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U.S. UTILITY Patent Application

PATENT NUMBER and

ISSUE DATE

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APPL NUM	FILING DATE	CLASS	SUBCLASS	GAU	EXAMINER
10075886	02/13/2002	236	51	3744	WAYNER

**APPLICANTS: Rosen Howard;

**CONTINUING DATA VERIFIED:

** FOREIGN APPLICATIONS VERIFIED:

PG-PUB	DO NOT PUBLISH ☐	RESCIND ☐
Foreign priority claimed	☐ yes ☒ no	ATTORNEY DOCKET NO
35 USC 119 conditions met	☐ yes ☒ no	
Verified and Acknowledged Examiner's initials	<i>WJ</i>	
TITLE : Thermostat system communicating with a remote correspondent for receiving and displaying diverse information		

U.S. DEPT. OF COMM. / PAT. & TM-PTO-436L (Rev. 12-94)

NOTICE OF ALLOWANCE MAILED		CLAIMS ALLOWED	
7/13/03		Total Claims 20	Print Claim for O.G. 1
ISSUE FEE		DRAWING	
Amount Due \$650	Date Paid	Sheets Drwg. 6	Figs. Drwg. 7
		Print Fig. 5	
☐ TERMINAL DISCLAIMER		Application Examiner 7-7-03	
PREPARED FOR ISSUE		WARNING: The information disclosed herein may be restricted. Unauthorized disclosure may be prohibited by the United States Code Title 35, Sections 122, 181 and 368, Possession outside the U.S. Patent & Trademark Office is restricted to authorized employees and contractors only.	

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INITIALS RSD 3/7/02

CONTENTS

		Date Received (Incl. C. of M.) or Date Mailed	Date Received (Incl. C. of M.) or Date Mailed
1.	Application <u>✓</u> papers.	4-1-02	31.
2.	<u>FDS</u>	11/4/02	32.
3.	<u>Petition to make Special</u>	11/4/02	33.
4.	<u>Petition granted</u>	3-3-00	34.
5.	<u>Rejection B</u>	3/25/03	35.
6.	<u>5k Amdt A</u>	5-6-03	36.
7.	<u>7/3 Allowance</u>	7/3/03	37.
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9.			39.
10.			40.
11.			41.
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ISSUE SLIP STAPLE AREA (for additional cross-references)

ISSUING CLASSIFICATION										
ORIGINAL				CROSS REFERENCE(S)						
CLASS		SUBCLASS		CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					
236		46R		236	51					
INTERNATIONAL CLASSIFICATION										
G05D	23	1	00							
F23N	5	1	20							
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INDEX OF CLAIMS

✓ Rejected - (Through numeral) ... Canceled N Non-elected A Appeal
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Claim	Date
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CLASSIFICATION NOTES

Examiner/ Classifier	Class	Date	Initials

POSITION	NAME	ID NO.	DATE
FEE DETERMINATION	WA		02-21-02
FILE ASSEMBLY			
QUALITY CHECK	791		
SCANNING	NS3 CM	SW	2-26-02
CLASSIFIER	RSD		3/7/02
FORMALITY REVIEW	1119	0119	03-12-02
RESPONSE			

SEARCH			
Class	Sub.	Date	Exmr.
236	46R	3/5/03	MM
	5194		
165	238		
ABOVE	TO	7/2/03	MM
	DATE		

INTERFERENCE SEARCHED			
Class	Sub.	Date	Exmr.
236	46R, 51	7/2/03	MM
	94		
165	238		

SEARCH NOTES		
(List databases searched. Attach search strategy inside.)		
	Date	Exmr.
MODEM ~~X~~ AND	236 / 46R	
INTERNET AND	236 / 46R	
TEMPERATURE SAME (INTERNET OR MODEM)	3/5/03	MM

PATENT APPLICATION SERIAL NO. _____

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

02/22/2002 WABDELRI 00000017 10075886

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PTO-1556

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Bib Data Sheet

CONFIRMATION NO. 9306

SERIAL NUMBER 10/075,886	FILING DATE 02/13/2002 RULE	CLASS 236	GROUP ART UNIT 3744	ATTORNEY DOCKET NO.
APPLICANTS — Howard B. Rosen, Hampstead, CANADA; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** IF REQUIRED, FOREIGN FILING LICENSE GRANTED** SMALL ENTITY ** ** 03/12/2002				
Foreign Priority claimed ☐ yes ☒ no 35 USC 119 (a-d) conditions ☐ yes ☒ no ☐ Met after met ☐ Allowance Verified and <i>M. Rosen</i> Acknowledged Examiner's Signature Initials		STATE OR COUNTRY CANADA	SHEETS DRAWING 6	TOTAL CLAIMS 20 INDEPENDENT CLAIMS 2
ADDRESS AIR MAIL HOWARD B. ROSEN 1 Lyncroft Road Hampstead ,QC H3X 3E3 CANADA				
TITLE Thermostat system communicating with a remote correspondent for receiving and displaying diverse information				
FILING FEE RECEIVED 370	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit	

1 ABSTRACT OF THE DISCLOSURE

2 A thermostat system includes a temperature sensor, an LCD for
3 selectively displaying an alphanumeric message and a processor having a
4 memory for storing program and data information. In one embodiment, the
5 data includes a table storing key terms on a predetermined subject. A
6 communications interface connects the processor and a remote correspondent
7 which is a source of current information. Periodically, communications is
8 established with the remote correspondent to read the current information and
9 parse the current information against the stored key terms. If a match is
10 found, the current information is further searched for a value associated with
11 the matched key term in order to display an alphanumeric message which
12 shows a first message component representative of the connotation of the
13 matched key term and a second message component representative of the
14 associated value. In a variant embodiment, the remote correspondent
15 provides a service periodically sending predetermined information for display
16 on the LCD. In another variant embodiment, the thermostat system can use
17 current information received from the first remote correspondent to send
18 directive information to suitably change the temperature (or other parameter)
19 set point at a second remote site.

1 THERMOSTAT SYSTEM COMMUNICATING WITH A REMOTE
2 CORRESPONDENT FOR RECEIVING AND DISPLAYING
3 DIVERSE INFORMATION

4 Field of the Invention

5 This invention relates to the art of thermostats and, more particularly, to
6 a thermostat system incorporating a communication interface for receiving
7 and displaying diverse information from a remote correspondent. In an
8 extended version, this invention relates to a thermostat system for receiving
9 and displaying information from a first remote correspondent and selectively
10 issuing an information/directive message to a second remote correspondent.

11 Background of the Invention

12 Thermostats have been used for many years as a temperature sensitive
13 switch which controls heating and/or cooling equipment for conditioning a
14 space in which the thermostat, or a temperature sensor connected to the
15 thermostat, is placed. In the well known manner, a simple thermostat can be
16 adjusted to establish a temperature set point such that, when the temperature
17 in the conditioned space reaches the set point, the thermostat interacts with
18 the heating and/or/cooling equipment to take suitable action to heat or cool
19 the conditioned space as may be appropriate for the season.

1

2.

1 Modern thermostat systems, which take advantage of the ongoing rapid
2 advances in electronic technology and circuit integration, have many features
3 which provide more precise supervision of the heating and/or cooling
4 equipment to achieve more economical and more comfortable management of
5 the temperature of a conditioned space. Many modern thermostat systems
6 include a real time clock, a memory and a data processor to run a process
7 control program stored in the memory to accurately measure the temperature
8 of a temperature sensor disposed in the conditioned space and to send control
9 signals to the heating and/or cooling equipment to closely control the
10 temperature of the conditioned space. Modern thermostat systems permit
11 anticipating and minimizing hysteresis or overshoot of the temperature in the
12 conditioned space. In addition, the program can specify different set points at
13 different times of the day and week and may also include a "vacation" mode
14 which employs different set points when the conditioned space is not
15 occupied for an extended period.

16 Many modern thermostat systems are programmable by a user.
17 Typically, prior art programmable thermostat system employ a tactile touch
18 pad with various fixed position buttons to be touched in a precise sequence to
19 program set points (which may vary with the day of the week) for
20 programmable time periods which may include a vacation mode. The

1 programming sequence may be followed on a separate display, typically a
2 liquid crystal display.

3 Other types of modern thermostat systems may limit, or even make no
4 provision for, user programming. For example, thermostats distributed
5 throughout a large commercial establishment may be programmable only by
6 authorized persons employing special tools or may even have their programs
7 permanently set at the time of manufacturer or installation. These non-
8 programmable thermostat systems do not have a user accessible touch pad (or
9 have no touch pad at all), but may incorporate a user readable display.

10 The present invention finds use in both programmable and non-
11 programmable thermostat systems which operate under control of a processor.

12 Summary of the Invention

13 A thermostat system according to the invention includes: a temperature
14 sensor for providing an electrical signal indicative of the temperature of a
15 conditioned space in which the temperature sensor is situated; a liquid crystal
16 display (LCD) for selectively displaying an alphanumeric message; and a
17 processor having: a CPU, real time clock and a memory for storing program
18 and data information. In one embodiment, the data includes a table storing
19 key terms on a predetermined subject (e.g., current and predicted weather
20 conditions in a given locale). A communications interface is adapted to

EXHIBIT 1018

1 establish bi-directional communications (via the Internet or some other
2 suitable facility) between the processor and a remote correspondent which is a
3 source of current information on the predetermined subject. Periodically, or
4 on demand if provided for, a program stored in the memory causes the CPU
5 to selectively: establish communications with the remote correspondent, read
6 the current information and parse the current information against the stored
7 key terms. If a match is found, the current information is further searched for
8 at least one value associated with the matched key term; and if at least one
9 such value is found, an alphanumeric message is displayed on the LCD to
10 show a first message component representative of the connotation of the
11 matched key term and a second message component representative of the
12 associated value.

13 In a variant embodiment, the remote correspondent provides a service
14 sending, periodically or on demand, predetermined information for display on
15 the LCD. In this variant, there is no parsing against locally stored key terms.
16 In another variant embodiment, the thermostat system can use current weather
17 information received from the first remote correspondent to determine and act
18 if the received information is such that a second remote correspondent
19 interfacing with a remotely controllable thermostat system should be

1 contacted, and send directive information to suitably change the temperature
2 (or other parameter) set point at the second remote site.

3 Description of the Drawing

4 The subject matter of the invention is particularly pointed out and
5 distinctly claimed in the concluding portion of the specification. The
6 invention, however, both as to organization and method of operation, may
7 best be understood by reference to the following description taken in
8 conjunction with the subjoined claims and the accompanying drawing of
9 which:

10 FIG. 1 is a block diagram of a first embodiment of a space conditioning
11 system incorporating a thermostat system employing the present invention;

12 FIG. 2 is a block diagram of a second embodiment of a space
13 conditioning system incorporating a thermostat system employing the present
14 invention;

15 FIG. 3 is a block diagram of a third embodiment of a space
16 conditioning system incorporating a thermostat system employing the present
17 invention;

18 FIG. 4 is a block diagram of a first embodiment of a space conditioning
19 system incorporating a thermostat system employing the present invention;

FIG. 5 is a high level process flow chart describing the operation of the invention in a first embodiment;

FIG. 6 is a pictorial of an exemplary display illustrating information presented to a user by the use of the invention; and

FIG. 7 is a high level flow chart describing the operation of the invention in a second embodiment.

Description of the Preferred Embodiment(s)

Referring first to FIG. 1, a thermostat system includes a processor 1 and a temperature sensor 5 which is disposed in a conditioned space 4. The processor 1 and the sensor 5 may be situated in a common housing (not shown) or separated, all as very well known in the art. The common housing is usually, but not necessarily, placed in the conditioned space 4. Thus, those skilled in the art will understand that the block diagram of FIG. 1 is very general in order to best explain the invention.

The processor 1 includes a central processing unit (CPU) 9 in communication with a memory 8 which stores data and program information and also, via an input/output unit (I/O unit) 10, an optional touch pad 11 and a liquid crystal display (LCD) 12. The liquid crystal display may optionally be backlit by any suitable means (not shown). The memory 8 may include a read-only part which is factory-programmed and a random-access part which

1 stores data subject to change during operation. A settable real time clock 13
2 is used to keep time in the thermostat system to facilitate diverse operations,
3 such as different temperature set points (desired temperatures), during
4 different periods of the day cycle. The thermostat system may be suitably
5 powered by a battery (not shown) and/or from equipment to which is
6 connected. The I/O unit includes a communications interface 14 for
7 coordinating communications between the CPU 9 and a remote correspondent
8 15. The communications interface 14 may be, for example, a conventional
9 serial port.

10 Thus, in the usual manner during normal operation, the temperature
11 sensor 5 sends an electrical signal (e.g., if the sensor 5 is a simple thermistor,
12 a resistance value; several types of temperature sensors are widely used)
13 representative of the temperature within the conditioned space 4 which the
14 processor can compare against a previously entered set point to determine if
15 control signals need to be sent to the space conditioning equipment 3. For
16 example, if the temperature in the conditioned space 4 is found to be too low
17 when operation is in the heating mode, the processor 1 signals the space
18 conditioning equipment 3 circulate, through ducts 6, 7, air from/to the
19 conditioned space 4 which is heated by the space conditioning equipment
20 before return to the conditioned space. This heating phase continues until the

1 sensor 5 indicates that the space is now too hot (or approaching too hot) with
2 reference to the set point such that the processor 1 sends signal(s) to the space
3 conditioning equipment 3 to cease the heating function, all as very well
4 known in the art. In a cooling mode, a counterpart procedure is followed.
5 Those skilled in the art will understand that the control process typically
6 includes such refinements as anticipation, hysteresis accommodation, fan
7 control, etc. which are acknowledged, but are not directly relevant to the
8 invention.

9 It may be noted that integrated circuit chips including all the processor
10 components with all the necessary interface conditioning circuits are available
11 off-the-shelf and are under constant refinement for increased power. The
12 subject invention only requires the capabilities of such a processor, and off-
13 the-shelf integrated circuit processor chips may be used to advantage in the
14 subject thermostat system.

15 Consider now a first embodiment of the invention. Referring to FIG. 5
16 as well as FIG. 1, there is stored in the memory 8 (typically, in ASCII format)
17 a series of key terms pertaining to a subject of interest such as the local
18 weather. Exemplary key terms for this subject may be "temperature",
19 "relative humidity", "high", "low", "barometric pressure", etc. The key terms
20 may be stored in the memory during the manufacturing process of the

1 thermostat system or, as will be described below, by user entry using the
2 touchpad 11 and LCD 12.

3 At one or more predetermined times of day (and/or on-demand if
4 provided for in the operating program) which have been previously stored in
5 the memory 8 and established by the clock 13, the CPU 9 starts the process
6 shown in FIG. 5 by issuing signals to the I/O unit 10 to cause the
7 communications interface 14 to establish communications, via link 16, with a
8 remote correspondent 15. The remote correspondent 15 has a known data
9 communications "address" and, in the example, is a source of current
10 information, such as local weather. Such local current weather information
11 sources are widely available and are routinely accessed by, for example, using
12 the Internet.

13 When the current local weather information is transmitted from the
14 remote correspondent 15 via link 16 to the communications interface 14 and
15 thence to the CPU 9, the CPU parses the information against the key terms
16 stored in memory 8 to determine if there is a match. This is easily achieved
17 because the source code (e.g., HTML if the communication is via the Internet)
18 of the information will typically also be in ASCII format. If the CPU 9 senses
19 a match, the just-received information is searched for the presence of at least
20 one "value" associated with the matched key term. If such a value is found

1 and under control of the CPU 9, a first alphanumeric message component
2 representative of the connotation of the matched key term and a second
3 alphanumeric message component representative of the value associated with
4 the key term are displayed on the LCD 12.

5 If no value for the present matched term is found, but more key terms
6 in the present set are yet to be compared to information just received from the
7 remote correspondent 15, the same process is repeated until all the key terms
8 in the present set have been parsed and alphanumeric messages, if generated,
9 have been sent to the LCD 12. The immediate session then ends.

10 As an example, assume that Montreal weather is of interest to an
11 occupant of a conditioned space in the Montreal area which uses the subject
12 thermostat system and that "temperature", "high" and "low" are the key terms
13 for the subject of local weather stored in the memory 8. Periodically, as
14 determined by times stored in the memory 8, the CPU 9 issues signals to
15 access the remote correspondent 15 (a site providing local Montreal weather
16 in the example) and download the current weather information as a data
17 stream. If the CPU finds, by examining and processing the data stream, that
18 the term "temperature" has been received, it looks for the next characters in
19 the data stream which can be a value associated with "temperature"; e.g., it
20 may quickly find "+18°C". With this coupling established, the CPU may

1 access the memory 8 to read the prestored alphanumeric message component
2 "Current Montreal Temperature:" and then concatenate, as a second
3 alphanumeric message component, "18C" and then send the complete
4 message to the LCD 12 which displays: "CURRENT MONTREAL
5 TEMPERATURE: 18°C".

6 In a similar manner, if the key term "high" and an associated value are
7 sensed, the exemplary message "MONTREAL HIGH TODAY: 26C." may be
8 displayed; and if the key term "low" and an associated value are sensed, the
9 exemplary message "MONTREAL LOW TODAY: 9C." may be displayed.

10 While an obvious application for using the invention is acquiring and
11 displaying current weather information, other types of current information
12 may be obtained and displayed in a like manner. For example, current stock
13 quotations for stock indexes and individual stocks, mutual funds and the like
14 can be automatically acquired, displayed and periodically updated by suitably
15 programming the processor 1 with the address of a site which maintains such
16 information current along with the desired key terms which may, in this
17 example, be NYSE, etc. stock symbols. Thus, the "value" term would be the
18 current stock quote. As an example, if the key term "FMAGX" is matched
19 and an associated value of 102.75 is also found, the alphanumeric message
20 "CURRENT QUOTE FOR MAGELLAN: 102.75" is generated and

1 displayed. To closely track one or more stocks or funds, the remote
2 correspondent can be accessed as often as desired to "refresh" the
3 alphanumeric message showing the current quote. A wide variety of types of
4 information may be programmed, accessed and displayed in a like manner.

5 It will be understood that the processor 1 can communicate
6 successively or at different times with different remote correspondents. Thus,
7 referring to FIG. 6, the current local weather information and the selected
8 stock market information can be serially received and processed for display
9 together in a manner which appears to be virtually simultaneous to a user. As
10 previously noted, the overall display can be updated throughout the day at
11 various times, as to each remote correspondent accessed, which have
12 previously been entered in the memory 8.

13 If the thermostat system is programmable, the operating program
14 installed during manufacture may provide for user entry following
15 conventional instructions similar to those used in user-programming the
16 climate control operation of the thermostat system. For example, assuming
17 that the remote correspondent has an Internet address, the address may be
18 entered using the touchpad 11 in any suitable manner as previously set up by
19 a system programmer during software design. Then, various key terms the

1 user wishes to employ with various remote correspondents having various
2 addresses may be entered by a user.

3 As previously mentioned, the invention is not limited to use in
4 programmable thermostat systems or even to thermostat systems in which
5 correspondent addresses and key terms have previously been entered into
6 memory 8. Still referring to FIG. 1 and also to FIG. 7, in a variant
7 embodiment of the invention, a thermostat system communicates with a
8 remote correspondent 15 which provides a customized service to the user of
9 the thermostat system. In this embodiment of the invention, the user is a
10 subscriber to the customized service in order to receive known current
11 information on a predetermined schedule. At predetermined times (or on
12 demand), data communications is established between the processor 1 and the
13 remote correspondent 15 which, in this case, provides the customized service.
14 The current information is downloaded and displayed. The resulting
15 messages shown and periodically updated on the LCD 12 may be as shown in
16 exemplary FIG. 6 if, for example, Montreal current temperature, daily high
17 and low temperatures and the current quote for Magellan is what the user has
18 subscribed to receive.

19 When the service is set up, the user and the business which provides the
20 service via the remote correspondent 15 agree as to what current information

1 (typically more than in the example) will be supplied on an agreed schedule.
2 Depending upon the server-client relationship, either the processor 1 or the
3 remote correspondent 15 may institute the current information transfer at the
4 predetermined times or on demand.

5 While the Internet is not the only facility which the subject thermostat
6 system may use to communicate with a remote correspondent, it is, at the
7 state-of-the-art the most readily widely available and easily accessible. Thus,
8 FIG. 2 show a typical coupling in which the communications interface 14
9 sends/receives serial data to/from an external (to the thermostat system)
10 modem 20 via serial link 16. The modem conventionally interfaces with an
11 Internet Service Provider (ISP) 21 which completes the communications link
12 to the remote correspondent in the well-known manner. The modem 20 may
13 be dial-up, cable, DSL or any other type suitable for the communications
14 environment in a given installation.

15 At the state-of-the-art and as shown in FIG. 3, a modem 24 for
16 communicating with the ISP 21 may be integrated into the communications
17 interface 14 of the input/output unit 14 to eliminate the need for an external
18 modem. Thus, when communications is established with the remote
19 correspondent 15 according to a schedule or upon demand, the data transfer
20 takes place via modem 24 and data link 26 as shown.

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1 Attention is now directed to FIG. 4 which illustrates an optional
2 extension of the subject thermostat system. It will be observed that the ISP 21
3 is not only in communication with the first remote correspondent 15, but also
4 with a second remote correspondent 26. The second remote correspondent 23
5 may be another thermostat system (controlling another conditioned space (not
6 shown) with other space conditioning equipment (not shown)) which can be
7 remotely controlled. In this embodiment, data received from the first remote
8 correspondent 15 as previously described may include specific information
9 which can be interpreted by the processor 1 to require action at the site of the
10 second remote correspondent 23. As an example, assume that the site of the
11 second remote correspondent 23 is a temporarily unoccupied dwelling and
12 that weather data received by the subject thermostat system indicates a
13 predicted significantly low temperature predicted for the region of the site of
14 the second remote correspondent 23. The processor 1 may determine, in
15 response to this new weather information supplied by the first remote
16 correspondent 15, that the heat should be turned on (or the set point raised) at
17 the site of the second remote correspondent 23 in order to protect water pipes
18 against freezing, warm the conditioned space controlled by the second remote
19 correspondent in anticipation of its upcoming occupation, etc.

1 Those skilled in the art will appreciate that, in a large facility
2 incorporating subdivisions in the conditioned space, each conditioned space
3 having its own thermostat system, each of the thermostat systems may
4 independently employ the invention as previously described.

5 While the principles of the invention have now been made clear in an
6 illustrative embodiment, there will be immediately obvious to those skilled in
7 the art many modifications of structure, arrangements, proportions, the
8 elements, materials, and components, used in the practice of the invention
9 which are particularly adapted for specific environments and operating
10 requirements without departing from those principles.

WHAT IS CLAIMED IS:

1 1. A thermostat system for controlling space conditioning equipment
2 comprising:

3 A) a temperature sensor for providing an electrical signal indicative of
4 the temperature of a conditioned space in which the temperature
5 sensor is situated;

6 B) a liquid crystal display for selectively displaying an alphanumeric
7 message;

8 C) a processor, said processor including:

9 1) a central processing unit;

10 2) a real time clock;

11 3) a memory coupled to said central processing unit for storing
12 program and data information, said data including a table
13 storing key terms on a predetermined subject; and

14 4) an input/output unit including:

15 a) a sensor input coupled to said temperature sensor for
16 receiving said electrical signal therefrom;

17 b) a control output coupled to the space conditioning
18 equipment for issuing control signals thereto; and

19 c) a communications interface adapted to establish bi-
20 directional communications between said processor and a
21 remote correspondent; and

22 D) a program stored in said memory for causing said central
23 processing unit to selectively:

24 1) direct said input/output unit to establish communications
25 with a first remote correspondent which is a source of current
26 information through said communications interface;

27 2) read the current information from said external source;

28 3) parse the current information against said key terms stored in
29 said memory;

30 4) if a match is found during step D)3), searching the current
31 information for at least one value associated with the said
32 matched key term; and

33 5) if said at least one value associated with the matched key
34 term is found during step D)4), displaying an alphanumeric
35 message on said liquid crystal display, said alphanumeric
36 message including:

37 a) a first message component stored in said memory and
38 representative of the connotation of said matched key
39 term; and
40 b) a second message component representative of said at
41 least one value associated with the matched key term
42 found during step D)4).

1 2. The thermostat system of Claim 1 in which said communications
2 interface includes a modem.

1 3. The thermostat system of Claim 1 in which said communications
2 interface is coupled to an external modem.

1 4. The thermostat system of Claim 1 in which said key terms are stored in
2 "ASCII" format and in which said current information is received in
3 "HTML" format.

1 5. The thermostat system of Claim 2 in which said key terms are stored in
2 "ASCII" format and in which said current information is received in
3 "HTML" format.

Sub A

1003333-001003

1 6. The thermostat system of Claim 3 in which said key terms are stored in
2 "ASCII" format and in which said current information is received in
3 "HTML" format.

1 7. The thermostat system of Claim 1 in which the source code of said
2 current information is parsed against said key terms stored in said memory.

1 8. The thermostat system of Claim 4 in which the source code of said
2 current information is parsed against said key terms stored in said memory.

1 9. The thermostat system of Claim 1 in which, said program further
2 includes:

- 3 A) alarm condition determination means adapted to detect an alarm
- 4 condition included in said current information; and
- 5 B) alarm condition alerting means to transmit an alarm message
- 6 through said communications interface to a predetermined second
- 7 remote correspondent.

Sub A1

10. The thermostat system of Claim 4 in which, said program further includes:

- A) alarm condition determination means adapted to detect an alarm condition included in said current information; and
- B) alarm condition alerting means to transmit an alarm message through said communications interface to a predetermined second remote correspondent.

11. A thermostat system for controlling space conditioning equipment comprising:

- A) a temperature sensor for providing an electrical signal indicative of the temperature of a conditioned space in which the temperature sensor is situated;
- B) a liquid crystal display for selectively displaying an alphanumeric message;
- C) a processor, said processor including:
 - 1) a central processing unit;
 - 2) a real time clock;
 - 3) a memory coupled to said central processing unit for storing program and data information; and

13 4) an input/output unit including:
14 a) a sensor input coupled to said temperature sensor for
15 receiving said electrical signal therefrom;
16 b) a control output coupled to the space conditioning
17 equipment for issuing control signals thereto; and
18 c) a communications interface adapted to establish bi-
19 directional communications between said processor and a
20 first remote correspondent which is a source of current
21 information; and
22 D) means coupling said communications interface and said first
23 remote correspondent; and
24 E) a program stored in said memory for displaying messages from
25 said first remote correspondent on said liquid crystal display.

12. The thermostat system of Claim 1 in which said communications
interface includes a modem.

13. The thermostat system of Claim 1 in which said communications
interface is coupled to an external modem.

Sub A

1 14. The thermostat system of Claim 11 in which, said program further
2 includes:

3 A) alarm condition determination means adapted to detect an alarm
4 condition included in said current information; and

5 B) alarm condition alerting means to transmit an alarm message
6 through said communications interface to a predetermined second
7 remote correspondent.

1 15. The thermostat system of Claim 12 in which, said program further
2 includes:

3 A) alarm condition determination means adapted to detect an alarm
4 condition included in said current information; and

5 B) alarm condition alerting means to transmit an alarm message
6 through said communications interface to a predetermined second
7 remote correspondent.

1 16. The thermostat system of Claim 13 in which, said program further
2 includes:

3 A) alarm condition determination means adapted to detect an alarm
4 condition included in said current information; and

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54b AS

(B) alarm condition alerting means to transmit an alarm message through said communications interface to a predetermined second remote correspondent.

1 17. The thermostat system of Claim 1 in which communications between
2 said first remote correspondent and said communications interface is carried
3 out via the Internet.

1 18. The thermostat system of Claim 2 in which communications between
2 said first remote correspondent and said communications interface is carried
3 out via the Internet.

1 19. The thermostat system of Claim 11 in which communications between
2 said first remote correspondent and said communications interface is carried
3 out via the Internet.

1 20. The thermostat system of Claim 12 in which communications between
2 said first remote correspondent and said communications interface is carried
3 out via the Internet.

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DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) ☒ Declaration Submitted with Initial Filing OR ☐ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)	Attorney Docket Number	
	First Named Inventor	Howard B. Rosen
	COMPLETE IF KNOWN	
	Application Number	
	Filing Date	
	Art Unit	
	Examiner Name	

As the below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original and first inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

THERMOSTAT SYSTEM COMMUNICATING WITH A REMOTE CORRESPONDENT FOR RECEIVING AND DISPLAYING DIVERSE INFORMATION

(Title of the Invention)

the specification of which

☐ is attached hereto

OR

☐ was filed on (MM/DD/YYYY) as United States Application Number or PCT International

Application Number and was amended on (MM/DD/YYYY) (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 specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

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

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
[NONE]			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

DECLARATION — Utility or Design Patent Application

Direct all correspondence to: ☒		Customer Number or Bar Code Label		OR ☐		Correspondence address below	
Howard B. Rosen							
Name							
Address 1 Lyncroft Road							
Hampstead City				Qc State		H3X 3E3 ZIP	
Canada Country		514-983-5662 Telephone			514-737-0922 Fax		
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 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.							
NAME OF SOLE OR FIRST INVENTOR :				☐ A petition has been filed for this unsigned inventor			
Given Name Howard B. (first and middle [if any])				Family Name Rosen or Surname			
Inventor's Signature 						Date 02/11/2002	
Montreal Residence: City		Qc State		Canada Country		Canadian Citizenship	
1 Lyncroft Road							
Mailing Address							
Hampstead City		Qc. State		H3X 3E3 ZIP		Canada Country	
NAME OF SECOND INVENTOR:				☐ A petition has been filed for this unsigned inventor			
Given Name (first and middle [if any])				Family Name or Surname			
Inventor's Signature						Date	
Residence: City		State		Country		Citizenship	
Mailing Address							
City		State		ZIP		Country	
☐ Additional inventors are being named on the ____ supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.							

[Page 2 of 2]

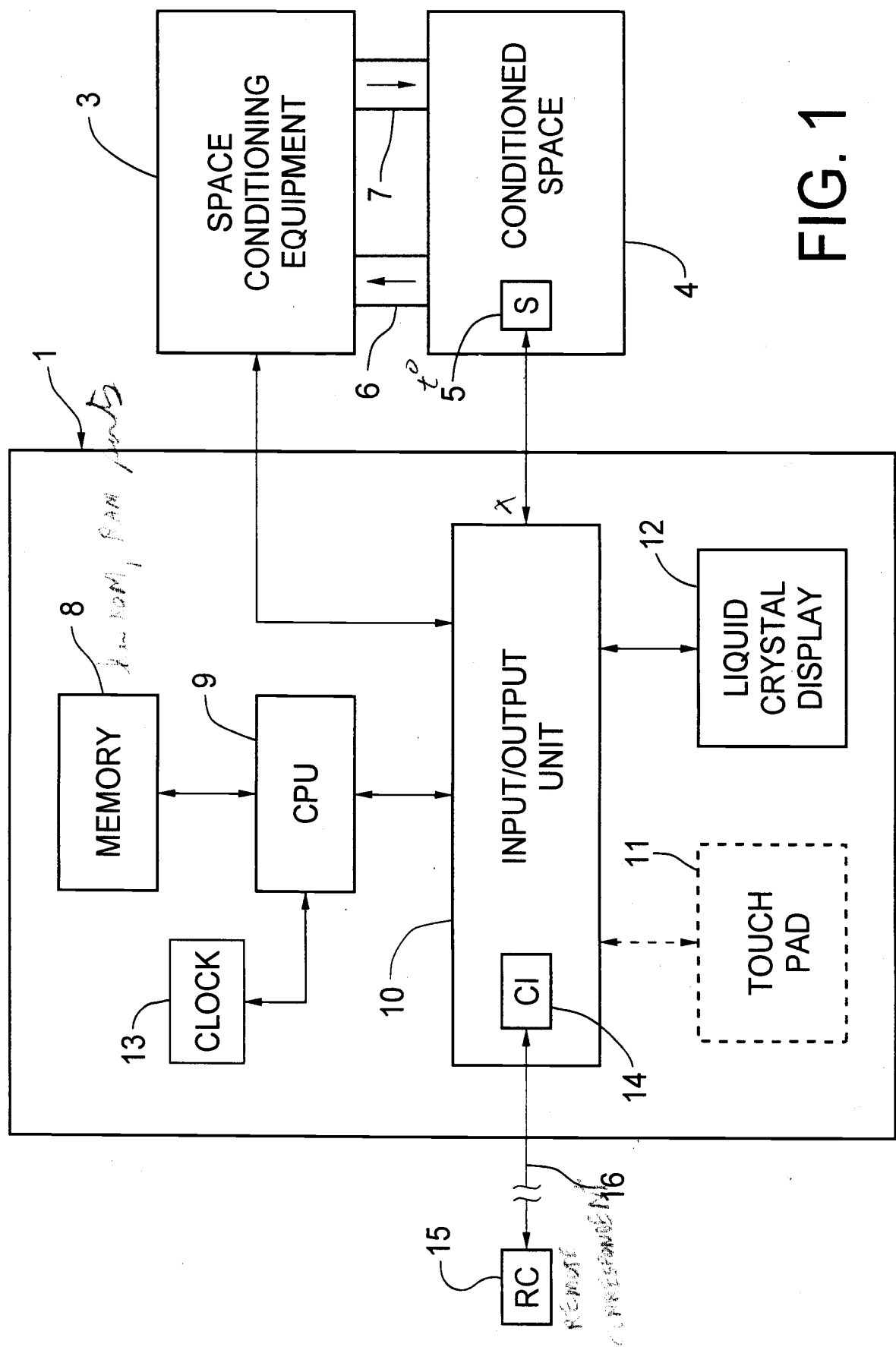


FIG. 1

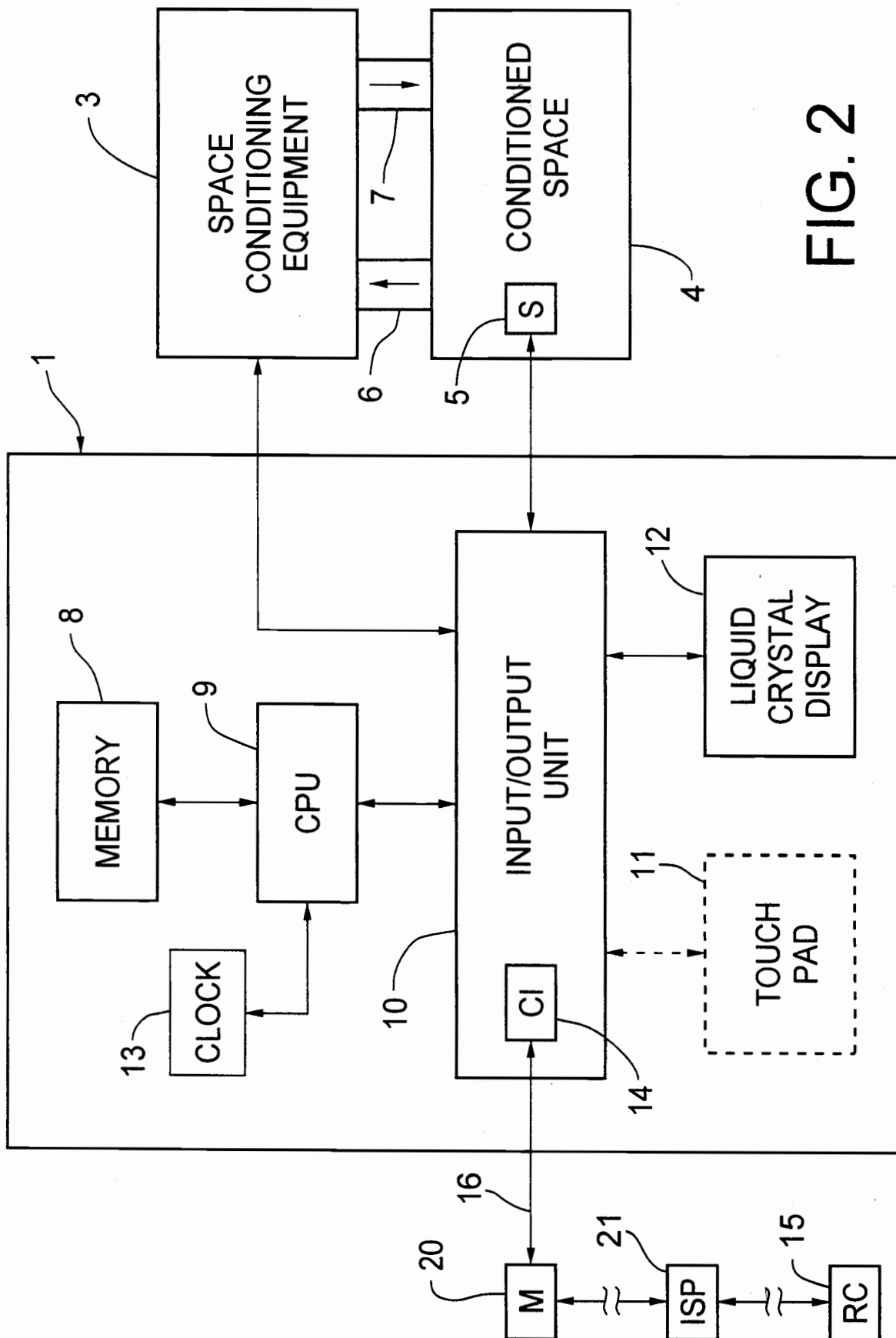


FIG. 2

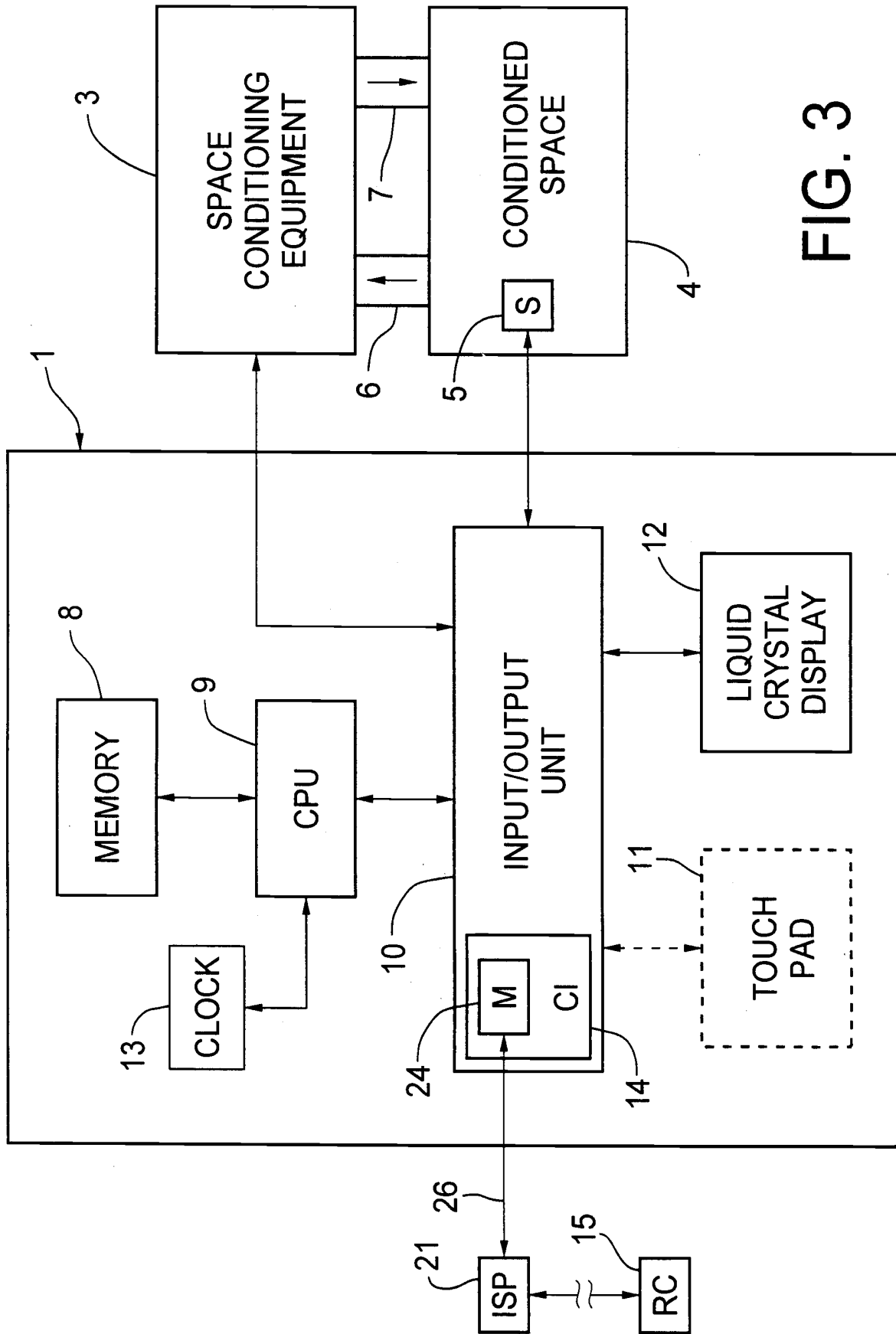


FIG. 3

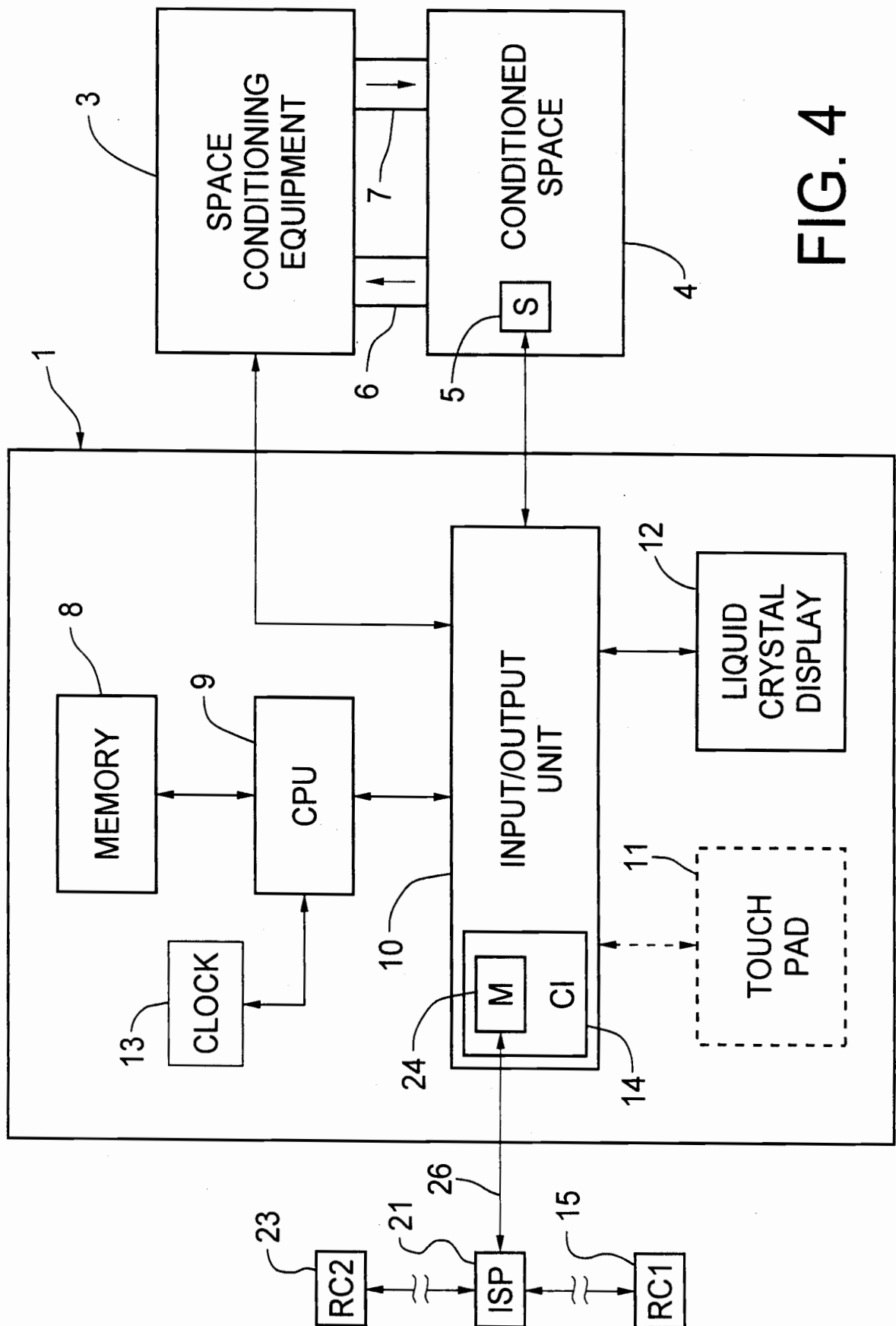


FIG. 4

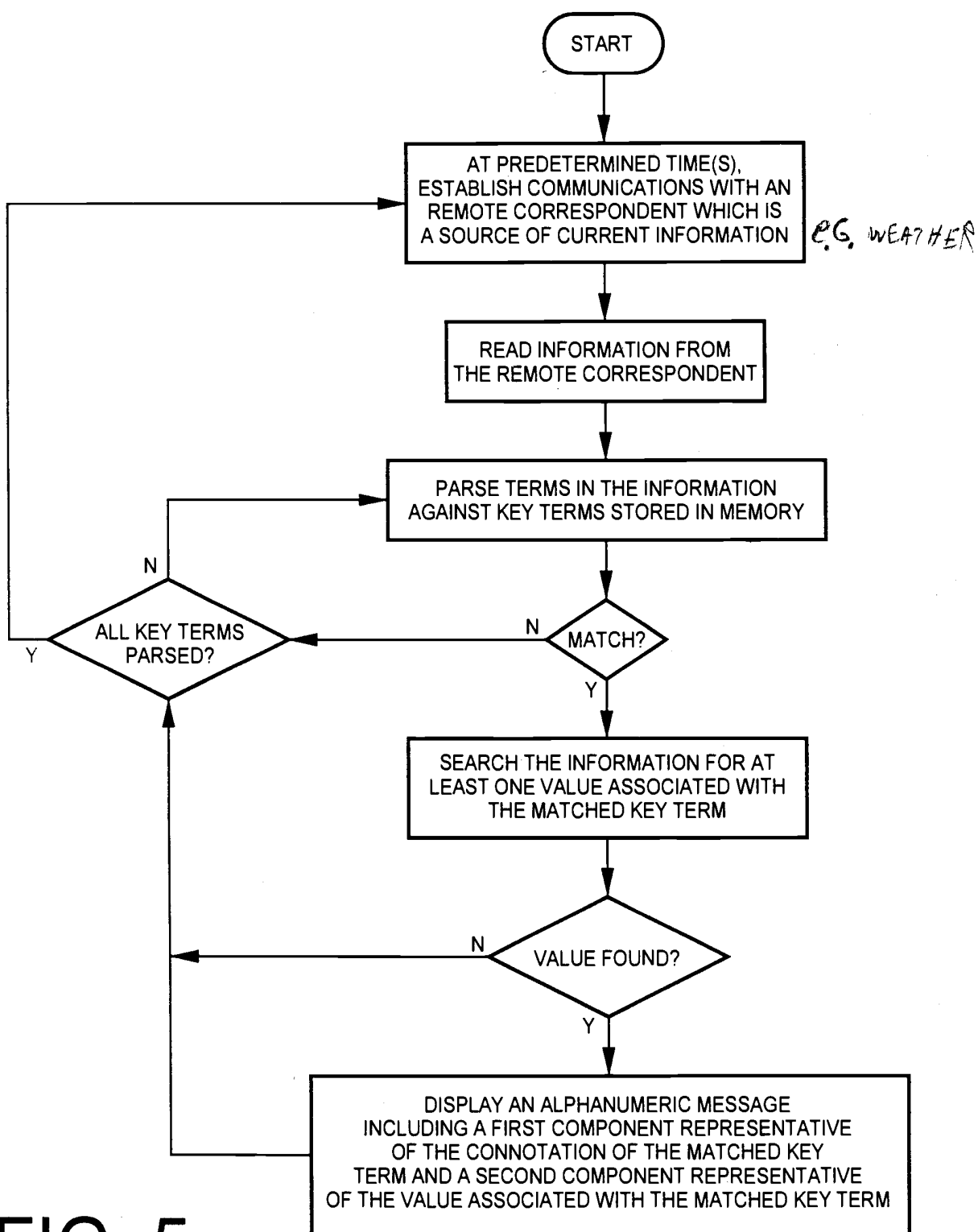


FIG. 5

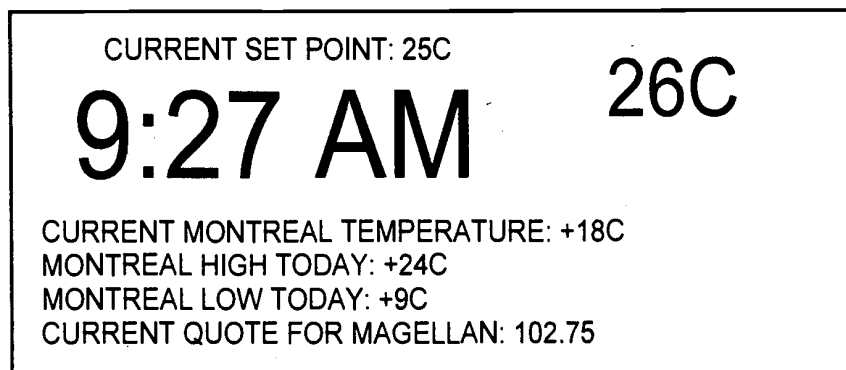


FIG. 6

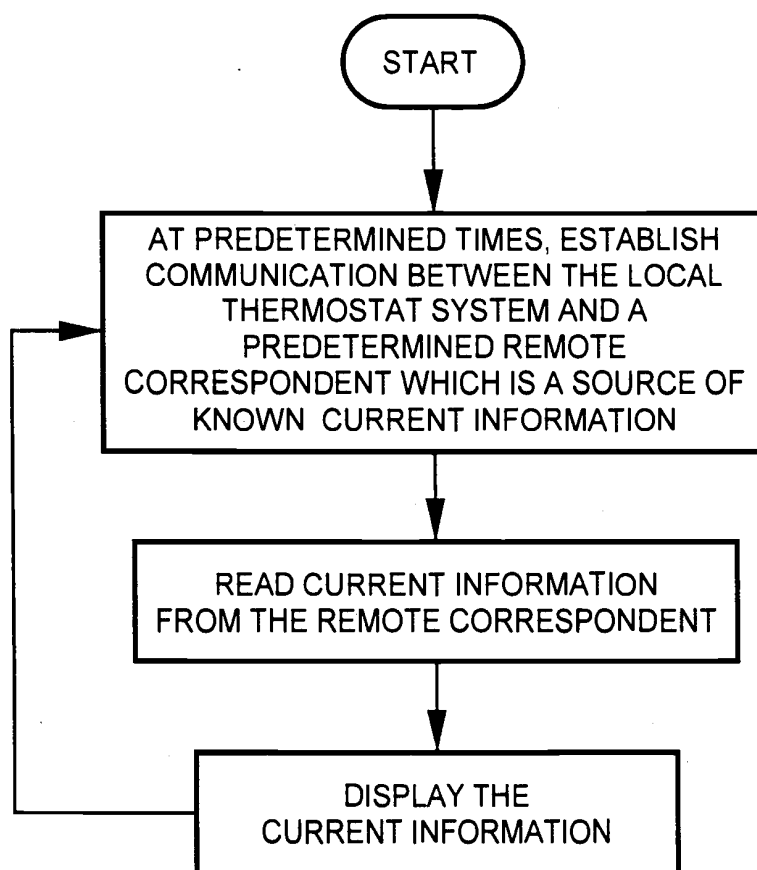


FIG. 7

DRWGS. APPROVED
7/1/03
FIG 5

0019555

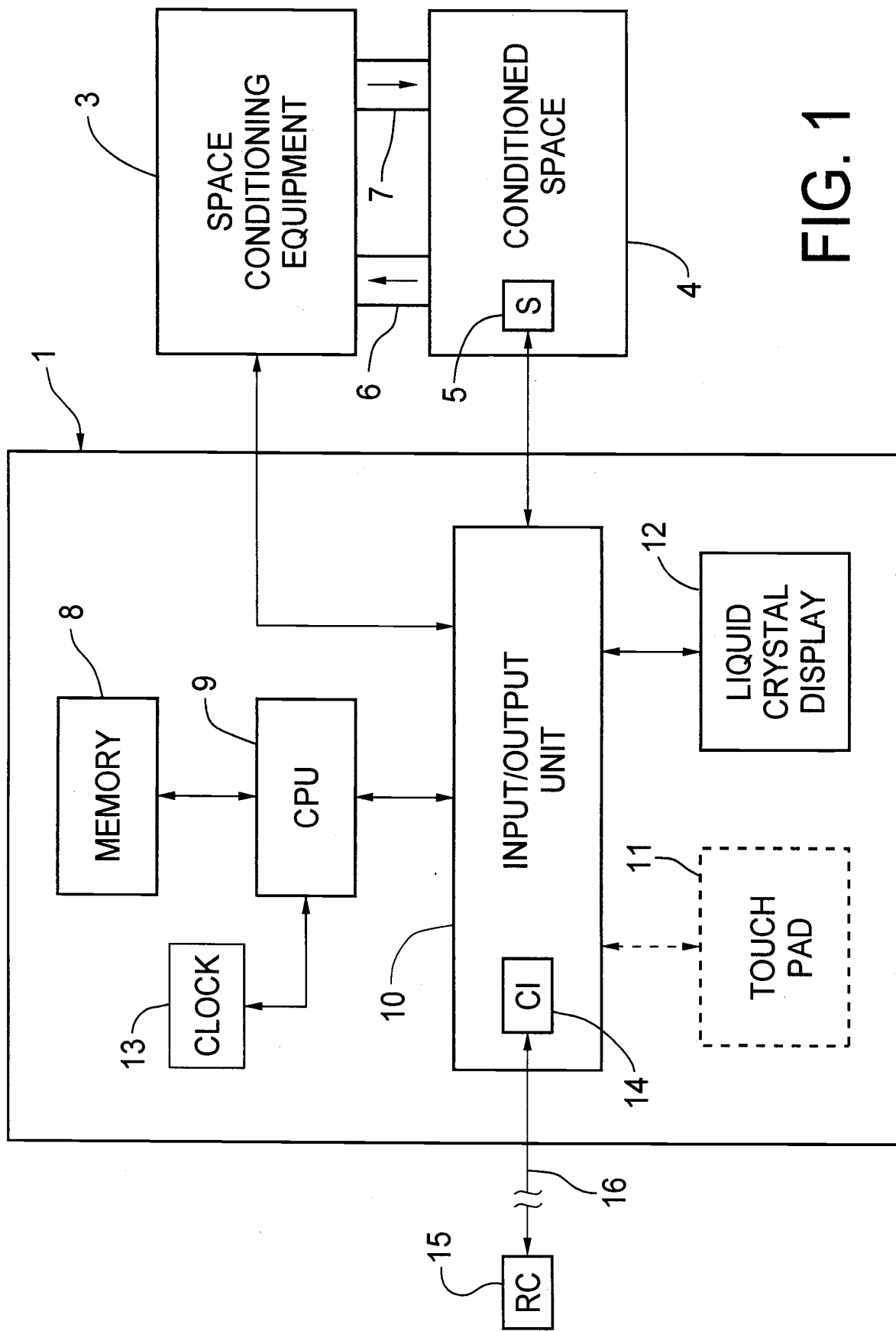


FIG. 1

FIG. 1

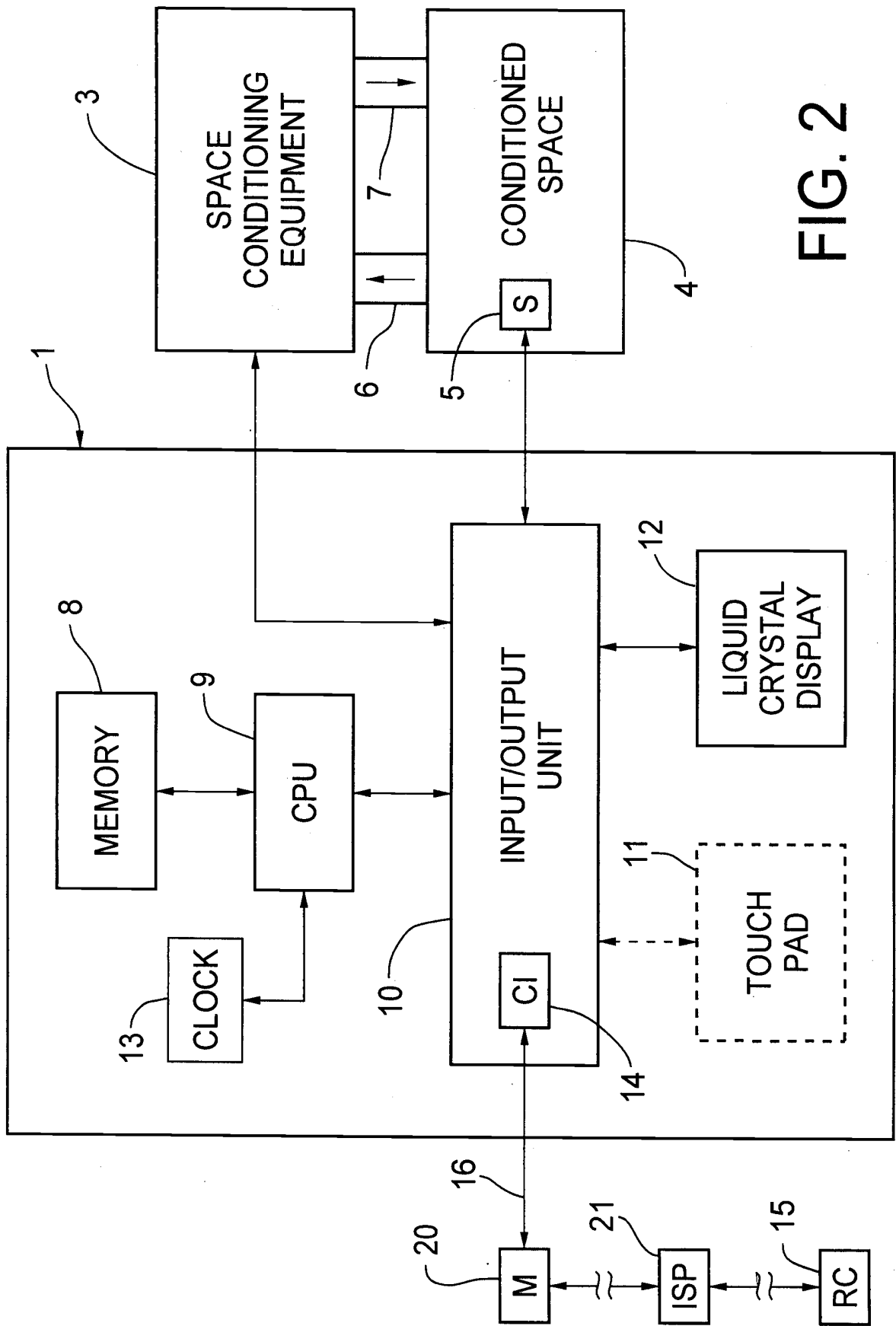


FIG. 2

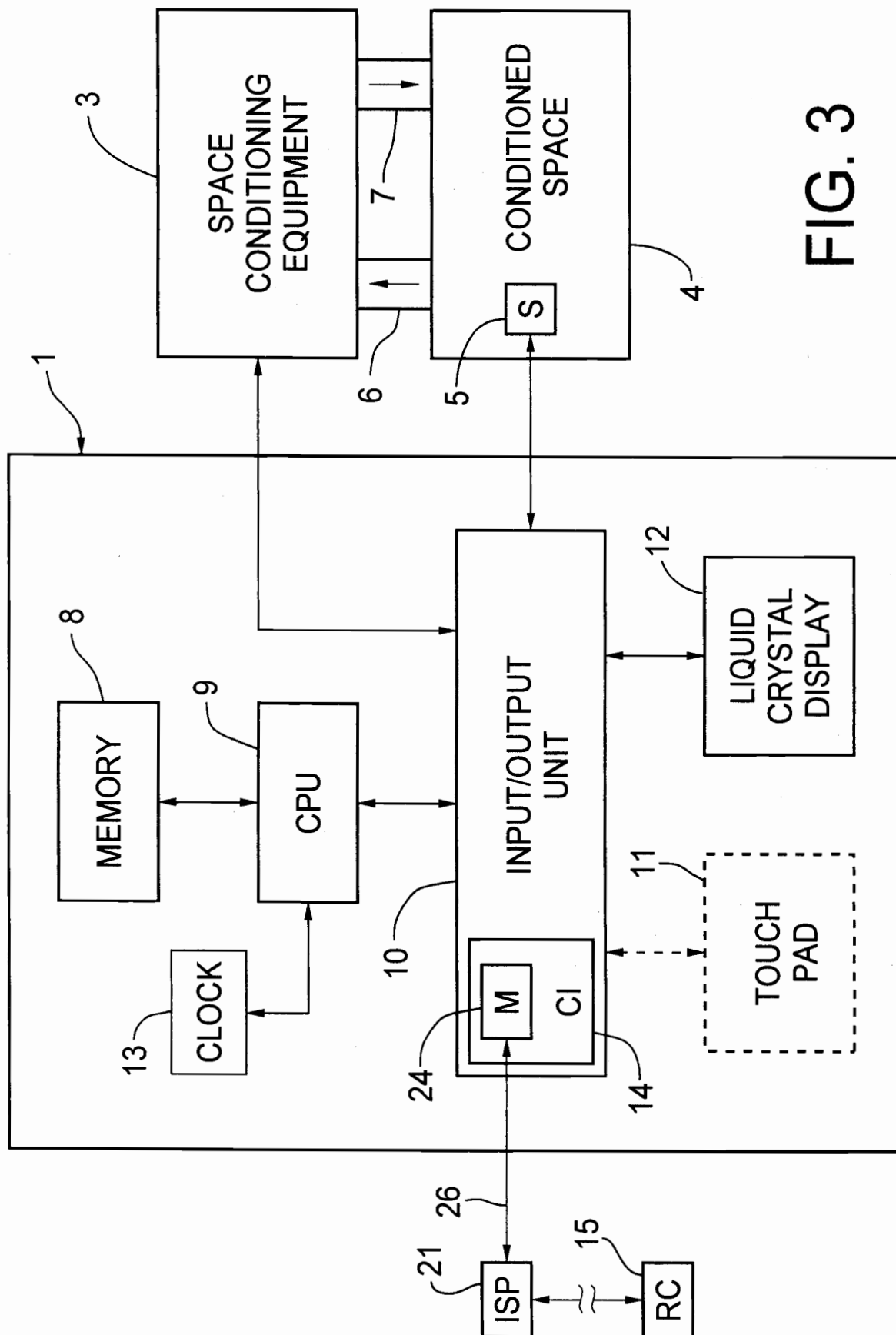


FIG. 3

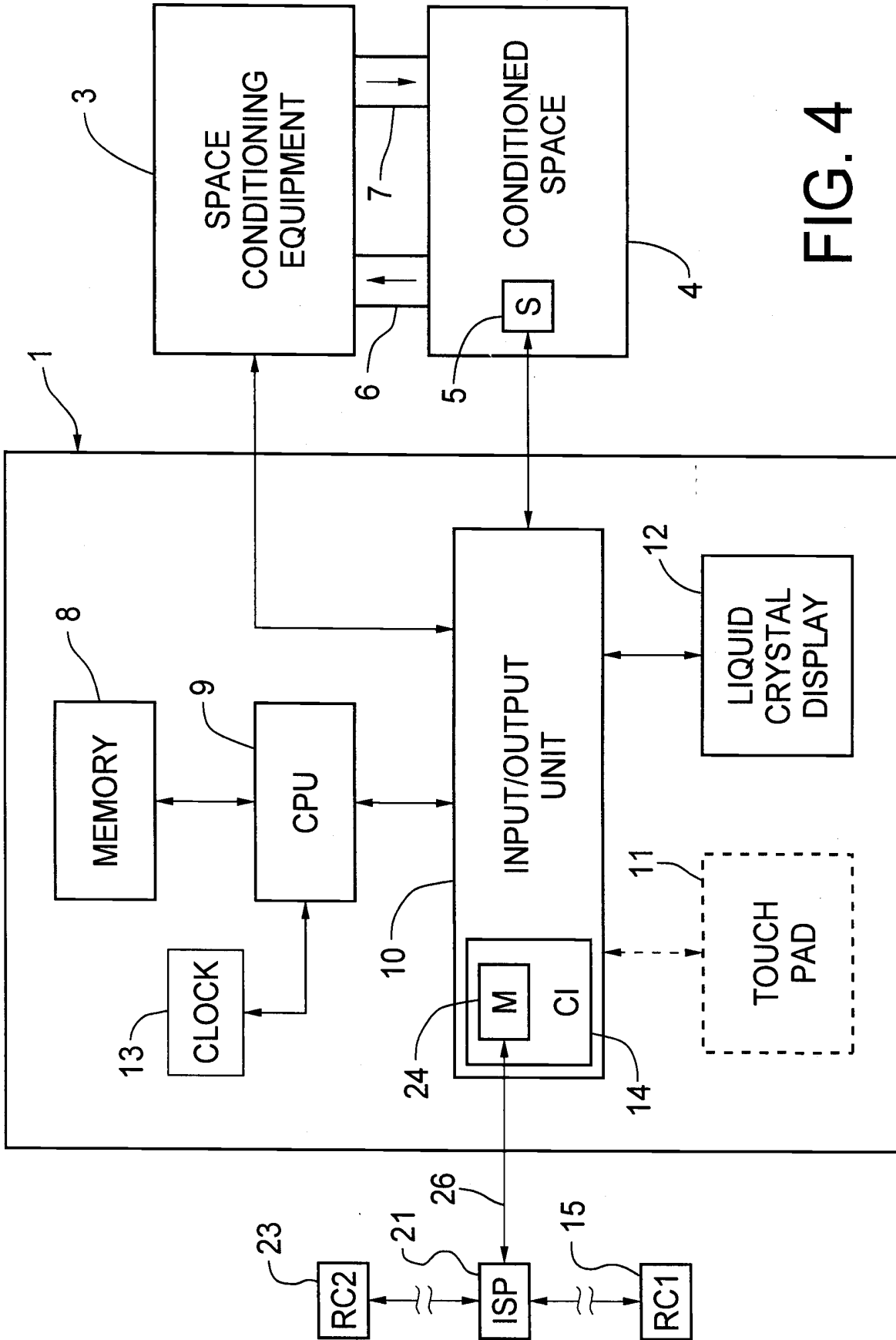


FIG. 4

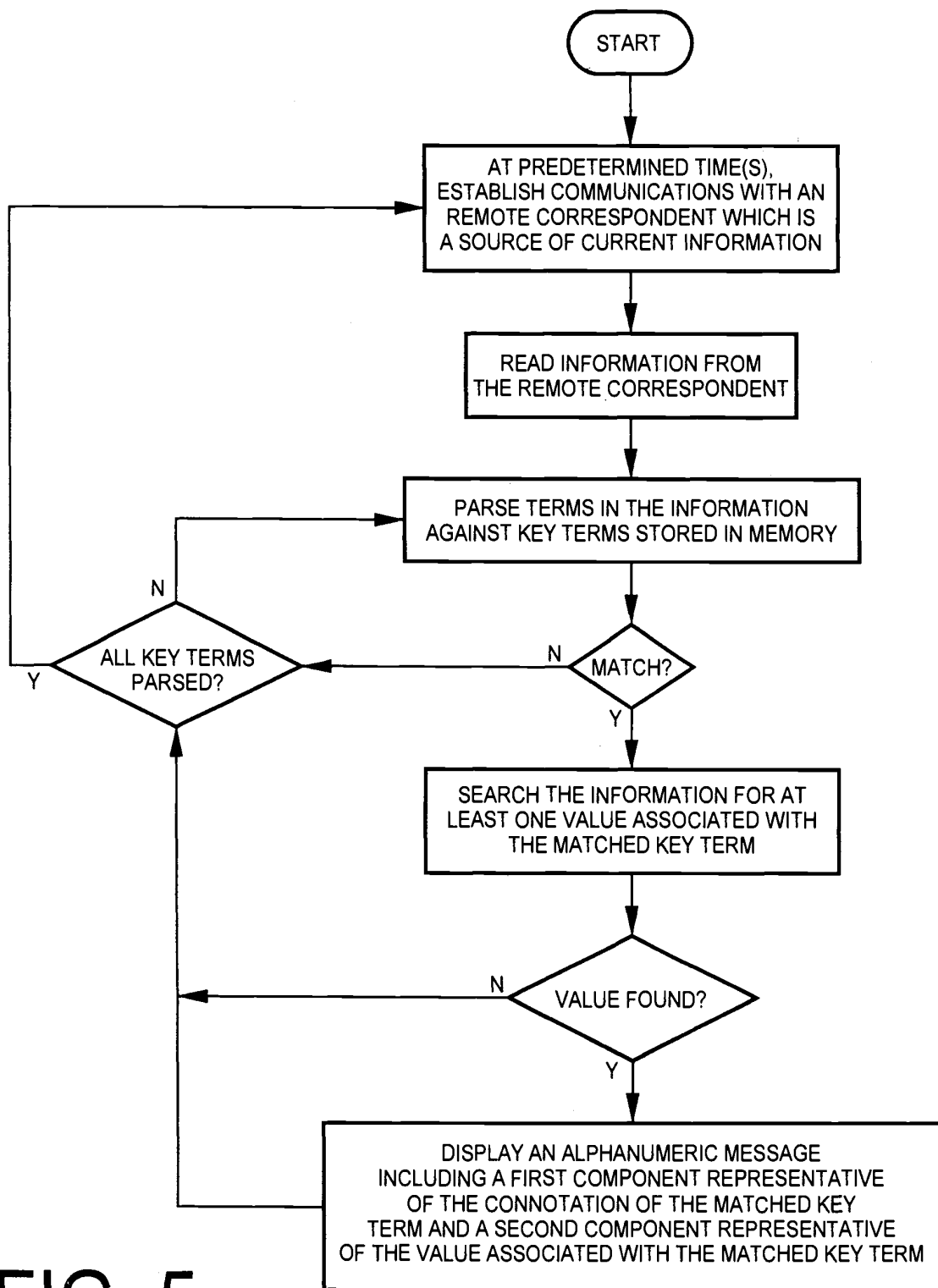


FIG. 5

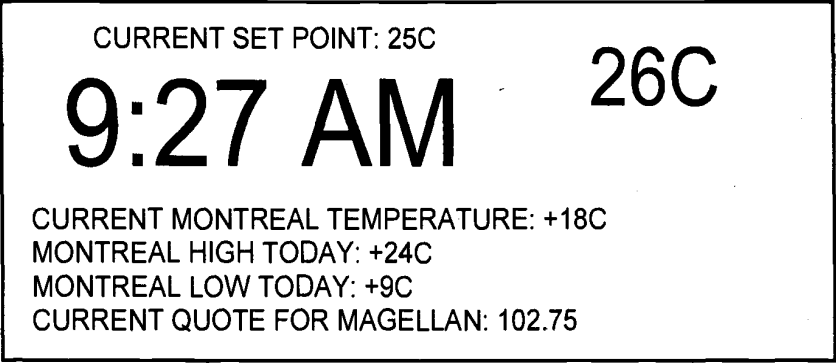


FIG. 6

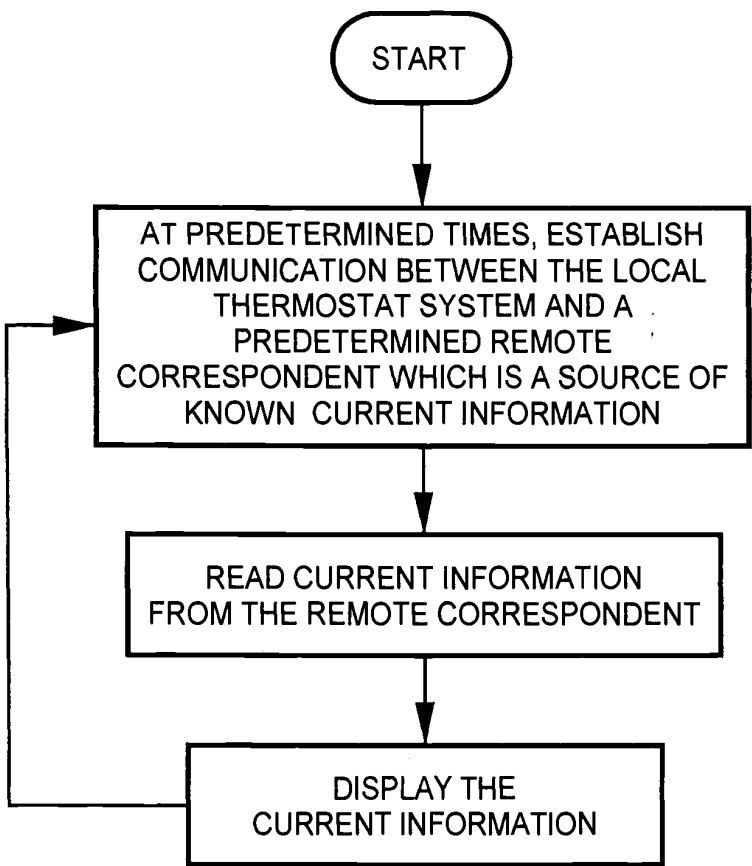


FIG. 7

02.15.02

PTO/SB/05 (03-01)

Approved for use through 10/31/2002. OMB 0851-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**UTILITY
PATENT APPLICATION
TRANSMITTAL**

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

Attorney Docket No.

First Inventor

Howard B. Rosen

Title

Express Mail Label No.

EF24879 7465 US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 25]
(preferred arrangement set forth below)
 - Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 5]
5. Oath or Declaration [Total Pages 2]
 - a. ☒ Newly executed (original or copy)
Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
 - b. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s)
named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO:

Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. ☐ Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ paper
 - c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☐ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No. _____

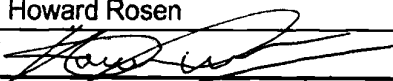
Prior application information: Examiner: _____ Group Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label  or ☒ Correspondence address below

Name	HOWARD B. ROSEN				
Address	1 Lyncroft Road				
City	Hampstead	State	QC	Zip Code	H3X 3E3
Country	Canada	Telephone	514-983-5662	Fax	514-737-0922

Name (Print/Type)	Howard Rosen	Registration No. (Attorney/Agent)	
Signature		Date	Feb 11, 2002

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FEE TRANSMITTAL
for FY 2002

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT

(\$)

Complete if Known

Application Number

Filing Date

First Named Inventor

Howard B. Rosen

Examiner Name

Group Art Unit

Attorney Docket No.

METHOD OF PAYMENT

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit
Account
Number

Deposit
Account
Name

☐ Charge Any Additional Fee Required
Under 37 CFR 1.16 and 1.17

☒ Applicant claims small entity status.
See 37 CFR 1.27

2. ☒ Payment Enclosed:

☐ Check

☒ Credit card

☐ Money
Order

☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Small Entity

Fee Fee Fee Fee Fee Description

Code (\$) Code (\$) Code (\$)

101 740 201 370 Utility filing fee

106 330 206 165 Design filing fee

107 510 207 255 Plant filing fee

108 740 208 370 Reissue filing fee

114 160 214 80 Provisional filing fee

Fee Paid

370.00

SUBTOTAL (1) (\$) 370.00

2. EXTRA CLAIM FEES

Total Claims 20 -20** = 0 X 0.00 = 0.00
Independent Claims 2 -3** = 0 X 0.00 = 0.00
Multiple Dependent 0 = 0.00

Large Entity Small Entity

Fee Fee Fee Fee Fee Description

Code (\$) Code (\$) Code (\$)

103 18 203 9 Claims in excess of 20

102 84 202 42 Independent claims in excess of 3

104 280 204 140 Multiple dependent claim, if not paid

109 84 209 42 ** Reissue independent claims
over original patent

110 18 210 9 ** Reissue claims in excess of 20
and over original patent

SUBTOTAL (2) (\$) 0.00

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
105 130 205 65		Surcharge - late filing fee or oath	
127 50 227 25		Surcharge - late provisional filing fee or cover sheet	
139 130 139 130		Non-English specification	
147 2,520 147 2,520		For filing a request for ex parte reexamination	
112 920* 112 920*		Requesting publication of SIR prior to Examiner action	
113 1,840* 113 1,840*		Requesting publication of SIR after Examiner action	
115 110 215 55		Extension for reply within first month	
116 400 216 200		Extension for reply within second month	
117 920 217 460		Extension for reply within third month	
118 1,440 218 720		Extension for reply within fourth month	
128 1,960 228 980		Extension for reply within fifth month	
119 320 219 160		Notice of Appeal	
120 320 220 160		Filing a brief in support of an appeal	
121 280 221 140		Request for oral hearing	
138 1,510 138 1,510		Petition to institute a public use proceeding	
140 110 240 55		Petition to revive - unavoidable	
141 1,280 241 640		Petition to revive - unintentional	
142 1,280 242 640		Utility issue fee (or reissue)	
143 460 243 230		Design issue fee	
144 620 244 310		Plant issue fee	
122 130 122 130		Petitions to the Commissioner	
123 50 123 50		Processing fee under 37 CFR 1.17(q)	
126 180 126 180		Submission of Information Disclosure Stmt	
581 40 581 40		Recording each patent assignment per property (times number of properties)	
146 740 246 370		Filing a submission after final rejection (37 CFR § 1.129(a))	
149 740 249 370		For each additional invention to be examined (37 CFR § 1.129(b))	
179 740 279 370		Request for Continued Examination (RCE)	
169 900 169 900		Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) 0.00

SUBMITTED BY

Name (Print/Type)

Howard B. Rosen

Registration No.
(Attorney/Agent)

Complete (if applicable)

Telephone

514-983-5662

Signature

Date

02/11/2002

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Howard B. Rosen

Filed: February 13, 2002

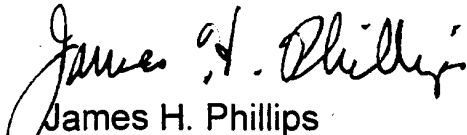
For:

THERMOSTAT SYSTEM COMMUNICATING WITH A REMOTE
CORRESPONDENT FOR RECEIVING AND DISPLAYING DIVERSE
INFORMATION

CERTIFICATE OF MAILING BY EXPRESS MAIL

The undersigned certifies that the enclosed Patent Application including: a Specification comprising 25 pages including 20 Claim(s) and an Abstract of the Disclosure and a drawing comprising 6 sheet(s) showing FIGs. 1 to 7; a Declaration; a Fee Transmittal for FY 2002 Form, a Credit Card Payment Form, a Utility Patent Application Transmittal Form; and an Acknowledgement of Receipt of Patent Application mailer, each one of which has placed thereon the were placed in an envelope and mailed by Express Mail (United States Post Office to Addressee - Express Mail Label No. EF248797465US) to the Assistant Commissioner for Patents, Washington, D.C. 20231 on February 13, 2002, on behalf of Applicant Howard B. Rosen.

Respectfully submitted,


James H. Phillips
Reg. No. 24,133

James H. Phillips, Reg. No. 24133
410 E. Braeburn Dr.
Phoenix, Arizona 85022
(602) 862-6542



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

GP/3744
#2
IDS

Title: Thermostat System Communicating With A
Remote Correspondent For Receiving And
Displaying Diverse Information
Inventor(s): Howard Rosen
Serial No.: 10/075886
Filing Date: 2/13/2002
Group No.: 3744
Examiner:
Attorney Docket No.:

TRANSMITTAL LETTER:
REGULAR PATENT
APPLICATION RECEIVED

NOV 06 2002
TECHNOLOGY CENTER R3700

ASSISTANT COMMISSIONER FOR PATENTS
Washington, DC 20231

Sir:

Transmitted hereunder for
filing is the above patent
application and/or related
documents as listed below.

CERTIFICATE OF MAILING (37 CFR 1.08)
I, the person below signing this Certificate of Mailing,
hereby certify that this document and the documents
referred to as enclosed therewith are being
deposited with sufficient postage for first class
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date in an envelope as addressed to: Assistant
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David T. Bracken

Signature: David T. Bracken
Date of Mailing: Oct. 31, 2002

- ☒ Power of Attorney – 1 p.
- ☒ Petition to Make Special – 1 p.
- ☒ Declaration in Support – 2 p.
- ☒ Authorization for \$160

- ☒ Information Disclosure Statement / Remarks
- ☒ Copies of Cited Prior Art
- ☒ Account Mgr. Letter (Royal Bank) – 1 p.

Address all correspondence to: David T. Bracken, The Law Office of David T.
Bracken, 4839 Bond Avenue, Orange, CA
92869
Phone: 714-744-4798

David T. Bracken

Attorney for Applicant(s)
David T. Bracken, Reg. No. 37522

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: Thermostat System Communicating
With A Remote Correspondent For
Receiving And Displaying Diverse
Information
Inventor(s): Howard Rosen
Serial No.: 10/075886
Filing Date: 2/13/2002
Group No.:
Examiner:
Attorney Docket No.:

INFORMATION DISCLOSURE
STATEMENT - REMARKS

RECEIVED

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TECHNOLOGY CENTER R3700

ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure under 37 C.F.R. 1.56 and pursuant to 37 C.F.R. 1.97-1.98, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents listed on the attached Form PTO-SB-08A. One copy of the cited document is submitted herewith.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant reserves the right to dispute any of the listed documents as prior art during examination. Further, Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application. Furthermore, the submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made or that no other material information may exist. Applicant respectfully submits that all pending claims are patentable over the foregoing references, alone or in combination.

The present Information Disclosure Statement is being filed with a PETITION TO MAKE SPECIAL PURSUANT TO 37 CFR §1.102(d) AND MPEP 708.02(I) FOR MANUFACTURE.

The invention is directed to receipt and display by a thermostat of current information from a first remote correspondent.

An extensive and diligent search was made relative to thermostats and other such devices with data connections to a network.

US Patent 6336142 describes a PDA that can execute applications programs such as PIM (Personal Information Manager) software or a Web browser while obtaining information such as newspaper article, stock quotations, a weather report,

traffic information or the like from a mobile download, preferably by using infrared communication.

US Patent 5999882 describes a system for collection of real-time weather data at a centralized database. The weather data is presented to users through a multimedia computer presentation over the Internet and through interactive presentation via a television broadcast hosted by a weather presenter. The system allows weather data to be shared among a number of different types of users, each of which may have different requirements.

US Patent 5568385 shows how a telephone line is opened only periodically during which time all data from the remote weather station is downloaded to a computer. Data presentations include interactive those made over a network protocol such as the Internet. The present invention allows collected weather data to be shared among a number of users.

US Patent 5896443 describes a system that starts with a desktop personal computer, personal digital assistant or other device which can receive, process and output data such as a thermostat or printer which may send/receive signals such as control signals. The device is coupled to it a high-frequency modem which allows the device to communicate the data that it is outputting or receiving on a high-frequency signal carried across telephone line.

US Patent 6161133 shows a dial-up technical-service network. The system allows setting-up and configuring appliances that make operation responses via Internet input. Appliances that use the Internet connection include devices that access and operate on the Internet. Examples given are WEB phones, WEB TV's, Palm-top computers, Internet capable cell phones, lap-top computers, desktop and larger computers, a refrigerator, air conditioning thermostat, toy etc., which may be connected to and utilize information from the Internet.

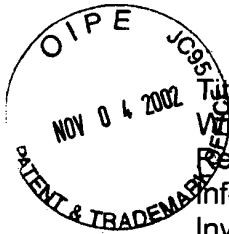
US Patent 6182113 relates that web pages, such as news pages, weather pages, traffic reports, etc., are updated at different times of the day. The disclosure of this patent continues in that the usefulness of a user's bookmarks can therefore vary with the time of day, user's location, and user's link bandwidth. At the web server end of the connection, the contents of a web page can be modified in accordance with a manually entered zip code.

Respectfully submitted,

Dated: Oct. 31, 2002

David T. Bracken

David T. Bracken
Registration No. 37,522



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: Thermostat System Communicating
With A Remote Correspondent For
Receiving And Displaying Diverse
Information
Inventor(s): Howard Rosen
Serial No.: 10/075886
Filing Date: 2/13/2002
Group No.:
Examiner:
Attorney Docket No.:

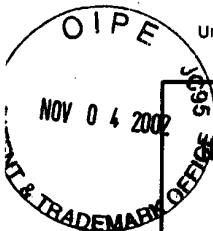
POWER OF ATTORNEY

I declare that:
4. The inventor(s) named below does (do) hereby appoint as attorney of record with full power of substitution and revocation, to prosecute the above application and transact all business in the Patent and Trademark Office connected therewith.: 1. David T. Bracken, Registration No. 37,522; Send correspondence to: David T. Bracken, The Law Office of David T. Bracken, 4839 East Bond Avenue, Orange, California 92869
5. All statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. All the above statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 the United States Code, and such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

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NOV 06 2002
TECHNOLOGY CENTER R3700

Inventor Name:	Signature of Inventor:	Date:
Howard Rosen		10/31/02



37 CFR 1.501 INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)										Docket Number (Optional) 10/075886 ~~Patent Number~~			
										Applicant Rosen			
										Issue Date		Group Art Unit 3744	
U.S. PATENT DOCUMENTS													
EXAMINER INITIAL	DOCUMENT NUMBER				DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE				
<i>[Signature]</i>				5896443	04-99	~~KEL~~ DIGHTER	379	9308					
<i>[Signature]</i>				6161133	12-00	KIKINIS	709	220					
<i>[Signature]</i>				6166342	12-00	CHOU	200	344					
<i>[Signature]</i>				6182113	01-01	NARAYANUSWAMI	709	203					
<i>[Signature]</i>				5568385	10-96	SHELTON	364	420					
<i>[Signature]</i>				5999882	12-91	SIMPSON ET AL	702		RECEIVED				
<i>[Signature]</i>				633414	20-02	KATO ET AL	709	227	NOV 06 2002				
									TECHNOLOGY CENTER R3700				
FOREIGN PATENT DOCUMENTS													
	DOCUMENT NUMBER				DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO				
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)													
EXAMINER W. WAYNAR							DATE CONSIDERED ~~3/4/02~~ 3/4/02						

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

#3
Pet to Make
Special

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

O I P E
NOV 04 2002
T & TRADEMARK

Title: Thermostat System Communicating With
A Remote Correspondent For Receiving And
Displaying Diverse Information
Inventor(s): Howard Rosen
Serial No.: 10/075886
Filing Date: 2/13/2002
Group No.:
Examiner:
Attorney Docket No.:

PETITION TO MAKE SPECIAL
PURSUANT TO 37 CFR §1.102(d)
AND MPEP 708.02(I) FOR
MANUFACTURE

RECEIVED

Assistant Commissioner for Patents
Washington, DC 20231

NOV 06 2002

TECHNOLOGY CENTER R3700

Dear Sir:

Applicant petitions to make this application special is made pursuant to the grounds of prospective manufacture under 37 CFR §1.102(d) and MPEP 708.02(I). Enclosed is a declaration by Applicant alleging that Applicant is in possession of sufficient presently available capital and facilities to manufacture the invention in quantity, that Applicant submits herewith a corroborating statement to that effect, Applicant will not manufacture unless certain that the patent will be granted, Applicant obligates himself to manufacture the invention in the United States or its possessions in quantity immediately upon the allowance of claims or issuance of a patent which will protect the investment of capital and facilities, and Applicant has caused to be made a careful and thorough search of the prior art.

Applicant provides herewith one copy of each of the references deemed most closely related to the subject matter encompassed by the claims if said references are not already of record.

Applicant provides herewith an Information Disclosure Statement explaining the search procedure and remarks relating the references to the claimed invention. Applicant files with this petition the required fee therefor.

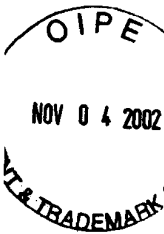
Respectfully submitted,

October 31, 2002

David T. Bracken

David T. Bracken
Reg. No. 37,522

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Title: Thermostat System Communicating With
A Remote Correspondent For Receiving And
Displaying Diverse Information
Inventor(s): Howard Rosen
Serial No.: 10/075886
Filing Date: 2/13/2002
Group No.:
Examiner:
Attorney Docket No.:

DECLARATION IN SUPPORT
PETITION TO MAKE SPECIAL
PURSUANT TO 37 CFR §1.102(d)
AND MPEP 708.02(I) FOR
MANUFACTURE

The undersigned, in support of a petition to make special pursuant to 37 CFR §1.102(d) and MPEP 708.02(I), declares that:

1. I am the owner and sole named inventor of the above application.
2. I am highly experienced over the last 20 years in bringing patented products to market through prototype development, testing, engineering design review, government approvals, location and development of manufacturing facilities for making commercial quantities of the patented products, licensing, and managing and funding final manufacture, marketing, sales and distribution of the patented products. The following are patents for which I am a named inventor and which are used in products that I have with, much perspiration and at great expense, performed at least some of the previous acts:
 - a. 6,398,118 Title: Thermostat incorporating thin film carbon dioxide sensor and environmental control system
 - b. 6,167,130 Title: Conditional autodialer
 - c. 6,014,435 Title: Unauthorized call defeat apparatus
 - d. 5,859,896 Title: Telephone line automatic prefix dialer
 - e. 5,784,436 Title: Automatic telephone recorder system incorporating a personal computer having a sound handling feature
 - f. 5,426,693 Title: Apparatus and method for automatically blocking the transmission of identifying information concerning a telephone calling party
 - g. 5,309,508 Title: Apparatus and method for automatically blocking the transmission of identifying information concerning a telephone calling party

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TECHNOLOGY CENTER R3700

11/05/2002 TLUU11 00000005 10075886
01 FC:1460 130.00 DP

3. As disclosed in the enclosed letter from my bank, I possess sufficient presently available capital and available capital of approximately US\$100,000 and facilities available here in Canada and in the People's Republic of China, with sufficient square footage and skilled operations personnel to manufacture the invention in quantity. In addition, substantial additional capital and facilities will be made available if a patent is granted.
4. A statement by a bank officer corroborating capital available for manufacture products using the patent is enclosed herewith.
5. I have made diligent sales and technology presentations of products using my invention in this application to one of the two largest thermostat manufacturers in the United States. They will not agree to buy products using my invention unless they are certain that the claims of this application will be granted. I am the prospective manufacturer for products using my invention. This large company with the potential to quickly sell millions of dollars of products using my invention will not buy those products unless they are certain that a patent will be granted for those products. I, as the prospective manufacturer, therefore cannot and will not manufacture products using my invention unless certain that the patent will be granted.
6. I hereby obligate myself to manufacture the invention in the United States or its possessions in a commercially impacting quantity of at least over 5,000 thermostats immediately upon the allowance of claims or issuance of a patent which will protect the investment of capital and facilities.
7. I have to be made a careful and thorough search of the prior art for the claimed invention of this application, the results of which are submitted with this declaration.
8. All the above statements were made of my own knowledge are true and that all statements made on information and belief are believed to be true and with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 the United States Code, and such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full Name of Declarant(s):	Signature of Declarant:	Date:
Howard Rosen		10/31/02

09/27/02 FRI 11:07 FAX 514 856 8655

BUS BKG WEST MTL

002



ROYAL BANK

Royal Bank of Canada
Business Banking
West-Montreal Area
3900 Côte Vertu, Suite 101
St. Laurent, Quebec H4R 1V4

Transit 02591
Tel.: (514) 856-8600
Fax: (514) 856-8655

September 27th, 2002

AED ELECTRONICS INC.
5756 Royalmount Avenue
Mont-Royal, Qc
H4P 1K5

Attention: Mr. Howard Rosen

Subject: United States Patent & Trademark Department

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NOV 06 2002

TECHNOLOGY CENTER R3700

To Whom It May Concern:

This is to confirm that Mr. Howard Rosen, sole shareholder of the entity *AED Electronics Inc.*, have in excess of US \$100,000 in investment deposits with the Royal Bank of Canada.

These investments are intended to be used for the purpose of manufacturing an innovative thermostat for which Mr. Howard Rosen has applied for patents.

Trusting the above is to your entire satisfaction.

Yours truly,

Wilfred Chioda
Account Manager
(514) 856-8616

09/27/02 08:16

TX/RX NO.9991

P.001



UNITED STATES PATENT AND TRADEMARK OFFICE

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

HOWARD B. ROSEN
1 Lyncroft Road
Hampstead, CANADA H3X 3E3

Paper No. 4

MAILED

MAR 03 2002

In re Application of
ROSEN, HOWARD B.
Application No.: 10/075,886
Filed: February 13, 2002

Director's Office
Group 3700

: **DECISION ON**
: **PETITION TO**
: **MAKE SPECIAL**
:

This is a decision on the petition filed November 4, 2002 to make special under 37 CFR 1.102(d).

Since the requirements of 37 CFR 1.102(d) and MPEP 708.02 I, have been met, the petition is granted.

The application is being forwarded to the examiner for an action on the merits.

Linda J. Sholl
Special Program Examiner
Technology Center 3700
Phone: (703) 308-1288



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,886	02/13/2002	Howard B. Rosen		9306

7590 03/25/2003
HOWARD B. ROSEN
1 Lyncroft Road
Hampstead, QC H3X 3E3
CANADA

EXAMINER

WAYNER, WILLIAM E

ART UNIT PAPER NUMBER

3744

DATE MAILED: 03/25/2003

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

Office Action Summary	Application No.	Applicant(s)	
	10/075886	ROSEN	
	Examiner		Group Art Unit
	W. WAYNER		3744

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☒ Responsive to communication(s) filed on 2/13/02

☐ 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*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-20 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 1-10, 12, 13, 16-18, 20 is/are allowed.

☒ Claim(s) 11, 19 is/are rejected.

☒ Claim(s) 14, 15, 20 is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ 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 (a)-(d)

☐ Acknowledgment 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: _____.

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

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.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Proffitt et al in view of Official Notice. Proffitt discloses thermostat 10 having a memory 24, a processor 20, a temperature sensor 22, a display 16, space conditioning equipment 26, a remote correspondent 12 there being bi-directional communication between 12 and 10 (col.2, line 16), a program stored in 24 for displaying messages from 12 on 16, col.2 line 48. Official Notice is taken that liquid crystal displays and real time clocks are conventional and would therefore be obvious to so provide the Proffitt in order to provide a more detailed disclosure.

Claims 14,15, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over (the are as applied to claim 11, and further in view of Sasao et al).

Sasao at col. 3 lines 21, 31, 48, teaches the use of the internet for communications between a thermostat and a remote site. In order to provide more versatile communication it would have been obvious to so provide Proffitt.

Any inquiry concerning this communication should be directed to William
Wayner at telephone number 703-308-1041.

WW/ts


William Wayner
Primary Examiner

Notice of References Cited		Application No.		Applicant(s)	
		10/075,886		ROSEN	
		Examiner		Group Art Unit	
		W. W AYNER		3744	
Page 1 of 1					
U.S. PATENT DOCUMENTS					
*		DOCUMENT NO.	DATE	NAME	CLASS SUBCLASS
A		5,361,982	11/1994	LIEBL ET AL	236 46R
B		5,924,486	7/1999	EHLERS ET AL	165 238
C		~~6,264,110~~	~~7/2001~~	~~SASAO ET AL~~	~~236 51-A~~
D		6,264,110	7/2001	PROFFITT ET AL	236 94-1
E		6,454,177	9/2002	SASAO ET AL	236 46R
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					
*		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)			DATE
U					
V					
W					
X					

* A copy of this reference is not being furnished with this Office action.
(See Manual of Patent Examining Procedure, Section 707.05(a).)

h
5-9-03
Amdr
6/18

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: THERMOSTAT SYSTEM
COMMUNICATING WITH A REMOTE
CORRESPONDENT FOR RECEIVING AND
DISPLAYING DIVERSE INFORMATION

Inventor(s): Howard B. Rosen

Application No.: 10/075,886

Filing Date:

Group No.: 3744

Examiner: William E. Wayner

Attorney Docket No.:

AMENDMENT

Mail Stop Non-Fee Amendment
Commissioner for Patents
PO BOX 1450
ALEXANDRIA, VA 222313-1450

Sir:

In response to the Office Action mailed March 25, 2003, and in view of the amendments made hereby, Applicant respectfully requests reconsideration of the rejection of Claims 11 and 19 as obvious under 35 USC § 103. Kindly revise Claim 11 to read as follows:

- 1 1. (Original) A thermostat system for controlling space conditioning equipment
- 2 comprising:
- 3 A) a temperature sensor for providing an electrical signal indicative of the
- 4 temperature of a conditioned space in which the temperature sensor is
- 5 situated;

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- 6 B) a liquid crystal display for selectively displaying an alphanumeric
7 message;
- 8 C) a processor, said processor including:
- 9 1) a central processing unit;
- 10 2) a real time clock;
- 11 3) a memory coupled to said central processing unit for storing
12 program and data information, said data including a table storing
13 key terms on a predetermined subject; and
- 14 4) an input/output unit including:
- 15 a) a sensor input coupled to said temperature sensor for receiving said
16 electrical signal therefrom;
- 17 b) a control output coupled to the space conditioning equipment for issuing
18 control signals thereto; and
- 19 c) a communications interface adapted to establish bi-directional
20 communications between said processor and a remote correspondent; and
- 21 D) a program stored in said memory for causing said central
22 processing unit to selectively:
- 23 1) direct said input/output unit to establish communications with
24 a first remote correspondent which is a source of current
25 information through said communications interface;
- 26 2) read the current information from said external source;
- 27 3) parse the current information against said key terms stored in
28 said memory;
- 29 4) if a match is found during step D)3), searching the current
30 information for at least one value associated with the said matched
31 key term; and
- 32 5) if said at least one value associated with the matched key
33 term is found during step D)4), displaying an alphanumeric

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34 message on said liquid crystal display, said alphanumeric message
35 including:
36 a) a first message component stored in said memory and representative of
37 the connotation of said matched key term; and
38 b) a second message component representative of said at least one value
39 associated with the matched key term found during step D)4).

1 2. (Original) The thermostat system of Claim 1 in which said communications
2 interface includes a modem.

1 3. (Original) The thermostat system of Claim 1 in which said communications
2 interface is coupled to an external modem.

1 4. (Original) The thermostat system of Claim 1 in which said key terms are
2 stored in "ASCII" format and in which said current information is received in
3 "HTML" format.

1 5. (Original) The thermostat system of Claim 2 in which said key terms are
2 stored in "ASCII" format and in which said current information is received in
3 "HTML" format.

1 6. (Original) The thermostat system of Claim 3 in which said key terms are
2 stored in "ASCII" format and in which said current information is received in
3 "HTML" format.

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10.
1 7. (Original) The thermostat system of Claim 1 in which the source code of said
2 current information is parsed against said key terms stored in said memory.

7
1 8. (Original) The thermostat system of Claim 4 in which the source code of said
2 current information is parsed against said key terms stored in said memory.

11.
1 9. (Original) The thermostat system of Claim 1 in which, said program further
2 includes:

3 A) alarm condition determination means adapted to detect an
4 alarm condition included in said current information; and
5 B) alarm condition alerting means to transmit an alarm message through said
6 communications interface to a predetermined second remote
7 correspondent.

9.
1 10. (Original) The thermostat system of Claim 4 in which, said program further
2 includes:

3 A) alarm condition determination means adapted to detect an
4 alarm condition included in said current information; and
5 B) alarm condition alerting means to transmit an alarm message
6 through said communications interface to a predetermined
7 second remote correspondent.

14.
1 11. (amended) A thermostat system for controlling space conditioning equipment
2 comprising:

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- 3 A) a temperature sensor for providing an electrical signal indicative of the
4 temperature of a conditioned space in which the temperature sensor is
5 situated;
6 B) a liquid crystal display for selectively displaying an alphanumeric
7 message;
8 C) a processor, said processor including:
9 1) a central processing unit;
10 2) a real time clock;
11 3) a memory coupled to said central processing unit for storing
12 program and data information; and
13 4) an input/output unit including:
14 a) a sensor input coupled to said temperature sensor for receiving
15 said electrical signal therefrom;
16 b) a control output coupled to the space conditioning equipment for
17 issuing control signals thereto; and
18 c) a communications interface adapted to establish bi-directional
19 communications between said processor and a first remote
20 correspondent which is a source of current information; and
21 D) means coupling said communications interface and said first
22 remote correspondent; and
23 a program stored in said memory for displaying messages received
24 from said first remote correspondent, which received messages do
25 not pertain to the operation of said thermostat system, on said
26 liquid crystal display.

- 1 12. (Original) The thermostat system of Claim 1 in which said communications
2 interface includes a modem.

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1 ¹⁵ 13. (Original) The thermostat system of Claim 1 in which said communications
2 interface is coupled to an external modem.

1 ¹⁹ 14. (Original) The thermostat system of Claim ¹⁸ 11 in which, said program further
2 includes:

3 A) alarm condition determination means adapted to detect an
4 alarm condition included in said current information; and

5 B) alarm condition alerting means to transmit an alarm message
6 through said communications interface to a predetermined second
7 remote correspondent.

1 ¹³ 15. (Original) The thermostat system of Claim 12 in which, said program further
2 includes:

3 A) alarm condition determination means adapted to detect an
4 alarm condition included in said current information; and

5 B) alarm condition alerting means to transmit an alarm message
6 through said communications interface to a predetermined second
7 remote correspondent.

1 16. (Original) The thermostat system of Claim ¹⁵ 13 in which, said program further
2 includes:

3 A) alarm condition determination means adapted to detect an
4 alarm condition included in said current information; and

5 B) alarm condition alerting means to transmit an alarm message
6 through said communications interface to a predetermined second
7 remote correspondent.

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1 17. (Original) The thermostat system of Claim 1 in which communications
2 between said first remote correspondent and said communications interface
3 is carried out via the Internet.

1 ^{4.}
~~18~~ (Original) The thermostat system of Claim 2 in which communications
2 between said first remote correspondent and said communications interface
3 is carried out via the Internet.

AI sent
1 ^{20.}
~~19~~ (Original) The thermostat system of Claim ¹⁸~~19~~ in which communications
2 between said first remote correspondent and said communications interface
3 is carried out via the Internet.

1 ^{14.}
~~20~~ (Original) The thermostat system of Claim 12 in which communications
2 between said first remote correspondent and said communications interface is
3 carried out via the Internet.

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REMARKS

Claims 1-20 are pending in the application. Claims 1-10, 12, 13, and 16-18 stand allowed. In his Office Action, the Examiner rejected Claim 11 under 35 U.S.C. § 103 as being unpatentable over Proffitt in view of Official Notice. Claim 19 was similarly rejected in further view of Sasao. Claims 14, 15 and 20 were merely objected to as depending from a rejected base claim.

In the disclosure of Proffitt, a thermostat receives commands from, and is sometimes interrogated by, an external source, such as an energy provider. The objective of the Proffitt invention is to off load a large portion of the data tracking and logging tasks from the energy provider to all the thermostats in its supply zone. Thus, compliance with set back commands issued by the energy provider may be periodically checked by interrogating each thermostat which has been, in effect, doing its own compliance check - logging, calculating and storing results - during normal operation such that only the results (rather than every event) need to be communicated to and processed by the energy provider.

Proffitt's display may then show that an overrideable setback mode is currently operating in the thermostat to control the HVAC equipment connected with the thermostat. Although described as a "message" in Proffitt, the communications between the energy provider and the processor in the thermostat cannot be construed as the equivalent of a "message" as described and employed in the subject application. Unless the command is shown in the form of the lines of code that cause it to occur, Proffitt does not describe directly displaying at the thermostat a setback command as a "message" obtained from an external source. The "message" displayed as in Proffitt is pre-stored information which is displayed when the thermostat operates in a mode commanded by the energy provider/external source. Proffitt has defined "message" to

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mean a pre-stored announcement of an operating condition that is displayed when a thermostat is controlled by an external source.

The present invention operates very differently. The initiative for getting the claimed "message" as diverse information does not originate with an outside source, i.e., the remote correspondent. The outside source is simply that: viz. a source of diverse information, not a source of control. In Claim 11, the claimed displayed "message" is obtained from the remote correspondent. The claimed "message" is not a pre-stored response to be displayed upon receipt of a particular command.

Cultor Corp. v. A.E. Staley Mfg. Co., 224 F.3d 1328, 1331, 56 USPQ2d 1208, 1210 (Fed. Cir. 2000) states that "Claims are not correctly construed to cover what was expressly disclaimed." In this application, the word "message" as in claim 11 *excludes* a pre-stored "message" displayed in response to receipt of a command from an external source. More broadly, the application is directed to receiving data, e.g., as to weather conditions, and displaying that data on a local display, i.e., at a local thermostat. The application is directed to displaying data received from a remote correspondent wherein the remote correspondent reacted to a request from a local thermostat specifically for that information. As defined in the subject specification, "a remote correspondent ... is a source of current information on the predetermined subject." Proffitt's external source is not a source of current information on a predetermined subject. Rather, Proffitt's external source is a source of operating commands sent to a thermostat as a result of the occurrence of specific algorithm results.

Sasao is consistent with Proffitt in that displayed information is in the form of a pre-stored response. A calculated forecast is displayed (via a mathematical conversion of inputs as a response to a pre-stored algorithm).

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In order to indisputably completely distinguish over the Proffitt disclosure in combination with Official Notice, element E) of Claim 11 has been rewritten to read:

"E) a program stored in said memory for displaying messages received from said first remote correspondent, which received messages do not pertain to the operation of said thermostat system, on said liquid crystal display.

It will be seen that the added language conclusively eliminates the connotation that the term "message" (already defined in the specification) could include a "message" such as Proffitt contemplates. Claim 14, 15 and 20 depend, directly or indirectly from base Claim 11 and should therefor also now be allowable.

Consideration of the above amendments and remarks is requested and it is submitted that such amendments and remarks place the application in condition for allowance. An early notice to that effect is respectfully solicited.

Respectfully submitted,

Dated: 5/6/2003

David T. Bracken

David T. Bracken
Registration No. 37,522
Phone: (714) 744-4798

A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

FAX RECEIVED

MAY 06 2003

GROUP 3700

Title: THERMOSTAT SYSTEM
COMMUNICATING WITH A REMOTE
CORRESPONDENT FOR RECEIVING AND
DISPLAYING DIVERSE INFORMATION
Inventor(s): Howard B. Rosen
Application No.: 10/075,886
Filing Date:
Group No.: 3744
Examiner: William E. Wayner
Attorney Docket No.:

FACSIMILE TRANSMITTAL

TO: MAIL STOP AMENDMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

The following documents are transmitted
hereunder for the above application:

1. Power of Attorney – 1 page
2. Amendment – 10 pages

Respectfully submitted,

David T. Bracken

David T. Bracken
Registration No. 37,522

Dated: March 3, 2002

CERTIFICATE OF FACSIMILE TRANSMISSION (37
CFR 1.8(a))

I hereby certify that this correspondence and the
documents referred to therein are transmitted by
facsimile to the United States Patent and
Trademark Office on the date below to the following
telephone number: (703) 308-7764
Number of Pages Transmitted: 12

David T. Bracken

Signature of Transmitter: David T. Bracken
Date of Transmission: MAY 6 2003

A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: THERMOSTAT SYSTEM
COMMUNICATING WITH A REMOTE
CORRESPONDENT FOR RECEIVING AND
DISPLAYING DIVERSE INFORMATION
Inventor(s): Howard B. Rosen
Application No.: 10/075,886
Filing Date:
Group No.: 3744
Examiner: William E. Wayner

DECLARATION /
POWER OF ATTORNEY

FAX RECEIVED
MAY 06 2003
GROUP 3700

As above-named inventor(s), I (we) hereby declare that:

1. The inventor(s) named below does (do) hereby appoint as attorney of record with full power of substitution and revocation, to prosecute the above application and transact all business in the Patent and Trademark Office connected therewith.: 1. David T. Bracken, Registration No. 37,522; Send correspondence to: David T. Bracken, The Law Office of David T. Bracken, 4839 East Bond Avenue, Orange, California 92869
2. All statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. All the above statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 the United States Code, and such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Inventor Name:	Signature of Inventor:	Date:
Howard Rosen		5/6/2003

A

Notice of Allowability	Application No.	Applicant(s)	
	10/075896	HOWARD B. ROSEN	
	Examiner	Art Unit	
	William Wayner	3744	

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/6/03 AMENDMENT
2. ☒ The allowed claim(s) is/are 1-20
3. ☒ The drawings filed on 2/02 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No. _____
- (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
- (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1 ☐ Notice of References Cited (PTO-892) | 2 ☐ Notice of Informal Patent Application (PTO-152) |
| 3 ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 ☐ Interview Summary (PTO-413), Paper No. _____ |
| 5 ☐ Information Disclosure Statements (PTO-1449), Paper No. _____ | 6 ☐ Examiner's Amendment/Comment |
| 7 ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 ☐ Examiner's Statement of Reasons for Allowance |
| | 9 ☐ Other |



NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 07/03/2003
HOWARD B. ROSEN
1 Lyncroft Road
Hampstead, QC H3X 3E3
CANADA

EXAMINER

WAYNER, WILLIAM E

ART UNIT

CLASS-SUBCLASS

3744

236-051000

DATE MAILED: 07/03/2003

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,886	02/13/2002	Howard B. Rosen		9306

TITLE OF INVENTION: THERMOSTAT SYSTEM COMMUNICATING WITH A REMOTE CORRESPONDENT FOR RECEIVING AND DISPLAYING DIVERSE INFORMATION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$650	\$300	\$950	10/03/2003

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.
- ☐ Applicant claims SMALL ENTITY status.
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application 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.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
Alexandria, Virginia 22313-1450
Fax (703)746-4000

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)
7590 07/03/2003

HOWARD B. ROSEN
1 Lyncroft Road
Hampstead, QC H3X 3E3
CANADA

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above, or being facsimile transmitted to the USPTO, on the date indicated below.

	(Depositor's name)
	(Signature)
	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,886	02/13/2002	Howard B. Rosen		9306

TITLE OF INVENTION: THERMOSTAT SYSTEM COMMUNICATING WITH A REMOTE CORRESPONDENT FOR RECEIVING AND DISPLAYING DIVERSE INFORMATION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$650	\$300	\$950	10/03/2003

EXAMINER	ART UNIT	CLASS-SUBCLASS
WAYNER, WILLIAM E	3744	236-051000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.	2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 1 _____ 2 _____ 3 _____
---	--

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)
PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.
(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) ☐ individual ☐ corporation or other private group entity ☐ government

4a. The following fee(s) are enclosed: ☐ Issue Fee ☐ Publication Fee ☐ Advance Order - # of Copies _____	4b. Payment of Fee(s): ☐ A check in the amount of the fee(s) is enclosed. ☐ Payment by credit card. Form PTO-2038 is attached. ☐ The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).
--	--

Commissioner for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature)	(Date)
NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office. This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450. 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.	



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United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,886	02/13/2002	Howard B. Rosen		9306
7590 07/03/2003				
HOWARD B. ROSEN 1 Lyncroft Road Hampstead, QC H3X 3E3 CANADA				
EXAMINER WAYNER, WILLIAM E				
ART UNIT		PAPER NUMBER		
3744		7		
DATE MAILED: 07/03/2003				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The patent term adjustment to date is 0 days. If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the term adjustment will be 0 days.

If a continued prosecution application (CPA) was filed in the above-identified application, the filing date that determines patent term adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system. (<http://pair.uspto.gov>)

Any questions regarding the patent term extension or adjustment determination should be directed to the Office of Patent Legal Administration at (703)305-1383.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,886	02/13/2002	Howard B. Rosen		9306
7590	07/03/2003		EXAMINER	
HOWARD B. ROSEN 1 Lyncroft Road Hampstead, QC H3X 3E3 CANADA			WAYNER, WILLIAM E	
			ART UNIT	PAPER NUMBER
			3744	

DATE MAILED: 07/03/2003

Notice of Fee Increase on January 1, 2003

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after January 1, 2003, then the amount due will be higher than that set forth in the "Notice of Allowance and Fee(s) Due" since there will be an increase in fees effective on January 1, 2003. See Revision of Patent and Trademark Fees for Fiscal Year 2003; Final Rule, 67 Fed. Reg. 70847, 70849 (November 27, 2002).

The current fee schedule is accessible from: <http://www.uspto.gov/main/howtofees.htm>.

If the issue fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due," but not the correct amount in view of the fee increase, a "Notice to Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice to Pay Balance of Issue Fee," if the response to the Notice of Allowance and Fee(s) due form is to be filed on or after January 1, 2003 (or mailed with a certificate of mailing on or after January 1, 2003), the issue fee paid should be the fee that is required at the time the fee is paid. If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously paid issue fee should be paid. See Manual of Patent Examining Procedure, Section 1308.01 (Eighth Edition, August 2001).

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

/01/24/1994 21:20 514-737892

AED ELECTRONICS INC

PAGE 43

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail Stop ISSUE FEE**
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Fax (703)746-4000

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Copyright Clearance Center (CCC) Transactional Reporting Service (TRS) fee is not applicable to this form.

7500 07/03/2003
HOWARD B. ROSEN
1 Lyncroft Road
Hampton, QC H3X 3E3
CANADA



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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Fee Issue Fax address above, or being transmitted to the USPTO, on the date indicated below.

DAVID T. BRACKEN (Type name)
David T. Bracken (Signature)
July 21, 2003 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	INFORMATION NO.
10075806	02/13/2002	Howard B. Rosen		7000

TITLE OF INVENTION: THERMOSTAT SYSTEM COMMUNICATING WITH A REMOTE CORRESPONDENT FOR RECEIVING AND DISPLAYING DIVERSE INFORMATION

APPL. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEES DUE	DATE DUE
nonprovisional	YES	\$450	\$300	\$750	10/03/2003

EXAMINER	ART UNIT	CLASS-SUBCLASS
WAYNER, WILLIAM E	3744	234-031000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.343).

☐ Change of correspondence address (for Change of Correspondence Address form PTO/SR/122) attached.

☐ "Fee Address" indication (for "Fee Address" Indication form PTO/SR/122; Rev. 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1. **DAVID T. BRACKEN**

2. _____

3. _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THIS 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 assignee has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.)

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) ☐ individual ☐ corporation or other private group/entity ☐ government

4a. The following fee(s) are enclosed:

☐ Issue Fee

☐ Publication Fee

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s):

☐ A check in the amount of the fee(s) is enclosed.

☐ Payment by credit card. Form PTO-2003 is attached.

☐ The Commissioner is hereby authorized by charge the required fee(s), or credit any over payment, to Deposit Account Number _____ (enclose a check copy of this form).

Commissioner for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified at one.

(Authorized Signature)

David T. Bracken

(Date)

July 21, 2003

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant, a registered attorney or agent, or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 15 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.** SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.

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TRANSMIT THIS FORM WITH FEE(S)

PTOL-85 (REV. 05-03) Approved for use through 04/30/2004. OMB 0651-0033

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

07/22/2003 SRESHEE 00000106 10075806

01 FC:2501
02 FC:1504

650.00 UP
300.00 UP

07/18/03 08:33

TX/RX NO.0733

P.000

PATENT APPLICATION FEE DETERMINATION RECORD Effective October 1, 2001						Application or Docket Number N/A				
CLAIMS AS FILED - PART I										
		(Column 1)			(Column 2)					
TOTAL CLAIMS				20						
FOR		NUMBER FILED		NUMBER EXTRA						
TOTAL CHARGEABLE CLAIMS		20		minus 20=		*		0		
INDEPENDENT CLAIMS		2		minus 3 =		*		0		
MULTIPLE DEPENDENT CLAIM PRESENT						☐				
* If the difference in column 1 is less than zero, enter "0" in column 2										
CLAIMS AS AMENDED - PART II										
		(Column 1)			(Column 2)			(Column 3)		
AMENDMENT A			CLAIMS REMAINING AFTER AMENDMENT				HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA	
	Total		*		20		Minus		** 20 =	
	Independent		*		2		Minus		*** 3 =	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐									
AMENDMENT B			CLAIMS REMAINING AFTER AMENDMENT				HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA	
	Total		*				Minus		** =	
	Independent		*				Minus		*** =	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐									
AMENDMENT C			CLAIMS REMAINING AFTER AMENDMENT				HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA	
	Total		*				Minus		** =	
	Independent		*				Minus		*** =	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐									
* 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.										

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	370.00	OR	BASIC FEE	740.00
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL	270	OR	TOTAL	

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDI-TIONAL FEE		RATE	ADDI-TIONAL FEE
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL		OR	TOTAL	
ADDIT. FEE			ADDIT. FEE	

RATE	ADDI-TIONAL FEE		RATE	ADDI-TIONAL FEE
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL		OR	TOTAL	
ADDIT. FEE			ADDIT. FEE	

RATE	ADDI-TIONAL FEE		RATE	ADDI-TIONAL FEE
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL		OR	TOTAL	
ADDIT. FEE			ADDIT. FEE	

CLAIMS ONLY						SERIAL NO. 10075886		FILING DATE			
						APPLICANT(S)					
CLAIMS											
	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT			*	*	*	
	IND.	DEP.	IND.	DEP.	IND.	DEP.		IND.	DEP.	IND.	DEP.
1							51				
2							52				
3							53				
4							54				
5							55				
6							56				
7							57				
8							58				
9							59				
10							60				
11							61				
12							62				
13							63				
14							64				
15							65				
16							66				
17							67				
18							68				
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35							85				
36							86				
37							87				
38							88				
39							89				
40							90				
41							91				
42							92				
43							93				
44							94				
45							95				
46							96				
47							97				
48							98				
49							99				
50							100				
TOTAL IND.	2						TOTAL IND.				
TOTAL DEP.	18						TOTAL DEP.				
TOTAL CLAIMS	20						TOTAL CLAIMS				
* MAY BE USED FOR ADDITIONAL CLAIMS OR ADMENDMENTS											
FORM PTO-2022 (1-98)						U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office					