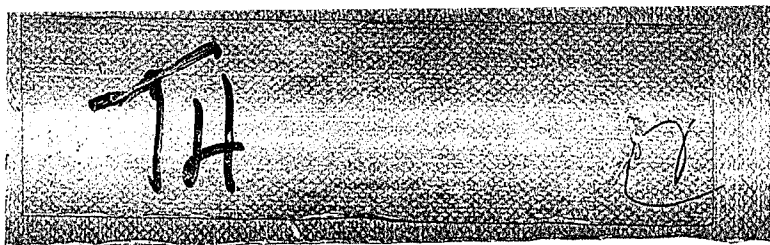


05/24/99

340	306
Class	Subclass
ISSUE CLASSIFICATION	



PATENT NUMBER

**6147601**



6147601

# U.S. UTILITY PATENT APPLICATION

<p><i>REN</i></p> <p>O.I.P.E.</p> <p>SCANNED <i>A.G.O.</i> Q.A. <i>ke</i></p>	<p>PATENT DATE</p> <p><i>NOV 14 2008</i></p>
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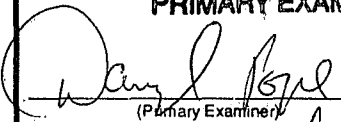

SECTOR	CLASS	SUBCLASS	ART UNIT	EXAMINER
	340	606	2736	DOPS

FILED WITH: ☐ DISK (CRF) ☐ FICHE  
(Attached in pocket on right inside flap)

**PREPARED AND APPROVED FOR ISSUE**

ISSUING CLASSIFICATION												
ORIGINAL				CROSS REFERENCE(S)								
CLASS		SUBCLASS		CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)							
340		506		340	539	825.06	825.36	825.49				
INTERNATIONAL CLASSIFICATION				700	17							
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☐ Continued on Issue Slip Inside File Jacket

<input type="checkbox"/> <b>TERMINAL DISCLAIMER</b>	<b>DRAWINGS</b>			<b>CLAIMS ALLOWED</b>	
	Sheets Drwg. 8	Figs. Drwg. 8	Print Fig. 1	Total Claims 43	Print Claim for O.G. 1
<input type="checkbox"/> a) The term of this patent subsequent to _____ (date) has been disclaimed.	_____ (Assistant Examiner) (Date)			<b>NOTICE OF ALLOWANCE MAILED</b>  7-5-00	
<input type="checkbox"/> b) The term of this patent shall not extend beyond the expiration date of U.S Patent. No. _____ _____ _____	<b>DARYL POPE PRIMARY EXAMINER</b>  (Primary Examiner) 6/28/00 (Date)			<b>ISSUE FEE</b> Amount Due \$605.00 Date Paid 7/3/00	
<input type="checkbox"/> c) The terminal _____ months of this patent have been disclaimed.	 (Legal Instruments Examiner) 7-19-00 (Date)			<b>ISSUE BATCH NUMBER</b> 090	

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Form PTO-436A  
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ISSUE FEE IN FILE

(LABEL AREA)

Formal Drawings(\_\_\_\_shts) set \_\_\_\_

PATENT APPLICATION SERIAL NO. \_\_\_\_\_

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

06/03/1999 PSTANBAC 00000020 09317235

01 FC:201	380.00 OP
02 FC:203	270.00 OP

PTO-1556  
(5/87)

\*U.S. GPO: 1998-433-214/80404

SERIAL NUMBER	FILING DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
09/317,235	05/24/99	340	2736	1315.034

APPLICANT

DAVID SANDELMAN, CHATHAM, NJ; DANIEL SHPRECHER, HIGHLAND LAKES, NJ.

**\*\*CONTINUING DOMESTIC DATA\*\*\*\*\***  
VERIFIED PROVISIONAL APPLICATION NO. 60/115,305 01/09/99.

D.P.

**\*\*371 (NAT'L STAGE) DATA\*\*\*\*\***  
VERIFIED

None D.P.

**\*\*FOREIGN APPLICATIONS\*\*\*\*\***  
VERIFIED

D.P.

IF REQUIRED, FOREIGN FILING LICENSE GRANTED 06/16/99 \*\* SMALL ENTITY \*\*

Foreign Priority claimed 35 USC 119 (a-d) conditions met	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> Met after Allowance	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
Verified and Acknowledged	<u>D.P.</u>	<u>Initials</u>	NJ	8	50	2

ADDRESS	BARRY E NEGRIN LEVINSOHN LERNER BERGER AND LANGSAM SUITE 2400 757 THIRD AVENUE NEW YORK NY 10017
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TITLE	ELECTRONIC MESSAGE DELIVERY SYSTEM UTILIZABLE IN THE MONITORING OF EQUIPMENT AND METHOD OF SAME <u>REMOTE</u>
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FILING FEE RECEIVED	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT NO. _____ for the following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing & of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit
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**UTILITY PATENT APPLICATION TRANSMITTAL  
(Small Entity)**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.  
1216.034Total Pages in this Submission  
3**TO THE ASSISTANT COMMISSIONER FOR PATENTS**Box Patent Application  
Washington, D.C. 20231

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

**ELECTRONIC MESSAGE DELIVERY SYSTEM UTILIZABLE IN THE MONITORING  
OF EQUIPMENT AND METHOD OF SAME**

and invented by:

David Sandelman, et al

If a **CONTINUATION APPLICATION**, check appropriate box and supply the requisite information:☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Which is a:

☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Which is a:

☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Enclosed are:

**Application Elements**

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 28 pages and including the following:
  - a. ☒ Descriptive Title of the Invention
  - b. ☐ Cross References to Related Applications (if applicable)
  - c. ☐ Statement Regarding Federally-sponsored Research/Development (if applicable)
  - d. ☐ Reference to Microfiche Appendix (if applicable)
  - e. ☒ Background of the Invention
  - f. ☒ Brief Summary of the Invention
  - g. ☒ Brief Description of the Drawings (if drawings filed)
  - h. ☒ Detailed Description
  - i. ☒ Claim(s) as Classified Below
  - j. ☒ Abstract of the Disclosure

# UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

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## Application Elements (Continued)

3. ☒ Drawing(s) (when necessary as prescribed by 35 USC 113)
- a. ☒ Formal      b. ☐ Informal      Number of Sheets 8
4. ☒ Oath or Declaration
- a. ☒ Newly executed (original or copy)      ☐ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional application only)
- c. ☒ With Power of Attorney      ☐ Without Power of Attorney
- d. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) named in the prior application,  
see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference (usable if Box 4b is checked)  
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under  
Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby  
incorporated by reference therein.
6. ☐ Computer Program in Microfiche
7. ☐ Genetic Sequence Submission (if applicable, all must be included)
- a. ☐ Paper Copy
- b. ☐ Computer Readable Copy
- c. ☐ Statement Verifying Identical Paper and Computer Readable Copy

## Accompanying Application Parts

8. ☒ Assignment Papers (cover sheet & documents)
9. ☐ 37 CFR 3.73(b) Statement (when there is an assignee)
10. ☐ English Translation Document (if applicable)
11. ☐ Information Disclosure Statement/PTO-1449      ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Acknowledgment postcard
14. ☒ Certificate of Mailing
- ☐ First Class      ☒ Express Mail (Specify Label No.): EL 161217675 US

**UTILITY PATENT APPLICATION TRANSMITTAL**  
**(Small Entity)**

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Docket No.  
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**Accompanying Application Parts (Continued)**

15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☒ Small Entity Statement(s) - Specify Number of Statements Submitted: 2
17. ☐ Additional Enclosures (please identify below):

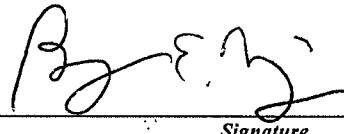
**Fee Calculation and Transmittal**

**CLAIMS AS FILED**

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	50	- 20 =	30	x \$9.00	\$270.00
Indep. Claims	2	- 3 =	0	x \$41.00	\$0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
BASIC FEE					\$380.00
OTHER FEE (specify purpose) <u>Assignment</u>					\$40.00
TOTAL FILING FEE					\$690.00

- ☒ A check in the amount of **\$690.00** to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge and credit Deposit Account No. **02-2105** as described below. A duplicate copy of this sheet is enclosed.
- ☐ Charge the amount of \_\_\_\_\_ as filing fee.
- ☒ Credit any overpayment.
- ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
- ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated: May 24, 1999



Signature

Barry E. Negrin, Reg. No. 37,407  
LEVISOHN, LERNER, BERGER & LANGSAM  
757 Third Avenue, Suite 2400  
New York, NY 10017

Tel. No. 212-486-7272  
Fax No. 212-486-0323

cc:

UTILITY PATENT APPLICATION TRANSMITTAL  
(Small Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.  
1216.036

Total Pages in this Submission  
3

TO THE ASSISTANT COMMISSIONER FOR PATENTS

Box Patent Application  
Washington, D.C. 20231

JC511 U.S. PAT. & TM. OFF.  
09/31/2005  
05/24/99

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OF EQUIPMENT AND METHOD OF SAME

and invented by:

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UTILITY PATENT APPLICATION TRANSMITTAL  
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Accompanying Application Parts (Continued)

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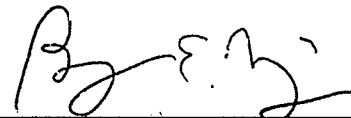
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Barry E. Negrin, Reg. No. 37,407  
LEVISOHN, LERNER, BERGER & LANGSAM  
757 Third Avenue, Suite 2400  
New York, NY 10017

Tel. No. 212-486-7272  
Fax No. 212-486-0323

cc:

ELECTRONIC MESSAGE DELIVERY SYSTEM UTILIZABLE  
IN THE MONITORING OF EQUIPMENT AND METHOD OF SAME

1.00 This Appln claims the benefit of U.S. Provisional No. 60/115,305 filed Jan. 9, 1999.

BACKGROUND OF THE INVENTION

Field of the Invention

The invention relates to monitoring systems, and more specifically to networks for remotely monitoring the condition of devices such as those employed in heating, ventilating, and cooling (HVAC) systems.

Description of the Related Art

It is desirable to be able to monitor remotely equipment that may require periodic preventive maintenance and/or that may require rapid response time should a catastrophic failure occur. For example, the components of a building's HVAC system must be monitored or checked frequently. Preventive maintenance must be performed on a constant basis, particularly with larger systems. Fault or failure conditions may vary in degrees of severity, however the contractor responsible for maintaining the HVAC equipment should be made aware of each failure in due course. Since a contractor, in all likelihood, is responsible for the care and maintenance of the installations of multiple clients, and since fault conditions may occur at any time of day or night, it is not practical for a contractor to remain on-site all the time. Remote detection at a central location (for example, the contractor's office) of fault conditions is desirable and often crucial.

Some remote monitoring devices have been developed. U.S. Patent No. 5,629,687 to Sutton et al. describes a universal interface for remotely-monitored security or alarm systems. In Sutton et al., a local control unit at a monitored site can, under an event condition, initiate a telephone call to a central control unit to alert a human operator of an event such as an intrusion, fire, or other emergency at the site. The local control unit, via the telephone link, sends a serial number indicative of the specific site and emergency to the monitoring center computer. The monitoring center computer receives the serial number and alerts a human operator as to the emergency. The human operator can then act accordingly, e.g., establish one- or two-way communication with the local site.

U.S. Patent No. 5,748,104 to Argyroudis et al. describes a wireless remote telemetry system which provides real-time reading and remote control of devices such as electricity meters. A home base unit communicates with remote metering units via cellular telephone lines. The home base unit also communicates with a central controller operated by the electric utility. When the utility determines that there is too much load on the power grid, for example, the central controller can send messages to an appliance to turn off. A customer could also remotely activate or deactivate an appliance via a cellular phone through the home base unit.

U.S. Patent No. 5,061,916 to French et al. describes a system for remotely reporting, in graphical format, alarms or other conditions in a building's automation system. Sensors in a building are hooked up via a telephone line to control module which is, in turn, hooked up to a central controller. When a sensor detects a fault condition, graphical information is compiled at the central controller and transmitted to one or more remote facsimile machines.



It is another object of the invention to provide a system for remotely monitoring electrical and/or mechanical equipment that can deliver messages to different individuals for different fault conditions.

It is another object of the invention to provide a system for remotely monitoring electrical and/or mechanical equipment that can deliver fault notification messages to different individuals for different fault conditions via different electronic media.

It is another object of the invention to provide a system for remotely monitoring electrical and/or mechanical equipment in which a customer may interactively modify its message profile.

It is another object of the invention to provide a system for remotely monitoring electrical and/or mechanical equipment in which a customer may interactively modify its message profile via the Internet.

The above and other objects are satisfied by the invention which is a remote equipment monitoring system and method for monitoring remote equipment. In the inventive method, the steps include determining a state of at least one parameter of at least one piece of remote equipment, communicating messages regarding the state to a central location as incoming messages, and forwarding exception messages based on the incoming messages to at least one user-defined end device.

The inventive system includes a sensor in communication with a piece of remote equipment, and an interface unit, connected to the sensor, having a message generating mechanism. A central computer server is in communication with the interface unit and is adapted to receive messages generated by the interface unit. When the sensor detects an

exception condition in the piece of remote equipment (i.e., an operating condition that is either out of the ordinary or beyond nominal parameters), the interface unit generates an incoming exception message and forwards the message to the server. The server forwards at least one outgoing exception message to at least one predetermined user-defined end device based on the incoming exception message.

The system can contact a customer or contractor via a number of different media (fax, e-mail, pager, etc.) in case of an equipment failure. The contractor can determine which people to contact and which medium to use for which equipment failure. For example, if the condition is not very serious (e.g., filter needs cleaning), the contractor can set up the system to send a message via e-mail; if, however, it is serious (e.g., low/high refrigerant pressure), then the system can page the contractor and/or send a text message over his personal communication service (PCS). Also, the system includes the capability to send multiple messages to multiple recipients via differing media simultaneously for a given exception condition. Preferably, the system includes a centralized electronic message delivery device or server that routes the various incoming exception messages to the desired individuals via the desired electronic media in accordance with the predetermined message profile. More preferably, the contractor or consumer can access the centralized message server via the Internet and modify the message profile through software on the device.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic of a preferred embodiment of a system according to the invention.

Fig. 2 is a schematic of a preferred embodiment of a link between the monitored equipment and the system according to the invention.

Figs. 3a-d are schematics of links between an end-user's machine and the system according to the invention.

Fig. 4 is a schematic of a preferred embodiment of the electronic message delivery server according to the invention.

Fig. 5 is a flow chart depicting the operation of the system according to the invention.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Equipment that needs to be monitored frequently, such as HVAC equipment, preferably operates within certain acceptable parameters. Some of these parameters are more crucial to the operation and/or life span of the equipment than are other parameters. For example, a low battery condition might be a lot less serious than a low coolant level condition. Whenever a piece of equipment operates outside its preferred parameters, an "exception" condition is created or said to exist. An exception condition can also be indicative of a regularly scheduled event occurring too often, too infrequently, or not at all. An exception condition could also be indicative of a measured value being beyond the design specification for the equipment.

When a monitored piece of equipment detects an exception condition, it activates its interface to the cellular phone network. The interface effectively acts as a cell phone in a roaming condition. The interface "attempts" to make a telephone call; because it is not recognized as being a resident of the local cell, the local cell (via the cellular network or mobile

switching center) contacts the "home cell" of the interface to insure that the interface is in good standing to complete the "call." There really is no home cell; in actuality, what is taking the place of the home cell of a cellular telephone is a message routing service such as those provided by Aeris or Bell South Cellemetry. When the local cell is contacting the message routing service, it transmits the following information: the serial number of the interface; the multi-digit "phone number" assigned to the interface; and the multi-digit phone number that the interface is "attempting to call." The message routing service tells the local cell that the interface is okay and should not be blacklisted, that the call need not go through, and that the interface should be removed from the "okay to roam" list immediately.

The interface is not really trying to call anyone; the multi-digit phone number it was trying to call represents a multi-digit code of information that is being sent to the message routing service and may represent fault information (e.g., 212-555-1212 means "filter needs cleaning"). The phone number assigned to the interface (which is also sent along with the phone number it is "trying to contact") may not only indicates which unit is doing the transmitting but may also convey fault information, since many of the devices being monitored do not have a large number of different fault conditions. This type of technology, in which information is transmitted in the handshaking portion of a cellular transmitter communicating to a local cell, appears in U.S. Patent Nos. 5,594,740 to LaDue and 5,546,444 to Roach, Jr. et al., and is commonly referred to as using control channel data. In LaDue (the Aeris version), the exception or status information is embedded in the digits of the "phone number" the interface is allegedly calling (the "dialed digits"); in Roach, Jr. (the Bell South Cellemetry version), the exception or

8



status information is embedded in the electronic serial number (ESN) of the interface, a number which identifies the physical hardware of the device. The information which identifies which interface has sent a message may be embedded in the mobile identification number (MIN) assigned to the interface unit. In the Aeris system, the ESN may also contain interface identification information.

The present invention expands on this technology and includes the message delivery technique mentioned above. The Aeris or Bell South Cellemetry router transmits the exception data to the inventive message delivery system which forwards the information to the contractor who is responsible for maintaining the faulty equipment. The contractor is provided with an account on the message delivery system that he can access via the Internet. The contractor sets up the specific parameters of which exception conditions are reported to which individuals. The contractor also sets up by which media (fax, e-mail, PCS) these individuals are to be notified. Multiple individuals may be alerted as to a exception condition. All of this data constitutes the contractor's message profile. For example, both the contractor and the owner of the premises might be signaled if there is a low/high refrigerant condition, however perhaps only one of them would be notified if a filter required cleaning. The user may also set, as part of the message profile, that different messages be delivered to different individuals at different times of the day, week, month, season, or year. For example, a high priority exception message may be directed to one repair/maintenance entity during regular business hours but be directed to a different repair/maintenance entity at night. Similarly, the same person could be contacted by different

means (e.g., fax or PCS) at different times. The content of the messages may also vary as a function of time.

In addition to notifying contractors when a problem arises, the interface may be programmed to check in once a day with an "all systems okay" message. This "okay" message also gets routed to the message delivery system. However, instead of being handled by an exception message subroutine in the message delivery system—the portion of the system which handles the above-mentioned fault messages—the "okay" message is checked by a missing message subroutine. The missing message subroutine checks the entire list of HVAC interfaces that are supposed to signal "okay" from the message delivery system database. The missing message subroutine compares the entire list to the list of HVAC interfaces that actually checked in as "okay". If an interface failed to check in "okay", the message delivery system sends out the appropriate messages to the proper individuals via the selected media, all in accordance with the user's message profile lodged in the user's account with the message delivery system. The periodic "okay" or status message is not merely limited to providing a status "heartbeat" for the equipment but may also be employed to transmit information about the monitored piece of equipment. As will be explained below, the status message only requires a portion of its digits to convey equipment identification information, thus allowing other information to be transmitted as well. For example, the status message may include statistical information about the equipment such as how many cycles it has performed since the last message, the run time of the motor, etc. The status message may also serve as a reminder for routine maintenance, or it may report very minor or low-priority conditions that are not time sensitive.

The format of the message sent from the failing device to the local cell to the router to the message delivery system is a multi-digit code. The first digit can be for message format (e.g., status message, exception message, etc.). The sub-address is a digit or two reserved to identify to which unit that a transceiver interface is assigned is experiencing an exception condition; i.e., one transceiver interface may be assigned to a building having nine HVAC units, all connected to the transceiver via a bus line. The final digits would indicate the specific exception condition. The multi-digit message received by the message delivery system is normalized, converted into a regular text message, and forwarded to the user/contractor.

Description will now be given of the preferred embodiments with reference to Figs. 1-5.

Figure 1 shows an overall view of the inventive system 50. An existing piece of equipment may be monitored, for example; an air-conditioner 2, boiler 3, motor starter 4, heater 5, or any other piece of equipment they may be desired to be monitored. The existing piece of equipment is fitted with an interface unit 10. Periodically, the interface unit 10 sends to the message delivery server 1 a status signal to let the message delivery server 1 know that the equipment being monitored and the interface unit 10 are functioning correctly. When a predetermined exception condition occurs in the piece of equipment being monitored, the interface unit 10 sends an incoming exception message to the message delivery server 1. The message delivery server 1 then routes the message as an outgoing exception message to the appropriate user interface; e-mail 6, fax 7, pager 8, voice 9, etc., according to the message profile as configured by the user of the system 21 via the Internet 122.

Messages from some of the interface units 10 may be delivered by means of wireless transmission over the cellular telephone network (see US Patent Nos. 5,594,740 and 5,546,444).

Figure 2 is a detailed view of link 11 shown in Figure 1. A message is transmitted from the cellular interface unit 10a via a radio frequency link 13 to a nearby cellular transceiver site 14, the message is then routed to the cellular network or mobile switching center (MSC, e.g., a cellular carrier such as Bell Atlantic) 16 where the message is then delivered via data circuits 17 and via router 51 (e.g., Bell South Cellemetry or Aeris) to the message delivery server 1. As will be clear from the discussion of Fig. 4, reference numerals 11a and 11b refer to different types of links. Specifically, link 11a is for receiving incoming exception and status messages from interfaces 10 which are in regions wired for sending data via the dialed digits control channel; link 11b forwards messages along the ESN channel to the message server 1.

Based on the configuration of the user's message profile, the outgoing exception message (or messages) is then delivered to the specified end device or devices. Figures 3a-d show a more detailed view of the various outbound links 12a-d that connect the server 1 to the various electronic media. In Fig. 3a, server 1 sends the message over a telephone line 18a to the Internet 122 and deposits the message in the user's e-mail box 6. In Fig. 3b, server 1 sends the message over a telephone line 18b through the public telephone switched network (PTSN) 19 to the user's fax machine 7. In Fig. 3c, server 1 sends the message over a telephone line 18c to the user's pager service 53 and thence to the user's pager or PCS 8. In Fig. 3d, server 1 sends the message over a telephone line 18d through the PTSN 19 to the user's voice mail box 9. The same message may also be sent to a number of other devices as configured by the user 121 over the

Internet 122. The same message that is being sent to a fax machine 7 as described above may also simultaneously be sent to an e-mail 6 recipient via the Internet. Preferably, different messages can be sent to different individuals simultaneously for the same fault condition; for example, the owner of the premises may receive a less-detailed message than the contractor.

5 A user's message profile can also be configured to store messages on server 1 for delivery at a later time or after certain conditions are met. For example, a contractor may not want his beeper activated every time server 1 receives an incoming exception message. The user profile can be configured to deliver messages on groups or only after several messages have accumulated for the same user/contractor. Optionally, an outgoing exception message may be  
10 generated only after several of the same type of incoming message are received; a portion of the memory of server 1 may be devoted to the storing and/or accumulating of messages. Alternatively, a single outgoing exception message may be generated in response to several incoming messages.

15 Figure 4 shows the details of the message delivery server 1. In the preferred embodiment, server 1 includes four hardware devices 200, 300, 400, and 500. Device 200 is responsible for receiving incoming messages, processing them in accordance with the user's preferences, and routing them for output. Messages may be temporarily stored or accumulated on device 200 before being transmitted to the user if the user's message profile is set up accordingly. Device 300 enables the user 121 to access server 1 and create or edit his message  
20 profile residing in relational data base 21 of device 200. Device 400 includes the various drivers 33 which are responsible for transmitting the various messages to the various media (fax, e-mail,

etc.). Device 500 includes billing computer 38 for keeping track of the charges and fees associated with the user's use of the service.

At the core of server 1 is a relational data base 21. Incoming messages are received by a specific service designed to handle both the transport method and message formatting. Every interface unit 10 is provided, like a cellular telephone, with an electronic serial number (ESN, to identify the specific interface unit sending the message) and a mobile identification number (MIN, similar to a cellular telephone's phone number). In some instances, the exception or status information is embedded in the dialed digits the interface transmits. The dialed digits control channel module 25 specifically receives messages that are encoded in the control channel's dialed digits (see US Patent 5,594,740). The ESN control channel module 24 receives messages that are encode in the electronic serial number of the message (US Patent 5,546,444). It is preferable to have both a dialed digits module 25 and an ESN module 24, because some geographic regions employ dialed digit data coding, while other regions employ ESN data coding. Information may be transmitted via the MIN of the interface 10 and also received by message delivery server 1. Services are also available to receive messages for analog modems connected to the public telephone switched network 23, and the cellular digital packet data network 22. As additional methods of transmitting data become available, they can be added to the services layer.

All incoming messages are normalized at the normalization module 26 so that all incoming messages can then be processed without regard to their incoming medium. All incoming messages are passed to the normal message subroutine 27, exception messages are

passed on for processing and routing via the user's configuration through the data base 21, and periodic status messages are queued. The missing message subroutine 28 compares received status messages with a list of expected messages. Status messages that are not received have an error message generated by the missing message subroutine 28 which are then delivered as configured by the user in his message profile as recorded in the relational database 21.

Messages to be delivered are placed in a message queue 32; as message traffic permits the appropriate drivers 33 request messages from the message queue 32 and route the messages over the appropriate transport. Numeric pages, faxes, voice and DTMF 34 are sent over the PTSN 12b-d, e-mail 35 is sent over the Internet 122. When a driver 33 has successfully delivered, a record is made in the data base 21 by the delivery confirmation subroutine 31 showing time and date of successful deliveries. Undeliverable messages are routed back to the database for generation of undeliverable message errors.

Users 121 connect to an Internet information server 30 via the Internet 122. The Internet information server presents to the user the information pertaining to that user's interfaces. Requests to alter the user's data are passed through active server pages 29 to protect both the integrity and security of the data base 21. All messages and transactions that pass through the system are logged in section 36, the transaction and message logs are then interfaced by section 37 to a billing system 38.

An example of the system's operation is as follows. When a user-contractor 121 first signs up with the system 50, he receives an account on the electronic message delivery server 1. Via the Internet, the contractor 121 is prompted through software to enter the pager numbers,

cellular telephone numbers, facsimile machine numbers, and Internet addresses of any individuals who are to be contacted in the event of an exception condition in building equipment 2-5 for which the contractor is responsible. The user-contractor 121 may also set the software to notify him of the periodic successful routine status check messages conveyed from equipment 2-5.

Fig. 5 depicts a flow chart of the basic steps that occur when a message is received by server 1. At step S1, the message is received. At step S2, normalization module 26 removes the required elements from the incoming message and arranges them in a normalized format and stores them as a record in a table. Server 1 can now examine a specific element in a message of any received media type. At step S3, it is determined what type of error message has been received. If it is an exception message that requires immediate action, it is passed onto a process to begin configuration of a readable message at step S4 for delivery at step S5. If not, server 1 determines if the received message is a "unit checking in" or a "system ok" status message at step S6. If the user has his message profile so configured, a storing/accumulating step (not shown) may occur between steps S4 and S5. Undefined messages are handled at step S7. If it is configured as a periodic message received to indicate normal operation of a unit, the message is stored at step S8 for use at a later time. Periodically, the list of units that have reported in at step S8 and the list of active units expected to report in (part of database 21) are compared at step S9. Units on the active list that do not appear on the checked-in units list are processed, and units that failed to report in have messages created at step S10. These messages are then posted for further processing and message delivery at step S5.



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5 In the example given, suppose boiler 3 breaks down in a non-catastrophic manner. The  
fault condition is detected by a sensor (not shown) and encoded to interface 10. Interface 10  
transmits a radio message via link 13 to a local cell site 14, which contacts data circuits 17 via  
cellular network 16. Circuits 17 forward the message to message server 1. If the message is  
transmitted by the cellular telephone network 16, the ESN arrives via link 11b to ESN channel  
24; alternatively, the dialed digits information arrives via link 11a to dialed digits channel 25.  
The message is normalized in normalization module 26 and passed along to the normalized  
message process module 27. Module 27 selects the user's message profile from relational  
database 21 and in accordance therewith, determines what message gets sent to whom and by  
which medium.

15  
The invention is not limited to the above description but rather is defined by the claims  
appearing hereinbelow. Modifications to the above description that include that which is known  
in the art are well within the scope of the contemplated invention. For example, the invention is  
designed to be adaptable to all forms of electronic communication, be they cellular telephone,  
land line telephone, electronic mail, facsimile, text page, voice mail, etc. All forms of electronic  
media are contemplated as being within the scope of the invention. Also, multiple formats of  
incoming and outgoing messages are contemplated as included within the scope of the claims  
and the invention. The user can adjust the format and content of the messages he receives by  
setting up his message profile accordingly.

What is claimed is:

sub. a1  
1. A method of monitoring remote equipment comprising the steps of:

- 5
- a) determining a state of at least one parameter of at least one piece of remote equipment;
  - b) communicating messages regarding the state to a central location as incoming messages; and
  - c) forwarding outgoing exception messages based on the incoming messages to at least one user-defined communication device.

2. A method according to Claim 1, wherein said step b) further comprises the step of communicating the incoming messages to the central location via one of a plurality of different communication media.

3. A method according to Claim 2, further comprising the step of d) normalizing the incoming messages into a uniform format to create normalized messages, wherein the outgoing exception messages are generated based on the normalized messages.

4. A method according to Claim 1, wherein the at least one parameter is at least one of an exception condition and a normal status condition.

sub. 5. A method according to Claim 1, further comprising the step of e) determining whether an  
a2 incoming message is an incoming exception message or a normal status message.

6. A method according to Claim 5 wherein, if an incoming message is determined to be an incoming exception message in step e), the method further comprises the step of f) routing the incoming exception message as the outgoing exception message to the at least one user-defined communication device.

7. A method according to Claim 6, further comprising the step of g) creating a user-defined message profile, wherein said forwarding step c) forwards the outgoing exception message in accordance with the user-defined message profile.

8. A method according to Claim 7, wherein step g) further comprises the step of h) enabling a user to create or edit the user-defined message profile remotely from the central location.

sub. 9. A method according to Claim 8, wherein said step h) is performed by the user via the  
a3 Internet.

10. A method according to Claim 8, wherein step g) further comprises the steps of:

1) selecting at least one type of user-defined communication device to which outgoing exception messages are to be forwarded;

2) selecting specific user-defined communication devices of the types selected in step 1);

and

3) determining the content of the outgoing exception messages forwarded in step c).

11. A method according to Claim 5, wherein if the incoming message is determined in step e) to be a normal status message, the method further comprises the step of i) storing the normal status message in a normal status memory.

12. A method according to Claim 11, further comprising the steps of:

j) providing a main list of all pieces of remote equipment being monitored;

k) comparing the normal status memory with the main list to determine which pieces of remote equipment did not communicate a normal status message within a predetermined period of time; and

l) generating an outgoing exception message for each piece of equipment identified in step k).

13. A method according to Claim 12, further comprising the step of g) creating a user-defined message profile, wherein said forwarding step c) forwards the outgoing exception message in accordance with the user-defined message profile.

14. A method according to Claim 13, wherein step g) further comprises the step of h) enabling a user to create or edit the user-defined message profile remotely from the central location.

Sub Q4 15. A method according to Claim 14, wherein the central location includes a computer database and said step h) is performed by the user via the Internet.

16. A method according to Claim 14, wherein step g) further comprises the steps of:

1) selecting at least one type of user-defined communication device to which outgoing exception messages are to be forwarded;

2) selecting specific user-defined communication devices of the types selected in step 1);

and

3) determining the content of the error messages forwarded in step c).

Sub Q5 17. A method according to Claim 1, wherein the communication devices include at least one of a facsimile machine, an e-mail account, a cellular telephone, a beeper, a pager, a PCS device, and a telephone.

18. A method according to Claim 2, wherein the communication media of step b) includes at least one of a cellular telephone network, radio transmissions, telephone lines, and the Internet.

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19. A method according to Claim 13, wherein step c) further comprises forwarding multiple outgoing exception messages to multiple user-defined communication devices in response to a single incoming message in accordance with the user-defined message profile.
20. A method according to Claim 13, wherein step c) further comprises forwarding a single outgoing exception message to a user-defined communication device in response to multiple incoming messages in accordance with the user-defined message profile.
21. A method according to Claim 13, further comprising the step of m) storing a plurality of user-defined message profiles at the central location.
22. A method according to Claim 7, wherein step c) further comprises forwarding multiple outgoing exception messages to multiple user-defined communication devices in response to a single incoming message in accordance with the user-defined message profile.
23. A method according to Claim 7, wherein step c) further comprises forwarding a single outgoing exception message to a user-defined communication device in response to multiple incoming messages in accordance with the user-defined message profile.
24. A method according to Claim 7, further comprising the step of m) storing a plurality of user-defined message profiles at the central location.

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A method according to Claim 1, wherein the remote equipment includes heating, ventilating, and cooling equipment.

Sub. 26

26. A method according to Claim 1, wherein said step b) further comprises the step of communicating an identification code of the piece of remote equipment in the incoming messages.

27. A method according to Claim 26, wherein said step c) further comprises the step of forwarding the identification code to the at least one user-defined communication device.

28. A method according to Claim 7, wherein step g) further comprises the step of enabling selection of different user-defined communication devices to receive outgoing exception messages at different time periods.

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A method according to Claim 13, wherein step <sup>g</sup><sub>h</sub> further comprises the step of enabling selection of different user-defined communication devices to receive outgoing exception messages at different time periods.

Sub. 27

30. A method according to Claim 11, further comprising the step of forwarding operational information embedded within a normal status message.

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31. A system for monitoring remote equipment, comprising:  
a sensor in communication with a piece of remote equipment;  
an interface unit, connected to said sensor; said interface unit having a message  
generating mechanism; and  
5 a central computer server in communication with said interface unit, said server adapted  
to receive messages generated by said interface unit,  
wherein when said sensor detects an exception condition in the piece of remote  
equipment, said interface unit generates an incoming exception message and forwards said  
message to said server,  
10 and wherein said server forwards at least one outgoing exception message to at least one  
predetermined user-defined communication device based on said incoming exception message.

32. A system according to Claim 31, wherein said message generating mechanism forwards  
said incoming exception messages via at least one of a plurality of communication media, said  
media comprising at least one of a cellular telephone network, radio transmissions, telephone  
lines, and the Internet.

<sup>24</sup>  
33. A system according to Claim <sup>23</sup>32, said server comprising a normalization module, wherein  
said server receives said incoming exception messages from said interface unit and said  
normalization module normalizes said incoming exception messages into a uniform format to



create normalized messages, wherein said outgoing exception messages are generated based on said normalized messages.

<sup>25</sup>  
34. A system according to Claim <sup>22</sup>31, wherein said sensor monitors at least one parameter of said piece of remote equipment, wherein the at least one parameter is at least one of an exception condition and a normal status condition.

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35. A system according to Claim 31, said system monitoring a plurality of pieces of equipment, each piece having an identification code, said server further comprising:

a first memory on which equipment identification codes of all monitored equipment are stored;

a second memory in which communication device identification codes of all of said user-defined communication devices are stored, said communication device identification codes being configured in user-defined message profiles.

36. A system according to Claim 35, said server further comprising a user interface remotely accessible by users and in communication with said second memory, wherein users can create or edit said user-defined message profiles remotely from said server.

37. A system according to Claim 36, wherein said user interface enables a user to select at least one type of user-defined communication device to which outgoing exception messages are

to be forwarded, select specific user-defined communication devices of the types selected, and determine the content of said outgoing exception messages forwarded by said server to said user-defined communication devices.

38. A system according to Claim 31, wherein said user-defined communication devices include communication devices including at least one of a facsimile machine, an e-mail account, a cellular telephone, a beeper, a pager, a PCS device, and a telephone.

39. A system according to Claim 35, wherein said interface unit periodically generates a normal status message if its respective piece of equipment is functioning properly, said normal status message including an equipment identification code.

40. A system according to Claim 39, said server further comprises:  
a third memory for storing said normal status messages;  
means for comparing the normal status memory with the main list and for identifying which of said pieces of remote equipment did not communicate a normal status message within a predetermined period of time; and

means for generating and forwarding an outgoing exception message for each piece of equipment identified by said comparing and identifying means, said outgoing exception message being forwarded to at least one of said user-defined communication devices in accordance with at least one of said user-defined message profiles.

<sup>32</sup>  
41. A system according to Claim <sup>30</sup>39, said server further comprising a normalization module, wherein said server receives said incoming exception messages from said interface unit and said normalization module normalizes said incoming exception messages into a uniform format to create normalized messages, wherein said outgoing exception messages are generated based on said normalized messages.

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42. A system according to Claim 35, said interface unit comprising a plurality of interface units, wherein each of said plurality of interface units is connected to a single piece of said pieces of equipment.

43. A system according to Claim 35, said interface unit comprising a plurality of interface units, wherein each of said plurality of interface units is connected to a number of said pieces of equipment.

44. A system according to Claim 35, wherein said user-defined message profiles are each configurable to cause said server to forward a plurality of said outgoing exception messages in response to receipt of a single incoming exception message.

45. A system according to Claim 35, wherein said user-defined message profiles are each configurable to cause said server to forward a single of said outgoing exception messages in response to receipt of multiple incoming exception messages.

46. A system according to Claim 40, wherein said outgoing exception message generating and forwarding means is adaptable to forward a plurality of said outgoing exception messages for each piece of equipment identified by said comparing and identifying means.

<sup>38</sup>  
47. A system according to Claim <sup>22</sup>31, wherein said incoming exception message comprises exception information and identification information concerning said piece of remote equipment.

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48. A system according to Claim 47, wherein said outgoing exception message comprises exception information and identification information concerning said piece of remote equipment.

49. A system according to Claim 39, wherein said normal status message further comprises operational information of said piece of remote equipment.

50. A system according to Claim 40, further comprising a fourth memory upon which outgoing exception messages are stored.

add Q11

## ABSTRACT

A system and method for monitoring remote equipment are provided. A sensor is in communication with a piece of remote equipment, and an interface unit, having a message generating mechanism, is connected to the sensor. A central computer server is in communication with the interface unit and is adapted to receive messages generated by the interface unit. When the sensor detects an exception condition in the piece of remote equipment, the interface unit generates an incoming exception message and forwards the message to the server. The server forwards at least one outgoing exception message to at least one predetermined user-defined communication device based on the incoming exception message. Multiple outgoing exception messages may be forwarded to multiple communication devices in accordance with a user-defined message profile, or a single outgoing exception message may be forwarded in response to receipt of multiple incoming exception messages. The message profile is remotely configurable by the user.

Docket No.  
1216.034

# Declaration and Power of Attorney For Patent Application

## English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

ELECTRONIC MESSAGE DELIVERY SYSTEM UTILIZABLE IN THE MONITORING  
OF EQUIPMENT AND METHOD OF SAME

the specification of which

(check one)

☒ is attached hereto.

☐ was filed on \_\_\_\_\_ as United States Application No. or PCT International  
Application Number \_\_\_\_\_  
and was amended on \_\_\_\_\_  
(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 to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>

Jan. 9, 1999

(Application Serial No.)

(Filing Date)

(Application Serial No.)

(Filing Date)

(Application Serial No.)

(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available 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)

(Application Serial No.)

(Filing Date)

(Status)  
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)  
(patented, pending, ~~abandoned~~)

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 issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

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VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) AND 1.27 (c)) - SMALL BUSINESS CONCERN			Docket No. 1216.034
Serial No.	Filing Date	Patent No.	Issue Date
Applicant/ Patentee: David Sandelman and Daniel Shprecher			
Invention: ELECTRONIC MESSAGE DELIVERY SYSTEM UTILIZABLE IN THE MONITORING OF EQUIPMENT AND METHOD OF SAME			
<p>I hereby declare that I am:</p> <p><input type="checkbox"/> the owner of the small business concern identified below:</p> <p><input checked="" type="checkbox"/> an official of the small business concern empowered to act on behalf of the concern identified below:</p> <p>NAME OF CONCERN: <u>Heat Timer Corporation</u></p> <p>ADDRESS OF CONCERN: <u>20 New Dutch Lane, Fairfield, NJ 07004</u></p> <p>I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 37 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.</p> <p>I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the above identified invention described in:</p> <p><input checked="" type="checkbox"/> the specification filed herewith with title as listed above.</p> <p><input type="checkbox"/> the application identified above.</p> <p><input type="checkbox"/> the patent identified above.</p> <p>If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed on the next page and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 CFR 1.9(c) or by 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).</p>			

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 exists.  
☐ each such person, concern or organization is listed below.

FULL NAME \_\_\_\_\_  
 ADDRESS \_\_\_\_\_

☐ Individual ☐ Small Business Concern ☐ Nonprofit Organization

FULL NAME \_\_\_\_\_  
 ADDRESS \_\_\_\_\_

☐ Individual ☐ Small Business Concern ☐ Nonprofit Organization

FULL NAME \_\_\_\_\_  
 ADDRESS \_\_\_\_\_

☐ Individual ☐ Small Business Concern ☐ Nonprofit Organization

FULL NAME \_\_\_\_\_  
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☐ Individual ☐ Small Business Concern ☐ Nonprofit Organization

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)

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, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: David Sandelman

TITLE OF PERSON SIGNING \_\_\_\_\_

OTHER THAN OWNER: Vice President

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SIGNATURE:  DATE: 5/20/99

<b>VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) AND 1.27 (b)) - INDEPENDENT INVENTOR</b>			<b>Docket No.</b> 1216.034																																																
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Applicant/ Patentee: David Sandelman and Daniel Shprecher																																																			
Invention: ELECTRONIC MESSAGE DELIVERY SYSTEM UTILIZABLE IN THE MONITORING OF EQUIPMENT AND METHOD OF SAME																																																			
<p>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 above and described in:</p> <p><input checked="" type="checkbox"/> the specification to be filed herewith. <input type="checkbox"/> the application identified above. <input type="checkbox"/> the patent identified above.</p> <p>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).</p> <p>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:</p> <p><input type="checkbox"/> No such person, concern or organization exists. <input checked="" type="checkbox"/> Each such person, concern or organization is listed below.</p> <p>*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)</p> <table><tr><td>FULL NAME</td><td colspan="3">Heat Timer Corporation</td></tr><tr><td>ADDRESS</td><td colspan="3">20 New Dutch Lane, Fairfield, NJ 07004</td></tr><tr><td></td><td><input type="checkbox"/> Individual</td><td><input type="checkbox"/> Small Business Concern</td><td><input type="checkbox"/> Nonprofit Organization</td></tr></table> <table><tr><td>FULL NAME</td><td colspan="3"></td></tr><tr><td>ADDRESS</td><td colspan="3"></td></tr><tr><td></td><td><input type="checkbox"/> Individual</td><td><input type="checkbox"/> Small Business Concern</td><td><input type="checkbox"/> Nonprofit Organization</td></tr></table> <table><tr><td>FULL NAME</td><td colspan="3"></td></tr><tr><td>ADDRESS</td><td colspan="3"></td></tr><tr><td></td><td><input type="checkbox"/> Individual</td><td><input type="checkbox"/> Small Business Concern</td><td><input type="checkbox"/> Nonprofit Organization</td></tr></table> <table><tr><td>FULL NAME</td><td colspan="3"></td></tr><tr><td>ADDRESS</td><td colspan="3"></td></tr><tr><td></td><td><input type="checkbox"/> Individual</td><td><input type="checkbox"/> Small Business Concern</td><td><input type="checkbox"/> Nonprofit Organization</td></tr></table>				FULL NAME	Heat Timer Corporation			ADDRESS	20 New Dutch Lane, Fairfield, NJ 07004				<input type="checkbox"/> Individual	<input type="checkbox"/> Small Business Concern	<input type="checkbox"/> Nonprofit Organization	FULL NAME				ADDRESS					<input type="checkbox"/> Individual	<input type="checkbox"/> Small Business Concern	<input type="checkbox"/> Nonprofit Organization	FULL NAME				ADDRESS					<input type="checkbox"/> Individual	<input type="checkbox"/> Small Business Concern	<input type="checkbox"/> Nonprofit Organization	FULL NAME				ADDRESS					<input type="checkbox"/> Individual	<input type="checkbox"/> Small Business Concern	<input type="checkbox"/> Nonprofit Organization
FULL NAME	Heat Timer Corporation																																																		
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	<input type="checkbox"/> Individual	<input type="checkbox"/> Small Business Concern	<input type="checkbox"/> Nonprofit Organization																																																

604350

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, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF INVENTOR David Sandelman

SIGNATURE OF INVENTOR 

DATE: 5/20/99

NAME OF INVENTOR Daniel Shprechen

SIGNATURE OF INVENTOR 

DATE: 5/20/99

NAME OF INVENTOR \_\_\_\_\_

SIGNATURE OF INVENTOR \_\_\_\_\_

DATE: \_\_\_\_\_

NAME OF INVENTOR \_\_\_\_\_

SIGNATURE OF INVENTOR \_\_\_\_\_

DATE: \_\_\_\_\_

NAME OF INVENTOR \_\_\_\_\_

SIGNATURE OF INVENTOR \_\_\_\_\_

DATE: \_\_\_\_\_

NAME OF INVENTOR \_\_\_\_\_

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DATE: \_\_\_\_\_

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NAME OF INVENTOR \_\_\_\_\_

SIGNATURE OF INVENTOR \_\_\_\_\_

DATE: \_\_\_\_\_

NAME OF INVENTOR \_\_\_\_\_

SIGNATURE OF INVENTOR \_\_\_\_\_

DATE: \_\_\_\_\_

NAME OF INVENTOR \_\_\_\_\_

SIGNATURE OF INVENTOR \_\_\_\_\_

DATE: \_\_\_\_\_

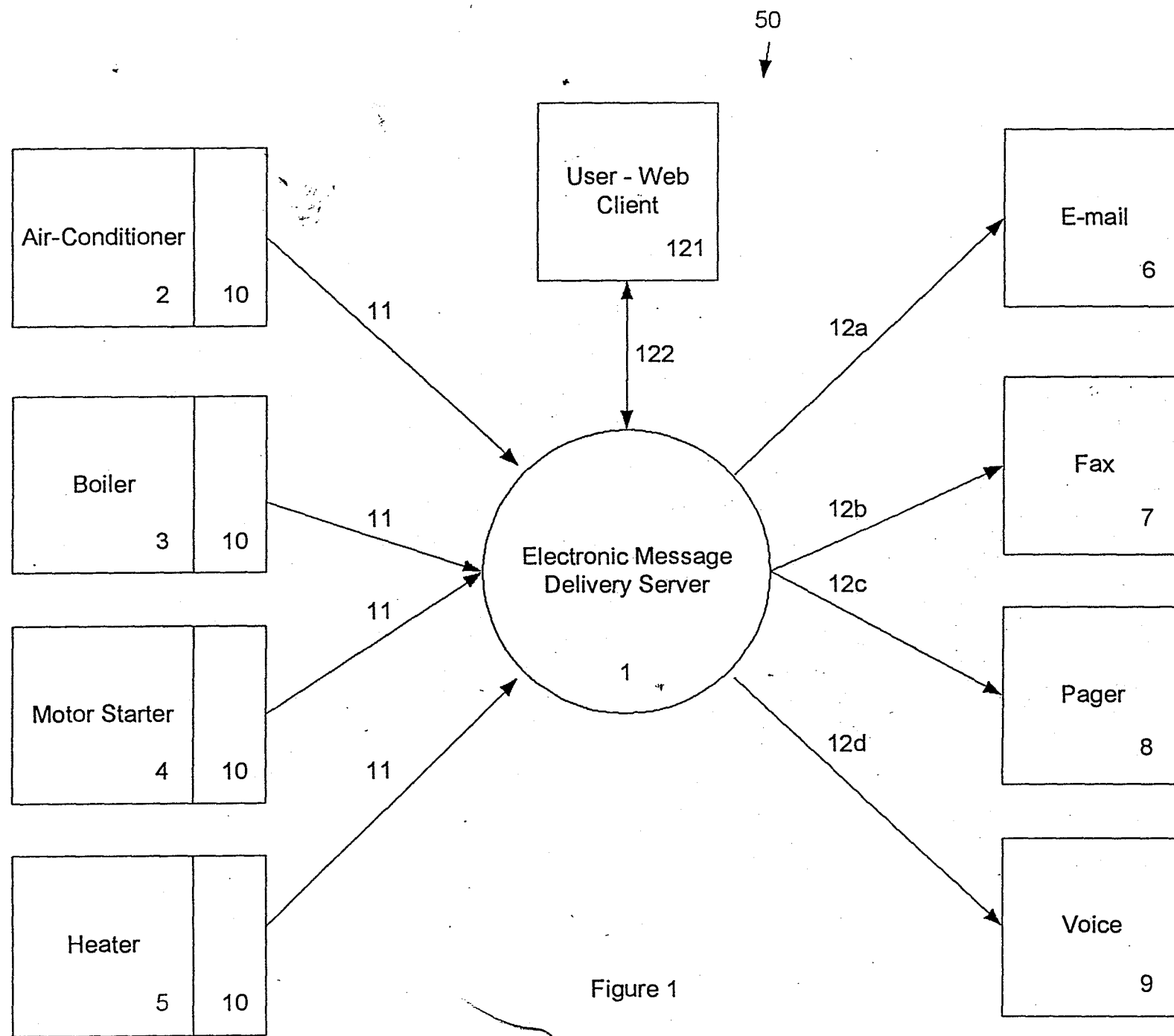


Figure 1

09317235 . 052499

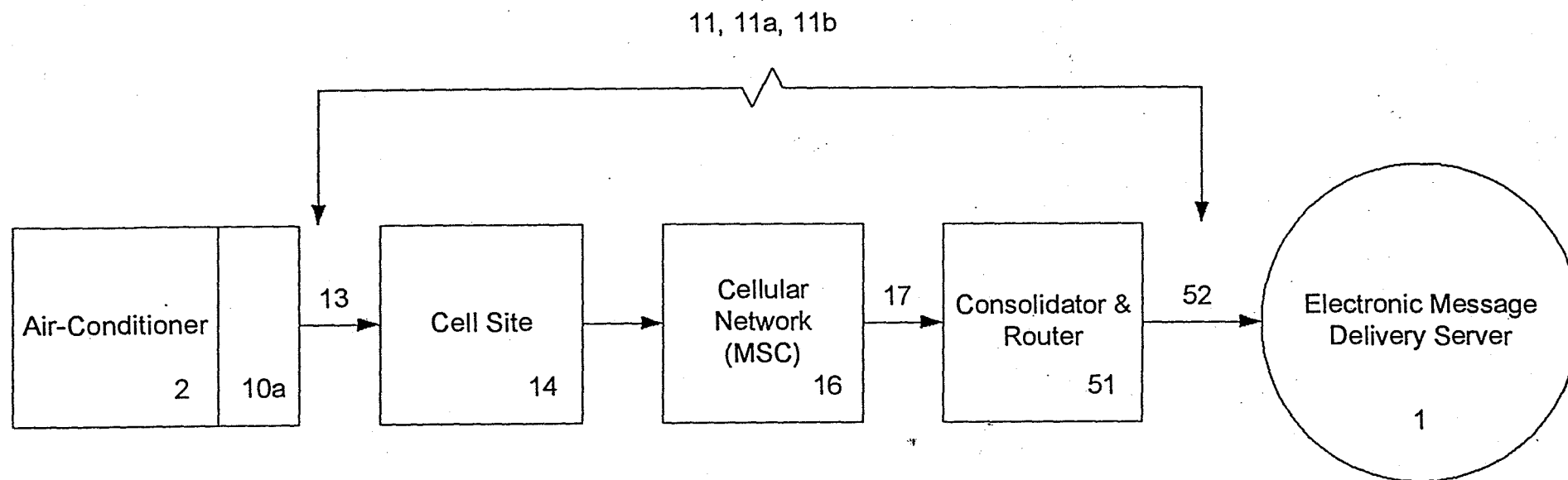


Figure 2

09317225, 052499



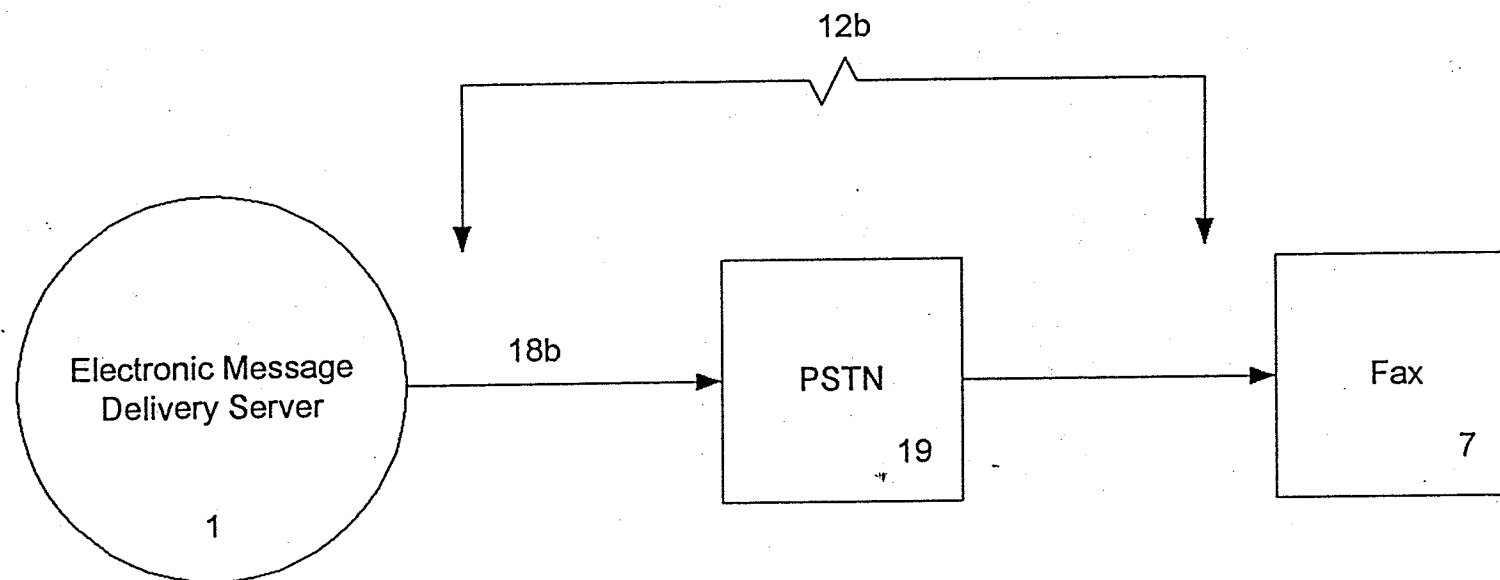


Figure 3b

09317235 . 052499



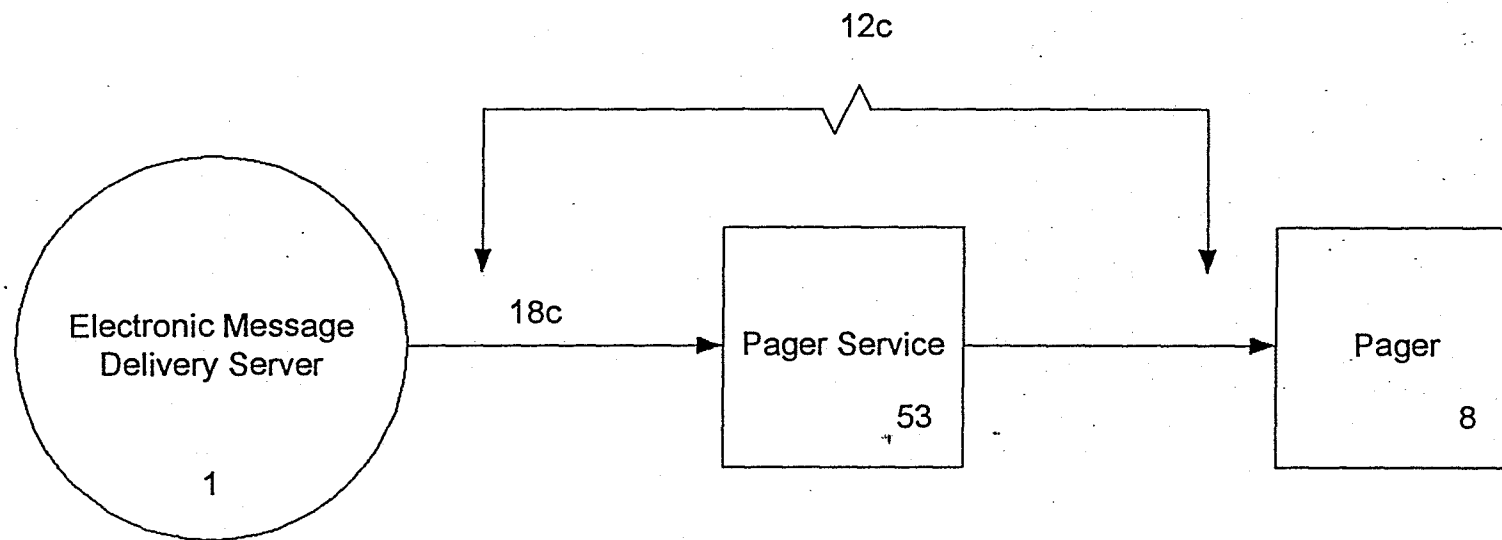


Figure 3c

0000170000, 0000499



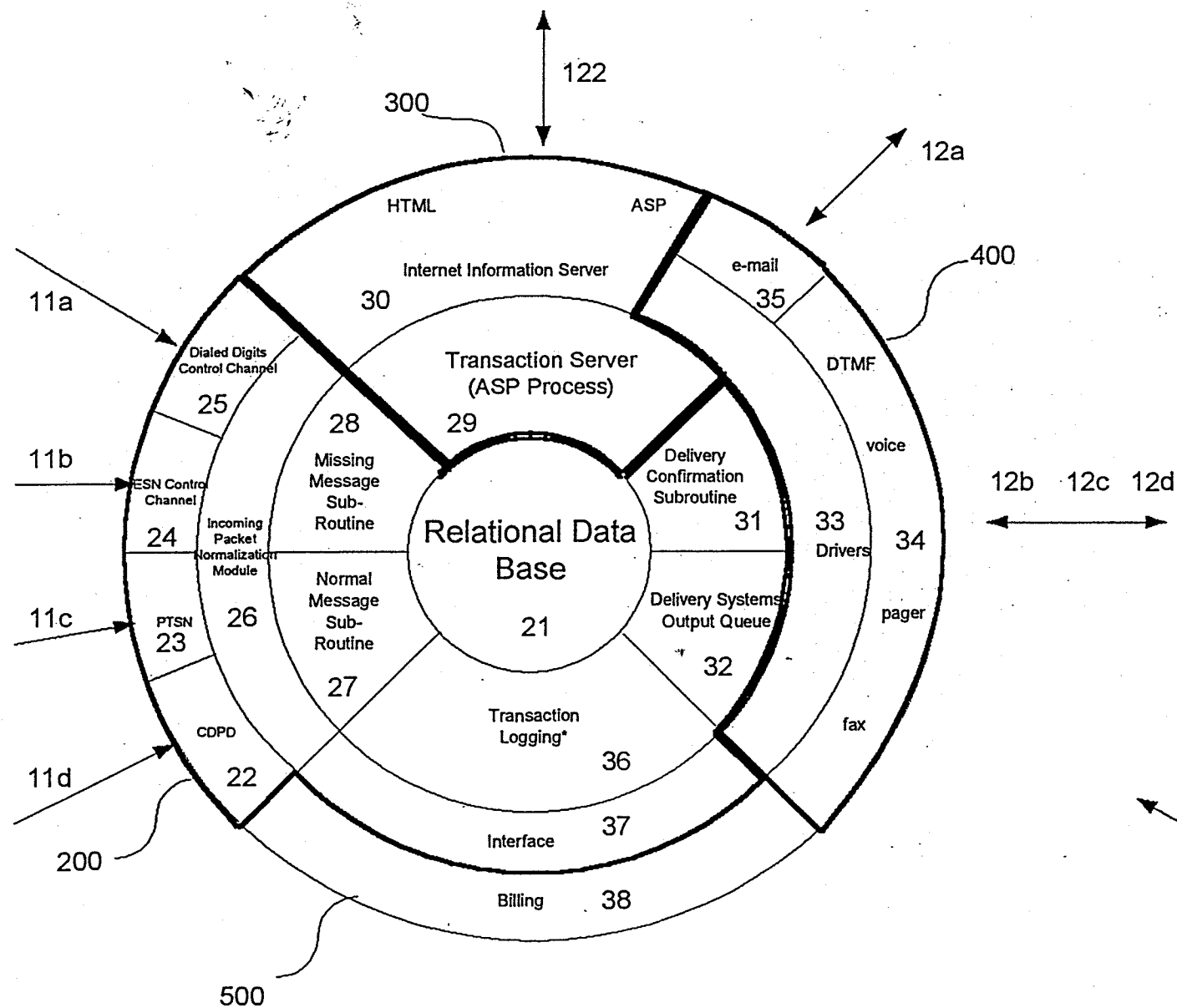


Figure 4

09317235, 052499

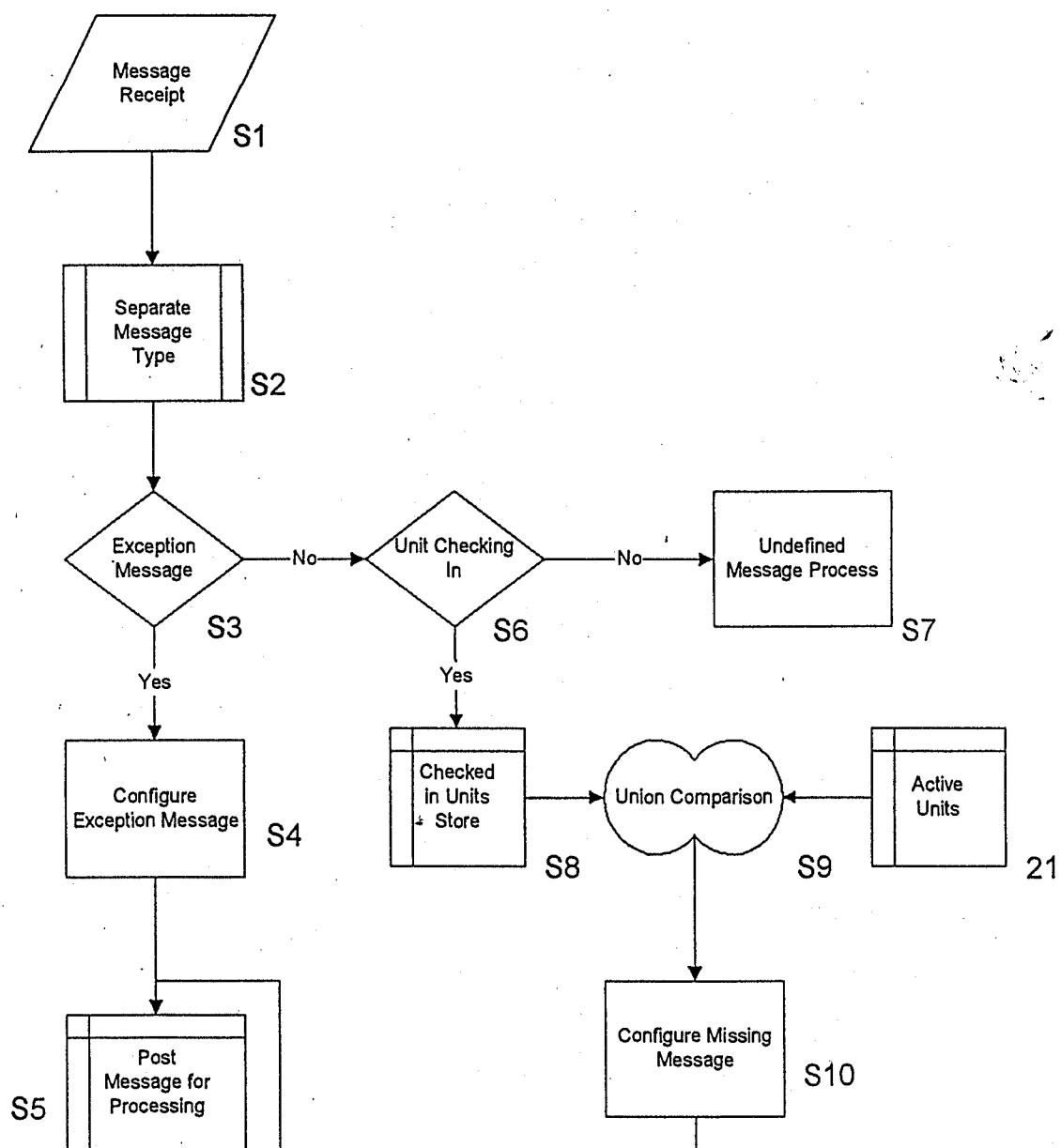


Figure 5

PRINT OF DRAWINGS  
AS ORIGINALLY FILED

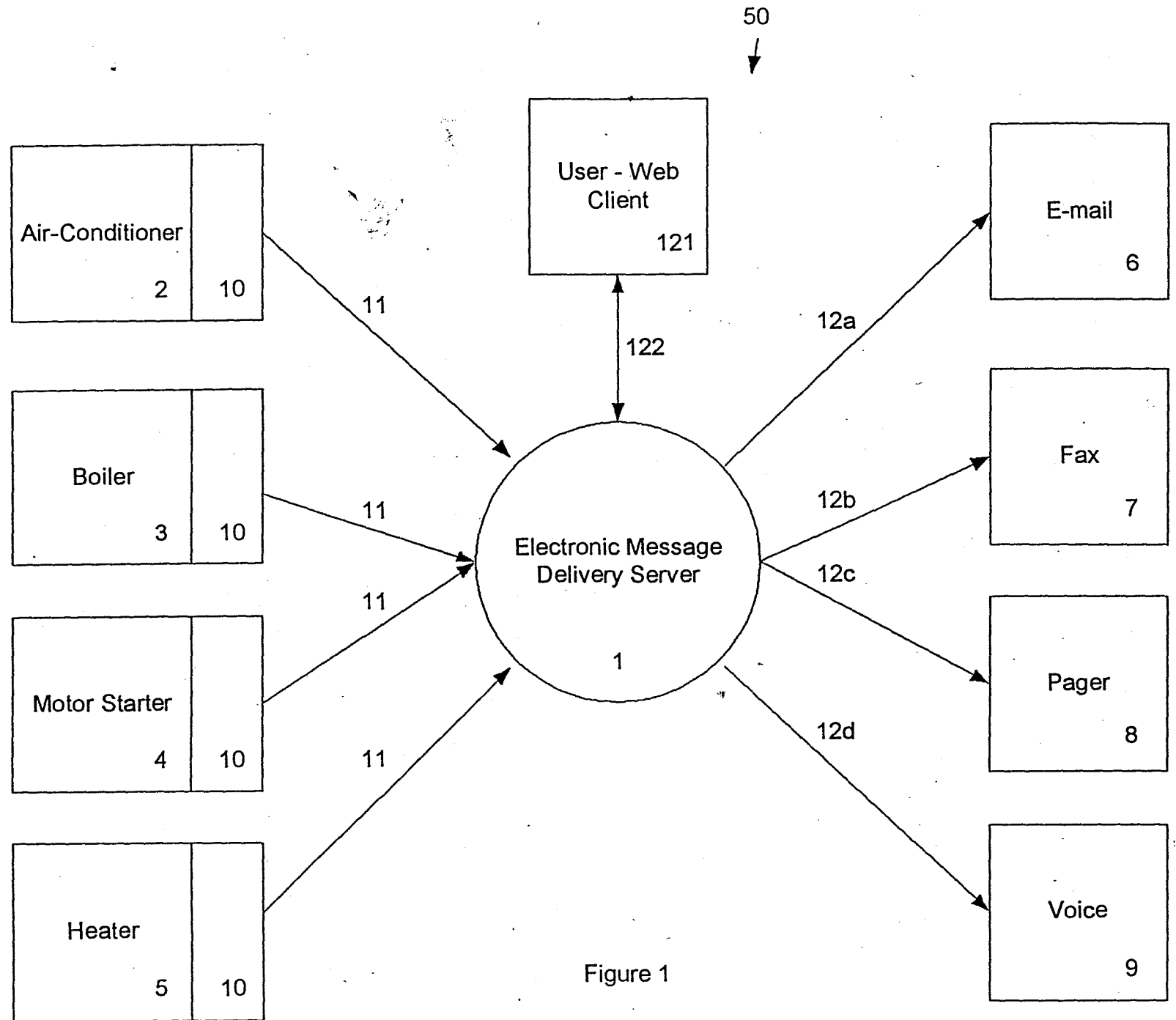


Figure 1

09317235 .052499

PRINT OF DRAWINGS  
AS ORIGINALLY FILED

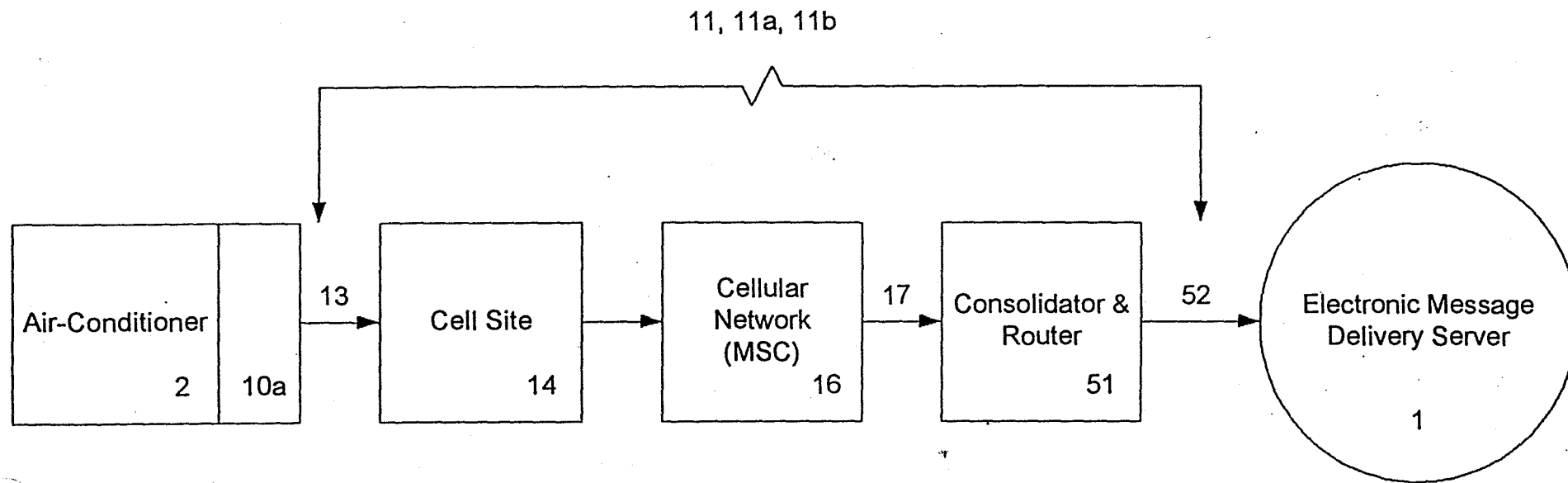


Figure 2

09317235 .052499

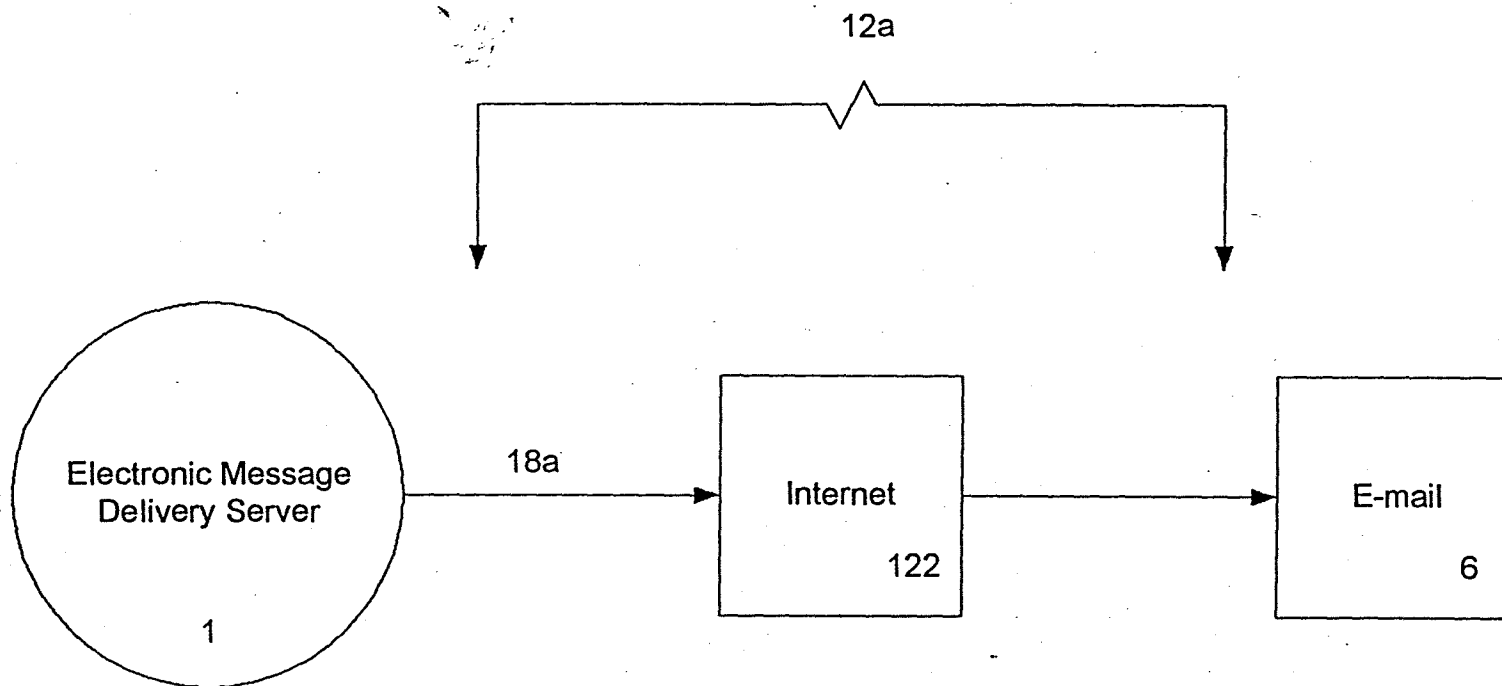


Figure 3a

09317235, 052499

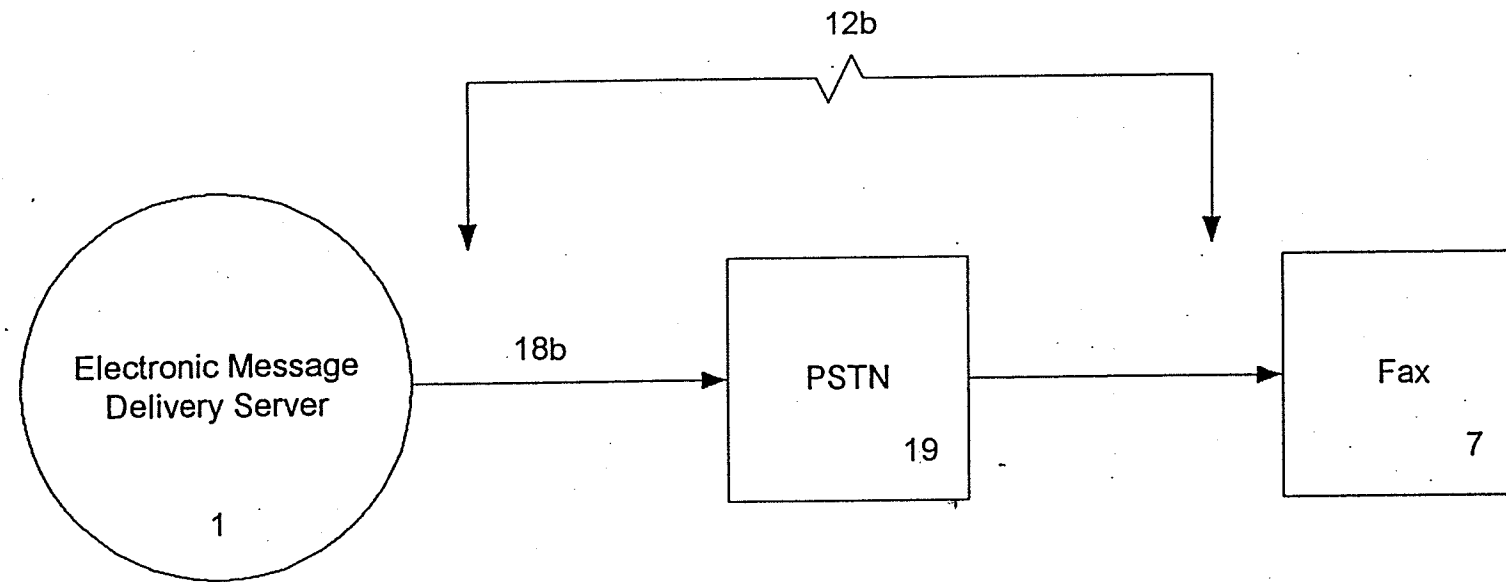


Figure 3b

09317235 .052499



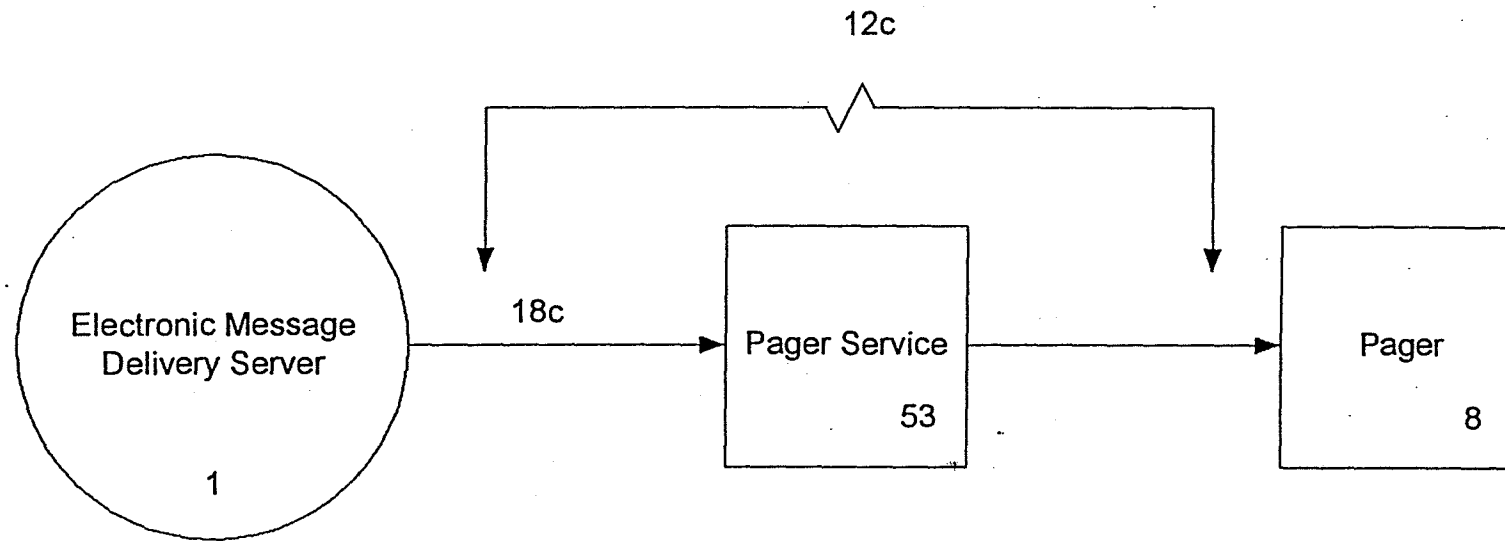


Figure 3c

09317235 .052499

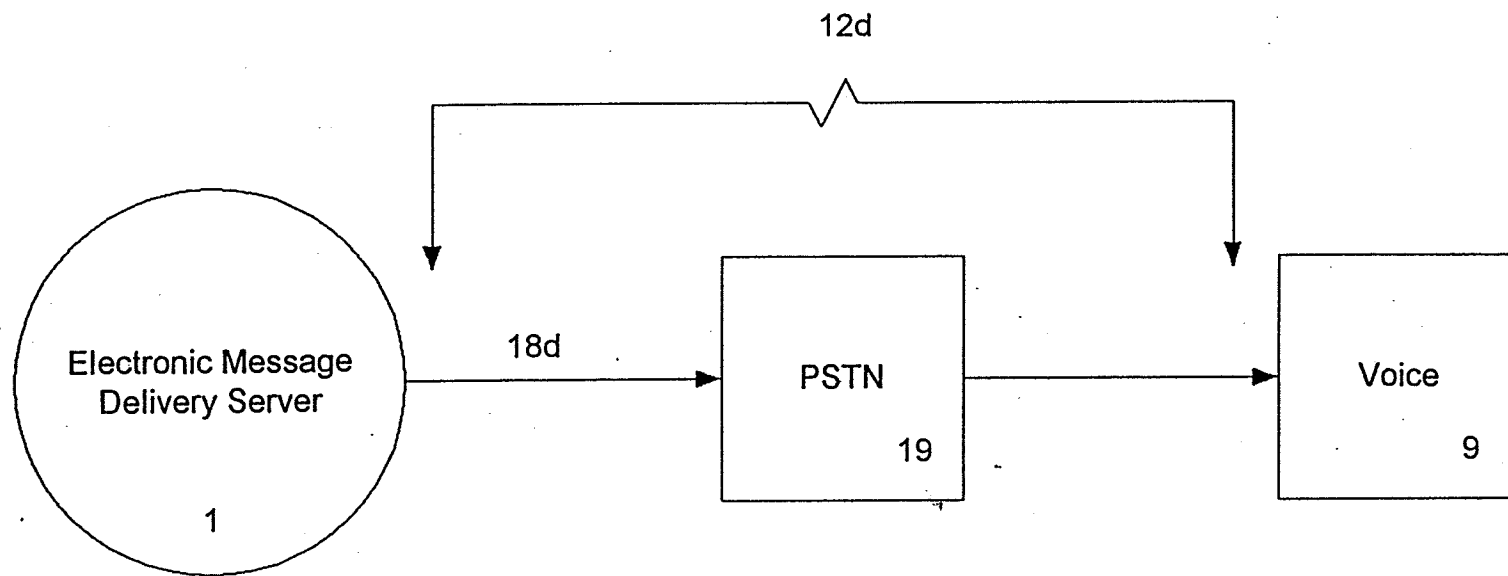


Figure 3d

PRINT OF DRAWINGS  
AS ORIGINALLY FILED

09317235 .052499

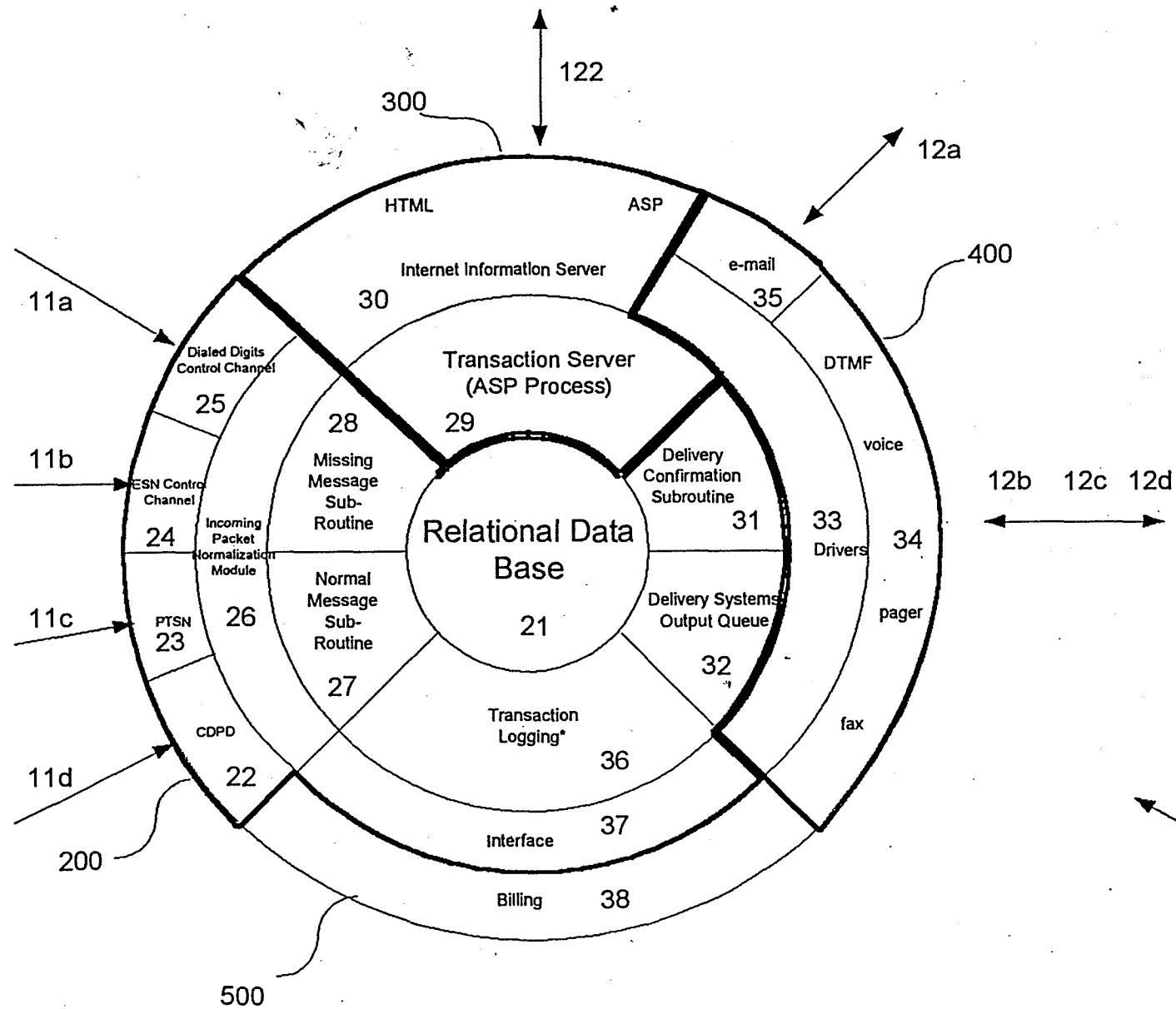


Figure 4

09317235 .052499

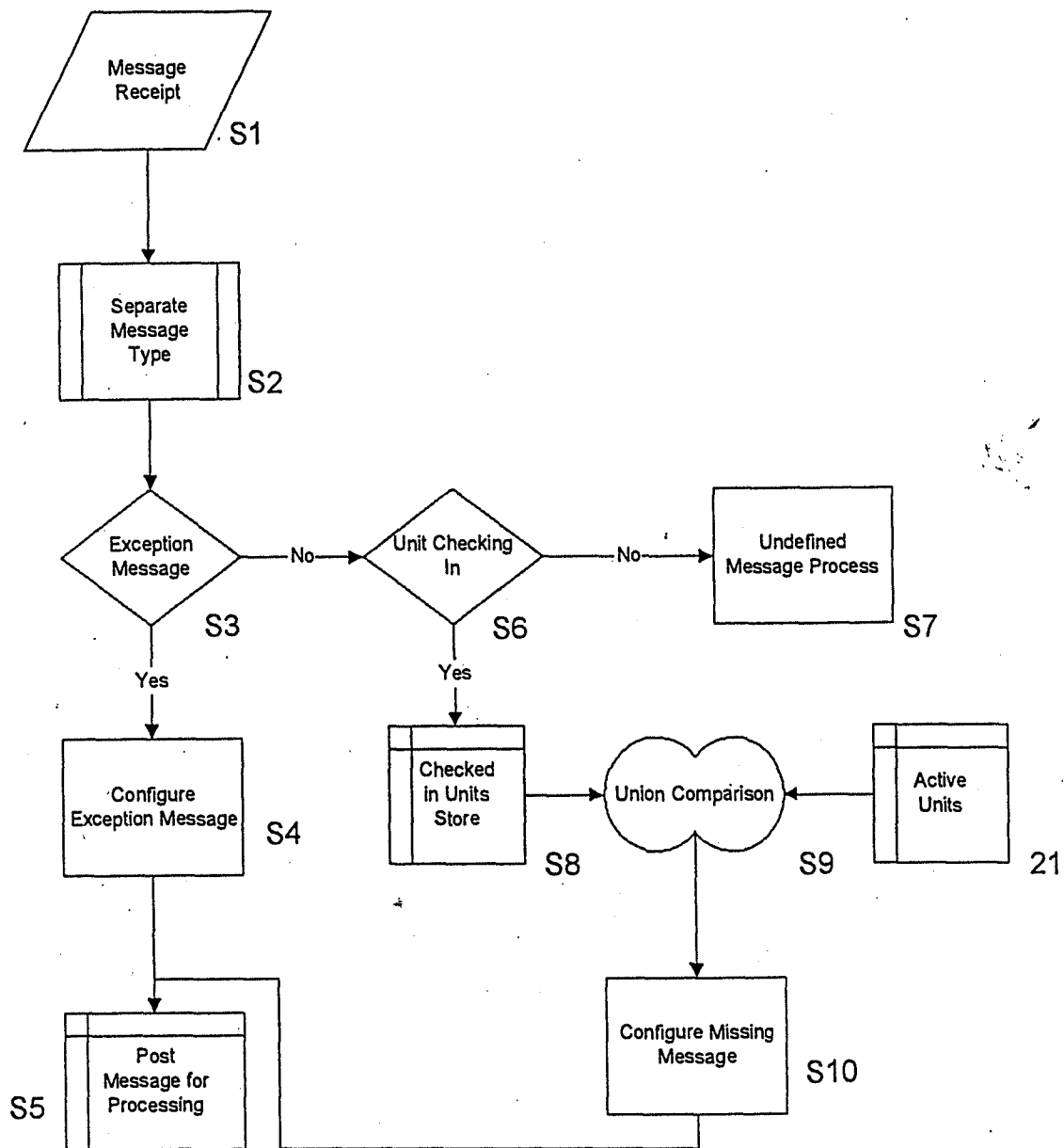


Figure 5

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Sandelman et al.

Serial No. 09/317,235

Filed : May 24, 1999

Art Unit 2736

Attorney Docket: 1216.034

For: Electronic Message Delivery System  
Utilizable in the Monitoring of Equipment and  
Method of Same



PATENT

INFORMATION DISCLOSURE  
STATEMENT

Assistant Commissioner of Patents  
Washington, DC 20231

Sir:

Pursuant to 37 CFR §1.97(b) Applicant submits the Information Disclosure Statement (IDS) filed herewith for the above-identified application. Since the IDS is being filed before the mailing of a first Office Action, no fee is due. A PTO-1449 and a copy of the 13 references cited thereon are also being submitted herewith. If any fees are required or if any overpayment needs to be credited, please charge/credit same to Deposit Account 02-2105.

Dated: October 26, 1999

Levisohn, Lerner, Berger & Langsam  
757 Third Avenue, Suite 2400  
New York, New York 10017  
(212) 486-7272

Respectfully submitted,

Barry E. Negrin  
Reg. No.: 37,407  
Attorney for Applicant

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NOV - 1 1999  
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2/11/99

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)	Docket Number (Optional) 1216.034	Application Number 09/317,235
	Applicant(s) Sandelman, et al.	
	Filing Date 05/24/99	Group Art Unit 2736

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
DP		5,855,008	12/29/1998	Goldhaber et al.	705	14	
		5,794,210	08/11/1998	Goldhaber et al.	705	14	
		5,748,104	05/05/1998	Argyroudis et al.	340	870.11	
		5,734,645	03/31/1998	Raith et al.	370	329	
		5,729,596	03/17/1998	Reeder et al.	379	102.09	
		5,642,356	06/24/1997	Wenk	370	337	
		5,629,687	05/13/1997	Sutton et al.	340	825.37	
		5,594,740	01/14/1997	LaDue	455	410	
		5,546,444	08/13/1996	Roach, Jr. et al.	455	412	
		5,528,675	06/18/1996	Chen	379	106.01	
		5,526,401	06/11/1996	Roach, Jr. et al.	455	426	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO


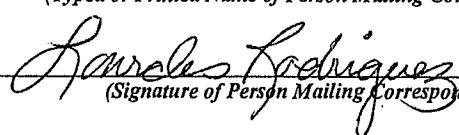
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


EXAMINER Daniel K. R. [Signature]	DATE CONSIDERED 6/28/00
--------------------------------------	----------------------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



GP 273-6

<b>CERTIFICATE OF MAILING</b> <b>FIRST CLASS MAIL (37 CFR 1.8)</b>			Docket No.
Applicant(s): Sandelman et al.			
Serial No. 09/317,235	Filing Date May 24, 1999	Examiner	Group Art Unit 2736
Invention: Electronic Message Delivery System Utilizable in the Monitoring of Equipment and Method of Same			
<div></div> <p>I hereby certify that this <u>Information Disclosure Statement</u> <i>(Identify type of correspondence)</i></p> <p>is being deposited with the United States Postal Service as first class mail in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on <u>October 26, 1999</u> <i>(Date)</i></p> <p><u>Lourdes Rodriguez</u> <i>(Typed or Printed Name of Person Mailing Correspondence)</i></p> <p><u></u> <i>(Signature of Person Mailing Correspondence)</i></p> <p>Note: Each paper must have its own certificate of mailing.</p>			

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UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

40

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/317,235

05/24/99

SANDELMAN

D

1216.034

EXAMINER

LM02/0120

BARRY E NEGRIN  
LEVINSOHN LERNER BERGER AND LANGSAM  
SUITE 2400  
757 THIRD AVENUE  
NEW YORK NY 10017

POPE, D

ART UNIT

PAPER NUMBER

2736

DATE MAILED:

01/20/00

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

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/317,235

Applicant(s)

SANDELMAN ET AL

Examiner

DARYL C. POPE

Group Art Unit

2736

☐ Responsive to communication(s) filed on \_\_\_\_\_☐ This action is FINAL.☐ 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*, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-50 is/are pending in the application

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.☒ Claim(s) 1-50 is/are rejected.☐ Claim(s) \_\_\_\_\_ is/are objected to.☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.☐ The specification is objected to by the Examiner.☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been  
☐ received.☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_☐ Interview Summary, PTO-413☒ Notice of Draftsperson's Patent Drawing Review, PTO-948☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2736

## DETAILED ACTION

### ART REJECTION:

#### *Claim Rejections - 35 USC § 103*

1. 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.

2. Claims 1-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al(5,400,246).

-- In considering claim 1, the claimed subject matter that is met by Wilson et al(Wilson) includes:

1) the claimed sensor, and interface unit are met by the various sensors and detectors and as well the PC interface unit(12, figure 2, column 9, lines 27 et seq).

**- Wilson does not show:**

- 1) the claimed server.

Since the system of Wilson is monitored and controlled via computer interface, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a server into the system of Wilson, since a server would have been necessary to effectively monitor and operate the computerized system.

-- Claims 31-50 recite subject matter that was met as discussed in claim 31 above.

Art Unit: 2736

-- Claims 1-30 recite methods that are met with regards to the discussion of the apparatus of claim 31 above.

***Conclusion***

3. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051 (for formal communications intended for entry)

Or:

(703) 305-3988 (for informal or draft communications, please label

“PROPOSED” or “DRAFT”)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daryl C. Pope whose telephone number is (703) 305-4838. The examiner can normally be reached on M-Th from 8:30 to 6:00. The examiner can also be reached on alternate Fridays from 8:30 to 5:00 since the examiner works on a flex-time schedule in which every other Friday is the examiner's day off.

Art Unit: 2736

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass, can be reached on (703) 305-4717. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8576.

Daryl C. Pope

  
**DARYL POPE**  
**PATENT EXAMINER**  
**GROUP 2700**  
2700

Jan. 11, 2000

09/317235

NOTICE OF DRAFTSPERSON'S  
PATENT DRAWING REVIEWThe drawing(s) filed (insert date) 5/24/99 are:A. ☐ approved by the Draftsperson under 37 CFR 1.84 or 1.152.B. ☒ objected to by the Draftsperson under 37 CFR 1.84 or 1.152 for the reasons indicated below. The Examiner will require submission of new, corrected drawings when necessary. Corrected drawing must be submitted according to the instructions on the back of this notice.

1. DRAWINGS. 37 CFR 1.84(a). Acceptable categories of drawings:  
Black ink. Color drawings are not acceptable until petition is granted.  
Fig(s) \_\_\_\_\_  
Pencil and non-black ink not permitted. Fig(s) \_\_\_\_\_
2. PHOTOGRAPHS. 37 CFR 1.84(b)  
\_\_\_\_ 1 full-tone set is required. Fig(s) \_\_\_\_\_  
\_\_\_\_ Photographs not properly mounted (must use bristol board or photographic double-weight paper). Fig(s) \_\_\_\_\_  
\_\_\_\_ Poor quality (half-tone). Fig(s) \_\_\_\_\_
3. TYPE OF PAPER. 37 CFR 1.84(e)  
\_\_\_\_ Paper not flexible, strong, white, and durable. Fig(s) \_\_\_\_\_  
\_\_\_\_ Erasures, alterations, overwritings, interlineations, folds, copy machine marks not accepted. Fig(s) \_\_\_\_\_  
\_\_\_\_ Mylar, velum paper is not acceptable (too thin). Fig(s) \_\_\_\_\_
4. SIZE OF PAPER. 37 CFR 1.84(f). Acceptable sizes:  
\_\_\_\_ 21.0 cm by 29.7 cm (DIN size A4)  
\_\_\_\_ 21.6 cm by 27.9 cm (8 1/2 x 11 inches)  
\_\_\_\_ All drawing sheets not the same size. Fig(s) \_\_\_\_\_  
\_\_\_\_ Sheet(s) \_\_\_\_\_  
\_\_\_\_ Drawings sheets not an acceptable size. Fig(s) \_\_\_\_\_
5. MARGINS. 37 CFR 1.84(g). Acceptable margins:  
\_\_\_\_ Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm  
\_\_\_\_ SIZE: A4 Size  
\_\_\_\_ Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm  
\_\_\_\_ SIZE: 8 1/2 x 11  
\_\_\_\_ Margins not acceptable. Fig(s) 1, 2  
\_\_\_\_ Top (T) \_\_\_\_\_ Left (L) \_\_\_\_\_  
\_\_\_\_ Right (R) \_\_\_\_\_ Bottom (B) \_\_\_\_\_
6. VIEWS. 37 CFR 1.84(h)  
REMINDER: Specification may require revision to correspond to drawing changes.  
Partial views. 37 CFR 1.84(h)(2)  
\_\_\_\_ Brackets needed to show figure as one entity. Fig(s) \_\_\_\_\_  
\_\_\_\_ Views not labeled separately or properly. Fig(s) \_\_\_\_\_  
\_\_\_\_ Enlarged view not labeled separately or properly. Fig(s) \_\_\_\_\_
7. SECTIONAL VIEWS. 37 CFR 1.84(h)(3)  
\_\_\_\_ Hatching not indicated for sectional portions of an object. Fig(s) \_\_\_\_\_  
\_\_\_\_ Sectional designation should be noted with Arabic or Roman numbers. Fig(s) \_\_\_\_\_
8. ARRANGEMENT OF VIEWS. 37 CFR 1.84(i)  
\_\_\_\_ Words do not appear on a horizontal, left-to-right fashion when page is either upright or turned so that the top becomes the right side, except for graphs. Fig(s) \_\_\_\_\_
9. SCALE. 37 CFR 1.84(k)  
\_\_\_\_ Scale not large enough to show mechanism without crowding when drawing is reduced in size to two-thirds in reproduction. Fig(s) \_\_\_\_\_
10. CHARACTER OF LINES, NUMBERS, & LETTERS. 37 CFR 1.84(i)  
\_\_\_\_ Lines, numbers & letters not uniformly thick and well defined, clean, durable, and black (poor line quality). Fig(s) \_\_\_\_\_
11. SHADING. 37 CFR 1.84(m)  
\_\_\_\_ Solid black areas pale. Fig(s) \_\_\_\_\_  
\_\_\_\_ Solid black shading not permitted. Fig(s) \_\_\_\_\_  
\_\_\_\_ Shaded lines, pale, rough and blurred. Fig(s) \_\_\_\_\_
12. NUMBERS, LETTERS, & REFERENCE CHARACTERS. 37 CFR 1.84(p)  
\_\_\_\_ Numbers and reference characters not plain and legible. Fig(s) \_\_\_\_\_  
\_\_\_\_ Figure legends are poor. Fig(s) \_\_\_\_\_  
\_\_\_\_ Numbers and reference characters not oriented in the same direction as the view. 37 CFR 1.84(p)(1) Fig(s) \_\_\_\_\_  
\_\_\_\_ English alphabet not used. 37 CFR 1.84(p)(2) Fig(s) \_\_\_\_\_  
\_\_\_\_ Numbers, letters and reference characters must be at least .32 cm (1/8 inch) in height. 37 CFR 1.84(p)(3) Fig(s) 1, 2
13. LEAD LINES. 37 CFR 1.84(q)  
\_\_\_\_ Lead lines cross each other. Fig(s) \_\_\_\_\_  
\_\_\_\_ Lead lines missing. Fig(s) \_\_\_\_\_
14. NUMBERING OF SHEETS OF DRAWINGS. 37 CFR 1.84(t)  
\_\_\_\_ Sheets not numbered consecutively, and in Arabic numerals beginning with number 1. Sheet(s) \_\_\_\_\_
15. NUMBERING OF VIEWS. 37 CFR 1.84(u)  
\_\_\_\_ Views not numbered consecutively, and in Arabic numerals, beginning with number 1. Fig(s) \_\_\_\_\_
16. CORRECTIONS. 37 CFR 1.84(w)  
\_\_\_\_ Corrections not made from prior PTO-948 dated \_\_\_\_\_
17. DESIGN DRAWINGS. 37 CFR 1.152  
\_\_\_\_ Surface shading shown not appropriate. Fig(s) \_\_\_\_\_  
\_\_\_\_ Solid black shading not used for color contrast. Fig(s) \_\_\_\_\_

## COMMENTS

REVIEWER

A.D.

DATE

7/7/99

TELEPHONE NO.

ATTACHMENT TO PAPER NO.

3

<b>Notice of References Cited</b>				Application No. 09/317,235		Applicant(s) SANDELMAN ET AL	
				Examiner DARYL C. POPE		Group Art Unit 2736	
U.S. PATENT DOCUMENTS							
		DOCUMENT NO.	DATE	NAME		CLASS	SUBCLASS
	A	5,400,246	3/1995	WILSON ET AL		340	825.06 X
	B						
	C						
	D						
	E						
	F						
	G						
	H						
	I						
	J						
	K						
	L						
	M						
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
	N						
	O						
	P						
	Q						
	R						
	S						
	T						
NON-PATENT DOCUMENTS							
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Interview Summary

Application No. 09/317,235	Applicant(s) SANDELMAN	
Examiner DARYL C. POPE	Group Art Unit 2736	

All participants (applicant, applicant's representative, PTO personnel):

- (1) DARYL C. POPE
- (2) BARRY NEGRIN
- (3) DAVID SANDELMAN
- (4) \_\_\_\_\_

Date of Interview May 11, 2000

Type: ☐ Telephonic ☒ Personal (copy is given to ☐ applicant ☒ applicant's representative).

Exhibit shown or demonstration conducted: ☐ Yes ☒ No. If yes, brief description:

Agreement ☐ was reached. ☒ was not reached.

Claim(s) discussed: 1, 31, 51, and 52

Identification of prior art discussed:  
WILSON ET AL(5,400,246)


Description of the general nature of what was agreed to if an agreement was reached, or any other comments:  
PROPOSED AMENDMENTS TO THE CLAIMS 1,31,51, AND 52 WHICH NCLUDED LIMITATIONS CONCERNING THE ROUTING OF OUTGOING MESSAGE PROFILES PERTAINING TO THE OPERATING STATUS OF MONITORED DEVICES, THE MESSAGE PROFILES BEING USER DEFINABLE AND MODIFIABLE. THE EXAMINER INFORMED THE APPLICANT'S REPRESENTATIVE THAT THESE LIMITATIONS APPEARED TO OVERCOME THE PRIOR ART OF RECORD.

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendents which would render the claims allowable is available, a summary thereof must be attached.)

1. ☒ It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a response to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

2. ☐ Since the Examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the interview unless box 1 above is also checked.

  
DARYL C. POPE  
PRIMARY EXAMINER  
ART UNIT 2736

Examiner Note: You must sign and stamp this form unless it is an attachment to a signed Office action.



# LEVISOHN, LERNER, BERGER & LANGSAM

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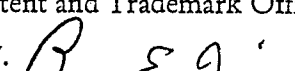
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## FACSIMILE TRANSMISSION

TO: U.S. Patent and Trademark Office FAX NO.: 703-305-3988  
ATTN: Examiner Darryl Pope Ser. No.: 09/317,235  
FROM: Barry E. Negrin URGENT  
LEVISOHN, LERNER, BERGER & LANGSAM

DATE: 05/04/00 Inventor: Sandelman et al.

PAGES INCLUDING THIS COVER SHEET: 17  
CONFIRMATION BY MAIL TO FOLLOW - ☐ YES - ☒ NO

CERTIFICATE OF FAX TRANSMISSION: I hereby certify that the attached correspondence, comprising Proposed Amendment for Interview Purposes Only, for the above-referenced patent application, are being submitted and facsimile transmitted to the U.S. Patent and Trademark Office at Fax. No. 703-305-3988 on May 4, 2000. By: Barry E. Negrin, Reg. No. 37,407. 

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Sandelman, David et al.

Serial No.: 09/317,235

Filing Date: May 24, 1999

For: **Electronic Message Delivery  
System Utilizable in the  
Monitoring of Remote  
Equipment and Method of  
Same (as amended herein)**

Examiner: Pope, D.

Art Unit: 2736

Attorney Docket No.: 1216.034

Patent

DRAFT

**ATTENTION:  
EXAMINER  
DARRYL POPE**

VIA FACSIMILE: 703-305-3988  
Assistant Commissioner for Patents  
Washington, DC 20231

**PROPOSED AMENDMENT**  
**FOR INTERVIEW PURPOSES ONLY**

**In the Title:** Before "EQUIPMENT" insert -REMOTE-.

**In the Claims:**

1. (Amended) A method of monitoring remote equipment comprising the steps of:
- a) determining a state of at least one parameter of at least one piece of the remote equipment;
  - b) communicating [messages regarding] a message indicative of the state from the piece
  - 5 of remote equipment to a computer server [central location] as an incoming message[s]; [and ]
  - c) enabling a user to remotely configure or modify a user-defined message profile  
containing outgoing message routing instructions, the user-defined message profile being  
storable on the computer server;

d) determining whether an incoming message is an incoming exception message  
10 indicative of improper operation of the piece of remote equipment;

[c)]e) if it is determined in step d) that an incoming message is an incoming exception  
message, forwarding at least one outgoing exception message[s] based on the incoming  
message[s] to at least one user-defined communication device specifiable in the user-defined  
message profile.

15 wherein the user can remotely configure or modify the user-defined message profile by  
remotely accessing the computer server.

2. (Amended) A method according to Claim 1, wherein said step b) further comprises the  
step of communicating [the] a plurality of incoming messages to the computer server [central  
location] via one of a plurality of different communication media.

3. (Amended) A method according to Claim 2, further comprising the step of [d)]  
normalizing the incoming messages into a uniform format to create normalized messages,  
wherein the outgoing exception messages are generated based on the normalized messages.

5. (Amended) A method according to Claim 1, wherein step (e) further comprises  
[comprising] the step of [e)] determining whether an incoming message is [an incoming  
exception message or] a normal status message indicative of proper operation of the piece of  
remote equipment.

*Kindly cancel Claims 6-8 without prejudice or disclaimer.*

9. (Amended) A method according to Claim [8] 1, wherein [said step h)] the remote  
configuring or modifying of the message profile enabled in step c) is performed by the user via  
the Internet.

10. (Amended) A method according to Claim [8] 1, wherein [step g)] the remote configuring or modifying of the message profile enabled in step c) further comprises the steps of:

5 1) selecting at least one type of user-defined communication device to which outgoing exception messages are to be forwarded;

2) selecting specific user-defined communication devices of the types selected in step 1);  
and

3) determining the content of the outgoing exception messages forwarded in step [c)] d).

11. (Amended) A method according to Claim 5, wherein if the incoming message is determined in step [e] d) to be a normal status message from the remote equipment indicating proper operation of the equipment, the method further comprises the step of i) storing the normal status message in a normal status memory.

12. (Amended) A method according to Claim 11, further comprising the steps of:

j) providing a main list having information identifying [of] all pieces of the remote equipment being monitored;

5 k) comparing the contents of the normal status memory with the main list to determine [which pieces of remote equipment did not communicate] whether a normal status message was not communicated within a predetermined period of time for any pieces of the remote equipment being monitored; and

l) generating an outgoing exception message in accordance with the message profile for each piece of equipment identified in step k) as not having sent a normal status message.

*Kindly cancel Claims 13 and 14 without prejudice or disclaimer.*

15. (Amended) A method according to Claim [14] 1, wherein the computer server [central location] includes a [computer] database in which a plurality of message profiles may be stored, and [said step h)] wherein the remote configuring or modifying of the message profile enabled in step c) is performed by the user via the Internet.

*Kindly cancel Claim 16 without prejudice or disclaimer.*

17. (Amended) A method according to Claim 1, wherein the at least one remote communication devices specifiable by the message profile include at least one of a facsimile machine, an e-mail receiving device [account], a cellular telephone, a beeper, a pager, a PCS device, and a telephone.

18. (Amended) A method according to Claim 2, wherein the plurality of communication media of step b) includes at least one of a cellular telephone network, radio transmissions, telephone lines, and the Internet.

19. (Amended) A method according to Claim [13] 1, wherein step [c)] e) further comprises forwarding multiple outgoing exception messages to multiple user-defined communication devices in response to a single incoming message in accordance with the user-defined message profile.

20. (Amended) A method according to Claim [13] 1, wherein step [c)] e) further comprises forwarding a single outgoing exception message to a user-defined communication device in response to multiple incoming messages in accordance with the user-defined message profile.

21. (Amended) A method according to Claim [13] 1, further comprising the step of [m)] storing a plurality of user-defined message profiles on [at] the computer server [central location].

*Kindly cancel Claims 22-24 without prejudice or disclaimer.*

26. (Amended) A method according to Claim 1, wherein said step b) further comprises the step of communicating in the incoming message an identification code of the piece of remote equipment to which the incoming message pertains [in the incoming messages].

27. (Amended) A method according to Claim 26, wherein said step [c)] e) further comprises the step of forwarding the identification code in the outgoing exception message to the at least one user-defined communication device in accordance with the user-defined message profile.

28. (Amended) A method according to Claim [7] 1, wherein step [g)] c) further comprises the step of enabling selection of different user-defined communication devices to receive outgoing exception messages at different time periods in accordance with the message profile, the message profile being definable to have the exception messages forwarded to different specified remote communication devices at different times.

30. (Amended) A method according to Claim [11] 5, [further comprising the step of forwarding] wherein each normal status message includes operational information concerning the piece of remote equipment to which the [embedded within a] normal status message pertains.

31. (Amended) A system for monitoring remote equipment, comprising:  
a sensor in local communication with a piece of remote equipment, said sensor detecting a state of at least one parameter of the piece of remote equipment;

an interface unit, locally connected to said sensor, said interface unit having a message  
5 generating mechanism; and

a [central] computer server in remote communication with said interface unit, said server  
adapted to receive messages generated by said interface unit, said computer server having a user  
interface, a user being capable of remotely accessing said computer server via said user interface  
to remotely configure a user-defined message profile containing outgoing message routing  
10 instructions,

wherein when said sensor detects an exception condition in the piece of remote  
equipment, said interface unit generates an incoming exception message indicative of the  
exception condition and forwards said message to said server,

and wherein said server forwards at least one outgoing exception message to at least one  
15 predetermined user-defined remote communication device based on said incoming exception  
message as specified in said user-defined message profile.

32. (Amended) A system according to Claim 31, wherein said message generating  
mechanism of the interface unit forwards said incoming exception messages to said computer  
server via at least one of a plurality of communication media, said media comprising at least one  
of a cellular telephone network, radio transmissions, telephone lines, and the Internet.

35. (Amended) A system according to Claim 31, said system monitoring a plurality of  
pieces of equipment, each piece having an identification code, said server further comprising:

a first memory on which equipment identification codes of all monitored equipment are  
stored;

a second memory in which communication device identification codes of all of said user-  
defined communication remote devices are stored, said communication device identification  
codes being configured in a plurality of said user-defined message profiles.

36. (Amended) A system according to Claim 35, wherein said [server further comprising a] user interface [remotely accessible by users and] is in communication with said second memory[, wherein] so that users can create or edit said user-defined message profiles remotely from said server.

37. (Amended) A system according to Claim 36, wherein said user interface enables a user to configure a user-defined message profile to select at least one type of [user-defined] communication device to which outgoing exception messages are to be forwarded, select specific user-defined communication devices of the types selected, and determine the content of said outgoing exception messages forwarded by said server to said user-defined communication devices.

38. (Amended) A system according to Claim 31, wherein said remote [user-defined] communication devices include [communication devices including] at least one of a facsimile machine, an e-mail receiving device [account], a cellular telephone, a beeper, a pager, a PCS device, and a land line telephone.

39. (Amended) A system according to Claim 35, wherein said interface unit periodically generates a normal status message if said sensor to which said interface unit is connected detects a normal status condition indicative of proper operation of [its] said respective piece of equipment to which said sensor is connected [is functioning properly], said normal status message including an equipment identification code of said respective piece of equipment.

40. (Amended) A system according to Claim 39, said server further [comprises] comprising:

a third memory for storing said normal status messages;



[means for comparing the normal status memory with the main list and for identifying] a  
5 comparator processor in communication with said first and third memories adapted to identify  
which of said pieces of monitored remote equipment having an identification code stored in said  
first memory did not communicate a normal status message stored in said third memory within a  
predetermined period of time; and

[means for generating and forwarding] a server message generator in communication with  
10 said comparator processor adapted to generate an outgoing exception message for each piece of  
equipment identified by said [comparing and identifying means] comparator processor, said  
outgoing exception message being forwarded by said server to at least one of said user-defined  
communication devices specified by [in accordance with] at least one of said user-defined  
message profiles.

42. (Amended) A system according to Claim 35, said interface unit comprising a plurality  
of remote interface units, wherein each of said plurality of remote interface units is locally  
respectively connected to a single piece of said remote pieces of equipment.

43. (Amended) A system according to Claim 35, said interface unit comprising a plurality  
of remote interface units, wherein each of said plurality of interface units is locally connected to  
a plurality of sensors which are in turn respectively connected to a number of said remote pieces  
of equipment.

44. (Amended) A system according to Claim 35, wherein said user-defined message  
profiles are each remotely configurable by a user to cause said server to forward a plurality of  
said outgoing exception messages in response to receipt of a single incoming exception  
message in accordance with the user-defined message profile.

45. (Amended) A system according to Claim 35, wherein said user-defined message profiles are each remotely configurable by a user to cause said server to forward a single of said outgoing exception messages in response to receipt of multiple incoming exception messages in accordance with the user-defined message profile.

46. (Amended) A system according to Claim 40, wherein said [outgoing exception message generating and forwarding means] computer server is adaptable to forward a plurality of said outgoing exception messages for each piece of equipment identified by said [comparing and identifying means] comparator processor in accordance with the user-defined message profile.

48. (Amended) A system according to Claim 47, wherein said outgoing exception message comprises exception information and identification information concerning said piece of remote equipment to which said normal status message pertains.

49. (Amended) A system according to Claim 39, wherein said normal status message further comprises operational information of said piece of remote equipment to which said normal status message pertains.

50. (Amended) A system according to Claim 40, said computer server further comprising a fourth memory upon which outgoing exception messages are stored.

***Kindly add the following new claims.***

-51. A method for monitoring remote equipment comprising the steps of:

a) determining a state of at least one parameter of at least one piece of the remote equipment;

b) communicating a message indicative of the state to a computer server as an incoming message, the incoming message having a respective incoming format;

c) normalizing the incoming message to form a corresponding normalized message having a predetermined uniform format;

d) storing the normalized message in a normalized message database on the computer server;

10 e) determining from the incoming message whether at least one exception message related to the incoming message is to be sent to at least one remote communication device specified by a plurality of message profiles stored at the computer server;

15 f) if it is determined in step e) that at least one exception message related to the incoming message is to be sent, deriving the at least one exception message from the stored normalized message corresponding to the related incoming message and the message profiles, the at least one exception message derived thereby having a respective format suitable for reception by the at least one remote communication device to which the at least one exception message is to be sent; and

20 g) sending the at least one exception message derived in step f) to the at least one remote communication device specified by the message profiles,

wherein the message profiles may be created or modified at least in part by a user by remote access of the computer server.

52. A system for monitoring remote equipment, comprising:

a sensor in communication with a piece of the remote equipment for detecting the state of at least one parameter thereof;

5 an interface unit, coupled to said sensor, said interface unit having a message generating mechanism for generating messages indicative of the state of the at least one parameter of the piece of the remote equipment; and

a computer server in communication with said interface unit, said server comprising:

a message interface for receiving messages generated by said interface unit;

10 a message normalizer for normalizing each one of the messages received from the  
interface unit to form corresponding normalized messages having a predetermined uniform  
format;

a normalized message database for storing normalized messages, including  
normalized messages from the message normalizer;

a message profile database for storing a plurality of message profiles;

15 a message processor for determining from each one of the messages received from  
the interface unit whether at least one exception message related to the received message is to be  
sent to at least one remote communication device specified by the message profiles;

20 an exception message generator for deriving the at least one exception message  
determined to be sent by the message processor to the at least one remote communication device,  
the at least one exception message being derived from a normalized message corresponding to  
the related message received from the interface unit and the message profiles, the at least one  
exception message derived thereby having at least one respective format suitable for reception by  
the at least one remote communication device to which the at least one exception message is to  
be sent;

25 a message interface for sending the at least one exception message derived by the  
exception message generator to the at least one remote communication device specified by the  
message profiles; and

a user interface for enabling a user at a remote location to create or modify at least  
a portion of the message profiles in the message profile database,

30 wherein when said sensor detects an exception condition in the piece of remote  
equipment, said interface unit generates an incoming message indicative of the exception  
condition and forwards said message to said server.—

### REMARKS

These proposed amendments are being submitted for interview purposes only. The gist of the claim amendments can be found in Claims 1 and 31; the remaining claims have, by and large, been amended for proper antecedency/dependency reasons. New claims 51 and 52 are of slightly different scope from Claims 1 and 31. No new matter has been added.

The invention is an electronic message delivery system for monitoring remote equipment, receiving signals from the remote equipment based on the status of the equipment, and sending outgoing messages to the appropriate parties and their various communication devices based on the messages received. The invention includes sensors locally connected to the remote equipment, interface units locally connected to the sensors, and a computer server that can receive messages from the remote interface units based on the readings of the sensors. The interface units are not hardwired into the central server, they communicate via remote means, such as via the cellular telephone network or the Internet.

One of the critical aspects of the invention is that the server includes a user interface which allows each user to remotely configure the server by configuring (creating, modifying, deleting, etc.) a message profile. The message profile is essentially a set of instructions that tells the server any or all of the following: a) to whom to route outgoing messages; b) which messages get routed to which person; c) to what communication devices the messages are routed (fax, pager, e-mail, etc.); d) if there should be a time delay before routing the messages; e) if several incoming messages should be received before sending out an outgoing message; f) if one incoming message should trigger the sending of several outgoing messages; and the like. The user can, from his home, his office, his Palm Pilot, or any other location that is remote from the computer server, connect with the server via the interface and reconfigure his message profile. In the preferred embodiment, the user interface is an Internet link which enables the user to access from a remote computer and create or edit his message profile. Passwords are provided so that a user's profile can only be edited by the proper person (i.e., the user).

An example of how the system is implemented is in the heating, ventilating, and cooling (HVAC) arts. Contractors and maintenance workers have to be able to monitor the equipment they are responsible for; however going around to all the boilers and air conditioners in their care just to check up on them is very time consuming. With the present system, sensors are locally attached –on site– to the air conditioner, for example, which can detect when specific problems occur. In the preferred embodiment, an interface unit is connected –also on site– to the sensors. When the sensors detect an abnormal condition –such as a lack of fan blower speed even though the air conditioner should be working– they send a signal to the interface unit. The interface unit can remotely access, via a national wireless network, for example, the computer server utilizing, for example, the handshaking portion of the cellular network. Thus, the interface unit and the computer server can be thousands of miles away and still communicate effectively.

The server receives the incoming message from the remote interface unit that the air conditioner's fan is not operating. On the computer is stored a user-defined message profile, which is like a laundry list of message routing instructions such as "if X goes wrong, tell Mr. Y via his pager/fax machine/e-mail, etc." For example, if the fan is not blowing in an air conditioner, there could be a blockage which is physically preventing the fan blades from turning, or there could be an electrical short preventing current from flowing to the fan motor, or several other possible problems. A contractor could have his message profile set up to notify one of his crew by sending the crewman a message. Connected to the server are a number of message output mechanisms that can send a message over a variety of different media as specified by the message profile. The crewman could get a beep or a message on his pager or could receive an e-mail for a lower priority problem. The contractor/supervisor could also receive a message so that he can check up on his crew.

Some messages require more attention than others. For example, if the trouble with the air conditioner were so serious as to threaten the whole building, the crewman, the contractor, and the owner of the building could be sent messages via their pagers. The contractor would be able to make the determination as to which problems require which messages and who should

hear about it. The interface units also send out periodic "heartbeat" signals which let the server know that everything is okay. The server is designed to route messages from multiple pieces of equipment to multiple people in accordance with multiple message profiles. That is, a number of different contractors can use the system independently of each other.

The Examiner cited Wilson et al. (USP. No. 5,400,246) as rendering obvious the claimed invention. Applicant disagrees for several reasons. First, there is absolutely no teaching, suggestion, or even a hint in Wilson of enabling a user to remotely configure a message profile on the computer server. The system of Fig. 12, for example, can send voice messages or faxes out to a recipient (see col. 34, lines 6-15), but it cannot receive instructions remotely from the intended message recipients. More specifically, Wilson does not permit a remote user to configure a message profile to specify where the outgoing messages are to be sent. There is absolutely no remote user interface in Wilson as recited and set forth in the claims of the present application. Wilson does discuss enabling the user to configure the system for a particular application (see Abstract, cols. 9-11 generally and col. 10, line 67 and on, in particular), but not remotely. In this description, the user must be sitting down at the central PC 12 in order to effect any changes on the system whatsoever. Thus, in Wilson, the "user" is the person who is setting up the system. Thus, while the "user" can go to the central computer and configure the system, he cannot do it from home, the office, or in the field. Remote communication between user and system is thus unidirectional, from the system to the user.

In Applicant's invention, by contrast, the user, as recited in the claims, is the person subscribing to the service, the person intended to receive the messages. He can log into the server via remote means, such as the Internet, to configure his message profile to tell the computer server where to send what error messages to whom and under what circumstances. Remote communication between the subscriber/user and the system is thus bidirectional: from the system to the user when the system is sending an error message, and from the user to the system when the user is creating/editing the message profile (among other things). Also, in Wilson, only a computer programmer can alter or modify any instructions on the computer; by

contrast, in Applicant's invention, the end user, not the programmer setting the system up, can adjust the message profile without any knowledge of computer programming.

Wilson also fails to teach or suggest the monitoring of remote equipment. All of the equipment being monitored in Wilson is hardwired into the system and is monitored locally. All of the various systems in Wilson require the I/O bridge device 14 into which all of the monitored equipment is directly wired. For example, Fig. 2 of Wilson shows an alarm system with smoke detectors 66 and 67 and burglar alarm loops 62 and 64. All of the devices are connected via wires to I/O bridge device 14 (see col. 9, lines 40-55). The equipment being monitored is not remote equipment, as required by the present claims, but rather local equipment.

Even the system shown in Fig. 12 of Wilson is only good for monitoring local equipment despite the presence of radio transceivers. As described in columns 33 and 34 of Wilson, Fig. 12 represents an alarm system for a car dealership lot. Instead of using wires to connect the anti-theft devices to the base transceiver 700, each car is provided with an RF transmitter which can broadcast back to the main base. However, what is described is a local RF network only. It is designed to cover the parking lot of an automobile dealer (see col. 34, lines 46-61), or a range of maybe a few thousand feet. Applicant's invention can monitor equipment that is truly remote, and it can be used over the entire world, because of: a) the ability of the remote interface units to contact the central server remotely; b) the ability of the central server to contact the message recipient remotely via any format of communication device, and c) the ability of the user/subscriber to contact the server and configure his message profile remotely.

Finally, Wilson fails to teach that multiple subscribers can utilize the system simultaneously. The inventive system can store multiple message profiles of multiple subscribers and route the messages from each person's equipment to that person in accordance with his message profile. By contrast, Wilson is silent as to accommodating multiple users.



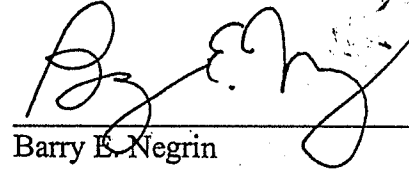
U.S. Appl'n No. 09/317,235  
Proposed Amendment  
FOR INTERVIEW PURPOSES ONLY

Applicant and the undersigned are willing to meet with the Examiner for an interview if this draft amendment is not entirely acceptable. Otherwise, an early Notice of Allowance is respectfully requested.

Date: May 4, 2000

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New York, New York 10017  
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Respectfully submitted,



Barry E. Negrin  
Reg. No.: 37,407  
Attorney for Applicant

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05-18-00

GAU 8736  
#

<b>COMBINED AMENDMENT &amp; PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) (Small Entity)</b>			Docket No. #5 1216.034		
In Re Application Of: Sandelman, David et al.					
Serial No. 09/317,255	Filing Date May 24, 1999	Examiner Daryl Pope	Group Art Unit 2736		
Invention: Electronic Message Delivery System Utilizable in the Monitoring of Remote Equipment and Method of Same					
<u>TO THE ASSISTANT COMMISSIONER FOR PATENTS:</u>					
This is a combined amendment and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the Office Action of <u>1/20/00</u> in the above-identified application. <div style="text-align: center;"><small>Date</small></div>					
The requested extension is as follows (check time period desired): <div style="display: flex; justify-content: space-between;"><div><input checked="" type="checkbox"/> One month</div><div><input type="checkbox"/> Two months</div><div><input type="checkbox"/> Three months</div><div><input type="checkbox"/> Four months</div><div><input type="checkbox"/> Five months</div></div> <div style="display: flex; justify-content: space-between;"><div>from: <u>4/20/00</u> <small>Date</small></div><div>until: <u>5/20/00</u> <small>Date</small></div></div>					
A verified statement of small entity status as a small entity under 37 CFR 1.27: <div style="display: flex; justify-content: space-between;"><div><input type="checkbox"/> is enclosed.</div><div><input checked="" type="checkbox"/> has already been filed in this application.</div></div>					
The fee for the amendment and extension of time has been calculated as shown below:					
CLAIMS AS AMENDED					
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST # PREV. PAID FOR	NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	43 -	50 =	0	x \$9.00	\$0.00
INDEP. CLAIMS	4 -	2 =	2	x \$39.00	\$78.00
FEE FOR AMENDMENT					\$78.00
FEE FOR EXTENSION OF TIME					\$55.00
<b>TOTAL FEE FOR AMENDMENT AND EXTENSION OF TIME</b>					<b>\$133.00</b>

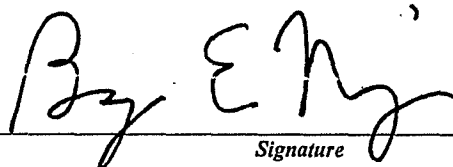
P28SMALL/REV03

**COMBINED AMENDMENT & PETITION FOR EXTENSION OF  
TIME UNDER 37 CFR 1.136(a) (Small Entity)**

Docket No.  
1216.034

The fee for the amendment and extension of time is to be paid as follows:


- ☒ A check in the amount of **\$133.00** for the amendment and extension of time is enclosed.
- ☐ Please charge Deposit Account No. \_\_\_\_\_ in the amount of \_\_\_\_\_  
A duplicate copy of this sheet is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. **02-2105**  
A duplicate copy of this sheet is enclosed.
- ☒ Any additional filing fees required under 37 C.F.R. 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.17.
- ☐ If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. \_\_\_\_\_  
A duplicate copy of this sheet is enclosed.

  
Signature

Dated: May 17, 2000

Barry E. Negrin, Esq. (Reg. No. 37,407)  
Levisohn, Lerner, Berger & Langsam  
757 Third Avenue - Suite 2400  
New York, New York 10017  
Telephone (212) 486-7272  
Facsimile (212) 486-0323

I certify that this document and fee is being deposited  
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Signature of Person Mailing Correspondence

Lourdes Rodriguez

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CC:

P28SMALL/REV03

<b>COMBINED AMENDMENT &amp; PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) (Small Entity)</b>	Docket No. 1216.034
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In Re Application Of: Sandelman, David et al.

Serial No. 09/317,235	Filing Date May 24, 1999	Examiner Daryl Pope	Group Art Unit 2736
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Invention: Electronic Message Delivery System Utilizable in the Monitoring of Remote Equipment and Method of Same

TO THE ASSISTANT COMMISSIONER FOR PATENTS:

This is a combined amendment and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the Office Action of 1/20/00 in the above-identified application.  
*Date*

The requested extension is as follows (check time period desired):  
☒ One month    ☐ Two months    ☐ Three months    ☐ Four months    ☐ Five months  
from: 4/20/00    until: 5/20/00  
*Date*    *Date*

A verified statement of small entity status as a small entity under 37 CFR 1.27:  
☐ is enclosed.  
☒ has already been filed in this application.

The fee for the amendment and extension of time has been calculated as shown below:

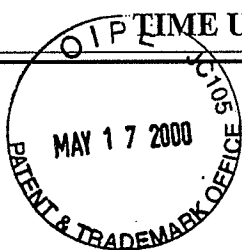
CLAIMS AS AMENDED						
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST # PREV. PAID FOR	NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE	
TOTAL CLAIMS	43 -	50 =	0	x \$9.00	\$0.00	
INDEP. CLAIMS	4 -	2 =	2	x \$39.00	\$78.00	
FEE FOR AMENDMENT					\$78.00	
FEE FOR EXTENSION OF TIME					\$55.00	
TOTAL FEE FOR AMENDMENT AND EXTENSION OF TIME					\$133.00	

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P28SMALL/REV03

COMBINED AMENDMENT & PETITION FOR EXTENSION OF  
TIME UNDER 37 CFR 1.136(a) (Small Entity)

Docket No.  
1216.034



The fee for the amendment and extension of time is to be paid as follows:

- ☒ A check in the amount of \$133.00 for the amendment and extension of time is enclosed.
- ☐ Please charge Deposit Account No. in the amount of  
A duplicate copy of this sheet is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 02-2105  
A duplicate copy of this sheet is enclosed.
- ☒ Any additional filing fees required under 37 C.F.R. 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.17.
- ☐ If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. A duplicate copy of this sheet is enclosed.

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02 FC 102

55.00 OP  
78.00 OP

*By E Nj*  
Signature

Dated: May 17, 2000

Barry E. Negrin, Esq. (Reg. No. 37,407)  
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757 Third Avenue - Suite 2400  
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Facsimile (212) 486-0323

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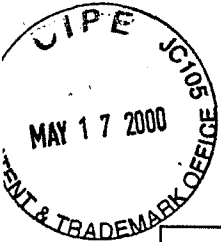
*Lourdes Rodriguez*  
Signature of Person Mailing Correspondence

Lourdes Rodriguez

Typed or Printed Name of Person Mailing Correspondence

CC:

P28SMALL/REV03



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: application of:	Sandelman, David et al.
Serial No.:	09/317,235
Filing Date:	May 24, 1999
For:	<b>Electronic Message Delivery System Utilizable in the Monitoring of Remote Equipment and Method of Same <i>(as amended herein)</i></b>
Examiner:	Daryl Pope
Art Unit:	2736
Attorney Docket No.:	1216.034

Patent  
Application

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Assistant Commissioner For Patents  
Washington, DC 20231

TRANSMITTAL LETTER

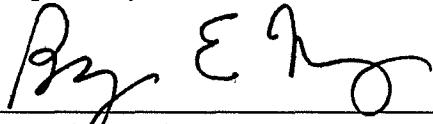
Sir:

Enclosed herewith is an Amendment. Check for \$133.00. In the event of any deficiency in the fee due in connection with this transmittal, the Commissioner is authorized and directed to debit our deposit account No. 02-2105 for the amount of such deficiency.

Dated: May 17, 2000

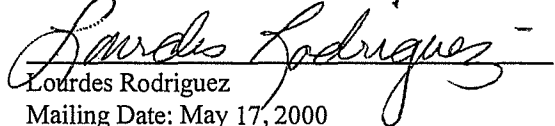
Respectfully submitted,

Levisohn, Lerner, Berger & Langsam  
757 Third Avenue, Suite 2400  
New York, NY 10018

  
\_\_\_\_\_  
Barry E. Negrin (Reg. No. 37,407)  
Attorney for Applicant

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MAY 17 2000  
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

6/a  
M. J. [Signature]  
5-23-00

Continuation-in-part re application of: Sandelman, David et al.  
Serial No.: 09/317,235  
Filing Date: May 24, 1999  
For: **Electronic Message Delivery System Utilizable in the Monitoring of Remote Equipment and Method of Same (as amended herein)**  
Examiner: Daryl Pope  
Art Unit: 2736  
Attorney Docket No.: 1216.034

Patent

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Assistant Commissioner for Patents  
Washington, DC 20231

AMENDMENT

Sir:

This Amendment is believed fully responsive to the Examiner's Office Action of January 20, 2000. Favorable reconsideration is respectfully requested. No new matter has been added. Applicant hereby petitions under 37 CFR § 1.136 for a **one month** extension of time extending the response period to **May 20, 2000**. Since Applicants and Applicants' assignee are both small entities, a check for the one-month extension fee of \$55 is enclosed.

Kindly amend the application as follows.

In the Title: Before "EQUIPMENT" insert -REMOTE-.

In the Claims:

1. (Amended) A method of monitoring remote equipment comprising the steps of:

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a) determining a state of at least one parameter of at least one piece of the remote equipment;

5 b) communicating [messages regarding] a message indicative of the state from the piece of remote equipment to a computer server [central location] as an incoming message[s]; [and ]

c) enabling a user to remotely configure or modify a user-defined message profile containing outgoing message routing instructions, the user-defined message profile being storable on the computer server;

10 d) determining whether an incoming message is an incoming exception message indicative of improper operation of the piece of remote equipment;

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[c)]e) if it is determined in step d) that an incoming message is an incoming exception message, forwarding at least one outgoing exception message[s] based on the incoming message[s] to at least one user-defined communication device specifiable in the user-defined message profile.

15 wherein the user can remotely configure or modify the user-defined message profile by remotely accessing the computer server.

2. (Amended) A method according to Claim 1, wherein said step b) further comprises the step of communicating [the] a plurality of incoming messages to the computer server [central location] via one of a plurality of different communication media.

3. (Amended) A method according to Claim 2, further comprising the step of [d)] normalizing the incoming messages into a uniform format to create normalized messages, wherein the outgoing exception messages are generated based on the normalized messages.

5. (Amended) A method according to Claim 1, wherein step (e) further comprises [comprising] the step of [e)] determining whether an incoming message is [an incoming



Q2  
Cancel.  
exception message or] a normal status message indicative of proper operation of the piece of remote equipment.

Kindly cancel Claims 6-8 without prejudice or disclaimer.

6  
9. (Amended) A method according to Claim [8] 1, wherein [said step h)] the remote configuring or modifying of the message profile enabled in step c) is performed by the user via the Internet.

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10. (Amended) A method according to Claim [8] 1, wherein [step g)] the remote configuring or modifying of the message profile enabled in step c) further comprises the steps of:

- 5
- 1) selecting at least one type of user-defined communication device to which outgoing exception messages are to be forwarded;
  - 2) selecting specific user-defined communication devices of the types selected in step 1);
- and
- 3) determining the content of the outgoing exception messages forwarded in step [c)] d).

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11. (Amended) A method according to Claim 5, wherein if the incoming message is determined in step [e] d) to be a normal status message from the remote equipment indicating proper operation of the equipment, the method further comprises the step of <sup>+</sup><sub>1</sub> storing the normal status message in a normal status memory.

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12. (Amended) A method according to Claim <sup>8</sup><sub>11</sub>, further comprising the steps of:  
9) providing a main list having information identifying [of] all pieces of the remote equipment being monitored;

5 k) comparing the contents of the normal status memory with the main list to determine [which pieces of remote equipment did not communicate] whether a normal status message was not communicated within a predetermined period of time for any pieces of the remote equipment being monitored; and

l) generating an outgoing exception message in accordance with the message profile for each piece of equipment identified in step k) as not having sent a normal status message.

*Kindly cancel Claims 13 and 14 without prejudice or disclaimer.*

10  
15. (Amended) A method according to Claim [14] 1, wherein the computer server [central location] includes a [computer] database in which a plurality of message profiles may be stored, and [said step h)] wherein the remote configuring or modifying of the message profile enabled in step c) is performed by the user via the Internet.

*Kindly cancel Claim 16 without prejudice or disclaimer.*

11  
17. (Amended) A method according to Claim 1, wherein the at least one remote communication devices specifiable by the message profile include at least one of a facsimile machine, an e-mail receiving device [account], a cellular telephone, a beeper, a pager, a PCS device, and a telephone.

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18. (Amended) A method according to Claim 2, wherein the plurality of communication media of step b) includes at least one of a cellular telephone network, radio transmissions, telephone lines, and the Internet.

<sup>13</sup>  
~~19.~~ (Amended) A method according to Claim [13] 1, wherein step [c)] e) further comprises forwarding multiple outgoing exception messages to multiple user-defined communication devices in response to a single incoming message in accordance with the user-defined message profile.

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<sup>14</sup>  
~~20.~~ (Amended) A method according to Claim [13] 1, wherein step [c)] e) further comprises forwarding a single outgoing exception message to a user-defined communication device in response to multiple incoming messages in accordance with the user-defined message profile.

<sup>15</sup>  
~~21.~~ (Amended) A method according to Claim [13] 1, further comprising the step of [m)] storing a plurality of user-defined message profiles on [at] the computer server [central location].

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*Kindly cancel Claims ~~22-24~~ without prejudice or disclaimer.*

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<sup>17</sup>  
~~26.~~ (Amended) A method according to Claim 1, wherein said step b) further comprises the step of communicating in the incoming message an identification code of the piece of remote equipment to which the incoming message pertains [in the incoming messages].

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<sup>18</sup>  
~~27.~~ (Amended) A method according to Claim <sup>17</sup>~~26~~, wherein said step [c)] e) further comprises the step of forwarding the identification code in the outgoing exception message to the at least one user-defined communication device in accordance with the user-defined message profile.

<sup>19</sup>  
~~28.~~ (Amended) A method according to Claim [7] 1, wherein step [g)] c) further comprises the step of enabling selection of different user-defined communication devices to receive outgoing exception messages at different time periods in accordance with the message profile.

the message profile being definable to have the exception messages forwarded to different specified remote communication devices at different times.

20. (Amended) A method according to Claim [11] 5, [further comprising the step of forwarding] wherein each normal status message includes operational information concerning the piece of remote equipment to which the [embedded within a] normal status message pertains.

21. (Amended) A system for monitoring remote equipment, comprising:  
a sensor in local communication with a piece of remote equipment, said sensor detecting a state of at least one parameter of the piece of remote equipment;

an interface unit, locally connected to said sensor, said interface unit having a message generating mechanism; and

a [central] computer server in remote communication with said interface unit, said server adapted to receive messages generated by said interface unit, said computer server having a user interface, a user being capable of remotely accessing said computer server via said user interface to remotely configure a user-defined message profile containing outgoing message routing instructions,

wherein when said sensor detects an exception condition in the piece of remote equipment, said interface unit generates an incoming exception message indicative of the exception condition and forwards said message to said server,

and wherein said server forwards at least one outgoing exception message to at least one predetermined user-defined remote communication device based on said incoming exception message as specified in said user-defined message profile.

22. (Amended) A system according to Claim 21, wherein said message generating mechanism of the interface unit forwards said incoming exception messages to said computer

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2nd ed.  
server via at least one of a plurality of communication media, said media comprising at least one of a cellular telephone network, radio transmissions, telephone lines, and the Internet.

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25. (Amended) A system according to Claim <sup>27</sup>31, said system monitoring a plurality of pieces of equipment, each piece having an identification code, said server further comprising:  
a first memory on which equipment identification codes of all monitored equipment are stored;  
a second memory in which communication device identification codes of all of said user-defined communication remote devices are stored, said communication device identification codes being configured in a plurality of said user-defined message profiles.

27  
26. (Amended) A system according to Claim <sup>26</sup>35, wherein said [server further comprising a] user interface [remotely accessible by users and] is in communication with said second memory[, wherein] so that users can create or edit said user-defined message profiles remotely from said server.

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1st ed.  
28  
27. (Amended) A system according to Claim <sup>27</sup>36, wherein said user interface enables a user to configure a user-defined message profile to select at least one type of [user-defined] communication device to which outgoing exception messages are to be forwarded, select specific user-defined communication devices of the types selected, and determine the content of said outgoing exception messages forwarded by said server to said user-defined communication devices.

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28. (Amended) A system according to Claim <sup>28</sup>37, wherein said remote [user-defined] communication devices include [communication devices including] at least one of a facsimile machine, an e-mail receiving device [account], a cellular telephone, a beeper, a pager, a PCS device, and a land line telephone.

<sup>30</sup>  
39. (Amended) A system according to Claim <sup>26</sup>35, wherein said interface unit periodically generates a normal status message if said sensor to which said interface unit is connected detects a normal status condition indicative of proper operation of [its] said respective piece of equipment to which said sensor is connected [is functioning properly], said normal status message including an equipment identification code of said respective piece of equipment.

<sup>51</sup>  
40. (Amended) A system according to Claim <sup>30</sup>39, said server further [comprises] comprising:

a third memory for storing said normal status messages;

[means for comparing the normal status memory with the main list and for identifying] a comparator processor in communication with said first and third memories adapted to identify which of said pieces of monitored remote equipment having an identification code stored in said first memory did not communicate a normal status message stored in said third memory within a predetermined period of time; and

[means for generating and forwarding] a server message generator in communication with said comparator processor adapted to generate an outgoing exception message for each piece of equipment identified by said [comparing and identifying means] comparator processor, said outgoing exception message being forwarded by said server to at least one of said user-defined communication devices specified by [in accordance with] at least one of said user-defined message profiles.

<sup>33</sup>  
42. (Amended) A system according to Claim <sup>26</sup>35, said interface unit comprising a plurality of remote interface units, wherein each of said plurality of remote interface units is locally respectively connected to a single piece of said remote pieces of equipment.

<sup>34</sup>  
43. (Amended) A system according to Claim <sup>26</sup>35, said interface unit comprising a plurality of remote interface units, wherein each of said plurality of interface units is locally connected to

a plurality of sensors which are in turn respectively connected to a number of said remote pieces of equipment.

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34. (Amended) A system according to Claim <sup>26</sup>33, wherein said user-defined message profiles are each remotely configurable by a user to cause said server to forward a plurality of said outgoing exception messages in response to receipt of a single incoming exception message in accordance with the user-defined message profile.

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43. (Amended) A system according to Claim <sup>26</sup>35, wherein said user-defined message profiles are each remotely configurable by a user to cause said server to forward a single of said outgoing exception messages in response to receipt of multiple incoming exception messages in accordance with the user-defined message profile.

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46. (Amended) A system according to Claim <sup>31</sup>40, wherein said [outgoing exception message generating and forwarding means] computer server is adaptable to forward a plurality of said outgoing exception messages for each piece of equipment identified by said [comparing and identifying means] comparator processor in accordance with the user-defined message profile.

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48. (Amended) A system according to Claim <sup>38</sup>47, wherein said outgoing exception message comprises exception information and identification information concerning said piece of remote equipment to which said normal status message pertains.

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49. (Amended) A system according to Claim <sup>30</sup>39, wherein said normal status message further comprises operational information of said piece of remote equipment to which said normal status message pertains.

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50. (Amended) A system according to Claim 31, said computer server further comprising  
a fourth memory upon which outgoing exception messages are stored.

Kindly add the following new claims.

42  
1. A method for monitoring remote equipment comprising the steps of:

a) determining a state of at least one parameter of at least one piece of the remote equipment;

5 b) communicating a message indicative of the state to a computer server as an incoming message, the incoming message having a respective incoming format;

c) normalizing the incoming message to form a corresponding normalized message having a predetermined uniform format;

d) storing the normalized message in a normalized message database on the computer server;

10 e) determining from the incoming message whether at least one exception message related to the incoming message is to be sent to at least one remote communication device specified by a plurality of message profiles stored at the computer server;

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15 f) if it is determined in step e) that at least one exception message related to the incoming message is to be sent, deriving the at least one exception message from the stored normalized message corresponding to the related incoming message and the message profiles, the at least one exception message derived thereby having a respective format suitable for reception by the at least one remote communication device to which the at least one exception message is to be sent; and

20 g) sending the at least one exception message derived in step f) to the at least one remote communication device specified by the message profiles,

wherein the message profiles may be created or modified at least in part by a user by remote access of the computer server.



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52.

A system for monitoring remote equipment, comprising:

a sensor in communication with a piece of the remote equipment for detecting the state of at least one parameter thereof;

5 an interface unit, coupled to said sensor, said interface unit having a message generating mechanism for generating messages indicative of the state of the at least one parameter of the piece of the remote equipment; and

a computer server in communication with said interface unit, said server comprising:

a message interface for receiving messages generated by said interface unit;

10 a message normalizer for normalizing each one of the messages received from the interface unit to form corresponding normalized messages having a predetermined uniform format;

a normalized message database for storing normalized messages, including normalized messages from the message normalizer;

a message profile database for storing a plurality of message profiles;

all 5  
cont. a message processor for determining from each one of the messages received from the interface unit whether at least one exception message related to the received message is to be sent to at least one remote communication device specified by the message profiles;

20 an exception message generator for deriving the at least one exception message determined to be sent by the message processor to the at least one remote communication device, the at least one exception message being derived from a normalized message corresponding to the related message received from the interface unit and the message profiles, the at least one exception message derived thereby having at least one respective format suitable for reception by the at least one remote communication device to which the at least one exception message is to be sent;

25 a message interface for sending the at least one exception message derived by the exception message generator to the at least one remote communication device specified by the message profiles; and

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a user interface for enabling a user at a remote location to create or modify at least a portion of the message profiles in the message profile database,

wherein when said sensor detects an exception condition in the piece of remote equipment, said interface unit generates an incoming message indicative of the exception condition and forwards said message to said server.—

#### REMARKS

Claims 1-50 were examined. Claims 1-50 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,400,246 to Wilson et al. On May 4, 2000, the undersigned submitted some proposed claim amendments in further of an interview. On May 11, 2000, the undersigned and the Examiner, Daryl Pope, had an in-person interview where the proposed claims were discussed. The above claim amendments are the same claims discussed on May 11. The gist of the claim amendments can be found in Claims 1 and 31; the remaining claims have, by and large, been amended for proper antecedency/dependency reasons. New claims 51 and 52 are of slightly different scope from Claims 1 and 31. No new matter has been added. The Examiner indicated that it appeared that the independent claims, Claims 1 and 31 as well as newly added Claims 51 and 52 recited patentable subject matter. Applicants wholeheartedly thank the Examiner for taking the time and effort to review the proposed claim amendments and meet with them in the interview, and they appreciate the indication that the claims are likely patentable over the cited art.

The invention is an electronic message delivery system for monitoring remote equipment, receiving signals from the remote equipment based on the status of the equipment, and sending outgoing messages to the appropriate parties and their various communication devices based on the messages received. The invention includes sensors locally connected to the remote equipment, interface units locally connected to the sensors, and a computer server that can receive messages from the remote interface units based on the readings of the sensors. The

interface units are not hardwired into the computer server, they communicate via remote means, such as via the cellular telephone network or the Internet.

One of the critical aspects of the invention is that the server includes a user interface which allows each user to remotely configure the server by configuring (creating, modifying, deleting, etc.) a message profile. The message profile is essentially a set of instructions that tells the server any or all of the following: a) to whom to route outgoing messages; b) which messages get routed to which person; c) to what communication devices the messages are routed (fax, pager, e-mail, etc.); d) if there should be a time delay before routing the messages; e) if several incoming messages should be received before sending out an outgoing message; f) if one incoming message should trigger the sending of several outgoing messages; and the like. Essentially, the message profile tells the server the who, what, when, where, and how to send outgoing messages. The user can, from his home, his office, his Palm Pilot, or any other location that is remote from the computer server, connect with the server via the user interface and reconfigure his message profile. In the preferred embodiment, the user interface is an Internet link which enables the user to access from a remote computer and create or edit his message profile. Passwords are provided so that a user's profile can only be edited by the proper person (i.e., the user).

An example of how the system is implemented is in the heating, ventilating, and cooling (HVAC) arts. Contractors and maintenance workers have to be able to monitor the equipment they are responsible for; however going around to all the boilers and air conditioners in their care just to check up on them is very time consuming. With the present system, sensors are locally attached –on site– to the air conditioner, for example, which can detect when specific problems occur. In the preferred embodiment, an interface unit is connected –also on site– to the sensors. When the sensors detect an abnormal condition –such as a lack of fan blower speed even though the air conditioner should be working– they send a signal to the interface unit. The interface unit can remotely access, via a national wireless network, for example, the computer server utilizing,

for example, the handshaking portion of the cellular network. Thus, the interface unit and the computer server can be thousands of miles away and still communicate effectively.

The server receives the incoming message from the remote interface unit that the air conditioner's fan is not operating. On the computer is stored a user-defined message profile, which is like a laundry list of message routing instructions such as "if X goes wrong, tell Mr. Y via his pager/fax machine/e-mail, etc." For example, if the fan is not blowing in an air conditioner, there could be a blockage which is physically preventing the fan blades from turning, or there could be an electrical short preventing current from flowing to the fan motor, or several other possible problems. A contractor could have his message profile set up to notify one of his crew by sending the crewman a message. Connected to the server are a number of message output mechanisms that can send a message over a variety of different media as specified by the message profile. The crewman could get a beep or a message on his pager or could receive an e-mail for a lower priority problem. The contractor/supervisor could also receive a message so that he can check up on his crew.

Some messages require more attention than others. For example, if the trouble with the air conditioner were so serious as to threaten the whole building, the crewman, the contractor, and the owner of the building could be sent messages via their pagers. The contractor would be able to make the determination as to which problems require which messages and who should hear about it. The interface units also send out periodic "heartbeat" signals which let the server know that everything is okay. The server is designed to route messages from multiple pieces of equipment to multiple people in accordance with multiple message profiles. That is, a number of different contractors can use the system independently of each other.

Wilson et al. does not render obvious the claimed invention for several reasons. First, there is no teaching, suggestion, or even a hint in Wilson of enabling a user to remotely configure (edit, modify, create, etc.) a message profile on the computer server. The system of Fig. 12, for example, can send voice messages or faxes out to a recipient (see col. 34, lines 6-15), but it cannot receive instructions remotely from the intended message recipients. More specifically,

Wilson does not permit a remote user to configure a message profile to specify where the outgoing messages are to be sent. There is absolutely no remote user interface in Wilson as recited and set forth in the claims of the present application. Wilson does discuss enabling the user to configure the system for a particular application (see Abstract, cols. 9-11 generally and col. 10, line 67 and on, in particular), but not remotely. In this description, the user must be sitting down at the central PC 12 in order to effect any changes on the system whatsoever. Thus, in Wilson, the "user" is the person who is setting up the system. Thus, while the "user" can go to the central computer and configure the system, he cannot do it from home, the office, or in the field. Remote communication between user and system is thus unidirectional, from the system to the user.

In Applicant's invention, by contrast, the user, as recited in the claims, is the person subscribing to the service, the person intended to receive the messages. He can log into the server via remote means, such as the Internet, to configure his message profile to tell the computer server where to send what error messages to whom and under what circumstances. Remote communication between the subscriber/user and the system is thus bidirectional: from the system to the user when the system is sending an error message, and from the user to the system when the user is creating/editing the message profile (among other things). Also, in Wilson, only a computer programmer can alter or modify any instructions on the computer; by contrast, in Applicant's invention, the end user, not the programmer setting the system up, can adjust the message profile without any knowledge of computer programming.

Wilson also fails to teach or suggest the monitoring of remote equipment. All of the equipment being monitored in Wilson is hardwired into the system and is monitored locally. All of the various systems in Wilson require the I/O bridge device 14 into which all of the monitored equipment is directly wired. For example, Fig. 2 of Wilson shows an alarm system with smoke detectors 66 and 67 and burglar alarm loops 62 and 64. All of the devices are connected via wires to I/O bridge device 14 (see col. 9, lines 40-55). The equipment being monitored is not remote equipment, as required by the present claims, but rather local equipment.

Even the system shown in Fig. 12 of Wilson is only good for monitoring local equipment despite the presence of radio transceivers. As described in columns 33 and 34 of Wilson, Fig. 12 represents an alarm system for a car dealership lot. Instead of using wires to connect the anti-theft devices to the base transceiver 700, each car is provided with an RF transmitter which can broadcast back to the main base. However, what is described is a local RF network only. It is designed to cover the parking lot of an automobile dealer (see col. 34, lines 46-61), or a range of maybe a few thousand feet. Applicant's invention can monitor equipment that is truly remote, and it can be used over the entire world, because of: a) the ability of the remote interface units to contact the central server remotely; b) the ability of the central server to contact the message recipient remotely via any format of communication device, and c) the ability of the user/subscriber to contact the server and configure his message profile remotely.

Finally, Wilson fails to teach that multiple subscribers can utilize the system simultaneously. The inventive system can store multiple message profiles of multiple subscribers and route the messages from each person's equipment to that person in accordance with his message profile. By contrast, Wilson is silent as to accommodating multiple users.

In view of the foregoing, Applicants respectfully submit that Claims 1-5, 9-12, 15, 17-21, and 26-52 recite patentable subject matter and that the application is in condition for allowance. The Examiner is invited to telephone the undersigned to discuss any further changes that might be deemed necessary. Prompt and favorable action toward the issuance of a patent is earnestly solicited and believed to be fully warranted.

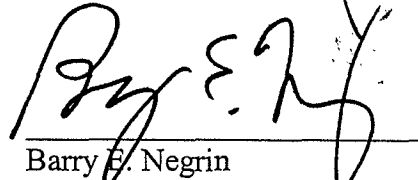
U.S. Appl'n No. 09/317,235  
Amendment

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any additional required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 02-2105.

Date: May 17, 2000

Levisohn, Lerner, Berger & Langsam  
757 Third Avenue, Suite 2400  
New York, New York 10017  
(212) 486-7272

Respectfully submitted,

  
Barry E. Negrin  
Reg. No.: 37,407  
Attorney for Applicant

FA\ARCHIVE\Barry\WPDOCS\PROSEC\1216-34.115.wpd

# Notice of Allowability

Application No.  
09/317,235

Applicant(s)  
SANDELMAN ET AL

Examiner  
DARYL C. POPE

Group Art Unit  
2736



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 and Issue Fee Due or other appropriate communication will be mailed in due course.

- ☒ This communication is responsive to amendment filed 5/17/00
- ☒ The allowed claim(s) is/are 1-5, 9-12, 15, 17-21, and 25-52
- ☐ The drawings filed on \_\_\_\_\_ are acceptable.
- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- ☒ Applicant MUST submit NEW FORMAL DRAWINGS
- ☐ because the originally filed drawings were declared by applicant to be informal.
- ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. 3.
- ☐ including changes required by the proposed drawing correction filed on \_\_\_\_\_, which has been approved by the examiner.
- ☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

- ☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

## Attachment(s)

- ☐ Notice of References Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Interview Summary, PTO-413
- ☒ Examiner's Amendment/Comment
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Examiner's Statement of Reasons for Allowance

DARYL POPE  
PRIMARY EXAMINER

DARYL C. POPE  
PRIMARY EXAMINER  
ART UNIT 2736



Application/Control Number: 09/317235

Art Unit:

7/B  
Page 2  
M. G. Lee  
7-3-00

### EXAMINER'S AMENDMENT

1. 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.

2. The application has been amended as follows:


**IN THE CLAIMS:**

- 1) Claim 11 line 3, "i)" has been changed to -- f) --;
- 2) Claim 12 line 2, "j)" has been changed to -- g) --;
- 3) Claim 29 line 1, "claim 13" has been changed to -- claim 12 --;
- 4) Claim 29 line 1, "g)" has been changed to -- e) --.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daryl C. Pope whose telephone number is (703) 305-4838.

Daryl C. Pope

July 1, 2000

  
DARYL POPE  
PRIMARY EXAMINER



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

LM01/0705

BARRY E NEGRIN  
LEVINSOHN LERNER BERGER AND LANGSAM  
SUITE 2400  
757 THIRD AVENUE  
NEW YORK NY 10017

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/317,235	05/24/99	043	POPE, D 2736	07/05/00
First Named Applicant	SANDELMAN 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION: ELECTRONIC MESSAGE DELIVERY SYSTEM UTILIZABLE IN THE MONITORING OF REMOTE EQUIPMENT AND METHOD OF SAME

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
3 1216.034	340-506.000	090	UTILITY	YES	\$605.00	10/05/00

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE 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.

HOW TO RESPOND 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:

A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or

B. If the status is the same, pay the FEE DUE shown above.
- If the SMALL ENTITY is shown as NO:

A. Pay FEE DUE shown above, or

B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.
- II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.
- III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box 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.

PATENT AND TRADEMARK OFFICE COPY



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: application of: Sandelman, David et al.

Serial No.: 09/317,235

Filing Date: May 24, 1999

For: **Electronic Message Delivery System Utilizable  
in the Monitoring of Remote Equipment and  
Method of Same**

Examiner: Daryl Pope

Art Unit: 2736

Attorney Docket No.: 1216.034

Patent  
Application

Assistant Commissioner For Patents  
Washington, DC 20231

**TRANSMITTAL LETTER**

Sir:

Enclosed herewith is an Issue Fee Transmittal form and eight sheets of formal drawings. In the event of any deficiency in the fee due in connection with this transmittal, the Commissioner is authorized and directed to debit our deposit account No. 02-2105 for the amount of such deficiency.

Dated: August 3, 2000

Respectfully submitted,

Levisohn, Lerner, Berger & Langsam  
757 Third Avenue, Suite 2400  
New York, NY 10017

Barry E. Negrin (Reg. No. 37,407)  
Attorney for Applicant

**Certificate of Mailing**

I certify that this document and fee are being deposited with the U.S. Postal Service by Express Mail, addressed to Assistant Commissioner for Patents, Washington, DC 20231.

Lourdes Rodriguez  
Mailing Date: August 3, 2000  
Express Mail Label: EL470650635US



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Sandelman

For: **Electronic Message Delivery  
System Utilizable in the  
Monitoring of Remote  
Equipment and Method of Same**

Serial No.: 09/317,235

Filing Date: 05/24/99

Art Unit: 2736

Examiner: Pope, D.

Attorney Docket No.: 1216.034

Allowed: July 5, 2000

PATENT

**SUBMISSION OF  
FORMAL DRAWINGS**

**BOX ISSUE FEE**

Commissioner of Patents  
Washington, DC 20231

Sir:

Applicant herewith submits **eight** sheets of formal drawings for the above-identified application. No new matter has been entered. The formal drawings are believed to address fully the deficiencies indicated on the PTO-948 form Applicant received as part of Paper No. 3.

Dated: August 3, 2000

Respectfully submitted,

Levisohn, Lerner, Berger & Langsam  
757 Third Avenue, Suite 2400  
New York, New York 10017  
(212) 486-7272

Barry E. Negrin  
Reg. No.: 37,407  
Attorney for Applicant

Serial No. 08/317,235

Allowed: 07/05/00

Batch # O80

Art Unit 2736

1/8



MD



1D09-317235

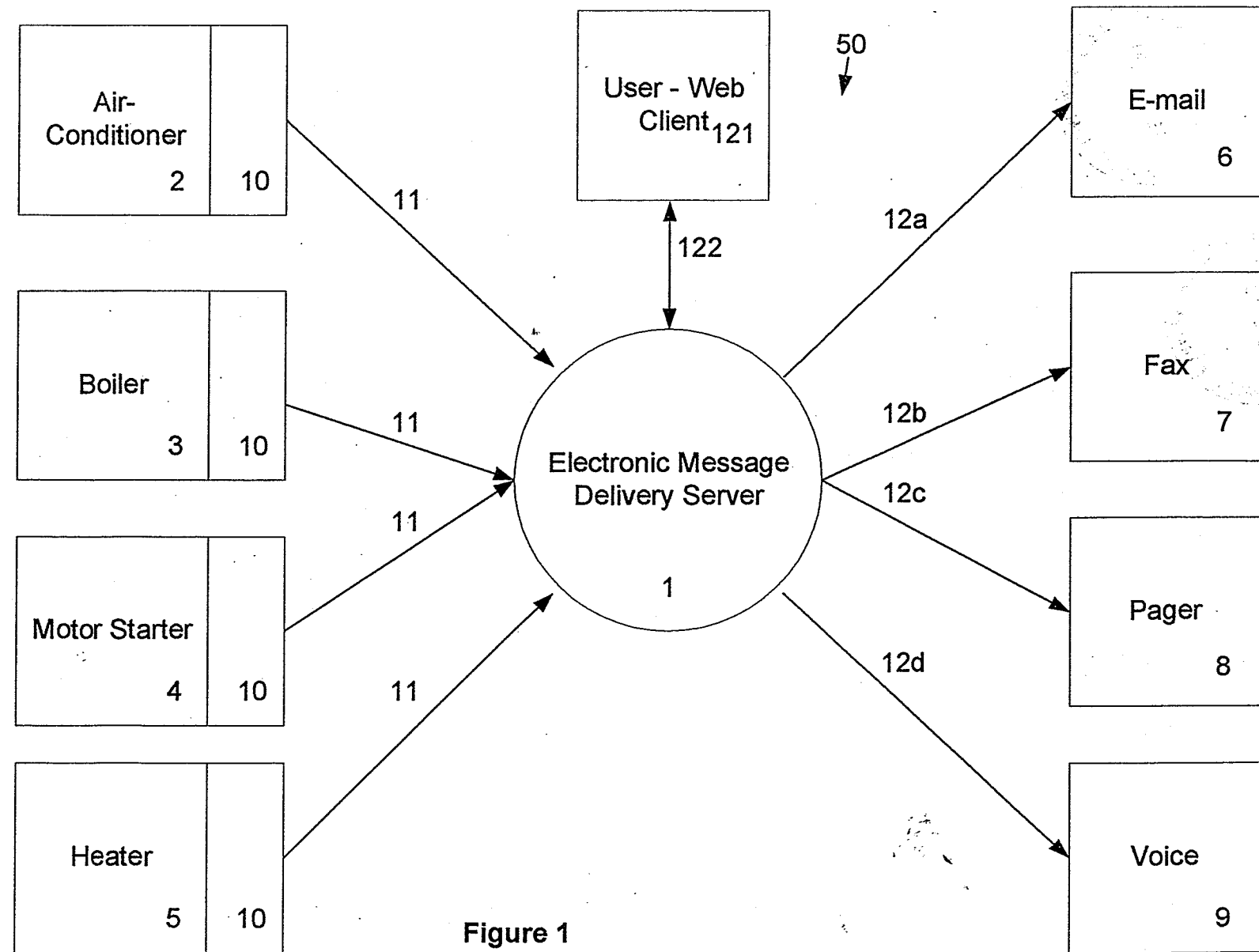
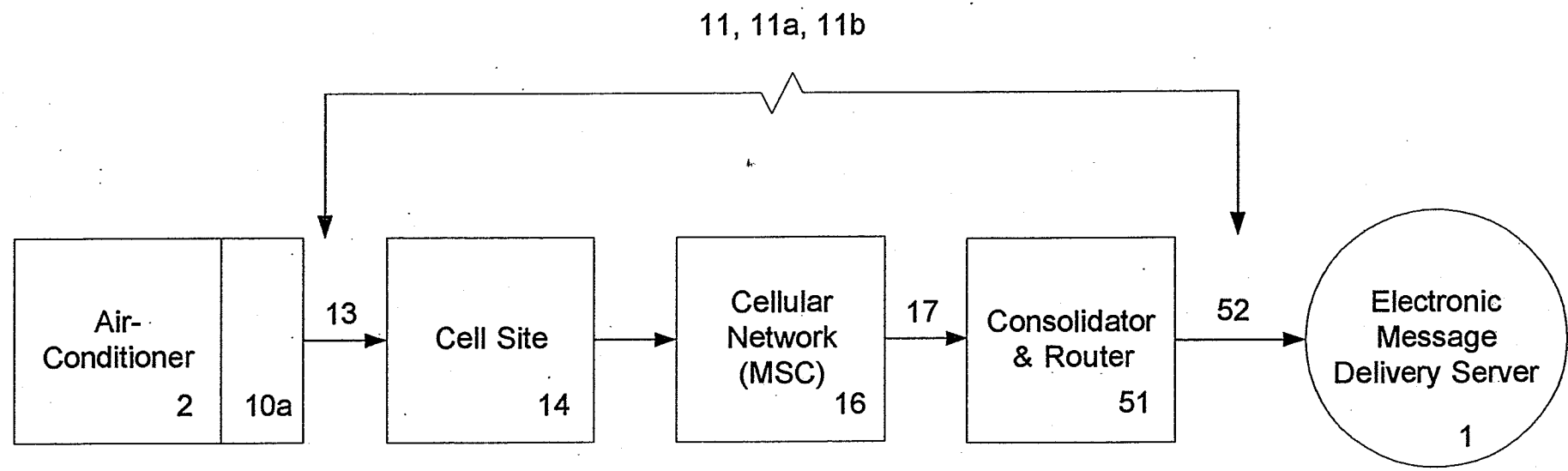
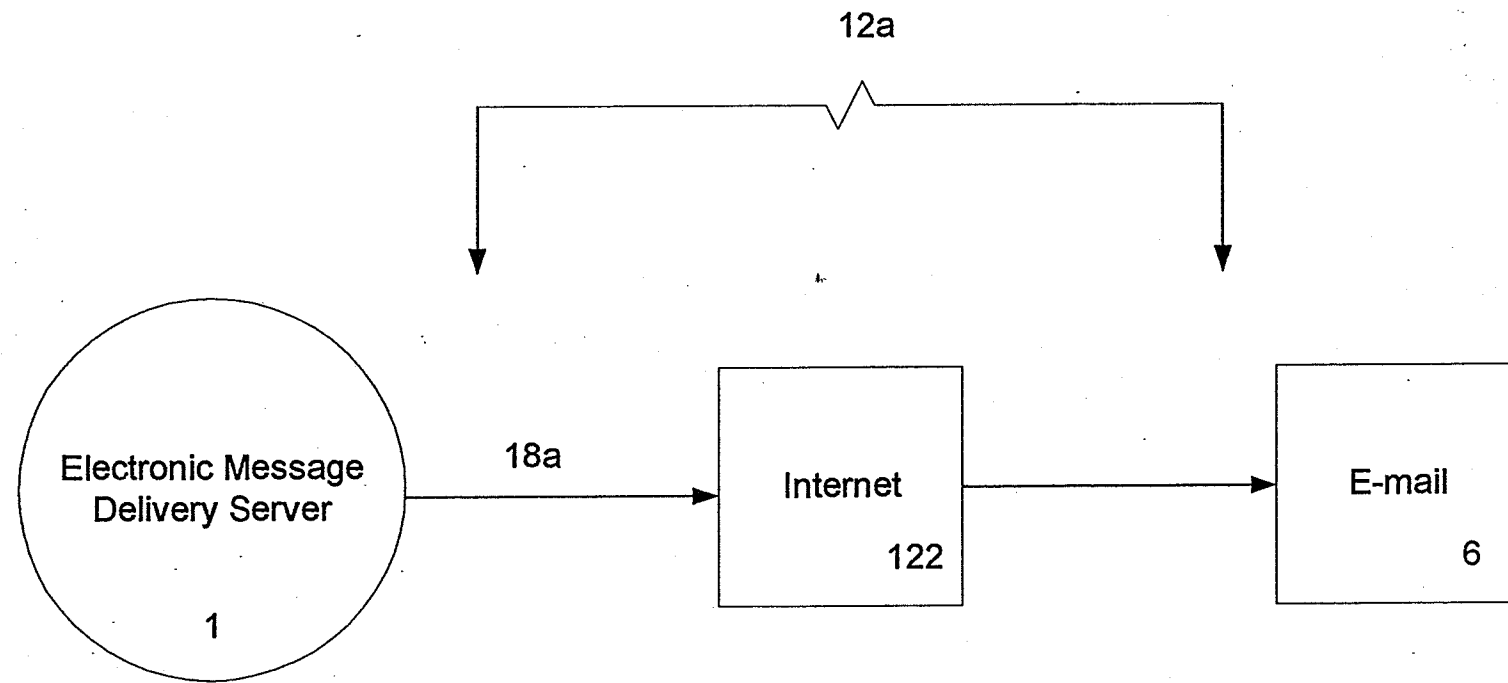


Figure 1

6147601



**Figure 2**



**Figure 3a**



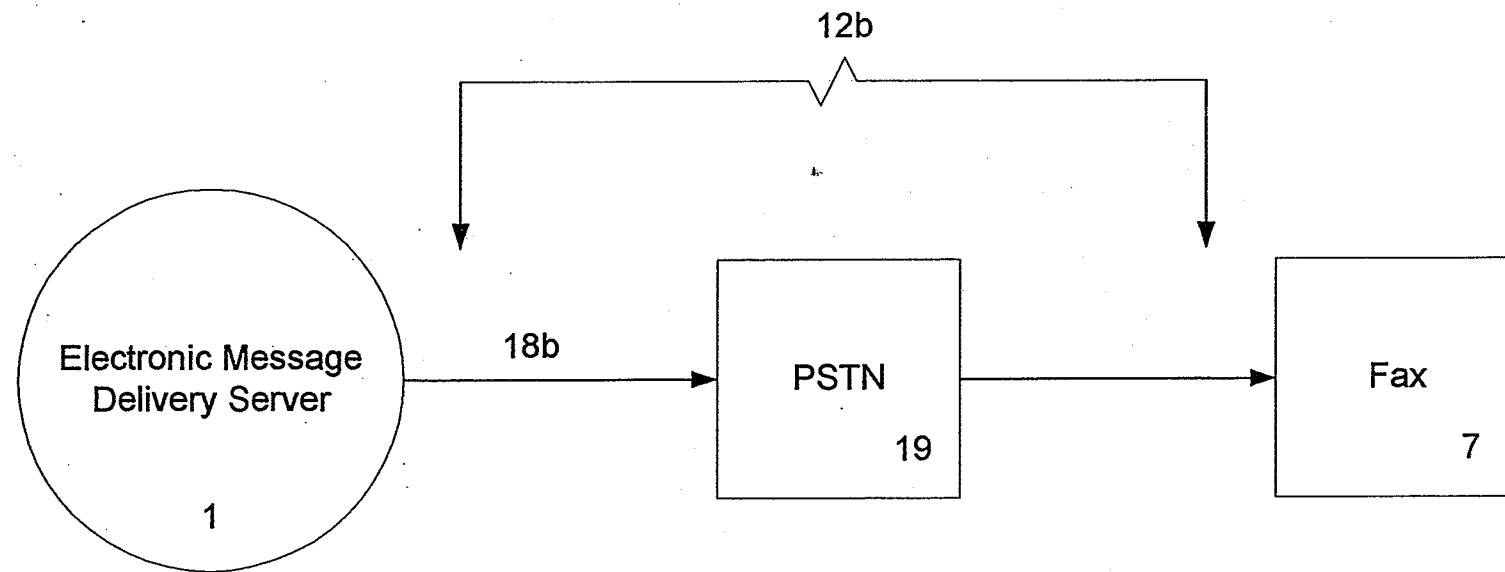


Figure 3b

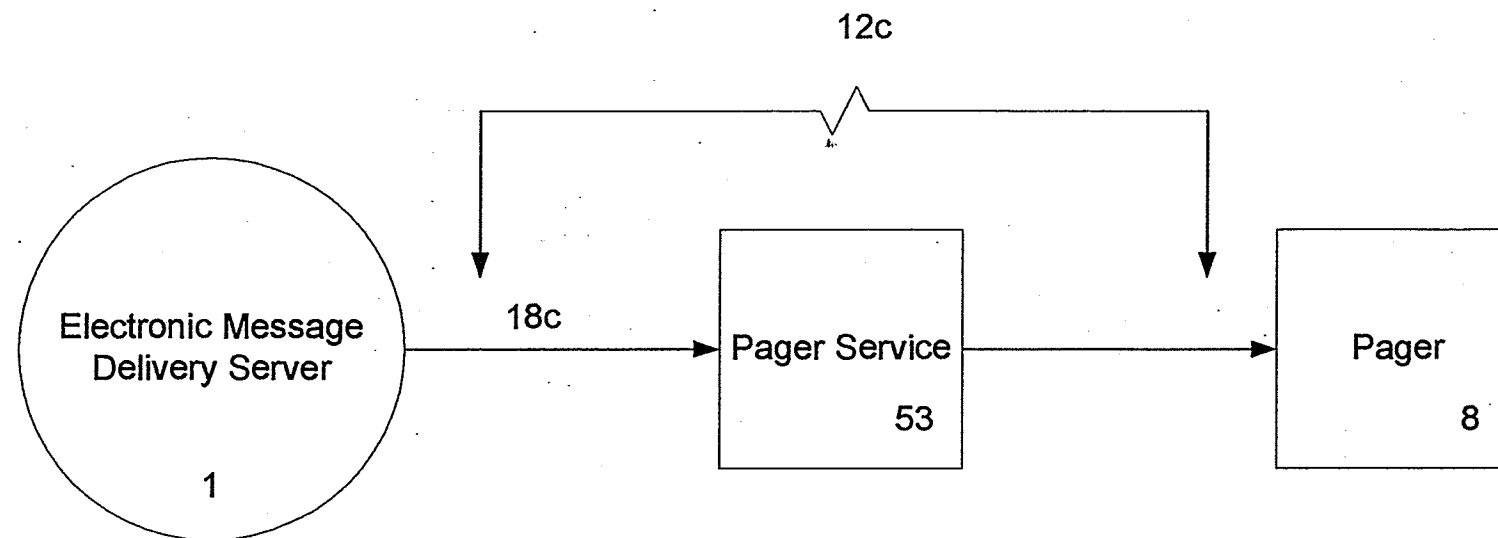


Figure 3c

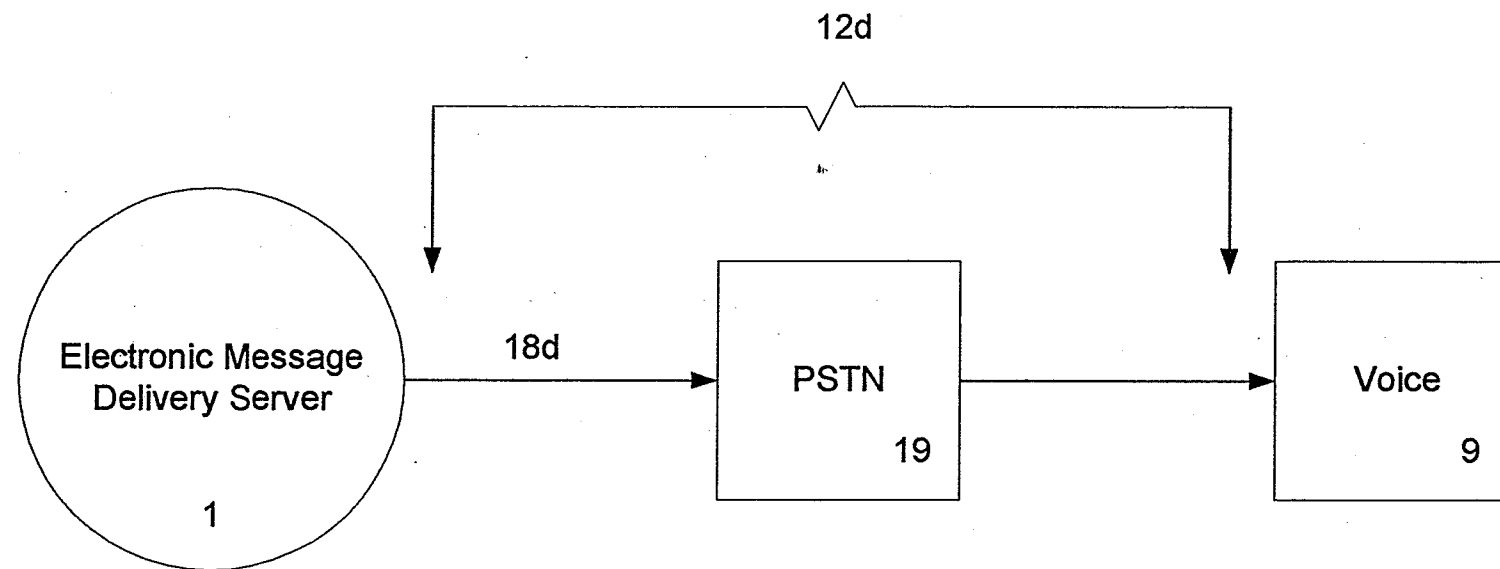


Figure 3d

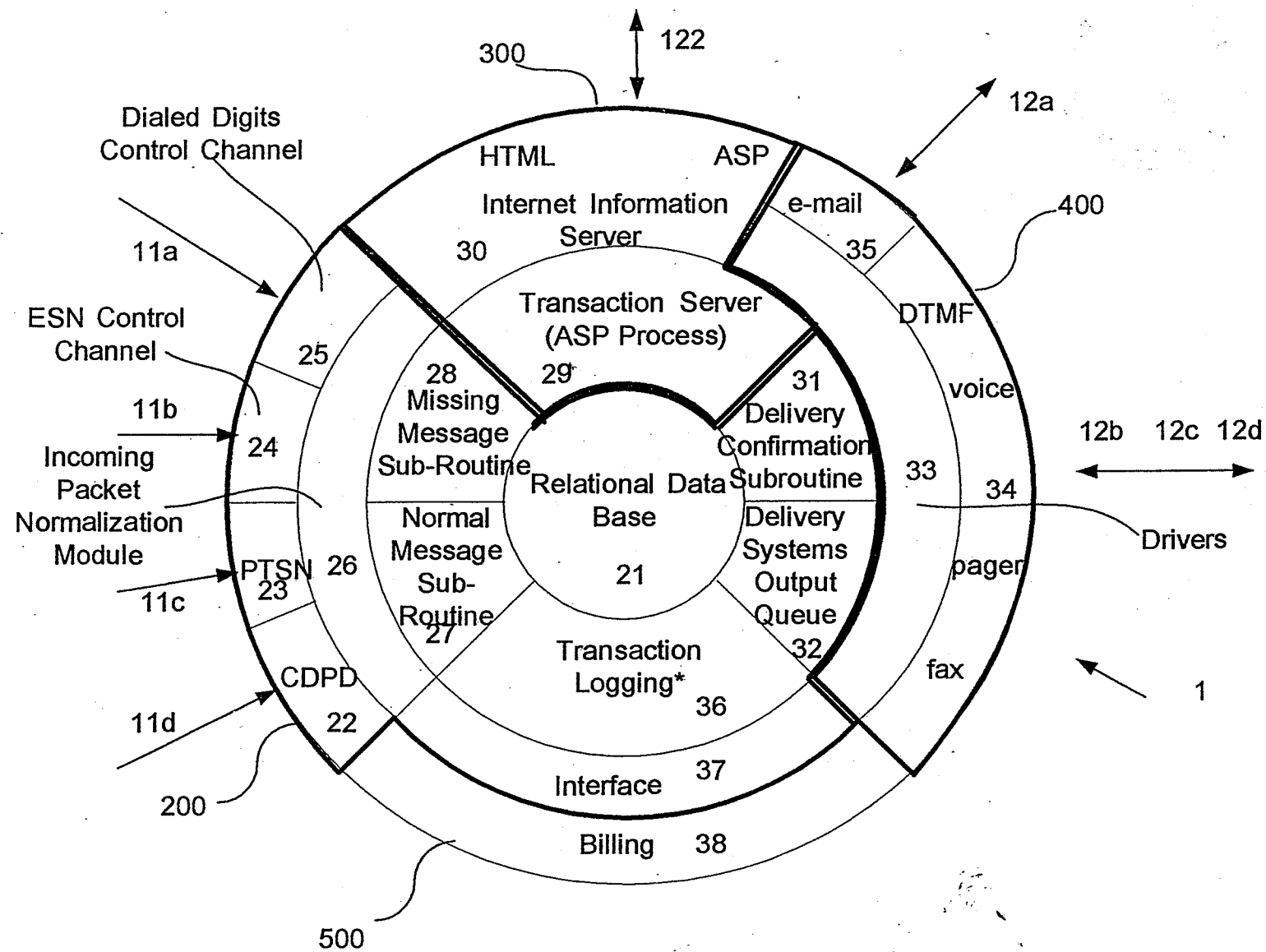


Figure 4

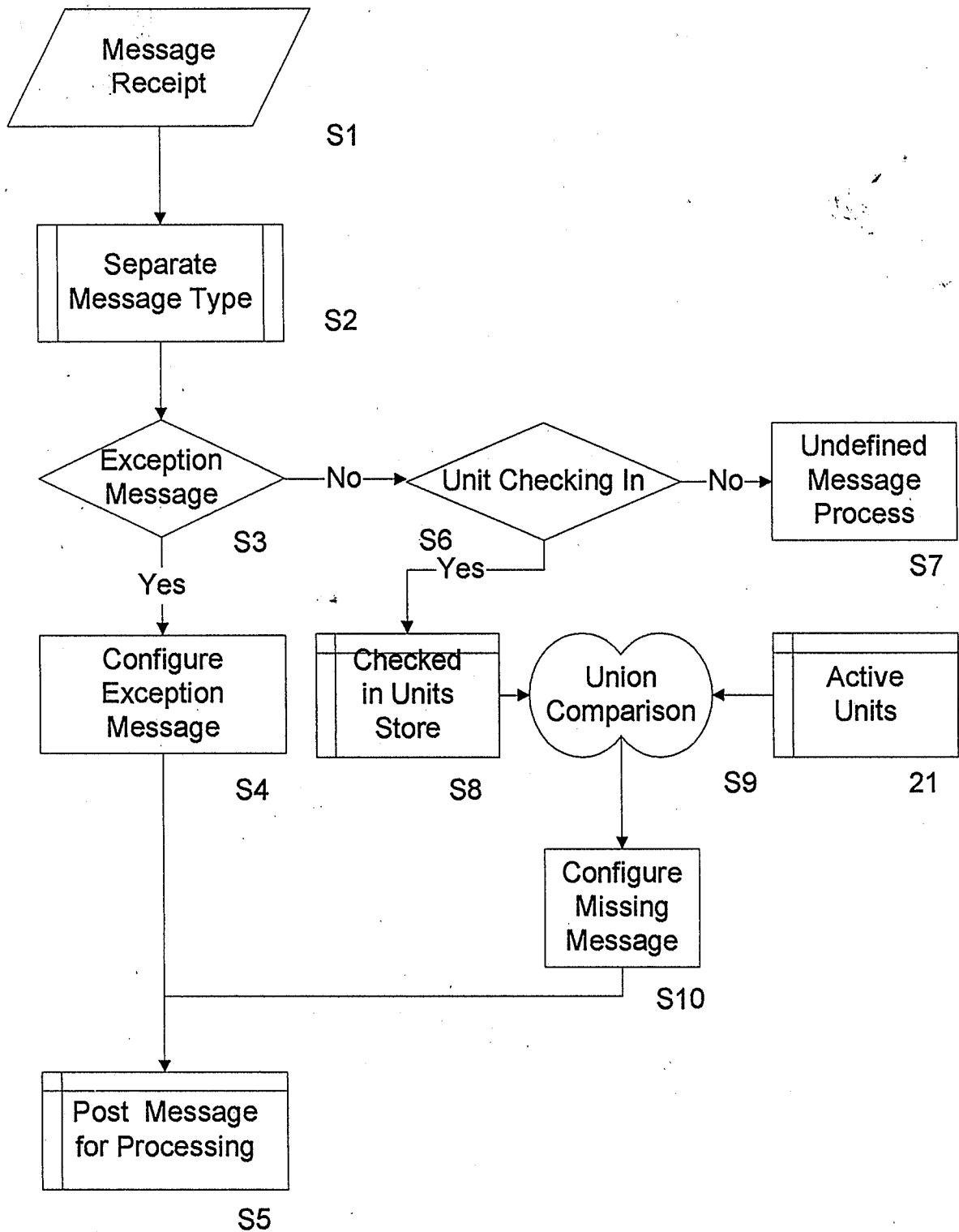
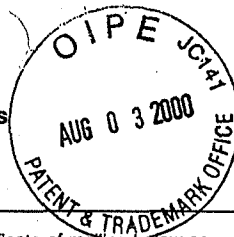


Figure 5

Complete and mail this form, together with applicable fees, to: **Box ISSUE FEE**  
**Assistant Commissioner for Patents**  
**Washington, D.C. 20231**



BH

**MAILING INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE. Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Issue Fee Receipt, 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: Legibly mark-up with any corrections or use Block 1)

LM01/0705

BARRY E NEGRIN  
LEVINSOHN LERNER BERGER AND LANGSAM  
SUITE 2400  
757 THIRD AVENUE  
NEW YORK NY 10017

Note: The certificate of mailing below can only be used for domestic mailings of the Issue Fee 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.

**Certificate of Mailing**

I hereby certify that this Issue Fee Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above on the date indicated below.

Lourdes Rodriguez (Depositor's name)

*Lourdes Rodriguez* (Signature)

8/3/00 (Date)

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/317,235	05/24/99	043	POPE, D	2736 07/05/00
First Named Applicant	SANDELMAN, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION: ELECTRONIC MESSAGE DELIVERY SYSTEM UTILIZABLE IN THE MONITORING OF REMOTE EQUIPMENT AND METHOD OF SAME

ATTYS DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
3 1216.034	340-506.000	090	UTILITY	YES	\$605.00	10/05/00

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Use of PTO form(s) and Customer Number are recommended, but not required.

- ☐ 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) attached.

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.

Levisohn, Lerner, Berger & Langsam  
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. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the PTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE Heat - Timer Corp.

(B) RESIDENCE: (CITY & STATE OR COUNTRY) Fairfield, New Jersey

Please check the appropriate assignee category indicated below (will not be printed on the patent)

☐ Individual ☒ corporation or other private group entity ☐ government

4a. The following fees are enclosed (make check payable to Commissioner of Patents and Trademarks):

- ☐ Issue Fee
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. The following fees or deficiency in these fees should be charged to:

DEPOSIT ACCOUNT NUMBER 02-2105  
(ENCLOSE AN EXTRA COPY OF THIS FORM)

- ☒ Issue Fee
- ☒ Advance Order - # of Copies 10

The COMMISSIONER OF PATENTS AND TRADEMARKS IS requested to apply the Issue Fee to the application identified above.

(Authorized Signature)

*B. E. Negrin*

(Date)

08/03/00

NOTE: The Issue Fee 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 Patent and Trademark Office.

**Burden Hour Statement:** This form is estimated to take 0.2 hours to complete. Time will vary depending on the needs of the individual case. Any comments on the amount of time required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND FEES AND THIS FORM TO: Box Issue Fee, Assistant Commissioner for Patents, Washington D.C. 20231

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.

docketed  
7/11/00

TRANSMIT THIS FORM WITH FEE



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 NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
09/317,235	6147601	2736	9200 K 10021 1012 113

**Change of Address/Power of Attorney**

The following fields have been set to Customer Number 4617 on

- Correspondence Address
- Maintenance Fee Address

The address of record for Customer Number 4617 is:

LEVISOHN, BERGER & LANGSAM, LLP  
805 THIRD AVENUE, 19TH FLOOR  
NEW YORK, NY 10022

The Practitioners of record for Customer Number 4617 are:

**PTO INSTRUCTIONS:**

Please take the following action when the correspondence address has been changed to a customer number:

- 1) Add 'ADDRESS CHANGE TO CUSTOMER NUMBER' on the next available content line of the File Jacket.
- 2) Put a line through the old address on the File Jacket and enter the Customer Number as the new address.
- 3) File this Notice in the File Jacket.

Please take the following action when the correspondence address has NOT been changed:

- 1) File this Notice in the File Jacket

**PATENT APPLICATION FEE DETERMINATION RECORD**  
Effective November 10, 1998

Application or Docket Number

9/317235

**CLAIMS AS FILED - PART I**

(Column 1)

(Column 2)

**SMALL ENTITY**  
TYPE ☐

OR

**OTHER THAN SMALL ENTITY**

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE		
TOTAL CLAIMS	50 minus 20=	* 30
INDEPENDENT CLAIMS	2 minus 3 =	*
MULTIPLE DEPENDENT CLAIM PRESENT		

RATE	FEE
	380.00
X\$ 9=	270
X39=	
+130=	
TOTAL	650

RATE	FEE
	760.00
X\$18=	
X78=	
+260=	
TOTAL	

\* 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)

**SMALL ENTITY**

OR

**OTHER THAN SMALL ENTITY**

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	42	Minus	** 50 = 8
	Independent	*	4	Minus	*** 3 = 1
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM					

RATE	ADDITIONAL FEE
X\$ 9=	
X39=	37.00
+130=	
TOTAL ADDIT. FEE	pd.

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

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*		Minus	** =
	Independent	*		Minus	*** =
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM					

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

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

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*		Minus	** =
	Independent	*		Minus	*** =
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM					

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

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.





## SEARCH NOTES

(INCLUDING SEARCH STRATEGY)

[illegible]

INTERFERENCE SEARCHED			
Class	Sub.	Date	Exmr.
340	506	6/28/00	D.P.
↓	539	↓	↓
	825.06		
	825.36		
	825.49		
700	17	↓	↓

✓

POSITION	INITIALS	ID NO.	DATE
FEE DETERMINATION	PS		6/3
O.I.P.E. CLASSIFIER		2	6/9/99
FORMALITY REVIEW		10608	6-16-99

INDEX OF CLAIMS

- ✓

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Rejected
- =

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Allowed
- (Through numeral)...

Canceled
- ÷

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Restricted
- N

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Non-elected
- I

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Interference
- A

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Appeal
- O

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Objected

Claim	Date			
	Final	Original		
1	1	1	✓	
2	2	2	✓	
3	3	3	✓	
4	4	4	✓	
5	5	5	✓	
6	6	6	✓	
7	7	7	✓	
8	8	8	✓	
9	9	9	✓	
10	10	10	✓	
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37	37	37	✓	
38	38	38	✓	
39	39	39	✓	
40	40	40	✓	
41	41	41	✓	

Claim	Date			
	Final	Original		
42	42	42	✓	
43	43	43	✓	
44	44	44	✓	
45	45	45	✓	
46	46	46	✓	
47	47	47	✓	
48	48	48	✓	
49	49	49	✓	
50	50	50	✓	
51	51	51	✓	
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57	57	57	✓	
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62	62	62	✓	
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68	68	68	✓	
69	69	69	✓	
70	70	70	✓	
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81	81	81	✓	
82	82	82	✓	
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87	87	87	✓	
88	88	88	✓	
89	89	89	✓	
90	90	90	✓	
91	91	91	✓	
92	92	92	✓	
93	93	93	✓	
94	94	94	✓	
95	95	95	✓	
96	96	96	✓	
97	97	97	✓	
98	98	98	✓	
99	99	99	✓	
100	100	100	✓	

Claim	Date			
	Final	Original		
101	101	101	✓	
102	102	102	✓	
103	103	103	✓	
104	104	104	✓	
105	105	105	✓	
106	106	106	✓	
107	107	107	✓	
108	108	108	✓	
109	109	109	✓	
110	110	110	✓	
111	111	111	✓	
112	112	112	✓	
113	113	113	✓	
114	114	114	✓	
115	115	115	✓	
116	116	116	✓	
117	117	117	✓	
118	118	118	✓	
119	119	119	✓	
120	120	120	✓	
121	121	121	✓	
122	122	122	✓	
123	123	123	✓	
124	124	124	✓	
125	125	125	✓	
126	126	126	✓	
127	127	127	✓	
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130	130	130	✓	
131	131	131	✓	
132	132	132	✓	
133	133	133	✓	
134	134	134	✓	
135	135	135	✓	
136	136	136	✓	
137	137	137	✓	
138	138	138	✓	
139	139	139	✓	
140	140	140	✓	
141	141	141	✓	
142	142	142	✓	
143	143	143	✓	
144	144	144	✓	
145	145	145	✓	
146	146	146	✓	
147	147	147	✓	
148	148	148	✓	
149	149	149	✓	
150	150	150	✓	

If more than 150 claims or 10 actions  
staple additional sheet here

PATENT APPLICATION



09317235

jc511 U.S. PTO

09/317235



05/24/99

JUN 09 2000  
INITIALS

CONTENTS

	Date received (Incl. C. of M.) or Date Mailed	Date received (Incl. C. of M.) or Date Mailed
1. Application <u>8</u> papers.		
2. <u>IDS</u>	<u>10-26-99</u>	
3. <u>Key (Brother)</u>	<u>1-20-00</u>	
4. <u>Interview Summary</u>	<u>5-16-00</u>	
5. <u>Ext. of Time (A)</u>	<u>5-17-00</u>	
6. <u>Amend. A</u>	<u>5-17-00</u>	
7. <u>Ex. Amend. B</u>	<u>7-5-00</u>	
8. <u>Formal Drawings (8 shts) set 1</u>	<u>8-3-00</u>	
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