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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Drugge

Serial No.: TBA

Group Art Unit: TBA

Filed: July 21, 2000

Examiner: TBA

For: APPARATUS FOR TOTAL IMMERSION Attorney Docket No. RD-001
PHOTOGRAPHYHonorable Commissioner of Patents and Trademarks
Washington, D.C. 20231TRANSMITTAL

S I R:

Submitted herewith is:

1. 50 pages of specification, including 10 pages of claims;
2. 5 sheets of drawings;
3. 1 page of abstract;
4. Declaration & Power of Attorney, executed;
5. Small Entity Petition, executed; and
6. a check for \$345.00 to cover the small entity filing fee.

Respectfully submitted,

Date: July 26, 2000

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EXPRESS MAIL CERTIFICATION

"Express Mail" mailing label number EK864830356US

Date of deposit: July 26, 2000

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Michael T. Zoppo

Date: 7/26/00

(Type or print name of person mailing paper or fee)

Signature of person mailing paper or fee

Canfield Scientific, Inc. - Exhibit 1002
 Canfield Scientific, Inc. v. Melanoscan, LLC
 IPR2017-02125

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: ☒ Application of: Drugge
☐ Patent of:

☐ Serial No.: TBA
☐ Patent No.:

Group Art Unit: TBA

☐ Filed: July 19, 2000
☐ Issued:

Examiner: TBA

For: APPARATUS FOR TOTAL
IMMERSION PHOTOGRAPHY

Attorney Docket No.: RD-001

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
[37 CFR 1.9(f) and 1.27(b)] - Independent Inventor

Sir:

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9 (c) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled: Apparatus for Total Immersion Photography Interfaces, as described in:

- ☒ the specification filed herewith
☐ application serial no.
☐ patent no. issued

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9 (c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9 (d) or a nonprofit organization under 37 CFR 1.9 (e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ no such person, concern, or organization
☐ persons, concerns or organizations listed below*

*NOTE: Separate verified statements are required from each named person, concern, or organization having rights to the invention averring to their status as small entities.
(37 CFR 1.27)

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☒ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME: _
ADDRESS: _
_

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. [37 CFR 1.28 (b)].

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, and patent issuing thereon, or any patent to which this verified statement is directed.

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DATE 7/18/2000	DATE	DATE
NAME OF INVENTOR N/A	NAME OF INVENTOR	NAME OF INVENTOR
SIGNATURE OF INVENTOR	SIGNATURE OF INVENTOR	SIGNATURE OF INVENTOR
DATE	DATE	DATE

APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY

Field of the Invention

The present invention relates primarily to conditions pertaining to health and cosmetics. As such, the device allows for the imaging of total or subtotal non-occluded body surfaces in order to detect health and cosmetic conditions and involves the measurement and analysis of an optically depicted image of a patient's surfaces by standard color imaging, heat, electromagnetic or chemical imaging. The present invention allows for image pixel acquisition, its data collection, data aggregation, data dissemination, data manipulation, and subsequent viewing. The present invention provides for tissue analysis of a patient such that relevant determinations may be made such as detection of diseases or related problems of cosmesis.

Background of the Invention

This invention relates to the detection, diagnosis and treatment of skin cancer as well as other diseases and cosmetic conditions of the visible human.

Half of all new cancers are skin cancers. About 1.3 million new cases of skin cancer will be diagnosed in the United States each year. About 80 percent of the new skin cancer cases will be basal cell carcinoma, 16 percent are squamous cell carcinoma, and 4 percent are melanoma.

Both basal cell carcinoma and squamous cell carcinoma have a better than 95 percent cure rate if detected and treated early. Squamous cell carcinoma of the skin accounts for about 2.3 thousand deaths annually.

The incidence of melanoma has more than tripled among Caucasians between 1980 and 2000. There will be about 47,700 new cases of melanoma in 2000. At current rates, one in 74

Caucasian Americans will develop melanoma. With that statistic, one person dies of melanoma every hour. This year, approximately 7,700 deaths will be attributed to melanoma in the ratio of 4,800 men and 2,900 women. Older Caucasian males have the highest mortality rates from melanoma. In women under the age of 30, melanoma is more prevalent than breast cancer. All of these cancers are associated with sun exposure with the majority occurring after age 50. Furthermore, the incidence rates for all skin cancers are increasing with movement of white populations south to sunnier climates and the greater numbers of individuals living into their 80s. With the "baby boomer" generation currently in their late 50s, the medical community is faced with an explosive skin cancer epidemic.

There is a need for practical device that allows for the rapid screening of individuals for skin cancer and other maladies of the skin in early stages of development.

Currently, clinical diagnosis of skin disease is generally accomplished by visual inspection under white light illumination. In this process, the reflectance light of a skin lesion is examined. Visual diagnosis alone may not be particularly accurate for early detection of skin cancer since many skin conditions have a similar appearance under white light. Therefore, when a suspect lesion is identified by visual examination, a biopsy is often performed for a definitive diagnosis. Not only is it crucial to diagnose skin pre-cancer or skin cancer at an early stage when it is curable, but it is also important to improve the clinical diagnosis of suspected skin lesions so as to avoid unnecessary skin biopsies.

Several approaches have been tried to improve skin cancer diagnosis. Digital processing of reflectance images has been extensively investigated recently and has been found in melanoma to be more accurate than specialist diagnostic accuracy. An alternative approach is

ultraviolet (UV), infrared (IR) or polarized light photography that extends visual perception of a physician to the UV, IR or polarized light reflectance patterns. A further alternative approach that is already in widespread medical use involves illuminating the skin with a "Wood's lamp" which consists of a mercury discharge lamp associated with a filter that transmits UVA light with a 365 nanometer peak while absorbing visible light. When this device is used to assist in skin diagnosis, the eye serves as both the detector and the long pass filter. The eye is not sensitive to UV light, but is sensitive to visible fluorescence light. When the "Wood's lamp" is used in a darkened room, where the physician sees an image of a fluorescing disease site. The "Wood's lamp" is useful for the diagnosis of some skin conditions such as tinea capitis, tinea versicolor, erythrasma, and some pseudomonas infections, as well as aiding in the detection and diagnosis of hypopigmented skin. It is of no value in conditions where the fluorescence is not in the visible spectrum. These techniques depend on lighting and sensor techniques and may be incorporated into the total immersion photography system.

Prior Disclosures

Currently, clinical diagnosis of skin disease is generally accomplished by visual, verbal and handwritten history taking and by inspection during a visit to the physician's clinic. Initial inspections are routinely performed by general practitioners. Dermatologists may be sought out by patients or used upon referral by general practitioners. Either way, an appointment is required. Visual inspections are often limited by the physician's schedule or patient modesty. The patient may only be willing to have the area of concern inspected. General practitioners, the HMO "gatekeepers", have been documented to be less effective in discerning potential cancerous lesions than dermatologists. If referrals are not made, possible malignancies may be overlooked. A second approach is chemical emulsion or digital photography that can extend visual perception

of a physician to the UV or IR reflectance patterns. Such approaches have been limited by the need for a "point-and-shoot" photographer. These more limited approaches require only images of those areas in question. This leaves open the possibility of an incomplete diagnosis. This approach may be augmented by the use of skin surface epiluminescence microscopy.

- 5 Epiluminescence light microscopy (ELM) represents a technique which permits examination of the surface of the skin and also--by using the oil immersion technique--of the dermal-epidermal junction zone. The commonly used method of epiluminescence microscopy is based on point and shoot techniques requiring a trained operator. Recently, there have been investigations into the use of digital imagery to aid with dermatologic diagnoses. The prevalent technique uses either
- 10 digitally processed standard photography or direct digital photography of sections of the subject's body. These images are then stored for inspection, referral, and/or forwarding. For comprehensive surface imaging, this approach requires multiple posings by the photographer and the subject that may exceed 30 views in total. Depending on the medium used, review of the images may or may not be available for inspection during the same appointment. Specific
- 15 applications include the MoleMap and MoleMax II systems. MoleMap uses a combination of three images (epiluminescence, macro and low resolution) to identify possible melanoma. Visual type resolution is used primarily for mapping suspicious locations. Images are diagnosed and reported on by dermatologists before being permanently archived on a computer system for future comparisons. The MoleMax II system combines epiluminescence microscopy and
- 20 computer technology for data storage and retrieval. The system can be adapted for body surface imaging (using serial individually-photographed images). Images are available for inspection during the current office visit, allowing simultaneous dermatologist/patient on-screen observation. Since the outcome of treatment of cancer is more favorable the earlier and more

accurately the cancer is detected, the present invention is a substantial advancement in improving public health by eliminating the barrier of an available expert photographer or dermatologist for effective skin screening. This device provides a complete non-covered screening in an automated fashion, removing the intrusion of physical inspection and decreasing the possibility of missed lesions. The image acquisition does not require the presence of a physician or medical photographer, thereby increasing convenience to the patient/subject. This, in turn, would allow the placement of the device independent of the physician's or medical photographer's office, a benefit to public health programs.

Since the outcome of cancer treatment is more favorable the earlier and more accurately the cancer is detected, the present invention is a substantial advancement in improving public health by automating the imaging of potentially cancerous lesions in a more rapid and complete method. In light of the many advantages of early detection, there exists a clear need for a device that can greatly enhance the current methods of skin cancer screening. Furthermore, such a device will also find use in the cosmetic and beauty industry.

Summary of the Invention

The TIP system- including the structure, infrastructure, and imaging system, requires little training, minimal staffing, and may be constructed with simple, easily available tools. TIP is a device that may be easily transportable, providing opportunity for skin screenings in diverse locations such as gym facilities, recreation centers, physician's offices, and other health oriented facilities. Medically under-served and restricted locales, e.g., rural areas and prison facilities, will also benefit from TIP system remote diagnostic capabilities (telemedicine), bringing the care of medical specialists to the patients.

003620 "AT" 6950

5 The present invention, Total Immersion Photography (TIP), relates initially, and thus generally, to cancer detection and, more particularly, to skin cancer, e.g., melanoma, detection involving the measurement and analysis of an optical depiction of the subject patient's skin surface by standard color imaging, as well as heat, electromagnetic or chemical imaging. The present invention allows for subject acquisition, data collation, data aggregation, data dissemination, data manipulation, data viewing in a preferable medium and analysis of a subject patient's skin surface, or other body tissue and, therefore, providing for the subject tissue's analysis such that relevant determinations may be made. TIP is a digital image acquisition device, the products of which, are capable of a variety of applications. For instance, panoramic mosaics of the body, 3-D models of the body, images for use with "machine vision", and interfacing with medical records are such possible uses.

15 The present invention is uniquely situated whereby TIP may operate as the screening test, as well as a confirmation of a positive result from a screening test, or even in a manner that provides for second opinions. In either circumstance, if the results of the administered test are confirmatory, *i.e.*, melanoma is detected or otherwise identified on the skin surface. If, on the other hand, it is determined that melanoma is not present on the skin surface and, consequently, that the screening test was erroneous, the patient is spared the trauma of having to undergo the full work-up including the biopsy. In that respect, confirmation of cancer by analyzing the skin surface as set forth herein has many significant advantages over conventional melanoma tests, as well as cancer detection methods in general.

20 TIP comprises an image acquisition device that is further comprised of an enclosed structure that is and can be designed and assembled according to the human physiology to be analyzed such that the enclosed structure maximizes the ease of acquisition of the human body

with traditional and/or digital photography. For purpose of discussion herein, the TIP structure may be comprised of fourteen (14) "panels". These fourteen (14) panels should be set forth in such that one panel has a "mirror image" panel. Alternatively, the TIP device may be constructed in a circular derivative, or like structure, of the fourteen (14) panel embodiment or other such number of panels keeping with the operative requirements of the device.

Contained within the enclosed structure are devices capable of "photographing" the body in a static position (motion or time-lapsed photography is also be provided for). The photographic device(s) may be capable of "taking" the body through traditional photography means, and/or temperature, chemical or electromagnetic based means. For purposes of discussion herein, the photographic means, e.g. a camera or like device capable of "capturing" a still image or video streamed images, ("camera") array should consist of no less than forty (40) cameras. The camera(s), as envisioned and discussed herein are set forth in the fourteen "panels" such that there are five (5) camera per vertical panel section (8 X 5 + top and bottom cameras =42). This structure of cameras and panels may be easily modified without departing from that which is taught, disclosed and intended. The basis for the panel-camera array is to accurately capture the physiological attributes desired from the subject patient. With subject placement, the camera array coordinates and distances are known in relation to the subject. These distances, in combination with focal length and resolution information, allows for the precise measurement of the human features of interest. The camera(s) may be left "on", engaged or otherwise activated at a desired time.

To effect the proper "picture" lighting or other optical, heat, chemical or electromagnetic, enhancement means may be affixed to, or placed around the structure such that the photographic device's "capturing" of the subject physiology may be optimized. Accordingly, for purpose of

discussion herein in regard to traditional photographic means the photographic optimization may be accomplished via a lighting means consists of fluorescent lights. These lights should be situated and placed behind panels constructed of Lucite or like material containing the same or similar physical and optical properties. The lighting means may be on "on" or activated prior to engagement of the camera or photographic means, or further, remotely triggered at a predetermined time.

In the event the camera(s) and/or the lighting means are triggered remotely or upon a sequencing event the same can be controlled manually or through computer assistance. Should computers or like devices be used to facilitate the process, the same may consist of at least one (1) USB Hub, but as is contemplated herein ten (10) USB Hubs with 7 (7) USB ports per hub. In turn, there should be a data processor or like means that resides on a server or so similarly situated.

The subject patient or physiological area would enter or be placed into the TIP enclosed structure, and if need be into the specified position for imaging. When in position, the camera device and enhancement, if not engaged, are so engaged and the image(s) obtained. Thereafter, the images are transmitted from the camera device(s) through the USB(s) onto a server/computer means capable of aggregating, manipulating and disseminating the image(s) collected into a visually discernable format. As such, the images can be displayed synchronously in 2D format or processed into 3D renderings for desired or required viewing.

As a result of the aforementioned TIP device, a doctor or other individual interested in acquiring the imaging of an individual or physiological area is provided a device capable of acquiring specific imagery and related information that may be further viewed, and/or collected,

registered and/or stored for analysis. And as is considered and contemplated herein in regard to conditions and diseases of the visible human (but to also include and not limited to general physical, topical and subcutaneous analysis).

Accordingly, the apparatus of the present invention provides means for diagnosis of a skin disease site using spectral analysis comprising: a light source for generating light to illuminate the disease site; a probe means to conduct the illumination light from the light source to the disease site and to collect the reflected and fluorescence light and conduct said light to be analyzed; and spectral analysis means optically connected to the probe means for generating and displaying spectral measurements of the fluorescence light and the reflectance light to assist the user in diagnosing the disease site.

In a further aspect, the present invention provides a method for diagnosis of a skin disease site using spectral analysis comprising the steps of: illuminating the disease site with a light source to generate fluorescence and reflectance light at the disease site; collecting the generated fluorescence and reflectance light; conducting a spectral analysis of the collected light using a spectrometer; displaying spectral measurements of the fluorescence light and the reflectance light; and analyzing the measured fluorescence and reflectance spectra together to make a diagnosis of the disease site.

In a preferred embodiment, the apparatus of the present invention includes a compact spectrometer connected to a computer, a fluorescence excitation light source with a shutter, a white light source with a shutter, a bifurcated fibre bundle, a light coupler, a skin probe, and controlling electronics. The system is designed to automatically switch between the fluorescence excitation light and the white light sources and complete fluorescence and reflectance spectral

measurements of a skin disease site sequentially in a few seconds. The system exploits the spectral differences of different skin diseases to aid in the dermatologic diagnosis. In particular, the apparatus provides a low cost, compact system that is capable of quickly and efficiently performing combined fluorescence and reflectance spectral analysis.

5 Applications

Below are some examples, but not limited to, in regard to the invention's scope and intended applications of TIP:

Automated Acquisition

Storage and display of the non-occluded visible body surface properties including but not limited to diseases and cosmetic conditions of the skin, hair and nails and body measurements. In this application the body surface can be viewed and measurements taken, evaluated, viewed, collated, and cross-referenced in an easy and efficient manner.

Melanoma and Skin Cancer Screening

Large populations can be effectively screened in a short period of time for skin cancers and related maladies using this device. The consistent lighting and repeatability of the imaging technique make it ideal for replacing the skin cancer screening environment where poor lighting, patient movement and dialogue, patient modesty and other factors increase the likelihood of an incomplete examination. By removing most of these factors, the physician is allowed undistracted viewing time of the patient's skin surface. In addition, the travel and time expense of skin cancer screenings at a location other than the physician's own office is large. For evaluations of change over time and detection of new lesions, 3-month, 6-month and yearly

scans can be obtained and analyzed in relation to one another. All evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that patient, doctor and health care provider time is minimized (and thus cost reduced). Data will be recorded and aggregated such that accurate assessments of the patient and population may be derived.

5 Medical Practice Aid/ Documentation System

The availability of images of a patient undergoing therapy is critical to a practicing dermatologist who bases his/her clinical evaluation on the "improvement" he/she sees in the patient over time. This is especially pertinent to chronic conditions such as acne, urticaria, atopic dermatitis, contact dermatitis, psoriasis, blistering disorders, etc. The system acts as a "medical memory" of the patient as he/she returns to the office for reevaluation.

Beauty Evaluations

Consumers flock to cosmetic counters to purchase makeup to hide their skin conditions. Eighty percent of skin cancers are found on the head and neck. A "beauty mark" that is identified by the patient on the face could be dermatosis nigra, seborrheic keratosis, compound nevus or melanoma. A raised pink or red "pimple" could be a basal cell carcinoma or granuloma or sarcoid lesion. Other conditions include broken blood vessels (red lines) which can be indicative for diagnoses of telangiectasias and rosacea. Pigment disorders such as vitiligo (lack of melanin), melasma (increased melanin), as well as discolorations due to excessive sun exposure are challenging to hide with makeup. Inflammatory skin conditions such as seborrheic dermatitis, psoriasis and eczema cause red, scaly patches which are chronic conditions falsely managed by moisturizers and makeup formulations. The information can be used to aid in makeover consultations. Consumers can be evaluated as to their current skin regimens and their conditions

and followed over time as they undergo medical therapy. In addition, topical and internal medicines can be studied for their effectiveness over time.

Body Morphology Analysis- Shape Evaluation

Medically consequential conditions of the skeleton such as limb deformities and the spine deformities of kyphosis and scoliosis may be assessed photogrammetrically through TIP system. The consumer is also curious about what "shape" they are in mainly for appearance reasons. The physician or physical trainer is interested in the "shape" of the patient or client for both health and beauty reasons. This invention allows for a total body evaluation on several dimensions. Measurements and comparisons of body contours, fat deposit analysis, assymetry, etc. with volume measurements will be valuable for the cosmetic surgeon, the physician, the physical trainer, the clothier, etc. Medical and health decisions will be aided with such information. These evaluations can then be viewed, collated, and cross-referenced in an easy and efficient manner.

Cosmetic Surgery Applications

Preoperative evaluations as well as postoperative analysis and comparisons can be made using this device for all cosmetic surgery procedures. This is especially true for but not limited to facial surgery, eyelid surgery, face lifts, neck lifts, laser resurfacing, laser hair removal, soft tissue augmentation and liposuction. The physician can look to reduce asymmetry of the patient's anatomy to enhance the outcome of cosmetic surgery. In addition, measurements of graft survival and soft tissue survival as well as measurements of soft tissue removal can be more accurately defined. These evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that studies can be made of the procedures where there are currently none.

Soft Tissue Manipulation

Volumetric measurements of soft tissue will facilitate studies of cosmetic procedures of the subcutis, glands, muscles, and skeleton. It will enhance the accuracy of body volume measurements for both soft tissue augmentation and soft tissue removal. Patients will be measured before soft tissue manipulation so that the procedure is more accurately applied to the areas to be treated. The volumetric data will serve as a baseline to study the effectiveness of the treatment and will also enhance postoperative evaluation. For soft tissue augmentation using live tissue, it will allow for survival studies to be conducted. This will be a significant improvement over the current water-displacement techniques and 2D renderings. These evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that patient and doctor time is minimized. Data can be reviewed in a postoperative environment to assess outcomes and be used for outcome studies.

Percent of Surface Involved Score Calculation

This device will be able to standardize the Percent of Surface Involved ("POSI") and Psoriasis Area Surface Involvement ("PASI") scoring for the evaluation of extent of disease of such skin diseases but not limited to psoriasis, pemphigus, burn victims, etc. Automation of the calculation will be critical. Topical and internal medicines can be studied for their effectiveness over time. These calculations can be collated and cross-referenced in manner such outcome studies of therapies can be collected for large populations and published.

Hair Loss Evaluation

Progression of hair loss and treatment evaluation can be monitored with such a device. Topical and internal medicines can be studied for their effectiveness over time. In addition, hair

transplantation techniques (planning, mapping and performing) will be enhanced. Postoperative and follow-up graft survival studies will also be more accurate. Such an evaluation procedure can be viewed by patient and health care professional alike, whereafter the same may be collated, and cross referenced in a manner such that time is minimized, data is accurately recorded and aggregated so an accurate assessment and prognosis may be made.

Wound Healing Evaluations

Therapeutic analyses for post operative wounds, traumatic wounds, ulcers, burns, scars, etc. collectively "wounds" can be made using this device. Measurements of the "wounds" at the outset of therapy and then at specific intervals of time allow for accurate evaluation of the progression of healing time and patient responsiveness to treatment. Topical and internal medicines can be studied for their effectiveness over time. These evaluations and resulting analyses can be viewed, collated, and cross referenced in an easy and efficient manner such that time is minimized, data accurately recorded and aggregated for efficient and accurate assessments and prognosis made.

Remote Diagnostic Evaluations

This device will allow for both local and remote medical and cosmetic consultations. These evaluations and applications can be shared effectively using store-and-forward telemedicine techniques. The TIP data set can be viewed, collated, and cross referenced in an easy and efficient manner such that patient and doctor time is minimized, data accurately recorded and aggregated and thus efficient and accurate diagnoses.

Accordingly the following are a list, not inclusive, of those ailments, maladies and concerns that can be addressed by the device as disclosed herein: Disorders relating to and/or

resulting from: altered reactivity; bacterial and fungal diseases; cell kinetics; cell differentiation; drugs and chemical agents; epidermal cohesion; epidermal appendages and related disorders; epidermal and appendageal tumors; hematology; infestations, bites, and stings; lymphomas and pseudolymphomas; mechanical and physical factors; melanocytes; mucocutaneous integument; neoplasms; nutrition, metabolism, and genetics; organ systems: gastrointestinal, cardiovascular, pulmonary, endocrine, renal and other organ systems; persistent inflammation; rheumatology; including but not limited to sexually transmitted diseases.

Also identifiable are conditions of surgical dermatology, including but not limited to: cryosurgery; hair loss and transplant; liposuction; micrographic surgery; nail surgery; sclerotherapy; skin resurfacing; soft tissue augmentation and wounds.

Particularly the following, but not limited thereto, are capable of being identified through the use of the invention disclosed herein:

Abscess, Child Abuse, Drug Abuse, Transient Acantholytic Dermatitis, Acanthosis Nigricans; Acarophobia; Acatalasia, Achromia Parasitica; Acne Artificialis; Acne Conglobata; Acne Cosmetica; Acne Excoriée; Acne Fulminans; Acne Keloidalis; Acne Mechanica; Acne Necrotica; Acne Neonatorum; Acne Rosacea; Acne Varioliformis; Acne Vulgaris; Chloracne; Cystic Acne, Halogen Acne, Pomade Acne, Steroid Acne, Tropical Acne, Acneiform Eruptions, Drug-Related Acne; Acrochordon; Acrocyanosis; Acrodermatitis Chronica Atrophicans; Acrodermatitis Continua; Acrodermatitis Enteropathica; Acrodermatitis of Hallopeau; Acrodermatitis Pustulosa Perstans; Papular Acrodermatitis of Childhood, Acrodynia; Acrokeratoelastoidosis; Acrokeratosis Verruciformis, Acromegaly, Acropachyderma, Acropustulosis, Acropustulosis Of Infancy, Acrosclerosis, Actinic Cheilitis, Actinic Dermatitis,

Reticulohistiocytosis; Congenital Syphilis; Congenital Vascular Neoplasm Syndromes;
 Connective Tissue Nevus; Conradi's Disease; Contact Dermatitis; Contracture, ; Unclassified;
 Copper Deficiency; Corns; Corticosteroid Effects; Cosmetic Procedures; Coumarin Reaction;
 Cowden's Disease; Coxsackie Infection; Craniofacial Angiomatosis; Creeping Eruption; Crest
 5 Syndrome; Crohn's Disease; Cronkhite - Canada Syndrome; Cryofibrinogenemia;
 Cryoglobulinemia; Cryosurgery; Cryptococcosis; Cushing's Syndrome; Cutaneomeningospinal
 Angiomatosis; Cutaneous B-Cell Lymphoma; Cutaneous Horn; Cutaneous Markers Of
 Malignancy; Cutaneous Papillomatosis; Cutaneous Tag; Cutaneous T-Cell Lymphoma; Cutis
 Elastica; Cutis Laxa; Cutis Marmorata; Cutis Marmorata Telangiectetica Congenita; Cutis
 10 Rhomboidalis Nuchae; Cutis Verticis Gyrata; Cyclic Neutropenia; Cyndroma; Cyst,
 Branchiogenic; Cyst, Epidermal Or Epithelial; Cyst, Keratinous, Pilar Or Sebaceous; Cyst,
 Mucous; Cyst, Pilar; Cyst, Sebaceous; Cyst, Synovial; Cytomegalovirus Infection; Dactyolysis;
 Dandruff; Darier - White Disease; Decubitus Ulcer; Deficiency, Mineral Or Vitamin; Degos
 Disease; Delusions Of Parasitosis; Demodex Folliculorum; Dental Abnormalities; Dental Sinus;
 15 Depigmentation; Depressive (Neurotic) Excoriations; Dercum's Disease; Dermal Hypoplasia;
 Dermatalgia; Dermatitis Herpetiformis; Dermatitis Medicamentosa; Dermatitis Nodularis
 Necrotica; Dermatitis Papillaris Capillitii; Dermatitis Repens; Dermatitis Vegetans; Dermatitis,
 Acute, Unclassified; Dermatitis, Atopic; Dermatitis, Autosensitization; Dermatitis, Beetle;
 Dermatitis, Berloque; Dermatitis, Contact; Dermatitis, Diaper; Dermatitis, Drug Allergy;
 20 Dermatitis, Drug Toxicity; Dermatitis, Dyshydrotic; Dermatitis, Eczematous; Dermatitis,
 Exfoliativa; Dermatitis, Factitial; Dermatitis, Infectious Eczematoid; Dermatitis, Irritant;
 Dermatitis, Nummular; Dermatitis, Occupational; Dermatitis, Perioral; Dermatitis, Photo;
 Dermatitis, Pregnancy; Dermatitis, Radiation; Dermatitis, Seborrheic; Dermatitis, Stasis;

Dermatitis,Nutritional; Dermatofibroma; Dermatofibrosarcoma Protuberans; Dermatofibrosis
 Lent Diss& Osteopoikilosis; Dermatolysis; Dermatomyositis; Dermatophyte Infections,
 Unclassified; Dermatophytid; Dermatophytosis; Dermatoses Papulosa Nigra; Dermographism;
 Dermoid Cyst; Desmoid Tumor; Desquamation, Unclassified; Diabetes Mellitus; Diabetic
 5 Dermodromes; Dialysis, Bullous Dermatoses Of Diaper Dermatitis; Disseminated Intravascular
 Coagulation; Diet & Dermatology; Digital Fibrokeratosis; Digitate Dermatoses; Diphtheria,
 Cutaneous; ;Discoid Lupus Erythematosus; Dissecting Cellulitis Of The Scalp; Disseminated
 Intravascular Coagulation; Disseminated Lupus Erythematosus; Disseminated Super. Actinic
 Porokeratosis; Discoid Lupus Erythematosus; Animal Bites; Down Syndrome; Dracunculosis;
 10 Drug Abuse; Drug Eruption; Drug Toxicity; Disseminated Superficial Actinic Porokeratosis;
 Duhring-Brocq Disease; Dupuytren's Contracture; Dyshydrotic Dermatitis; Warty Dyskeratoma;
 Dyskeratosis Congenita; Dyskeratosis Follicularis; Dysplastic Nevi Or Syndrome;
 Dysproteinemia; Dysraphism; Dystrophic Nails; Ecchymosis; Eccrine Gland Tumors; Eccrine
 Hydrocystoma; Eccrine Poroma; Eccrine Spiradenoma; Ecthyma; Ecthyma Contagiosum (Orf);
 15 Ecthyma Gangrenosum; Ectodermal Defect, Congenital; Eczema Craquelé; Eczema Herpeticum
 And Vaccinatum; Eczema, Atopic; Eczema, Dyshydrotic; Eczema, Nummular; Edema,
 Angioneurotic; Edema, Legs, Hereditary; Edema, Unclassified; Ehlers-Danlos Syndrome;
 Ehrlichosis; Elastoidosis, Nodular With Cysts & Comedones; Elastolysis, Generalized;
 Elastoma, Juvenile; Elastosis Perforans Serpiginosa; Elastosis, Actinic; Elastosis, Perforating;
 20 Elephantiasis; Elephantiasis Nostras Verrucosa; Emboli; Endocrinopathy, Miscellaneous;
 Endometriosis; Eosinophilic Fasciitis; Eosinophilic Granuloma; Eosinophilic Papulovesicular
 Derm Of Newborn; Ephelides And Lentigines; Epidermal Inclusion Cyst; Epidermal Necrolysis,
 Toxic; Epidermal Nevus; Epidermodysplasia Verruciformis; Epidermoid Carcinoma;

Epidermolysis Bullosa; Epidermolytic Hyperkeratosis; Epiloia; Epithelial Cyst; Epithelial
 Nevus; Epithelioma Adenoides Cysticum; Epithelioma, Arsenical; Epithelioma, Basal Cell;
 Epithelioma, Calcifying Of Malherbe; Epithelioma, Squamous; Erosio Interdigitalis
 Blastomycetica; Eruption Of Lymphocyte Recovery; Eruption, Creeping; Erysipelas;
 5 Erysipeloid; Erythema Ab Igne; Erythema Annulare Centrifugum; Erythema Chronicum
 Migrans; Erythema Circinatum; Erythema Dyschromicum Perstans; Erythema Elevatum
 Diutinum; Erythema Figuratum Perstans; Erythema Gydatum Perstans; Erythema Gydatum
 Repens; Erythema Induratum; Erythema Infectiosum; Erythema Marginatum; Erythema
 Multiforme; Erythema Nodosum; Erythema Of Jacquet; Erythema Perstans; Erythema Toxicum
 10 Neonatorum; Erythema, Anatomic; Erythema, Noninfectious, Unclassified; Erythema, Toxic;
 Erythema, Unclassified; Erythermalgia; Erythrasma; Erythrocyte Autosensitization;
 Erythroderma, Exfoliative; Erythrokeratoderma Variabilis; Erythromelalgia; Erythroplasia Of
 Queyrat; Esthiomene; Exanthem Subitum; Exanthem, Bacterial; Exanthem, Viral; Excoriation,
 Depressive Or Neurotic; Exfoliation Of Palms And Soles; Exfoliative Dermatitis (Or See Cause);
 15 Extramammary Paget's Disease; Extramedullary Hematopoiesis, Cutaneous; Exudative Discoid
 And Lichenoid Dermatitis; Fabry's Disease; Facial Granuloma; Factitial Dermatitis; Familial
 Benign Chronic Pemphigus; Familial Hemorrhagic Telangiectasia; Farber's Disease; Fasciitis,
 Necrotizing; Fat Dystrophy; Fat Necrosis; Favre - Racouchot Elastoidosis Syndrome; Favus;
 Febrile Neutrophilic Dermatoses, Acute; Female Pattern Baldness; Fever Blisters, Aphthae;
 20 Fever Blisters, Herpes Simplex; Fibroepithelial Polyp; Fibroma; Fibromatosis Of Penis; Fibrous
 Papule Of Nose; Fibroxanthoma, Atypical; Fifth Disease; Figurate Erythema; Filariasis; Fissured
 Tongue; Fistulae, Congenital; Fixed Drug Eruption; Flat Warts; Flea Bites; Florid Oral
 Papillomatosis; Flushing, Non-Carcinoid; Focal Dermal Hypoplasia; Fogo Selvagem; Follicular

Mucinosi; Folliculitis; Folliculitis Abscedens Et Suffodiens; Folliculitis Decalvans; Folliculitis Keloidalis; Fordyce Lesions Of Scrotum; Fordyce Spots; Foreign Body; Foreign Body Granuloma; Fox - Fordyce Disease; Freckles; Friction Blister; Frostbite; Fungal Cultures (Alphabetical By Genus); Fungal Infection, Deep, Unclassified; Fungal Infection, Superficial, Unclassified; Furuncle; Ganglion; Gangosa; Gangrene; Gardner's Syndrome; Gargoylism; Gastrointestinal Syndromes; Gaucher's Disease; Geographic Tongue; German Measles' Gi Disease, Skin ;Manifestations; Gianotti - Crosti Syndrome; Giant Cell Arteritis; Gingiva, Unclassified; Gingival Hypertrophy; Gingivitis, Unclassified; Glanders; Glandular Cheilitis; Glomus Tumor; Glossitis, Median Rhomboid; Glossitis, Unclassified; Glucagonoma Syndrome; Glycogen Storage Disease; Gold Pigmentation; Goltz Syndrome; Gonococcemia; Gonorrhea; Gougerot - Blum Disease; Gougerot - Carteaud's Papillomatosis; Gout; Gower's Panatroph; Graft Vs. Host Reaction; Granular Cell Myoblastoma; Granuloma ; Annulare; Granuloma Faciale; Granuloma Fissuratum, Cutaneous; Granuloma Fissuratum, Mouth; Granuloma Inguinale; Granuloma Pyogenicum; Granuloma, Mosinophilic; Granuloma, Foreign Body; Granuloma, Meischer's; Granuloma, Swimming Pool; Granuloma, Unclassified; Granulomatosis Disciformis, Meischer; Granulomatosis, Chronic Familial; Granulomatosis, Wegener's; Granulomatous Disease, Chronic; Granulosis Rubra Nasi; Graves Disease; Grooved Tongue; Grovers Disease; Gumma; Guttate Hypomelanosis, Idiopathic; Guttate Morphea; Gynecomastia; Gypsy Moth Dermatitis; Hailey - Hailey Disease; Hair Collar Sign; Hair Excess; Hair Pigment Disorder; Hair Shaft Abnormalities; Hairy Leukoplakia (Aids Associated); Hairy Leukoplakia (Non-Aids Associated); Hairy Tongue; Halo Nevus; Halogen Acne; Hamartoma; Hand And Foot Eruption, Unclassified; Hand-Foot-And-Mouth Disease; Hand-Schuller-Christian Disease; Hansen's Disease; Hartnup Disease; Heat Injury; Heat Rash; Hemangiectatic Hypertrophy;

Morbus Moniliformis; Morphea; Morquio's Disease; Mucha-Habermann's Disease; Mucinosis, Focal; Mucinosis, Reticular Erythematous; Mucinous Cyst; Mucocutaneous Lymph Node Syndrome; Mucopolysaccharidoses; Mucormycosis; Mucosa, Oral, Unclassified; Mucous Cyst; Multicentric Reticulohistiocytosis; Multiple Benign Cystic Epithelioma; Multiple Endocrine Neoplasia Synd; Multiple Hamartoma Syndrome; Multiple Idiopathic Hemorrhagic Sarcoma; Multiple Mucosal Neuroma; Multiple Myeloma; Mumps; Munchausen Syndrome; Mycetoma; Mycobacterial Infections, Atypical; Mycosis Fungoides; Myiasis; Myoblastoma; Myoepithelioma; Myoma And Leiomyoma; Myxedema And Localized Myxedema; Myxoid Cyst; Nail Disorders Assoc. With Internal Disease; Nail Dystrophy, Unclassified; Nail Pits; Nails, Normal Variants; Narcotic Dermopathy; Nasal Glioma; Necrobiosis Lipoidica; Necrobiotic Xanthogranuloma; Necrolysis, Toxic Epidermal; Necrolytic Migratory Erythema; Necrosis, Unclassified; Necrotizing Fasciitis; Necrotizing Vasculitis; Needle Marks; Neonatal Acne; Neonatal Lupus Erythematosus; Netherton's Syndrome; Neurilemmoma; Neurodermatitis; Neurofibroma, Neurofibromatosis; Neurotic Excoriations; Neutrophilic Dermatoses, Acute Febrile; Nevroxanthoendothelioma; Nevroxanthogranuloma; Nevus Anemicus; Nevus Angiolipomatosus; Nevus Araneus; Nevus Caeruleus; Nevus Cell Nevus; Nevus Comedonicus; Nevus Depigmentosus; Nevus Elasticus; Nevus Flammeus; Nevus Of Ito; Nevus Of Ota; Nevus Sebaceous; Nevus Syringocystadenoma Papilliferum; Nevus Unius Lateris; Nevus, Blue; Nevus, Blue Rubber Bleb; Nevus, Compound; Nevus, Dermal; Nevus, Epidermal; Nevus, Epithelial; Nevus, Halo; Nevus, Junctional; Nevus, Linear; Nevus, Organoid; Nevus, Pigmented; Nevus, Spider; Nevus, Spindle Cell; Nevus, Verrucous; Nevus, White Spongy Of Mucosa; Nickle Allergy; Niemann - Pick Disease; Nocardiosis; Nodular Dermal Allergide; Nodular Elastoidosis; Nodular Fasciitis; Nodular Fat Necrosis; Nodular Subepidermal Fibrosis; Nodular Vasculitis;

Sebacous Gland Tumors, Benign; Sebaceous Hyperplasia; Sebaceous Nevus; Seborrheic Dermatitis; Seborrheic Keratosis; Secondary Syphilis; Senear-Usher Syndrome; Senile Elastosis; Senile Keratosis; Senile Purpura; Septicemia; Serum Sickness; Sézary Syndrome; Shingles; Sick Cell Ulcer; Sjögren's Syndrome; Skin Tag; Skin Tests For Allergy; Smallpox; Snake Bites; Sneddon-Wilkinson Subcorneal Pustulosis; Solar Atrophy; Solar Keratosis; Solar Urticaria; South American Blastomycosis; Speigler-Fendt Sarcoid; Spider Bites; Spider Nevi; Spinal Dysraphism; Spindle Cell Nevus; Spiradenoma; Spitz's Juvenile Melanoma; Sporotrichosis; Squamous Cell Carcinoma; Staphylococcal Scalded-Skin Syndrome; Stasis Dermatitis; Steatocystoma Multiplex, Stevens-Johnson Syndrome; Stings, Insect; Stings, Other Than Insects And Spiders; Stings, Spider; Stomatitis; Stomatitis, Aphthous; Storage Disease, Glycogen; Striae; Stucco Keratosis; Stump Dermatitis; Sturge-Weber Syndrome; Subacute Bacterial Endocarditis; Subcorneal Pustular Dermatoses; Subcutaneous Fat Necrosis; Subepidermal Nodular Fibrosis; Sulzberger-Garbe Disease; Sunburn; Supernumerary Digit; Supernumerary Nipple; Surfer's Nodule; Surgery; Sweat Gland Carcinoma; Sweat Gland Disorders, Unclassified; Sweat Gland Necrosis; Sweat Gland Tumors, Benign; Sweet's Syndrome; Swimmer's Itch; Swimming Pool Granuloma; Sycosis; Symmetric Lividity Of The Soles; Symmetrical Peripheral Gangrene; Syndactyly; Synovial Cyst; Syphilis, Congenital; Syphilis, Primary; Syphilis, Secondary; Syphilis, Tertiary; Syringocystadenoma Papilliferum; Syringoma; Systemic Lupus Erythematosus; Systemic Therapy; Tags, Skin; Tar Melanosis; Tattoo; T-Cell Disorders; Teaching Slides; Teeth Abnormalities, Unclassified; Telangiectasia; Telangiectasia Macularis Eruptiva Perstans; Telangiectasia, Hereditary Hemorrhagic; Telogen Effluvium; Temporal Arteritis and other such like diseases and maladies now known and unknown.

Without doubt the invention disclosed herein served many well and long felt needs and concerns among the public and health care professionals.

Objects of the Invention

In view of the foregoing, it is therefore an object of the invention to provide a detection
5 device for skin cancer and other diseases of the skin.

It is a further objective of the invention to provide a detection device for skin cancer and other maladies of the skin that is neither invasive nor destructive to the tissue being examined.

A further object of the invention is to provide a device that may be used as a mirror for anyone wishing to view his/her body but have been unable to do so, such as in gym facilities,
10 homes, physician's offices, and other health care facilities.

A further object of the invention is to provide detection means that does not involve biopsy or contact with the skin.

Another object of the invention is to provide detection means that does not have side effects on the skin.

15 A further object of the invention is to provide a means for remote viewing of patients for telemedical diagnostic means, such as in prison facilities, remote locations or other areas that are similarly deficient in highly qualified or experts in a medical field.

A further object of the invention is to provide a cost-effective device.

Another object of the invention is to provide a device that may be easy to use.

20 A further object of the invention is to provide a device that may be assembled with

minimal professional carpenter assistance.

A further object of the invention is to provide a device that may be easily transportable.

Another object of the invention is to provide a device that is capable of being used in a system for reducing maladies of the skin

5 A further object of the invention is to provide a device that allows for automated acquisition of human physiological characteristics.

A further object of the invention is to provide a device that allows for melanoma and skin cancer screening.

10 A further object of the invention is to provide a device that allows for POSI score calculation.

A further object of the invention is to provide a device that allows for hair loss and/or growth evaluation(s).

A further object of the invention is to provide a device that allows for wound healing evaluations.

15 A further object of the invention is to provide a device that allows for remote diagnostic evaluations.

A further object of the invention is to provide a device that allows for viewing and analysis of cosmetic surgery applications.

A further object of the invention is to provide a device that allows for beauty evaluations.

A further object of the invention is to provide a device that allows for body morphology analysis.

A further object of the invention is to provide a device that allows for viewing and analysis of soft tissue augmentation.

5 A further object of the invention is to provide health care professionals with a device that will make doctor-patient interface time more efficient.

Another object of the invention is to provide a device capable of allowing health care professional(s), doctor(s), nutritionist(s), physical trainer(s) and individual person(s) the ability to view, monitor, evaluate and render decisions based upon that which is captured, viewed and or compared to prior analysis utilizing the device as disclosed herein.

A further object of the invention is to provide a device that may reduce patient time spent in a health care professional's, doctor's, nutritionist's, physical trainer's facility where said individual may review an his/her health, etc.

A further object of the invention is to provide a device that may reduce the related costs associated with an analysis as described herein.

Another object of the invention is to provide a device that may reduce the cost to insurance programs reimbursing applicable healthcare and related professions for their time and effort associated with the rendering of care to such an insured individual.

Another object of the invention is to improve the quality of life.

20 Another object of the present device disclosed herein is to allow for a better and more efficient rendering of all forms of health care where visualization of the human body, including

parts thereof, is required.

The invention thus provides a device for the identification, diagnosis and subsequent treatment of maladies of the skin that is time and cost efficient and effective with no side effects.

Having thus described the invention, it will be apparent to those of skill in the art that modifications can be made within the scope of the invention without departing from the scope or breath of that which is intended and disclosed herein.

Brief Description of the Drawings

Figure 1 (FIG 1) depicts a horizontal cross-section of an imaging system in accordance with the present invention.

Figure 2 (FIG 2) depicts a vertical panel of an imaging device in accordance with the present invention.

Figure 3 (FIG 3) depicts a horizontal cross section of an alternate embodiment of an imaging system in accordance with the present invention utilizing a circular periphery.

Figure 4 (FIG 4) depicts an exemplary imaging device, e.g., camera, and actuation means.

Figure 5 (FIG 5) is a schematic of a complete imaging system in accordance with the present invention.

Detailed Description of the Preferred Embodiment

This invention teaches a TIP device that provides non-occluded images by employing an array of imaging devices and thereafter combining individual images to form a continuous

image. It has been heretofore contemplated that the device could find use as an aid in screening and diagnosis of conditions of soft tissue, hair and nails. Furthermore, it could also find use as a beauty aid to consult those considering cosmetic surgery or changes in personal appearance.

Thus, the following detailed description, read with the above-described drawings will
5 serve to explain various preferred embodiments and components of the present invention.

FIG 1 depicts a horizontal cross section of an embodiment of the TIP system 100 in accordance with the present invention. The system may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 108 of the device 100 with
10 sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would fit comfortably at center 108. The system 100 is comprised of several panels 109. In this particular embodiment, fourteen (14) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, an 8-sided polygon was chosen. The
15 shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 109 is comprised of an imager array 102, comprising a vertical array of imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature, chemical information or other information of interest. In this embodiment, we assume the use of digital cameras operating in the conventional fashion.
20 Thus, in order to optimize the performance of the cameras, light sources 101 are utilized. While fluorescent tubes are the preferred means, any type of illumination can be used, for example, a Wood's lamp may be used. These light sources 101 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 102 is the perimeter wall

103. The perimeter wall can be made of plywood, particle board or any other structural material capable of supporting the structure. In front of the light sources 101 and imager array 102 is shield 107. Shield 107 protects the imager array 102 and light sources 101 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 107, and furthermore, a shield
5 with variable transmittance is contemplated. In between the plurality of panels 109, there are dividers 106. Dividers 106 function to provide stability for shield 107, and also, when made opaque, reduce light interference between adjacent imager arrays 102. To effect access and egress, panels 104 function as a doorway. By rotating on hinge 105, panels 104 swing outward, thus allowing access to the interior of system 100. A system 100 is also contemplated without
10 doorway 104 that can be used for examining small objects, such as the scalp or hands, for example.

FIG 2 depicts an exemplary panel 200 of a TIP system in accordance with the present invention. Supporting the panel 200, is perimeter wall 207. Perimeter wall 207 can be flat, curved or angled in any fashion to accommodate the desired perimeter shape. Supported by the
15 perimeter wall 207 are imaging arrays 205 and 206 and light sources 202 and 208. While this exemplary panel utilizes dual imaging arrays 205, 206 and light sources 202, 208, the panel may be configured in any fashion utilizing at least one imaging array. Light sources 202, 208 are optional, and depending on the type of imaging done, e.g., chemical, may be unnecessary. However, in the present embodiment, light sources 202 and 208 are taken to be standard
20 fluorescent tubes. They could also be, for example, Wood's lamps. Imaging arrays 205 and 206 comprise a plurality of imaging devices 203. Imaging devices 203 may be a standard or digital camera, or any other type of device capable of capturing the desired information from the subject with the imaging system. Imaging devices 203 are controlled through cables 204. These cables

may be used to remotely trigger a mechanical actuator or, as is contemplated herein, act as part of an electronic interface such as USB. Imaging arrays 205 and 206 are depicted herein as vertical arrays of 5 imaging devices 203. In practice, the array can vary greatly. For use in smaller examinations, e.g., the scalp, it is suggested that less imaging devices 203 would be required to generate a complete image.

FIG 3 depicts a horizontal cross section of an alternate embodiment of an imaging system 300 in accordance with the present invention utilizing a circular periphery. The system 300 may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 308 of the device 300 with sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would comfortably at center 308. The system 300 is comprised of several panels 309. In this particular embodiment, eight (8) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, a circle was constructed. The shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 301 is comprised of an imager array 302, comprising a vertical array of imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature or chemical information. In this embodiment, we assume the use of digital cameras operating in the conventional fashion. Thus, in order to optimize the performance of the cameras, light sources 303 are utilized. While fluorescent tubes are the preferred means, any type of illumination can be used. These light sources 303 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 302 is the perimeter wall 310. The perimeter wall can be made of plywood,

particleboard or any other structural material capable of supporting the structure. In front of the light sources 303 and imager array 302 is shield 309. Shield 309 protects the imager array 302 and light sources 303 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 309, and furthermore, a shield with variable transmittance is contemplated. In
5 between the plurality of panels 301, there are dividers 306. Dividers 306 function to provide stability for shield 309, and also, when made opaque, reduce light interference between adjacent imager arrays 302. To effect access and egress, panel 304 functions as a doorway. By rotating on a double-hinge hinge 305 and clearing angled divider 307, panel 304 swings outward, thus allowing access to the interior of system 300. A system 300 is also contemplated without
10 doorway 304 that can be used for examining small objects, such as the scalp or hands, for example.

FIG 4 depicts an exemplary imaging device 400 for use with the present invention. In practice, the imaging device 400 may be a standard or digital camera, or any other type of device capable of capturing the desired information from the subject with the imaging system. For
15 example, devices capable of recording infrared or chemical information could be used. The present embodiment, however, contemplates the use of a digital camera as exemplified by the current figure. Such a device would comprise lens 403, mechanical actuator 402 and control cable 401. Preferably, cable 401 is used to electronically control, and further, download digital image information from imaging device 400. As is contemplated herein, the electronic control
20 could be USB. Alternatively, control cable 401 could be used to trigger mechanical actuator 402. Although the present figure describes a specific imaging device, it should be understood that a wide variety of data collection devices could be employed without departing from the scope of the present invention.

FIG 5 depicts a schematic of a complete image processing system 500 in accordance with the present invention. As discussed above in FIG 1, imaging system 100 may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 108 of the device 100 with sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would fit comfortably at center 108. The system 100 is comprised of several panels 109. In this particular embodiment, fourteen (14) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, an 8-sided polygon was chosen. The shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 109 is comprised of an imager array 102, comprising a vertical array of imaging devices. Imaging arrays 507 through 519 can be identical to imager array 102, or may vary in the information they garner in accord with the desired application. The present embodiment, however, contemplates identical imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature or chemical information. In this embodiment, we assume the use of digital cameras operating in the conventional fashion. Thus, in order to optimize the performance of the cameras, light sources 101 are utilized. Each imaging array may utilize a light source 101 to enhance imaging ability. Furthermore, each of said light sources could have varying characteristics to accord with the application. While fluorescent tubes are the preferred means, any type of illumination can be used. These light sources 101 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 102 is the perimeter wall 103. The perimeter wall can be made of plywood, particle board or any other structural material capable of

supporting the structure. In front of the light sources 101 and imager arrays 102 and 507-519 is shield 107. Shield 107 protects the imager arrays 102 and 507 through 519 and light sources 101 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 107, and furthermore, a shield with variable transmittance is contemplated. In between the plurality of panels 109, there are dividers 106. Dividers 106 function to provide stability for shield 107, and also, when made opaque, reduce light interference between adjacent imager arrays 102 and 507 through 519. To effect access and egress, panels 104 function as a doorway. By rotating on hinge 105, panels 104 swing outward, thus allowing access to the interior of system 100. A system 100 is also contemplated without doorway 104 that can be used for examining small objects, such as the scalp or hands, for example. In order to effect the processing of the multiple images garnered from the plurality of imaging arrays, the imager arrays 102 and 507 through 519 are networked to a single computer 501. The present embodiment contemplates the use of USB to network the arrays 102 and 507 through 519. The imaging devices of arrays 102, 507, 508 and 509 are connected to USB hub 506 via interface cabling 102a, 507a, 508a and 509a, respectively. The imaging devices of arrays 517, 518 and 519 are connected to USB hub 505 via interface cabling 517a, 518a and 519a, respectively. The imaging devices of arrays 514, 515 and 516 connected to USB hub 504 via interface cabling 514a, 515a and 516a, respectively. The imaging devices of arrays 510, 511, 512 and 513 are connected to USB hub 503 via interface cabling 510a, 511a, 512a and 513a, respectively. Hub 506 is connected with hub 503 via cable 520. Hub 505 is connected with hub 504 via cable 521. Hubs 503 and 504 are then connected to hub 502 via cables 522 and 523, respectively. Finally, hub 502, which has the totality of imaging devices of imaging arrays 102 and 507 through 519 connected thereto, is connected to computer 501 via cable 524. The computer 501 is used to process the individual images garnered from each

imaging device of each imaging array 102 and 507 through 519 to created a non-occluded image of the subject within system 100, and preferably, at center 108. It should be noted that the arrangement of hubs 506, 505, 504, 503 and 502 and the concomitant cabling presented heretofore is merely exemplary, and anyone with skill in the art will recognize the myriad ways of interconnecting the imaging devices of imaging arrays 102 and 507 through 519 to computer 501.

While the present invention has been described with reference to one or more preferred embodiments, which embodiments have been set forth in considerable detail for the purposes of making a complete disclosure of the invention, such embodiments are merely exemplary and are not intended to be limiting or represent an exhaustive enumeration of all aspects of the invention. The scope of the invention, therefore, shall be defined solely by the following claims. Further, it will be apparent to those of skill in the art that numerous changes may be made in such details without departing from the spirit and the principles of the invention.

Claims

What I Claim Is:

1. A device for the identification of maladies that effect human tissue wherein said device comprises a chamber, an illumination means, an imaging means and a viewing means;
5 wherein said device generates an image of a three dimensional object, said image is displayed in a two dimensional medium that is further manipulated in said two dimensional medium allowing for viewing.
2. A device according to claim 1 wherein said viewing is two dimensional in nature.
3. A device according to claim 1 wherein said viewing is three dimensional in nature.
- 10 4. A device according to claim 1 whereby said chamber is further comprised of panels that enclose said three dimensional object in a radius of 360 degrees on the vertical axis.
5. A device according to claim 1 whereby said chamber is further comprised of panels that enclose said three dimensional object in a radius of 360 degrees on the vertical axis and 360 degrees on the horizontal axis.
- 15 6. A device according to claim 1 whereby said imaging means is further comprised of at least one imaging device.
7. A chamber according to claim 4 whereby said panels are further comprised of at least one imaging means.
8. A chamber according to claim 5 whereby said panels are further comprised of at least one
20 imaging means.

9. A device according top claim 1 whereby said imaging means is capable of capturing light in the humanly perceivable light spectrum.

10. A device according top claim 1 whereby said imaging means is capable of capturing infrared emissions.

5 11. A device according top claim 1 whereby said imaging means is capable of capturing electrical emissions.

12. A device according top claim 1 whereby said imaging means is capable of capturing magnetic emissions.

10 13. A device according top claim 1 whereby said imaging means is capable of capturing chemical emissions.

14. A device according top claim 1 whereby said imaging means is capable of capturing temperature emissions.

15. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to record said three dimensional object.

15 16. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in light in the humanly perceivable light spectrum

20 17. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in light in infrared emissions.

18. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in electrical emissions.

19. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in magnetic emissions.

20. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in chemical emissions.

21. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in temperature emissions.

22. A panel according to claim 4 whereby said panel is constructed of a material capable of allowing adequate illumination to pass through said panel to illuminate said three dimensional object.

23. A panel according to claim 5 whereby said panel is constructed of a material capable of allowing adequate illumination to pass through said panel to illuminate said three dimensional object.

24. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object in the humanly perceivable spectrum for its respective imaging means.

25. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object in the infrared spectrum for its respective imaging means.

26. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object for imaging means capable of capturing electrical emissions.

27. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object for imaging means capable of capturing magnetic emissions.

28. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object for imaging means capable of capturing chemical emissions.

29. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object for imaging means capable of capturing temperature emissions.

30. A device according to claim 1 whereby said viewing means may further comprise a computer monitor.

31. A device according to claim 1 whereby said viewing means may further comprise a television screen.

32. A device according to claim 1 whereby said viewing means may further comprise a PDA (personal digital assistant).

33. A device according to claim 1 whereby said viewing means may further comprise a device capable of displaying said three dimensional object in a visually perceivable form.

34. A device according to claim 1 whereby said manipulation may allow for viewing of said three dimensional object in 360 degrees.

5 35. A device according to claim 1 whereby said manipulation may allow for viewing of said three dimensional object in 720 degrees.

36. A device according to claim 1 whereby said identification may also include those maladies that effect other terrestrial flora and fauna, other than homo sapiens.

10 37. A device according to claim 1 whereby said chamber means is further comprised of panels that encompass the three dimensional object sufficiently to capture a real time image of said three dimensional object.

38. A device according to claim 1 whereby said chamber has a means to allow for the entry and removal of said three-dimensional object.

15 39. A device according to claim 1 that may further include a means of detection and monitoring of the level(s) of the illumination generated by said illumination means.

40. A means of detection according to claim 39 further comprising a means of interacting and adjusting the level of said illumination prior to said imaging means capturing an image of said three dimensional object disposed within said chamber.

20 41. A device according to claim 1 that allows for said imaged three-dimensional object's manipulation 360 degrees on the vertical axis.

42. A device according to claim 1 that allows for said imaged three-dimensional object's manipulation 360 degrees on the horizontal axis.

43. A device according to claim 1 that allows for said imaged three-dimensional object's viewing on the z-axis.

5 44. A device comprising an enclosed area, an illumination means, an imaging means and a viewing means.

45. A device according to claim 44 that accurately images an object placed or otherwise located within said enclosed area for later viewing on said viewing means.

46. A device according to claim 44 whereby said enclosed area is of proportionate dimensions to allow for the insertion or placement of an object to be photographed therein.

47. A device according to claim 44 whereby said enclosed area is constructed of transparent or otherwise translucent material that will allow for the illumination of an object contained or laced therein by said illumination means.

15 48. A device according to claim 44 whereby said illumination means produces ample illumination in the humanly perceivable spectrum, infrared, electrical, magnetic, chemical or temperature such that the object placed or otherwise located within said enclosed area may be imaged or otherwise viewed to attain the desired results.

20 49. A device according to claim 44 whereby said imaging means may image an object placed or otherwise located within said enclosed area in the humanly perceivable spectrum, or applicable infrared, electrical, magnetic, chemical or temperature spectrum.

50. A device according to claim 44 whereby said viewing means is further comprised of a USB hub, interfacing cable, computer processor or like processor, monitor, and control means.

51. A viewing means according to claim 50 whereby said control means is voice automated.

5 52. A viewing means according to claim 50 whereby said control means is keyboard controlled.

53. A viewing means according to claim 50 whereby said control means is mouse controlled.

54. A viewing means according to claim 50 whereby said control means is cursor controlled.

55. A device capable of assisting in the remote diagnosis of maladies that affect the human skin, that further comprise an imaging and viewing means.

56. A device that allows for the imaging of a three dimensional object under illumination; said device further comprising an enclosure, imaging means, illumination means, illumination control means, viewing means.

57. A device according to claim 56 wherein said illumination is within the spectrum of humanly perceivable light.

58. A device according to claim 56 wherein said illumination is within the spectrum of infrared.

59. A device according to claim 56 wherein said illumination is within the spectrum of ultra violet.

60. A device according to claim 56 wherein said illumination is magnetic in nature.

61. A device according to claim 56 wherein said illumination is chemical in nature.

62. A device according to claim 56 wherein said illumination is electrical in nature.

63. A device according to claim 56 wherein said illumination is thermal energy.

64. A device according to claim 56 wherein said enclosure allows for the entry or placement
5 of a three-dimensional object therein.

65. A device according to claim 56 wherein said enclosure is further manufactured of
material that permits said illumination to pass there through to further illuminate said
three dimensional object.

66. A device according to claim 56 whereby said imaging means comprises at least one
camera, or like device, capable of imaging and storing an image of said three dimensional
object.

67. A device according to claim 66 wherein said image is in the humanly perceivable
spectrum.

68. A device according to claim 66 wherein said image is in the infrared spectrum.

69. A device according to claim 66 wherein said image is in the ultra violet spectrum.

70. A device according to claim 66 wherein said image record magnetic information of said
three dimensional object.

71. A device according to claim 66 wherein said image records chemical information of said
three dimensional object.

72. A device according to claim 66 wherein said image records electrical of said three dimensional object.

73. A device according to claim 66 wherein said image records temperature information of said three dimensional object.

5 74. A device according to claim 1 whereby said illumination means produces sufficient illumination such that said three dimensional object is sufficiently illuminated such that an accurate image of said three dimensional object may be taken by said imaging means.

75. A device according to claim 56 whereby said illumination control means is further comprised of a monitor means located in or capable of monitoring the illumination within said enclosure and adjustment means located without said enclosure such the level of illumination may be assessed and adjusted such that the image of said three dimensional object may effectively illuminated.

76. A device according to claim 56 whereby said viewing means further comprises a connection means, by and between said imaging means and a monitor means, wherein said monitor means is capable of rendering a two dimensional rendition of said imaged three dimensional object, and further comprises a manner by which said imaged three dimensional object in said rendition may be manipulated in 360 degrees.

77. A device capable of imaging the surface of the human skin and rendering the same in a visual perceivable form that further allows for user viewing and manipulation.

20 78. A device according to claim 77 that further allows said manipulation of said imaged surface on the horizontal axis.

79. A device according to claim 77 that allows said manipulation of said imaged surface on the vertical axis.

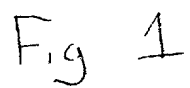
80. A device according to claim 77 that allows for said manipulation of said imaged surface on the z-axis.

ABSTRACT

Total Immersion Photography (TIP) is disclosed, preferably for the use of screening for various medical and cosmetic conditions. TIP, in a preferred embodiment, comprises an enclosed structure that may be sized in accordance with an entire person, or individual body parts.

- 5 Disposed therein are a plurality of imaging means which may gather a variety of information, e.g., chemical, light, temperature, etc. In a preferred embodiment, a computer and plurality of USB hubs are used to remotely operate and control digital cameras. The photo information is then transferred via the USB to the computer for processing and aggregation. Subject information is gathered to configure the operation of the various parameters of the device.

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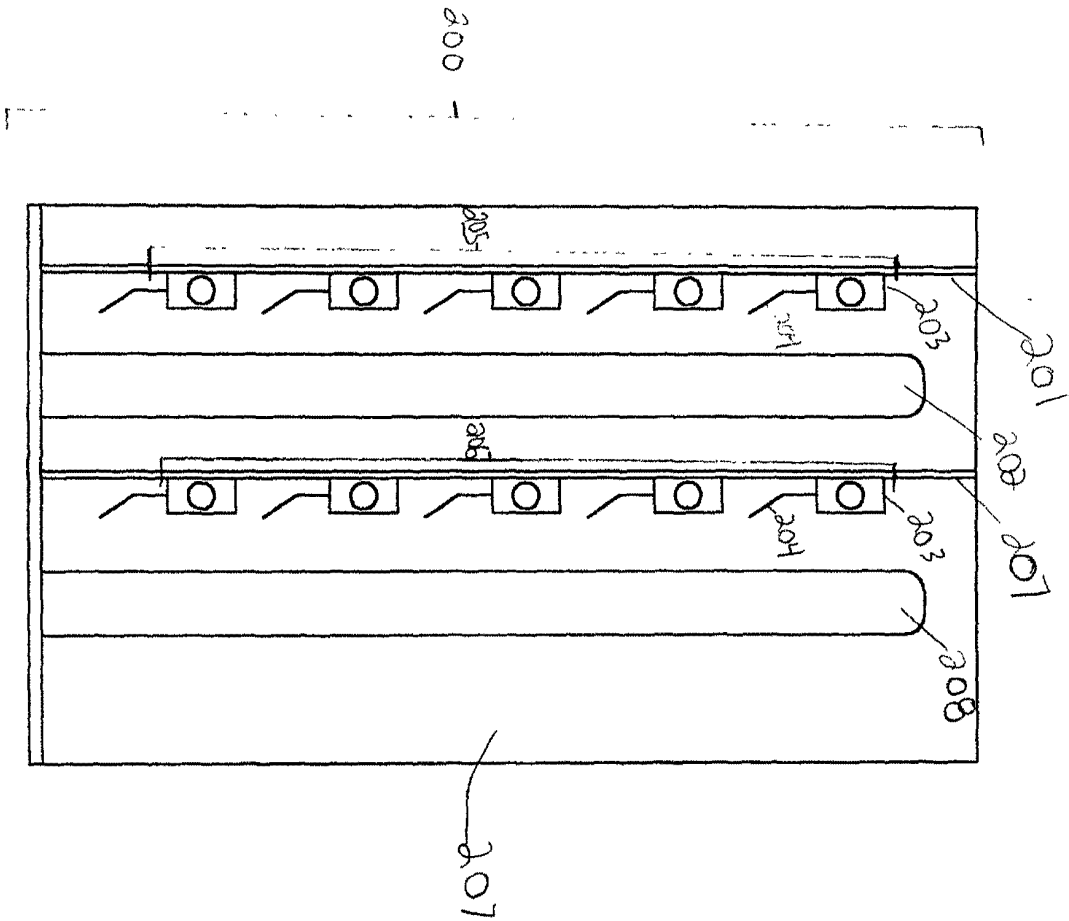


Fig. 200

The diagram shows a circular track with a central point labeled 308. The track is divided into segments by radial lines. Various components are labeled with reference numerals: 301, 302, 303, 304, 305, 306, 307, 308, and 309. The labels 301, 302, 303, 304, 305, 306, 307, 308, and 309 are positioned around the perimeter of the track, with arrows pointing to specific components. The label 301 points to a rectangular block on the outer edge. The label 302 points to a rectangular block on the inner edge. The label 303 points to a rectangular block on the inner edge. The label 304 points to a rectangular block on the outer edge. The label 305 points to a rectangular block on the outer edge. The label 306 points to a rectangular block on the inner edge. The label 307 points to a rectangular block on the outer edge. The label 308 points to the central point. The label 309 points to a rectangular block on the inner edge.

Page 57 of 358.

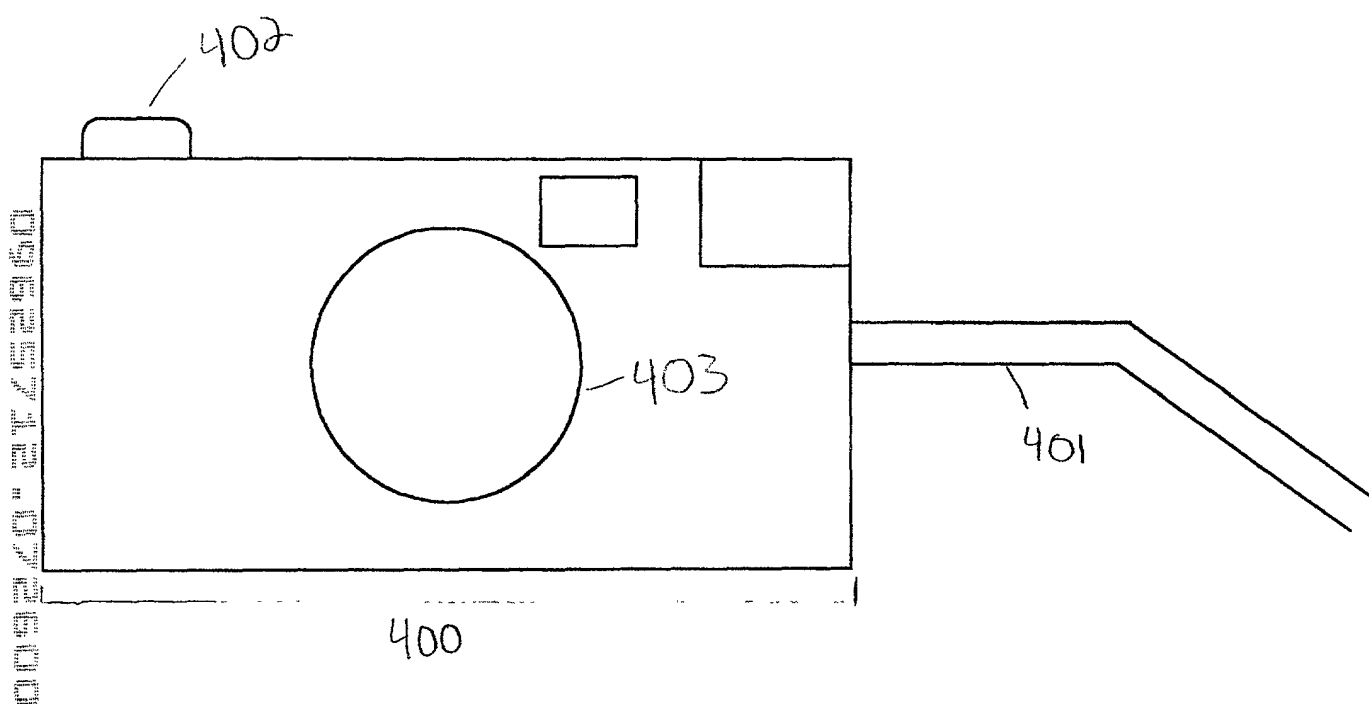
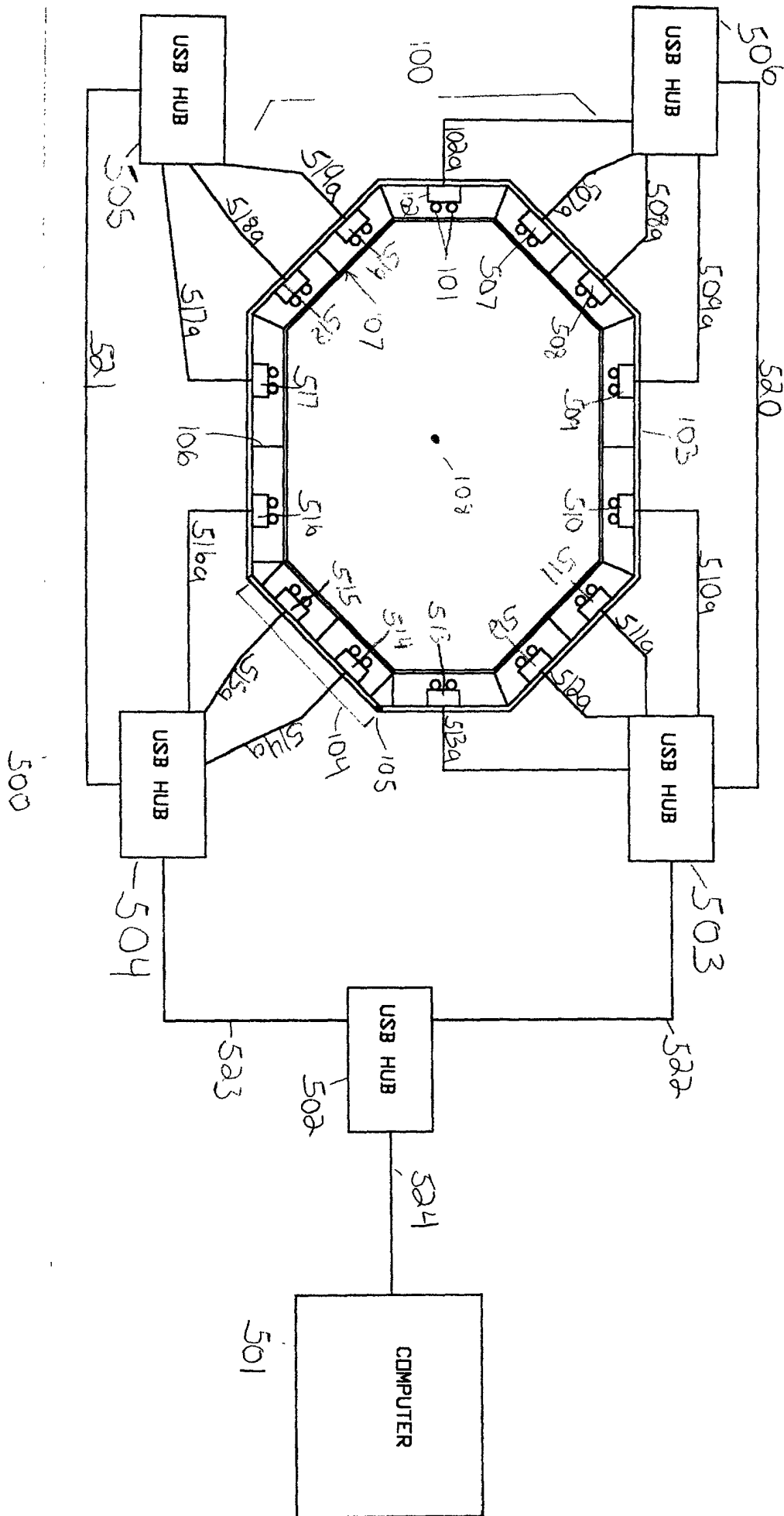


Fig. 4



09625712.072600
F.95

**DECLARATION
AND POWER OF ATTORNEY**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below at 201 et seq. underneath my name.

I believe I am the original, first and sole inventor if only one name is listed at 201 below, or an original, first and joint inventor if plural names are listed at 201 et seq. below, of the subject matter which is claimed and for which a patent is sought on the invention entitled APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY the specification of which:

☒ is attached hereto ☐ was filed on as Application Serial No. (for declaration not accompanying application)

with amendment(s) filed (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119/§172 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED PRIOR TO THE FILING DATE OF THE APPLICATION			
APPLICATION NUMBER	COUNTRY	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 U.S.C. 119/172
N/A			YES ☐ NO ☐
			YES ☐ NO ☐
			YES ☐ NO ☐
			YES ☐ NO ☐

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NO.	FILING DATE	STATUS		
		PATENTED	PENDING	ABANDONED
N/A				

POWER OF ATTORNEY: As a named inventor, I hereby appoint the law firm of Holubar, McKinney & Ross and therein Ralph J. Crispino, Reg. No.: 46,144, whose address is 4 Child's Lane, Old Field, New York 11733, and the law firm's attorneys, to prosecute this application, and to transact all business in the Patent and Trademark Office connected therewith.

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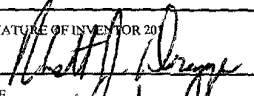
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE OF INVENTOR 201 	SIGNATURE OF INVENTOR 202	SIGNATURE OF INVENTOR 203
DATE 7/18/2020	DATE	DATE
SIGNATURE OF INVENTOR 204	SIGNATURE OF INVENTOR 205	SIGNATURE OF INVENTOR 206
DATE	DATE	DATE

PATENT NUMBER

U.S. **UTILITY** Patent Application

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PATENT DATE

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Q.A

APPLICATION NO. 09/625712	CONT/PRIOR	CLASS ~~356~~ 600	SUBCLASS 476	ART UNIT ~~2877~~ 3742 ~~3757~~	EXAMINER ~~Caster~~ Leung

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Rhett Drugge

Apparatus for total immersion photography

PTO-2040
12/99

ISSUING CLASSIFICATION

[illegible]

☐ TERMINAL DISCLAIMER	DRAWINGS			CLAIMS ALLOWED	
	Sheets Drwg.	Figs. Drwg.	Print Fig.	Total Claims	Print Claim for O.G.
☐ The term of this patent subsequent to _____ (date) has been disclaimed.	_____ (Assistant Examiner) (Date)			NOTICE OF ALLOWANCE MAILED	
☐ The term of this patent shall not extend beyond the expiration date of U.S Patent. No. _____ _____ _____	_____ (Primary Examiner) (Date)			ISSUE FEE	
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O.I.P.E. CLASSIFIER		6453-10	8-7-00
FORMALITY REVIEW	EW		9/14/00
RESPONSE FORMALITY REVIEW			

INDEX OF CLAIMS

✓ Rejected N Non-elected
 = ... Allowed I Interference
 - (Through numeral) ... Canceled A Appeal
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Claim	Date
Final Original	
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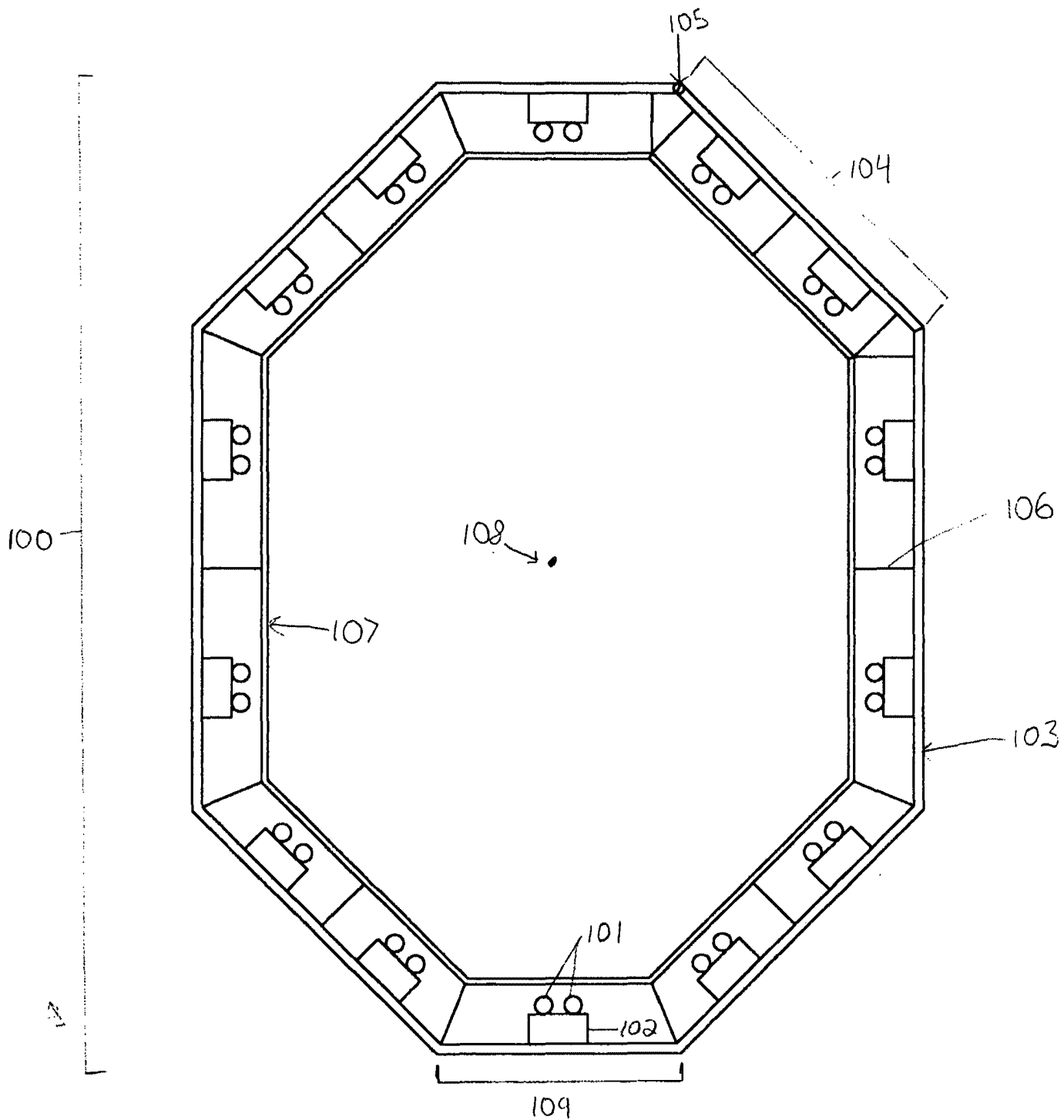


Fig 1

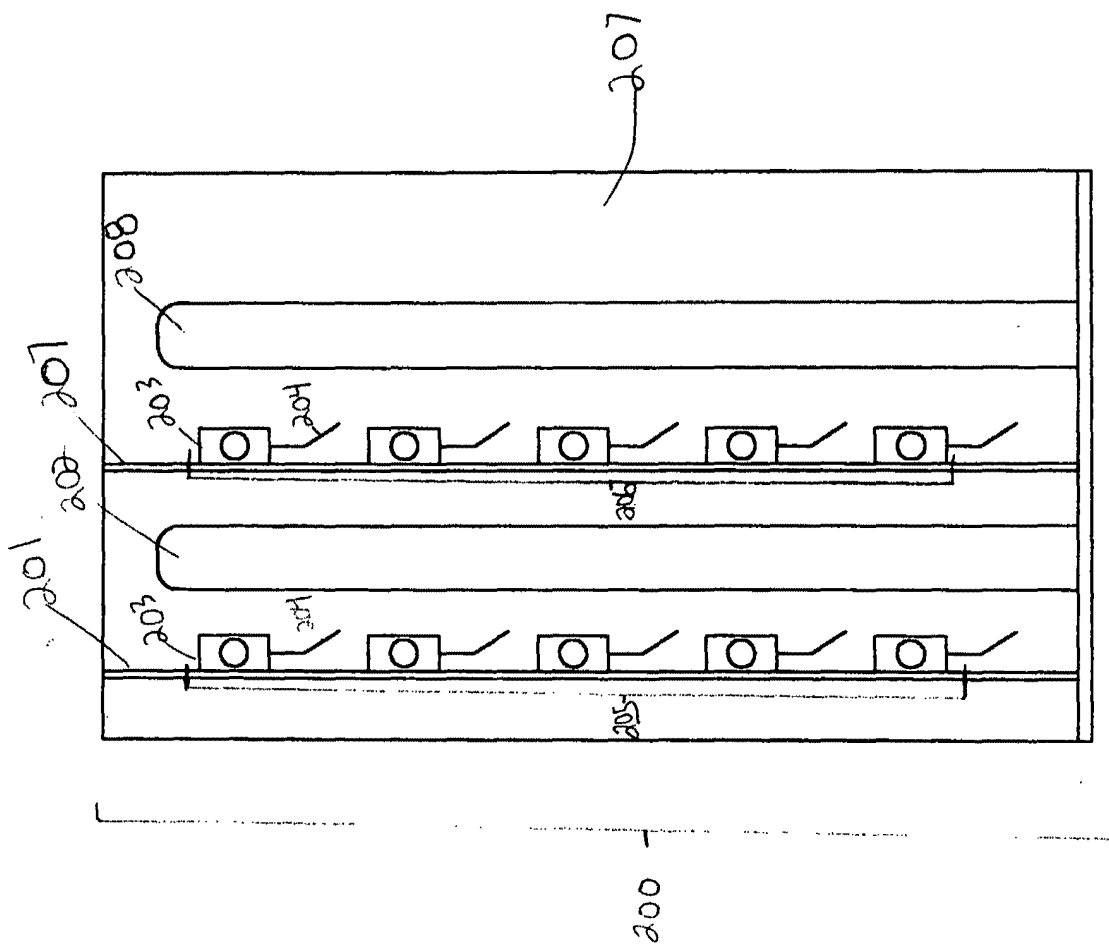


Fig. 20525712.072600

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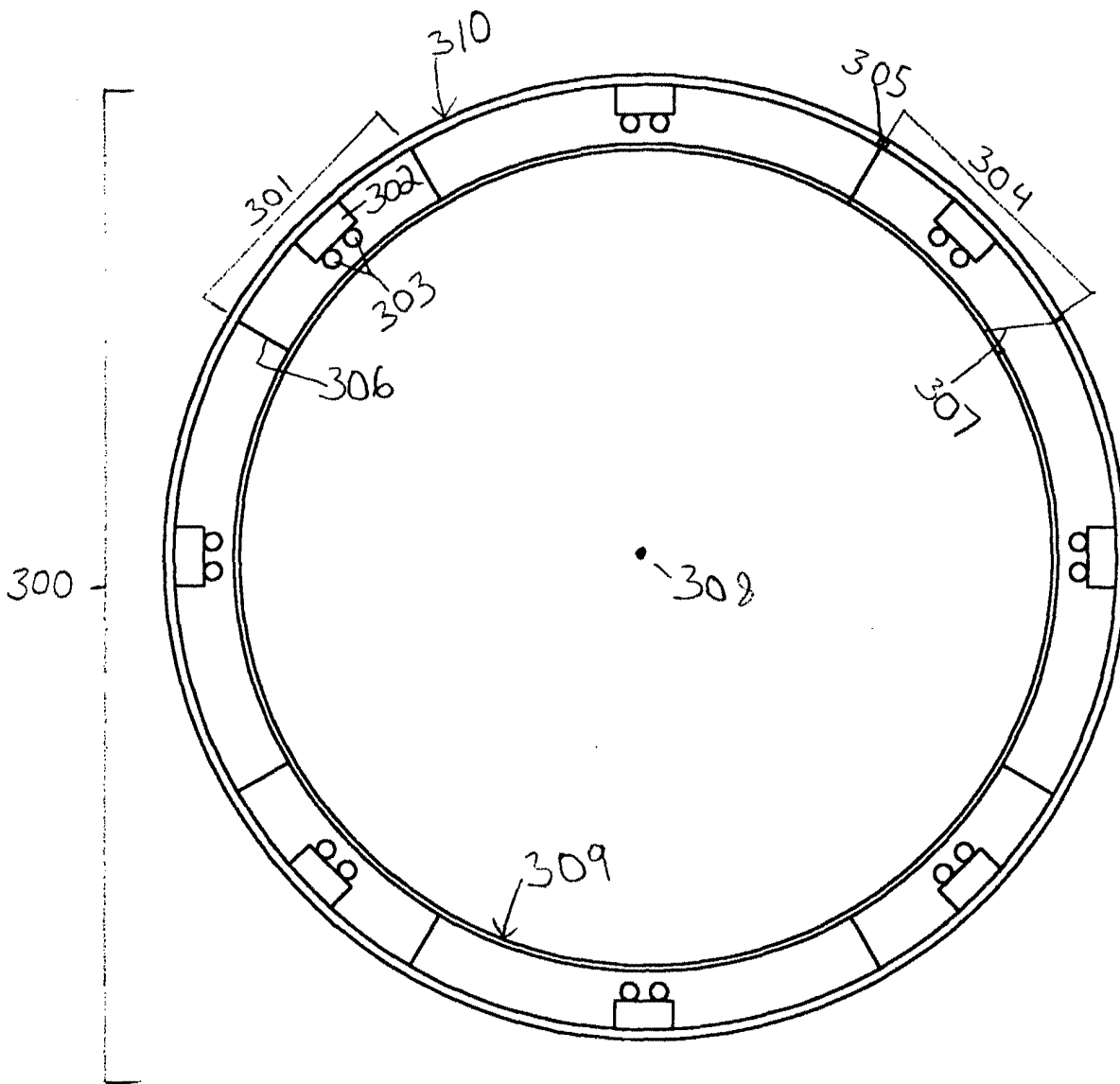
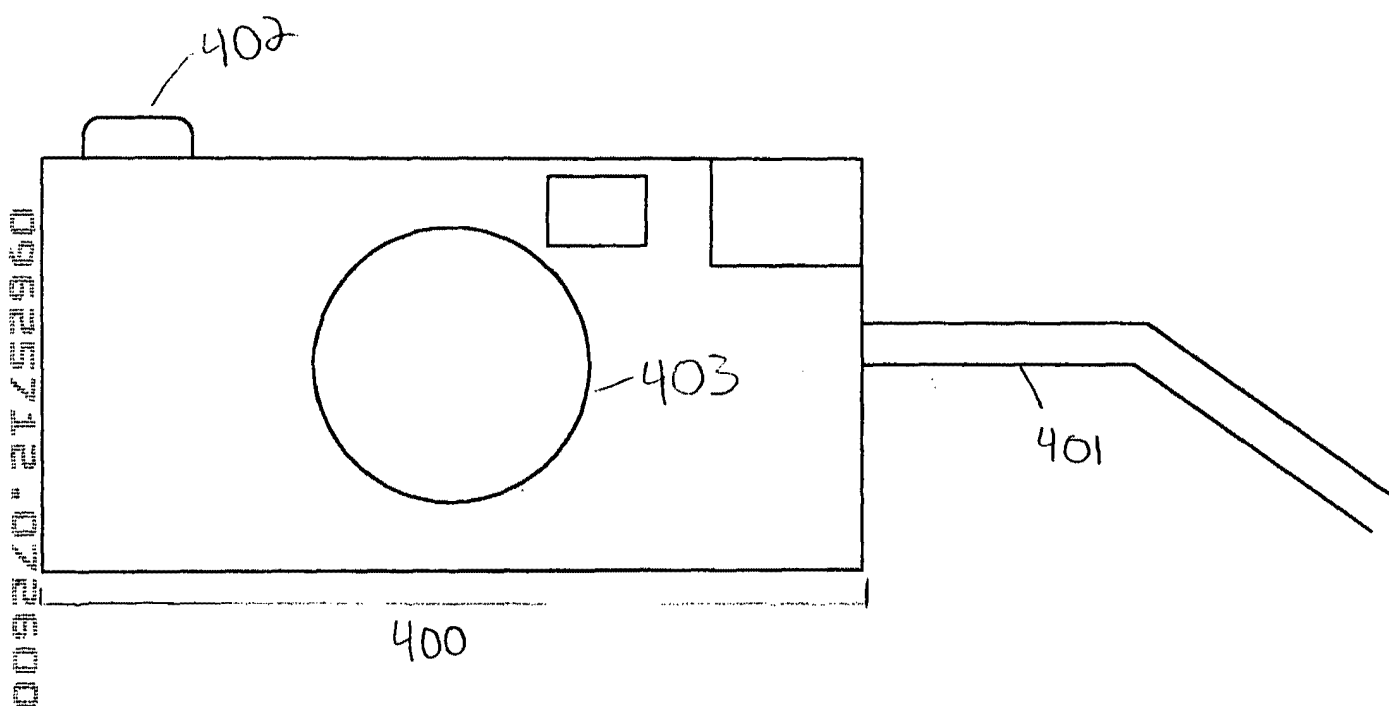
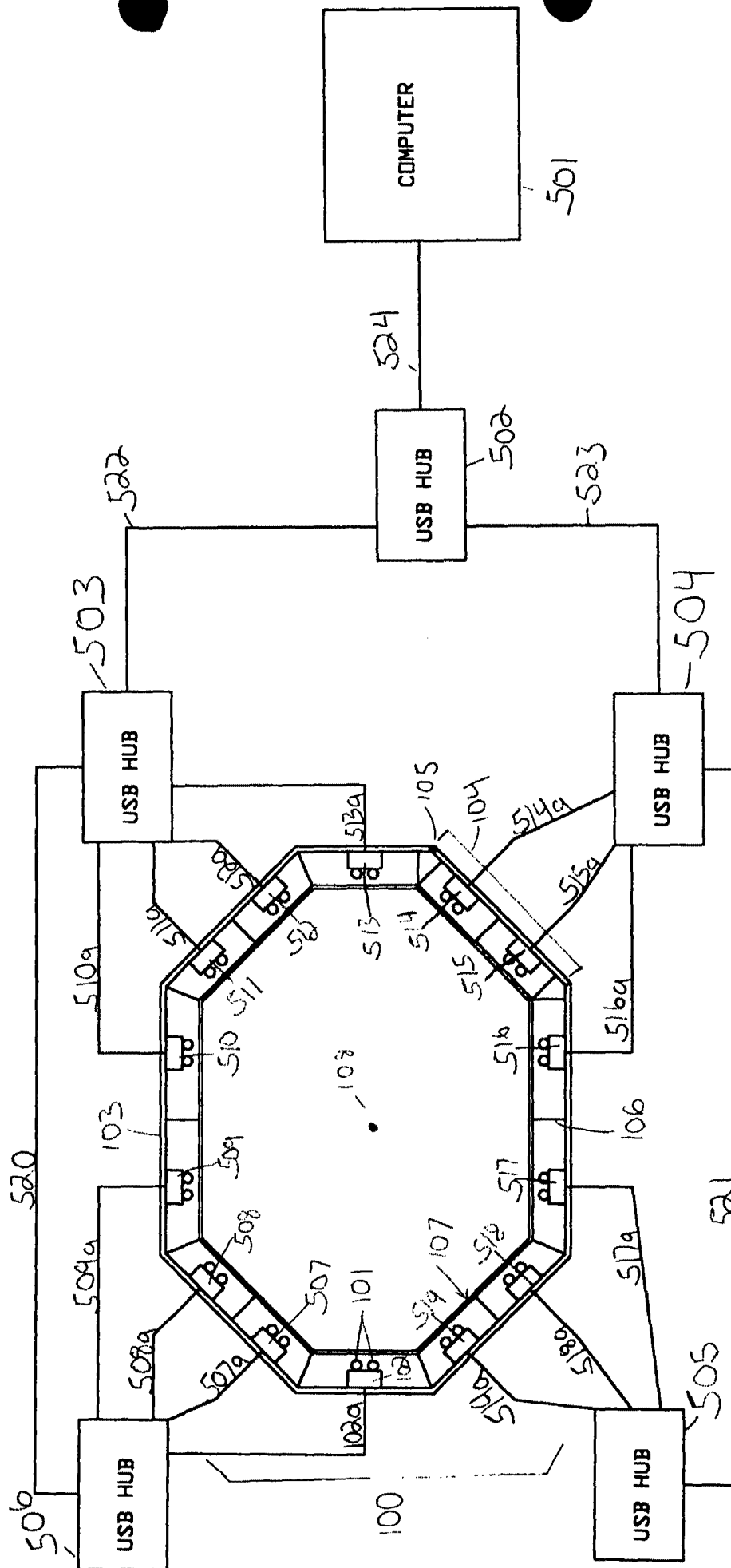


Fig. 3





500

APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY

Field of the Invention

5 The present invention relates primarily to conditions pertaining to health and cosmetics. As such, the device allows for the imaging of total or subtotal non-occluded body surfaces in order to detect health and cosmetic conditions and involves the measurement and analysis of an optically depicted image of a patient's surfaces by standard color imaging, heat, electromagnetic or chemical imaging. The present invention allows for image pixel acquisition, its data collection, data aggregation, data dissemination, data manipulation, and subsequent viewing. The present invention provides for tissue analysis of a patient such that relevant determinations may be made such as detection of diseases or related problems of cosmesis.

Background of the Invention

This invention relates to the detection, diagnosis and treatment of skin cancer as well as other diseases and cosmetic conditions of the visible human.

10 Half of all new cancers are skin cancers. About 1.3 million new cases of skin cancer will be diagnosed in the United States each year. About 80 percent of the new skin cancer cases will be basal cell carcinoma, 16 percent are squamous cell carcinoma, and 4 percent are melanoma.

Both basal cell carcinoma and squamous cell carcinoma have a better than 95 percent cure rate if detected and treated early. Squamous cell carcinoma of the skin accounts for about 2.3 thousand deaths annually.

20 The incidence of melanoma has more than tripled among Caucasians between 1980 and 2000. There will be about 47,700 new cases of melanoma in 2000. At current rates, one in 74

Caucasian Americans will develop melanoma. With that statistic, one person dies of melanoma every hour. This year, approximately 7,700 deaths will be attributed to melanoma in the ratio of 4,800 men and 2,900 women. Older Caucasian males have the highest mortality rates from melanoma. In women under the age of 30, melanoma is more prevalent than breast cancer. All of these cancers are associated with sun exposure with the majority occurring after age 50. Furthermore, the incidence rates for all skin cancers are increasing with movement of white populations south to sunnier climates and the greater numbers of individuals living into their 80s. With the "baby boomer" generation currently in their late 50s, the medical community is faced with an explosive skin cancer epidemic.

There is a need for practical device that allows for the rapid screening of individuals for skin cancer and other maladies of the skin in early stages of development.

Currently, clinical diagnosis of skin disease is generally accomplished by visual inspection under white light illumination. In this process, the reflectance light of a skin lesion is examined. Visual diagnosis alone may not be particularly accurate for early detection of skin cancer since many skin conditions have a similar appearance under white light. Therefore, when a suspect lesion is identified by visual examination, a biopsy is often performed for a definitive diagnosis. Not only is it crucial to diagnose skin pre-cancer or skin cancer at an early stage when it is curable, but it is also important to improve the clinical diagnosis of suspected skin lesions so as to avoid unnecessary skin biopsies.

Several approaches have been tried to improve skin cancer diagnosis. Digital processing of reflectance images has been extensively investigated recently and has been found in melanoma to be more accurate than specialist diagnostic accuracy. An alternative approach is

ultraviolet (UV), infrared (IR) or polarized light photography that extends visual perception of a physician to the UV, IR or polarized light reflectance patterns. A further alternative approach that is already in widespread medical use involves illuminating the skin with a "Wood's lamp" which consists of a mercury discharge lamp associated with a filter that transmits UVA light with a 365 nanometer peak while absorbing visible light. When this device is used to assist in skin diagnosis, the eye serves as both the detector and the long pass filter. The eye is not sensitive to UV light, but is sensitive to visible fluorescence light. When the "Wood's lamp" is used in a darkened room, where the physician sees an image of a fluorescing disease site. The "Wood's lamp" is useful for the diagnosis of some skin conditions such as tinea capitis, tinea versicolor, erythrasma, and some pseudomonas infections, as well as aiding in the detection and diagnosis of hypopigmented skin. It is of no value in conditions where the fluorescence is not in the visible spectrum. These techniques depend on lighting and sensor techniques and may be incorporated into the total immersion photography system.

Prior Disclosures

Currently, clinical diagnosis of skin disease is generally accomplished by visual, verbal and handwritten history taking and by inspection during a visit to the physician's clinic. Initial inspections are routinely performed by general practitioners. Dermatologists may be sought out by patients or used upon referral by general practitioners. Either way, an appointment is required. Visual inspections are often limited by the physician's schedule or patient modesty. The patient may only be willing to have the area of concern inspected. General practitioners, the HMO "gatekeepers", have been documented to be less effective in discerning potential cancerous lesions than dermatologists. If referrals are not made, possible malignancies may be overlooked. A second approach is chemical emulsion or digital photography that can extend visual perception

of a physician to the UV or IR reflectance patterns. Such approaches have been limited by the need for a "point-and-shoot" photographer. These more limited approaches require only images of those areas in question. This leaves open the possibility of an incomplete diagnosis. This approach may be augmented by the use of skin surface epiluminescence microscopy.

5 Epiluminescence light microscopy (ELM) represents a technique which permits examination of the surface of the skin and also--by using the oil immersion technique--of the dermal-epidermal junction zone. The commonly used method of epiluminescence microscopy is based on point and shoot techniques requiring a trained operator. Recently, there have been investigations into the use of digital imagery to aid with dermatologic diagnoses. The prevalent technique uses either
10 digitally processed standard photography or direct digital photography of sections of the subject's body. These images are then stored for inspection, referral, and/or forwarding. For comprehensive surface imaging, this approach requires multiple posings by the photographer and the subject that may exceed 30 views in total. Depending on the medium used, review of the images may or may not be available for inspection during the same appointment. Specific
15 applications include the MoleMap and MoleMax II systems. MoleMap uses a combination of three images (epiluminescence, macro and low resolution) to identify possible melanoma. Visual type resolution is used primarily for mapping suspicious locations. Images are diagnosed and reported on by dermatologists before being permanently archived on a computer system for future comparisons. The MoleMax II system combines epiluminescence microscopy and
20 computer technology for data storage and retrieval. The system can be adapted for body surface imaging (using serial individually-photographed images). Images are available for inspection during the current office visit, allowing simultaneous dermatologist/patient on-screen observation. Since the outcome of treatment of cancer is more favorable the earlier and more

accurately the cancer is detected, the present invention is a substantial advancement in improving public health by eliminating the barrier of an available expert photographer or dermatologist for effective skin screening. This device provides a complete non-covered screening in an automated fashion, removing the intrusion of physical inspection and decreasing the possibility of missed lesions. The image acquisition does not require the presence of a physician or medical photographer, thereby increasing convenience to the patient/subject. This, in turn, would allow the placement of the device independent of the physician's or medical photographer's office, a benefit to public health programs.

Since the outcome of cancer treatment is more favorable the earlier and more accurately the cancer is detected, the present invention is a substantial advancement in improving public health by automating the imaging of potentially cancerous lesions in a more rapid and complete method. In light of the many advantages of early detection, there exists a clear need for a device that can greatly enhance the current methods of skin cancer screening. Furthermore, such a device will also find use in the cosmetic and beauty industry.

Summary of the Invention

The TIP system- including the structure, infrastructure, and imaging system, requires little training, minimal staffing, and may be constructed with simple, easily available tools. TIP is a device that may be easily transportable, providing opportunity for skin screenings in diverse locations such as gym facilities, recreation centers, physician's offices, and other health oriented facilities. Medically under-served and restricted locales, e.g., rural areas and prison facilities, will also benefit from TIP system remote diagnostic capabilities (telemedicine), bringing the care of medical specialists to the patients.

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5 The present invention, Total Immersion Photography (TIP), relates initially, and thus generally, to cancer detection and, more particularly, to skin cancer, e.g., melanoma, detection involving the measurement and analysis of an optical depiction of the subject patient's skin surface by standard color imaging, as well as heat, electromagnetic or chemical imaging. The present invention allows for subject acquisition, data collation, data aggregation, data dissemination, data manipulation, data viewing in a preferable medium and analysis of a subject patient's skin surface, or other body tissue and, therefore, providing for the subject tissue's analysis such that relevant determinations may be made. TIP is a digital image acquisition device, the products of which, are capable of a variety of applications. For instance, panoramic mosaics of the body, 3-D models of the body, images for use with "machine vision", and interfacing with medical records are such possible uses.

15 The present invention is uniquely situated whereby TIP may operate as the screening test, as well as a confirmation of a positive result from a screening test, or even in a manner that provides for second opinions. In either circumstance, if the results of the administered test are confirmatory, *i.e.*, melanoma is detected or otherwise identified on the skin surface. If, on the other hand, it is determined that melanoma is not present on the skin surface and, consequently, that the screening test was erroneous, the patient is spared the trauma of having to undergo the full work-up including the biopsy. In that respect, confirmation of cancer by analyzing the skin surface as set forth herein has many significant advantages over conventional melanoma tests, as well as cancer detection methods in general.

TIP comprises an image acquisition device that is further comprised of an enclosed structure that is and can be designed and assembled according to the human physiology to be analyzed such that the enclosed structure maximizes the ease of acquisition of the human body

with traditional and/or digital photography. For purpose of discussion herein, the TIP structure may be comprised of fourteen (14) "panels". These fourteen (14) panels should be set forth in such that one panel has a "mirror image" panel. Alternatively, the TIP device may be constructed in a circular derivative, or like structure, of the fourteen (14) panel embodiment or other such number of panels keeping with the operative requirements of the device.

Contained within the enclosed structure are devices capable of "photographing" the body in a static position (motion or time-lapsed photography is also be provided for). The photographic device(s) may be capable of "taking" the body through traditional photography means, and/or temperature, chemical or electromagnetic based means. For purposes of discussion herein, the photographic means, e.g. a camera or like device capable of "capturing" a still image or video streamed images, ("camera") array should consist of no less than forty (40) cameras. The camera(s), as envisioned and discussed herein are set forth in the fourteen "panels" such that there are five (5) camera per vertical panel section (8 X 5 + top and bottom cameras =42). This structure of cameras and panels may be easily modified without departing from that which is taught, disclosed and intended. The basis for the panel-camera array is to accurately capture the physiological attributes desired from the subject patient. With subject placement, the camera array coordinates and distances are known in relation to the subject. These distances, in combination with focal length and resolution information, allows for the precise measurement of the human features of interest. The camera(s) may be left "on", engaged or otherwise activated at a desired time.

To effect the proper "picture" lighting or other optical, heat, chemical or electromagnetic, enhancement means may be affixed to, or placed around the structure such that the photographic device's "capturing" of the subject physiology may be optimized. Accordingly, for purpose of

discussion herein in regard to traditional photographic means the photographic optimization may be accomplished via a lighting means consists of fluorescent lights. These lights should be situated and placed behind panels constructed of Lucite or like material containing the same or similar physical and optical properties. The lighting means may be on "on" or activated prior to engagement of the camera or photographic means, or further, remotely triggered at a predetermined time.

In the event the camera(s) and/or the lighting means are triggered remotely or upon a sequencing event the same can be controlled manually or through computer assistance. Should computers or like devices be used to facilitate the process, the same may consist of at least one (1) USB Hub, but as is contemplated herein ten (10) USB Hubs with 7 (7) USB ports per hub. In turn, there should be a data processor or like means that resides on a server or so similarly situated.

The subject patient or physiological area would enter or be placed into the TIP enclosed structure, and if need be into the specified position for imaging. When in position, the camera device and enhancement, if not engaged, are so engaged and the image(s) obtained. Thereafter, the images are transmitted from the camera device(s) through the USB(s) onto a server/computer means capable of aggregating, manipulating and disseminating the image(s) collected into a visually discernable format. As such, the images can be displayed synchronously in 2D format or processed into 3D renderings for desired or required viewing.

As a result of the aforementioned TIP device, a doctor or other individual interested in acquiring the imaging of an individual or physiological area is provided a device capable of acquiring specific imagery and related information that may be further viewed, and/or collected,

registered and/or stored for analysis. And as is considered and contemplated herein in regard to conditions and diseases of the visible human (but to also include and not limited to general physical, topical and subcutaneous analysis).

Accordingly, the apparatus of the present invention provides means for diagnosis of a skin disease site using spectral analysis comprising: a light source for generating light to illuminate the disease site; a probe means to conduct the illumination light from the light source to the disease site and to collect the reflected and fluorescence light and conduct said light to be analyzed; and spectral analysis means optically connected to the probe means for generating and displaying spectral measurements of the fluorescence light and the reflectance light to assist the user in diagnosing the disease site.

In a further aspect, the present invention provides a method for diagnosis of a skin disease site using spectral analysis comprising the steps of: illuminating the disease site with a light source to generate fluorescence and reflectance light at the disease site; collecting the generated fluorescence and reflectance light; conducting a spectral analysis of the collected light using a spectrometer; displaying spectral measurements of the fluorescence light and the reflectance light; and analyzing the measured fluorescence and reflectance spectra together to make a diagnosis of the disease site.

In a preferred embodiment, the apparatus of the present invention includes a compact spectrometer connected to a computer, a fluorescence excitation light source with a shutter, a white light source with a shutter, a bifurcated fibre bundle, a light coupler, a skin probe, and controlling electronics. The system is designed to automatically switch between the fluorescence excitation light and the white light sources and complete fluorescence and reflectance spectral

measurements of a skin disease site sequentially in a few seconds. The system exploits the spectral differences of different skin diseases to aid in the dermatologic diagnosis. In particular, the apparatus provides a low cost, compact system that is capable of quickly and efficiently performing combined fluorescence and reflectance spectral analysis.

5 Applications

Below are some examples, but not limited to, in regard to the invention's scope and intended applications of TIP:

Automated Acquisition

Storage and display of the non-occluded visible body surface properties including but not limited to diseases and cosmetic conditions of the skin, hair and nails and body measurements. In this application the body surface can be viewed and measurements taken, evaluated, viewed, collated, and cross-referenced in an easy and efficient manner.

Melanoma and Skin Cancer Screening

Large populations can be effectively screened in a short period of time for skin cancers and related maladies using this device. The consistent lighting and repeatability of the imaging technique make it ideal for replacing the skin cancer screening environment where poor lighting, patient movement and dialogue, patient modesty and other factors increase the likelihood of an incomplete examination. By removing most of these factors, the physician is allowed undistracted viewing time of the patient's skin surface. In addition, the travel and time expense of skin cancer screenings at a location other than the physician's own office is large. For evaluations of change over time and detection of new lesions, 3-month, 6-month and yearly

scans can be obtained and analyzed in relation to one another. All evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that patient, doctor and health care provider time is minimized (and thus cost reduced). Data will be recorded and aggregated such that accurate assessments of the patient and population may be derived.

5 Medical Practice Aid/ Documentation System

The availability of images of a patient undergoing therapy is critical to a practicing dermatologist who bases his/her clinical evaluation on the "improvement" he/she sees in the patient over time. This is especially pertinent to chronic conditions such as acne, urticaria, atopic dermatitis, contact dermatitis, psoriasis, blistering disorders, etc. The system acts as a "medical memory" of the patient as he/she returns to the office for reevaluation.

Beauty Evaluations

Consumers flock to cosmetic counters to purchase makeup to hide their skin conditions. Eighty percent of skin cancers are found on the head and neck. A "beauty mark" that is identified by the patient on the face could be dermatosis nigra, seborrheic keratosis, compound nevus or melanoma. A raised pink or red "pimple" could be a basal cell carcinoma or granuloma or sarcoid lesion. Other conditions include broken blood vessels (red lines) which can be indicative for diagnoses of telangiectasias and rosacea. Pigment disorders such as vitiligo (lack of melanin), melasma (increased melanin), as well as discolorations due to excessive sun exposure are challenging to hide with makeup. Inflammatory skin conditions such as seborrheic dermatitis, psoriasis and eczema cause red, scaly patches which are chronic conditions falsely managed by moisturizers and makeup formulations. The information can be used to aid in makeover consultations. Consumers can be evaluated as to their current skin regimens and their conditions

and followed over time as they undergo medical therapy. In addition, topical and internal medicines can be studied for their effectiveness over time.

Body Morphology Analysis- Shape Evaluation

Medically consequential conditions of the skeleton such as limb deformities and the spine deformities of kyphosis and scoliosis may be assessed photogrammetrically through TIP system. The consumer is also curious about what "shape" they are in mainly for appearance reasons. The physician or physical trainer is interested in the "shape" of the patient or client for both health and beauty reasons. This invention allows for a total body evaluation on several dimensions. Measurements and comparisons of body contours, fat deposit analysis, assymetry, etc. with volume measurements will be valuable for the cosmetic surgeon, the physician, the physical trainer, the clothier, etc. Medical and health decisions will be aided with such information. These evaluations can then be viewed, collated, and cross-referenced in an easy and efficient manner.

Cosmetic Surgery Applications

Preoperative evaluations as well as postoperative analysis and comparisons can be made using this device for all cosmetic surgery procedures. This is especially true for but not limited to facial surgery, eyelid surgery, face lifts, neck lifts, laser resurfacing, laser hair removal, soft tissue augmentation and liposuction. The physician can look to reduce asymmetry of the patient's anatomy to enhance the outcome of cosmetic surgery. In addition, measurements of graft survival and soft tissue survival as well as measurements of soft tissue removal can be more accurately defined. These evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that studies can be made of the procedures where there are currently none.

Soft Tissue Manipulation

Volumetric measurements of soft tissue will facilitate studies of cosmetic procedures of the subcutis, glands, muscles, and skeleton. It will enhance the accuracy of body volume measurements for both soft tissue augmentation and soft tissue removal. Patients will be measured before soft tissue manipulation so that the procedure is more accurately applied to the areas to be treated. The volumetric data will serve as a baseline to study the effectiveness of the treatment and will also enhance postoperative evaluation. For soft tissue augmentation using live tissue, it will allow for survival studies to be conducted. This will be a significant improvement over the current water-displacement techniques and 2D renderings. These evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that patient and doctor time is minimized. Data can be reviewed in a postoperative environment to assess outcomes and be used for outcome studies.

Percent of Surface Involved Score Calculation

This device will be able to standardize the Percent of Surface Involved ("POSI") and Psoriasis Area Surface Involvement ("PASI") scoring for the evaluation of extent of disease of such skin diseases but not limited to psoriasis, pemphigus, burn victims, etc. Automation of the calculation will be critical. Topical and internal medicines can be studied for their effectiveness over time. These calculations can be collated and cross-referenced in manner such outcome studies of therapies can be collected for large populations and published.

Hair Loss Evaluation

Progression of hair loss and treatment evaluation can be monitored with such a device. Topical and internal medicines can be studied for their effectiveness over time. In addition, hair

transplantation techniques (planning, mapping and performing) will be enhanced. Postoperative and follow-up graft survival studies will also be more accurate. Such an evaluation procedure can be viewed by patient and health care professional alike, whereafter the same may be collated, and cross referenced in a manner such that time is minimized, data is accurately recorded and aggregated so an accurate assessment and prognosis may be made.

Wound Healing Evaluations

Therapeutic analyses for post operative wounds, traumatic wounds, ulcers, burns, scars, etc. collectively "wounds" can be made using this device. Measurements of the "wounds" at the outset of therapy and then at specific intervals of time allow for accurate evaluation of the progression of healing time and patient responsiveness to treatment. Topical and internal medicines can be studied for their effectiveness over time. These evaluations and resulting analyses can be viewed, collated, and cross referenced in an easy and efficient manner such that time is minimized, data accurately recorded and aggregated for efficient and accurate assessments and prognosis made.

Remote Diagnostic Evaluations

This device will allow for both local and remote medical and cosmetic consultations. These evaluations and applications can be shared effectively using store-and-forward telemedicine techniques. The TIP data set can be viewed, collated, and cross referenced in an easy and efficient manner such that patient and doctor time is minimized, data accurately recorded and aggregated and thus efficient and accurate diagnoses.

Accordingly the following are a list, not inclusive, of those ailments, maladies and concerns that can be addressed by the device as disclosed herein: Disorders relating to and/or

resulting from: altered reactivity; bacterial and fungal diseases; cell kinetics; cell differentiation; drugs and chemical agents; epidermal cohesion; epidermal appendages and related disorders; epidermal and appendageal tumors; hematology; infestations, bites, and stings; lymphomas and pseudolymphomas; mechanical and physical factors; melanocytes; mucocutaneous integument; neoplasms; nutrition, metabolism, and genetics; organ systems: gastrointestinal, cardiovascular, pulmonary, endocrine, renal and other organ systems; persistent inflammation; rheumatology; including but not limited to sexually transmitted diseases.

Also identifiable are conditions of surgical dermatology, including but not limited to: cryosurgery; hair loss and transplant; liposuction; micrographic surgery; nail surgery; sclerotherapy; skin resurfacing; soft tissue augmentation and wounds.

Particularly the following, but not limited thereto, are capable of being identified through the use of the invention disclosed herein:

Abscess, Child Abuse, Drug Abuse, Transient Acantholytic Dermatitis, Acanthosis Nigricans; Acarophobia; Acatalasia, Achromia Parasitica; Acne Artificialis; Acne Conglobata; Acne Cosmetica; Acne Excoriée; Acne Fulminans; Acne Keloidalis; Acne Mechanica; Acne Necrotica; Acne Neonatorum; Acne Rosacea; Acne Varioliformis; Acne Vulgaris; Chloracne; Cystic Acne, Halogen Acne, Pomade Acne, Steroid Acne, Tropical Acne, Acneiform Eruptions, Drug-Related Acne; Acrochordon; Acrocyanosis; Acrodermatitis Chronica Atrophicans; Acrodermatitis Continua; Acrodermatitis Enteropathica; Acrodermatitis of Hallopeau; Acrodermatitis Pustulosa Perstans; Papular Acrodermatitis of Childhood, Acrodynia; Acrokeratoelastoidosis; Acrokeratosis Verruciformis, Acromegaly, Acropachyderma, Acropustulosis, Acropustulosis Of Infancy, Acrosclerosis, Actinic Cheilitis, Actinic Dermatitis,

Actinic Elastosis, Actinic Keratosis, Actinic Damage; Actinic Prurigo; Actinic Reticuloid;
Actinomycosis, Actinophytosis, Acuminate Warts; Acute Febrile Neutrophilic Dermatoses, Drug
Addiction, Addison's Disease; Sweat Gland Adenoma, Adenoma Sebaceum, Adenomatosis Oris,
Adiposis Dolorosa, Agammaglobulinemia, AIDS, AIDS-Associated Syndromes, Ainhum,
5 Albinism, Albright's Syndrome, Aldrich's Syndrome, Alkaptonuria, Allergic Contact Dermatitis,
Allergic Vasculitis; Alopecia Areata, Alopecia Mucinoso, Alopecia Totalis, Alopecia
Universalis, Androgenetic Alopecia, Scarring Alopecia, Amebiasis, Amputation Stump
Dermatitis, Amyloidosis, Anagen Effluvium, Anaphylactoid Purpura, Anderson-Fabry Disease,
Anemia, Anetoderma, Angiitis, Angioedema, Angiofibroma, Angioimmunoblastic
10 Lymphadenopathy; Angiokeratoma & Other Benign Vascular Tumors; Angiokeratoma Corporis
Diffusum, Angiolipoma, Angiolymphoid Hyperplasia, Angioma, Angioma Serpiginosum,
Angioneurotic Edema, Anhidrotic Ectodermal Dysplasia, Animal Bites, Anthrax,
Antiphospholipid Syndrome, Aphthous Ulcer, Aplasia Cutis Congenita, Apocrine Miliaria,
Argyria, Arsenical Keratoses, Arteriolitis, Arteriovenous Malformations, Arthritis, Arthropod
15 Bites And Stings, Ashy Dermatoses, Aspergillosis, Asteatosis, Ataxia-Telangiectasia, Atopic
Dermatitis, Atrophic Nail Disorders, Malignant Atrophic Papulosis, Atrophie Blanche,
Anetoderma, Atrophy Unclassified, Atypical Fibroxanthoma, Atypical Mycobacterial Infections,
Auricular Fistula, Autoeczematous Dermatitis, Autoerythrocyte Sensitization, Autosensitization
Dermatitis, Pustular Bacterid, Balanitis Xerotica Obliterans; Balding, Basal Cell Carcinoma,
20 Basal Cell Nevus Syndrome, Battered Child, Bazin's Disease, B-Cell Disorders, Becker's Nevus,
Behçet's Syndrome, Bejel, Benign Familial Chronic Pemphigus, Benign Mucous Membrane
Pemphigoid, Benign Tumors,, Berloque Dermatitis, Biliary Cirrhosis, Birthmarks, Insect Bites,
Spider Bites, B-K Mole Syndrome, Black Hairy Tongue, Black Heel, Blaschko Dermatitis,

Dermatitis,Nutritional; Dermatofibroma; Dermatofibrosarcoma Protuberans; Dermatofibrosis
 Lent Diss& Osteopoikilosis; Dermatolysis; Dermatomyositis; Dermatophyte Infections,
 Unclassified; Dermatophytid; Dermatophytosis; Dermatoses Papulosa Nigra; Dermographism;
 Dermoid Cyst; Desmoid Tumor; Desquamation, Unclassified; Diabetes Mellitus; Diabetic
 5 Dermodromes; Dialysis, Bullous Dermatoses Of Diaper Dermatitis; Disseminated Intravascular
 Coagulation; Diet & Dermatology; Digital Fibrokeratosis; Digitate Dermatoses; Diphtheria,
 Cutaneous; ;Discoid Lupus Erythematosus; Dissecting Cellulitis Of The Scalp; Disseminated
 Intravascular Coagulation; Disseminated Lupus Erythematosus; Disseminated Super. Actinic
 Porokeratosis; Discoid Lupus Erythematosus; Animal Bites; Down Syndrome; Dracunculosis;
 10 Drug Abuse; Drug Eruption; Drug Toxicity; Disseminated Superficial Actinic Porokeratosis;
 Duhring-Brocq Disease; Dupuytren's Contracture; Dyshydrotic Dermatitis; Warty Dyskeratoma;
 Dyskeratosis Congenita; Dyskeratosis Follicularis; Dysplastic Nevi Or Syndrome;
 Dysproteinemia; Dysraphism; Dystrophic Nails; Ecchymosis; Eccrine Gland Tumors; Eccrine
 Hydrocystoma; Eccrine Poroma; Eccrine Spiradenoma; Ecthyma; Ecthyma Contagiosum (Orf);
 15 Ecthyma Gangrenosum; Ectodermal Defect, Congenital; Eczema Craquelé; Eczema Herpeticum
 And Vaccinatum; Eczema, Atopic; Eczema, Dyshydrotic; Eczema, Nummular; Edema,
 Angioneurotic; Edema, Legs, Hereditary; Edema, Unclassified; Ehlers-Danlos Syndrome;
 Ehrlichosis; Elastoidosis, Nodular With Cysts & Comedones; Elastolysis, Generalized;
 Elastoma, Juvenile; Elastosis Perforans Serpiginosa; Elastosis, Actinic; Elastosis, Perforating;
 20 Elephantiasis; Elephantiasis Nostras Verrucosa; Emboli; Endocrinopathy, Miscellaneous;
 Endometriosis; Eosinophilic Fasciitis; Eosinophilic Granuloma; Eosinophilic Papulovesicular
 Derm Of Newborn; Ephelides And Lentigines; Epidermal Inclusion Cyst; Epidermal Necrolysis,
 Toxic; Epidermal Nevus; Epidermodysplasia Verruciformis; Epidermoid Carcinoma;

Epidermolysis Bullosa; Epidermolytic Hyperkeratosis; Epiloia; Epithelial Cyst; Epithelial
 Nevus; Epithelioma Adenoides Cysticum; Epithelioma, Arsenical; Epithelioma, Basal Cell;
 Epithelioma, Calcifying Of Malherbe; Epithelioma, Squamous; Erosio Interdigitalis
 Blastomycetica; Eruption Of Lymphocyte Recovery; Eruption, Creeping; Erysipelas;
 5 Erysipeloid; Erythema Ab Igne; Erythema Annulare Centrifugum; Erythema Chronicum
 Migrans; Erythema Circinatum; Erythema Dyschromicum Perstans; Erythema Elevatum
 Diutinum; Erythema Figuratum Perstans; Erythema Gyratum Perstans; Erythema Gyratum
 Repens; Erythema Induratum; Erythema Infectiosum; Erythema Marginatum; Erythema
 Multiforme; Erythema Nodosum; Erythema Of Jacquet; Erythema Perstans; Erythema Toxicum
 10 Neonatorum; Erythema, Anatomic; Erythema, Noninfectious, Unclassified; Erythema, Toxic;
 Erythema, Unclassified; Erythermalgia; Erythrasma; Erythrocyte Autosensitization;
 Erythroderma, Exfoliative; Erythrokeratoderma Variabilis; Erythromelalgia; Erythroplasia Of
 Queyrat; Esthiomene; Exanthem Subitum; Exanthem, Bacterial; Exanthem, Viral; Excoriation,
 Depressive Or Neurotic; Exfoliation Of Palms And Soles; Exfoliative Dermatitis (Or See Cause);
 15 Extramammary Paget's Disease; Extramedullary Hematopoiesis, Cutaneous; Exudative Discoid
 And Lichenoid Dermatitis; Fabry's Disease; Facial Granuloma; Factitial Dermatitis; Familial
 Benign Chronic Pemphigus; Familial Hemorrhagic Telangiectasia; Farber's Disease; Fasciitis,
 Necrotizing; Fat Dystrophy; Fat Necrosis; Favre - Racouchot Elastoidosis Syndrome; Favus;
 Febrile Neutrophilic Dermatoses, Acute; Female Pattern Baldness; Fever Blisters, Aphthae;
 20 Fever Blisters, Herpes Simplex; Fibroepithelial Polyp; Fibroma; Fibromatosis Of Penis; Fibrous
 Papule Of Nose; Fibroxanthoma, Atypical; Fifth Disease; Figurate Erythema; Filariasis; Fissured
 Tongue; Fistulae, Congenital; Fixed Drug Eruption; Flat Warts; Flea Bites; Florid Oral
 Papillomatoses; Flushing, Non-Carcinoid; Focal Dermal Hypoplasia; Fogo Selvagem; Follicular

Hemangioendothelioma; Hemangioma; Hematologic Disorders, Unclassified; Hematoma;
 Hemochromatosis; Hemosiderosis; Henoch-Schönlein Purpura; Hepatic Disease; Hepatitis;
 Hereditary Disorders, Unclassified; Hereditary Hemorrhagic Telangiectasia; Herpangina; Herpes
 Gestationis; Herpes Progenitalis; Herpes Simplex; Herpes Zoster; Hibernoma; Hidradenitis
 5 Suppurativa; Hidradenitis, Palmar-Plantar; Hidradenoma Papilliferum; Hidrocystoma; Hidrotic
 Ectodermal Defect; Hippocratic Nails; Hirsutism; Histiocytoma; Histiocytoid Hemangioma;
 Histiocytosis X; Histoplasmosis; Hives; Hodgkin's Disease; Homocystinuria; Hookworm
 Infestations; Horn, Cutaneous; Housewife's Eczema; Howell Evans Synd; Hunter's Syndrome;
 Hurler's Syndrome; Hyalinosis Cutis Et Mucosae; Hydroa Aestivale; Hydroa Vacciniforme;
 10 Hygroma, Cystic; Hyper Ige Syndrome; Hypercholesterolemia; Hyperhydrosis; Hyperkeratosis
 Climactericum; Hyperkeratosis Follicularis (Kyrle's); Hyperkeratosis Lenticularis
 Perstans(Flegel); Hyperkeratosis Palmaris Et Plantaris; Hyperkeratosis, Epidermolytic;
 Hyperkeratosis, Unclassified; Hyperlipemia; Hyperpigmentation, Unclassified; Hypersensitivity
 Vasculitis; Hypertrichosis; Hypertrophic Nails; Hypertrophic Scar; Hypertrophy From Chronic
 15 Irritation; Hypohidrosis; Hypomelanosis, Unclassified; Hypoplasia, Congenital; Ichthyosis;
 Ichthyosis Hystrix; Ichthyosis Linearis Circumflex; Ichthyosis Vulgaris; Id Eruption; Idiopathic
 Guttate Hypomelanosis; Ige Syndrome; Immersion Foot; Immune Complex Disease; Immune
 Deficiency, Acquired (AIDS); Immune Deficiency, Unclassified (Not AIDS); Immunoblastic
 Lymphadenopathy; Immunoglobulin Deficiency Disorders; Impetigo, Impetigo Follicularis;
 20 Impetigo Herpetiformis; Impetigo Of Bockhart; Inclusion Cyst; Incontinentia Pigmenti; Infantile
 Lichenoid Dermatitis; Infections, Bacterial, Unclassified; Infections, Rickettsial, Unclassified;
 Infections, Viral, Unclassified; Infectious Eczematoid Dermatitis; Infectious Mononucleosis;
 Infundibulofolliculitis; Injury, Traumatic; Inoculation Tuberculosis; Insect Bites And Stings;

Morbus Moniliformis; Morphea; Morquio's Disease; Mucha-Habermann's Disease; Mucinosi,
 Focal; Mucinosi, Reticular Erythematous; Mucinous Cyst; Mucocutaneous Lymph Node
 Syndrome; Mucopolysaccharidoses; Mucormycosis; Mucosa, Oral, Unclassified; Mucous Cyst;
 Multicentric Reticulohistiocytosis; Multiple Benign Cystic Epithelioma; Multiple Endocrine
 5 Neoplasia Synd; Multiple Hamartoma Syndrome; Multiple Idiopathic Hemorrhagic Sarcoma;
 Multiple Mucosal Neuroma; Multiple Myeloma; Mumps; Munchausen Syndrome; Mycetoma;
 Mycobacterial Infections, Atypical; Mycosis Fungoides; Myiasis; Myoblastoma;
 Myoepithelioma; Myoma And Leiomyoma; Myxedema And Localized Myxedema; Myxoid
 Cyst; Nail Disorders Assoc. With Internal Disease; Nail Dystrophy, Unclassified; Nail Pits;
 10 Nails, Normal Variants; Narcotic Dermopathy; Nasal Glioma; Necrobiosis Lipoidica;
 Necrobiotic Xanthogranuloma; Necrolysis, Toxic Epidermal; Necrolytic Migratory Erythema;
 Necrosis, Unclassified; Necrotizing Fasciitis; Necrotizing Vasculitis; Needle Marks; Neonatal
 Acne; Neonatal Lupus Erythematosus; Netherton's Syndrome; Neurilemmoma; Neurodermatitis;
 Neurofibroma, Neurofibromatosis; Neurotic Excoriations; Neutrophilic Dermatosi, Acute
 15 Febrile; Nevoxanthoendothelioma; Nevoxanthogranuloma; Nevus Anemicus; Nevus
 Angiolipomatosus; Nevus Araneus; Nevus Caeruleus; Nevus Cell Nevus; Nevus Comedonicus;
 Nevus Depigmentosus; Nevus Elasticus; Nevus Flammeus; Nevus Of Ito; Nevus Of Ota; Nevus
 Sebaceous; Nevus Syringocystadenoma Papilliferum; Nevus Unius Lateris; Nevus, Blue; Nevus,
 Blue Rubber Bleb; Nevus, Compound; Nevus, Dermal; Nevus, Epidermal; Nevus, Epithelial;
 20 Nevus, Halo; Nevus, Junctional; Nevus, Linear; Nevus, Organoid; Nevus, Pigmented; Nevus,
 Spider; Nevus, Spindle Cell; Nevus, Verrucous; Nevus, White Spongy Of Mucosa; Nickle
 Allergy; Niemann - Pick Disease; Nocardiosis; Nodular Dermal Allergide; Nodular Elastoidosis;
 Nodular Fasciitis; Nodular Fat Necrosis; Nodular Subepidermal Fibrosis; Nodular Vasculitis;

Nodules, Milker's; Nodules, Rheumatoid; Noma; Non-Venereal Treponematoses; Normal
 Variants; North American Blastomycosis; Norwegian Scabies; Nummular Dermatitis;
 Nutritional Or Vitamin Deficiency; Occupational Acne; Occupational Dermatoses, Unclassified;
 Occupational Leukoderma; Ochronosis; Ocular Pemphigus; Oid-Oid Disease; Omphalitis;
 5 Onchocerciasis; Onychauxis; Onychia; Onychodystrophy, Unclassified; Onychogryphosis;
 Onycholysis; Onychomycosis; Ophiasis; Oral Florid Papillomatoses; Oral Mucosa, Unclassified;
 Oral Tumors; Oral, Unclassified; Oral-Facial-Digital Syndrome; Orf; Organoid Nevus; Oroya
 Fever; Osler-Rendu-Weber Disease; Osteoarthritis; Osteodermatopoikilosis; Osteogenesis
 Imperfecta; Osteoma Cutis; Other Syndromes, Unclassified; Oxyuriasis; Pachydermoperiostosis;
 10 Pachyonychia Congenita; Pagetoid Reticulosis; Paget's Disease; Painful Bruising Syndrome;
 Palate, Unclassified; Palmar Erythema; Palmar Fibromatosis; Palmar-Plantar Hidradenitis;
 Palmoplantar Keratosis; Palmoplantar Pustulosis, Unclassified; Panatrophs Of Gower;
 Panniculitis; Papilloma, Mucous Membrane; Papilloma, Skin; Papillomatoses, Cutaneous;
 Papillomatoses, Florid Oral; Papillon-Lefèvre Syndrome; Papular Dermatitis Of Pregnancy;
 15 Papular Mucinosis; Papular Urticaria; Papulonecrotic Tuberculid; Papulosis, Malignant Atrophic
 Of Degos; Paracoccidioidomycosis; Paraffinoma; Paraneoplastic Syndromes; Parapsoriasis,
 Acute; Parapsoriasis, Chronic; Parasitic Infestations, Unclassified; Parasitosis, Delusions Of;
 Paronychia; Pasini Et Pierini Syndrome; Patch Testing, Pathergic Granulomatosis; Pearly Penile
 Papules; Pediatric Dermatoses; Pediculosis; Pelade; Pellagra; Pemphigoid, Benign Mucous
 20 Membrane; Pemphigoid, Bullous; Pemphigoid, Cicatricial, Mucosal; Pemphigoid, Unclassified;
 Pemphigus Erythematodes; Pemphigus Foliaceus; Pemphigus Vegetans; Pemphigus Vulgaris;
 Pemphigus, Brazilian; Pemphigus, Drug; Pemphigus, Familial Benign Chronic; Pemphigus,
 Hailey-Hailey; Pemphigus, Unclassified; Penile Pearly Papules; Perforating Collagenosis;

Perforating Dermatoses; Perforating Folliculitis; Periapical Abscess; Perianal Protrusions, Pyramidal; Perianal Strep; Periarthritis Nodosa; Perifolliculitis Capitis
 Abscedens Et Suff.; Perioral Dermatitis; Perlèche; Pernicious Anemia; Pernio; Petechiae; Peutz-
 Jeghers Syndrome; Peyronie's Disease; Phagedena; Phenylketonuria; Phlebectasia; Phlebitis;
 5 Phototherapy; Phrynodema; Phthiriasis; Phycomycosis; Pian; Piebaldism; Piedra; Piezogenic
 Pedal Papules, Painful; Pigmentary Hairy Nevus; Pigmentation, Anatomic; Pigmentation, Hair;
 Pigmentation, Nail; Pigmentation, Unclassified; Pigmented Purpuric Eruptions; Pilar Cyst; Pilar
 Tumor; Pilomatricoma; Pilonidal Cyst; Pinta; Pinworm Dermatitis; Pitted Keratolysis; Pitted
 Nails; Pityriasis Alba; Pityriasis Capitis; Pityriasis Lichenoides Chronica; Pityriasis Lichenoides
 10 Et Varioliformis Acuta; Pityriasis Rosea; Pityriasis Rubra Pilaris; Pityriasis Streptogenes;
 Pityriasis Versicolor; Plant Dermatitis; Plantar Wart; Plasmacytoma; Pleva; Podagra;
 Poikiloderma; Poikiloderma Congenitale; Poikiloderma Of Civatte; Poikiloderma Vasculare
 Atrophicans; Poison Ivy Dermatitis; Poliosis; Polyarteritis Nodosa; Polychondritis; Polycythemia
 Vera; Polydactyly; Polymorphic Light Eruption; Polyostotic Fibrous Dysplasia (Albright's);
 15 Polyp, Fibroepithelial; Pompholyx; Porokeratosis; Poroma; Porphyria; Port Wine Stain;
 Portugese Man-Of-War Sting; Post-Inflammatory Hyperpigmentation; Post-Inflammatory
 Hypopigmentation; Postmastectomy Lymphangiosarcoma; Pregnancy, Dermatitis In; Pressure
 Sore; Pretibial Myxedema; Prickle Cell Carcinoma; Prickly Heat; Primary Syphilis; Progeria;
 Progressive Bacterial Synergistic Gangrene; Progressive Pigmentary Dermatoses; Proteinosis,
 20 Lipoid; Prurigo Gestationis; Prurigo Gravidarum; Prurigo Nodularis; Pruritic Urticarial Papules
 Plaques Of Preg.; Pruritis, Signs, Unclassified; Pruritus Gravidarum; Pseudoacanthosis
 Nigricans; Pseudoatrophoderma Colli; Pseudocyst Of The Auricle; Pseudofolliculitis Barbae;
 Pseudolymphoma Of Speigler-Fendt; Pseudomonas Infection; Pseudopelade; Pseudosarcoma;

Pseudotuberculosis; Pseudoverrucous Papules; Pseudoxanthoma Elasticum; Psoriasis;
 Pterygium; Punctate Keratosis Of Palms And Soles; Puppp Syndrome; Purpura And
 Ecchymosis; Purpura Annularis Telangiectoides; Purpura Fulminans; Purpura Pigmentosa
 Chronica; Purpura Rheumatica; Purpuric Pigmented Lichenoid Dermatitis; Pustular Bacterid;
 5 Pustular Dermatoses, Subcorneal; Pustular Eruption Of Palms And Soles; Pustular
 Perifolliculitis; Pustulosis Palmaris Et Plantaris; Pyoderma And Folliculitis; Pyoderma Faciale;
 Pyoderma Gangrenosum; Pyogenic Granuloma; Pyramidal Perianal Protrusion; Radiation
 Dermatoses; Radiation Therapy; Ragweed Dermatitis; Ranula; Raynaud's Disease Or
 Phenomenon; Reactive Perforating Collagenosis; Reflex Sympathetic Dystrophy; Reiter's
 10 Syndrome; Relapsing Polychondritis; Relapsing Self-Healing Blaschko Dermatitis; Rem
 Syndrome; Rendu-Osler-Weber Syndrome; Retention Cysts Of Lips; Reticular Erythematous
 Mucinosi; Reticulohistiocytosis, Multicentric; Reticulohistiocytosis, Cong Self-Healing;
 Reticuloid, Actinic; Reticulum Cell Sarcoma; Rheumatoid Arthritis; Rheumatoid Nodule;
 Rhinophyma; Rhinoscleroma; Rhinosporidiosis; Rhus Dermatitis; Rickettsial Infections; Riehl's
 15 Melanosis; Ringed Hair; Ritter's Disease; Rocky Mountain Spotted Fever; Rodent Ulcer;
 Romberg's Disease; Rosacea; Rosacea-Like Tuberculid Of Lewandowsky; Roseola Infantum;
 Rothman-Makai Syndrome; Rothmund-Thomson Syndrome; Rubella; Rubeola; Sarcoid;
 Sarcoma; Sarcoma, Kaposi's (Aids-Associated); Sarcoma, Kaposi's (Not Aids); Sauriasis;
 Scabies; Scalded Skin Syndrome; Scar; Scarlet Fever; Schamberg's Disease; Schistosomiasis;
 20 Scleredema; Sclerema; Sclerodactyly; Scleroderma; Sclerodermatomyositis; Scleromyxedema;
 Sclerosing Hemangioma; Sclerosing Lymphangitis, Penis; Sclerosis, Diffuse Systemic;
 Sclerotherapy; Scratch Marks; Scrofuloderma; Scrotal Tongue; Scurvy; Seabather's Eruption;
 Sebaceous Adenoma; Sebaceous Cyst; Sebaceous Epithelioma; Sebaceous Gland Carcinoma;

Sebacous Gland Tumors, Benign; Sebaceous Hyperplasia; Sebaceous Nevus; Seborrheic Dermatitis; Seborrheic Keratosis; Secondary Syphilis; Senear-Usher Syndrome; Senile Elastosis; Senile Keratosis; Senile Purpura; Septicemia; Serum Sickness; Sézary Syndrome; Shingles; Sickle Cell Ulcer; Sjögren's Syndrome; Skin Tag; Skin Tests For Allergy; Smallpox; Snake Bites; Sneddon-Wilkinson Subcorneal Pustulosis; Solar Atrophy; Solar Keratosis; Solar Urticaria; South American Blastomycosis; Speigler-Fendt Sarcoid; Spider Bites; Spider Nevi; Spinal Dysraphism; Spindle Cell Nevus; Spiradenoma; Spitz's Juvenile Melanoma; Sporotrichosis; Squamous Cell Carcinoma; Staphylococcal Scalded-Skin Syndrome; Stasis Dermatitis; Steatocystoma Multiplex, Stevens-Johnson Syndrome; Stings, Insect; Stings, Other Than Insects And Spiders; Stings, Spider; Stomatitis; Stomatitis, Aphthous; Storage Disease, Glycogen; Striae; Stucco Keratosis; Stump Dermatitis; Sturge-Weber Syndrome; Subacute Bacterial Endocarditis; Subcorneal Pustular Dermatoses; Subcutaneous Fat Necrosis; Subepidermal Nodular Fibrosis; Sulzberger-Garbe Disease; Sunburn; Supernumerary Digit; Supernumerary Nipple; Surfer's Nodule; Surgery; Sweat Gland Carcinoma; Sweat Gland Disorders, Unclassified; Sweat Gland Necrosis; Sweat Gland Tumors, Benign; Sweet's Syndrome; Swimmer's Itch; Swimming Pool Granuloma; Sycosis; Symmetric Lividity Of The Soles; Symmetrical Peripheral Gangrene; Syndactyly; Synovial Cyst; Syphilis, Congenital; Syphilis, Primary; Syphilis, Secondary; Syphilis, Tertiary; Syringocystadenoma Papilliferum; Syringoma; Systemic Lupus Erythematosus; Systemic Therapy; Tags, Skin; Tar Melanosis; Tattoo; T-Cell Disorders; Teaching Slides; Teeth Abnormalities, Unclassified; Telangiectasia; Telangiectasia Macularis Eruptiva Perstans; Telangiectasia, Hereditary Hemorrhagic; Telogen Effluvium; Temporal Arteritis and other such like diseases and maladies now known and unknown.

Without doubt the invention disclosed herein served many well and long felt needs and concerns among the public and health care professionals.

Objects of the Invention

5 In view of the foregoing, it is therefore an object of the invention to provide a detection device for skin cancer and other diseases of the skin.

It is a further objective of the invention to provide a detection device for skin cancer and other maladies of the skin that is neither invasive nor destructive to the tissue being examined.

10 A further object of the invention is to provide a device that may be used as a mirror for anyone wishing to view his/her body but have been unable to do so, such as in gym facilities, homes, physician's offices, and other health care facilities.

A further object of the invention is to provide detection means that does not involve biopsy or contact with the skin.

Another object of the invention is to provide detection means that does not have side effects on the skin.

15 A further object of the invention is to provide a means for remote viewing of patients for telemedical diagnostic means, such as in prison facilities, remote locations or other areas that are similarly deficient in highly qualified or experts in a medical field.

A further object of the invention is to provide a cost-effective device.

Another object of the invention is to provide a device that may be easy to use.

20 A further object of the invention is to provide a device that may be assembled with

minimal professional carpenter assistance.

A further object of the invention is to provide a device that may be easily transportable.

Another object of the invention is to provide a device that is capable of being used in a system for reducing maladies of the skin

5 A further object of the invention is to provide a device that allows for automated acquisition of human physiological characteristics.

A further object of the invention is to provide a device that allows for melanoma and skin cancer screening.

10 A further object of the invention is to provide a device that allows for POSI score calculation.

A further object of the invention is to provide a device that allows for hair loss and/or growth evaluation(s).

A further object of the invention is to provide a device that allows for wound healing evaluations.

15 A further object of the invention is to provide a device that allows for remote diagnostic evaluations.

A further object of the invention is to provide a device that allows for viewing and analysis of cosmetic surgery applications.

A further object of the invention is to provide a device that allows for beauty evaluations.

A further object of the invention is to provide a device that allows for body morphology analysis.

A further object of the invention is to provide a device that allows for viewing and analysis of soft tissue augmentation.

5 A further object of the invention is to provide health care professionals with a device that will make doctor-patient interface time more efficient.

10 Another object of the invention is to provide a device capable of allowing health care professional(s), doctor(s), nutritionist(s), physical trainer(s) and individual person(s) the ability to view, monitor, evaluate and render decisions based upon that which is captured, viewed and or compared to prior analysis utilizing the device as disclosed herein.

A further object of the invention is to provide a device that may reduce patient time spent in a health care professional's, doctor's, nutritionist's, physical trainer's facility where said individual may review an his/her health, etc.

15 A further object of the invention is to provide a device that may reduce the related costs associated with an analysis as described herein.

Another object of the invention is to provide a device that may reduce the cost to insurance programs reimbursing applicable healthcare and related professions for their time and effort associated with the rendering of care to such an insured individual.

Another object of the invention is to improve the quality of life.

20 Another object of the present device disclosed herein is to allow for a better and more efficient rendering of all forms of health care where visualization of the human body, including

parts thereof, is required.

The invention thus provides a device for the identification, diagnosis and subsequent treatment of maladies of the skin that is time and cost efficient and effective with no side effects.

Having thus described the invention, it will be apparent to those of skill in the art that
5 modifications can be made within the scope of the invention without departing from the scope or breath of that which is intended and disclosed herein.

Brief Description of the Drawings

Figure 1 (FIG 1) depicts a horizontal cross-section of an imaging system in accordance with the present invention.

Figure 2 (FIG 2) depicts a vertical panel of an imaging device in accordance with the
10 present invention.

Figure 3 (FIG 3) depicts a horizontal cross section of an alternate embodiment of an imaging system in accordance with the present invention utilizing a circular periphery.

Figure 4 (FIG 4) depicts an exemplary imaging device, e.g., camera, and actuation
15 means.

Figure 5 (FIG 5) is a schematic of a complete imaging system in accordance with the present invention.

Detailed Description of the Preferred Embodiment

This invention teaches a TIP device that provides non-occluded images by employing an
20 array of imaging devices and thereafter combining individual images to form a continuous

image. It has been heretofore contemplated that the device could find use as an aid in screening and diagnosis of conditions of soft tissue, hair and nails. Furthermore, it could also find use as a beauty aid to consult those considering cosmetic surgery or changes in personal appearance.

Thus, the following detailed description, read with the above-described drawings will
5 serve to explain various preferred embodiments and components of the present invention.

FIG 1 depicts a horizontal cross section of an embodiment of the TIP system 100 in accordance with the present invention. The system may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 108 of the device 100 with
10 sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would fit comfortably at center 108. The system 100 is comprised of several panels 109. In this particular embodiment, fourteen (14) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, an 8-sided polygon was chosen. The
15 shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 109 is comprised of an imager array 102, comprising a vertical array of imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature, chemical information or other information of interest. In this embodiment, we assume the use of digital cameras operating in the conventional fashion.
20 Thus, in order to optimize the performance of the cameras, light sources 101 are utilized. While fluorescent tubes are the preferred means, any type of illumination can be used, for example, a Wood's lamp may be used. These light sources 101 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 102 is the perimeter wall

103. The perimeter wall can be made of plywood, particle board or any other structural material capable of supporting the structure. In front of the light sources 101 and imager array 102 is shield 107. Shield 107 protects the imager array 102 and light sources 101 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 107, and furthermore, a shield
5 with variable transmittance is contemplated. In between the plurality of panels 109, there are dividers 106. Dividers 106 function to provide stability for shield 107, and also, when made opaque, reduce light interference between adjacent imager arrays 102. To effect access and egress, panels 104 function as a doorway. By rotating on hinge 105, panels 104 swing outward, thus allowing access to the interior of system 100. A system 100 is also contemplated without
10 doorway 104 that can be used for examining small objects, such as the scalp or hands, for example.

FIG 2 depicts an exemplary panel 200 of a TIP system in accordance with the present invention. Supporting the panel 200, is perimeter wall 207. Perimeter wall 207 can be flat, curved or angled in any fashion to accommodate the desired perimeter shape. Supported by the
15 perimeter wall 207 are imaging arrays 205 and 206 and light sources 202 and 208. While this exemplary panel utilizes dual imaging arrays 205, 206 and light sources 202, 208, the panel may be configured in any fashion utilizing at least one imaging array. Light sources 202, 208 are optional, and depending on the type of imaging done, e.g., chemical, may be unnecessary. However, in the present embodiment, light sources 202 and 208 are taken to be standard
20 fluorescent tubes. They could also be, for example, Wood's lamps. Imaging arrays 205 and 206 comprise a plurality of imaging devices 203. Imaging devices 203 may be a standard or digital camera, or any other type of device capable of capturing the desired information from the subject with the imaging system. Imaging devices 203 are controlled through cables 204. These cables

may be used to remotely trigger a mechanical actuator or, as is contemplated herein, act as part of an electronic interface such as USB. Imaging arrays 205 and 206 are depicted herein as vertical arrays of 5 imaging devices 203. In practice, the array can vary greatly. For use in smaller examinations, e.g., the scalp, it is suggested that less imaging devices 203 would be required to generate a complete image.

FIG 3 depicts a horizontal cross section of an alternate embodiment of an imaging system 300 in accordance with the present invention utilizing a circular periphery. The system 300 may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 308 of the device 300 with sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would comfortably at center 308. The system 300 is comprised of several panels 309. In this particular embodiment, eight (8) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, a circle was constructed. The shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 301 is comprised of an imager array 302, comprising a vertical array of imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature or chemical information. In this embodiment, we assume the use of digital cameras operating in the conventional fashion. Thus, in order to optimize the performance of the cameras, light sources 303 are utilized. While fluorescent tubes are the preferred means, any type of illumination can be used. These light sources 303 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 302 is the perimeter wall 310. The perimeter wall can be made of plywood,

particleboard or any other structural material capable of supporting the structure. In front of the light sources 303 and imager array 302 is shield 309. Shield 309 protects the imager array 302 and light sources 303 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 309, and furthermore, a shield with variable transmittance is contemplated. In
5 between the plurality of panels 301, there are dividers 306. Dividers 306 function to provide stability for shield 309, and also, when made opaque, reduce light interference between adjacent imager arrays 302. To effect access and egress, panel 304 functions as a doorway. By rotating on a double-hinge hinge 305 and clearing angled divider 307, panel 304 swings outward, thus allowing access to the interior of system 300. A system 300 is also contemplated without
10 doorway 304 that can be used for examining small objects, such as the scalp or hands, for example.

FIG 4 depicts an exemplary imaging device 400 for use with the present invention. In practice, the imaging device 400 may be a standard or digital camera, or any other type of device capable of capturing the desired information from the subject with the imaging system. For
15 example, devices capable of recording infrared or chemical information could be used. The present embodiment, however, contemplates the use of a digital camera as exemplified by the current figure. Such a device would comprise lens 403, mechanical actuator 402 and control cable 401. Preferably, cable 401 is used to electronically control, and further, download digital image information from imaging device 400. As is contemplated herein, the electronic control
20 could be USB. Alternatively, control cable 401 could be used to trigger mechanical actuator 402. Although the present figure describes a specific imaging device, it should be understood that a wide variety of data collection devices could be employed without departing from the scope of the present invention.

FIG 5 depicts a schematic of a complete image processing system 500 in accordance with the present invention. As discussed above in FIG 1, imaging system 100 may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 108 of the device 100 with sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would fit comfortably at center 108. The system 100 is comprised of several panels 109. In this particular embodiment, fourteen (14) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, an 8-sided polygon was chosen. The shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 109 is comprised of an imager array 102, comprising a vertical array of imaging devices. Imaging arrays 507 through 519 can be identical to imager array 102, or may vary in the information they garner in accord with the desired application. The present embodiment, however, contemplates identical imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature or chemical information. In this embodiment, we assume the use of digital cameras operating in the conventional fashion. Thus, in order to optimize the performance of the cameras, light sources 101 are utilized. Each imaging array may utilize a light source 101 to enhance imaging ability. Furthermore, each of said light sources could have varying characteristics to accord with the application. While fluorescent tubes are the preferred means, any type of illumination can be used. These light sources 101 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 102 is the perimeter wall 103. The perimeter wall can be made of plywood, particle board or any other structural material capable of

supporting the structure. In front of the light sources 101 and imager arrays 102 and 507-519 is shield 107. Shield 107 protects the imager arrays 102 and 507 through 519 and light sources 101 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 107, and furthermore, a shield with variable transmittance is contemplated. In between the plurality of panels 109, there are dividers 106. Dividers 106 function to provide stability for shield 107, and also, when made opaque, reduce light interference between adjacent imager arrays 102 and 507 through 519. To effect access and egress, panels 104 function as a doorway. By rotating on hinge 105, panels 104 swing outward, thus allowing access to the interior of system 100. A system 100 is also contemplated without doorway 104 that can be used for examining small objects, such as the scalp or hands, for example. In order to effect the processing of the multiple images garnered from the plurality of imaging arrays, the imager arrays 102 and 507 through 519 are networked to a single computer 501. The present embodiment contemplates the use of USB to network the arrays 102 and 507 through 519. The imaging devices of arrays 102, 507, 508 and 509 are connected to USB hub 506 via interface cabling 102a, 507a, 508a and 509a, respectively. The imaging devices of arrays 517, 518 and 519 are connected to USB hub 505 via interface cabling 517a, 518a and 519a, respectively. The imaging devices of arrays 514, 515 and 516 connected to USB hub 504 via interface cabling 514a, 515a and 516a, respectively. The imaging devices of arrays 510, 511, 512 and 513 are connected to USB hub 503 via interface cabling 510a, 511a, 512a and 513a, respectively. Hub 506 is connected with hub 503 via cable 520. Hub 505 is connected with hub 504 via cable 521. Hubs 503 and 504 are then connected to hub 502 via cables 522 and 523, respectively. Finally, hub 502, which has the totality of imaging devices of imaging arrays 102 and 507 through 519 connected thereto, is connected to computer 501 via cable 524. The computer 501 is used to process the individual images garnered from each

imaging device of each imaging array 102 and 507 through 519 to created a non-occluded image of the subject within system 100, and preferably, at center 108. It should be noted that the arrangement of hubs 506, 505, 504, 503 and 502 and the concomitant cabling presented heretofore is merely exemplary, and anyone with skill in the art will recognize the myriad ways of interconnecting the imaging devices of imaging arrays 102 and 507 through 519 to computer 501.

While the present invention has been described with reference to one or more preferred embodiments, which embodiments have been set forth in considerable detail for the purposes of making a complete disclosure of the invention, such embodiments are merely exemplary and are not intended to be limiting or represent an exhaustive enumeration of all aspects of the invention. The scope of the invention, therefore, shall be defined solely by the following claims. Further, it will be apparent to those of skill in the art that numerous changes may be made in such details without departing from the spirit and the principles of the invention.

Claims

What I Claim Is:

1. A device for the identification of maladies that effect human tissue wherein said device comprises a chamber, an illumination means, an imaging means and a viewing means;
5 wherein said device generates an image of a three dimensional object, said image is displayed in a two dimensional medium that is further manipulated in said two dimensional medium allowing for viewing.
2. A device according to claim 1 wherein said viewing is two dimensional in nature.
3. A device according to claim 1 wherein said viewing is three dimensional in nature.
- 10 4. A device according to claim 1 whereby said chamber is further comprised of panels that enclose said three dimensional object in a radius of 360 degrees on the vertical axis.
5. A device according to claim 1 whereby said chamber is further comprised of panels that enclose said three dimensional object in a radius of 360 degrees on the vertical axis and 360 degrees on the horizontal axis.
- 15 6. A device according to claim 1 whereby said imaging means is further comprised of at least one imaging device.
7. A chamber according to claim 4 whereby said panels are further comprised of at least one imaging means.
8. A chamber according to claim 5 whereby said panels are further comprised of at least one
20 imaging means.

9. A device according top claim 1 whereby said imaging means is capable of capturing light in the humanly perceivable light spectrum.

10. A device according top claim 1 whereby said imaging means is capable of capturing infrared emissions.

5 11. A device according top claim 1 whereby said imaging means is capable of capturing electrical emissions.

12. A device according top claim 1 whereby said imaging means is capable of capturing magnetic emissions.

10 13. A device according top claim 1 whereby said imaging means is capable of capturing chemical emissions.

14. A device according top claim 1 whereby said imaging means is capable of capturing temperature emissions.

15. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to record said three dimensional object.

15 16. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in light in the humanly perceivable light spectrum

20 17. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in light in infrared emissions.

18. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in electrical emissions.

19. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in magnetic emissions.

20. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in chemical emissions.

21. A device according to claim 1 whereby said illumination means is capable of producing adequate illumination for said imaging means to optimally function in temperature emissions.

22. A panel according to claim 4 whereby said panel is constructed of a material capable of allowing adequate illumination to pass through said panel to illuminate said three dimensional object.

23. A panel according to claim 5 whereby said panel is constructed of a material capable of allowing adequate illumination to pass through said panel to illuminate said three dimensional object.

24. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object in the humanly perceivable spectrum for its respective imaging means.

25. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object in the infrared spectrum for its respective imaging means.

26. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object for imaging means capable of capturing electrical emissions.

27. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object for imaging means capable of capturing magnetic emissions.

28. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object for imaging means capable of capturing chemical emissions.

29. An illumination means according to claim 15 whereby said illumination means is capable of illuminating said three dimensional object for imaging means capable of capturing temperature emissions.

30. A device according to claim 1 whereby said viewing means may further comprise a computer monitor.

31. A device according to claim 1 whereby said viewing means may further comprise a television screen.

32. A device according to claim 1 whereby said viewing means may further comprise a PDA (personal digital assistant).

33. A device according to claim 1 whereby said viewing means may further comprise a device capable of displaying said three dimensional object in a visually perceivable form.

34. A device according to claim 1 whereby said manipulation may allow for viewing of said three dimensional object in 360 degrees.

5 35. A device according to claim 1 whereby said manipulation may allow for viewing of said three dimensional object in 720 degrees.

36. A device according to claim 1 whereby said identification may also include those maladies that effect other terrestrial flora and fauna, other than homo sapiens.

37. A device according to claim 1 whereby said chamber means is further comprised of panels that encompass the three dimensional object sufficiently to capture a real time image of said three dimensional object.

38. A device according to claim 1 whereby said chamber has a means to allow for the entry and removal of said three-dimensional object.

39. A device according to claim 1 that may further include a means of detection and monitoring of the level(s) of the illumination generated by said illumination means.

40. A means of detection according to claim 39 further comprising a means of interacting and adjusting the level of said illumination prior to said imaging means capturing an image of said three dimensional object disposed within said chamber.

41. A device according to claim 1 that allows for said imaged three-dimensional object's manipulation 360 degrees on the vertical axis.

42. A device according to claim 1 that allows for said imaged three-dimensional object's manipulation 360 degrees on the horizontal axis.

43. A device according to claim 1 that allows for said imaged three-dimensional object's viewing on the z-axis.

5 44. A device comprising an enclosed area, an illumination means, an imaging means and a viewing means.

45. A device according to claim 44 that accurately images an object placed or otherwise located within said enclosed area for later viewing on said viewing means.

46. A device according to claim 44 whereby said enclosed area is of proportionate dimensions to allow for the insertion or placement of an object to be photographed therein.

47. A device according to claim 44 whereby said enclosed area is constructed of transparent or otherwise translucent material that will allow for the illumination of an object contained or laced therein by said illumination means.

15 48. A device according to claim 44 whereby said illumination means produces ample illumination in the humanly perceivable spectrum, infrared, electrical, magnetic, chemical or temperature such that the object placed or otherwise located within said enclosed area may be imaged or otherwise viewed to attain the desired results.

20 49. A device according to claim 44 whereby said imaging means may image an object placed or otherwise located within said enclosed area in the humanly perceivable spectrum, or applicable infrared, electrical, magnetic, chemical or temperature spectrum.

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50. A device according to claim 44 whereby said viewing means is further comprised of a USB hub, interfacing cable, computer processor or like processor, monitor, and control means.

51. A viewing means according to claim 50 whereby said control means is voice automated.

5 52. A viewing means according to claim 50 whereby said control means is keyboard controlled.

53. A viewing means according to claim 50 whereby said control means is mouse controlled.

54. A viewing means according to claim 50 whereby said control means is cursor controlled.

55. A device capable of assisting in the remote diagnosis of maladies that affect the human skin, that further comprise an imaging and viewing means.

56. A device that allows for the imaging of a three dimensional object under illumination; said device further comprising an enclosure, imaging means, illumination means, illumination control means, viewing means.

15 57. A device according to claim 56 wherein said illumination is within the spectrum of humanly perceivable light.

58. A device according to claim 56 wherein said illumination is within the spectrum of infrared.

59. A device according to claim 56 wherein said illumination is within the spectrum of ultra violet.

20 60. A device according to claim 56 wherein said illumination is magnetic in nature.

61. A device according to claim 56 wherein said illumination is chemical in nature.

62. A device according to claim 56 wherein said illumination is electrical in nature.

63. A device according to claim 56 wherein said illumination is thermal energy.

64. A device according to claim 56 wherein said enclosure allows for the entry or placement
5 of a three-dimensional object therein.

65. A device according to claim 56 wherein said enclosure is further manufactured of
material that permits said illumination to pass there through to further illuminate said
three dimensional object.

66. A device according to claim 56 whereby said imaging means comprises at least one
camera, or like device, capable of imaging and storing an image of said three dimensional
object.

67. A device according to claim 66 wherein said image is in the humanly perceivable
spectrum.

68. A device according to claim 66 wherein said image is in the infrared spectrum.

69. A device according to claim 66 wherein said image is in the ultra violet spectrum.

70. A device according to claim 66 wherein said image record magnetic information of said
three dimensional object.

71. A device according to claim 66 wherein said image records chemical information of said
three dimensional object.

72. A device according to claim 66 wherein said image records electrical of said three dimensional object.

73. A device according to claim 66 wherein said image records temperature information of said three dimensional object.

5 74. A device according to claim 1 whereby said illumination means produces sufficient illumination such that said three dimensional object is sufficiently illuminated such that an accurate image of said three dimensional object may be taken by said imaging means.

75. A device according to claim 56 whereby said illumination control means is further comprised of a monitor means located in or capable of monitoring the illumination within said enclosure and adjustment means located without said enclosure such the level of illumination may be assessed and adjusted such that the image of said three dimensional object may effectively illuminated.

76. A device according to claim 56 whereby said viewing means further comprises a connection means, by and between said imaging means and a monitor means, wherein said monitor means is capable of rendering a two dimensional rendition of said imaged three dimensional object, and further comprises a manner by which said imaged three dimensional object in said rendition may be manipulated in 360 degrees.

77. A device capable of imaging the surface of the human skin and rendering the same in a visual perceivable form that further allows for user viewing and manipulation.

20 78. A device according to claim 77 that further allows said manipulation of said imaged surface on the horizontal axis.

0965712.072600

79. A device according to claim 77 that allows said manipulation of said imaged surface on the vertical axis.

80. A device according to claim 77 that allows for said manipulation of said imaged surface on the z-axis.

09625713.072600

ABSTRACT

Total Immersion Photography (TIP) is disclosed, preferably for the use of screening for various medical and cosmetic conditions. TIP, in a preferred embodiment, comprises an enclosed structure that may be sized in accordance with an entire person, or individual body parts.

- 5 Disposed therein are a plurality of imaging means which may gather a variety of information, e.g., chemical, light, temperature, etc. In a preferred embodiment, a computer and plurality of USB hubs are used to remotely operate and control digital cameras. The photo information is then transferred via the USB to the computer for processing and aggregation. Subject information is gathered to configure the operation of the various parameters of the device.

09605712.072600

**DECLARATION
AND POWER OF ATTORNEY**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below at 201 et seq. underneath my name.

I believe I am the original, first and sole inventor if only one name is listed at 201 below, or an original, first and joint inventor if plural names are listed at 201 et seq. below, of the subject matter which is claimed and for which a patent is sought on the invention entitled APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY the specification of which:

☒ is attached hereto ☐ was filed on as Application Serial No. (for declaration not accompanying application)

with amendment(s) filed (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119/§172 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED PRIOR TO THE FILING DATE OF THE APPLICATION			
APPLICATION NUMBER	COUNTRY	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 U.S.C. 119/172
N/A			YES ☐ NO ☐
			YES ☐ NO ☐
			YES ☐ NO ☐
			YES ☐ NO ☐

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NO.	FILING DATE	STATUS		
		PATENTED	PENDING	ABANDONED
N/A				

POWER OF ATTORNEY: As a named inventor, I hereby appoint the law firm of Holubar, McKinney & Ross and therein Ralph J. Crispino, Reg. No.: 46,144, whose address is 4 Child's Lane, Old Field, New York 11733, and the law firm's attorneys, to prosecute this application, and to transact all business in the Patent and Trademark Office connected therewith.

SEND CORRESPONDENCE TO:

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OLD FIELD, NEW YORK 11733

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(516) 446-1111

201	FULL NAME OF INVENTOR	LAST NAME Drugge	FIRST NAME Rhett	MIDDLE NAME	
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202	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY	ZIP CODE

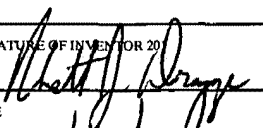
203	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY	ZIP CODE

204	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY	ZIP CODE

205	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY	ZIP CODE

206	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY	ZIP CODE

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE OF INVENTOR 201 	SIGNATURE OF INVENTOR 202	SIGNATURE OF INVENTOR 203
DATE 7/18/2000	DATE	DATE
SIGNATURE OF INVENTOR 204	SIGNATURE OF INVENTOR 205	SIGNATURE OF INVENTOR 206
DATE	DATE	DATE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: ☒ Application of: Drugge
☐ Patent of:

☐ Serial No.: TBA
☐ Patent No.:

Group Art Unit: TBA

☐ Filed: July 19, 2000
☐ Issued:

Examiner: TBA

For: APPARATUS FOR TOTAL
IMMERSION PHOTOGRAPHY

Attorney Docket No.: RD-001

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
[37 CFR 1.9(f) and 1.27(b)] - Independent Inventor

Sir:

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9 (c) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled: Apparatus for Total Immersion Photography Interfaces, as described in:

- ☒ the specification filed herewith
☐ application serial no.
☐ patent no. issued

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9 (c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9 (d) or a nonprofit organization under 37 CFR 1.9 (e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ no such person, concern, or organization
☐ persons, concerns or organizations listed below*

*NOTE: Separate verified statements are required from each named person, concern, or organization having rights to the invention averring to their status as small entities.
(37 CFR 1.27)

FULL NAME: Rhett Drugge
ADDRESS: 50 Glenbrook Road, Suite 1C
Stamford, Connecticut 06902-2914

☒ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME: _
ADDRESS: _
_

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. [37 CFR 1.28 (b)].

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, and patent issuing thereon, or any patent to which this verified statement is directed.

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NAME OF INVENTOR Rhett Drugge	NAME OF INVENTOR N/A	NAME OF INVENTOR
SIGNATURE OF INVENTOR <i>Rhett Drugge</i>	SIGNATURE OF INVENTOR	SIGNATURE OF INVENTOR
DATE 7/18/2000	DATE	DATE
NAME OF INVENTOR N/A	NAME OF INVENTOR	NAME OF INVENTOR
SIGNATURE OF INVENTOR	SIGNATURE OF INVENTOR	SIGNATURE OF INVENTOR
DATE	DATE	DATE



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov



Bib Data Sheet

SERIAL NUMBER 09/625,712	FILING DATE 07/26/2000 RULE -	CLASS 356	GROUP ART UNIT 2877	ATTORNEY DOCKET NO. RD-001
APPLICANTS Rhett Drugge, Stamford, CT ; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS *****				
IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 09/14/2000				
Foreign Priority claimed ☐ yes ☒ no 35 USC 119 (a-d) conditions ☐ yes ☒ no ☐ Met after met Allowance Verified and Acknowledged <u> </u> Examiner's Signature <u> </u> Initials		STATE OR COUNTRY CT	SHEETS DRAWING 5	TOTAL CLAIMS 80
INDEPENDENT CLAIMS 3				
ADDRESS Holubar McKinney & Ross 4 Child's Lane Old Field ,NY 11733				
TITLE Apparatus for total immersion photography				
FILING FEE RECEIVED 345	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit	

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

08/03/2000 JARTIS 00000046 09625712

01 FC:201 345.00 0P

PTO-1556
(5/87)

This Form is for INTERNAL PTO USE ONLY
It does NOT get mailed to the applicant.

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NOTICE OF FILING / CLAIM FEE(S) DUE (CALCULATION SHEET)

APPLICATION NUMBER: _____

Total Fee Calculation

Fee Code	Total # Claims	Number Exam	X	Fee	Fee	=	Total
	Sm. Lg.			Sm. Entry	Lg. Entry		
Basic Filing Fee	301.101			345			2
Total Claims X 20	303.103	80	20 =	60	X		540
Independent Claims X 3	302.102	3	3 =		X		
Multi-Dep Claim Present	304.104						
Surcharge	305.105						
English Translation	139						

TOTAL FEE CALCULATION

540

Fees due upon filing the application

Total Filing Fees Due = \$ 885.00

Less Filing Fees Submitted = \$ 345.00

BALANCE DUE = \$ 540.00

J. Arthur
Office of Initial Patent Examination

Figure 7

PATENT APPLICATION FEE DETERMINATION RECORD

Effective December 29, 1999

Application or Docket Number

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE		
TOTAL CLAIMS	80 minus 20 = *	60
INDEPENDENT CLAIMS	43 minus 3 = *	
MULTIPLE DEPENDENT CLAIM PRESENT		

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)	(Column 4)	(Column 5)
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				

	(Column 1)	(Column 2)	(Column 3)	(Column 4)	(Column 5)
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				

	(Column 1)	(Column 2)	(Column 3)	(Column 4)	(Column 5)
AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				

SMALL ENTITY TYPE ☒

RATE	FEE
	345.00
X\$ 9=	540
X39=	
+130=	
TOTAL	885

OR OTHER THAN SMALL ENTITY

RATE	FEE
	690.00
X\$18=	
X78=	
+260=	
TOTAL	

SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
X39=	
+130=	
TOTAL ADDIT. FEE	

OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$18=	
X78=	
+260=	
TOTAL ADDIT. FEE	

SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
X39=	
+130=	
TOTAL ADDIT. FEE	

OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$18=	
X78=	
+260=	
TOTAL ADDIT. FEE	

SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
X39=	
+130=	
TOTAL ADDIT. FEE	

OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$18=	
X78=	
+260=	
TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

***If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

APPLICATION TRANSFER REQUEST FOR S.N.

09/625,712

Section I. TRANSFER REQUEST BY (PRINT NAME) Er. phamDate 10/4/00TO: Art Unit: 3737Class/sub 604/506From: A.U. 2877 Class 356

REASON:

diagnosis of skin disease. imaging deviceGatekeeper concurrence #B for YN
10/6/00

Hand carried: Personally accepted by _____

Section II. DISPOSITION BY RECEIVING TC

A.U. 3737Date 11-7-00☒ ACCEPTED BY RECEIVING T.C.

NOT ACCEPTED

☐ Forward to Post Classifier☐ Return to Originating Technology Center /AU _____

REASON:

DISPOSITION BY RECEIVING TC POST CLASSIFIER

☐ This dispute was resolved. Forward to Class/Sub _____ TC/AU _____ Post Classifier _____ Date _____

Concurring _____ Date _____

☐ This dispute was not resolved, forward to DISPUTE RESOLUTION PANEL

Post Classifier Assessment:

Gatekeeper Concurrence _____

Section III. DISPOSITION BY DISPUTE RESOLUTION PANEL

Date _____

Panel Decision: Forward to Technology Center / Art Unit _____ Class/sub _____

REASON:

Panel Member _____ Concurring Panel Member _____

☐ This application MAY be returned to the dispute resolution panel if reconsideration is desired (use form 447R).☐ This application MAY NOT be returned to the dispute resolution panel. THIS IS A FINAL DISPOSITION.

DOCUMENT-IDENTIFIER: US 5797845 A
TITLE: Ultrasound apparatus for three dimensional
image reconstruction

----- KWIC -----

DEPR:

FIG. 12 describes the schematic of the generation of the acoustic wave packages and schematic of the signal processing of the echo signals. As it is seen from the figure, transmit and receive array systems are separated. The pulse driver 47 has timing circuitry and the necessary set of generators. They perform the functions of the transmit system 22 in the phased mode with dynamic focusing and scanning of the beam and are connected with individual elements 28 of the transmit array 22 by cables 48. Individual elements 28 of the receive array 23 register the echo signals and are connected by cables 45 with reception parts 49 and 50 of the apparatus which provides amplification of the echo signals, conversion of them in the digital code and recording of amplitude information from every receive array individual element in the memory for every focal distance. Adjustment of the dynamic receive apertures is produced by shifting the individual element information by the number of digits corresponding to the delay for every individual element. After this, individual element information is summed and presented as part of the acoustic line for every selected aperture. Thus, the sector of the 2D image is



US005797845A

United States Patent [19]

Barabash et al.

[11] Patent Number: 5,797,845

[45] Date of Patent: Aug. 25, 1998

[54] ULTRASOUND APPARATUS FOR THREE DIMENSIONAL IMAGE RECONSTRUCTION

[76] Inventors: Leonid S. Barabash, 13021 S. 48th St., Apt. 2097; Aaron E. LaBarge, 3914 E. Nambe St., both of Phoenix, Ariz. 85044; Angel T. M. Wang, 4700 Sandyland Rd. Apt. 37, Carpinteria, Calif. 93013

[21] Appl. No.: 742,403

[22] Filed: Nov. 4, 1996

[51] Int. CL⁶ A61B 8/00

[52] U.S. Cl. 600/443; 600/459; 128/916

[58] Field of Search 128/916, 660.07, 128/660.01, 661.01; 600/443, 447, 459

[56] References Cited**U.S. PATENT DOCUMENTS**

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 Marshall T. Robinson and Olaf T. von Ramm, "Real-Time Angular Scatter Imaging System for Improved Tissue Contrast in Diagnostic Ultrasound Images", IEEE Trans. on Ultrasonics, Ferroelectrics and Frequency Control, vol. 41, No. 1, Jan. 1994.

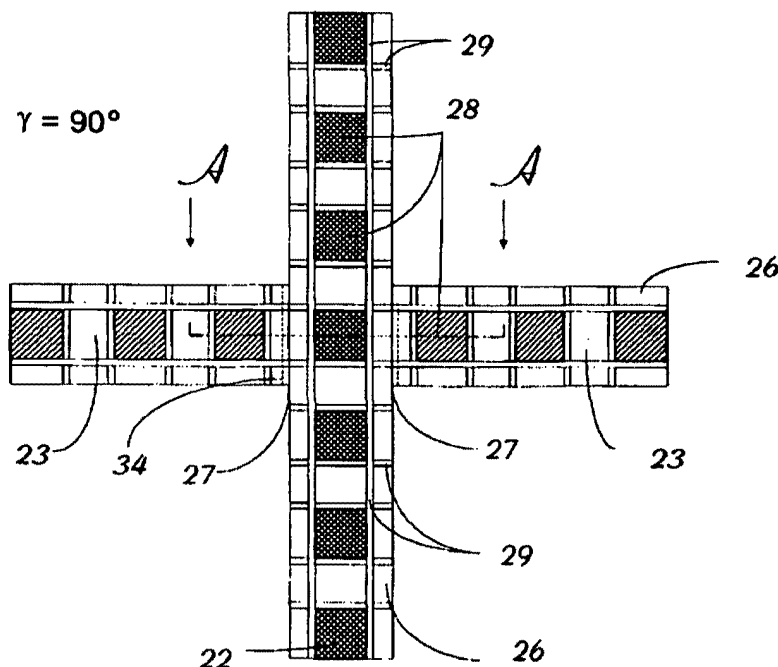
S.W.Smith et al., "Two-Dimensional Arrays for Medical Ultrasound", Ultrasonics Symposium, 1991, p. 625.

Richard E.Davidsen and Stephen W.Smith, "Sparse Geometries for Two-Dimensional Array Transducers in Volumetric Imaging" Ultrasonics Symposium, 1993, p. 1091.

Primary Examiner—Francis Jaworski

[57] ABSTRACT

This invention employs an ultrasound apparatus with a phased transducer having transmit and receive array systems to form an electronically scanned ultrasonic "pencil" beam (25) from crossed flat acoustic beams. The flat transmit beams and flat receive apertures are shaped by the arrays with size of individual elements on the order of the wavelength of a generated carrier frequency in a human body. The separation of array functions in the transmission and reception modes reduces the side lobe level and improves the noise performance. A fast method of acquisition of two dimensional images is described. This method uses a property of a dynamic focused and scanned flat acoustic beam together with the ability to shape flat synthetic receive apertures from digitized and memorized amplitude information. The same fast method of three dimensional image reconstruction is suggested, which uses an unfocused acoustic beam generated by a single transducer element together with the ability to form flat synthetic receive apertures in memory.

24 Claims, 15 Drawing Sheets

DOCUMENT-IDENTIFIER: US 5782762 A
TITLE: Method and system for producing interactive,
three-dimensional
renderings of selected body organs having hollow
lumens to enable simulated
movement through the lumen

----- KWIC -----

BSPR:

In a specific application for generating a three-dimensional rendering of a patient's colon, the patient initially undergoes a selected preparation procedure. For example, the patient's colon is initially cleansed and then inflated with air to permit the acquisition of unobstructed two-dimensional images of the colon. Next, the patient undergoes a CT scan to produce a series of two-dimensional images of the patient's internal organs. Preferably, a spiral or helical CT scanner is employed to provide a series of uninterrupted two-dimensional images through the body. The series of two-dimensional images are transferred from the scanner to a graphics computer to effect various image processing procedures. The dataset corresponding to the series of two-dimensional images may be transferred to the graphics computer in a compressed format for decompression on the graphics computer. Alternatively, the dataset representing the series of two-dimensional images may be decompressed on the computer console of the scanner prior to transfer to the



US005782762A

United States Patent [19]

Vining

[11] **Patent Number:** 5,782,762[45] **Date of Patent:** Jul. 21, 1998

[54] **METHOD AND SYSTEM FOR PRODUCING INTERACTIVE, THREE-DIMENSIONAL RENDERINGS OF SELECTED BODY ORGANS HAVING HOLLOW LUMENS TO ENABLE SIMULATED MOVEMENT THROUGH THE LUMEN**

[75] **Inventor:** David J. Vining, Winston-Salem, N.C.

[73] **Assignee:** Wake Forest University, Winston-Salem, N.C.

[21] **Appl. No.:** 331,352

[22] **Filed:** Oct. 27, 1994

[51] **Int. Cl.⁶** A61B 5/05

[52] **U.S. Cl.** 600/407; 395/119; 395/924; 128/920

[58] **Field of Search** 128/653.1, 653.2, 128/653.4, 654, 920; 364/413.14, 413.19, 413.22; 378/4, 901; 395/119, 120, 924; 600/407, 410, 420, 431

[56] **References Cited**

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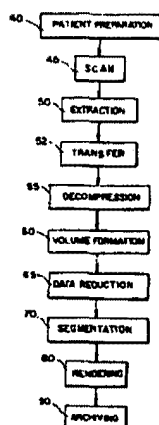
Primary Examiner—Brian L. Casler

Attorney, Agent, or Firm—Dann, Dorfman, Herrell and Skillman, P.C.

[57] **ABSTRACT**

A method and system are provided for effecting interactive, three-dimensional renderings of selected body organs for purposes of medical observation and diagnosis. A series of CT images of the selected body organs are acquired. The series of CT images is stacked to form a three-dimensional volume file. To facilitate interactive three-dimensional rendering, the three-dimensional volume file may be subjected to an optional dataset reduction procedure to reduce pixel resolution and/or to divide the three-dimensional volume file into selected subvolumes. From a selected volume or subvolume, the image of a selected body organ is segmented or isolated. A wireframe model of the segmented organ image is then generated to enable interactive, three-dimensional rendering of the selected organ.

156 Claims, 25 Drawing Sheets



DOCUMENT-IDENTIFIER: US 6083162 A
TITLE: Method and system for producing interactive,
three-dimensional
renderings of selected body organs having hollow
lumens to enable simulated
movement through the lumen

----- KWIC -----

BSPR:

In a specific application for generating a three-dimensional rendering of a patient's colon, the patient initially undergoes a selected preparation procedure. For example, the patient's colon is initially cleansed and then inflated with air to permit the acquisition of unobstructed two-dimensional images of the colon. Next, the patient undergoes a CT scan to produce a series of two-dimensional images of the patient's internal organs. Preferably, a spiral or helical CT scanner is employed to provide a series of uninterrupted two-dimensional images through the body. The series of two-dimensional images are transferred from the scanner to a graphics computer to effect various image processing procedures. The dataset corresponding to the series of two-dimensional images may be transferred to the graphics computer in a compressed format for decompression on the graphics computer. Alternatively, the dataset representing the series of two-dimensional images may be decompressed on the computer console of the scanner prior to transfer to the



US006083162A

United States Patent [19]
Vining

[11] **Patent Number:** **6,083,162**
 [45] **Date of Patent:** ***Jul. 4, 2000**

[54] **METHOD AND SYSTEM FOR PRODUCING INTERACTIVE, THREE-DIMENSIONAL RENDERINGS OF SELECTED BODY ORGANS HAVING HOLLOW LUMENS TO ENABLE SIMULATED MOVEMENT THROUGH THE LUMEN**

[75] **Inventor:** **David J. Vining**, Winston-Salem, N.C.

[73] **Assignee:** **Wake Forest University**,
 Winston-Salem, N.C.

[*] **Notice:** This patent is subject to a terminal disclaimer.

[21] **Appl. No.:** **08/817,901**

[22] **PCT Filed:** **Oct. 27, 1995**

[86] **PCT No.:** **PCT/US95/14022**

§ 371 Date: **Apr. 28, 1997**

§ 102(e) Date: **Apr. 28, 1997**

[87] **PCT Pub. No.:** **WO96/13207**

PCT Pub. Date: **May 9, 1996**

Related U.S. Application Data

[63] Continuation-in-part of application No. 08/331,352, Oct. 27, 1994.

[51] **Int. Cl.⁷** **A61B 5/05**

[52] **U.S. Cl.** **600/407; 345/420; 345/424; 345/429; 345/433; 128/920**

[58] **Field of Search** **600/407, 410, 600/420, 431; 378/4.901; 345/419-443, 952; 395/924; 128/920**

[56] **References Cited**

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4,710,876	12/1987	Cline et al.	
4,719,585	1/1988	Cline et al.	
4,729,098	3/1988	Cline et al.	
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Primary Examiner—Brian L. Casler

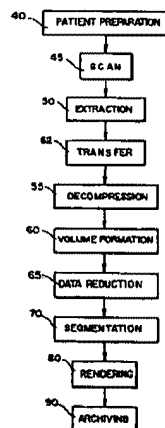
Attorney, Agent, or Firm—Dann, Dorfman, Herrell & Skillman, P.C.

[57]

ABSTRACT

A method and system are provided for effecting interactive, three-dimensional renderings of selected body organs for purposes of medical observation and diagnosis. A series of CT images of the selected body organs are acquired. The series of CT images is stacked to form a three-dimensional volume file. To facilitate interactive three-dimensional rendering, the three-dimensional volume file may be subjected to an optional dataset reduction procedure to reduce pixel resolution and/or to divide the three-dimensional volume file into selected subvolumes. From a selected volume or subvolume, the image of a selected body organ is segmented of isolated. A wireframe model of the segmented organ image is then generated to enable interactive, three-dimensional rendering of the selected organ.

129 Claims, 25 Drawing Sheets



DOCUMENT-IDENTIFIER: US 6236875 B1
TITLE: Surgical navigation systems including
reference and localization frames

----- KWIC -----

DEPR:

Pre-operative imaging occurs as usual and the skeletal elements may be discriminated from the soft tissue in the image data set as above. In particular, a CT scan of the skeletal elements 10, 20, 30 could be taken prior to the procedure. Processor 104 may then discriminate the skeletal elements and store the pre-procedural image data set in memory 106. Next, the patient is immobilized for the procedure. A radiograph of the skeletal anatomy of interest is taken by a radiographic device equipped with emitters detectible by the digitizer. For example, a fluoroscopic localizer 136 is illustrated in FIG. 7. Localizer 136 includes a device which emits x-rays such as tube 138 and a screen 140 which is sensitive to x-rays, producing an image when x-rays pass through it. This screen is referred to as a fluoroscopic plate. Emitters 142 may be positioned on the tube 138, or on the fluoroscopic plate 140 or on both. For devices in which the tube 138 is rigidly attached to the plate 140, emitters need only be provided on either the tube or the plate. Alternatively, the reference array 110 may be attached to the tube or the plate, obviating the need for emitters on this element. By passing



US006236875B1

(12) **United States Patent**
Bucholz et al.

(10) **Patent No.:** **US 6,236,875 B1**

(45) **Date of Patent:** ***May 22, 2001**

(54) **SURGICAL NAVIGATION SYSTEMS
 INCLUDING REFERENCE AND
 LOCALIZATION FRAMES**

(75) **Inventors:** **Richard D. Bucholz**, St. Louis, MO
 (US); **Kevin T. Foley**, Memphis, TN
 (US); **Kurt R. Smith**, Boulder, CO
 (US); **Daniel Bass**, Moss Beach, CA
 (US); **Thomas Wiedenmaier**, San
 Carlos, CA (US); **Todd Pope**, San
 Francisco, CA (US); **Udo**
Wiedenmaier, San Mateo, CA (US)

(73) **Assignees:** **Surgical Navigation Technologies**,
 Broomfield, CO (US); **St. Louis**
University, St. Louis, MO (US)

(*) **Notice:** This patent issued on a continued pro-
 secution application filed under 37 CFR
 1.53(d), and is subject to the twenty year
 patent term provisions of 35 U.S.C.
 154(a)(2).

Subject to any disclaimer, the term of this
 patent is extended or adjusted under 35
 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** **08/809,404**

(22) **PCT Filed:** **Oct. 5, 1995**

(86) **PCT No.:** **PCT/US95/12894**

§ 371 Date: **Jul. 23, 1997**

§ 102(e) Date: **Jul. 23, 1997**

(87) **PCT Pub. No.:** **WO96/11624**

PCT Pub. Date: **Apr. 25, 1996**

Related U.S. Application Data

(63) Continuation-in-part of application No. 08/319,615, filed on
 Oct. 7, 1994, now abandoned.

(60) Provisional application No. 60/003,415, filed on Sep. 8,
 1995.

(51) **Int. Cl.⁷** **A61B 5/05**

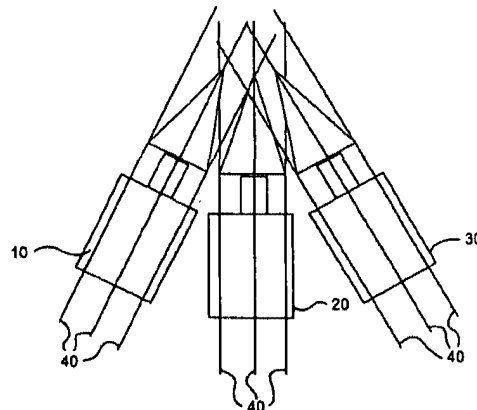
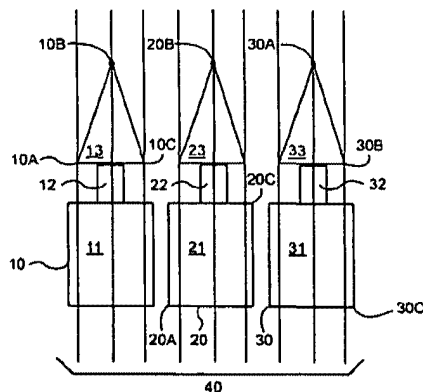
(52) **U.S. Cl.** **600/407; 606/130**

(58) **Field of Search** **600/407, 410,**
600/414, 415, 417, 425, 426, 429, 437;
606/130

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x-rays through the skeletal element 141 of interest, a two-dimensional image based on bone density is produced and recorded by the plate. The image produced by the fluoroscopic localizer 136 is determined by the angle of the tube 138 with respect to the plate 140 and the position of the skeletal elements therebetween and can be defined with respect to procedure coordinates (surgical space). Fluoroscopic localizer 136 includes a processor which digitizes the image on the plate 140 and provides the digitized image to processor 104 for possible processing and subsequent storage in intra-procedural geometry data memory 121. Processor 104 may simulate the generation of this two-dimensional x-ray image by creating a series of two-dimensional projection of the three-dimensional skeletal elements that have been discriminated in the image data set stored in memory 106. Each two dimensional projection would represent the passage of an X-ray beam through the body at a specific angle and distance. In order to form the displaced data set and thus achieve registration, an iterative process is used which selects that a two-dimensional projection through the displaced data-set that most closely matches the actual radiographic image(s) stored in memory 121. The described process can utilize more than one radiographic image. Since the processor 104 is also aware of the position of the fluoroscopic localizers because of the emitters 142 thereon, which are in communication with localizer 108, the exact position of the skeletal elements during the procedure is



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,712	07/26/2000	Rhett Drugge	RD-001	7895

7590 09/10/2002

Holubar McKinney & Ross
4 Child's Lane
Old Field, NY 11733

EXAMINER

LEUNG, PHILIP H

ART UNIT	PAPER NUMBER

3742

DATE MAILED: 09/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/625,712Applicant(s)
DRUGGEExaminer
Philip H. LeungArt Unit
3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE one MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 1-80 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Art Unit: 3742

ELECTION/RESTRICTION

1. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to **Group Art Unit 3742**.

2. This application contains claims directed to the following patentably distinct species of the claimed invention:

Figure 1 and *Figure 3*.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, at least claim 1 is generic.

Applicant is advised that a response to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Art Unit: 3742

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (as set forth in 37 CFR 1.143).

4. Any inquiry concerning any communication from the examiner should be directed to Examiner Leung whose telephone number is (703) 308-1710. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa Walberg, can be reached on (703) 308-1327. The fax phone number for this Group is (703) 305-3463.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.


PHILIP H. LEUNG
PRIMARY EXAMINER
ART UNIT 3742

P.Leung/pl
9-6-02



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,712	07/26/2000	Rhett Drugge	RD-001	7895

7590 07/01/2003
Holubar McKinney & Ross
4 Child's Lane
Old Field, NY 11733

EXAMINER

LEUNG, PHILIP H

ART UNIT PAPER NUMBER

3742

DATE MAILED: 07/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Notice of Abandonment

Application No.
09/625,712

Applicant(s)
DRUGGE

Examiner
Philip H. Leung

Art Unit
3742



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on Sep 10, 2002.
 - (a) ☐ A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
 - (b) ☐ A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113(a) to the final rejection.

(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
 - (c) ☐ A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
 - (d) ☒ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
 - (a) ☐ The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
 - (b) ☐ The submitted issue fee of \$ _____ is insufficient. A balance of \$ _____ is due.

The issue fee required by 37 CFR 1.18 is \$ _____. The publication fee, if required by 37 CFR 1.18(d) is \$ _____
 - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
 - (a) ☐ Proposed new formal drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
 - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interferences rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☐ The reason(s) below:


PHILIP H. LEUNG
PRIMARY EXAMINER
ART UNIT 3742

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

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PTO/SB/87 (08-03)

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MELANIE G. VASQUEZ

Typed or printed name of person signing Certificate

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ATTACHED HERETO FOR SERIAL NO. 09/625,712

1. PTO/SB/82 Revocation of Power of Attorney with New Power of Attorney and Change of Correspondence Address [1 page]
- 2.
- 3.
- 4.

TOTAL PAGES INCLUDING FACSIMILE TRANSMITTAL: 2

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HARTFORD: 839609.01

FROM :

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U.S. Patent and Trademark Office U.S. DEPARTMENT OF COMMERCE
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PTO/SB/02 (04-05)

REVOCATION OF POWER OF ATTORNEY WITH NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Application Number	09/626,712
Filing Date	
First Named Inventor	Rhett J. DRUGGE
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint the practitioners associated with the Customer Number: **21832**

☒ Please change the correspondence address for the above-identified application to:

☒ The address associated with Customer Number: **21832**

OR

☐ Firm or Individual Name	McCarter & English, LLP		
Address	185 Asylum Street CryPlace I		
City	Hartford	State	CT
Country	USA		
Telephone	860-275-6719	Fax	860-724-3397

I am the:

☒ Applicant/Inventor.

☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

SIGNATURE of Applicant or Assignee of Record

Signature	<i>[Signature]</i>		
Name	Rhett J. Drugge, M.D.		
Date	5-6-05	Telephone	(203) 324-5719

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 01 forms are submitted.

This collection of information is required by 37 CFR 1.301. The information is required to obtain or refuse a benefit by the PTO which is to be (and by the USPTO a process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is designed to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments as to the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1480, Alexandria, VA 22313-1480.

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HARTFORD: 639329.01

FROM :

FAX NO. : 203 323 7485

May. 10 2005 12:04PM P2

05/10/2005 12:33 FAX 8807243397

MCCARTER & ENGLISH LLP

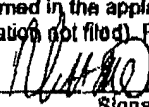
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PTO/3517 (11-04)

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POWER TO INSPECT/COPY		Docket Number (Optional)
In re Application of Rhett J. DRUGGE		
RECEIVED MAY 11 2005 Art Unit	Application Number 09/625,712	Filed
To be assigned	Examiner To be assigned	
File Information Unit		
Commissioner for Patents P.O. Box 1480 Alexandria, VA 22313-1450		Paper No. <u>4</u>
Please permit the following person(s) to inspect and make copies of the above identified application:		
Customer Name(s): <u>Rick Jordan</u>		
Badge Number(s): _____		
Company Name (if any): <u>World Patent Services, 2001 Jefferson Davis Highway, Suite 304B, Arlington, VA 22202</u>		
Telephone Number: <u>(703) 418-2848</u>		
Fax Number: <u>(703) 418-3848</u>		
I am an:		
☒ Applicant.		
☐ Authorized official of the assignee of record. The assignment was recorded in the United States Patent and Trademark Office at Reel _____ Frame _____ or for which a copy thereof is attached.		
☐ Attorney or agent of record. Registration No. _____ Attorney is associated with Customer No. 21832.		
☐ Attorney or agent named in the application papers filed under 37 CFR 1.53, 1.494, or 1.495 (37 CFR 1.63 or 1.497 oath or declaration not filed). Registration No. _____		
 Signature		<u>5-10-05</u> Date
RHETT J. DRUGGE, M.D. Typed or printed name		FOR USPTO USE ONLY If a CD is ordered: Date CD ordered: _____ Date CD received: _____ Date CD given to customer: _____ Date CD returned by Customer: _____ CD purchased? YES NO Power to Inspect Approved by: _____ Unit: _____
Title (Officer of company or corporate assignee)		
Name of Assignee, if any (e.g., company name)		
<u>(203) 324-5719</u> Telephone Number		

This collection of information is required by 37 CFR 1.14. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1480, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1480, Alexandria, VA 22313-1450.

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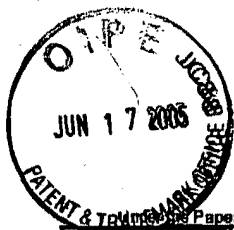
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PTO/SB/07 (08-03)

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Certificate of Transmission under 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office to 703-872-9306.

on June 17, 2005
Date

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OFFICE OF PETITIONS

Elizabeth M. Swift

Signature

Elizabeth M. Swift

Typed or printed name of person signing Certificate

Note: Each paper must have its own certificate of transmission, or this certificate must identify each submitted paper.

ATTACHED HERETO FOR U.S. SERIAL NO. 09/625,712:

1. Petition under 37 CFR 1.137(b) to revive unintentionally abandoned application. (2 pages)
2. Response to Office Action (2 pages)
3. Fee Transmittal (1 page)

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TOTAL PAGES INCLUDING FACSIMILE TRANSMITTAL: 6

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06/17/2005 14:33 FAX 8607243397

PATENT MAINTENANCE
DIVISION

MCCARTER & ENGLISH LLP

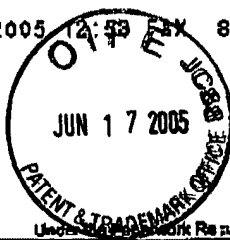
SHEARD & DRUGGE PC.

MCCARTER & ENGLISH LLP

002/006

PAGE 02

002/003



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PTO/SB/04 (09-04)

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PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)	Docket Number (Optional) 100504.00002

First named inventor: Rhett DRUGGE

Application No.: 09/625,712

Art Unit: 3742

Filed: 07/26/2000

Examiner: Philip H. Leung

Title: APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY

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OFFICE OF PETITIONS

Attention: Office of Petitions
Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22311-1450
FAX (703) 872-9306

NOTE: If information or assistance is needed in completing this form, please contact Petitions Information at (703) 305-9282.

The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the expiration date of the period set for reply in the office notice or action plus an extensions of time actually obtained.

APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION

NOTE: A grantable petition requires the following items:

- (1) Petition fee;
- (2) Reply and/or issue fee;
- (3) Terminal disclaimer with disclaimer fee - required for all utility and plant applications filed before June 8, 1995; and for all design applications; and
- (4) Statement that the entire delay was unintentional.

1. Petition fee

- ☒ Small entity fee \$ 750.00 (37 CFR 1.17(m)). Applicant claims small entity status. See 37 CFR 1.27.
- ☐ Other than small entity - fee \$ _____ (37 CFR 1.17(m))

2. Reply and/or fee

- A. The reply and/or fee to the above-noted Office action in the form of Response to Office Action (Identify type of reply):**

- ☐ has been filed previously on _____
- ☒ is enclosed herewith.

- B. The issue fee and publication fee (if applicable) of \$ _____**

- ☐ has been paid previously on _____
- ☐ is enclosed herewith.

This collection of information is required by 37 CFR 1.137(b). The information is required to obtain or retain a benefit by the public which is to the (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the content of this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22311-1450. DO NOT SEND REPLY OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22311-1450.

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PTO/SB/64 (08-04)

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3. Terminal disclaimer with disclaimer fee

- ☒ Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required.
- ☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of \$ _____ for a small entity or \$ _____ for other than a small entity) disclaiming the required period of time is enclosed herewith (see PTO/SB/63).

4. STATEMENT: The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional. (NOTE: The United States Patent and Trademark Office may require additional information if there is a question as to whether either the abandonment or the delay in filing a petition under 37 CFR 1.137(b) was unintentional (MPEP 711.03(c), subsections (III)(C) and (D)).)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

[Signature]
Signature

6.17.05
Date

Rhet J. Druggs
Typed or printed name

32615
Registration Number, if applicable

50 Glenbrook Road, Suite 1C
Address

203-323-7485
Telephone Number

Stamford, Connecticut 06902-2914
Address

Enclosures: ☒ For Payment

☒ Reply

☐ Terminal Disclaimer Form

☐ Additional sheets containing statements establishing unintentional delay

☐ Other _____

CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR 1.8(a)]

I hereby certify that this correspondence is being:

☐ Deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

☒ Transmitted by facsimile on the date shown below to the United States Patent and Trademark Office at (703) 872-9306.

June 17, 2005
Date

[Signature]
Signature

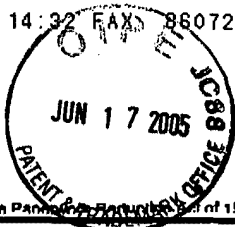
Elizabeth M. Swift

Typed or printed name of person signing certificate

[Page 2 of 3]

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PTO/SB/17 (12-04)

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U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2005

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 750.00)

Complete If Known

Application Number **09/625,712**
 Filing Date **07/26/2000**
 First Named Inventor **Rhett DRUGGE**
 Examiner Name **Philip H. Leung**
 Art Unit **3742**
 Attorney Docket No. **100504.00002**

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OFFICE OF PETITIONS

METHOD OF PAYMENT (check all that apply)

- ☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____
- ☒ Deposit Account Deposit Account Number: **50-1402** Deposit Account Name: **MCCARTER & ENGLISH, LLP**
- For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)
- ☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee
- ☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.18 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims: _____ Extra Claims: _____ Fee (\$): _____ Fee Paid (\$): _____

Multiple Dependent Claims: _____ Fee (\$): _____ Fee Paid (\$): _____

HP = highest number of total claims paid for, if greater than 20

Indep. Claims: _____ Extra Claims: _____ Fee (\$): _____ Fee Paid (\$): _____

HP = highest number of independent claims paid for, if greater than 3

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets: _____ Extra Sheets: _____ Number of each additional 50 or fraction thereof: _____ Fee (\$): _____ Fee Paid (\$): _____

- 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other: Fee for Petition under 37 CFR 1.137(b) - small entity

Fees Paid (\$)

\$750.00

SUBMITTED BY

Signature: Mark D. Giarratana Registration No. **32,615** Telephone **860.275.8719**

Name (Print/Type): **MARK D. GIARRATANA** Date **17 JUNE 2005**

This collection of information is required by 37 CFR 1.138. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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HARTFORD: 642123.01

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JUN 17 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

Rhett J. DRUGGE

Serial No.: 09/625,712

Filed: July 26, 2000

)
)
) Group Art Unit: 3742
)
) Examiner: Philip H. Leung
)
) Docket No. 100504.00002
For: **APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY**
 Commissioner for Patents
 Washington, DC 20231

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JUL 08 2005

OFFICE OF PETITIONS
RESPONSE TO OFFICE ACTION

Dear Sir:

In response to the Office Action dated September 10, 2002, please enter and consider the following amendment and remarks:

REMARKS

Claims 1-80 were pending in this application. This amendment responds to the first Office Action, which identifies two patentably distinct species of the claimed invention, and requires election of a single species and identification of the claims readable thereon for prosecution on the merits.

In response to the Election/Restriction Requirement set forth in the Office Action, Applicant elects to prosecute the species of Figure 1. This election is made without prejudice to Applicant's right to pursue coverage of any non-elected subject matter in divisional application(s). Claims 1-80 are believed to read on the elected species of Figure 1. Accordingly, claims 1-80 are currently pending in this application.

The elected claims are believed to be allowable over the prior art of record. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned. If the Examiner has any questions in connection with this paper, or otherwise if it

09/625,712
Art Unit 3742

100504.00002

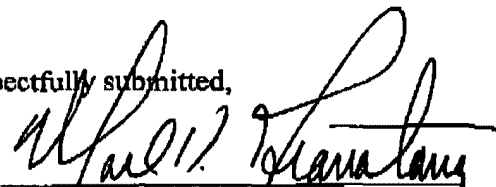
would facilitate the examination of this application, please call the undersigned at the telephone number below.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicant's attorney hereby authorizes that such fee be charged to Deposit Account No. 50-1402.

Date: 17 JUNE 2005

Respectfully submitted,

By:



Mark D. Giarratana
Reg. No. 32,615
McCarter & English, LLP
CityPlace I
185 Asylum Street
Hartford, CT 06103
Phone: (860) 275-6793
Fax: (860) 724-3397

HARTFORD: 642125.01



UNITED STATES PATENT AND TRADEMARK OFFICE

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MCCARTER & ENGLISH LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103

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OFFICE OF PETITIONS

In re Application of :
Rhett Drugge :
Application No. 09/625,712 :
Filed: July 26, 2000 :
Attorney Docket No. RD-001 :

ON PETITION

This is a decision on the petition under 37 CFR 1.137(b), filed June 17, 2005, to revive the above-identified application.

The petition is **GRANTED**.

This application became abandoned for failure to timely file a proper reply to the non-final Office action mailed September 10, 2002, which set an one (1) month period for response. Accordingly, this application became abandoned on October 11, 2002. A Notice of Abandonment was mailed on July 1, 2003.

The above-identified application has been abandoned for an extended period of time. The Patent and Trademark Office is relying on petitioner's duty of candor and good faith and accepting the statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition pursuant to 37 CFR 1.137(b) was unintentional. See Changes to Patent Practice and Procedure, 62 Fed. Reg. at 53160 and 53178; 1203 Off. Gaz. Pat. Office at 88 and 103 (responses to comments 64 and 109) (applicant obligated under 37 CFR 10.18 to inquire into the underlying facts and circumstances when providing the statement required by 37 CFR 1.137(b) to the Patent and Trademark Office).

The file is being forwarded to Technology Center 3700 for review of the response, filed June 17, 2005, *in due course*.

Telephone inquiries concerning this matter may be directed to the undersigned at (571) 272-3228.

Edward J. Tannouse
Petitions Attorney
Office of Petitions/Patent
United States Patent and Trademark Office



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,712	07/26/2000	Rhett Drugge	RD-001	7895

21832 7590 05/16/2006
MCCARTER & ENGLISH LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103

EXAMINER

ROBINSON, DANIEL LEON

ART UNIT	PAPER NUMBER

3742

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

6

Office Action Summary	Application No. 09/625,712	Applicant(s) DRUGGE, RHETT	
	Examiner Daniel L. Robinson	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-80 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5) ☐ Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date _____	6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-6, 9-21, 30-39, 41-50 and 74, drawn to a diagnostic device, classified in class 600, subclass 476.
- II. Claims 7-8, drawn to a chamber, classified in class 396, subclass 39.
- III. Claims 22-23, drawn to a panel, classified in class 211, subclass 75.
- IV. Claims 24-29, drawn to illumination means, classified in class 362, subclass 3.
- V. Claim 40, drawn to detection means, classified in class 600, 431.
- VI. Claims 51-54, drawn to a viewer, classified in class 600, subclass 103.
- VII. Claim 55, drawn to a diagnostically capable device, classified in class 600, subclass 477.
- VIII. Claims 75-76, drawn to a 3D imaging device, classified in class 600, subclass 407.
- IX. Claims 77-80, drawn to 2D imaging device, classified in class 600, subclass 407.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and Groups II-IX are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the

Art Unit: 3742

combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombinations as claimed because each subcombination recites limiting features not found in the combination. The subcombinations have separate utility such as chambers, panels, illuminators, detectors, viewers, diagnostics and imagers.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

This application contains claims directed to the following patentably distinct species:

Species A 3D imaging

Species B 2D imaging

The species are independent or distinct because independent.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim

is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

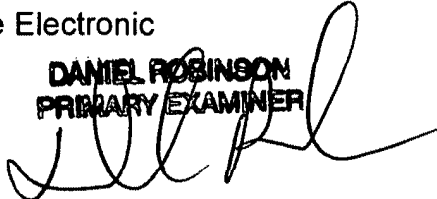
Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L. Robinson whose telephone number is 571-272-4788. The examiner can normally be reached on m-f 5:30-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DANIEL ROBINSON
PRIMARY EXAMINER


dlr

**RECEIVED
CENTRAL FAX CENTER****JUL 17 2006****CERTIFICATE OF FACSIMILE TRANSMISSION**

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is facsimile transmitted to: Mail Stop: Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. Facsimile No. 571-273-8300.

Date: June 17, 2006**Name:** K. Ferrary**Signature:****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of Rhett Drugge

Serial No.: 09/625,712

Filing Date: July 26, 2000

Title: Apparatus for Total Immersion Photography

) Examiner: Daniel Leon Robinson

) Confirmation No.: 7895

) Art Unit: 3742

) Docket No.: 100504.00002
(formerly RD-001)

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

RESPONSE TO RESTRICTION REQUIREMENT

Sir:

In response to the Election/Restriction Requirement set forth in the Office Action dated May 16, 2006, Applicant elects to prosecute the invention of Group I, including claims 1-6, 9-21, 30-39, 41-50 and 74. Since the Examiner has indicated that Groups II-IX are related as a subcombination of the combination of Group I, it is respectfully submitted that none of these claims of Groups II-IX should be withdrawn from consideration unless no generic claim is ultimately held allowable. Applicant also elects Species B directed to 2D imaging. The following claims are generic or directed to Species B: Claims 1, 2, 4-80. This election is made without prejudice to Applicant's right to pursue coverage of any non-elected subject matter in one or more divisional applications.

The pending claims are believed to be allowable over the prior art of record. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner has any questions in connection with this paper, or otherwise

- 1 -

Application No. 09/625,712
Reply to Office Action of May 16, 2006

if it would facilitate the examination of this application, please call the undersigned at the telephone number below.

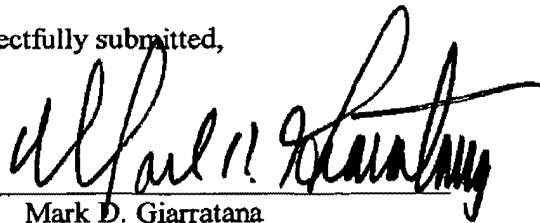
In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, or if an additional extension is required, please consider this a petition therefor, and Applicant's attorney hereby authorizes that any such fee be charged to Deposit Account No. 50-3569.

Respectfully submitted,

Date:

17 July 2006

By:



Mark D. Giarratana
Registration No. 32,615
Attorneys for Applicant

PTO Correspondence Address:

McCarter & English, LLP
CityPlace I
185 Asylum Street
Hartford, CT 06103
Phone: (860) 275-6719
Fax: (860) 724-3997

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JUL 17 2006

PTO/SB/97 (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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Certificate of Transmission under 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office to 571.273.8300

on July 17, 2006
Date

Kathleen M. Ferrary
Signature

Kathleen M. Ferrary

Typed or printed name of person signing Certificate

Note: Each paper must have its own certificate of transmission, or this certificate must identify each submitted paper.

ATTACHED HERETO: Serial No. 09/625,712 (Docket No. 100504.00002)

1. Petition for One Month Extension of Time - 1 page
2. Response to Restriction Requirement - 2 pages

TOTAL PAGES INCLUDING FACSIMILE TRANSMITTAL: 4

This collection of information is required by 37 CFR 1.8. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.8 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

JUL 17 2006

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being facsimile transmitted on the date shown below to: Mail Stop: Amendments, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. Facsimile No. 571-273-8300

Date: July 17, 2006

Name: K. Ferrary

Signature: *K. Ferrary*IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Rhett Drugge

Serial No.: 09/625,712

Filing Date: July 26, 2000

Title: Apparatus for Total Immersion Photography

) Examiner: Daniel Leon Robinson

) Confirmation No.: 7895

) Art Unit: 3742

) Docket No.: 100504.00002
(formerly RD-001)

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

**PETITION AND FEE FOR EXTENSION
OF TIME UNDER 37 C.F.R. § 1.17(a)(1)**

Dear Sir:

Applicant hereby requests a one-month extension of time in which to respond to the Restriction Requirement dated May 16, 2006 to thereby extend the period for response from June 16, 2006 to July 16, 2006. Because July 16, 2006 fell upon a non-business day, Applicant respectfully submits that this Petition along with the accompanying Response to Restriction Requirement is filed within a timely manner.

Authorization is given to charge the \$60.00 for a Small Entity associated with this extension of time to Deposit Account No. 50-3569. If any additional fee is required, please accept this as authorization to charge Deposit Account No. 50-3569.

Respectfully submitted,

Date: July 17, 2006

By: *Mark D. Giarratana*

Mark D. Giarratana
Registration No. 32,615
Attorney for Applicant

PTO Correspondence Address:
McCarte & English, LLP
CityPlace I
185 Asylum Street
Hartford, Ct 06103
860.275.6719
860.724.3397

09625712

00000033 503569

60.00 DA

01 FC:2251

ME15747216.1

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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L2	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L3	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L4	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L5	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L6	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L7	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L8	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L9	28121	600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
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L12	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
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L14	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L15	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

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L24	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 12:52
L25	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
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L27	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
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L40	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L41	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L42	40	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L43	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L44	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L45	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
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L48	0	"imaging stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L49	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L50	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L51	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L52	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L53	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:52
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L56	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L57	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L58	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
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L61	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
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EAST Search History

L65	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
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L67	28121	600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
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L69	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L70	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L71	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L72	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L73	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L74	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L75	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L76	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L77	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L78	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L79	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L80	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L81	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and "confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L82	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L83	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L84	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L85	0	"imaging stresed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L86	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L87	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L88	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L89	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L90	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L91	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L92	38421	L58 or L59 or L60 or L61 or L62 or L63	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L93	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L94	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L95	8	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L96	3	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L97	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 12:52
L98	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L99	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L100	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L101	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L102	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L103	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L104	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L105	40	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L106	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L107	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L108	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:52
L109	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L110	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L111	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L112	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:52
L113	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L114	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L115	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L116	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L117	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L118	615	"power sensor".ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L119	0	"power sensor".ti. and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L120	146	"power sensor" and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L121	2	"6972395".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L122	0	"6972395".pn. and resistivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L123	0	219/438.ccls. and resistivity with sense with chance	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L124	0	219/438.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L125	2	"219"/\$.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L126	100	"resistivity sensor" with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L127	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L128	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L129	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L130	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L131	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L132	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L133	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L134	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L135	28121	600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L136	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L137	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L138	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L139	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L140	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L141	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L142	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L143	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L144	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L145	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L146	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L147	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L148	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L149	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and "confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L150	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L151	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L152	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L153	0	"imaging stresed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L154	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L155	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L156	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L157	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L158	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L159	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L160	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L161	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L162	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L163	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L164	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L165	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L166	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L167	28121	600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L168	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L169	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L170	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L171	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L172	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L173	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L174	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L175	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L176	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L177	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L178	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L179	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L180	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L181	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and "confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L182	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L183	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L184	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L185	0	"imaging streded skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L186	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L187	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L188	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L189	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L190	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L191	38421	L158 or L159 or L160 or L161 or L162 or L163	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L192	0	"power sensor".ti. and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L193	2	"6972395".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L194	0	"6972395".pn. and resistivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L195	0	219/438.ccls. and resistivity with sense with chance	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L196	0	219/438.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L197	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L198	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L199	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L200	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L201	8	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L202	3	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L203	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 12:52
L204	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L205	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L206	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L207	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L208	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L209	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L210	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53

EAST Search History

L211	40	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L212	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L213	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L214	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:53
L215	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L216	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L217	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L218	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:53

EAST Search History

L219	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L220	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L221	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L222	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L223	8	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L224	3	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L225	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 12:53
L226	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L227	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L228	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L229	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L230	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53

EAST Search History

L231	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L232	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L233	40	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L234	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L235	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L236	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:53
L237	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L238	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L239	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53

EAST Search History

L240	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:53
L241	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L242	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L243	2	"219"/\$.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L244	100	"resistivity sensor" with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L245	146	"power sensor" and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L246	50	600/162.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L247	2182	600/407.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L248	615	"power sensor".ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L249	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53

EAST Search History

L250	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:05
L251	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L252	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L253	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L254	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L255	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L256	29007	L127 or L161 or L162 or L163 or L246 or L247	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L257	0	L256 and L253	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L258	3323	L256 and (2-d or "two dimensional" or 2-dimensional) with image	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L259	3706	L256 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L260	139	L259 and L249	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L261	79	L259 and L249 and (diagnose or diagnostic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L262	399	L256 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging) with (view or viewing)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53

EAST Search History

L263	5	L256 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging) with (view or viewing) and L249	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L264	15	L256 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging) with (view or viewing) with (diagnose or diagnostic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L265	15	L256 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging) with (view or viewing) with (diagnose or diagnostic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:45
L266	5	265 and infrared	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:47
L267	5	265 and infrared and light	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:03
L268	0	265 and infrared and light and computer with (view or viewing)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:52
L269	0	25 and infrared and light and computer with (view or viewing) and usb and (three with hundred with sixty)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:53
L270	0	135 and infrared and light and computer with (view or viewing) and usb and (three with hundred with sixty)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:53
L271	1	135 and infrared and light and computer with (view or viewing) and (three with hundred with sixty)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:54
L272	39	infrared and light and computer with (view or viewing) and (three with hundred with sixty)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:54
L273	1	infrared and light and computer with (view or viewing) and (three with hundred with sixty) and usb	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:55
L274	39	infrared and light and computer with (view or viewing) and (three with hundred with sixty)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:58

EAST Search History

L275	283	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:59
L276	45	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree and usb	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:56
L277	125332	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree and usb diagnose	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:56
L278	0	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree and usb and diagnose	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:56
L279	10	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree and usb and diagnostic	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:56
L280	283	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:01
L281	55	280 and 146	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:59
L282	45	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree and usb	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:01
L283	0	600/476.ccls. and (ligt and infrared)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:05
L284	347	600/476.ccls. and (light and infrared)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:16
L285	11	600/476.ccls. and (light and infrared) with view	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:13
L286	2	"7092014".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:09
L287	1	600/476.ccls. and voice with control	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:14

EAST Search History

L288	5	600/476.ccls. and (voice or audible) with control	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:14
L289	150	9 and voice with control	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:16
L290	6	9 and voice with control with view	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:16
S1	13295	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S2	13295	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S3	787	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S4	316	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S5	11778	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S6	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S7	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S8	1794	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S9	26047	600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S10	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S11	73299	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S12	6801	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31

EAST Search History

S13	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S14	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S15	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S16	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S17	2	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S18	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S19	1794	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S20	1063	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S21	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S22	3	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S23	1	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S24	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2004/06/04 10:32
S25	671	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S26	2	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32

EAST Search History

S27	8	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S28	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S29	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S30	1234	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:41
S31	91	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:41
S32	18050	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:42
S33	517243	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:43
S34	100	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:44
S35	15	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:44
S36	1662	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:48
S37	3	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:47
S38	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and " confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:48
S39	2	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:51

EAST Search History

S40	85	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:53
S41	49066	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:53
S42	32	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:03
S43	4	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:04
S44	12	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:04
S45	11	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:09
S46	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2004/06/04 11:08
S47	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:10
S48	0	"imaging stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:10
S49	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:11
S50	2	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:11
S51	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:12

EAST Search History

S52	3	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:12
S53	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2004/06/04 11:12
S54	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/07 13:18
S55	3174	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/07 13:20
S56	3842	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/07 13:20
S57	3	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/07 13:20
S58	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.) and stess\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:45
S59	1	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stess\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:46
S60	10277	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:55
S61	14493	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56

EAST Search History

S62	14493	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S63	900	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S64	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S65	12508	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S66	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S67	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S68	2101	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S69	28082	600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S70	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S71	90610	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S72	10277	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S73	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S74	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S75	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S76	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56

EAST Search History

S77	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S78	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S79	2101	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S80	1247	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S81	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S82	8	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S83	3	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S84	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/16 10:56
S85	775	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S86	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S87	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S88	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S89	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S90	1322	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56

EAST Search History

S91	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S92	19245	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S93	575472	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S94	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S95	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S96	2068	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S97	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S98	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and " confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S99	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 0	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 1	53471	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 2	40	(((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 3	7	(((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56

EAST Search History

S10 4	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 5	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 6	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/16 10:56
S10 7	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 8	0	"imaging stresed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 9	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 0	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 1	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 2	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 3	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/16 10:56

EAST Search History

S11 4	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 5	4027	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 6	4798	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 7	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 8	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:58
S11 9	38337	S60 or S61 or S62 or S63 or S64 or S65	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/23 10:41
S12 0	615	"power sensor".ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/23 10:45
S12 1	0	"power sensor".ti. and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/23 10:45
S12 2	146	"power sensor" and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:56
S12 3	2	"6972395".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:56
S12 4	0	"6972395".pn. and resistivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:56

EAST Search History

S12 5	0	219/438.ccls. and resistivity with sense with chance	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:57
S12 6	0	219/438.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:57
S12 7	2	"219"/\$.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:58
S12 8	100	"resistivity sensor" with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S12 9	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 0	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 1	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 2	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 3	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 4	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 5	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 6	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 7	28121	600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 8	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S13 9	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 0	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 1	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 2	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 3	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 4	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 5	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 6	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 7	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 8	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 9	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 0	8	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 1	3	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 2	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 10:52

EAST Search History

S15 3	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 4	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 5	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 6	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 7	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 8	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 9	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 0	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 1	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 2	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 3	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 4	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 5	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S16 6	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or dermat\$)) and " confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 7	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or dermat\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 8	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 9	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 0	40	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 1	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 2	16	"600"/\$.ccls. and "confocal imaging " and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 3	14	("600"/\$.ccls. and "confocal imaging " and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$. ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 4	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 10:52
S17 5	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S17 6	0	"imaging stresed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 7	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 8	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 9	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 0	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 1	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 10:52
S18 2	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 3	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 4	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 5	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 6	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 7	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S18 8	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 9	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 0	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 1	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 2	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 3	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 4	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 5	28121	600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 6	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 7	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 8	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 9	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 0	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 1	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 2	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S20 3	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 4	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 5	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 6	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 7	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 8	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 9	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and "confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 0	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 1	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 2	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 3	0	"imaging stresed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 4	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 5	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 6	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S21 7	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 8	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 9	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 0	38421	S186 or S187 or S188 or S189 or S190 or S191	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 1	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 2	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 3	8	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 4	3	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 5	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 10:52
S22 6	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 7	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 8	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 9	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S23 0	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 1	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 2	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 3	40	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 4	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 5	14	("600"/\$.ccls. and "confocal imaging " and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$. ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 6	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 10:52
S23 7	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 8	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 9	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S24 0	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 10:52
S24 1	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 2	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 3	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 4	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 5	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 6	615	"power sensor".ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 7	0	"power sensor".ti. and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 8	146	"power sensor" and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 9	2	"6972395".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S25 0	0	"6972395".pn. and resistivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S25 1	0	219/438.ccls. and resistivity with sense with chance	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S25 2	0	219/438.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S25 3	2	"219"/\$.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S25 4	100	"resistivity sensor" with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S25 5	50	600/162.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:01
S25 6	2182	600/407.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:01
S25 7	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:02
S25 8	29007	S129 or S189 or S190 or S191 or S255 or S256	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:02
S25 9	0	S258 and S257	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:03
S26 0	3323	S258 and (2-d or "two dimensional" or 2-dimensional) with image	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:04
S26 1	3706	S258 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:07

EAST Search History

S26 2	139	S261 and S153	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:05
S26 3	79	S261 and S153 and (diagnose or diagnostic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:06
S26 4	399	S258 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging) with (view or viewing)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:08
S26 5	5	S258 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging) with (view or viewing) and S153	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:07

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L2	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L3	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L4	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L5	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L6	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L7	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L8	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L9	28121	600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L10	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L11	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L12	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L13	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L14	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L15	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L16	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L17	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L18	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L19	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L20	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L21	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L22	8	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L23	3	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L24	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 12:52
L25	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L26	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L27	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L28	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L29	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L30	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L31	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L32	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L33	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L34	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L35	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L36	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L37	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L38	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and " confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L39	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L40	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L41	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L42	40	(((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L43	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L44	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L45	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L46	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:52
L47	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L48	0	"imaging stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L49	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L50	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L51	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L52	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L53	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:52
L54	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L55	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L56	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L57	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L58	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L59	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L60	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L61	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L62	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L63	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L64	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L65	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L66	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L67	28121	600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L68	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L69	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L70	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L71	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L72	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L73	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L74	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L75	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L76	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L77	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L78	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L79	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L80	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L81	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and "confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L82	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L83	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L84	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L85	0	"imaging stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L86	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L87	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L88	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L89	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L90	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L91	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L92	38421	L58 or L59 or L60 or L61 or L62 or L63	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L93	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L94	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L95	8	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L96	3	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L97	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 12:52
L98	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L99	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L100	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L101	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L102	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L103	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L104	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L105	40	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L106	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L107	14	("600"/\$.cccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.cccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L108	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:52
L109	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L110	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L111	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L112	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:52
L113	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L114	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L115	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L116	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L117	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L118	615	"power sensor".ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L119	0	"power sensor".ti. and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L120	146	"power sensor" and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L121	2	"6972395".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L122	0	"6972395".pn. and resistivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L123	0	219/438.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L124	0	219/438.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L125	2	"219"/\$.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L126	100	"resistivity sensor" with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L127	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L128	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L129	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L130	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L131	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L132	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L133	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L134	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L135	28121	600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L136	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L137	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L138	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L139	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L140	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L141	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L142	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L143	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L144	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L145	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L146	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L147	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L148	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L149	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and "confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L150	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L151	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L152	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L153	0	"imaging streded skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L154	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L155	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L156	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L157	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L158	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L159	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L160	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L161	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L162	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L163	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L164	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L165	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L166	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L167	28121	600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L168	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L169	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L170	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L171	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L172	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L173	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L174	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L175	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L176	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L177	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L178	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L179	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L180	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L181	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and "confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L182	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L183	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L184	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

EAST Search History

L185	0	"imaging streded skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L186	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L187	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L188	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L189	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L190	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L191	38421	L158 or L159 or L160 or L161 or L162 or L163	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L192	0	"power sensor".ti. and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L193	2	"6972395".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L194	0	"6972395".pn. and resistivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L195	0	219/438.ccls. and resistivity with sense with chance	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L196	0	219/438.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L197	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52

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L198	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L199	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L200	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L201	8	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L202	3	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L203	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 12:52
L204	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L205	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:52
L206	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L207	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L208	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L209	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L210	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53

EAST Search History

L211	40	(((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L212	7	(((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L213	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L214	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:53
L215	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L216	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L217	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L218	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:53

EAST Search History

L219	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L220	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L221	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L222	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L223	8	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L224	3	(600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L225	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 12:53
L226	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L227	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L228	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L229	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L230	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53

EAST Search History

L231	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L232	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L233	40	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L234	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L235	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L236	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:53
L237	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L238	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L239	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53

EAST Search History

L240	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 12:53
L241	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L242	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L243	2	"219"/\$.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L244	100	"resistivity sensor" with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L245	146	"power sensor" and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L246	50	600/162.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L247	2182	600/407.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L248	615	"power sensor".ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L249	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53

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L250	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:05
L251	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L252	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L253	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L254	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L255	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L256	29007	L127 or L161 or L162 or L163 or L246 or L247	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L257	0	L256 and L253	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L258	3323	L256 and (2-d or "two dimensional" or 2-dimensional) with image	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L259	3706	L256 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L260	139	L259 and L249	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L261	79	L259 and L249 and (diagnose or diagnostic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L262	399	L256 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging) with (view or viewing)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53

EAST Search History

L263	5	L256 and (2-d or "two dimensional" or 2-dimensional) with (Image or imaging) with (view or viewing) and L249	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L264	15	L256 and (2-d or "two dimensional" or 2-dimensional) with (Image or imaging) with (view or viewing) with (diagnose or diagnostic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 12:53
L265	15	L256 and (2-d or "two dimensional" or 2-dimensional) with (Image or imaging) with (view or viewing) with (diagnose or diagnostic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:45
L266	5	265 and infrared	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:47
L267	5	265 and infrared and light	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:03
L268	0	265 and infrared and light and computer with (view or viewing)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:52
L269	0	25 and infrared and light and computer with (view or viewing) and usb and (three with hundred with sixty)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:53
L270	0	135 and infrared and light and computer with (view or viewing) and usb and (three with hundred with sixty)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:53
L271	1	135 and infrared and light and computer with (view or viewing) and (three with hundred with sixty)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:54
L272	39	infrared and light and computer with (view or viewing) and (three with hundred with sixty)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:54
L273	1	infrared and light and computer with (view or viewing) and (three with hundred with sixty) and usb	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:55
L274	39	infrared and light and computer with (view or viewing) and (three with hundred with sixty)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:58

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L275	283	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:59
L276	45	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree and usb	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:56
L277	125332	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree and usb diagnose	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:56
L278	0	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree and usb and diagnose	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:56
L279	10	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree and usb and diagnostic	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:56
L280	283	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:01
L281	55	280 and 146	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 13:59
L282	45	infrared and light and computer with (view or viewing) and ((three with hundred with sixty) or "360") with degree and usb	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:01
L283	0	600/476.ccls. and (ligt and infrared)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:05
L284	347	600/476.ccls. and (light and infrared)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:16
L285	11	600/476.ccls. and (light and Infrared) with view	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:13
L286	2	"7092014".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:09
L287	1	600/476.ccls. and voice with control	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:14

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L288	5	600/476.ccls. and (voice or audible) with control	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:14
L289	150	9 and voice with control	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:16
L290	6	9 and voice with control with view	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 14:16
S1	13295	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S2	13295	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S3	787	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S4	316	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S5	11778	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S6	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S7	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S8	1794	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S9	26047	600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S10	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S11	73299	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S12	6801	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31

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S13	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S14	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S15	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S16	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S17	2	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S18	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:31
S19	1794	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S20	1063	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S21	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S22	3	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S23	1	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S24	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2004/06/04 10:32
S25	671	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S26	2	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32

EAST Search History

S27	8	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S28	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S29	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:32
S30	1234	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:41
S31	91	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:41
S32	18050	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:42
S33	517243	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:43
S34	100	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:44
S35	15	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:44
S36	1662	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:48
S37	3	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:47
S38	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and " confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:48
S39	2	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:51

EAST Search History

S40	85	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:53
S41	49066	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:53
S42	32	(((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:03
S43	4	(((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:04
S44	12	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:04
S45	11	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:09
S46	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2004/06/04 11:08
S47	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:10
S48	0	"imaging stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:10
S49	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:11
S50	2	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:11
S51	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:12

EAST Search History

S52	3	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 11:12
S53	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2004/06/04 11:12
S54	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/07 13:18
S55	3174	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/07 13:20
S56	3842	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/07 13:20
S57	3	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/07 13:20
S58	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.) and stess\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:45
S59	1	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stess\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/04 10:46
S60	10277	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:55
S61	14493	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56

EAST Search History

S62	14493	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S63	900	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S64	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S65	12508	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S66	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S67	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S68	2101	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S69	28082	600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S70	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S71	90610	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S72	10277	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S73	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S74	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S75	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S76	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56

EAST Search History

S77	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S78	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S79	2101	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S80	1247	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S81	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S82	8	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S83	3	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S84	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/16 10:56
S85	775	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S86	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S87	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S88	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S89	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S90	1322	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56

EAST Search History

S91	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S92	19245	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S93	575472	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S94	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S95	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S96	2068	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S97	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S98	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and " confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S99	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S100	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S101	53471	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S102	40	(((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S103	7	(((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56

EAST Search History

S10 4	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 5	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not (((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 6	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/16 10:56
S10 7	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 8	0	"imaging stresed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S10 9	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 0	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 1	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 2	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 3	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/16 10:56

EAST Search History

S11 4	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 5	4027	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 6	4798	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 7	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:56
S11 8	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/16 10:58
S11 9	38337	S60 or S61 or S62 or S63 or S64 or S65	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/23 10:41
S12 0	615	"power sensor".ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/23 10:45
S12 1	0	"power sensor".ti. and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/23 10:45
S12 2	146	"power sensor" and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:56
S12 3	2	"6972395".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:56
S12 4	0	"6972395".pn. and resistivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:56

EAST Search History

S12 5	0	219/438.ccls. and resistivity with sense with chance	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:57
S12 6	0	219/438.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:57
S12 7	2	"219"/\$.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 08:58
S12 8	100	"resistivity sensor" with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S12 9	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 0	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 1	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 2	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 3	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 4	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 5	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 6	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 7	28121	600/407-480.ccls. or 600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S13 8	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S13 9	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 0	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 1	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 2	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 3	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 4	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 5	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 6	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 7	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 8	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S14 9	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 0	8	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 1	3	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 2	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 10:52

EAST Search History

S15 3	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 4	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 5	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 6	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 7	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 8	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S15 9	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 0	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 1	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 2	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 3	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 4	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 5	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S16 6	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and "confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 7	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 8	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S16 9	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 0	40	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 1	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 2	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 3	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not ((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 4	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 10:52
S17 5	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S17 6	0	"imaging stresed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 7	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 8	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S17 9	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 0	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 1	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 10:52
S18 2	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 3	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 4	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 5	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 6	10322	(zeng or lam or palcic).ln.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 7	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S18 8	14509	600/407-480.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S18 9	901	700/90.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 0	321	332/117.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 1	12530	250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 2	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 3	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 4	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 5	28121	600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 6	4	"6526309".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 7	90917	("6526309".pn. or "6104939".pn.) nad fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 8	10322	(zeng or lam or palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S19 9	2	"6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 0	2	"6526309".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 1	2	"5813987".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 2	2	"5713364".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S20 3	1325	600/587.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 4	95	128/915.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 5	19276	378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 6	576479	600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 7	111	zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 8	2076	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S20 9	0	((600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$)) and "confocal with imaging"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 0	112	(stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 1	53540	"600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 2	16	"600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 3	0	"imaging stresed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 4	0	"imaging stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 5	0	"confocal imaging" and "stretched skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 6	4041	(force or stress) with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S21 7	4814	(force or stress) with imaging 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 8	1	("6526309".pn. or "6104939".pn.) and fluorescence	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S21 9	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 0	38421	S186 or S187 or S188 or S189 or S190 or S191	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 1	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 2	2	"5292415".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 3	8	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 4	3	(600/407-480.ccls. or 600/407-480. ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345.ccls.) and fluorescence with (infrared) with reflectance with imaging	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 5	4	(US-5292415-\$ or US-6638668-\$ or US-6310729-\$ or US-6507747-\$). did.	USPAT	OR	OFF	2006/10/24 10:52
S22 6	8	(zeng and lam and palcic).in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 7	10	600/476.ccls. and ((zeng or lam or palcic).in.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 8	7	"6526309".pn. or "5813987".pn. or "5713364".pn. or "6104939".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S22 9	2	"6008889".pn.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S23 0	17	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and zavislan.in.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 1	4	zavislan.in. and stress\$ with (tissue or skin or derm\$)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 2	3	(600/407-480.ccls. or 700/90.ccls. or 332/117.ccls. or 250/317.1-345. ccls. or 600/587.ccls. or "91" or 378/37-195.ccls.) and stress\$ with (tissue or skin or derm\$) with confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 3	40	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 4	7	((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and confocal	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 5	14	("600"/\$.ccls. and "confocal imaging" and (stress\$ or force) and skin) not ((stressed or stress) with (tissue or skin or dermat\$) with (imaging or image)) and "600"/\$.ccls.)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 6	17	("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.	USPAT	OR	ON	2006/10/24 10:52
S23 7	2	((("4768874" "4817622" "4863252" "4965441" "4991953" "5048904" "5048942" "5120953" "5122653" "5208648" "5321683" "5386317" "5464436" "5532874" "5719700" "5788639" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 8	7	"imaging skin" and (stressed or stretched)	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S23 9	4	"confocal imaging" and "stressed skin"	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S24 0	21	("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.	USPAT	OR	ON	2006/10/24 10:52
S24 1	2	((("4442844" "4515165" "4570638" "5146923" "5195522" "5349961" "5371368" "5701902" "5719700" "5730133" "5769076" "5787887" "5788634" "5788639" "5833633" "5833634" "5842995" "5848177" "5851181" "5860967" "6032071").PN.) and "confocal imaging" and skin	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 2	4	(force or stress) with imaging and 600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 3	777	600/476.ccls.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 4	1248	(dichroic and (filter or mirror)).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 5	2103	dichroic and (filter or mirror).ti.	USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 6	615	"power sensor".ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 7	0	"power sensor".ti. and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 8	146	"power sensor" and "219"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S24 9	2	"6972395".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52

EAST Search History

S25 0	0	"6972395".pn. and resistivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S25 1	0	219/438.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S25 2	0	219/438.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S25 3	2	"219"/\$.ccls. and resistivity with sense with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S25 4	100	"resistivity sensor" with change	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 10:52
S25 5	50	600/162.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:01
S25 6	2182	600/407.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:01
S25 7	44	drugge.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:02
S25 8	29007	S129 or S189 or S190 or S191 or S255 or S256	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:02
S25 9	0	S258 and S257	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:03
S26 0	3323	S258 and (2-d or "two dimensional" or 2-dimensional) with image	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:04
S26 1	3706	S258 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:07

EAST Search History

S26 2	139	S261 and S153	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:05
S26 3	79	S261 and S153 and (diagnose or diagnostic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:06
S26 4	399	S258 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging) with (view or viewing)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:08
S26 5	5	S258 and (2-d or "two dimensional" or 2-dimensional) with (image or imaging) with (view or viewing) and S153	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/10/24 11:07



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,712	07/26/2000	Rhett Drugge	RD-001	7895

21832 7590 10/26/2006

MCCARTER & ENGLISH LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103

EXAMINER

ROBINSON, DANIEL LEON

ART UNIT	PAPER NUMBER

3742

DATE MAILED: 10/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/625,712

Applicant(s)

DRUGGE, RHETT

Examiner

Daniel L. Robinson

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) 3-6, 22-29, 40, 51-73 and 75-80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed:
- 6) ☒ Claim(s) 1,2,9-21,30-39,41-50 and 74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)	5) ☐ Notice of Informal Patent Application
Paper No(s)/Mail Date _____	6) ☐ Other: _____

Response to Election

Applicant's election without traverse of Group I, Species B, Claims 1-2, 9-21, 30-39, 41-50 and 74 in the reply filed on 7-21-2006 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 9-21, 33, 36-39, 43, and 74 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Zeman (U.S.Pat.6,556,858).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30-32, 34-35, 41, 42 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeman in view of Li et al.(U.S.Pat.7,092,014). Zeman discloses an infrared light imaging system that shows many of the features of the claimed invention but fails to show 360 degree viewing, a PDA, USB or computer monitor. Li discloses a scene capturing and view rendering based on a longitudinally aligned camera array that shows all the features absent from Zeman. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to use 360 degree viewing to view a 3d object and a USB linked computer monitor as taught by Li so as to view in realtime or anytime.

Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zeman in view of Li as applied to claims 30-32, 34-35, 41, 42 and 50 above, and further in view of Mick et al.(U.S.Pat.5,261,404). Zeman in view of Li does not show voice control. Mick discloses a three dimensional mammal anatomy imaging system and method that shows voice control. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to use voice control so as to free hands up for object manipulation.

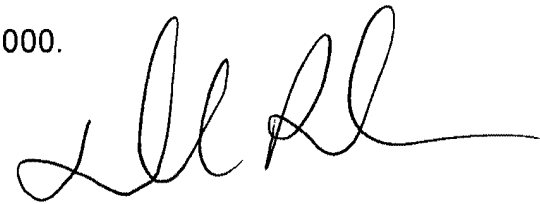
Claims 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeman in view of Wake (U.S.Pat.6,339,216). Zeman discloses an infrared light imaging system that shows many of the features of the claimed invention but fails to explicitly show an enclosed area. Wake discloses a time-resolved breast imaging device that explicitly shows an enclosed area. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to use the enclosed area as taught by Wake with the device of Zeman so as to illuminate a breast.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fontenot, Diab, Diab'986, Fontenot'306 and Kitajima are cited to show structure and methods similar to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L. Robinson whose telephone number is 571-272-4788. The examiner can normally be reached on m-f 5:30-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'D. Robinson', with a long horizontal flourish extending to the right.

DANIEL ROBINSON
PRIMARY EXAMINER

dlr

Notice of References Cited	Application/Control No. 09/625,712	Applicant(s)/Patent Under Reexamination DRUGGE, RHETT	
	Examiner Daniel L. Robinson	Art Unit 3742	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,339,216	01-2002	Wake, Robert H.	250/214A
*	B	US-5,261,404	11-1993	Mick et al.	600/425
*	C	US-7,092,014	08-2006	Li et al.	348/218.1
*	D	US-6,556,858	04-2003	Zeman, Herbert D.	600/473
*	E	US-6,597,941	07-2003	Fontenot et al.	600/473
*	F	US-6,397,091	05-2002	Diab et al.	600/323
*	G	US-6,011,986	01-2000	Diab et al.	600/323
*	H	US-5,879,306	03-1999	Fontenot et al.	600/473
*	I	US-5,865,829	02-1999	Kitajima, Nobuaki	606/3
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes



Application/Control No.

09/625,712

Examiner

Daniel L. Robinson

Applicant(s)/Patent under Reexamination

DRUGGE, RHETT

Art Unit

3742

SEARCHED

Class	Subclass	Date	Examiner
600	476	Visible Light	
	162	Illumination	
	407	Detection	
		of nuclear	
		Electromagnetiz	
		or Ultrasonic	
		Radiation	
	477	Comparison	
	478	Light Fiber	
	479	Cardiovascular	
	480	Blood Pressure	

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	DATE	EXMR
OPD, EPO Derwent USPTO / East		
Inventor Prugge searched		
No I.P.S.		
Total Immersion (TIP) Photography for Diagnostic		
No Priority		
USB data Transfer Known Serial (USB) BUS		
Filing Date 7-26-2000		
Search notes attached		



IPW 342

CERTIFICATE OF MAILING

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop: Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: January 26, 2007

Name: Sherry B. Visintainer

Signature:

Sherry B. Visintainer

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Rhett Drugge

Serial No.: 09/625,712

Filing Date: July 26, 2000

Title: Apparatus for Total Immersion Photography

) Examiner: Daniel Leon Robinson

)

) Confirmation No.: 7895

)

) Art Unit: 3742

)

) Docket No.: 100504.00002
) (RD-001)

TRANSMITTAL

Transmitted herewith for filing in connection with the above-identified patent application are the following documents:

1. Amendment in Response to the Office Action dated October 26, 2006;
2. A clean copy of the specification; and
3. A marked-up version of the specification

If any additional fees or extensions are required, please consider this a petition therefor, or otherwise if necessary to cover any deficiency in fees already paid, authorization is hereby given to charge our Deposit Account No. 50-3569.

Respectfully submitted,

Date: January 26, 2007

By:

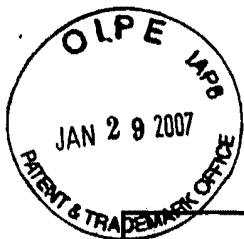
Thomas J. Ryan

Thomas J. Ryan (Reg. No. 52,187)

Mark D. Giarratana (Reg. No. 32,615)

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CERTIFICATE OF MAILING

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop: Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Serial No.: 09/625,712

Filing Date: July 26, 2000

Title: Apparatus for Total Immersion Photography

) Examiner: Daniel Leon Robinson

) Confirmation No.: 7895

) Art Unit: 3742

) Docket No.: 100504.00002
) (RD-001)

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

AMENDMENT AND RESPONSE TO OFFICE ACTION

Sir:

In response to the Office Action dated October 26, 2006, please amend the above-identified application as follows:

Amendments to the Specification:

Please replace the specification with the amended version included herewith. A substitute specification with markings showing the amendments is enclosed. A clean version of the substitute specification is also enclosed.

Amendments to the Claims:

1. (Currently Amended) A device for the identification of maladies that effect human tissue comprising:

an enclosure configured to receive a person or portion thereof for imaging the person or portion thereof, wherein the enclosure defines a specified imaging position for placing the person or portion thereof within the enclosure for imaging, and the specified imaging position defines a centerline;

a plurality of imaging devices, wherein a plurality of the imaging devices are vertically spaced relative to each other, a plurality of the imaging devices are laterally spaced relative to each other, a plurality of the imaging devices are located on opposite sides of the centerline of the specified imaging position relative to each other, and each imaging device is located a predetermined distance relative to the specified imaging position; and

a plurality of light sources spaced relative to each other and peripheral to the plurality of imaging devices that illuminate the person or portion thereof located at the specified imaging position and generate refraction and reflectance light therefrom;

wherein said device comprises a chamber, an illumination means, an imaging means and a viewing means; wherein each of said imaging devices generates an image of a three dimensional object the illuminated person or portion thereof located at the specified imaging position, and defines respective coordinates and said respective predetermined distance relative to the specified imaging position, and defines a respective focal length and resolution information, allowing precise measurement of imaged features of the person or portion thereof located at the specified imaging position said image is displayed in a two dimensional medium that is further manipulated in said two dimensional medium allowing for viewing.

2. (Currently amended) A device according to claim 1 wherein said viewing is two dimensional in nature the plurality of light sources is located amongst the plurality of imaging devices.

3. (Withdrawn) A device according to claim ~~1~~ 2 wherein said viewing is three dimensional in nature at least two light sources are located lateral to at least two imaging devices.

4. (Withdrawn) A device according to ~~claim 1~~ whereby said chamber is further comprised of panels that enclose said three dimensional object in a radius of 360 degrees on the vertical axis claim

3 wherein said at least two light sources are positioned symmetrically relative to the center line of the specified imaging position.

5. (Withdrawn) A device according to claim 1 ~~whereby said chamber is further comprised of panels that enclose said three dimensional object in a radius of 360 degrees on the vertical axis and 360 degrees on the horizontal axis~~ wherein the plurality of imaging devices includes:

a first imaging array spaced a predetermined distance relative to the specified imaging position to a side of the enclosure, wherein the first imaging array includes a plurality of first imaging devices vertically spaced relative to each other; and

a second imaging array spaced a predetermined distance relative to the specified imaging position, and laterally spaced adjacent to the first imaging array on an opposite side of the centerline of the specified imaging position relative to the first imaging array, wherein the second imaging array includes a plurality of second imaging devices vertically spaced relative to each other.

6. (Withdrawn) A device according to claim ~~5~~ 1 ~~whereby said imaging means is further comprised of at least one imaging device~~ wherein the plurality of imaging devices further includes:

a third imaging array spaced a predetermined distance relative to the specified imaging position, and laterally spaced relative to the first imaging array on an opposite side of the first imaging array relative to the second imaging array, wherein the third imaging array includes a plurality of third imaging devices vertically spaced relative to each other; and

a fourth imaging array spaced a predetermined distance relative to the specified imaging position, and laterally spaced relative to the second imaging array on an opposite side of the second imaging array relative to the first imaging array, wherein the fourth imaging array includes a plurality of fourth imaging devices vertically spaced relative to each other.

7. (Currently amended) ~~A chamber~~ A device according to ~~claim 4~~ claim 6 ~~whereby said panels are further comprised of at least one imaging means~~ wherein the plurality of light sources is symmetrical about the center line and includes a first light source located lateral to the first imaging array, a second light source located between the first and second imaging array, a third light source located between the third and fourth imaging arrays and symmetrical about the center line to the second light source, and a fourth light source located opposite the first light source and lateral to the fourth imaging array.

8. (Currently amended) ~~A chamber~~ A device according to ~~claim 5~~ claim 11 wherein said panels are further comprised of at least one imaging means.

9. (Currently amended) A device according to ~~top~~ claim 1 ~~whereby~~ wherein said plurality of imaging-means devices is capable of capturing light in the humanly perceivable light spectrum.

10. (Currently amended) A device according to ~~top claim 1~~ whereby ~~said imaging-means is~~ capable of capturing infrared emissions wherein said viewing is selected from: two-dimensional viewing and three-dimensional viewing.

11. (Currently amended) A device according to ~~top claim 1~~ whereby ~~said imaging-means is~~ capable of capturing electrical emissions to claim 1 wherein said enclosure is further comprised of panels that enclose said person or portion thereof in a radius selected from at least one of: 360 degrees on the vertical axis and 360 degrees on the horizontal axis.

12. (Currently amended) A device according to ~~top~~ claim 1 ~~whereby~~ wherein said plurality of imaging-means devices is capable of capturing ~~magnetic~~ emissions selected from infrared emissions and electrical emissions.

13. (Currently amended) A device according to ~~top~~ claim 1 ~~whereby~~ wherein said plurality of imaging-means devices is capable of capturing emissions selected from magnetic and chemical emissions.

14. (Currently amended) A device according to ~~top~~ claim 1 ~~whereby~~ wherein said plurality of imaging-means devices is capable of capturing temperature emissions.

15. (Currently amended) A device according to ~~claim 1~~ whereby ~~said illumination-means~~ wherein said plurality of light sources is capable of producing adequate illumination for said plurality of imaging-means devices to record said ~~three dimensional object~~ person or portion thereof.

16. (Currently amended) A device according to ~~claim 1~~ whereby ~~said illumination-means~~ wherein said plurality of light sources is capable of producing adequate illumination for said plurality of imaging-means devices to optimally function in light in the humanly perceivable light spectrum.

17. (Currently amended) A device according to ~~claim 1~~ whereby ~~said illumination-means~~ wherein said plurality of light sources is capable of producing adequate illumination for said plurality of imaging-means devices to optimally function in light in infrared emissions.

18. (Currently amended) A device according to ~~claim 1~~ whereby ~~said illumination-means~~ wherein said plurality of light sources is capable of producing adequate illumination for said plurality of imaging-means devices to optimally function in electrical emissions.

19. (Currently amended) A device according to ~~claim 1~~ whereby ~~said illumination-means~~

wherein said plurality of light sources is capable of producing adequate illumination for said plurality of imaging-means devices to optimally function in magnetic emissions.

20. (Currently amended) A device according to claim 1 ~~whereby said illumination means~~ wherein said plurality of light sources is capable of producing adequate illumination for said plurality of imaging-means devices to optimally function in chemical emissions.

21. (Currently amended) A device according to claim 1 ~~whereby said illumination means~~ wherein said plurality of light sources is capable of producing adequate illumination for said plurality of imaging-means devices to optimally function in temperature emissions.

22. (Withdrawn) A ~~panel device~~ device according to claim 4 ~~whereby wherein said panel is panels~~ are constructed of a material capable of allowing adequate illumination to pass through said panels to illuminate said ~~three-dimensional-object person or portion thereof~~.

23. (Withdrawn) A ~~panel device~~ device according to claim 5 ~~whereby wherein~~ wherein said panel is constructed of a material capable of allowing adequate illumination to pass through said panel to illuminate said ~~three-dimensional-object person or portion thereof~~.

24. (Withdrawn) ~~An illumination means~~ A device according to claim 15 ~~whereby said illumination means~~ wherein each of said plurality of light sources is capable of illuminating said ~~three-dimensional-object person or portion thereof~~ in the humanly perceivable spectrum for its respective ~~imaging-means device~~.

25. (Withdrawn) ~~An illumination means~~ A device according to claim 15 ~~whereby said illumination means~~ wherein each of said plurality of light sources is capable of illuminating said ~~three-dimensional-object person or portion thereof~~ in the infrared spectrum for its respective ~~imaging means device~~.

26. (Withdrawn) ~~An illumination means~~ A device according to claim 15 ~~whereby said illumination means~~ wherein each of said plurality of light sources is capable of illuminating said ~~three-dimensional-object person or portion thereof~~ for ~~an imaging-means device~~ capable of capturing electrical emissions.

27. (Withdrawn) ~~An illumination means~~ A device according to claim 15 ~~whereby said illumination means~~ wherein each of said plurality of light sources is capable of illuminating said ~~three-dimensional-object person or portion thereof~~ for ~~an imaging-means device~~ capable of capturing magnetic emissions.

28. (Withdrawn) ~~An illumination means~~ A device according to claim 15 ~~whereby said~~

~~illumination means~~ wherein each of said plurality of light sources is capable of illuminating said ~~three dimensional object~~ person or portion thereof for ~~an imaging means device~~ capable of capturing chemical emissions.

29. (Withdrawn) ~~An illumination means~~ A device according to claim 15 ~~whereby said illumination means~~ wherein each of said plurality of light sources is capable of illuminating said three dimensional object for ~~an imaging means device~~ capable of capturing temperature emissions.

30. (Currently amended) A device according to claim 1 ~~whereby said viewing means may further comprise a computer monitor~~ further comprising a display device for displaying one or more images generated by said plurality of imaging devices.

31. (Currently amended) A device according to ~~claim 1 whereby said viewing means may claim 30~~ wherein said display device further comprises at least one of a computer monitor and a television screen.

32. (Currently amended) A device according to ~~claim 1 whereby said viewing means may claim 30~~ wherein said display device further comprises a PDA (personal digital assistant).

33. (Currently amended) A device according to ~~claim 1 whereby said viewing means may claim 30~~ wherein said display device further comprises a device capable of displaying said ~~three dimensional object~~ person or portion thereof in a visually perceivable form.

34. (Currently amended) A device according to claim 1 ~~whereby said manipulation may wherein said device allows~~ for viewing of said ~~three dimensional object~~ person or portion thereof in 360 degrees.

35. (Currently amended) A device according to claim 1 ~~whereby said manipulation may wherein said device allows~~ for viewing of said ~~three dimensional object~~ person or portion thereof in 720 degrees.

36. (Currently amended) A device according to claim 1 ~~whereby said identification may also include those~~ wherein said maladies include maladies that effect ~~other non-human~~ terrestrial flora and fauna, ~~other than homo sapiens.~~

37. (Currently amended) A device according to claim 1 ~~whereby said chamber means is further comprised of~~ wherein said enclosure comprises panels that encompass the ~~three dimensional object~~ said person or portion thereof sufficiently to capture a real time image of said ~~three dimensional object~~ person or portion thereof.

38. (Currently amended) A device according to claim 1 ~~whereby said chamber~~ wherein said

enclosure has a means to allow for the entry and removal of said ~~three-dimensional object~~ person or portion thereof.

39. (Currently amended) A device according to claim 1 ~~that may further include a further~~ comprising means of detection and monitoring of the level(s) of the illumination generated by said ~~illumination means~~ plurality of light sources.

40. (Withdrawn) A ~~means of detection~~ device according to claim 39 further comprising a means of interacting and adjusting the level of said illumination prior to said ~~imaging means~~ plurality of imaging devices capturing an image of said ~~three-dimensional object~~ person or portion thereof disposed within said ~~chamber~~ enclosure.

41. (Currently amended) A device according to claim 1 that allows for ~~said imaged three-dimensional object's~~ manipulation of said person or portion thereof in a range of 360 degrees on the vertical axis.

42. (Currently amended) A device according to claim 1 that allows for ~~said imaged three-dimensional object's~~ manipulation of said person or portion thereof in a range of 360 degrees on the horizontal axis.

43. (Currently amended) A device according to claim 1 that allows for ~~said imaged three-dimensional object's~~ viewing of said person or portion thereof on the z-axis.

44. (Canceled)

45. (Canceled)

46. (Currently amended) A device according to ~~claim 44 whereby said enclosed area~~ claim 1, wherein said enclosure is of proportionate dimensions to allow for the insertion or placement of an ~~object to be photographed therein~~ said person or portion thereof.

47. (Currently amended) A device according to ~~claim 44 whereby said enclosed area~~ claim 1, wherein said enclosure is constructed of transparent or otherwise translucent material that will allow for the illumination of ~~an object contained or laced therein by said illumination means~~ said person or portion thereof by said plurality of light sources.

48. (Canceled)

49. (Canceled)

50. (Currently amended) A device according to ~~claim 44 whereby said viewing means is~~ further comprised claim 1 further comprising a viewing device that includes at least one of a USB hub, an interfacing cable, a computer processor or like processor, a monitor, and a control means

device.

51. (Withdrawn) A ~~viewing means~~ device according to claim 50 ~~whereby said control means~~ wherein said control device is voice automated.

52. (Withdrawn) A ~~viewing means~~ device according to claim 50 ~~whereby said control means~~ wherein said control device is keyboard controlled.

53. (Withdrawn) A ~~viewing means~~ device according to claim 50 ~~whereby said control means~~ wherein said control device is mouse controlled.

54. (Withdrawn) A ~~viewing means~~ device according to claim 50 ~~whereby said control means~~ wherein said control device is cursor controlled.

55. (Canceled)

56. (Withdrawn) A ~~device that allows for the imaging of a three dimensional object under illumination; said device for the identification of maladies that effect human tissue comprising:~~

first means for receiving and enclosing a person or portion thereof to image the person or portion thereof;

second means located within the first means for specifying an imaging position for placing the person or portion thereof within the first means, wherein the second means defines a centerline;

a plurality of imaging means, wherein a plurality of the imaging means are vertically spaced relative to each other, a plurality of the imaging means are laterally spaced relative to each other, a plurality of the imaging means are located on opposite sides of the centerline of the specified imaging position relative to each other, and each imaging means is located a predetermined distance relative to the specified imaging position; and

a plurality of illuminating means spaced relative to each other and peripheral to the plurality of imaging means for illuminating the person or portion thereof located at the specified imaging position and generating reflection and reflectance light therefrom;

wherein each of said imaging means generates an image of the illuminated person or portion thereof located at the second means, and defines respective coordinates and said respective predetermined distance relative to the second means, and defines a respective focal length and resolution information, allowing precise measurement of imaged features of the person or portion thereof located at the second means~~further comprising an enclosure, imaging means, illumination means, illumination control means, viewing means.~~

57. (Withdrawn) A device according to claim 56 wherein ~~said illumination is within the~~

~~spectrum of humanly perceivable light~~ the plurality of illuminating means is located amongst the plurality of imaging means.

58. (Withdrawn) A device according to claim ~~56~~ 57 wherein ~~said illumination is within is within the spectrum of infrared~~ said illumination means comprises a plurality of imaging arrays, and each imaging array is located on an opposite side of at least one respective imaging array relative to the center line of the specified imaging position.

59. (Withdrawn) A device according to claim 56 wherein ~~said illumination is within the spectrum of the ultra-violet~~ the plurality of imaging means includes:

a first imaging array spaced a predetermined distance relative to the second means to a side of the first means, wherein the first imaging array includes a plurality of first imaging means vertically spaced relative to each other; and

a second imaging array spaced a predetermined distance relative to the second means, and laterally spaced adjacent to the first imaging array on an opposite side of the centerline of the second means relative to the first imaging array, wherein the second imaging array includes a plurality of second imaging means vertically spaced relative to each other.

60. (Withdrawn) A device according to claim ~~56~~ 59 wherein ~~said illumination is magnetic in nature~~ the plurality of imaging means further includes:

a third imaging array spaced a predetermined distance relative to the second means, and laterally spaced relative to the first imaging array on an opposite side of the first imaging array relative to the second imaging array, wherein the third imaging array includes a plurality of third imaging means vertically spaced relative to each other; and

a fourth imaging array spaced a predetermined distance relative to the second means, and laterally spaced relative to the second imaging array on an opposite side of the second imaging array relative to the first imaging array, wherein the fourth imaging array includes a plurality of fourth imaging means vertically spaced relative to each other.

61. (Withdrawn) A device according to claim ~~56~~ wherein said illumination is chemical in nature 60 wherein the plurality of illuminating means includes first illuminating means located lateral to the first imaging array, a second illuminating means located between the first and second imaging arrays, third illuminating means located between the third and fourth imaging arrays, on an opposite side of the second illuminating means and a fourth illuminating means located lateral to the fourth imaging array and on an opposite side of the first illuminating means.

62. (Withdrawn) A device according to claim 56 wherein said ~~illumination is electrical in nature~~ plurality of illuminating means emits radiation selected from at least one of: humanly perceivable light, infrared radiation, and ultraviolet radiation.

63. (Withdrawn) A device according to claim 56 wherein said illumination is thermal energy.

64. (Withdrawn) A device according to claim 56 wherein said ~~enclosure allows for the entry or placement of a three dimensional object therein~~ illumination is of a nature selected from at least one of magnetic, chemical and electrical in nature.

65. (Withdrawn) A device according to claim 56 wherein said ~~enclosure is further~~ means for receiving and enclosing a person or portion thereof is manufactured of material that permits said illumination to pass there through to further illuminate said ~~three dimensional object~~ person or portion thereof while excluding stray illumination from sources external to the device.

66. (Withdrawn) A device according to claim 56 ~~whereby said~~ wherein said plurality of imaging means comprises at least one camera, or like device, capable of imaging and storing an image of said ~~three dimensional object~~ person or portion thereof.

67. (Withdrawn) A device according to claim 66 wherein said image is in the humanly perceivable spectrum.

68. (Withdrawn) A device according to claim 66 wherein said image is in the infrared spectrum.

69. (Withdrawn) A device according to claim 66 wherein said image is in the ultra violet spectrum.

70. (Withdrawn) A device according to claim 66 wherein said image records magnetic information of said ~~three dimensional object~~ person or portion thereof.

71. (Withdrawn) A device according to claim 66 wherein said image records chemical information of said ~~three dimensional object~~ person or portion thereof.

72. (Withdrawn) A device according to claim 66 wherein said image records electrical information of said ~~three dimensional object~~ person or portion thereof.

73. (Withdrawn) A device according to claim 66 wherein said image records temperature information of said ~~three dimensional object~~ person or portion thereof.

74. (Currently amended) A device according to claim 1 whereby said plurality of illumination means produces sufficient illumination such that said ~~three dimensional object~~ person or portion thereof is sufficiently illuminated such that an accurate image of said ~~three dimensional~~

~~object~~ person or portion thereof may be taken by said plurality of imaging means.

75. (Withdrawn) A device according to claim 56 ~~whereby said~~ further comprising
~~illumination control means is further comprised of that comprises:~~

~~a monitor means located in or capable of~~ means for monitoring the illumination, located
~~within said enclosure means for receiving and enclosing a person or portion thereof; and~~
~~adjustment means located without said enclosure means for adjusting the level of~~
illumination, located outside said means for receiving and enclosing a person or portion thereof, such
that the level of illumination may be assessed and adjusted such that the image of said
~~three dimensional object~~ person or portion thereof may be effectively illuminated.

76. (Withdrawn) A device according to claim 56 ~~whereby said viewing means further~~
~~comprises a connection means, by and between said imaging means and a monitor means further~~
~~comprising:~~

means for viewing images connected to said plurality of imaging means, wherein said
~~monitor viewing means is capable of rendering a two dimensional rendition of said imaged three~~
~~dimensional object~~ person or portion thereof, and

further comprises a manner by which said imaged three dimensional object in said rendition
may be manipulated in means for manipulating said person or portion thereof 360 degrees.

77. (Canceled)

78. (Withdrawn) A device according to ~~claim 77~~ claim 1 that ~~further allows said~~
~~manipulation of said imaged surface~~ person or portion thereof on the horizontal axis.

79. (Withdrawn) A device according to ~~claim 77~~ claim 1 that allows ~~said~~ manipulation of
~~said imaged surface~~ person or portion thereof on the vertical axis.

80. (Withdrawn) A device according to ~~claim 77~~ claim 1 that allows ~~for said~~ manipulation of
~~said imaged surface~~ person or portion thereof on the z-axis.

REMARKS

Claims 1-43, 46, 47, 50-54, 56-63 and 65-80 are pending in the application. Claims 3-5, 22-29, 40, 51-54, 56-73 and 75, 76 and 78-80 are withdrawn from consideration. Claims 44, 45, 48, 49, 55 and 77 are canceled. In view of the above amendments and the following remarks, it is respectfully submitted that claims 1-80 are allowable.

Restriction

With the above amendments, the application now includes two independent claims: claim 1 and claim 56. Claim 56 is commensurate in scope with claim 1, but is rather drafted in means plus function language, and therefore claims 1 and 56 should not be subject to restriction under 35 U.S.C. 121. Furthermore, Applicant respectfully submits that claims 1 and 56 are generic to both Species A and Species B. Dependent claims 7, 8, 22, 23, 24-29, 40 and 51-54 are amended to require all of the limitations of independent claim 1, and therefore all of the dependent claims are subject to rejoinder upon allowance of independent claims 1 and 56.

Specification

The specification is amended to correct errors and clarify language. Both marked and clean versions of a substitute specification are enclosed. No new matter has been introduced as a result of this amendment.

Claim Rejections – 35 U.S.C. § 102

Claims 1, 2, 9-21, 33, 36-39 and 74 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,556,858 to Zeman, hereinafter “Zeman”. Claim 1 is independent. Applicant respectfully traverses this rejection.

Zeman describes an imaging system 2 for illuminating an object 32, such as body tissue, with highly diffuse infrared light, and for producing a video image of the object 32 based upon infrared light reflected from the object 32 (col. 3, lines 32-35). The imaging system 2 includes

an illumination system 10 that includes multiple infrared light providers 10a-10f, each providing infrared light to the object 32 from a different illumination direction (col. 3, lines 40-42). The imaging system 2 also includes an imaging device 38, such as a video camera, for viewing the object 32 (col. 3, lines 60-61).

Zeman thus describes an imaging system for imaging a single plane, that utilizes a single imaging device, i.e., a video camera. However, Zeman does not describe an imaging device that utilizes multiple imaging devices to capture multiple images of a target person located at specific positions. Thus, Zeman does not teach or suggest “a plurality of imaging devices, wherein a plurality of the imaging devices are vertically spaced relative to each other, a plurality of the imaging devices are laterally spaced relative to each other, a plurality of the imaging devices are located on opposite sides of the centerline of the specified imaging position relative to each other, and each imaging device is located a predetermined distance relative to the specified imaging position . . . wherein each of said imaging devices generates an image of the illuminated person or portion thereof located at the specified imaging position, and defines respective coordinates and said respective predetermined distance relative to the specified imaging position, and defines a respective focal length and resolution information, allowing precise measurement of imaged features of the person or portion thereof located at the specified imaging position,” as recited in amended independent claim 1. Therefore, claim 1 is patentable over Zeman.

Claims 2, 9-21, 33, 36-39, 43 and 74 depend from claim 1. For at least reasoning similar to that provided in support of the patentability of claim 1, claims 2, 9-21, 33, 36-39, 43 and 74 are patentable over Zeman.

For the above reasons, the rejection of claims 1, 2, 9-21, 33, 36-39 and 74 under 35 U.S.C. 102(e) as being anticipated by Zeman is overcome. Accordingly, reconsideration and withdrawal of the rejection of claims 1, 2, 9-21, 33, 36-39 and 74 is respectfully requested.

Claim Rejections – 35 U.S.C. §103

Claims 30-32, 34, 35, 41, 42 and 50 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Zeman in view of U.S. Patent No. 7,092,014 to Li et al., hereinafter “Li”. Applicant respectfully traverses this rejection.

As discussed above, Zeman does not teach or suggest a plurality of imaging devices as recited in amended independent claim 1. Applicant submits that Li does not make up for the deficiencies of Zeman, as they apply to claim 1.

Li describes a system for capturing scenes based on a longitudinally aligned camera array (col. 2, lines 38-40). A longitudinal camera array is rotated through a capture cylinder, with each camera in the array capturing multiple images as the array rotates (col. 2, lines 41-43).

One or more of multiple images are selected for a particular viewing position based on a display value for each pixel in the array (col. 2, line 50 – col. 3, line 5). The user may move around within the 3D scene by inputting appropriate commands to the system that translate to a location within the 3D scene and a direction of view of the observer that is presented for viewing by a display output component (col. 5, lines 38-47). The display of the output component will change as if the user moved within the 3D scene (col. 5, lines 47-48).

Li thus describes a system for providing multiple images of a scene taken by a camera array that is moved through the scene, and provides different images to a user based upon the user's desired angular position relative to the scene. However, Li does not describe a plurality of imaging devices located at a predetermined distance relative to a specific imaging position, or located on opposite sides of a centerline of the imaging position relative to one another, and further does not describe a system that allows precise measurement of imaged features based on the coordinates and distance of each imaging device relative to the imaging position.

Therefore, Zeman and Li, whether considered alone or in combination, do not teach or suggest “a plurality of imaging devices, wherein a plurality of the imaging devices are vertically spaced relative to each other, a plurality of the imaging devices are laterally spaced relative to each other, a plurality of the imaging devices are located on opposite sides of the centerline of the specified imaging position relative to each other, and each imaging device is located a predetermined distance relative to the specified imaging position . . . wherein each of said imaging devices generates an image of the illuminated person or portion thereof located at the specified imaging position, and defines respective coordinates and said respective predetermined distance relative to the specified imaging position, and defines a respective focal length and resolution information, allowing precise measurement of imaged features of the person or portion thereof located at the specified imaging position,” as recited in amended independent claim 1. Thus, claim 1 is patentable over the cited combination of Zeman and Li for at least

these reasons.

Claims 30-32, 34, 35, 41, 42 and 50 depend from claim 1. For reasoning that is the same as or similar to that provided in support of the patentability of claims 1, claims 30-32, 34, 35, 41, 42 and 50 are patentable over the cited combination of Zeman and Li. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 30-32, 34, 35, 41, 42 and 50.

Claim 51 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Zeman in view of Li, and further in view of U.S. Patent No. 5,261,404 to Mick et al., hereinafter "Mick". Claim 51 as amended depends from amended independent claim 1. Applicant respectfully traverses this rejection.

As discussed above, Zeman and Li, whether considered alone or in combination, do not teach or suggest a plurality of imaging devices as recited in amended independent claim 1. Applicant submits that Mick does not make up for the deficiencies of Zeman and Li, as they apply to claim 1.

Mick describes a system for 3D imaging of the internal anatomy of a mammal using tomographic slice data and images produced within the body cavity of the mammal (col. 2, lines 23-33. However, Mick does not teach or suggest "a plurality of imaging devices, wherein a plurality of the imaging devices are vertically spaced relative to each other, a plurality of the imaging devices are laterally spaced relative to each other, a plurality of the imaging devices are located on opposite sides of the centerline of the specified imaging position relative to each other, and each imaging device is located a predetermined distance relative to the specified imaging position . . . wherein each of said imaging devices generates an image of the illuminated person or portion thereof located at the specified imaging position, and defines respective coordinates and said respective predetermined distance relative to the specified imaging position, and defines a respective focal length and resolution information, allowing precise measurement of imaged features of the person or portion thereof located at the specified imaging position", as recited in amended independent claim 1.

Therefore, Zeman, Li and Mick, whether considered alone or in combination, do not teach or suggest "a plurality of imaging devices, wherein a plurality of the imaging devices are vertically spaced relative to each other, a plurality of the imaging devices are laterally spaced relative to each other, a plurality of the imaging devices are located on opposite sides of the

centerline of the specified imaging position relative to each other, and each imaging device is located a predetermined distance relative to the specified imaging position . . . wherein each of said imaging devices generates an image of the illuminated person or portion thereof located at the specified imaging position, and defines respective coordinates and said respective predetermined distance relative to the specified imaging position, and defines a respective focal length and resolution information, allowing precise measurement of imaged features of the person or portion thereof located at the specified imaging position,” as recited in amended independent claim 1. Thus, claim 1 is patentable over the cited combination of Zeman, Li and Mick for at least these reasons.

Claim 51 depends from claim 1. For reasoning that is the same as or similar to that provided in support of the patentability of claims 1, claim 51 is patentable over the cited combination of Zeman, Li and Mick. Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 51.

Claims 44-49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Zeman in view of U.S. Patent No. 6,339,216 to Wake, hereinafter “Wake”. Claims 44, 45, 48 and 49 are canceled. Claims 46 and 47 as amended depend from amended independent claim 1. Applicants respectfully traverse this rejection.

As discussed above, Zeman does not teach or suggest a plurality of imaging devices as recited in amended independent claim 1. Applicant submits that Wake does not make up for the deficiencies of Zeman, as they apply to claim 1.

Wake describes a detector array for a laser imaging apparatus, comprising a plurality of detectors disposed in an arc around an opening in which an object to be scanned is disposed; and a multi-gain amplifier circuit connected to each detector (col. 3, lines 9-13). However, Wake does not teach or suggest “a plurality of imaging devices, wherein a plurality of the imaging devices are vertically spaced relative to each other, a plurality of the imaging devices are laterally spaced relative to each other, a plurality of the imaging devices are located on opposite sides of the centerline of the specified imaging position relative to each other, and each imaging device is located a predetermined distance relative to the specified imaging position . . . wherein each of said imaging devices generates an image of the illuminated person or portion thereof located at the specified imaging position, and defines respective coordinates and said respective

predetermined distance relative to the specified imaging position, and defines a respective focal length and resolution information, allowing precise measurement of imaged features of the person or portion thereof located at the specified imaging position,” as recited in amended independent claim 1.

Therefore, Zeman and Wake, whether considered alone or in combination, do not teach or suggest “a plurality of imaging devices, wherein a plurality of the imaging devices are vertically spaced relative to each other, a plurality of the imaging devices are laterally spaced relative to each other, a plurality of the imaging devices are located on opposite sides of the centerline of the specified imaging position relative to each other, and each imaging device is located a predetermined distance relative to the specified imaging position . . . wherein each of said imaging devices generates an image of the illuminated person or portion thereof located at the specified imaging position, and defines respective coordinates and said respective predetermined distance relative to the specified imaging position, and defines a respective focal length and resolution information, allowing precise measurement of imaged features of the person or portion thereof located at the specified imaging position,” as recited in amended independent claim 1.

Furthermore, there is no suggestion or motivation to combine the teachings of Zeman and Wake as suggested by the Office Action. Wake describes enclosing an appendage in an imaging system and requires transillumination through the skin to achieve adequate light intensity. The imaging sensors of Wake must be applied directly to the skin to optimize its sensitivity to transilluminated photons without interference. In contrast, Zeman is concerned with remote illumination and would thus be inadequate for use with the Wake system. Therefore, one of ordinary skill in the art would not be motivated to combine the teachings of Zeman and Wake.

The cited combination of Zeman and Wake fails to teach or suggest the elements of claim 1. Furthermore, there is no suggestion or motivation to combine the teachings of Zeman and Wake. Thus, claim 1 is patentable over the cited combination of Zeman and Wake for at least these reasons.

Claims 46 and 47 depend from claim 1. For reasoning that is the same as or similar to that provided in support of the patentability of claims 1, claims 46 and 47 are patentable over the cited combination of Zeman and Wake. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 46 and 47.

Conclusion

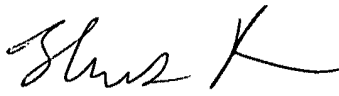
The pending claims are believed to be allowable over the prior art of record. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned. If the Examiner has any questions in connection with this paper, or otherwise if it would facilitate the examination of this application, please call the undersigned at the telephone number below.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicant's attorneys hereby authorize that such fee(s) be charged to Deposit Account No. 50-3569.

Respectfully submitted,

Date: January 26, 2007

By: _____



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APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY

Field of the Invention

The present invention relates primarily to conditions pertaining to health and cosmetics. As such, the device allows for the imaging of total or subtotal non-occluded body surfaces in order to
5 detect health and cosmetic conditions and involves the measurement and analysis of an optically depicted image of a patient's surfaces by standard color imaging, heat, electromagnetic or chemical imaging. The present invention allows for image pixel acquisition, its data collection, data aggregation, data dissemination, data manipulation, and subsequent viewing. The present invention provides for tissue analysis of a patient such that relevant determinations may be made
10 such as detection of diseases or related problems of cosmesis.

Background of the Invention

The invention relates to the detection, diagnosis and treatment of skin cancer as well as other diseases and cosmetic conditions of the visible human.

Half of all new cancers are skin cancers. About 1.3 million new cases of skin cancer will
15 be diagnosed in the United States each year. About 80 percent of the new skin cancer cases will be basal cell carcinoma, 16 percent are squamous cell carcinoma, and 4 percent are melanoma.

Both basal cell carcinoma and squamous cell carcinoma have a better than 95 percent cure rate if detected and treated early. Squamous cell carcinoma of the skin accounts for about 2.3 thousand deaths annually.

20 The incidence of melanoma has more than tripled among Caucasians between 1980 and 2000. There will be about 47,700 new cases of melanoma in 2000. At current rates, one in 74 Caucasian Americans will develop melanoma. With that statistic, one person dies of melanoma every hour. This year, approximately 7,700 deaths will be attributed to melanoma in the ratio of 4,800 men and 2,900 women. Older Caucasian males have the highest mortality rates from
25 melanoma. In women under the age of 30, melanoma is more prevalent than breast cancer. All of these cancers are associated with sun exposure with the majority occurring after age 50. Furthermore, the incidence rates for all skin cancers are increasing with movement of white populations south to sunnier climates and the greater numbers of individuals living into their 80s.

With the "baby boomer" generation currently in their late 50s, the medical community is faced with an explosive skin cancer epidemic.

There is a need for a practical device that allows for the rapid screening of individuals for skin cancer and other maladies of the skin in early stages of development.

5 Currently, clinical diagnosis of skin disease is generally accomplished by visual inspection under white light illumination. In this process, the reflectance light of a skin lesion is examined. Visual diagnosis alone may not be particularly accurate for early detection of skin cancer since many skin conditions have a similar appearance under white light. Therefore, when a suspect lesion is identified by visual examination, a biopsy is often performed for a definitive diagnosis.

10 Not only is it crucial to diagnose skin pre-cancer or skin cancer at an early stage when it is curable, but it is also important to improve the clinical diagnosis of suspected skin lesions so as to avoid unnecessary skin biopsies.

Several approaches have been tried to improve skin cancer diagnosis. Digital processing of reflectance images has been extensively investigated recently and has been found in melanoma to

15 be more accurate than specialist diagnostic accuracy. An alternative approach is ultraviolet (UV), infrared (IR) or polarized light photography that extends visual perception of a physician to the UV, IR or polarized light reflectance patterns. A further alternative approach that is already in widespread medical use involves illuminating the skin with a "Wood's lamp" which consists of a mercury discharge lamp associated with a filter that transmits UVA light with a 365 nanometer

20 peak while absorbing visible light. When this device is used to assist in skin diagnosis, the eye serves as both the detector and the long pass filter. The eye is not sensitive to UV light, but is sensitive to visible fluorescence light. When the "Wood's lamp" is used in a darkened room, where the physician sees an image of a fluorescing disease site. The "Wood's lamp" is useful for the diagnosis of some skin conditions such as tinea capitis, tinea versicolor, erythrasma, and some

25 pseudomonas infections, as well as aiding in the detection and diagnosis of hypopigmented skin. It is of no value in conditions where the fluorescence is not in the visible spectrum. These techniques depend on lighting and sensor techniques and may be incorporated into the total immersion photography system.

Prior Disclosures

Currently, clinical diagnosis of skin disease is generally accomplished by visual, verbal and handwritten history taking and by inspection during a visit to the physician's clinic. Initial inspections are routinely performed by general practitioners. Dermatologists may be sought out by patients or used upon referral by general practitioners. Either way, an appointment is required. Visual inspections are often limited by the physician's schedule or patient modesty. The patient may only be willing to have the area of concern inspected. General practitioners, the HMO "gatekeepers", have been documented to be less effective in discerning potential cancerous lesions than dermatologists. If referrals are not made, possible malignancies may be overlooked. A second approach is chemical emulsion or digital photography that can extend visual perception of a physician to the UV or IR reflectance patterns. Such approaches have also been limited by the need for a "point-and-shoot" photographer. A more limited approach requires only images of those areas in question. This again leaves open the possibility of an incomplete diagnosis. This approach may be augmented by the use of skin surface epiluminescence microscopy. Epiluminescence light microscopy (ELM) represents a technique which permits examination of the surface of the skin and also--by using the oil immersion technique--of the dermal-epidermal junction zone. The commonly used method of epiluminescence microscopy is based on point and shoot techniques requiring a trained operator. Recently, there have been investigations into the use of digital imagery to aid with dermatologic diagnoses. The prevalent technique uses either digitally processed standard photography or direct digital photography of sections of the subject's body. These images are then stored for inspection, referral, and/or forwarding. For comprehensive surface imaging, this approach requires multiple posings by the photographer and the subject that may exceed 30 views in total. Depending on the medium used, review of the images may or may not be available for inspection during the same appointment. Specific applications include the MoleMap and MoleMax II systems. MoleMap uses a combination of three images (epiluminescence, macro and low resolution) to identify possible melanoma. Visual type resolution is used primarily for mapping suspicious locations. Images are diagnosed and reported on by dermatologists before being permanently archived on a computer system for future comparisons. The MoleMax II system combines epiluminescence microscopy and computer technology for data storage and retrieval. The system can be adapted for body surface imaging (using serial individually-photographed images). Images are available for inspection during the

current office visit, allowing simultaneous dermatologist/patient on-screen observation. Since the outcome of treatment of cancer is more favorable the earlier and more accurately the cancer is detected, the present invention is a substantial advancement in improving public health by eliminating the barrier of an available expert photographer or dermatologist for effective skin screening. This device provides a complete non-covered screening in an automated fashion, removing the intrusion of physical inspection and decreasing the possibility of missed lesions. The image acquisition does not require the presence of a physician or medical photographer, thereby increasing convenience to the patient/subject. This, in turn, would allow the placement of the device independent of the physician's or medical photographer's office, a benefit to public health programs.

Since the outcome of cancer treatment is more favorable the earlier and more accurately the cancer is detected, the present invention is a substantial advancement in improving public health by automating the imaging of potentially cancerous lesions in a more rapid and complete method. In light of the many advantages of early detection, there exists a clear need for a device that can greatly enhance the current methods of skin cancer screening. Furthermore, such a device will also find use in the cosmetic and beauty industry.

Summary of the Invention

The TIP system including the structure, infrastructure, and imaging system, requires little training, minimal staffing, and may be constructed with simple, easily available tools. TIP is a device that may be easily transportable, providing opportunity for skin screenings in diverse locations such as gym facilities, recreation centers, physician's offices, and other health oriented facilities. Medically under-served and restricted locales, e.g., rural areas and prison facilities, will also benefit from TIP system remote diagnostic capabilities (telemedicine), bringing the care of medical specialists to the patients.

The present invention, Total Immersion Photography (TIP), relates initially, and thus generally, to cancer detection and, more particularly, to skin cancer, e.g., melanoma, detection involving the measurement and analysis of an optical depiction of the subject patient's skin surface by standard color imaging, as well as heat, electromagnetic or chemical imaging. The present invention allows for subject acquisition, data collation, data aggregation, data

dissemination, data manipulation, data viewing in a preferable medium and analysis of a subject patient's skin surface, or other body tissue and, therefore, providing for the subject tissue's analysis such that relevant determinations may be made. TIP is a digital image acquisition device, the products of which, are capable of a variety of applications. For instance, panoramic mosaics of the body, 3-D models of the body, images for use with "machine vision", and interfacing with medical records are such possible uses.

The present invention is uniquely situated whereby TIP may operate as the screening test, as well as a confirmation of a positive result from a screening test, or even in a manner that provides for second opinions. In either circumstance, if the results of the administered test are confirmatory, *i.e.*, melanoma is detected or otherwise identified on the skin surface. If, on the other hand, it is determined that melanoma is not present on the skin surface and, consequently, that the screening test was erroneous, the patient is spared the trauma of having to undergo the full work-up including the biopsy. In that respect, confirmation of cancer by analyzing the skin surface as set forth herein has many significant advantages over conventional melanoma tests, as well as cancer detection methods in general.

TIP comprises an image acquisition device that is further comprised of an enclosed structure that is and can be designed and assembled according to the human physiology to be analyzed such that the enclosed structure maximizes the ease of acquisition of the human body with traditional and/or digital photography. For purpose of discussion herein, the TIP structure may be comprised of fourteen (14) "panels". These fourteen (14) panels should be set forth in such that one panel has a "mirror image" panel. Alternatively, the TIP device may be constructed in a circular derivative, or like structure, of the fourteen (14) panel embodiment or other such number of panels keeping with the operative requirements of the device.

Contained within the enclosed structure are devices capable of "photographing" the body in a static position (motion or time-lapsed photography is also be provided for). The photographic device(s) may be capable of "taking" the body through traditional photography means, and/or temperature, chemical or electromagnetic based means. For purposes of discussion herein, the photographic means, *e.g.* a camera or like device capable of "capturing" a still image or video streamed images, ("camera") array should consist of no less than forty (40) cameras. The camera(s), as envisioned and discussed herein are set forth in the fourteen "panels" such that there

are five (5) cameras per vertical panel section (8 X 5 + top and bottom cameras =42). This structure of cameras and panels may be easily modified without departing from that which is taught, disclosed and intended. The basis for the panel-camera array is to accurately capture the physiological attributes desired from the subject patient. With subject placement, the camera array coordinates and distances are known in relation to the subject. These distances, in combination with focal length and resolution information, allows for the precise measurement of the human features of interest. The camera(s) may be left "on", engaged or otherwise activated at a desired time.

To effect the proper "picture" lighting or other optical, heat, chemical or electromagnetic, enhancement means may be affixed to, or placed around the structure such that the photographic device's "capturing" of the subject physiology may be optimized. Accordingly, for purpose of discussion herein in regard to traditional photographic means the photographic optimization may be accomplished via a lighting means which consists of fluorescent lights. These lights should be situated and placed behind panels constructed of Lucite or like material containing the same or similar physical and optical properties. The lighting means may be "on" or activated prior to engagement of the camera or photographic means, or further, remotely triggered at a predetermined time.

In the event the camera(s) and/or the lighting means are triggered remotely or upon a sequencing event the same can be controlled manually or through computer assistance. Should computers or like devices be used to facilitate the process, the same may consist of at least one (1) USB Hub, but as is contemplated herein ten (10) USB Hubs with 7 (7) USB ports per hub. In turn, there should be a data processor or like means that resides on a server or so similarly situated.

The subject patient or physiological area would enter or be placed into the TIP enclosed structure, and if need be into the specified position for imaging. When in position, the camera device and enhancement, if not engaged, are so engaged and the image(s) obtained. Thereafter, the images are transmitted from the camera device(s) through the USB(s) onto a server/computer means capable of aggregating, manipulating and disseminating the image(s) collected into a visually discernable format. As such, the images can be displayed synchronously in 2D format or processed into 3D renderings for desired or required viewing.

As a result of the aforementioned TIP device, a doctor or other individual interested in acquiring the imaging of an individual or physiological area is provided a device capable of acquiring specific imagery and related information that may be further viewed, and/or collected, registered and/or stored for analysis. And as is considered and contemplated herein in regard to conditions and diseases of the visible human (but to also include and not limited to general physical, topical and subcutaneous analysis).

Accordingly, the apparatus of the present invention provides means for diagnosis of a skin disease site using spectral analysis comprising: a light source for generating light to illuminate the disease site; a probe means to conduct the illumination light from the light source to the disease site and to collect the reflected and fluorescence light and conduct said light to be analyzed; and spectral analysis means optically connected to the probe means for generating and displaying spectral measurements of the fluorescence light and the reflectance light to assist the user in diagnosing the disease site.

In a further aspect, the present invention provides a method for diagnosis of a skin disease site using spectral analysis comprising the steps of: illuminating the disease site with a light source to generate fluorescence and reflectance light at the disease site; collecting the generated fluorescence and reflectance light; conducting a spectral analysis of the collected light using a spectrometer; displaying spectral measurements of the fluorescence light and the reflectance light; and analyzing the measured fluorescence and reflectance spectra together to make a diagnosis of the disease site.

In a preferred embodiment, the apparatus of the present invention includes a compact spectrometer connected to a computer, a fluorescence excitation light source with a shutter, a white light source with a shutter, a bifurcated fibre bundle, a light coupler, a skin probe, and controlling electronics. The system is designed to automatically switch between the fluorescence excitation light and the white light sources and complete fluorescence and reflectance spectral measurements of a skin disease site sequentially in a few seconds. The system exploits the spectral differences of different skin diseases to aid in the dermatologic diagnosis. In particular, the apparatus provides a low cost, compact system that is capable of quickly and efficiently performing combined fluorescence and reflectance spectral analysis.

Applications

Below are some examples, but not limited to, in regard to the invention's scope and intended applications of TIP:

Automated Acquisition

- 5 Storage and display of the non-occluded visible body surface properties including but not limited to diseases and cosmetic conditions of the skin, hair and nails and body measurements. In this application the body surface can be viewed and measurements taken, evaluated, viewed, collated, and cross-referenced in an easy and efficient manner.

Melanoma and Skin Cancer Screening

- 10 Large populations can be effectively screened in a short period of time for skin cancers and related maladies using this device. The consistent lighting and repeatability of the imaging technique make it ideal for replacing the skin cancer screening environment where poor lighting, patient movement and dialogue, patient modesty and other factors increase the likelihood of an incomplete examination. By removing most of these factors, the physician is allowed undistracted
15 viewing time of the patient's skin surface. In addition, the travel and time expense of skin cancer screenings at a location other than the physician's own office is large. For evaluations of change over time and detection of new lesions, 3-month, 6-month and yearly scans can be obtained and analyzed in relation to one another. All evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that patient, doctor and health care provider time is
20 minimized (and thus cost reduced). Data will be recorded and aggregated such that accurate assessments of the patient and population may be derived.

Medical Practice Aid/ Documentation System

- The availability of images of a patient undergoing therapy is critical to a practicing dermatologist who bases his/her clinical evaluation on the "improvement" he/she sees in the
25 patient over time. This is especially pertinent to chronic conditions such as acne, urticaria, atopic dermatitis, contact dermatitis, psoriasis, blistering disorders, etc. The system acts as a "medical memory" of the patient as he/she returns to the office for reevaluation.

Beauty Evaluations

Consumers flock to cosmetic counters to purchase makeup to hide their skin conditions. Eighty percent of skin cancers are found on the head and neck. A "beauty mark" that is identified by the patient on the face could be dermatosis nigra, seborrheic keratosis, compound nevus or melanoma. A raised pink or red "pimple" could be a basal cell carcinoma or granuloma or sarcoid lesion. Other conditions include broken blood vessels (red lines) which can be indicative for diagnoses of telangiectasias and rosacea. Pigment disorders such as vitiligo (lack of melanin), melasma (increased melanin), as well as discolorations due to excessive sun exposure are challenging to hide with makeup. Inflammatory skin conditions such as seborrheic dermatitis, psoriasis and eczema cause red, scaly patches which are chronic conditions falsely managed by moisturizers and makeup formulations. The information can be used to aid in makeover consultations. Consumers can be evaluated as to their current skin regimens and their conditions and followed over time as they undergo medical therapy. In addition, topical and internal medicines can be studied for their effectiveness over time.

Body Morphology Analysis- Shape Evaluation

Medically consequential conditions of the skeleton such as limb deformities and the spine deformities of kyphosis and scoliosis may be assessed photogrammetrically through TIP system. The consumer is also curious about what "shape" they are in mainly for appearance reasons. The physician or physical trainer is interested in the "shape" of the patient or client for both health and beauty reasons. This invention allows for a total body evaluation on several dimensions. Measurements and comparisons of body contours, fat deposit analysis, assymetry, etc. with volume measurements will be valuable for the cosmetic surgeon, the physician, the physical trainer, the clothier, etc. Medical and health decisions will be aided with such information. These evaluations can then be viewed, collated, and cross-referenced in an easy and efficient manner.

Cosmetic Surgery Applications

Preoperative evaluations as well as postoperative analysis and comparisons can be made using this device for all cosmetic surgery procedures. This is especially true for but not limited to facial surgery, eyelid surgery, face lifts, neck lifts, laser resurfacing, laser hair removal, soft tissue augmentation and liposuction. The physician can look to reduce asymmetry of the patient's

anatomy to enhance the outcome of cosmetic surgery. In addition, measurements of graft survival and soft tissue survival as well as measurements of soft tissue removal can be more accurately defined. These evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that studies can be made of the procedures where there are currently none.

5 Soft Tissue Manipulation

Volumetric measurements of soft tissue will facilitate studies of cosmetic procedures of the subcutis, glands, muscles, and skeleton. It will enhance the accuracy of body volume measurements for both soft tissue augmentation and soft tissue removal. Patients will be measured before soft tissue manipulation so that the procedure is more accurately applied to the areas to be
10 treated. The volumetric data will serve as a baseline to study the effectiveness of the treatment and will also enhance postoperative evaluation. For soft tissue augmentation using live tissue, it will allow for survival studies to be conducted. This will be a significant improvement over the current water-displacement techniques and 2D renderings. These evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that patient and doctor time is minimized.
15 Data can be reviewed in a postoperative environment to assess outcomes and be used for outcome studies.

Percent of Surface Involved Score Calculation

This device will be able to standardize the Percent of Surface Involved ("POSI") and Psoriasis Area Surface Involvement ("PASI") scoring for the evaluation of extent of disease of
20 such skin diseases but not limited to psoriasis, pemphigus, burn victims, etc. Automation of the calculation will be critical. Topical and internal medicines can be studied for their effectiveness over time. These calculations can be collated and cross-referenced in manner such outcome studies of therapies can be collected for large populations and published.

Hair Loss Evaluation

25 Progression of hair loss and treatment evaluation can be monitored with such a device. Topical and internal medicines can be studied for their effectiveness over time. In addition, hair transplantation techniques (planning, mapping and performing) will be enhanced. Postoperative and follow-up graft survival studies will also be more accurate. Such an evaluation procedure can

be viewed by patient and health care professional alike, whereafter the same may be collated, and cross referenced in a manner such that time is minimized, data is accurately recorded and aggregated so an accurate assessment and prognosis may be made.

Wound Healing Evaluations

5 Therapeutic analyses for post operative wounds, traumatic wounds, ulcers, burns, scars, etc. collectively "wounds" can be made using this device. Measurements of the "wounds" at the outset of therapy and then at specific intervals of time allow for accurate evaluation of the progression of healing time and patient responsiveness to treatment. Topical and internal medicines can be studied for their effectiveness over time. These evaluations and resulting
10 analyses can be viewed, collated, and cross referenced in an easy and efficient manner such that time is minimized, data accurately recorded and aggregated for efficient and accurate assessments and prognosis made.

Remote Diagnostic Evaluations

 This device will allow for both local and remote medical and cosmetic consultations.
15 These evaluations and applications can be shared effectively using store-and-forward telemedicine techniques. The TIP data set can be viewed, collated, and cross referenced in an easy and efficient manner such that patient and doctor time is minimized, data accurately recorded and aggregated and thus efficient and accurate diagnoses.

 Accordingly the following are a list, not inclusive, of those ailments, maladies and
20 concerns that can be addressed by the device as disclosed herein: Disorders relating to and/or resulting from: altered reactivity; bacterial and fungal diseases; cell kinetics; cell differentiation; drugs and chemical agents; epidermal cohesion; epidermal appendages and related disorders; epidermal and appendageal tumors; hematology; infestations, bites, and stings; lymphomas and pseudolymphomas; mechanical and physical factors; melanocytes; mucocutaneous integument;
25 neoplasms; nutrition, metabolism, and genetics; organ systems: gastrointestinal, cardiovascular, pulmonary, endocrine, renal and other organ systems; persistent inflammation; rheumatology; including but not limited to sexually transmitted diseases.

 Also identifiable are conditions of surgical dermatology, including but not limited to:

cryosurgery; hair loss and transplant; liposuction; micrographic surgery; nail surgery; sclerotherapy; skin resurfacing; soft tissue augmentation and wounds.

Particularly the following, but not limited thereto, are capable of being identified through the use of the invention disclosed herein:

- 5 Abscess, Child Abuse, Drug Abuse, skin lesions, Physical Acantholytic Dermatitis, Transient Acanthosis Nigricans; Acarophobia; Acatalasia, Achromia Parasitica; Acne Artificialis; Acne Conglobata; Acne Cosmetica; Acne Excoriée; Acne Fulminans; Acne Keloidalis; Acne Mechanica; Acne Necrotica; Acne Neonatorum; Acne Rosacea; Acne Varioliformis; Acne Vulgaris; Chloracne; Cystic Acne, Halogen Acne, Pomade Acne, Steroid Acne, Tropical Acne,
- 10 Acneiform Eruptions, Drug-Related Acne; Acrochordon; Acrocyanosis; Acrodermatitis Chronica Atrophicans; Acrodermatitis Continua; Acrodermatitis Enteropathica; Acrodermatitis of Hallopeau; Acrodermatitis Pustulosa Perstans; Papular Acrodermatitis of Childhood, Acrodynia; Acrokeratoelastoidosis; Acrokeratosis Verruciformis, Acromegaly, Acropachyderma, Acropustulosis, Acropustulosis Of Infancy, Acrosclerosis, Actinic Cheilitis, Actinic Dermatitis,
- 15 Actinic Elastosis, Actinic Keratosis, Actinic Damage; Actinic Prurigo; Actinic Reticuloid; Actinomycosis, Actinophytosis, Acuminate Warts; Acute Febrile Neutrophilic Dermatoses, Drug Addiction, Addison's Disease; Sweat Gland Adenoma, Adenoma Sebaceum, Adenomatosis Oris, Adiposis Dolorosa, Agammaglobulinemia, AIDS, AIDS-Associated Syndromes, Ainhum, Albinism, Albright's Syndrome, Aldrich's Syndrome, Alkaptonuria, Allergic Contact Dermatitis,
- 20 Allergic Vasculitis; Alopecia Areata, Alopecia Mucinososa, Alopecia Totalis, Alopecia Universalis, Androgenetic Alopecia, Scarring Alopecia, Amebiasis, Amputation Stump Dermatitis, Amyloidosis, Anagen Effluvium, Anaphylactoid Purpura, Anderson-Fabry Disease, Anemia, Anetoderma, Angiitis, Angioedema, Angiofibroma, Angioimmunoblastic Lymphadenopathy; Angiokeratoma & Other Benign Vascular Tumors; Angiokeratoma Corporis Diffusum,
- 25 Angiolipoma, Angiolymphoid Hyperplasia, Angioma, Angioma Serpiginosum, Angioneurotic Edema, Anhidrotic Ectodermal Dysplasia, Animal Bites, Anthrax, Antiphospholipid Syndrome, Aphthous Ulcer, Aplasia Cutis Congenita, Apocrine Miliaria, Argyria, Arsenical Keratoses, Arteriolitis, Arteriovenous Malformations, Arthritis, Arthropod Bites And Stings, Ashy Dermatitis, Aspergillosis, Asteatosis, Ataxia-Telangiectasia, Atopic Dermatitis, Atrophic Nail
- 30 Disorders, Malignant Atrophic Papulosis, Atrophie Blanche, Anetoderma, Atrophy Unclassified,

Atypical Fibroxanthoma, Atypical Mycobacterial Infections, Auricular Fistula, Autoeczematous Dermatitis, Autoerythrocyte Sensitization, Autosensitization Dermatitis, Pustular Bacterid, Balanitis Xerotica Obliterans; Balding, Basal Cell Carcinoma, Basal Cell Nevus Syndrome, Battered Child, Bazin's Disease, B-Cell Disorders, Becker's Nevus, Behçet's Syndrome, Bejel, 5 Benign Familial Chronic Pemphigus, Benign Mucous Membrane Pemphigoid, Benign Tumors,, Berloque Dermatitis, Biliary Cirrhosis, Birthmarks, Insect Bites, Spider Bites, B-K Mole Syndrome, Black Hairy Tongue, Black Heel, Blaschko Dermatitis, North American Blastomycosis, South American Blastomycosis, Blepharitis, Blister Agents, Blister Beetle Dermatitis, Blood Dyscrasias, Bloom's Syndrome, Blue Nevus, Blue Rubber Bleb Nevus, 10 Bockhart's Impetigo, Boil, Bornholm Disease, Botryomycosis, Bourneville's Disease, Bowenoid Papulosis, Bowen's Disease Or Intraepidermal Carcinoma, Branchial Cyst, Branchiogenic Cyst, Brazilian Pemphigus, Bromoderma, Brucellosis, Buerger's Disease, Bullous Dermatoses Of Childhood, Bullous Diabeticorum, Bullous Disorders, Bullous Pemphigoid, Burn, Buruli Ulcer, Buschke-Ollendorff Syndrome, Cafe-Au-Lait Spots, Caffey's Syndrome, Calcifying Epithelioma, 15 Calcinosis Cutis And Osteoma Cutis, Callus, Campbell De'morgan Spot, Candidiasis, Canities, Canker Sore, Capillary Hemangioma, Carbuncle, Carcinoid Syndrome, Epidermoid Carcinoma, Metastatic Carcinoma, Merkel Cell Carcinoma, Squamous Cell Carcinoma, Carotenemia, Caterpillar Dermatitis, Cat-Scratch Disease, Cellulite, Lymphangitis, Dissecting Cellulitis of the Scalp, Cercarial Dermatitis, Chagas Disease, Chancre, Chancroid, Chédiak - Higashi Syndrome, 20 Cheilitis, Cheilitis Glandularis, Cheilitis Granulomatosa, Chemical Blister Agents, Side-Effects of Cancer Chemotherapy, Cherry Angioma, Chickenpox, Chigger Bites, Chilblains, Child Abuse, Chloasma, Chloracne, Cholinergic Urticaria, Chondrodermatitis, Chromhidrosis, Chromoblastomycosis, Chromomycosis, Chronic Granulomatous Disease, Chrysiasis, Churg Strauss, Cicatricial Alopecia, Cicatricial Pemphigoid, Cicatrix, Clavus, Clear Cell Acanthoma, 25 Clubbing Of Fingers, Cobb Syndrome, Coccidioidomycosis, Cockayne's Syndrome, Cold Injury, Ulcerative Colitis, Perforating Collagenosis, Collodion Baby; Colloid Miliun, Comedos, Comedonal Nevus, Complement Deficiency Disorders, Compound Nevus, Condyloma Accuminatum; Condyloma Lata; Confluent And Reticulated Papillomatosis; Congenital Disorders, Unclassified; Congenital Fistulae; Congenital Hair Disorders, Unclassified; Congenital 30 Hypoplasia; Congenital Poikiloderma; Congenital Self-Healing Reticulohistiocytosis; Congenital Syphilis; Congenital Vascular Neoplasm Syndromes; Connective Tissue Nevus; Conradi's

Disease; Contact Dermatitis; Contracture, ; Unclassified; Copper Deficiency; Corns; Corticosteroid Effects; Cosmetic Procedures; Coumarin Reaction; Cowden's Disease; Coxsackie Infection; Craniofacial Angiomatosis; Creeping Eruption; Crest Syndrome; Crohn's Disease; Cronkhite - Canada Syndrome; Cryofibrinogenemia; Cryoglobulinemia; Cryosurgery;

5 Cryptococcosis; Cushing's Syndrome; Cutaneomeningospinal Angiomatosis; Cutaneous B-Cell Lymphoma; Cutaneous Horn; Cutaneous Markers Of Malignancy; Cutaneous Papillomatosis; Cutaneous Tag; Cutaneous T-Cell Lymphoma; Cutis Elastica; Cutis Laxa; Cutis Marmorata; Cutis Marmorata Telangiectetica Congenita; Cutis Rhomboidalis Nuchae; Cutis Verticis Gyrata; Cyclic Neutropenia; Cyndroma; Cyst, Branchiogenic; Cyst, Epidermal Or Epithelial; Cyst, Keratinous,

10 Pilar Or Sebaceous; Cyst, Mucous; Cyst, Pilar; Cyst, Sebaceous; Cyst, Synovial; Cytomegalovirus Infection; Dactyolysis; Dandruff; Darier - White Disease; Decubitus Ulcer; Deficiency, Mineral Or Vitamin; Degos Disease; Delusions Of Parasitosis; Demodex Folliculorum; Dental Abnormalities; Dental Sinus; Depigmentation; Depressive (Neurotic) Excoriations; Dercum's Disease; Dermal Hypoplasia; Dermatalgia; Dermatitis Herpetiformis; Dermatitis Medicamentosa;

15 Dermatitis Nodularis Necrotica; Dermatitis Papillaris Capillitii; Dermatitis Repens; Dermatitis Vegetans; Dermatitis, Acute, Unclassified; Dermatitis, Atopic; Dermatitis, Autosensitization; Dermatitis, Beetle; Dermatitis, Berloque; Dermatitis, Contact; Dermatitis, Diaper; Dermatitis, Drug Allergy; Dermatitis, Drug Toxicity; Dermatitis, Dyshydrotic; Dermatitis, Eczematous; Dermatitis, Exfoliativa; Dermatitis, Facticial; Dermatitis, Infectious Eczematoid; Dermatitis,

20 Irritant; Dermatitis, Nummular; ermatitis, Occupational; Dermatitis, Perioral; Dermatitis, Photo; Dermatitis, Pregnancy; Dermatitis, Radiation; Dermatitis, Seborrheic; Dermatitis, Stasis; Dermatitis, Nutritional; Dermatofibroma; Dermatofibrosarcoma Protuberans; Dermatofibrosis Lent Diss& Osteopoikilosis; Dermatolysis; Dermatomyositis; Dermatophyte Infections, Unclassified; Dermatophytid; Dermatophytosis; Dermatoses Papulosa Nigra; Dermographism; Dermoid Cyst;

25 Desmoid Tumor; Desquamation, Unclassified; Diabetes Mellitus; Diabetic Dermodromes; Dialysis, Bullous Dermatoses Of Diaper Dermatitis; Disseminated Intravascular Coagulation; Diet & Dermatology; Digital Fibrokeratosis; Digitate Dermatoses; Diphtheria, Cutaneous; ; Discoid Lupus Erythematosus; Dissecting Cellulitis Of The Scalp; Disseminated Intravascular Coagulation; Disseminated Lupus Erythematosus; Disseminated Super. Actinic Porokeratosis;

30 Discoid Lupus Erythematosus; Animal Bites; Down Syndrome; Dracunculosis; Drug Abuse; Drug Eruption; Drug Toxicity; Disseminated Superficial Actinic Porokeratosis; Duhring-Brocq Disease;

Dupuytren's Contracture; Dyshydrotic Dermatitis; Warty Dyskeratoma; Dyskeratosis Congenita; Dyskeratosis Follicularis; Dysplastic Nevi Or Syndrome; Dysproteinemia; Dysraphism; Dystrophic Nails; Ecchymosis; Eccrine Gland Tumors; Eccrine Hydrocystoma; Eccrine Poroma; Eccrine Spiradenoma; Ecthyma; Ecthyma Contagiosum (Orf); Ecthyma Gangrenosum;

5 Ectodermal Defect, Congenital; Eczema Craquelé; Eczema Herpeticum And Vaccinatum; Eczema, Atopic; Eczema, Dyshydrotic; Eczema, Nummular; Edema, Angioneurotic; Edema, Legs, Hereditary; Edema, Unclassified; Ehlers-Danlos Syndrome; Ehrlichosis; Elastoidosis, Nodular With Cysts & Comedones; Elastolysis, Generalized; Elastoma, Juvenile; Elastosis Perforans Serpiginosa; Elastosis, Actinic; Elastosis, Perforating; Elephantiasis; Elephantiasis

10 Nostras Verrucosa; Emboli; Endocrinopathy, Miscellaneous; Endometriosis; Eosinophilic Fasciitis; Eosinophilic Granuloma; Eosinophilic Papulovesicular Derm Of Newborn; Ephelides And Lentigines; Epidermal Inclusion Cyst; Epidermal Necrolysis, Toxic; Epidermal Nevus; Epidermodysplasia Verruciformis; Epidermoid Carcinoma; Epidermolysis Bullosa; Epidermolytic Hyperkeratosis; Epiloia; Epithelial Cyst; Epithelial Nevus; Epithelioma Adenoides Cysticum;

15 Epithelioma, Arsenical; Epithelioma, Basal Cell; Epithelioma, Calcifying Of Malherbe; Epithelioma, Squamous; Erosio Interdigitalis Blastomycetica; Eruption Of Lymphocyte Recovery; Eruption, Creeping; Erysipelas; Erysipeloid; Erythema Ab Igne; Erythema Annulare Centrifugum; Erythema Chronicum Migrans; Erythema Circinatum; Erythema Dyschromicum Perstans; Erythema Elevatum Diutinum; Erythema Figuratum Perstans; Erythema Gyrratum Perstans;

20 Erythema Gyrratum Repens; Erythema Induratum; Erythema Infectiosum; Erythema Marginatum; Erythema Multiforme; Erythema Nodosum; Erythema Of Jacquet; Erythema Perstans; Erythema Toxicum Neonatorum; Erythema, Anatomic; Erythema, Noninfectious, Unclassified; Erythema, Toxic; Erythema, Unclassified; Erythralgia; Erythrasma; Erythrocyte Autosensitization; Erythroderma, Exfoliative; Erythrokeratoderma Variabilis; Erythromelalgia; Erythroplasia Of

25 Queyrat; Esthiomene; Exanthem Subitum; Exanthem, Bacterial; Exanthem, Viral; Excoriation, Depressive Or Neurotic; Exfoliation Of Palms And Soles; Exfoliative Dermatitis (Or See Cause); Extramammary Paget's Disease; Extramedullary Hematopoiesis, Cutaneous; Exudative Discoid And Lichenoid Dermatitis; Fabry's Disease; Facial Granuloma; Factitial Dermatitis; Familial Benign Chronic Pemphigus; Familial Hemorrhagic Telangiectasia; Farber's Disease; Fasciitis,

30 Necrotizing; Fat Dystrophy; Fat Necrosis; Favre - Racouchot Elastoidosis Syndrome; Favus; Febrile Neutrophilic Dermatoses, Acute; Female Pattern Baldness; Fever Blisters, Aphthae; Fever

Blisters, Herpes Simplex; Fibroepithelial Polyp; Fibroma; Fibromatosis Of Penis; Fibrous Papule
 Of Nose; Fibroxanthoma, Atypical; Fifth Disease; Figurate Erythema; Filariasis; Fissured Tongue;
 Fistulae, Congenital; Fixed Drug Eruption; Flat Warts; Flea Bites; Florid Oral Papillomatoses;
 Flushing, Non-Carcinoid; Focal Dermal Hypoplasia; Fogo Selvagem; Follicular Mucinosi-
 5 Folliculitis; Folliculitis Abscedens Et Suffodiens; Folliculitis Decalvans; Folliculitis Keloidalis;
 Fordyce Lesions Of Scrotum; Fordyce Spots; Foreign Body; Foreign Body Granuloma; Fox -
 Fordyce Disease; Freckles; Friction Blister; Frostbite; Fungal Cultures (Alphabetical By Genus);
 Fungal Infection, Deep, Unclassified; Fungal Infection, Superficial, Unclassified; Furuncle;
 Ganglion; Gangosa; Gangrene; Gardner's Syndrome; Gargoylism; Gastrointestinal Syndromes;
 10 Gaucher's Disease; Geographic Tongue; German Measles' Gi Disease, Skin ;Manifestations;
 Gianotti - Crosti Syndrome; Giant Cell Arteritis; Gingiva, Unclassified; Gingival Hypertrophy;
 Gingivitis, Unclassified; Glanders; Glandular Cheilitis; Glomus Tumor; Glossitis, Median
 Rhomboid; Glossitis, Unclassified; Glucagonoma Syndrome; Glycogen Storage Disease; Gold
 Pigmentation; Goltz Syndrome; Gonococcemia; Gonorrhea; Gougerot - Blum Disease; Gougerot -
 15 Carteaud's Papillomatosis; Gout; Gower's Panatrophy; Graft Vs. Host Reaction; Granular Cell
 Myoblastoma; Granuloma ; Annulare; Granuloma Faciale; Granuloma Fissuratum, Cutaneous;
 Granuloma Fissuratum, Mouth; Granuloma Inguinale; Granuloma Pyogenicum; Granuloma,
 Mosinophilic; Granuloma, Foreign Body; Granuloma, Meischer's; Granuloma, Swimming Pool;
 Granuloma, Unclassified; Granulomatosis Disciformis, Meischer; Granulomatosis, Chronic
 20 Familial; Granulomatosis, Wegener's; Granulomatous Disease, Chronic; Granulosis Rubra Nasi;
 Graves Disease; Grooved Tongue; Grovers Disease; Gumma; Guttate Hypomelanosis, Idiopathic;
 Guttate Morphea; Gynecomastia; Gypsy Moth Dermatitis; Hailey - Hailey Disease; Hair Collar
 Sign; Hair Excess; Hair Pigment Disorder; Hair Shaft Abnormalities; Hairy Leukoplakia (Aids
 Associated); Hairy Leukoplakia (Non-Aids Associated); Hairy Tongue; Halo Nevus; Halogen
 25 Acne; Hamartoma; Hand And Foot Eruption, Unclassified; Hand-Foot-And-Mouth Disease;
 Hand-Schuller-Christian Disease; Hansen's Disease; Hartnup Disease; Heat Injury; Heat Rash;
 Hemangiectatic Hypertrophy; Hemangioendothelioma; Hemangioma; Hematologic Disorders,
 Unclassified; Hematoma; Hemochromatosis; Hemosiderosis; Henoch-Schönlein Purpura; Hepatic
 Disease; Hepatitis; Hereditary Disorders, Unclassified; Hereditary Hemorrhagic Telangiectasia;
 30 Herpangina; Herpes Gestationis; Herpes Progenitalis; Herpes Simplex; Herpes Zoster; Hibernoma;
 Hidradenitis Suppurativa; Hidradenitis, Palmar-Plantar; Hidradenoma Papilliferum;

Hidrocystoma; Hidrotic Ectodermal Defect; Hippocratic Nails; Hirsutism; Histiocytoma;
 Histiocytoid Hemangioma; Histiocytosis X; Histoplasmosis; Hives; Hodgkin's Disease;
 Homocystinuria; Hookworm Infestations; Horn, Cutaneous; Housewife's Eczema; Howell Evans
 Synd; Hunter's Syndrome; Hurler's Syndrome; Hyalinosis Cutis Et Mucosae; Hydroa Aestivale;
 5 Hydroa Vacciniforme; Hygroma, Cystic; Hyper Ige Syndrome; Hypercholesterolemia;
 Hyperhidrosis; Hyperkeratosis Climactericum; Hyperkeratosis Follicularis (Kyrle's);
 Hyperkeratosis Lenticularis Perstans(Flegel); Hyperkeratosis Palmaris Et Plantaris;
 Hyperkeratosis, Epidermolytic; Hyperkeratosis, Unclassified; Hyperlipemia; Hyperpigmentation,
 Unclassified; Hypersensitivity Vasculitis; Hypertrichosis; Hypertrophic Nails; Hypertrophic Scar;
 10 Hypertrophy From Chronic Irritation; Hypohidrosis; Hypomelanosis, Unclassified; Hypoplasia,
 Congenital; Ichthyosis; Ichthyosis Hystrix; Ichthyosis Linearis Circumflex; Ichthyosis Vulgaris; Id
 Eruption; Idiopathic Guttate Hypomelanosis; Ige Syndrome; Immersion Foot; Immune Complex
 Disease; Immune Deficiency, Acquired (AIDS); Immune Deficiency, Unclassified (Not AIDS);
 Immunoblastic Lymphadenopathy; Immunoglobulin Deficiency Disorders; Impetigo, Impetigo
 15 Follicularis; Impetigo Herpetiformis; Impetigo Of Bockhart; Inclusion Cyst; Incontinentia
 Pigmenti; Infantile Lichenoid Dermatitis; Infections, Bacterial, Unclassified; Infections,
 Rickettsial, Unclassified; Infections, Viral, Unclassified; Infectious Eczematoid Dermatitis;
 Infectious Mononucleosis; Infundibulofolliculitis; Injury, Traumatic; Inoculation Tuberculosis;
 Insect Bites And Stings; Intaepidermal Carcinoma; Intertrigo; Iododerma; Irritant Dermatitis;
 20 Ischemia; Ischemic Ulcer; Itch, Unclassified; Jadassohn - Lewandowsky Syndrome; Jaundice;
 Jaw, Lumpy; Jellyfish Sting; Jessner's Lymphocytic Infiltration; Job's Syndrome; Junctional
 Nevus; Juvenile Elastoma; Juvenile Melanoma, Benign; Juvenile Xanthogranuloma; Kala Azar;
 Kaposi's Sarcoma (Aids Associated); Kaposi's Sarcoma (Not Aids Associated); Kaposi's
 Varicelliform Eruption; Kasaback-Merritt Syndrome; Kawasaki Disease; Keloid; Keloid Acne;
 25 Keloidal Blastomycosis; Keratinous Cyst; Keratoacanthoma; Keratoderma Blenorrhagica;
 Keratoderma Climactericum; Keratoderma Of Palms And Soles; Keratoderma Palmaris Et
 Plantaris; Keratolysis Exfoliativa; Keratolysis, Pitted; Keratosis Blenorrhagica And Reiter's Synd;
 Keratosis Follicularis; Keratosis Palmaris Et Plantaris; Keratosis Pilaris; Keratosis Punctata
 Palmaris Et Plantaris; Keratosis, Actinic; Keratosis, Follicle, Unclassified; Keratosis, Mouth;
 30 Keratosis, Seborrheic; Keratosis. Arsenical; Kerion; Kinky Hair Disease, Menke's; Klippel-
 Trenaunay-Parkes-Weber; Knuckle Pads; Koh Preparation; Koilonychia; Kraurosis Vulvae;

Kwashiorkor; Kyrle's Disease; Lamellar Dyshydrosis; Lamellar Ichthyosis; Larva Migrans; Laser Therapy; Leg Ulcer, Unclassified; Leiner's Disease; Leiomyoma; Leishmaniasis; Lentigo; Lentigo Maligna; Lentigo Maligna Melanoma; Leopard Syndrome; Leprosy; Lesch - Nyhan Syndrome; Leser - Trélat Sign; Lethal Midline Granuloma; Letterer - Siwe Disease; Leukemia Cutis; 5 Leukocyte Disorders, Unclassified; Leukoderma, Unclassified; Leukonychia; Leukoplakia And Keratosis, Mouth; Leukoplakia, Except Mouth; Lichen Amyloidosis; Lichen Aureus; Lichen Myxedematosus; Lichen Nitidus; Lichen Pilaris; Lichen Planopilaris; Lichen Planus; Lichen Sclerosus Et Atrophicus; Lichen Scrofulosorum; Lichen Simplex Chronicus; Lichen Spinulosus; Lichen Striatus; Light Eruption Or Reaction; Light Therapy; Lindau-Von Hippel Disease; Linear & Whorled Nevoid Hyperpigmentation; Linear Iga Disease; Linear Nevus; Lip, Unclassified; 10 Lipoatrophy; Lipodystrophy; Lipogranulomatosis; Lipoid Proteinosis; Lipoma; Livedo Reticularis; Loaisis; Lobo's Disease; Loxoscelism; Lumpy Jaw; Lupus Erythematosus, Discoid; Lupus Erythematosus, Neonatal; Lupus Erythematosus, Subacute Cutaneous; Lupus Erythematosus, Systemic; Lupus Miliaris Disseminata; Lupus Miliaris Disseminata Faciei; Lupus Pernio; Lupus Profundus; Lupus Vulgaris; Lyell's Syndrome; Lyme Disease; Lymphadenosis Cutis; Lymphangioma; Lymphangitis; Lymphedema; Lymphoblastoma; Lymphocyte Recovery Eruption; Lymphocytic Infiltrate Of Jessner; Lymphocytoma Cutis And Lymphocytic Infiltrate; Lymphogranuloma Venereum; Lymphoma, Hodgkin's; Lymphoma, Non-Hodgkin's, Other; Lymphomatoid Granulomatosis; Lymphomatoid Papulosis; Macrochelia; Macroglobulinemia; 20 Macroglossia; Maculae Ceruleae; Macular Atrophy; Madelung's Disease; Madura Foot; Maduromycosis; Mafucci's Syndrome; Majocchi's Disease; Majocchi's Granuloma; Mal De Meleda; Mal Perforans Ulcer; Male Pattern Baldness; Malherbe, Calcifying Epithelioma Of; Malignancy Markers, Cutaneous; Malignant Atrophic Papulosis; Malignant Freckle; Malignant Lentigo; Malignant Melanoma; Malignant Tumors, Unclassified; Marfan's Syndrome; Marjolin's Ulcer; Markers Of Malignancy, Unclassified; Mast Cell Tumor; Mastocytosis; Measles; Measles, German; Median Rhomboid Glossitis; Meischer's Granuloma; Melanoma, Lentigo Maligna; Melanoma, Malignant; Melanosis Circumscripta Precancerosa; Melasma; Melkersson-Rosenthal Syndrome; Meloidosis; Meningococcemia; Menkes Kinky Hair Syndrome; Mercury Pigmentation; Merkel Cell Carcinoma; Metal Allergy; Metal Pigmentation; Metastatic Carcinoma; 25 Mibelli, Angiokeratoma Of; Microscopic Examination; Midline Granuloma, Lethal; Miliaria; Milium; Milker's Nodules; Milroy's Disease; Mite Dermatitis; Mixed Connective Tissue Disease; 30

Mohs Micrographic Surgery; Mole; Molluscum Contagiosum; Mondor's Syndrome; Mongolian Spot; Mongolism; Monilethrix; Moniliasis; Morbus Moniliformis; Morphea; Morquio's Disease; Mucha-Habermann's Disease; Mucinosi, Focal; Mucinosi, Reticular Erythematous; Mucinous Cyst; Mucocutaneous Lymph Node Syndrome; Mucopolysaccharidoses; Mucormycosis; Mucosa, Oral, Unclassified; Mucous Cyst; Multicentric Reticulohistiocytosis; Multiple Benign Cystic Epithelioma; Multiple Endocrine Neoplasia Synd; Multiple Hamartoma Syndrome; Multiple Idiopathic Hemorrhagic Sarcoma; Multiple Mucosal Neuroma; Multiple Myeloma; Mumps; Munchausen Syndrome; Mycetoma; Mycobacterial Infections, Atypical; Mycosis Fungoides; Myiasis; Myoblastoma; Myoepithelioma; Myoma And Leiomyoma; Myxedema And Localized Myxedema; Myxoid Cyst; Nail Disorders Assoc. With Internal Disease; Nail Dystrophy, Unclassified; Nail Pits; Nails, Normal Variants; Narcotic Dermopathy; Nasal Glioma; Necrobiosis Lipoidica; Necrobiotic Xanthogranuloma; Necrolysis, Toxic Epidermal; Necrolytic Migratory Erythema; Necrosis, Unclassified; Necrotizing Fasciitis; Necrotizing Vasculitis; Needle Marks; Neonatal Acne; Neonatal Lupus Erythematosus; Netherton's Syndrome; Neurilemmoma; Neurodermatitis; Neurofibroma, Neurofibromatosis; Neurotic Excoriations; Neutrophilic Dermatosi, Acute Febrile; Nevoxanthoendothelioma; Nevoxanthogranuloma; Nevus Anemicus; Nevus Angiolipomatous; Nevus Araneus; Nevus Caeruleus; Nevus Cell Nevus; Nevus Comedonicus; Nevus Depigmentosus; Nevus Elasticus; Nevus Flammeus; Nevus Of Ito; Nevus Of Ota; Nevus Sebaceous; Nevus Syringocystadenoma Papilliferum; Nevus Unius Lateris; Nevus, Blue; Nevus, Blue Rubber Bleb; Nevus, Compound; Nevus, Dermal; Nevus, Epidermal; Nevus, Epithelial; Nevus, Halo; Nevus, Junctional; Nevus, Linear; Nevus, Organoid; Nevus, Pigmented; Nevus, Spider; Nevus, Spindle Cell; Nevus, Verrucous; Nevus, White Spongy Of Mucosa; Nickle Allergy; Niemann - Pick Disease; Nocardiosis; Nodular Dermal Allergide; Nodular Elastoidosis; Nodular Fasciitis; Nodular Fat Necrosis; Nodular Subepidermal Fibrosis; Nodular Vasculitis; Nodules, Milker's; Nodules, Rheumatoid; Noma; Non-Venereal Treponematoses; Normal Variants; North American Blastomycosis; Norwegian Scabies; Nummular Dermatitis; Nutritional Or Vitamin Deficiency; Occupational Acne; Occupational Dermatoses, Unclassified; Occupational Leukoderma; Ochronosis; Ocular Pemphigus; Oid-Oid Disease; Omphalitis; Onchocerciasis; Onychia; Onychodystrophy, Unclassified; Onychogryphosis; Onycholysis; Onychomycosis; Ophiasis; Oral Florid Papillomatosis; Oral Mucosa, Unclassified; Oral Tumors; Oral, Unclassified; Oral-Facial-Digital Syndrome; Orf; Organoid Nevus; Oroya

Fever; Osler-Rendu-Weber Disease; Osteoarthritis; Osteodermatopoikilosis; Osteogenesis Imperfecta; Osteoma Cutis; Other Syndromes, Unclassified; Oxyuriasis; Pachydermoperiostosis; Pachyonychia Congenita; Pagetoid Reticulosis; Paget's Disease; Painful Bruising Syndrome; Palate, Unclassified; Palmar Erythema; Palmar Fibromatosis; Palmar-Plantar Hidradenitis; 5 Palmoplantar Keratosis; Palmoplantar Pustulosis, Unclassified; Panatrophs Of Gower; Panniculitis; Papilloma, Mucous Membrane; Papilloma, Skin; Papillomatosis, Cutaneous; Papillomatosis, Florid Oral; Papillon-Lefèvre Syndrome; Papular Dermatitis Of Pregnancy; Papular Mucinosis; Papular Urticaria; Papulonecrotic Tubercule; Papulosis, Malignant Atrophic Of Degos; Paracoccidioidomycosis; Paraffinoma; Paraneoplastic Syndromes; Parapsoriasis, 10 Acute; Parapsoriasis, Chronic; Parasitic Infestations, Unclassified; Parasitosis, Delusions Of; Paronychia; Pasini Et Pierini Syndrome; Patch Testing, Pathergic Granulomatosis; Pearly Penile Papules; Pediatric Dermatoses; Pediculosis; Pelade; Pellagra; Pemphigoid, Benign Mucous Membrane; Pemphigoid, Bullous; Pemphigoid, Cicatricial, Mucosal; Pemphigoid, Unclassified; Pemphigus Erythematodes; Pemphigus Foliaceus; Pemphigus Vegetans; Pemphigus Vulgaris; 15 Pemphigus, Brazilian; Pemphigus, Drug; Pemphigus, Familial Benign Chronic; Pemphigus, Hailey-Hailey; Pemphigus, Unclassified; Penile Pearly Papules; Perforating Collagenosis; Perforating Dermatitis; Perforating Folliculitis; Periapical Abscess; Periapical Necrotic Recurrent; Perianal Protrusions, Pyramidal; Perianal Strep; Periarthritis Nodosa; Perifolliculitis Capitis Abscedens Et Suff.; Perioral Dermatitis; Perlèche; Pernicious Anemia; Pernio; Petechiae; Peutz- 20 Jeghers Syndrome; Peyronie's Disease; Phagedena; Phenylketonuria; Phlebotomy; Phlebitis; Phototherapy; Phrynodema; Phthiriasis; Phycomycosis; Pian; Piebaldism; Piedra; Piezogenic Pedal Papules, Painful; Pigmentary Hairy Nevus; Pigmentation, Anatomic; Pigmentation, Hair; Pigmentation, Nail; Pigmentation, Unclassified; Pigmented Purpuric Eruptions; Pilar Cyst; Pilar Tumor; Pilomatricoma; Pilonidal Cyst; Pinta; Pinworm Dermatitis; Pitted Keratolysis; Pitted 25 Nails; Pityriasis Alba; Pityriasis Capitis; Pityriasis Lichenoides Chronica; Pityriasis Lichenoides Et Varioliformis Acuta; Pityriasis Rosea; Pityriasis Rubra Pilaris; Pityriasis Streptogenes; Pityriasis Versicolor; Plant Dermatitis; Plantar Wart; Plasmacytoma; Pleva; Podagra; Poikiloderma; Poikiloderma Congenitale; Poikiloderma Of Civatte; Poikiloderma Vasculare Atrophicans; Poison Ivy Dermatitis; Poliosis; Polyarteritis Nodosa; Polychondritis; Polycythemia 30 Vera; Polydactyly; Polymorphic Light Eruption; Polyostotic Fibrous Dysplasia (Albright's); Polyp, Fibroepithelial; Pompholyx; Porokeratosis; Poroma; Porphyria; Port Wine Stain; Portuguese

Man-Of-War Sting; Post-Inflammatory Hyperpigmentation; Post-Inflammatory Hypopigmentation; Postmastectomy Lymphangiosarcoma; Pregnancy, Dermatitis In; Pressure Sore; Pretibial Myxedema; Prickle Cell Carcinoma; Prickly Heat; Primary Syphilis; Progeria; Progressive Bacterial Synergistic Gangrene; Progressive Pigmentary Dermatoses; Proteinosis;

5 Lipoid; Prurigo Gestationis; Prurigo Gravidarum; Prurigo Nodularis; Pruritic Urticarial Papules Plaques Of Preg.; Pruritis, Signs, Unclassified; Pruritus Gravidarum; Pseudoacanthosis Nigricans; Pseudoatrophoderma Colli; Pseudocyst Of The Auricle; Pseudofolliculitis Barbae; Pseudolymphoma Of Speigler-Fendt; Pseudomonas Infection; Pseudopelade; Pseudosarcoma; Pseudotuberculosis; Pseudoverrucous Papules; Pseudoxanthoma Elasticum; Psoriasis; Pterygium;

10 Punctate Keratosis Of Palms And Soles; Puppp Syndrome; Purpura And Ecchymosis; Purpura Annularis Telangiectoides; Purpura Fulminans; Purpura Pigmentosa Chronica; Purpura Rheumatica; Purpuric Pigmented Lichenoid Dermatitis; Pustular Bacterid; Pustular Dermatitis, Subcorneal; Pustular Eruption Of Palms And Soles; Pustular Perifolliculitis; Pustulosis Palmaris Et Plantaris; Pyoderma And Folliculitis; Pyoderma Faciale; Pyoderma Gangrenosum; Pyogenic

15 Granuloma; Pyramidal Perianal Protrusion; Radiation Dermatoses; Radiation Therapy; Ragweed Dermatitis; Ranula; Raynaud's Disease Or Phenomenon; Reactive Perforating Collagenosis; Reflex Sympathetic Dystrophy; Reiter's Syndrome; Relapsing Polychondritis; Relapsing Self-Healing Blaschko Dermatitis; Rem Syndrome; Rendu-Osler-Weber Syndrome; Retention Cysts Of Lips; Reticular Erythematous Mucinosi; Reticulohistiocytosis, Multicentric;

20 Reticulohistiocytosis, Cong Self-Healing; Reticuloid, Actinic; Reticulum Cell Sarcoma; Rheumatoid Arthritis; Rheumatoid Nodule; Rhinophyma; Rhinoscleroma; Rhinosporidiosis; Rhus Dermatitis; Rickettsial Infections; Riehl's Melanosis; Ringed Hair; Ritter's Disease; Rocky Mountain Spotted Fever; Rodent Ulcer; Romberg's Disease; Rosacea; Rosacea-Like Tuberculid Of Lewandowsky; Roseola Infantum; Rothman-Makai Syndrome; Rothmund-Thomson

25 Syndrome; Rubella; Rubeola; Sarcoid; Sarcoma; Sarcoma, Kaposi's (Aids-Associated); Sarcoma, Kaposi's (Not Aids); Sauriasis; Scabies; Scalded Skin Syndrome; Scar; Scarlet Fever; Schamberg's Disease; Schistosomiasis; Scleredema; Sclerema; Sclerodactyly; Scleroderma; Sclerodermatomyositis; Scleromyxedema; Sclerosing Hemangioma; Sclerosing Lymphangitis, Penis; Sclerosis, Diffuse Systemic; Sclerotherapy; Scratch Marks; Scrofuloderma; Scrotal Tongue;

30 Scurvy; Seabather's Eruption; Sebaceous Adenoma; Sebaceous Cyst; Sebaceous Epithelioma; Sebaceous Gland Carcinoma; Sebaceous Gland Tumors, Benign; Sebaceous Hyperplasia;

Sebacous Nevus; Seborrheic Dermatitis; Seborrheic Keratosis; Secondary Syphilis; Senear-Usher Syndrome; Senile Elastosis; Senile Keratosis; Senile Purpura; Septicemia; Serum Sickness; Sézary Syndrome; Shingles; Sickle Cell Ulcer; Sjögren's Syndrome; Skin Tag; Skin Tests For Allergy; Smallpox; Snake Bites; Sneddon-Wilkinson Subcorneal Pustulosis; Solar Atrophy; Solar Keratosis; Solar Urticaria; South American Blastomycosis; Speigler-Fendt Sarcoid; Spider Bites; Spider Nevi; Spinal Dysraphism; Spindle Cell Nevus; Spiradenoma; Spitz's Juvenile Melanoma; Sporotrichosis; Squamous Cell Carcinoma; Staphylococcal Scalded-Skin Syndrome; Stasis Dermatitis; Steatocystoma Multiplex, Steroid Acne, Steroid Effects, Unclassified; Stevens-Johnson Syndrome; Stings, Insect; Stings, Other Than Insects And Spiders; Stings, Spider; Stomatitis; Stomatitis, Aphthous; Storage Disease, Glycogen; Striae; Stucco Keratosis; Stump Dermatitis; Sturge-Weber Syndrome; Subacute Bacterial Endocarditis; Subcorneal Pustular Dermatitis; Subcutaneous Fat Necrosis; Subepidermal Nodular Fibrosis; Sulzberger-Garbe Disease; Sunburn; Supernumerary Digit; Supernumerary Nipple; Surfer's Nodule; Surgery; Sweat Gland Carcinoma; Sweat Gland Disorders, Unclassified; Sweat Gland Necrosis; Sweat Gland Tumors, Benign; Sweet's Syndrome; Swimmer's Itch; Swimming Pool Granuloma; Sycosis; Symmetric Lividity Of The Soles; Symmetrical Peripheral Gangrene; Syndactyly; Synovial Cyst; Syphilis, Congenital; Syphilis, Primary; Syphilis, Secondary; Syphilis, Tertiary; Syringocystadenoma Papilliferum; Syringoma; Systemic Lupus Erythematosus; Systemic Therapy; Tags, Skin; Tar Melanosis; Tattoo; T-Cell Disorders; Teaching Slides; Teeth Abnormalities, Unclassified; Telangiectasia; Telangiectasia Macularis Eruptiva Perstans; Telangiectasia, Hereditary Hemorrhagic; Telogen Effluvium; Temporal Arteritis and other such like diseases and maladies now known and unknown.

Without doubt the invention disclosed herein served many well and long felt needs and concerns among the public and health care professionals.

25 Objects of the Invention

In view of the foregoing, it is therefore an object of the invention to provide a detection device for skin cancer and other diseases of the skin.

It is a further objective of the invention to provide a detection device for skin cancer and other maladies of the skin that is neither invasive nor destructive to the tissue being examined.

A further object of a preferred embodiment of the invention is to provide a device that may be used as a mirror for anyone wishing to view his/her body but have been unable to do so, such as in gym facilities, homes, physician's offices, and other health care facilities.

5 A further object of a preferred embodiment of the invention is to provide detection means that does not involve biopsy or contact with the skin.

Another object of a preferred embodiment of the invention is to provide detection means that does not have side effects on the skin.

10 A further object of a preferred embodiment of the invention is to provide a means for remote viewing of patients for telemedical diagnostic means, such as in prison facilities, remote locations or other areas that are similarly deficient in highly qualified or experts in a medical field.

A further object of a preferred embodiment of the invention is to provide a cost-effective device.

Another object of a preferred embodiment of the invention is to provide a device that may be easy to employ.

15 A further object of a preferred embodiment of the invention is to provide a device that may be assembled with minimal professional carpenter assistance.

A further object of a preferred embodiment of the invention is to provide a device that may be easily transportable.

20 Another object of a preferred embodiment of the invention is to provide a device that is capable of being used in a system for reducing maladies of the skin

A further object of a preferred embodiment of the invention is to provide a device that allows for automated acquisition of human physiological characteristics.

A further object of a preferred embodiment of the invention is to provide a device that allows for melanoma and skin cancer screening.

25 A further object of a preferred embodiment of the invention is to provide a device that

allows for POSI score calculation.

A further object of a preferred embodiment of the invention is to provide a device that allows for hair loss and/or growth evaluation(s).

5 A further object of a preferred embodiment of the invention is to provide a device that allows for wound healing evaluations.

A further object of a preferred embodiment of the invention is to provide a device that allows for remote diagnostic evaluations.

A further object of a preferred embodiment of the invention is to provide a device that allows for viewing and analysis of cosmetic surgery applications.

10 A further object of a preferred embodiment of the invention is to provide a device that allows for beauty evaluations.

A further object of a preferred embodiment of the invention is to provide a device that allows for body morphology analysis.

15 A further object of a preferred embodiment of the invention is to provide a device that allows for viewing and analysis of soft tissue augmentation.

A further object of a preferred embodiment of the invention is to provide health care professionals with a device that will make doctor-patient interface time more efficient.

20 Another object of a preferred embodiment of the invention is to provide a device capable of allowing health care professional(s), doctor(s), nutritionist(s), physical trainer(s) and individual person(s) the ability to view, monitor, evaluate and render decisions based upon that which is captured, viewed and or compared to prior analysis utilizing the device as disclosed herein.

A further object of a preferred embodiment of the invention is to provide a device that may reduce patient time spent in a health care professional's, doctor's, nutritionist's, physical trainer's facility where said individual may review an his/her health, etc.

25 A further object of a preferred embodiment of the invention is to provide a device that may

reduce the related costs associated with an analysis as described herein.

Another object of a preferred embodiment of the invention is to provide a device that may reduce the cost to insurance programs reimbursing applicable healthcare and related professions for their time and effort associated with the rendering of care to such an insured individual.

5 Another object of a preferred embodiment of the invention is to improve the quality of life.

Another object of the present device disclosed herein is to allow for a better and more efficient rendering of any of a variety of forms of health care where visualization of the human body, including parts thereof, is required.

10 The preferred embodiments of the invention thus provides a device for the identification, diagnosis and subsequent treatment of maladies of the skin that is time and cost efficient and effective with no side effects.

Having thus described the invention, it will be apparent to those of skill in the art that modifications can be made within the scope of the invention without departing from the scope or breath of that which is intended and disclosed herein.

15 Brief Description of the Drawings

Figure 1 (FIG 1) depicts a horizontal cross-section of an imaging system in accordance with the present invention.

Figure 2 (FIG 2) depicts a vertical panel of an imaging device in accordance with the present invention.

20 Figure 3 (FIG 3) depicts a horizontal cross section of an alternate embodiment of an imaging system in accordance with the present invention utilizing a circular periphery.

Figure 4 (FIG 4) depicts an exemplary imaging device, e.g., camera, and actuation means.

Figure 5 (FIG 5) is a schematic of a complete imaging system in accordance with the present invention.

Detailed Description of the Preferred Embodiment

This invention teaches a TIP device that provides non-occluded images by employing an array of imaging devices and thereafter combining individual images to form a continuous image. It has been heretofore contemplated that the device could find use as an aid in screening and diagnosis of conditions of soft tissue, hair and nails. Furthermore, it could also find use as a beauty aid to consult those considering cosmetic surgery or changes in personal appearance.

Thus, the following detailed description, read with the above-described drawings will serve to explain various preferred embodiments and components of the present invention.

FIG 1 depicts a horizontal cross section of an embodiment of the TIP system 100 in accordance with the present invention. The system may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 108 of the device 100 with sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would fit comfortably at center 108. The system 100 is comprised of several panels 109. In this particular embodiment, fourteen (14) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, an 8-sided polygon was chosen. The shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 109 is comprised of an imager array 102, comprising a vertical array of imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature, chemical information or other information of interest. In this embodiment, we assume the use of digital cameras operating in the conventional fashion. Thus, in order to optimize the performance of the cameras, light sources 101 are utilized. While fluorescent tubes are the preferred means, any type of illumination can be used, for example, a Wood's lamp may be used. These light sources 101 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 102 is the perimeter wall 103. The perimeter wall can be made of plywood, particle board or any other structural material capable of supporting the structure. In front of the light sources 101 and imager array 102 is shield 107. Shield 107 protects the imager array 102 and light sources 101 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 107, and furthermore, a shield with variable transmittance is

contemplated. In between the plurality of panels 109, there are dividers 106. Dividers 106 function to provide stability for shield 107, and also, when made opaque, reduce light interference between adjacent imager arrays 102. To effect access and egress, panels 104 function as a doorway. By rotating on hinge 105, panels 104 swing outward, thus allowing access to the interior of system 100. A system 100 is also contemplated without doorway 104 that can be used for examining small objects, such as the scalp or hands, for example.

FIG 2 depicts an exemplary panel 200 of a TIP system in accordance with the present invention. Supporting the panel 200, is perimeter wall 207. Perimeter wall 207 can be flat, curved or angled in any fashion to accommodate the desired perimeter shape. Supported by the perimeter wall 207 are imaging arrays 205 and 206 and light sources 202 and 208. While this exemplary panel utilizes dual imaging arrays 205, 206 and light sources 202, 208, the panel may be configured in any fashion utilizing at least one imaging array. Light sources 202, 208 are optional, and depending on the type of imaging done, e.g., chemical, may be unnecessary. However, in the present embodiment, light sources 202 and 208 are taken to be standard fluorescent tubes. They could also be, for example, Wood's lamps. Imaging arrays 205 and 206 comprise a plurality of imaging devices 203. Imaging devices 203 may be a standard or digital camera, or any other type of device capable of capturing the desired information from the subject with the imaging system. Imaging devices 203 are controlled through cables 204. These cables may be used to remotely trigger a mechanical actuator or, as is contemplated herein, act as part of an electronic interface such as USB. Imaging arrays 205 and 206 are depicted herein as vertical arrays of 5 imaging devices 203. In practice, the array can vary greatly. For use in smaller examinations, e.g., the scalp, it is suggested that less imaging devices 203 would be required to generate a complete image.

FIG 3 depicts a horizontal cross section of an alternate embodiment of an imaging system 300 in accordance with the present invention utilizing a circular periphery. The system 300 may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 308 of the device 300 with sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would comfortably at center 308. The system 300 is comprised

of several panels 309. In this particular embodiment, eight (8) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, a circle was constructed. The shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 301 is comprised of an imager array 302, comprising a vertical array of imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature or chemical information. In this embodiment, we assume the use of digital cameras operating in the conventional fashion. Thus, in order to optimize the performance of the cameras, light sources 303 are utilized. While fluorescent tubes are the preferred means, any type of illumination can be used. These light sources 303 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 302 is the perimeter wall 310. The perimeter wall can be made of plywood, particleboard or any other structural material capable of supporting the structure. In front of the light sources 303 and imager array 302 is shield 309. Shield 309 protects the imager array 302 and light sources 303 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 309, and furthermore, a shield with variable transmittance is contemplated. In between the plurality of panels 301, there are dividers 306. Dividers 306 function to provide stability for shield 309, and also, when made opaque, reduce light interference between adjacent imager arrays 302. To effect access and egress, panel 304 functions as a doorway. By rotating on a double-hinge hinge 305 and clearing angled divider 307, panel 304 swings outward, thus allowing access to the interior of system 300. A system 300 is also contemplated without doorway 304 that can be used for examining small objects, such as the scalp or hands, for example.

FIG 4 depicts an exemplary imaging device 400 for use with the present invention. In practice, the imaging device 400 may be a standard or digital camera, or any other type of device capable of capturing the desired information from the subject with the imaging system. For example, devices capable of recording infrared or chemical information could be used. The present embodiment, however, contemplates the use of a digital camera as exemplified by the current figure. Such a device would comprise lens 403, mechanical actuator 402 and control cable 401. Preferably, cable 401 is used to electronically control, and further, download digital image information from imaging device 400. As is contemplated herein, the electronic control could be USB. Alternatively, control cable 401 could be used to trigger mechanical actuator 402. Although the present figure describes a specific imaging device, it should be understood that a wide variety

of data collection devices could be employed without departing from the scope of the present invention.

FIG 5 depicts a schematic of a complete image processing system 500 in accordance with the present invention. As discussed above in FIG 1, imaging system 100 may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 108 of the device 100 with sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would fit comfortably at center 108. The system 100 is comprised of several panels 109. In this particular embodiment, fourteen (14) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, an 8-sided polygon was chosen. The shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 109 is comprised of an imager array 102, comprising a vertical array of imaging devices. Imaging arrays 507 through 519 can be identical to imager array 102, or may vary in the information they garner in accord with the desired application. The present embodiment, however, contemplates identical imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature or chemical information. In this embodiment, we assume the use of digital cameras operating in the conventional fashion. Thus, in order to optimize the performance of the cameras, light sources 101 are utilized. Each imaging array may utilize a light source 101 to enhance imaging ability. Furthermore, each of said light sources could have varying characteristics to accord with the application. While fluorescent tubes are the preferred means, any type of illumination can be used. These light sources 101 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 102 is the perimeter wall 103. The perimeter wall can be made of plywood, particle board or any other structural material capable of supporting the structure. In front of the light sources 101 and imager arrays 102 and 507-519 is shield 107. Shield 107 protects the imager arrays 102 and 507 through 519 and light sources 101 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 107, and furthermore, a shield with variable transmittance is contemplated. In between the plurality of panels 109, there are dividers 106. Dividers 106 function to provide stability for shield 107, and also, when made opaque, reduce light interference between adjacent imager arrays 102 and 507 through 519. To

effect access and egress, panels 104 function as a doorway. By rotating on hinge 105, panels 104 swing outward, thus allowing access to the interior of system 100. A system 100 is also contemplated without doorway 104 that can be used for examining small objects, such as the scalp or hands, for example. In order to effect the processing of the multiple images garnered from the plurality of imaging arrays, the imager arrays 102 and 507 through 519 are networked to a single computer 501. The present embodiment contemplates the use of USB to network the arrays 102 and 507 through 519. The imaging devices of arrays 102, 507, 508 and 509 are connected to USB hub 506 via interface cabling 102a, 507a, 508a and 509a, respectively. The imaging devices of arrays 517, 518 and 519 are connected to USB hub 505 via interface cabling 517a, 518a and 519a, respectively. The imaging devices of arrays 514, 515 and 516 connected to USB hub 504 via interface cabling 514a, 515a and 516a, respectively. The imaging devices of arrays 510, 511, 512 and 513 are connected to USB hub 503 via interface cabling 510a, 511a, 512a and 513a, respectively. Hub 506 is connected with hub 503 via cable 520. Hub 505 is connected with hub 504 via cable 521. Hubs 503 and 504 are then connected to hub 502 via cables 522 and 523, respectively. Finally, hub 502, which has the totality of imaging devices of imaging arrays 102 and 507 through 519 connected thereto, is connected to computer 501 via cable 524. The computer 501 is used to process the individual images garnered from each imaging device of each imaging array 102 and 507 through 519 to create a non-occluded image of the subject within system 100, and preferably, at center 108. It should be noted that the arrangement of hubs 506, 505, 504, 503 and 502 and the concomitant cabling presented heretofore is merely exemplary, and anyone with skill in the art will recognize the myriad ways of interconnecting the imaging devices of imaging arrays 102 and 507 through 519 to computer 501.

While the present invention has been described with reference to one or more preferred embodiments, which embodiments have been set forth in considerable detail for the purposes of making a complete disclosure of the invention, such embodiments are merely exemplary and are not intended to be limiting or represent an exhaustive enumeration of all aspects of the invention. The scope of the invention, therefore, shall be defined solely by the following claims. Further, it will be apparent to those of skill in the art that numerous changes may be made in such details without departing from the spirit and the principles of the invention.



APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY

Field of the Invention

The present invention relates primarily to conditions pertaining to health and cosmetics. As such, the device allows for the imaging of total or subtotal non-occluded body surfaces in order to detect health and cosmetic conditions and involves the measurement and analysis of an optically depicted image of a patient's surfaces by standard color imaging, heat, electromagnetic or chemical imaging. The present invention allows for image pixel acquisition, its data collection, data aggregation, data dissemination, data manipulation, and subsequent viewing. The present invention provides for tissue analysis of a patient such that relevant determinations may be made such as detection of diseases or related problems of cosmesis.

Background of the Invention

The invention relates to the detection, diagnosis and treatment of skin cancer as well as other diseases and cosmetic conditions of the visible human.

Half of all new cancers are skin cancers. About 1.3 million new cases of skin cancer will be diagnosed in the United States each year. About 80 percent of the new skin cancer cases will be basal cell carcinoma, 16 percent are squamous cell carcinoma, and 4 percent are melanoma.

Both basal cell carcinoma and squamous cell carcinoma have a better than 95 percent cure rate if detected and treated early. Squamous cell carcinoma of the skin accounts for about 2.3 thousand deaths annually.

The incidence of melanoma has more than tripled among Caucasians between 1980 and 2000. There will be about 47,700 new cases of melanoma in 2000. At current rates, one in 74 Caucasian Americans will develop melanoma. With that statistic, one person dies of melanoma every hour. This year, approximately 7,700 deaths will be attributed to melanoma in the ratio of 4,800 men and 2,900 women. Older Caucasian males have the highest mortality rates from melanoma. In women under the age of 30, melanoma is more prevalent than breast cancer. All of these cancers are associated with sun exposure with the majority occurring after age 50. Furthermore, the incidence rates for all skin cancers are increasing with movement of white populations south to sunnier climates and the greater numbers of individuals living into their 80s.

With the "baby boomer" generation currently in their late 50s, the medical community is faced with an explosive skin cancer epidemic.

There is a need for a practical device that allows for the rapid screening of individuals for skin cancer and other maladies of the skin in early stages of development.

5 Currently, clinical diagnosis of skin disease is generally accomplished by visual inspection under white light illumination. In this process, the reflectance light of a skin lesion is examined. Visual diagnosis alone may not be particularly accurate for early detection of skin cancer since many skin conditions have a similar appearance under white light. Therefore, when a suspect lesion is identified by visual examination, a biopsy is often performed for a definitive diagnosis.

10 Not only is it crucial to diagnose skin pre-cancer or skin cancer at an early stage when it is curable, but it is also important to improve the clinical diagnosis of suspected skin lesions so as to avoid unnecessary skin biopsies.

Several approaches have been tried to improve skin cancer diagnosis. Digital processing of reflectance images has been extensively investigated recently and has been found in melanoma to

15 be more accurate than specialist diagnostic accuracy. An alternative approach is ultraviolet (UV), infrared (IR) or polarized light photography that extends visual perception of a physician to the UV, IR or polarized light reflectance patterns. A further alternative approach that is already in widespread medical use involves illuminating the skin with a "Wood's lamp" which consists of a mercury discharge lamp associated with a filter that transmits UVA light with a 365 nanometer

20 peak while absorbing visible light. When this device is used to assist in skin diagnosis, the eye serves as both the detector and the long pass filter. The eye is not sensitive to UV light, but is sensitive to visible fluorescence light. When the "Wood's lamp" is used in a darkened room, ~~where~~ the physician sees an image of a fluorescing disease site. The "Wood's lamp" is useful for the diagnosis of some skin conditions such as tinea capitis, tinea versicolor, erythrasma, and some

25 pseudomonas infections, as well as aiding in the detection and diagnosis of hypopigmented skin. It is of no value in conditions where the fluorescence is not in the visible spectrum. These techniques depend on lighting and sensor techniques and may be incorporated into the total immersion photography system.

Prior Disclosures

Currently, clinical diagnosis of skin disease is generally accomplished by visual, verbal and handwritten history taking and by inspection during a visit to the physician's clinic. Initial inspections are routinely performed by general practitioners. Dermatologists may be sought out by patients or used upon referral by general practitioners. Either way, an appointment is required. Visual inspections are often limited by the physician's schedule or patient modesty. The patient may only be willing to have the area of concern inspected. General practitioners, the HMO "gatekeepers", have been documented to be less effective in discerning potential cancerous lesions than dermatologists. If referrals are not made, possible malignancies may be overlooked. A second approach is chemical emulsion or digital photography that can extend visual perception of a physician to the UV or IR reflectance patterns. Such approaches have also been limited by the need for a "point-and-shoot" photographer. A more limited approach requires only images of those areas in question. This again leaves open the possibility of an incomplete diagnosis. This approach may be augmented by the use of skin surface epiluminescence microscopy. Epiluminescence light microscopy (ELM) represents a technique which permits examination of the surface of the skin and also--by using the oil immersion technique--of the dermal-epidermal junction zone. The commonly used method of epiluminescence microscopy is based on point and shoot techniques requiring a trained operator. Recently, there have been investigations into the use of digital imagery to aid with dermatologic diagnoses. The prevalent technique uses either digitally processed standard photography or direct digital photography of sections of the subject's body. These images are then stored for inspection, referral, and/or forwarding. For comprehensive surface imaging, this approach requires multiple posings by the photographer and the subject that may exceed 30 views in total. Depending on the medium used, review of the images may or may not be available for inspection during the same appointment. Specific applications include the MoleMap and MoleMax II systems. MoleMap uses a combination of three images (epiluminescence, macro and low resolution) to identify possible melanoma. Visual type resolution is used primarily for mapping suspicious locations. Images are diagnosed and reported on by dermatologists before being permanently archived on a computer system for future comparisons. The MoleMax II system combines epiluminescence microscopy and computer technology for data storage and retrieval. The system can be adapted for body surface imaging (using serial individually-photographed images). Images are available for inspection during the

current office visit, allowing simultaneous dermatologist/patient on-screen observation. Since the outcome of treatment of cancer is more favorable the earlier and more accurately the cancer is detected, the present invention is a substantial advancement in improving public health by eliminating the barrier of an available expert photographer or dermatologist for effective skin screening. This device provides a complete non-covered screening in an automated fashion, removing the intrusion of physical inspection and decreasing the possibility of missed lesions. The image acquisition does not require the presence of a physician or medical photographer, thereby increasing convenience to the patient/subject. This, in turn, would allow the placement of the device independent of the physician's or medical photographer's office, a benefit to public health programs.

Since the outcome of cancer treatment is more favorable the earlier and more accurately the cancer is detected, the present invention is a substantial advancement in improving public health by automating the imaging of potentially cancerous lesions in a more rapid and complete method. In light of the many advantages of early detection, there exists a clear need for a device that can greatly enhance the current methods of skin cancer screening. Furthermore, such a device will also find use in the cosmetic and beauty industry.

Summary of the Invention

The TIP system including the structure, infrastructure, and imaging system, requires little training, minimal staffing, and may be constructed with simple, easily available tools. TIP is a device that may be easily transportable, providing opportunity for skin screenings in diverse locations such as gym facilities, recreation centers, physician's offices, and other health oriented facilities. Medically under-served and restricted locales, e.g., rural areas and prison facilities, will also benefit from TIP system remote diagnostic capabilities (telemedicine), bringing the care of medical specialists to the patients.

The present invention, Total Immersion Photography (TIP), relates initially, and thus generally, to cancer detection and, more particularly, to skin cancer, e.g., melanoma, detection involving the measurement and analysis of an optical depiction of the subject patient's skin surface by standard color imaging, as well as heat, electromagnetic or chemical imaging. The present invention allows for subject acquisition, data collation, data aggregation, data

dissemination, data manipulation, data viewing in a preferable medium and analysis of a subject patient's skin surface, or other body tissue and, therefore, providing for the subject tissue's analysis such that relevant determinations may be made. TIP is a digital image acquisition device, the products of which, are capable of a variety of applications. For instance, panoramic mosaics of the body, 3-D models of the body, images for use with "machine vision", and interfacing with medical records are such possible uses.

The present invention is uniquely situated whereby TIP may operate as the screening test, as well as a confirmation of a positive result from a screening test, or even in a manner that provides for second opinions. In either circumstance, if the results of the administered test are confirmatory, *i.e.*, melanoma is detected or otherwise identified on the skin surface. If, on the other hand, it is determined that melanoma is not present on the skin surface and, consequently, that the screening test was erroneous, the patient is spared the trauma of having to undergo the full work-up including the biopsy. In that respect, confirmation of cancer by analyzing the skin surface as set forth herein has many significant advantages over conventional melanoma tests, as well as cancer detection methods in general.

TIP comprises an image acquisition device that is further comprised of an enclosed structure that is and can be designed and assembled according to the human physiology to be analyzed such that the enclosed structure maximizes the ease of acquisition of the human body with traditional and/or digital photography. For purpose of discussion herein, the TIP structure may be comprised of fourteen (14) "panels". These fourteen (14) panels should be set forth in such that one panel has a "mirror image" panel. Alternatively, the TIP device may be constructed in a circular derivative, or like structure, of the fourteen (14) panel embodiment or other such number of panels keeping with the operative requirements of the device.

Contained within the enclosed structure are devices capable of "photographing" the body in a static position (motion or time-lapsed photography is also be provided for). The photographic device(s) may be capable of "taking" the body through traditional photography means, and/or temperature, chemical or electromagnetic based means. For purposes of discussion herein, the photographic means, e.g. a camera or like device capable of "capturing" a still image or video streamed images, ("camera") array should consist of no less than forty (40) cameras. The camera(s), as envisioned and discussed herein are set forth in the fourteen "panels" such that there

are five (5) cameras per vertical panel section (8 X 5 + top and bottom cameras =42). This structure of cameras and panels may be easily modified without departing from that which is taught, disclosed and intended. The basis for the panel-camera array is to accurately capture the physiological attributes desired from the subject patient. With subject placement, the camera array coordinates and distances are known in relation to the subject. These distances, in combination with focal length and resolution information, allows for the precise measurement of the human features of interest. The camera(s) may be left "on", engaged or otherwise activated at a desired time.

To effect the proper "picture" lighting or other optical, heat, chemical or electromagnetic, enhancement means may be affixed to, or placed around the structure such that the photographic device's "capturing" of the subject physiology may be optimized. Accordingly, for purpose of discussion herein in regard to traditional photographic means the photographic optimization may be accomplished via a lighting means which consists of fluorescent lights. These lights should be situated and placed behind panels constructed of Lucite or like material containing the same or similar physical and optical properties. The lighting means may be ~~on~~ "on" or activated prior to engagement of the camera or photographic means, or further, remotely triggered at a predetermined time.

In the event the camera(s) and/or the lighting means are triggered remotely or upon a sequencing event the same can be controlled manually or through computer assistance. Should computers or like devices be used to facilitate the process, the same may consist of at least one (1) USB Hub, but as is contemplated herein ten (10) USB Hubs with 7 (7) USB ports per hub. In turn, there should be a data processor or like means that resides on a server or so similarly situated.

The subject patient or physiological area would enter or be placed into the TIP enclosed structure, and if need be into the specified position for imaging. When in position, the camera device and enhancement, if not engaged, are so engaged and the image(s) obtained. Thereafter, the images are transmitted from the camera device(s) through the USB(s) onto a server/computer means capable of aggregating, manipulating and disseminating the image(s) collected into a visually discernable format. As such, the images can be displayed synchronously in 2D format or processed into 3D renderings for desired or required viewing.

As a result of the aforementioned TIP device, a doctor or other individual interested in acquiring the imaging of an individual or physiological area is provided a device capable of acquiring specific imagery and related information that may be further viewed, and/or collected, registered and/or stored for analysis. And as is considered and contemplated herein in regard to conditions and diseases of the visible human (but to also include and not limited to general physical, topical and subcutaneous analysis).

Accordingly, the apparatus of the present invention provides means for diagnosis of a skin disease site using spectral analysis comprising: a light source for generating light to illuminate the disease site; a probe means to conduct the illumination light from the light source to the disease site and to collect the reflected and fluorescence light and conduct said light to be analyzed; and spectral analysis means optically connected to the probe means for generating and displaying spectral measurements of the fluorescence light and the reflectance light to assist the user in diagnosing the disease site.

In a further aspect, the present invention provides a method for diagnosis of a skin disease site using spectral analysis comprising the steps of: illuminating the disease site with a light source to generate fluorescence and reflectance light at the disease site; collecting the generated fluorescence and reflectance light; conducting a spectral analysis of the collected light using a spectrometer; displaying spectral measurements of the fluorescence light and the reflectance light; and analyzing the measured fluorescence and reflectance spectra together to make a diagnosis of the disease site.

In a preferred embodiment, the apparatus of the present invention includes a compact spectrometer connected to a computer, a fluorescence excitation light source with a shutter, a white light source with a shutter, a bifurcated fibre bundle, a light coupler, a skin probe, and controlling electronics. The system is designed to automatically switch between the fluorescence excitation light and the white light sources and complete fluorescence and reflectance spectral measurements of a skin disease site sequentially in a few seconds. The system exploits the spectral differences of different skin diseases to aid in the dermatologic diagnosis. In particular, the apparatus provides a low cost, compact system that is capable of quickly and efficiently performing combined fluorescence and reflectance spectral analysis.

Applications

Below are some examples, but not limited to, in regard to the invention's scope and intended applications of TIP:

Automated Acquisition

- 5 Storage and display of the non-occluded visible body surface properties including but not limited to diseases and cosmetic conditions of the skin, hair and nails and body measurements. In this application the body surface can be viewed and measurements taken, evaluated, viewed, collated, and cross-referenced in an easy and efficient manner.

Melanoma and Skin Cancer Screening

- 10 Large populations can be effectively screened in a short period of time for skin cancers and related maladies using this device. The consistent lighting and repeatability of the imaging technique make it ideal for replacing the skin cancer screening environment where poor lighting, patient movement and dialogue, patient modesty and other factors increase the likelihood of an incomplete examination. By removing most of these factors, the physician is allowed undistracted
15 viewing time of the patient's skin surface. In addition, the travel and time expense of skin cancer screenings at a location other than the physician's own office is large. For evaluations of change over time and detection of new lesions, 3-month, 6-month and yearly scans can be obtained and analyzed in relation to one another. All evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that patient, doctor and health care provider time is
20 minimized (and thus cost reduced). Data will be recorded and aggregated such that accurate assessments of the patient and population may be derived.

Medical Practice Aid/ Documentation System

- The availability of images of a patient undergoing therapy is critical to a practicing dermatologist who bases his/her clinical evaluation on the "improvement" he/she sees in the
25 patient over time. This is especially pertinent to chronic conditions such as acne, urticaria, atopic dermatitis, contact dermatitis, psoriasis, blistering disorders, etc. The system acts as a "medical memory" of the patient as he/she returns to the office for reevaluation.

Beauty Evaluations

Consumers flock to cosmetic counters to purchase makeup to hide their skin conditions. Eighty percent of skin cancers are found on the head and neck. A "beauty mark" that is identified by the patient on the face could be dermatosis nigra, seborrheic keratosis, compound nevus or melanoma. A raised pink or red "pimple" could be a basal cell carcinoma or granuloma or sarcoid lesion. Other conditions include broken blood vessels (red lines) which can be indicative for diagnoses of telangectasias and rosacea. Pigment disorders such as vitiligo (lack of melanin), melasma (increased melanin), as well as discolorations due to excessive sun exposure are challenging to hide with makeup. Inflammatory skin conditions such as seborrheic dermatitis, psoriasis and eczema cause red, scaly patches which are chronic conditions falsely managed by moisturizers and makeup formulations. The information can be used to aid in makeover consultations. Consumers can be evaluated as to their current skin regimens and their conditions and followed over time as they undergo medical therapy. In addition, topical and internal medicines can be studied for their effectiveness over time.

Body Morphology Analysis- Shape Evaluation

Medically consequential conditions of the skeleton such as limb deformities and the spine deformities of kyphosis and scoliosis may be assessed photogrammetrically through TIP system. The consumer is also curious about what "shape" they are in mainly for appearance reasons. The physician or physical trainer is interested in the "shape" of the patient or client for both health and beauty reasons. This invention allows for a total body evaluation on several dimensions. Measurements and comparisons of body contours, fat deposit analysis, assymetry, etc. with volume measurements will be valuable for the cosmetic surgeon, the physician, the physical trainer, the clothier, etc. Medical and health decisions will be aided with such information. These evaluations can then be viewed, collated, and cross-referenced in an easy and efficient manner.

Cosmetic Surgery Applications

Preoperative evaluations as well as postoperative analysis and comparisons can be made using this device for all cosmetic surgery procedures. This is especially true for but not limited to facial surgery, eyelid surgery, face lifts, neck lifts, laser resurfacing, laser hair removal, soft tissue augmentation and liposuction. The physician can look to reduce asymmetry of the patient's

anatomy to enhance the outcome of cosmetic surgery. In addition, measurements of graft survival and soft tissue survival as well as measurements of soft tissue removal can be more accurately defined. These evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that studies can be made of the procedures where there are currently none.

5 Soft Tissue Manipulation

Volumetric measurements of soft tissue will facilitate studies of cosmetic procedures of the subcutis, glands, muscles, and skeleton. It will enhance the accuracy of body volume measurements for both soft tissue augmentation and soft tissue removal. Patients will be measured before soft tissue manipulation so that the procedure is more accurately applied to the areas to be
10 treated. The volumetric data will serve as a baseline to study the effectiveness of the treatment and will also enhance postoperative evaluation. For soft tissue augmentation using live tissue, it will allow for survival studies to be conducted. This will be a significant improvement over the current water-displacement techniques and 2D renderings. These evaluations can be viewed, collated, and cross-referenced in an easy and efficient manner such that patient and doctor time is minimized.
15 Data can be reviewed in a postoperative environment to assess outcomes and be used for outcome studies.

Percent of Surface Involved Score Calculation

This device will be able to standardize the Percent of Surface Involved ("POSI") and Psoriasis Area Surface Involvement ("PASI") scoring for the evaluation of extent of disease of
20 such skin diseases but not limited to psoriasis, pemphigus, burn victims, etc. Automation of the calculation will be critical. Topical and internal medicines can be studied for their effectiveness over time. These calculations can be collated and cross-referenced in manner such outcome studies of therapies can be collected for large populations and published.

Hair Loss Evaluation

25 Progression of hair loss and treatment evaluation can be monitored with such a device. Topical and internal medicines can be studied for their effectiveness over time. In addition, hair transplantation techniques (planning, mapping and performing) will be enhanced. Postoperative and follow-up graft survival studies will also be more accurate. Such an evaluation procedure can

be viewed by patient and health care professional alike, whereafter the same may be collated, and cross referenced in a manner such that time is minimized, data is accurately recorded and aggregated so an accurate assessment and prognosis may be made.

Wound Healing Evaluations

5 Therapeutic analyses for post operative wounds, traumatic wounds, ulcers, burns, scars, etc. collectively "wounds" can be made using this device. Measurements of the "wounds" at the outset of therapy and then at specific intervals of time allow for accurate evaluation of the progression of healing time and patient responsiveness to treatment. Topical and internal medicines can be studied for their effectiveness over time. These evaluations and resulting
10 analyses can be viewed, collated, and cross referenced in an easy and efficient manner such that time is minimized, data accurately recorded and aggregated for efficient and accurate assessments and prognosis made.

Remote Diagnostic Evaluations

 This device will allow for both local and remote medical and cosmetic consultations.
15 These evaluations and applications can be shared effectively using store-and-forward telemedicine techniques. The TIP data set can be viewed, collated, and cross referenced in an easy and efficient manner such that patient and doctor time is minimized, data accurately recorded and aggregated and thus efficient and accurate diagnoses.

 Accordingly the following are a list, not inclusive, of those ailments, maladies and
20 concerns that can be addressed by the device as disclosed herein: Disorders relating to and/or resulting from: altered reactivity; bacterial and fungal diseases; cell kinetics; cell differentiation; drugs and chemical agents; epidermal cohesion; epidermal appendages and related disorders; epidermal and appendageal tumors; hematology; infestations, bites, and stings; lymphomas and pseudolymphomas; mechanical and physical factors; melanocytes; mucocutaneous integument;
25 neoplasms; nutrition, metabolism, and genetics; organ systems: gastrointestinal, cardiovascular, pulmonary, endocrine, renal and other organ systems; persistent inflammation; rheumatology; including but not limited to sexually transmitted diseases.

 Also identifiable are conditions of surgical dermatology, including but not limited to:

cryosurgery; hair loss and transplant; liposuction; micrographic surgery; nail surgery; sclerotherapy; skin resurfacing; soft tissue augmentation and wounds.

Particularly the following, but not limited thereto, are capable of being identified through the use of the invention disclosed herein:

- 5 Abscess, Child Abuse, Drug Abuse, skin lesions, Physical Acantholytic Dermatitis, Transient Acanthosis Nigricans; Acarophobia; Acatalasia, Achromia Parasitica; Acne Artificialis; Acne Conglobata; Acne Cosmetica; Acne Excoriée; Acne Fulminans; Acne Keloidalis; Acne Mechanica; Acne Necrotica; Acne Neonatorum; Acne Rosacea; Acne Varioliformis; Acne Vulgaris; Chloracne; Cystic Acne, Halogen Acne, Pomade Acne, Steroid Acne, Tropical Acne,
- 10 Acneiform Eruptions, Drug-Related Acne; Acrochordon; Acrocyanosis; Acrodermatitis Chronica Atrophicans; Acrodermatitis Continua; Acrodermatitis Enteropathica; Acrodermatitis of Hallopeau; Acrodermatitis Pustulosa Perstans; Papular Acrodermatitis of Childhood, Acrodynia; Acrokeratoelastoidosis; Acrokeratosis Verruciformis, Acromegaly, Acropachyderma, Acropustulosis, Acropustulosis Of Infancy, Acrosclerosis, Actinic Cheilitis, Actinic Dermatitis,
- 15 Actinic Elastosis, Actinic Keratosis, Actinic Damage; Actinic Prurigo; Actinic Reticuloid; Actinomycosis, Actinophytosis, Acuminate Warts; Acute Febrile Neutrophilic Dermatoses, Drug Addiction, Addison's Disease; Sweat Gland Adenoma, Adenoma Sebaceum, Adenomatosis Oris, Adiposis Dolorosa, Agammaglobulinemia, AIDS, AIDS-Associated Syndromes, Ainhum, Albinism, Albright's Syndrome, Aldrich's Syndrome, Alkaptonuria, Allergic Contact Dermatitis,
- 20 Allergic Vasculitis; Alopecia Areata, Alopecia Mucinososa, Alopecia Totalis, Alopecia Universalis, Androgenetic Alopecia, Scarring Alopecia, Amebiasis, Amputation Stump Dermatitis, Amyloidosis, Anagen Effluvium, Anaphylactoid Purpura, Anderson-Fabry Disease, Anemia, Anetoderma, Angiitis, Angioedema, Angiofibroma, Angioimmunoblastic Lymphadenopathy; Angiokeratoma & Other Benign Vascular Tumors; Angiokeratoma Corporis Diffusum,
- 25 Angiolipoma, Angiolymphoid Hyperplasia, Angioma, Angioma Serpiginosum, Angioneurotic Edema, Anhidrotic Ectodermal Dysplasia, Animal Bites, Anthrax, Antiphospholipid Syndrome, Aphthous Ulcer, Aplasia Cutis Congenita, Apocrine Miliaria, Argyria, Arsenical Keratoses, Arteriolitis, Arteriovenous Malformations, Arthritis, Arthropod Bites And Stings, Ashy Dermatitis, Aspergillosis, Asteatosis, Ataxia-Telangiectasia, Atopic Dermatitis, Atrophic Nail
- 30 Disorders, Malignant Atrophic Papulosis, Atrophie Blanche, Anetoderma, Atrophy Unclassified,

Atypical Fibroxanthoma, Atypical Mycobacterial Infections, Auricular Fistula, Autoeczematous Dermatitis, Autoerythrocyte Sensitization, Autosensitization Dermatitis, Pustular Bacterid, Balanitis Xerotica Obliterans; Balding, Basal Cell Carcinoma, Basal Cell Nevus Syndrome, Battered Child, Bazin's Disease, B-Cell Disorders, Becker's Nevus, Behçet's Syndrome, Bejel, 5 Benign Familial Chronic Pemphigus, Benign Mucous Membrane Pemphigoid, Benign Tumors,, Berloque Dermatitis, Biliary Cirrhosis, Birthmarks, Insect Bites, Spider Bites, B-K Mole Syndrome, Black Hairy Tongue, Black Heel, Blaschko Dermatitis, North American Blastomycosis, South American Blastomycosis, Blepharitis, Blister Agents, Blister Beetle Dermatitis, Blood Dyscrasias, Bloom's Syndrome, Blue Nevus, Blue Rubber Bleb Nevus, 10 Bockhart's Impetigo, Boil, Bornholm Disease, Botryomycosis, Bourneville's Disease, Bowenoid Papulosis, Bowen's Disease Or Intraepidermal Carcinoma, Branchial Cyst, Branchiogenic Cyst, Brazilian Pemphigus, Bromoderma, Brucellosis, Buerger's Disease, Bullous Dermatoses Of Childhood, Bullous Diabeticorum, Bullous Disorders, Bullous Pemphigoid, Burn, Buruli Ulcer, Buschke-Ollendorff Syndrome, Cafe-Au-Lait Spots, Caffey's Syndrome, Calcifying Epithelioma, 15 Calcinosis Cutis And Osteoma Cutis, Callus, Campbell De'morgan Spot, Candidiasis, Canities, Canker Sore, Capillary Hemangioma, Carbuncle, Carcinoid Syndrome, Epidermoid Carcinoma, Metastatic Carcinoma, Merkel Cell Carcinoma, Squamous Cell Carcinoma, Carotenemia, Caterpillar Dermatitis, Cat-Scratch Disease, Cellulite, Lymphangitis, Dissecting Cellulitis of the Scalp, Cercarial Dermatitis, Chagas Disease, Chancre, Chancroid, Chédiak - Higashi Syndrome, 20 Cheilitis, Cheilitis Glandularis, Cheilitis Granulomatosa, Chemical Blister Agents, Side-Effects of Cancer Chemotherapy, Cherry Angioma, Chickenpox, Chigger Bites, Chilblains, Child Abuse, Chloasma, Chloracne, Cholinergic Urticaria, Chondrodermatitis, Chromhidrosis, Chromoblastomycosis, Chromomycosis, Chronic Granulomatous Disease, Chrysiasis, Churg Strauss, Cicatricial Alopecia, Cicatricial Pemphigoid, Cicatrix, Clavus, Clear Cell Acanthoma, 25 Clubbing Of Fingers, Cobb Syndrome, Coccidioidomycosis, Cockayne's Syndrome, Cold Injury, Ulcerative Colitis, Perforating Collagenosis, Collodion Baby; Colloid Milium, Comedos, Comedonal Nevus, Complement Deficiency Disorders, Compound Nevus, Condyloma Accuminatum; Condyloma Lata; Confluent And Reticulated Papillomatosis; Congenital Disorders, Unclassified; Congenital Fistulae; Congenital Hair Disorders, Unclassified; Congenital 30 Hypoplasia; Congenital Poikiloderma; Congenital Self-Healing Reticulohistiocytosis; Congenital Syphilis; Congenital Vascular Neoplasm Syndromes; Connective Tissue Nevus; Conradi's

Disease; Contact Dermatitis; Contracture, ; Unclassified; Copper Deficiency; Corns; Corticosteroid Effects; Cosmetic Procedures; Coumarin Reaction; Cowden's Disease; Cocksackie Infection; Craniofacial Angiomatosis; Creeping Eruption; Crest Syndrome; Crohn's Disease; Cronkhite - Canada Syndrome; Cryofibrinogenemia; Cryoglobulinemia; Cryosurgery;

5 Cryptococcosis; Cushing's Syndrome; Cutaneomeningospinal Angiomatosis; Cutaneous B-Cell Lymphoma; Cutaneous Horn; Cutaneous Markers Of Malignancy; Cutaneous Papillomatosis; Cutaneous Tag; Cutaneous T-Cell Lymphoma; Cutis Elastica; Cutis Laxa; Cutis Marmorata; Cutis Marmorata Telangiectetica Congenita; Cutis Rhomboidalis Nuchae; Cutis Verticis Gyrata; Cyclic Neutropenia; Cyndroma; Cyst, Branchiogenic; Cyst, Epidermal Or Epithelial; Cyst, Keratinous,

10 Pilar Or Sebaceous; Cyst, Mucous; Cyst, Pilar; Cyst, Sebaceous; Cyst, Synovial; Cytomegalovirus Infection; Dactyolysis; Dandruff; Darier - White Disease; Decubitus Ulcer; Deficiency, Mineral Or Vitamin; Degos Disease; Delusions Of Parasitosis; Demodex Folliculorum; Dental Abnormalities; Dental Sinus; Depigmentation; Depressive (Neurotic) Excoriations; Dercum's Disease; Dermal Hypoplasia; Dermatalgia; Dermatitis Herpetiformis; Dermatitis Medicamentosa;

15 Dermatitis Nodularis Necrotica; Dermatitis Papillaris Capillitii; Dermatitis Repens; Dermatitis Vegetans; Dermatitis, Acute, Unclassified; Dermatitis, Atopic; Dermatitis, Autosensitization; Dermatitis, Beetle; Dermatitis, Berloque; Dermatitis, Contact; Dermatitis, Diaper; Dermatitis, Drug Allergy; Dermatitis, Drug Toxicity; Dermatitis, Dyshydrotic; Dermatitis, Eczematous; Dermatitis, Exfoliativa; Dermatitis, Facticial; Dermatitis, Infectious Eczematoid; Dermatitis,

20 Irritant; Dermatitis, Nummular; ermatitis, Occupational; Dermatitis, Perioral; Dermatitis, Photo; Dermatitis, Pregnancy; Dermatitis, Radiation; Dermatitis, Seborrheic; Dermatitis, Stasis; Dermatitis, Nutritional; Dermatofibroma; Dermatofibrosarcoma Protuberans; Dermatofibrosis Lent Diss& Osteopoikilosis; Dermatology; Dermatomyositis; Dermatophyte Infections, Unclassified; Dermatophytid; Dermatophytosis; Dermatoses Papulosa Nigra; Dermographism; Dermoid Cyst;

25 Desmoid Tumor; Desquamation, Unclassified; Diabetes Mellitus; Diabetic Dermodromes; Dialysis, Bullous Dermatoses Of Diaper Dermatitis; Disseminated Intravascular Coagulation; Diet & Dermatology; Digital Fibrokeratosis; Digitate Dermatoses; Diphtheria, Cutaneous; ; Discoid Lupus Erythematosus; Dissecting Cellulitis Of The Scalp; Disseminated Intravascular Coagulation; Disseminated Lupus Erythematosus; Disseminated Super. Actinic Porokeratosis;

30 Discoid Lupus Erythematosus; Animal Bites; Down Syndrome; Dracunculosis; Drug Abuse; Drug Eruption; Drug Toxicity; Disseminated Superficial Actinic Porokeratosis; Duhning-Brocq Disease;

Dupuytren's Contracture; Dyshydrotic Dermatitis; Warty Dyskeratoma; Dyskeratosis Congenita;
 Dyskeratosis Follicularis; Dysplastic Nevi Or Syndrome; Dysproteinemia; Dysraphism;
 Dystrophic Nails; Ecchymosis; Eccrine Gland Tumors; Eccrine Hydrocystoma; Eccrine Poroma;
 Eccrine Spiradenoma; Ecthyma; Ecthyma Contagiosum (Orf); Ecthyma Gangrenosum;
 5 Ectodermal Defect, Congenital; Eczema Craquelé; Eczema Herpeticum And Vaccinatum;
 Eczema, Atopic; Eczema, Dyshydrotic; Eczema, Nummular; Edema, Angioneurotic; Edema,
 Legs, Hereditary; Edema, Unclassified; Ehlers-Danlos Syndrome; Ehrlichosis; Elastoidosis,
 Nodular With Cysts & Comedones; Elastolysis, Generalized; Elastoma, Juvenile; Elastosis
 Perforans Serpiginosa; Elastosis, Actinic; Elastosis, Perforating; Elephantiasis; Elephantiasis
 10 Nostras Verrucosa; Emboli; Endocrinopathy, Miscellaneous; Endometriosis; Eosinophilic
 Fasciitis; Eosinophilic Granuloma; Eosinophilic Papulovesicular Derm Of Newborn; Ephelides
 And Lentigines; Epidermal Inclusion Cyst; Epidermal Necrolysis, Toxic; Epidermal Nevus;
 Epidermodysplasia Verruciformis; Epidermoid Carcinoma; Epidermolysis Bullosa; Epidermolytic
 Hyperkeratosis; Epiloia; Epithelial Cyst; Epithelial Nevus; Epithelioma Adenoides Cysticum;
 15 Epithelioma, Arsenical; Epithelioma, Basal Cell; Epithelioma, Calcifying Of Malherbe;
 Epithelioma, Squamous; Erosio Interdigitalis Blastomycetica; Eruption Of Lymphocyte Recovery;
 Eruption, Creeping; Erysipelas; Erysipeloid; Erythema Ab Igne; Erythema Annulare Centrifugum;
 Erythema Chronicum Migrans; Erythema Circinatum; Erythema Dyschromicum Perstans;
 Erythema Elevatum Diutinum; Erythema Figuratum Perstans; Erythema Gyrratum Perstans;
 20 Erythema Gyrratum Repens; Erythema Induratum; Erythema Infectiosum; Erythema Marginatum;
 Erythema Multiforme; Erythema Nodosum; Erythema Of Jacquet; Erythema Perstans; Erythema
 Toxicum Neonatorum; Erythema, Anatomic; Erythema, Noninfectious, Unclassified; Erythema,
 Toxic; Erythema, Unclassified; Erythralgia; Erythrasma; Erythrocyte Autosensitization;
 Erythroderma, Exfoliative; Erythrodermatitis Variabilis; Erythromelalgia; Erythroplasia Of
 25 Queyrat; Esthiomene; Exanthem Subitum; Exanthem, Bacterial; Exanthem, Viral; Excoriation,
 Depressive Or Neurotic; Exfoliation Of Palms And Soles; Exfoliative Dermatitis (Or See Cause);
 Extramammary Paget's Disease; Extramedullary Hematopoiesis, Cutaneous; Exudative Discoid
 And Lichenoid Dermatitis; Fabry's Disease; Facial Granuloma; Factitial Dermatitis; Familial
 Benign Chronic Pemphigus; Familial Hemorrhagic Telangiectasia; Farber's Disease; Fasciitis,
 30 Necrotizing; Fat Dystrophy; Fat Necrosis; Favre - Racouchot Elastoidosis Syndrome; Favus;
 Febrile Neutrophilic Dermatoses, Acute; Female Pattern Baldness; Fever Blisters, Aphthae; Fever

Blisters, Herpes Simplex; Fibroepithelial Polyp; Fibroma; Fibromatosis Of Penis; Fibrous Papule
 Of Nose; Fibroxanthoma, Atypical; Fifth Disease; Figurate Erythema; Filariasis; Fissured Tongue;
 Fistulae, Congenital; Fixed Drug Eruption; Flat Warts; Flea Bites; Florid Oral Papillomatoses;
 Flushing, Non-Carcinoid; Focal Dermal Hypoplasia; Fogo Selvagem; Follicular Mucinosi-
 5 Folliculitis; Folliculitis Abscedens Et Suffodiens; Folliculitis Decalvans; Folliculitis Keloidalis;
 Fordyce Lesions Of Scrotum; Fordyce Spots; Foreign Body; Foreign Body Granuloma; Fox -
 Fordyce Disease; Freckles; Friction Blister; Frostbite; Fungal Cultures (Alphabetical By Genus);
 Fungal Infection, Deep, Unclassified; Fungal Infection, Superficial, Unclassified; Furuncle;
 Ganglion; Gangosa; Gangrene; Gardner's Syndrome; Gargoylism; Gastrointestinal Syndromes;
 10 Gaucher's Disease; Geographic Tongue; German Measles' Gi Disease, Skin ;Manifestations;
 Gianotti - Crosti Syndrome; Giant Cell Arteritis; Gingiva, Unclassified; Gingival Hypertrophy;
 Gingivitis, Unclassified; Glanders; Glandular Cheilitis; Glomus Tumor; Glossitis, Median
 Rhomboid; Glossitis, Unclassified; Glucagonoma Syndrome; Glycogen Storage Disease; Gold
 Pigmentation; Goltz Syndrome; Gonococcemia; Gonorrhea; Gougerot - Blum Disease; Gougerot -
 15 Carteau's Papillomatosis; Gout; Gower's Panatroph; Graft Vs. Host Reaction; Granular Cell
 Myoblastoma; Granuloma ; Annulare; Granuloma Faciale; Granuloma Fissuratum, Cutaneous;
 Granuloma Fissuratum, Mouth; Granuloma Inguinale; Granuloma Pyogenicum; Granuloma,
 Mosinophilic; Granuloma, Foreign Body; Granuloma, Meischer's; Granuloma, Swimming Pool;
 Granuloma, Unclassified; Granulomatosis Disciformis, Meischer; Granulomatosis, Chronic
 20 Familial; Granulomatosis, Wegener's; Granulomatous Disease, Chronic; Granulosis Rubra Nasi;
 Graves Disease; Grooved Tongue; Grovers Disease; Gumma; Guttate Hypomelanosis, Idiopathic;
 Guttate Morphea; Gynecomastia; Gypsy Moth Dermatitis; Hailey - Hailey Disease; Hair Collar
 Sign; Hair Excess; Hair Pigment Disorder; Hair Shaft Abnormalities; Hairy Leukoplakia (Aids
 Associated); Hairy Leukoplakia (Non-Aids Associated); Hairy Tongue; Halo Nevus; Halogen
 25 Acne; Hamartoma; Hand And Foot Eruption, Unclassified; Hand-Foot-And-Mouth Disease;
 Hand-Schuller-Christian Disease; Hansen's Disease; Hartnup Disease; Heat Injury; Heat Rash;
 Hemangiectatic Hypertrophy; Hemangioendothelioma; Hemangioma; Hematologic Disorders,
 Unclassified; Hematoma; Hemochromatosis; Hemosiderosis; Henoch-Schönlein Purpura; Hepatic
 Disease; Hepatitis; Hereditary Disorders, Unclassified; Hereditary Hemorrhagic Telangiectasia;
 30 Herpangina; Herpes Gestationis; Herpes Progenitalis; Herpes Simplex; Herpes Zoster; Hibernoma;
 Hidradenitis Suppurativa; Hidradenitis, Palmar-Plantar; Hidradenoma Papilliferum;

Hidrocystoma; Hidrotic Ectodermal Defect; Hippocratic Nails; Hirsutism; Histiocytoma;
 Histiocytoid Hemangioma; Histiocytosis X; Histoplasmosis; Hives; Hodgkin's Disease;
 Homocystinuria; Hookworm Infestations; Horn, Cutaneous; Housewife's Eczema; Howell Evans
 Synd; Hunter's Syndrome; Hurler's Syndrome; Hyalinosis Cutis Et Mucosae; Hydroa Aestivale;
 5 Hydroa Vacciniforme; Hygroma, Cystic; Hyper Ige Syndrome; Hypercholesterolemia;
 Hyperhidrosis; Hyperkeratosis Climactericum; Hyperkeratosis Follicularis (Kyrle's);
 Hyperkeratosis Lenticularis Perstans(Flegel); Hyperkeratosis Palmaris Et Plantaris;
 Hyperkeratosis, Epidermolytic; Hyperkeratosis, Unclassified; Hyperlipemia; Hyperpigmentation,
 Unclassified; Hypersensitivity Vasculitis; Hypertrichosis; Hypertrophic Nails; Hypertrophic Scar;
 10 Hypertrophy From Chronic Irritation; Hypohidrosis; Hypomelanosis, Unclassified; Hypoplasia,
 Congenital; Ichthyosis; Ichthyosis Hystrix; Ichthyosis Linearis Circumflex; Ichthyosis Vulgaris; Id
 Eruption; Idiopathic Guttate Hypomelanosis; Ige Syndrome; Immersion Foot; Immune Complex
 Disease; Immune Deficiency, Acquired (AIDS); Immune Deficiency, Unclassified (Not AIDS);
 Immunoblastic Lymphadenopathy; Immunoglobulin Deficiency Disorders; Impetigo, Impetigo
 15 Follicularis; Impetigo Herpetiformis; Impetigo Of Bockhart; Inclusion Cyst; Incontinentia
 Pigmenti; Infantile Lichenoid Dermatitis; Infections, Bacterial, Unclassified; Infections,
 Rickettsial, Unclassified; Infections, Viral, Unclassified; Infectious Eczematoid Dermatitis;
 Infectious Mononucleosis; Infundibulofolliculitis; Injury, Traumatic; Inoculation Tuberculosis;
 Insect Bites And Stings; Intaepidermal Carcinoma; Intertrigo; Iododerma; Irritant Dermatitis;
 20 Ischemia; Ischemic Ulcer; Itch, Unclassified; Jadassohn - Lewandowsky Syndrome; Jaundice;
 Jaw, Lumpy; Jellyfish Sting; Jessner's Lymphocytic Infiltration; Job's Syndrome; Junctional
 Nevus; Juvenile Elastoma; Juvenile Melanoma, Benign; Juvenile Xanthogranuloma; Kala Azar;
 Kaposi's Sarcoma (Aids Associated); Kaposi's Sarcoma (Not Aids Associated); Kaposi's
 Varicelliform Eruption; Kasaback-Merritt Syndrome; Kawasaki Disease; Keloid; Keloid Acne;
 25 Keloidal Blastomycosis; Keratinous Cyst; Keratoacanthoma; Keratoderma Blenorrhagica;
 Keratoderma Climactericum; Keratoderma Of Palms And Soles; Keratoderma Palmaris Et
 Plantaris; Keratolysis Exfoliativa; Keratolysis, Pitted; Keratosis Blenorrhagica And Reiter's Synd;
 Keratosis Follicularis; Keratosis Palmaris Et Plantaris; Keratosis Pilaris; Keratosis Punctata
 Palmaris Et Plantaris; Keratosis, Actinic; Keratosis, Follicle, Unclassified; Keratosis, Mouth;
 30 Keratosis, Seborrheic; Keratosis. Arsenical; Kerion; Kinky Hair Disease, Menke's; Klippel-
 Trenaunay-Parkes-Weber; Knuckle Pads; Koh Preparation; Koilonychia; Kraurosis Vulvae;

Kwashiorkor; Kyrle's Disease; Lamellar Dyshydrosis; Lamellar Ichthyosis; Larva Migrans; Laser Therapy; Leg Ulcer, Unclassified; Leiner's Disease; Leiomyoma; Leishmaniasis; Lentigo; Lentigo Maligna; Lentigo Maligna Melanoma; Leopard Syndrome; Leprosy; Lesch - Nyhan Syndrome; Leser - Trélat Sign; Lethal Midline Granuloma; Letterer - Siwe Disease; Leukemia Cutis; 5 Leukocyte Disorders, Unclassified; Leukoderma, Unclassified; Leukonychia; Leukoplakia And Keratosis, Mouth; Leukoplakia, Except Mouth; Lichen Amyloidosis; Lichen Aureus; Lichen Myxedematosus; Lichen Nitidus; Lichen Pilaris; Lichen Planopilaris; Lichen Planus; Lichen Sclerosus Et Atrophicus; Lichen Scrofulosorum; Lichen Simplex Chronicus; Lichen Spinulosus; Lichen Striatus; Light Eruption Or Reaction; Light Therapy; Lindau-Von Hippel Disease; Linear 10 & Whorled Nevoid Hyperpigmentation; Linear Iga Disease; Linear Nevus; Lip, Unclassified; Lipoatrophy; Lipodystrophy; Lipogranulomatosis; Lipoid Proteinosis; Lipoma; Livedo Reticularis; Loaisis; Lobo's Disease; Loxoscelism; Lumpy Jaw; Lupus Erythematosus, Discoid; Lupus Erythematosus, Neonatal; Lupus Erythematosus, Subacute Cutaneous; Lupus Erythematosus, Systemic; Lupus Miliaris Disseminata; Lupus Miliaris Disseminata Faciei; Lupus 15 Pernio; Lupus Profundus; Lupus Vulgaris; Lyell's Syndrome; Lyme Disease; Lymphadenosis Cutis; Lymphangioma; Lymphangitis; Lymphedema; Lymphoblastoma; Lymphocyte Recovery Eruption; Lymphocytic Infiltrate Of Jessner; Lymphocytoma Cutis And Lymphocytic Infiltrate; Lymphogranuloma Venereum; Lymphoma, Hodgkin's; Lymphoma, Non-Hodgkin's, Other; Lymphomatoid Granulomatosis; Lymphomatoid Papulosis; Macrochelia; Macroglobulinemia; 20 Macroglossia; Maculae Ceruleae; Macular Atrophy; Madelung's Disease; Madura Foot; Maduromycosis; Mafucci's Syndrome; Majocchi's Disease; Majocchi's Granuloma; Mal De Meleda; Mal Perforans Ulcer; Male Pattern Baldness; Malherbe, Calcifying Epithelioma Of; Malignancy Markers, Cutaneous; Malignant Atrophic Papulosis; Malignant Freckle; Malignant Lentigo; Malignant Melanoma; Malignant Tumors, Unclassified; Marfan's Syndrome; Marjolin's 25 Ulcer; Markers Of Malignancy, Unclassified; Mast Cell Tumor; Mastocytosis; Measles; Measles, German; Median Rhomboid Glossitis; Meischer's Granuloma; Melanoma, Lentigo Maligna; Melanoma, Malignant; Melanosis Circumscripta Precancerosa; Melasma; Melkersson-Rosenthal Syndrome; Meloidosis; Meningococcemia; Menkes Kinky Hair Syndrome; Mercury Pigmentation; Merkel Cell Carcinoma; Metal Allergy; Metal Pigmentation; Metastatic Carcinoma; 30 Mibelli, Angiokeratoma Of; Microscopic Examination; Midline Granuloma, Lethal; Miliaria; Milium; Milker's Nodules; Milroy's Disease; Mite Dermatitis; Mixed Connective Tissue Disease;

Mohs Micrographic Surgery; Mole; Molluscum Contagiosum; Mondor's Syndrome; Mongolian Spot; Mongolism; Monilethrix; Moniliasis; Morbus Moniliformis; Morphea; Morquio's Disease; Mucha-Habermann's Disease; Mucinosi, Focal; Mucinosi, Reticular Erythematous; Mucinous Cyst; Mucocutaneous Lymph Node Syndrome; Mucopolysaccharidoses; Mucormycosis; Mucosa, Oral, Unclassified; Mucous Cyst; Multicentric Reticulohistiocytosis; Multiple Benign Cystic Epithelioma; Multiple Endocrine Neoplasia Synd; Multiple Hamartoma Syndrome; Multiple Idiopathic Hemorrhagic Sarcoma; Multiple Mucosal Neuroma; Multiple Myeloma; Mumps; Munchausen Syndrome; Mycetoma; Mycobacterial Infections, Atypical; Mycosis Fungoides; Myiasis; Myoblastoma; Myoepithelioma; Myoma And Leiomyoma; Myxedema And Localized Myxedema; Myxoid Cyst; Nail Disorders Assoc. With Internal Disease; Nail Dystrophy, Unclassified; Nail Pits; Nails, Normal Variants; Narcotic Dermopathy; Nasal Glioma; Necrobiosis Lipoidica; Necrobiotic Xanthogranuloma; Necrolysis, Toxic Epidermal; Necrolytic Migratory Erythema; Necrosis, Unclassified; Necrotizing Fasciitis; Necrotizing Vasculitis; Needle Marks; Neonatal Acne; Neonatal Lupus Erythematosus; Netherton's Syndrome; Neurilemmoma; Neurodermatitis; Neurofibroma, Neurofibromatosis; Neurotic Excoriations; Neutrophilic Dermatosi, Acute Febrile; Nevoxanthoendothelioma; Nevoxanthogranuloma; Nevus Anemicus; Nevus Angiolipomatosis; Nevus Araneus; Nevus Caeruleus; Nevus Cell Nevus; Nevus Comedonicus; Nevus Depigmentosus; Nevus Elasticus; Nevus Flammeus; Nevus Of Ito; Nevus Of Ota; Nevus Sebaceous; Nevus Syringocystadenoma Papilliferum; Nevus Unius Lateris; Nevus, Blue; Nevus, Blue Rubber Bleb; Nevus, Compound; Nevus, Dermal; Nevus, Epidermal; Nevus, Epithelial; Nevus, Halo; Nevus, Junctional; Nevus, Linear; Nevus, Organoid; Nevus, Pigmented; Nevus, Spider; Nevus, Spindle Cell; Nevus, Verrucous; Nevus, White Spongy Of Mucosa; Nickle Allergy; Niemann - Pick Disease; Nocardiosis; Nodular Dermal Allergide; Nodular Elastoidosis; Nodular Fasciitis; Nodular Fat Necrosis; Nodular Subepidermal Fibrosis; Nodular Vasculitis; Nodules, Milker's; Nodules, Rheumatoid; Noma; Non-Venereal Treponematoses; Normal Variants; North American Blastomycosis; Norwegian Scabies; Nummular Dermatitis; Nutritional Or Vitamin Deficiency; Occupational Acne; Occupational Dermatosis, Unclassified; Occupational Leukoderma; Ochronosis; Ocular Pemphigus; Oid-Oid Disease; Omphalitis; Onchocerciasis; Onychia; Onychodystrophy, Unclassified; Onychogryphosis; Onycholysis; Onychomycosis; Ophiasis; Oral Florid Papillomatosis; Oral Mucosa, Unclassified; Oral Tumors; Oral, Unclassified; Oral-Facial-Digital Syndrome; Orf; Organoid Nevus; Oroya

Fever; Osler-Rendu-Weber Disease; Osteoarthritis; Osteodermatopoikilosis; Osteogenesis Imperfecta; Osteoma Cutis; Other Syndromes, Unclassified; Oxyuriasis; Pachydermoperiostosis; Pachyonychia Congenita; Pagetoid Reticulosis; Paget's Disease; Painful Bruising Syndrome; Palate, Unclassified; Palmar Erythema; Palmar Fibromatosis; Palmar-Plantar Hidradenitis; 5 Palmoplantar Keratosis; Palmoplantar Pustulosis, Unclassified; Panatrophia Of Gower; Panniculitis; Papilloma, Mucous Membrane; Papilloma, Skin; Papillomatosis, Cutaneous; Papillomatosis, Florid Oral; Papillon-Lefèvre Syndrome; Papular Dermatitis Of Pregnancy; Papular Mucinosis; Papular Urticaria; Papulonecrotic Tubercule; Papulosis, Malignant Atrophic Of Degos; Paracoccidioidomycosis; Paraffinoma; Paraneoplastic Syndromes; Parapsoriasis, 10 Acute; Parapsoriasis, Chronic; Parasitic Infestations, Unclassified; Parasitosis, Delusions Of; Paronychia; Pasini Et Pierini Syndrome; Patch Testing, Pathergic Granulomatosis; Pearly Penile Papules; Pediatric Dermatoses; Pediculosis; Pelade; Pellagra; Pemphigoid, Benign Mucous Membrane; Pemphigoid, Bullous; Pemphigoid, Cicatricial, Mucosal; Pemphigoid, Unclassified; Pemphigus Erythematodes; Pemphigus Foliaceus; Pemphigus Vegetans; Pemphigus Vulgaris; 15 Pemphigus, Brazilian; Pemphigus, Drug; Pemphigus, Familial Benign Chronic; Pemphigus, Hailey-Hailey; Pemphigus, Unclassified; Penile Pearly Papules; Perforating Collagenosis; Perforating Dermatitis; Perforating Folliculitis; Perianthitis Mucosa Necrotica Recurrens; Perianal Protrusions, Pyramidal; Perianal Strep; Periarthritis Nodosa; Perifolliculitis Capitis Abscedens Et Suff.; Perioral Dermatitis; Perlèche; Pernicious Anemia; Pernio; Petechiae; Peutz- 20 Jeghers Syndrome; Peyronie's Disease; Phagedena; Phenylketonuria; Phlebotasia; Phlebitis; Phototherapy; Phrynodema; Phthiriasis; Phycomycosis; Pian; Piebaldism; Piedra; Piezogenic Pedal Papules, Painful; Pigmentary Hairy Nevus; Pigmentation, Anatomic; Pigmentation, Hair; Pigmentation, Nail; Pigmentation, Unclassified; Pigmented Purpuric Eruptions; Pilar Cyst; Pilar Tumor; Pilonidal Cyst; Pinta; Pinworm Dermatitis; Pitted Keratolysis; Pitted 25 Nails; Pityriasis Alba; Pityriasis Capitis; Pityriasis Lichenoides Chronica; Pityriasis Lichenoides Et Varioliformis Acuta; Pityriasis Rosea; Pityriasis Rubra Pilaris; Pityriasis Streptogenes; Pityriasis Versicolor; Plant Dermatitis; Plantar Wart; Plasmacytoma; Pleva; Podagra; Poikiloderma; Poikiloderma Congenitale; Poikiloderma Of Civatte; Poikiloderma Vasculare Atrophicum; Poison Ivy Dermatitis; Poliosis; Polyarteritis Nodosa; Polychondritis; Polycythemia 30 Vera; Polydactyly; Polymorphic Light Eruption; Polyostotic Fibrous Dysplasia (Albright's); Polyp, Fibroepithelial; Pompholyx; Porokeratosis; Poroma; Porphyria; Port Wine Stain; Portuguese

Man-Of-War Sting; Post-Inflammatory Hyperpigmentation; Post-Inflammatory Hypopigmentation; Postmastectomy Lymphangiosarcoma; Pregnancy, Dermatitis In; Pressure Sore; Pretibial Myxedema; Prickle Cell Carcinoma; Prickly Heat; Primary Syphilis; Progeria; Progressive Bacterial Synergistic Gangrene; Progressive Pigmentary Dermatoses; Proteinosis; 5 Lipoid; Prurigo Gestationis; Prurigo Gravidarum; Prurigo Nodularis; Pruritic Urticarial Papules Plaques Of Preg.; Pruritis, Signs, Unclassified; Pruritus Gravidarum; Pseudoacanthosis Nigricans; Pseudoatrophoderma Colli; Pseudocyst Of The Auricle; Pseudofolliculitis Barbae; Pseudolymphoma Of Speigler-Fendt; Pseudomonas Infection; Pseudopelade; Pseudosarcoma; Pseudotuberculosis; Pseudoverrucous Papules; Pseudoxanthoma Elasticum; Psoriasis; Pterygium; 10 Punctate Keratosis Of Palms And Soles; Puppp Syndrome; Purpura And Ecchymosis; Purpura Annularis Telangiectoides; Purpura Fulminans; Purpura Pigmentosa Chronica; Purpura Rheumatica; Purpuric Pigmented Lichenoid Dermatitis; Pustular Bacterid; Pustular Dermatitis, Subcorneal; Pustular Eruption Of Palms And Soles; Pustular Perifolliculitis; Pustulosis Palmaris Et Plantaris; Pyoderma And Folliculitis; Pyoderma Faciale; Pyoderma Gangrenosum; Pyogenic 15 Granuloma; Pyramidal Perianal Protrusion; Radiation Dermatoses; Radiation Therapy; Ragweed Dermatitis; Ranula; Raynaud's Disease Or Phenomenon; Reactive Perforating Collagenosis; Reflex Sympathetic Dystrophy; Reiter's Syndrome; Relapsing Polychondritis; Relapsing Self-Healing Blaschko Dermatitis; Rem Syndrome; Rendu-Osler-Weber Syndrome; Retention Cysts Of Lips; Reticular Erythematous Mucinosi; Reticulohistiocytosis, Multicentric; 20 Reticulohistiocytosis, Cong Self-Healing; Reticuloid, Actinic; Reticulum Cell Sarcoma; Rheumatoid Arthritis; Rheumatoid Nodule; Rhinophyma; Rhinoscleroma; Rhinosporidiosis; Rhus Dermatitis; Rickettsial Infections; Riehl's Melanosis; Ringed Hair; Ritter's Disease; Rocky Mountain Spotted Fever; Rodent Ulcer; Romberg's Disease; Rosacea; Rosacea-Like Tuberculid Of Lewandowsky; Roseola Infantum; Rothman-Makai Syndrome; Rothmund-Thomson 25 Syndrome; Rubella; Rubeola; Sarcoid; Sarcoma; Sarcoma, Kaposi's (Aids-Associated); Sarcoma, Kaposi's (Not Aids); Sauriasis; Scabies; Scalded Skin Syndrome; Scar; Scarlet Fever; Schamberg's Disease; Schistosomiasis; Scleredema; Sclerema; Sclerodactyly; Scleroderma; Sclerodermatomyositis; Scleromyxedema; Sclerosing Hemangioma; Sclerosing Lymphangitis, Penis; Sclerosis, Diffuse Systemic; Sclerotherapy; Scratch Marks; Scrofuloderma; Scrotal Tongue; 30 Scurvy; Seabather's Eruption; Sebaceous Adenoma; Sebaceous Cyst; Sebaceous Epithelioma; Sebaceous Gland Carcinoma; Sebaceous Gland Tumors, Benign; Sebaceous Hyperplasia;

Sebacous Nevus; Seborrheic Dermatitis; Seborrheic Keratosis; Secondary Syphilis; Senear-Usher Syndrome; Senile Elastosis; Senile Keratosis; Senile Purpura; Septicemia; Serum Sickness; Sézary Syndrome; Shingles; Sickle Cell Ulcer; Sjögren's Syndrome; Skin Tag; Skin Tests For Allergy; Smallpox; Snake Bites; Sneddon-Wilkinson Subcorneal Pustulosis; Solar Atrophy; Solar Keratosis; Solar Urticaria; South American Blastomycosis; Speigler-Fendt Sarcoid; Spider Bites; Spider Nevi; Spinal Dysraphism; Spindle Cell Nevus; Spiradenoma; Spitz's Juvenile Melanoma; Sporotrichosis; Squamous Cell Carcinoma; Staphylococcal Scalded-Skin Syndrome; Stasis Dermatitis; Steatocystoma Multiplex, Steroid Acne, Steroid Effects, Unclassified; Stevens-Johnson Syndrome; Stings, Insect; Stings, Other Than Insects And Spiders; Stings, Spider; Stomatitis; Stomatitis, Aphthous; Storage Disease, Glycogen; Striae; Stucco Keratosis; Stump Dermatitis; Sturge-Weber Syndrome; Subacute Bacterial Endocarditis; Subcorneal Pustular Dermatitis; Subcutaneous Fat Necrosis; Subepidermal Nodular Fibrosis; Sulzberger-Garbe Disease; Sunburn; Supernumerary Digit; Supernumerary Nipple; Surfer's Nodule; Surgery; Sweat Gland Carcinoma; Sweat Gland Disorders, Unclassified; Sweat Gland Necrosis; Sweat Gland Tumors, Benign; Sweet's Syndrome; Swimmer's Itch; Swimming Pool Granuloma; Sycosis; Symmetric Lividity Of The Soles; Symmetrical Peripheral Gangrene; Syndactyly; Synovial Cyst; Syphilis, Congenital; Syphilis, Primary; Syphilis, Secondary; Syphilis, Tertiary; Syringocystadenoma Papilliferum; Syringoma; Systemic Lupus Erythematosus; Systemic Therapy; Tags, Skin; Tar Melanosis; Tattoo; T-Cell Disorders; Teaching Slides; Teeth Abnormalities, Unclassified; Telangiectasia; Telangiectasia Macularis Eruptiva Perstans; Telangiectasia, Hereditary Hemorrhagic; Telogen Effluvium; Temporal Arteritis and other such like diseases and maladies now known and unknown.

Without doubt the invention disclosed herein served many well and long felt needs and concerns among the public and health care professionals.

25 Objects of the Invention

In view of the foregoing, it is therefore an object of the invention to provide a detection device for skin cancer and other diseases of the skin.

It is a further objective of the invention to provide a detection device for skin cancer and other maladies of the skin that is neither invasive nor destructive to the tissue being examined.

A further object of a preferred embodiment of the invention is to provide a device that may be used as a mirror for anyone wishing to view his/her body but have been unable to do so, such as in gym facilities, homes, physician's offices, and other health care facilities.

5 A further object of a preferred embodiment of the invention is to provide detection means that does not involve biopsy or contact with the skin.

Another object of a preferred embodiment of the invention is to provide detection means that does not have side effects on the skin.

10 A further object of a preferred embodiment of the invention is to provide a means for remote viewing of patients for telemedical diagnostic means, such as in prison facilities, remote locations or other areas that are similarly deficient in highly qualified or experts in a medical field.

A further object of a preferred embodiment of the invention is to provide a cost-effective device.

Another object of a preferred embodiment of the invention is to provide a device that may be easy to employ.

15 A further object of a preferred embodiment of the invention is to provide a device that may be assembled with minimal professional carpenter assistance.

A further object of a preferred embodiment of the invention is to provide a device that may be easily transportable.

20 Another object of a preferred embodiment of the invention is to provide a device that is capable of being used in a system for reducing maladies of the skin

A further object of a preferred embodiment of the invention is to provide a device that allows for automated acquisition of human physiological characteristics.

A further object of a preferred embodiment of the invention is to provide a device that allows for melanoma and skin cancer screening.

25 A further object of a preferred embodiment of the invention is to provide a device that

allows for POSI score calculation.

A further object of a preferred embodiment of the invention is to provide a device that allows for hair loss and/or growth evaluation(s).

5 A further object of a preferred embodiment of the invention is to provide a device that allows for wound healing evaluations.

A further object of a preferred embodiment of the invention is to provide a device that allows for remote diagnostic evaluations.

A further object of a preferred embodiment of the invention is to provide a device that allows for viewing and analysis of cosmetic surgery applications.

10 A further object of a preferred embodiment of the invention is to provide a device that allows for beauty evaluations.

A further object of a preferred embodiment of the invention is to provide a device that allows for body morphology analysis.

15 A further object of a preferred embodiment of the invention is to provide a device that allows for viewing and analysis of soft tissue augmentation.

A further object of a preferred embodiment of the invention is to provide health care professionals with a device that will make doctor-patient interface time more efficient.

20 Another object of a preferred embodiment of the invention is to provide a device capable of allowing health care professional(s), doctor(s), nutritionist(s), physical trainer(s) and individual person(s) the ability to view, monitor, evaluate and render decisions based upon that which is captured, viewed and or compared to prior analysis utilizing the device as disclosed herein.

A further object of a preferred embodiment of the invention is to provide a device that may reduce patient time spent in a health care professional's, doctor's, nutritionist's, physical trainer's facility where said individual may review an his/her health, etc.

25 A further object of a preferred embodiment of the invention is to provide a device that may

reduce the related costs associated with an analysis as described herein.

Another object of a preferred embodiment of the invention is to provide a device that may reduce the cost to insurance programs reimbursing applicable healthcare and related professions for their time and effort associated with the rendering of care to such an insured individual.

5 Another object of a preferred embodiment of the invention is to improve the quality of life.

Another object of the present device disclosed herein is to allow for a better and more efficient rendering of ~~all~~ any of a variety of forms of health care where visualization of the human body, including parts thereof, is required.

10 The preferred embodiments of the invention thus provides a device for the identification, diagnosis and subsequent treatment of maladies of the skin that is time and cost efficient and effective with no side effects.

Having thus described the invention, it will be apparent to those of skill in the art that modifications can be made within the scope of the invention without departing from the scope or breath of that which is intended and disclosed herein.

15 Brief Description of the Drawings

Figure 1 (FIG 1) depicts a horizontal cross-section of an imaging system in accordance with the present invention.

Figure 2 (FIG 2) depicts a vertical panel of an imaging device in accordance with the present invention.

20 Figure 3 (FIG 3) depicts a horizontal cross section of an alternate embodiment of an imaging system in accordance with the present invention utilizing a circular periphery.

Figure 4 (FIG 4) depicts an exemplary imaging device, e.g., camera, and actuation means.

Figure 5 (FIG 5) is a schematic of a complete imaging system in accordance with the present invention.

Detailed Description of the Preferred Embodiment

This invention teaches a TIP device that provides non-occluded images by employing an array of imaging devices and thereafter combining individual images to form a continuous image. It has been heretofore contemplated that the device could find use as an aid in screening and diagnosis of conditions of soft tissue, hair and nails. Furthermore, it could also find use as a beauty aid to consult those considering cosmetic surgery or changes in personal appearance.

Thus, the following detailed description, read with the above-described drawings will serve to explain various preferred embodiments and components of the present invention.

FIG 1 depicts a horizontal cross section of an embodiment of the TIP system 100 in accordance with the present invention. The system may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 108 of the device 100 with sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would fit comfortably at center 108. The system 100 is comprised of several panels 109. In this particular embodiment, fourteen (14) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, an 8-sided polygon was chosen. The shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 109 is comprised of an imager array 102, comprising a vertical array of imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature, chemical information or other information of interest. In this embodiment, we assume the use of digital cameras operating in the conventional fashion. Thus, in order to optimize the performance of the cameras, light sources 101 are utilized. While fluorescent tubes are the preferred means, any type of illumination can be used, for example, a Wood's lamp may be used. These light sources 101 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 102 is the perimeter wall 103. The perimeter wall can be made of plywood, particle board or any other structural material capable of supporting the structure. In front of the light sources 101 and imager array 102 is shield 107. Shield 107 protects the imager array 102 and light sources 101 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 107, and furthermore, a shield with variable transmittance is

contemplated. In between the plurality of panels 109, there are dividers 106. Dividers 106 function to provide stability for shield 107, and also, when made opaque, reduce light interference between adjacent imager arrays 102. To effect access and egress, panels 104 function as a doorway. By rotating on hinge 105, panels 104 swing outward, thus allowing access to the interior of system 100. A system 100 is also contemplated without doorway 104 that can be used for examining small objects, such as the scalp or hands, for example.

FIG 2 depicts an exemplary panel 200 of a TIP system in accordance with the present invention. Supporting the panel 200, is perimeter wall 207. Perimeter wall 207 can be flat, curved or angled in any fashion to accommodate the desired perimeter shape. Supported by the perimeter wall 207 are imaging arrays 205 and 206 and light sources 202 and 208. While this exemplary panel utilizes dual imaging arrays 205, 206 and light sources 202, 208, the panel may be configured in any fashion utilizing at least one imaging array. Light sources 202, 208 are optional, and depending on the type of imaging done, e.g., chemical, may be unnecessary. However, in the present embodiment, light sources 202 and 208 are taken to be standard fluorescent tubes. They could also be, for example, Wood's lamps. Imaging arrays 205 and 206 comprise a plurality of imaging devices 203. Imaging devices 203 may be a standard or digital camera, or any other type of device capable of capturing the desired information from the subject with the imaging system. Imaging devices 203 are controlled through cables 204. These cables may be used to remotely trigger a mechanical actuator or, as is contemplated herein, act as part of an electronic interface such as USB. Imaging arrays 205 and 206 are depicted herein as vertical arrays of 5 imaging devices 203. In practice, the array can vary greatly. For use in smaller examinations, e.g., the scalp, it is suggested that less imaging devices 203 would be required to generate a complete image.

FIG 3 depicts a horizontal cross section of an alternate embodiment of an imaging system 300 in accordance with the present invention utilizing a circular periphery. The system 300 may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 308 of the device 300 with sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would comfortably at center 308. The system 300 is comprised

of several panels 309. In this particular embodiment, eight (8) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, a circle was constructed. The shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 301 is comprised of an imager array 302, comprising a vertical array of imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature or chemical information. In this embodiment, we assume the use of digital cameras operating in the conventional fashion. Thus, in order to optimize the performance of the cameras, light sources 303 are utilized. While fluorescent tubes are the preferred means, any type of illumination can be used. These light sources 303 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 302 is the perimeter wall 310. The perimeter wall can be made of plywood, particleboard or any other structural material capable of supporting the structure. In front of the light sources 303 and imager array 302 is shield 309. Shield 309 protects the imager array 302 and light sources 303 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 309, and furthermore, a shield with variable transmittance is contemplated. In between the plurality of panels 301, there are dividers 306. Dividers 306 function to provide stability for shield 309, and also, when made opaque, reduce light interference between adjacent imager arrays 302. To effect access and egress, panel 304 functions as a doorway. By rotating on a double-hinge hinge 305 and clearing angled divider 307, panel 304 swings outward, thus allowing access to the interior of system 300. A system 300 is also contemplated without doorway 304 that can be used for examining small objects, such as the scalp or hands, for example.

FIG 4 depicts an exemplary imaging device 400 for use with the present invention. In practice, the imaging device 400 may be a standard or digital camera, or any other type of device capable of capturing the desired information from the subject with the imaging system. For example, devices capable of recording infrared or chemical information could be used. The present embodiment, however, contemplates the use of a digital camera as exemplified by the current figure. Such a device would comprise lens 403, mechanical actuator 402 and control cable 401. Preferably, cable 401 is used to electronically control, and further, download digital image information from imaging device 400. As is contemplated herein, the electronic control could be USB. Alternatively, control cable 401 could be used to trigger mechanical actuator 402. Although the present figure describes a specific imaging device, it should be understood that a wide variety

of data collection devices could be employed without departing from the scope of the present invention.

FIG 5 depicts a schematic of a complete image processing system 500 in accordance with the present invention. As discussed above in FIG 1, imaging system 100 may be sized in any fashion to accord with the application. For example, should the system be used to image an entire person, the system will be sized such that the person could easily stand at the center 108 of the device 100 with sufficient comfort. However, if the particular application is for the examination of something smaller, the scalp, for example, the device could be made smaller such that just a person's cranium would fit comfortably at center 108. The system 100 is comprised of several panels 109. In this particular embodiment, fourteen (14) panels are used. The panels are interconnected to form an enclosed structure. In this particular embodiment, an 8-sided polygon was chosen. The shape is arbitrary, however, the only requirement is that the panels are set up in mirrored pairs. Each panel 109 is comprised of an imager array 102, comprising a vertical array of imaging devices. Imaging arrays 507 through 519 can be identical to imager array 102, or may vary in the information they garner in accord with the desired application. The present embodiment, however, contemplates identical imaging devices. The imaging devices could comprise standard or digital cameras, or other devices capable of capturing light, temperature or chemical information. In this embodiment, we assume the use of digital cameras operating in the conventional fashion. Thus, in order to optimize the performance of the cameras, light sources 101 are utilized. Each imaging array may utilize a light source 101 to enhance imaging ability. Furthermore, each of said light sources could have varying characteristics to accord with the application. While fluorescent tubes are the preferred means, any type of illumination can be used. These light sources 101 can be always on, or, alternatively, only activated when the cameras are operating. Supporting the imager array 102 is the perimeter wall 103. The perimeter wall can be made of plywood, particle board or any other structural material capable of supporting the structure. In front of the light sources 101 and imager arrays 102 and 507-519 is shield 107. Shield 107 protects the imager arrays 102 and 507 through 519 and light sources 101 from contact with the subject. Standard 1/8" obscured plexiglass can be used as shield 107, and furthermore, a shield with variable transmittance is contemplated. In between the plurality of panels 109, there are dividers 106. Dividers 106 function to provide stability for shield 107, and also, when made opaque, reduce light interference between adjacent imager arrays 102 and 507 through 519. To

effect access and egress, panels 104 function as a doorway. By rotating on hinge 105, panels 104 swing outward, thus allowing access to the interior of system 100. A system 100 is also contemplated without doorway 104 that can be used for examining small objects, such as the scalp or hands, for example. In order to effect the processing of the multiple images garnered from the plurality of imaging arrays, the imager arrays 102 and 507 through 519 are networked to a single computer 501. The present embodiment contemplates the use of USB to network the arrays 102 and 507 through 519. The imaging devices of arrays 102, 507, 508 and 509 are connected to USB hub 506 via interface cabling 102a, 507a, 508a and 509a, respectively. The imaging devices of arrays 517, 518 and 519 are connected to USB hub 505 via interface cabling 517a, 518a and 519a, respectively. The imaging devices of arrays 514, 515 and 516 connected to USB hub 504 via interface cabling 514a, 515a and 516a, respectively. The imaging devices of arrays 510, 511, 512 and 513 are connected to USB hub 503 via interface cabling 510a, 511a, 512a and 513a, respectively. Hub 506 is connected with hub 503 via cable 520. Hub 505 is connected with hub 504 via cable 521. Hubs 503 and 504 are then connected to hub 502 via cables 522 and 523, respectively. Finally, hub 502, which has the totality of imaging devices of imaging arrays 102 and 507 through 519 connected thereto, is connected to computer 501 via cable 524. The computer 501 is used to process the individual images garnered from each imaging device of each imaging array 102 and 507 through 519 to ~~created~~ create a non-occluded image of the subject within system 100, and preferably, at center 108. It should be noted that the arrangement of hubs 506, 505, 504, 503 and 502 and the concomitant cabling presented heretofore is merely exemplary, and anyone with skill in the art will recognize the myriad ways of interconnecting the imaging devices of imaging arrays 102 and 507 through 519 to computer 501.

While the present invention has been described with reference to one or more preferred embodiments, which embodiments have been set forth in considerable detail for the purposes of making a complete disclosure of the invention, such embodiments are merely exemplary and are not intended to be limiting or represent an exhaustive enumeration of all aspects of the invention. The scope of the invention, therefore, shall be defined solely by the following claims. Further, it will be apparent to those of skill in the art that numerous changes may be made in such details without departing from the spirit and the principles of the invention.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 09/625,712		Filing Date 07/26/2000		☐ To be Mailed			
APPLICATION AS FILED – PART I												
(Column 1)			(Column 2)		SMALL ENTITY ☒ OR			OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)		
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A			N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A			N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A			N/A			
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$	=		X \$	=		X \$	=		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$	=		X \$	=		X \$	=		
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).											
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))												
* If the difference in column 1 is less than zero, enter "0" in column 2.												
APPLICATION AS AMENDED – PART II												
(Column 1)			(Column 2)		(Column 3)			SMALL ENTITY OR			OTHER THAN SMALL ENTITY	
AMENDMENT	01/29/2007	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))	* 74	Minus	** 80	= 0	X \$25 =	0		X \$	=		
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	X \$100 =	0		X \$	=		
	☐ Application Size Fee (37 CFR 1.16(s))											
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
						TOTAL ADD'L FEE	0		TOTAL ADD'L FEE			
(Column 1)			(Column 2)		(Column 3)			SMALL ENTITY OR			OTHER THAN SMALL ENTITY	
AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)			
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$	=	X \$	=			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$	=	X \$	=			
	☐ Application Size Fee (37 CFR 1.16(s))											
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
						TOTAL ADD'L FEE		TOTAL ADD'L FEE				
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.												

Legal Instrument Examiner:
Rozenia Harmon

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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NOTICE OF ALLOWANCE AND FEE(S) DUE

21832 7590 04/19/2007

MCCARTER & ENGLISH LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103

EXAMINER

ROBINSON, DANIEL LEON

ART UNIT

PAPER NUMBER

3742

DATE MAILED: 04/19/2007

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,712	07/26/2000	Rhett Drugge	RD-001	7895
TITLE OF INVENTION: APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$0	\$0	\$700	07/19/2007

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- Pay TOTAL FEE(S) DUE shown above, or
- If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

21832 7590 04/19/2007

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,712	07/26/2000	Rhett Drugge	RD-001	7895

TITLE OF INVENTION: APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$0	\$0	\$700	07/19/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
ROBINSON, DANIEL LEON	3742	600-476000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1	_____
2	_____
3	_____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,712	07/26/2000	Rhett Drugge	RD-001	7895
21832	7590	04/19/2007	EXAMINER	
MCCARTER & ENGLISH LLP CITYPLACE I 185 ASYLUM STREET HARTFORD, CT 06103			ROBINSON, DANIEL LEON	
			ART UNIT	PAPER NUMBER
			3742	
DATE MAILED: 04/19/2007				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

09/625,712

Examiner

Daniel L. Robinson

Applicant(s)

DRUGGE, RHETT

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 1-29-2007.
2. ☒ The allowed claim(s) is/are 1-43, 46-47, 50-54 and 56-80.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

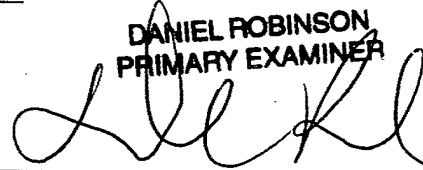
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DANIEL ROBINSON
PRIMARY EXAMINER



Response to Amendment

Allowable Subject Matter

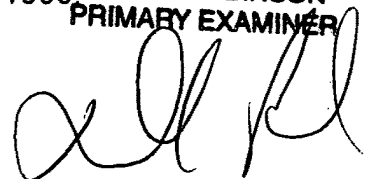
Claims 1-43, 46-47, 50-54 and 56-80 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L. Robinson whose telephone number is 571-272-4788. The examiner can normally be reached on m-f 5:30-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**DANIEL ROBINSON
PRIMARY EXAMINER**



dlr

Issue Classification 	Application/Control No. 09/625,712	Applicant(s)/Patent under Reexamination DRUGGE, RHETT
	Examiner Daniel L. Robinson	Art Unit 3742

ISSUE CLASSIFICATION									
ORIGINAL					INTERNATIONAL CLASSIFICATION				
CLASS		SUBCLASS			CLAIMED		NON-CLAIMED		
600		476			A61B 600				
CROSS REFERENCES									
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)								
608	477								
					DANIEL ROBINSON PRIMARY EXAMINER (Primary Examiner) (Date) 4-10-2007		Total Claims Allowed: 75 O.G. Print Claim(s) 1 O.G. Print Fig. 5		
(Assistant Examiner) (Date)									
(Legal Instruments Examiner) (Date)									

☐ Claims renumbered in the same order as presented by applicant										☐ CPA		☐ T.D.		☐ R.1.47	
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		31		61		91		121		151		181		
	2		32		62		92		122		152		182		
	3		33		63		93		123		153		183		
	4		34		64		94		124		154		184		
	5		35		65		95		125		155		185		
	6		36		66		96		126		156		186		
	7		37		67		97		127		157		187		
	8		38		68		98		128		158		188		
	9		39		69		99		129		159		189		
	10		40		70		100		130		160		190		
	11		41		71		101		131		161		191		
	12		42		72		102		132		162		192		
	13		43		73		103		133		163		193		
	14		44		74		104		134		164		194		
	15		45		75		105		135		165		195		
	16		46		76		106		136		166		196		
	17		47		77		107		137		167		197		
	18		48		78		108		138		168		198		
	19		49		79		109		139		169		199		
	20		50		80		110		140		170		200		
	21		51		81		111		141		171		201		
	22		52		82		112		142		172		202		
	23		53		83		113		143		173		203		
	24		54		84		114		144		174		204		
	25		55		85		115		145		175		205		
	26		56		86		116		146		176		206		
	27		57		87		117		147		177		207		
	28		58		88		118		148		178		208		
	29		59		89		119		149		179		209		
	30		60		90		120		150		180		210		

Search Notes



Application/Control No.

09/625,712

Examiner

Daniel L. Robinson

Applicant(s)/Patent under Reexamination

DRUGGE, RHETT

Art Unit

3742

Surgery
Diagnostic
Health
AGIB
600

SEARCHED			
Class	Subclass	Date	Examiner
600	476	Visible Light	
	162	Illumination	
	407	Detection	
		of nuclear	
		Electromagnetiz	
		or Ultrasonic	
		Radiation	
	477	Comparison	
	478	Light Fiber	
	479	Cardiovascular	
	480	Blood Pressure	

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner
		Same as	
		600	

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
OPD, EPO Dernest USPTO / East Inventor Prugge searched		
No I. D. S.		
Total Immersion (TIP) Photography for Diagnostic		
No Priority		
USB data Transfer Universal Serial BUS (USB)		
Filing Date 7-26-2000		
Search notes attached		



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UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 7895

SERIAL NUMBER	FILING OR 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
09/625,712	07/26/2000	600	3742	RD-001
RULE				

APPLICANTS

Rhett Drugge, Stamford, CT;

** CONTINUING DATA *****

** FOREIGN APPLICATIONS *****

IF REQUIRED, FOREIGN FILING LICENSE GRANTED **

09/14/2000

** SMALL ENTITY **

Foreign Priority claimed	☐ yes ☒ no	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119 (a-d) conditions met	☐ yes ☒ no	CT	5	80	3
Verified and Acknowledged	Examiner's Signature <i>[Signature]</i> Initials <i>[Initials]</i>				

ADDRESS

21832

TITLE

Apparatus for total immersion photography

FILING FEE RECEIVED 345	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Issue Classification 	Application/Control No. 09/625,712	Applicant(s)/Patent under Reexamination DRUGGE, RHETT
	Examiner Daniel L. Robinson	Art Unit 3742

ISSUE CLASSIFICATION											
ORIGINAL				INTERNATIONAL CLASSIFICATION							
CLASS		SUBCLASS		CLAIMED				NON-CLAIMED			
600		476		A 61 B 600							
CROSS REFERENCES											
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)										
608	477										
								Total Claims Allowed: 75			
(Assistant Examiner) (Date)				DANIEL ROBINSON PRIMARY EXAMINER (Primary Examiner) (Date) 4-10-2007				O.G. Print Claim(s) 1		O.G. Print Fig. 5	
(Legal Instruments Examiner) (Date)											

☒ Claims renumbered in the same order as presented by applicant												☐ CPA		☐ T.D.		☐ R.1.47	
Final	Original		Final	Original		Final	Original		Final	Original		Final	Original		Final	Original	
	1			31			61			91			121			151	
	2			32			62			92			122			152	
	3			33			63			93			123			153	
	4			34			64			94			124			154	
	5			35			65			95			125			155	
	6			36			66			96			126			156	
	7			37			67			97			127			157	
	8			38			68			98			128			158	
	9			39			69			99			129			159	
	10			40			70			100			130			160	
	11			41			71			101			131			161	
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	13			43			73			103			133			163	
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	28			58			88			118			148			178	
	29			59			89			119			149			179	
	30			60			90			120			150			180	
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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
 or **Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

21832 7590 04/19/2007

MCCARTER & ENGLISH LLP

CITYPLACE I

185 ASYLUM STREET

HARTFORD, CT 06103

07/20/2007 ADDRESS 00000036 503569 09625712

01 FC:2501 700.00 DA

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Thomas J. Ryan

(Depositor's name)

Thomas J. Ryan

(Signature)

July 19, 2007

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,712	07/26/2000	Rbett Druggo	RD-001	7895

TITLE OF INVENTION: APPARATUS FOR TOTAL IMMERSION PHOTOGRAPHY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$0	\$0	\$700	07/19/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
ROBINSON, DANIEL LEON	3742	600-476000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 McCarter & English, LLP

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 50-3569 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature

Thomas J. Ryan

Date July 19, 2007

Typed or printed name Thomas J. Ryan

Registration No. 52,187

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,712	07/26/2000	Rhett Drugge	100504.00002	7895

21832 7590 03/05/2008
MCCARTER & ENGLISH LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103

EXAMINER

ROBINSON, DANIEL LEON

ART UNIT	PAPER NUMBER

3742

MAIL DATE	DELIVERY MODE

03/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Supplemental
Notice of Allowability**

Application No.

09/625,712

Examiner

DANIEL L. ROBINSON

Applicant(s)

DRUGGE, RHETT

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to printer rush.
2. ☒ The allowed claim(s) is/are 1-43, 46-47, 50-54 and 56-80.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
- ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.

7. ☐ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____

**DANIEL L. ROBINSON
PRIMARY EXAMINER**

Supplemental Notice of Allowability

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the Claims

In Claim 8 line 1 Delete "8." and insert therein ---11.--- also delete "claim 11" and insert therein ---claim 8---

In Claim 11 line 1 Delete "11." and insert therein ---8.---

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL L. ROBINSON whose telephone number is (571)272-4788. The examiner can normally be reached on m-f 5:30-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu B Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

dlr/Daniel L Robinson/
Primary Examiner, Art Unit 3742



DANIEL L. ROBINSON
PRIMARY EXAMINER



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,712	04/15/2008	7359748	100504.00002	7895

21832 7590 03/26/2008
MCCARTER & ENGLISH LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 802 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Rhett Drugge, Stamford, CT;