Docket No.: 0290672.00128US2

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Murali ARAVAMUDAN et al. Confirmation No.: 5356

Application No.: 11/246,432 Art Unit: 2169

Filed: October 7, 2005 Examiner: H. Wong

Title: METHOD AND SYSTEM FOR INCREMENTAL SEARCH WITH

REDUCED TEXT ENTRY WHERE THE RELEVANCE OF RESULTS IS A DYNAMICLALLY COMPUTED FUNCTION OF USER INPUT

SEARCH STRING CHARACTER COUNT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

AMENDMENT IN RESPONSE TO NON-FINAL OFFICE ACTION UNDER 37 C.F.R. 1.111

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Non-Final Office Action dated March 7, 2011, please amend the above-identified U.S. patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 8 of this paper.

US1DOCS 7985925v1

Docket No.: 0290672.00128US2

AMENDMENTS TO THE CLAIMS

Claims 1-33 (Cancelled)

- 34. (Currently Amended) A method of processing a search request received from a user operating a hand-held text input device, the search request directed at identifying a desired item from a set of items, each of the items having one or more associated terms, the method comprising: providing the set of items, the items having assigned popularity values to indicate a relative measure of a likelihood that the item is desired by the user;
 - for each item, associating a set of terms to describe the item and assigning a relevance value for each term based on a relevance of the term in identifying the item;
 - receiving text on the hand-held text input device entered by the user, the text having one or more text characters of one or more prefixes for terms the user is using to identify a desired item;
 - in response to receiving a text character, performing a first incremental find to compare the one or more user-entered prefixes with the terms associated with the items and to retrieve the relevance values for the one or more user-entered prefixes matching terms associated with the items;
 - determining a first ranking order of items found in the first incremental find based at least in part on the retrieved relevance values and the assigned popularity values of the items found in the first incremental find;
 - ordering and presenting one or more items to the user found in the first incremental find based on the first ranking order;
 - in response to receiving at least one subsequent text character, performing a second incremental find to compare the <u>one or more</u> user-entered prefixes, including the at least one subsequent text character and any preceding text characters, with the terms associated with the items and to retrieve the relevance values for said <u>one or more</u> user-entered prefixes matching terms associated with the items;

Reply to Office Action of March 7, 2011

determining a count of the number of characters of text received from the user;

adjusting the relevance value assigned to at least one of the terms associated with one or

more of the items retrieved in response to the <u>one or more</u> user-entered prefixes

based on the count of the number of text characters received from the user;

determining a second ranking order of the items found in the second incremental find based

at least in part on the adjusted relevance values and the assigned popularity values of

the items found in the second incremental find; and

ordering and presenting one or more items to the user based on the second ranking order so

that the relative order of the items found in both the first and second incremental

finds is adjusted as characters are entered.

35. (Previously Presented) The method of claim 34, further comprising the terms associated with

the items being organized into searchable subspace categories, each subspace category having a

relevance bias value, wherein at least one of determining the first ranking order and determining the

second ranking order is further based on the relevance bias values of the subspace categories.

36. (Previously Presented) The method of claim 35, wherein the relevance bias values are based

on the count of the number of text characters received from the user.

37. (Previously Presented) The method of claim 35, wherein the subspace categories include a

personalized history category containing terms associated with items identified from previous

incremental finds conducted by the user.

38. (Previously Presented) The method of claim 35, wherein the ordering and presenting of one

or more items is limited to items having associated terms of one or more selected subspace

categories.

39. (Previously Presented) The method of claim 38, wherein the one or more selected subspace

categories are selected based on the count of the number of text characters received from the user.

40. (Previously Presented) The method of claim 35, wherein the ordered and presented one or

more items are presented on a display device, the display device having display space allocated

Application No. 11/246,432 Amendment dated July 6, 2011

Reply to Office Action of March 7, 2011

according to the subspace categories.

41. (Previously Presented) The method of claim 34, wherein the hand-held text input device

includes a set of overloaded keys generating an ambiguous text input.

42. (Previously Presented) The method of claim 41, wherein the hand-held text input device is a

Docket No.: 0290672.00128US2

phone, a mobile computing device, or a remote control device for a television.

43. (Previously Presented) The method of claim 34, wherein the ordered and presented one or

more items are presented on a display constrained device.

44. (Previously Presented) The method of claim 43, wherein the display device is a phone, a

mobile computing device, or a non-intrusive interface display area of a television.

45. (Previously Presented) The method of claim 34, wherein the assigned popularity values of

one or more items of the set of items is based on a relative measure of popular opinion of the item.

46. (Previously Presented) The method of claim 34, wherein the assigned popularity values of

one or more items of the set of items is based on a temporal relevance of the items or a location

relevance of the items.

47. (Previously Presented) The method of claim 34, wherein at least one of determining the first

ranking order and determining the second ranking order is further based on the number of prefixes

of the received text.

48. (Previously Presented) The method of claim 34, wherein a portion of the set of items resides

on a computer remote from the user.

49. (Previously Presented) The method of claim 34, wherein a computer remote from the user

performs at least one of the steps of receiving text entered by the user, performing the first

incremental find, determining the first ranking order, performing the second incremental find,

determining the count of the number of characters of text received, adjusting the relevance values of

the terms associated with the items, and determining the second ranking order.

4

Application No. 11/246,432 Docket No.: 0290672.00128US2 Amendment dated July 6, 2011

Reply to Office Action of March 7, 2011

50. (Currently Amended) A system for processing a search request received from a user operating a hand-held text input device, the search request directed at identifying a desired item from a set of items, each of the items having one or more associated terms, the system comprising:

- a first memory for storing at least a first portion of the set of items, the items having assigned popularity values to indicate a relative measure of a likelihood that the item is desired by the user, and each item being associated with a set of terms to describe the item, each term being assigned a relevance value based on a relevance of an informational content of the term in identifying the item;
- a device input for receiving text entered by the user on a hand-held text input device, the text having two or more text characters of one or more prefixes for terms the user is using to identify a desired item, the two or more text characters including a first text portion and a second text portion, the second text portion being received subsequent to the first text portion;
- a processor for performing a first incremental find in response to receiving the first text portion and for ordering one or more items found in the first incremental find based on a first ranking order, the first incremental find comparing the one or more userentered prefixes with the terms associated with the items and retrieving the relevance values for the one or more user-entered prefixes matching terms associated with the items, the first ranking order of the one or more items found in the first incremental find being based on the assigned popularity values of the items and being based on the retrieved relevance values for the one or more user-entered prefixes matching terms associated with the items, so that relatively more popular and more relevant items appear earlier in the order for user selection or activation, the processor also for performing a second incremental find in response to receiving the second text portion and for ordering one or more items found in the second incremental find based on a second ranking order, the second incremental find comparing the one or more userentered prefixes with the terms associated with the items and retrieving the relevance values for the one or more user-entered prefixes matching terms associated with the items, the second ranking order of the one or more items found in the second

Docket No.: 0290672.00128US2

incremental find being based on the assigned popularity values of the items and being based on adjusted relevance values for the one or more user-entered prefixes matching terms associated with the items, the relevance values of the terms associated with the items being adjusted in response to the count of the number of text characters received from the user, and the order of at least a portion of the one or more items being changed based on the adjusted relevance values of the terms; and

a device output for presenting at least one of the first and the second ordered one or more items to the user.

- 51. (Previously Presented) The system of claim 50, further comprising the terms associated with the items being organized into searchable subspace categories, each subspace category having a relevance bias value, wherein at least one of the first and second ordering the one or more items is further based on the relevance bias values of the subspace categories.
- 52. (Previously Presented) The system of claim 51, wherein the relevance bias values are based on the count of the number of text characters received from the user.
- 53. (Previously Presented) The system of claim 51, wherein the subspace categories include a personalized history category containing terms associated with items identified from previous incremental finds conducted by the user.
- 54. (Previously Presented) The system of claim 51, wherein the incremental find is limited to items having associated descriptive terms of one or more selected subspace categories.
- 55. (Previously Presented) The system of claim 54, wherein the one or more selected subspace categories are selected based on the count of the number of text characters received from the user.
- 56. (Previously Presented) The system of claim 51, further comprising a display device for presenting the at least one of the first and the second ordered one or more items, the display device having display space allocated according to the subspace categories.
- 57. (Previously Presented) The system of claim 50, wherein the text entered by the user on the

Application No. 11/246,432 Amendment dated July 6, 2011

Reply to Office Action of March 7, 2011

hand-held text input device includes a set of overloaded keys generating an ambiguous text input.

Docket No.: 0290672.00128US2

58. (Previously Presented) The system of claim 57, wherein the hand-held text input device is a

phone, a mobile computing device, or a remote control device for a television.

59. (Previously Presented) The system of claim 50, further comprising a display constrained

device for presenting the at least one of the first and the second ordered one or more items.

60. (Previously Presented) The system of claim 59, wherein the display device is a phone, a

mobile computing device, or a non-intrusive interface display area of a television.

61. (Previously Presented) The system of claim 50, wherein the assigned popularity value of one

or more items of the set of items is based on a relative measure of popular opinion of the item.

62. (Previously Presented) The system of claim 50, wherein the assigned popularity value of one

or more items of the set of items is based on a temporal relevance of the item or a location relevance

of the item.

63. (Previously Presented) The system of claim 50, wherein at least one of the first ranking

order and the second ranking order of the one or more items is further based on a count of the

number of prefixes of the received text.

64. (Previously Presented) The system of claim 50, further comprising a second memory on a

computer remote from the user for storing at least a second portion of the set of items.

65. (Previously Presented) The system of claim 50, wherein the processor is disposed in a

computer remote from the user.

7

<u>REMARKS</u>

This Amendment is filed in response to the Non-Final Office Action dated March 7, 2011.

Claims 34-65 were pending in the application. Claims 34 and 50 have been amended. No claims

have been cancelled or added. We respectfully request reconsideration of the application in view of

the following remarks.

Claim Objections

Claims 34 and 50 were objected to due to informalities. We have amended these claims and

respectfully request reconsideration.

Rejections under 35 U.S.C. § 103(a)

Claims 34-40, 43, 45-56, 59, and 61-65 were rejected under 35 U.S.C. § 103(a) as being

obvious over U.S. Pat. No. 6,480,837 to Dutta (herein "Dutta") in view of U.S. Pat. Pub.

2005/0283468 by Kamvar et al. (herein "Kamvar"), and further in view of U.S. Pat. Pub.

2005/0256846 by Zigmond et al. (herein "Zigmond").

The rejection of the above-mentioned claims is based on a claim interpretation in which the

Examiner interprets the limitation "adjusting the relevance value assigned to at least one of the

terms associated with one or more of the items retrieved in response to the user-entered prefixes

based on the count of the number of text characters received from the user" of claim 34 to mean that

"It is the user-entered prefixes that is based on said count of the number of text characters." See

Office Action at pg. 3 (emphasis in the original). We submit this interpretation is incorrect for the

reasons that follow.

First, it is common practice in method claims to recite a step of performing an action based

on a determined value. Thus, we submit that one having ordinary skill in the art would understand

the limitation to mean that it is the relevance values that are adjusted, and this adjustment is based

on the count of the number of text characters received from the user. More specifically, the

relevance values that are adjusted are those that are assigned to at least one of the terms associated

with one or more of the items retrieved in response to the user-entered prefixes.

8

Second, the Examiner's proposed interpretation is contrary to the other limitations recited in claim 34. For example, (1) the second element establishes that relevance values are assigned to terms that are associated with the items and (2) the fourth element requires retrieving those relevance values for the one or more user-entered prefixes matching terms associated with the items. Thus, these two elements provide the antecedent basis for the claim term "the relevance value assigned to at least one of the terms associated with one or more of the items retrieved in response to the one or more user-entered prefixes" that appears in the limitation in question. In other words, the claim term "the relevance value assigned to at least one of the terms associated with one or more of the items retrieved in response to the one or more user-entered prefixes" is specifically identifying which relevance values are to be adjusted.

Third, the Examiner's proposed interpretation is inconsistent with the specification. The specification clearly describes that the user-entered prefixes are provided by the user to find desired items. See ¶¶ 27, 32-33, and 38. The user is not basing the prefixes on the count of the number of text characters of the prefix. If anything, the user is merely basing the prefixes on what the user seeks. Thus, we submit it is inconsistent with the specification to assign the meaning proposed by the Examiner to this claim term. Moreover, claim 34 clearly states that the method receives text entered by the user, and the text has one or more text characters of one or more prefixes for terms the user is using to identify a desired item. See claim 34 at 3rd element.

Because the interpretation of claim 34 is incorrect, the Examiner's position that certain elements of claim 34 are found in the cited references is also incorrect when the correct claim interpretation is applied. Specifically, the cited references do not teach or suggest the claim elements "determining a count of the number of characters of text received from the user" and "adjusting the relevance value assigned to at least one of the terms associated with one or more of the items retrieved in response to the one or more user-entered prefixes based on the count of the number of text characters received from the user".

The Office Action states that, "Dutta further discloses adjusting the relevance value assigned to at least one of the terms associated with one or more of the items retrieved in response to the user-entered prefixes based on the number of text characters received from the user" (emphasis

Reply to Office Action of March 7, 2011

added) reasoning that "number can be interpreted as a group of one kind." See Office Action at pg. 6-7. The Examiner continues, stating "Zigmond discloses determining a count of the number of characters of text received from the user and prefixes based on the count." See Office Action at pg. 10. However, as set forth in detail above, this analysis is based on an erroneous interpretation of the language of the claim. We submit that the Examiner's position that "number can be interpreted as a group of one kind" is no longer relevant in view of the proper interpretation of the language of claim 34 because the claim term "number" does not stand alone in the claim. Rather, the claim requires adjusting the relevance value based on the count of the number of text characters. None of the references alone or in combination teach or suggest this limitation.

Dutta does not teach or suggest adjusting the relevance value assigned to at least one term associated with an item based on the count of the number of text characters received from the user as part of a search string to identify a desired item. Rather, Dutta discloses adjusting popularity weights associated with an item up or down depending on whether the item is selected from a list of possible search results. See Dutta at col. 4, lns. 31-67. Dutta explains that, "Only after selection is the popularity weight for the selected URL/keyword pair adjusted upward." See Dutta at col. 5, lns. 55-56 (emphasis added). In other words, any adjustment to any relevance values or popularity weighting in Dutta is done after the selection and not as part of the search process based on user input. Moreover, any popularity adjustment is done based on selection of the item and not based on user search input.

Meanwhile, whether or not Zigmond discloses determining a count of the number of characters of text received from the user, which it does not, Zigmond does not teach or suggest adjusting the relevance value assigned to at least one term associated with an item <u>based on the</u> count of the number of text characters received from the user as part of a search string to identify a desired item. Moreover, Zigmond is silent regarding the use of variable relevance values for the purpose of ordering items found during an incremental find. Rather, Zigmond merely organizes programming titles into sparse subsets of all titles, the size of which is based on the number of display entries of a display screen associated with a client device. See Zigmond at ¶ 17.

Reply to Office Action of March 7, 2011

Docket No.: 0290672.00128US2

Specifically, Zigmond discloses presenting an initial sparse subset corresponding to an initial character input and prefetching a second sparse subset of titles that have the initial input character as their initial character. When a user inputs a second character, the portion of the second sparse subset corresponding to the second and first characters is presented. See Zigmond at ¶ 17-19. Zigmond uses the nomenclature "zero-character prefix", "one-character prefix", "two-character prefix", and so on to describe corresponding indexes. See Zigmond at ¶¶ 39-40. However, Zigmond is not counting the number of characters entered by the user to determine which index to provide. Rather, Zigmond matches the characters of the user's input to characters associated with the indexes to determine which set of program titles to display. See Zigmond at ¶¶ 42-48.

In contrast, claim 34 requires determining a count of a number of characters of text received from the user, and adjusting the relevance value assigned to at least one term associated with items based on the count of the number of text characters received from the user. Thus, the invention set forth in claim 34 adjusts the relevance value of terms independent of the selection of items, but, rather, based on a count of the number of text characters received from the user. As explained above, one of skill in the art would understand "count of the number of text characters" to mean a numerical value and not "group of one kind" as suggested by the examiner. Consequently, the relative positions of the individual search results within the presentation order can be adjusted as the user is entering characters of the prefix text entry. This, for example, enables search results having a relatively lower popularity rating to be ranked more preferably in the presentation order as the number of characters entered by the user increases. See Application at ¶¶ 40-43.

As set forth above, the cited references do not teach or suggest adjusting the relevance value assigned to at least one of the terms associated with one or more of the items retrieved in response to the one or more user-entered prefixes based on a count of the number of text characters received from the user. Moreover, the cited references lack using the adjusted relevance values to change the relative order of items that remain in the search results as the search proceeds. As we explain in our application, ordering the search results based only on their popularities causes highly popular results to monopolize the most desirable positions in the presentation order, thereby "occluding" less popular results. This occurs despite the fact that the user has been presented with the popular

Application No. 11/246,432 Amendment dated July 6, 2011 Reply to Office Action of March 7, 2011

results, has elected not to select the popular results, and continues to enter additional characters in the search text. This problem is especially troublesome when the search results are being presented on hand-held, display-constrained device (e.g., PDA or mobile telephone). See Application at ¶ 43.

Unlike the cited references, our claim 34 clearly recites retrieving relevance values assigned to terms associated with incrementally found items and adjusting the relevance values based on a count of the number of text characters received from the user. Incrementally found items are initially ordered based at least in part on the retrieved relevance values and then reordered and presented to the user based at least in part on a weighing of these adjusted relevance values. The application describes the discovery of the occlusion problem and the advantages of the solutions devised by the inventors. Namely, by basing the ordering of the search results in part on a count of the number of text characters received from the user, search results desired by the user can be found with less overall text entered by the user. See Application at ¶¶ 40-43.

None of this is taught or suggested by the cited references. Therefore, we submit that claim 34 is patentable over the cited references. Claims 35-40, 43, 45-49 depend from claim 34 and, therefore include the limitations of claim 34. Thus, we submit these claims are also patentable over the cited references for the reasons given above.

Independent claim 50 recites <u>adjusting the relevance values</u> of the terms associated with items in response to <u>a count of the number of text characters</u> received from the user and <u>changing</u> the order of at least a portion of the one or more items based on the <u>adjusted relevance values</u> of the terms associated with the items as the search proceeds. Thus, we submit that claim 50 is patentable over the cited references for the reasons provided above in connection with claim 34.

Claims 51-56, 59, and 61-65 depend from claim 50 and, therefore include the limitations of claim 50. Thus, we submit these claims are also patentable over the cited references for the reasons given above.

Claims 41-42, 44 and 57-58, and 60 were rejected under 35 U.S.C. § 103(a) as being obvious over Dutta in view of Kamvar and Zigmond, and in further view of U.S. Pat. Pub. 2004/0021691 by Dostie et al. (herein "Dostie").

Application No. 11/246,432 Docket No.: 0290672.00128US2 Amendment dated July 6, 2011

Reply to Office Action of March 7, 2011

The Office Action relies on the combination of Dutta, Kamvar, and Zigmond to supply the

limitations of independent claim 34 and turns to Dostie for the additional limitations found in the

dependent claims. As set forth in detail above, we submit that the Office Action fails to provide a

prima facie case against claims 34 are 50. Claims 41-42 and 44 depend from claim 34 and,

therefore include the limitations of claim 34. Claims 57-58 and 60 depend from claim 50 and,

therefore include the limitations of claim 50. Therefore, we submit these claims are also patentable

over the cited references for the reasons given above.

Conclusion

In view of the above amendment, we submit the pending application is in condition for

allowance. We sincerely invite the Examiner to contact the undersigned to discuss any concerns

that may remain after consideration of this Amendment.

A request for a one-month extension of time and authorization to charge the fees associated

therewith accompany this request. We believe no other fee is due with this response. However, if a

fee is due, please charge our Deposit Account No. 08-0219, under Order No. 0290672.00128US2

from which the undersigned is authorized to draw.

Respectfully submitted,

Dated: July 6, 2011

/John V. Hobgood/

John V. Hobgood

Registration No.: 61,540

Attorney for Applicant(s)

Wilmer Cutler Pickering Hale and Dorr LLP

60 State Street

Boston, Massachusetts 02109

(617) 526-6000 (telephone)

(617) 526-5000 (facsimile)

PTO/SB/22 (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

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

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless if displays a valid OMB control number.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)	Docket Number (Optional)					
FY 2009 (Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).)	0290672.00128US2					
Application Number 11/246,432-Conf. #5356	Filed October 7, 2005					
METHOD AND SYSTEM FOR INCREMENTAL SEARCH WITH REDUCED TEXT ENTRY WHERE THE RELEVANCE OF RESULTS IS A DYNAMICALLY COMPUTED FUNCTION OF USER INPUT SEARCH STRING CHARACTER COUNT						
Art Unit 2169	Examiner H. Wong					
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.						
The requested extension and fee are as follows (check time period desired	and enter the appropriate fee below):					
Fee X One month (37 CFR 1.17(a)(1)) \$130	Small Entity Fee \$65 \$ 65.00					
Two months (37 CFR 1.17(a)(2)) \$490	\$245 \$					
Three months (37 CFR 1.17(a)(3)) \$1110	\$555 \$					
Four months (37 CFR 1.17(a)(4)) \$1730	\$865 \$					
Five months (37 CFR 1.17(a)(5)) \$2350	\$1175 \$					
A check in the amount of the fee is enclosed. X Payment by credit card. Form PTO-2038 is attached. The Director has already been authorized to charge fees in this application to a Deposit Account. X The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number						
/John V. Hobgood/	July 6, 2011					
Signature	Date					
John V. Hobgood	(617) 526-6000					
Typed or printed name Telephone Number 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 forms are submitted.						

Electronic Pate	nt App	lication Fee	Transm	ittal	
Application Number:	112	11246432			
Filing Date:	07-	07-Oct-2005			
Title of Invention:	rele	Method and system for incremental search with reduced text entry where the relevance of results is a dynamically computed function of user input search string character count			
First Named Inventor/Applicant Name:	Mu	Murali Aravamudan			
Filer:	Jol	John Verble Hobgood/Jody Begley			
Attorney Docket Number:	029	0290672.00128US2			
Filed as Small Entity	<u>'</u>				
Utility under 35 USC 111(a) Filing Fees					
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:					
Pages:					
Claims:					
Miscellaneous-Filing:					
Petition:					
Patent-Appeals-and-Interference:					
Post-Allowance-and-Post-Issuance:					
Extension-of-Time:					
Extension - 1 month with \$0 paid		2251	1	65	65

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
	Total in USD (\$)			65

Electronic Acknowledgement Receipt				
EFS ID:	10458319			
Application Number:	11246432			
International Application Number:				
Confirmation Number:	5356			
Title of Invention:	Method and system for incremental search with reduced text entry where the relevance of results is a dynamically computed function of user input search string character count			
First Named Inventor/Applicant Name:	Murali Aravamudan			
Customer Number:	23483			
Filer:	John Verble Hobgood/Jody Begley			
Filer Authorized By:	John Verble Hobgood			
Attorney Docket Number:	0290672.00128US2			
Receipt Date:	06-JUL-2011			
Filing Date:	07-OCT-2005			
Time Stamp:	14:13:12			
Application Type:	Utility under 35 USC 111(a)			

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$65
RAM confirmation Number	484
Deposit Account	080219
Authorized User	HOBGOOD,JOHN V.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge	any Additional Fees required under 37 C.F	.R. Section 1.21 (Miscellaneous fe	es and charges)				
File Listin	g:						
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)		
1		128US2amendment.pdf	138177 yes	13			
'		128032amenument.pui	ca7d99ea8d89ede691705589c8eacaaf710 7f970	yes	13		
Multipart Description/PDF files in .zip description							
	Document De	Start E		nd			
	Amendment/Req. Reconsiderati	1	1				
	Claims	2	7				
	Applicant Arguments/Remarks	8	13				
Warnings:							
Information:							
2	Extension of Time	128US2EOT.pdf	94262 no		1		
			23d0221c01a9ee9cf75f6f5ad8a4ac1dbfe8 d398				
Warnings:							
Information:							
3	Fee Worksheet (SB06)	fee-info.pdf	30363	no	2		
		'	864f14ea9a35d07ed418cf1a24dd1b79e9c 8bbd1				

Total Files Size (in bytes):

262802

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Warnings: Information: This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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

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. Application or Docket Number Filing Date PATENT APPLICATION FEE DETERMINATION RECORD 11/246.432 10/07/2005 To be Mailed Substitute for Form PTO-875 APPLICATION AS FILED - PART I OTHER THAN SMALL ENTITY X SMALL ENTITY (Column 1) (Column 2) OR RATE (\$) FOR NUMBER FILED NUMBER EXTRA FEE (\$) RATE (\$) FEE (\$) ☐ BASIC FEE N/A N/A N/A N/A 37 CFR 1.16(a), (b), or (c)) SEARCH FEE N/A N/A N/A N/A (37 CFR 1.16(k), (i), or (m) **EXAMINATION FEE** N/A N/A N/A N/A (37 CFR 1.16(o), (p), or (q)) TOTAL CLAIMS OR X \$ X \$ minus 20 (37 CFR 1.16(i)) INDEPENDENT CLAIMS minus 3 = X \$ = X \$ = If the specification and drawings exceed 100 sheets of paper, the application size fee due APPLICATION SIZE FEE is \$250 (\$125 for small entity) for each (37 CFR 1.16(s)) 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)) TOTAL TOTAL * If the difference in column 1 is less than zero, enter "0" in column 2. APPLICATION AS AMENDED - PART II OTHER THAN SMALL ENTITY SMALL ENTITY (Column 3) OR (Column 1) (Column 2) CLAIMS HIGHEST PRESENT ADDITIONAL ADDITIONAL REMAINING NUMBER 07/06/2011 RATE (\$) RATE (\$) **AFTER PREVIOUSLY FXTRA** FEE (\$) FFF (\$) AMENDMENT **AMENDMENT** PAID FOR Total (37 CFR * 32 Minus ** 33 = 0X \$26 = 0 OR X \$ Independent (37 CFR 1.16(h)) = 0 0 * 2 Minus ***3 X \$110 = OR X \$ = Application Size Fee (37 CFR 1.16(s)) OR FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) ADD'L 0 OR ADD'L FEE FEE (Column 1) (Column 2) (Column 3) CLAIMS HIGHEST PRESENT ADDITIONAL ADDITIONAL REMAINING NUMBER RATE (\$) RATE (\$) AFTER PREVIOUSLY **EXTRA** FEE (\$) FEE (\$) **AMENDMENT** PAID FOR ENDMEN Total (37 CFR Minus X \$ OR X \$ Independent Minus OR X \$ X \$ Application Size Fee (37 CFR 1.16(s)) ₹ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) OR TOTAL TOTAL ADD'L OR ADD'L * If the entry in column 1 is less than the entry in column 2, write "0" in column 3. Legal Instrument Examiner: ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". /TINA J. BARDEN/ *** 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

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.

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