

**Mail Stop 8
Director of the U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450**

REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 6:22-cv-131	DATE FILED 2/6/2022	U.S. DISTRICT COURT WESTERN DISTRICT OF TEXAS
PLAINTIFF ROSEN TECHNOLOGIES LLC		DEFENDANT RESIDEO TECHNOLOGIES, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 6,581,846	6/24/2003	ROSEN TECHNOLOGIES LLC
2 6,619,555	9/16/2003	ROSEN TECHNOLOGIES LLC
3 6,789,739	9/14/2004	ROSEN TECHNOLOGIES LLC
4 7,156,318	1/7/2007	ROSEN TECHNOLOGIES LLC
5 7,185,825	3/6/2007	ROSEN TECHNOLOGIES LLC

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
filed in the U.S. District Court WESTERN DISTRICT OF TEXAS on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 6:22-cv-131	DATE FILED 2/6/2022	U.S. DISTRICT COURT WESTERN DISTRICT OF TEXAS
PLAINTIFF ROSEN TECHNOLOGIES LLC		DEFENDANT RESIDEO TECHNOLOGIES, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 7,232,075	6/19/2007	ROSEN TECHNOLOGIES LLC
2 RE40,437	7/15/2008	ROSEN TECHNOLOGIES LLC
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT7129032

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
Name		Execution Date
IAED TECHNOLOGIES INC		12/03/2021
RECEIVING PARTY DATA		
Name:	ROSEN TECHNOLOGIES LLC	
Street Address:	17330 PRESTON RD	
Internal Address:	ST 200D	
City:	DALLAS	
State/Country:	TEXAS	
Postal Code:	75252	
PROPERTY NUMBERS Total: 18		
Property Type	Number	
Patent Number:	7232075	
Patent Number:	7152806	
Patent Number:	7156318	
Patent Number:	7185825	
Patent Number:	7145110	
Patent Number:	7058477	
Patent Number:	7028912	
Patent Number:	7050026	
Patent Number:	6902117	
Patent Number:	6789739	
Patent Number:	6786421	
Patent Number:	6619555	
Patent Number:	6578770	
Patent Number:	6581846	
Patent Number:	7841542	
Patent Number:	7838803	
Application Number:	13953135	
Application Number:	14313507	

CORRESPONDENCE DATA**Fax Number:**

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Email: JASON@IPVAL.COM**Correspondent Name:** JASON BOURGEOIS**Address Line 1:** 4940 BROADWAY STREET**Address Line 2:** ST130**Address Line 4:** SAN ANTONIO, TEXAS 78209

NAME OF SUBMITTER:	JASON BOURGEOIS
SIGNATURE:	/JASON BOURGEOIS/
DATE SIGNED:	01/19/2022
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 3

source=IAED and Rosen Tech Patent Assignment#page1.tif

source=IAED and Rosen Tech Patent Assignment#page2.tif

source=IAED and Rosen Tech Patent Assignment#page3.tif

PATENT ASSIGNMENT AGREEMENT

THIS PATENT ASSIGNMENT AGREEMENT (the "Agreement"), is made and entered into this 3rd day of December, 2021 (the "Effective Date"), is by and between IAED Technologies, Inc., a Canadian Company with a principal place of business at 695 Chenin Avila Unit 7 Suite 259, Piedmont, Quebec, J0R1T0 Canada ("Assignor") and Rosen Technologies, LLC, a Texas company organized under the laws of Texas, ("Assignee"). Assignor and Assignee are also referred to in this Agreement each as a "Party" and collectively as the "Parties."

WHEREAS, Assignor is the sole owner of all rights, title and interest in and to the inventions (the "Inventions") as described and claimed in the United States and foreign patents and patent application as listed on Schedule A (United States patent properties) and Schedule B (foreign patent properties) hereto (collectively the "Patents");

NOW, THEREFORE, in consideration of the mutual covenants and agreements of the Parties and pursuant to the Purchase Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is hereby agreed as follows:

I. ASSIGNMENT

1. Assignor hereby sells, transfers, assigns and sets over to Assignee all rights, title and interest (for all countries) in and to the Inventions and the Patents, and all the rights and privileges under any letters patent that may be granted under any continuations, divisions, reissues, reexaminations, renewals and extensions therefor and thereon and all continuations, divisions, reissues, reexaminations, renewals and extensions thereof; and all applications for industrial property protection, including without limitation, all applications for patents, utility models, copyright, and designs which may hereafter be filed for said Inventions and Patents in any country or countries, together with the right to file such applications and the right to claim for the same the priority rights derived from the Inventions and the Patents under the patent laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, copyrights and designs which may hereafter be filed for said Inventions or Patents in any country or countries, together with the right to file such applications; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates, copyrights and designs which may be granted for said Invention and/or Patent in any country or countries and all extensions, renewals and reissues thereof.
2. The rights, title and interest transferred above are subject to Assignor having previously granted a non-exclusive, fully paid up, royalty-free license to the Patents to Verdant Environmental Technologies Inc. dated August 31, 2016 (Verdant License) presently held through acquisition by Emerson Electric Co.. For the avoidance of doubt, Emerson Electric Co. (including its Subsidiaries) or any subsequent acquirer of this pre-existing license. Further, including the right to expand the license in the future to products branded under other trademarks owned by the holding licensee.
3. Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the

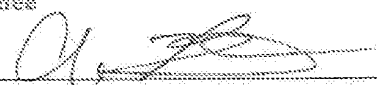
United States and any official of any country or countries foreign to the United States, whose duty is to issue patents or other evidence or forms of industrial property on applications as aforesaid, to issue the same to Assignee, its successors, assigns and legal representatives, or to such nominees as it may designate.

4. Assignor agrees that, whenever reasonably requested by Assignee, Assignor will execute all papers, take all rightful oaths, and do all acts which may be reasonably necessary for securing and maintaining patents for the Inventions in any country and for vesting title thereto in Assignee, its successors, assigns and legal representatives or nominees.
5. Assignor authorizes and empowers Assignee, its successors, assigns and legal representatives or nominees, to invoke and claim for any application for patent or other form of protection for the Inventions, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable, and to invoke and claim such right of priority without further written or oral authorization from Assignor.
6. Assignor hereby consents that a copy of this Agreement shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document that may be required in any country for any purpose and more particularly in proof of the right of Assignee or nominee to claim the aforesaid benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.
7. All of the rights, title and interest in and to the Inventions and the Patents sold, transferred, assigned and set over to Assignee hereunder include all income, royalties, damages and payments now or hereafter due or payable with respect thereto, and all causes of action (whether in law or equity) and the right to sue, counterclaim, and recover for the past, present and future infringement of the rights assigned or to be assigned hereunder.

Assignor

By: 
Name: Howard Rosen
Title: Managing Member

Assignee

By: 
Name: Adam Baumli
Title: Managing Member

SCHEDULE A
UNITED STATES PATENTS AND PATENT APPLICATIONS

U.S. Patent Application Publications

Publication Number	Application Number	Publication Date	Application Date	Issue Date
US20150028114A1	13/953,135	1/29/2015	7/29/2013	Pending
US20150369508A1	14/313,507	12/24/2015	6/24/2014	Pending

U.S. Patent Publications

Patent Number	Application Number	Publication Date	Application Date	Issue Date
US7232075B1	11/039,180	6/19/2007	1/19/2005	6/19/2007
US7152806B1	10/654,230	12/26/2006	9/3/2003	12/26/2006
US7156318B1	10/654,235	1/2/2007	9/3/2003	1/2/2007
US7185825B1	10/875,579	3/6/2007	6/24/2004	3/6/2007
US7145110B1	11/254,078	12/5/2006	10/19/2005	12/5/2006
US7058477B1	10/995,574	6/6/2006	11/23/2004	6/6/2006
US7028912B1	10/878,825	4/18/2006	6/28/2004	4/18/2006
US7050626B1	10/440,474	5/23/2006	5/15/2003	5/23/2006
US6902117B1	10/420,660	6/7/2005	4/21/2003	6/7/2005
US6789739B2	10/287,677	9/14/2004	11/4/2002	9/14/2004
US6786421B2	10/654,236	9/7/2004	9/3/2003	9/7/2004
US6619555B2	10/075,866	9/16/2003	2/13/2002	9/16/2003
US6578770B1	10/119,180	6/17/2003	4/9/2002	6/17/2003
US6581846B1	10/091,767	6/24/2003	3/6/2002	6/24/2003
US7841542B1	11/557,492	11/30/2010	11/7/2006	11/30/2010
US7836803B1	11/852,036	11/23/2010	9/7/2007	11/23/2010

TO:	
COMMISSIONER OF PATENTS AND TRADEMARKS (USPTO) P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OF DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

In compliance with 35 U.S.C. 290 and/or 15 U.S.C. 1116 you are hereby advised
 that a court action has been filed on the following patent(s)/trademark(s) in the U.S. District Court:

DOCKET NO. 10cv2771	DATE FILED: 5/4/2010	UNITED STATES DISTRICT COURT, NORTHERN DISTRICT OF ILLINOIS, EASTERN DIVISION
Plaintiff(s): Verdant Environmental Technologies	Defendant(s): Ecobee, Inc.	
PATENT NUMBER	DATE OF PATENT	HOLDER OF PATENT OR TRADEMARK
US 6,619,555 B2	9/16/03	Verdant Environmental Technologies
US 6,789,739 B2	9/14/04	Verdant Environmental Technologies
US 7,232,075 B1	6/19/07	Verdant Environmental Technologies

In the above-entitled case, the following trademarks(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
TRADEMARK NUMBER	DATE OF TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1.			
2.			
3.			

In the above-entitled case, the following decision has been rendered or judgment issued

DECISION/JUDGMENT : MINUTE entry before Honorable John W. Darrah: Plaintiff having filed a notice of voluntary dismissal without prejudice, this case is hereby closed. Mailed notice		
CLERK - MICHAEL W. DOBBINS	DEPUTY CLERK: /s/ Brenda Rinozzi	DATE: November 4, 2010



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/287,677	11/04/2002	Howard Rosen	

51413
 MARC E. HANKIN, ESQ.
 11414 THURSTON CIRCLE
 LOS ANGELES, CA 90049

CONFIRMATION NO. 5280



OC000000018445756

Date Mailed: 04/03/2006

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/16/2006.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

M. Be...
 MELKAM BEYENE
 PTOSS (703) 305-3006

OFFICE COPY



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/287,677	11/04/2002	Howard Rosen	0208.2A4

David T. Bracken
 The Law Office of David T. Bracken
 4839 Bond Avenue
 Orange, CA 92869

CONFIRMATION NO. 5280



OC000000018445740

Date Mailed: 04/03/2006

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

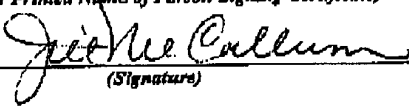
This is in response to the Power of Attorney filed 03/16/2006.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

M.Beyene

 MELKAM BEYENE
 PTOSS (703) 305-3006

OFFICE COPY

CERTIFICATE OF TRANSMISSION BY FACSIMILE (37 CFR 1.8)			Docket No. 185833
Applicant(s): Mark Stefan Maler et al.			
Application No. 11/287,677	Filing Date 11/28/2005	Examiner NYA	Group Art Unit 3745
Invention: A METHOD FOR CREATING A SERPENTINE COOLING CIRCUIT IN A TURBINE BLADE			RECEIVED CENTRAL FAX CENTER MAR 24 2006
I hereby certify that this <u>Response to Forty-Five Day Notice (3 pgs)</u> (Identify type of correspondence) is being facsimile transmitted to the United States Patent and Trademark Office (Fax. No. <u>571-273-8300</u>) on <u>March 24, 2006</u> (Date) <u>Jill McCallum</u> (Typed or Printed Name of Person Signing Certificate)  (Signature) Note: Each paper must have its own certificate of mailing.			

P 8/REV02

PAGE 1/4 * RCVD AT 3/24/2006 3:41:31 PM [Eastern Standard Time] * SVR:USPTO-EFAXRF-1/0 * DNIS:2738300 * CSID:8602860115 * DURATION (mm-ss):01-52

Mar 24 2006 4:39PM

CANTOR COLBURN LLP

8602860115

p.2

MAR 24 '06 02:17PM GRVL ADV SYS DESIGN

P.2


**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

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

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
11/287,677	11/28/2005	Mark Stefan Maler	185833

 CANTOR COLBURN, LLP
55 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

EXAMINER	
ART UNIT	PAPER NUMBER
PATENT & TRADEMARK OFFICE	

DATE MAILED:

FEB 24 2006

LICENSING & REVIEW

**IF NO RESPONSE TO THIS NOTICE IS RECEIVED WITHIN FORTY-FIVE DAYS, A
FORMAL REQUIREMENT WILL BE ISSUED**

The subject matter of this application appears to:

- ☐ be "useful in the production or utilization of special nuclear material or atomic energy" as recited in 42 U.S.C. 2182 (Department of Energy (DOE)).
- ☒ have significant utility in the conduct of aeronautical and space activities" as recited in 42 U.S.C. 2457 (National Aeronautics and Space Administration (NASA)).

Accordingly, no patent can issue on this application unless applicant(s) file a statement (under oath or in the form of a declaration as provided by 37 CFR 1.68) setting forth (1) the full facts concerning the circumstances under which the invention was made and conceived and (2) the relationship (if any) of the invention to the performance of any work under any contract or other arrangement with the Agency(ies) noted above. On the reverse side of this form is an example of an acceptable format for this statement. The language appearing in paragraphs III and/or IV of the example must appear if applicant is attempting to establish that no relationship (under item 2 above) exists.

If the invention disclosed in this application was developed under a contract, grant or cooperative agreement between the Agency indicated above and a person, small business or non-profit organization and rights to the invention have been determined by specific reference to 35 U.S.C. 202 in the contract, grant or cooperative agreement, then applicant need not submit the statement described above. Instead, applicant may file a verified statement (under oath or in the form of a declaration, 37 CFR 1.68) setting forth the information required by 35 U.S.C. 202(c)(6).

IF NO STATEMENT HAS BEEN RECEIVED WITHIN FORTY-FIVE DAYS OF THE MAIL DATE INDICATED ABOVE, a formal requirement for statement will then be issued. No provision is made for extension of the statutory thirty-day period for response to the formal requirement and the penalty for failure to file an acceptable and timely statement is abandonment of the application. Therefore, applicants are strongly encouraged to submit a statement at this time in order to avoid the issuance of a formal requirement.

IT IS IMPORTANT TO NOTE that the statement must accurately represent the property rights situation of the claimed invention if and when the application is found allowable. Thus, if during prosecution before the examiner, the claimed invention is so altered or the property rights situation so changed as to impact the accuracy of a statement submitted earlier, a supplemental statement must be filed. Failure to submit such additional information where appropriate may be considered a false representation of material facts and render the patent owner vulnerable to loss of patent rights and other sanctions as set forth in the statutes. The PTO will not review allowed applications for this possibility. The responsibility for complying with the statutes rests with the applicants.

Any questions regarding this requirement should be directed to Licensing and Review at (800) 260-1181

**PLEASE DIRECT ALL COMMUNICATIONS RELATING TO THIS MATTER TO THE
ATTENTION OF LICENSING AND REVIEW**

BEST AVAILABLE COPY

Mar 24 2006 4:39PM CANTOR COLBURN LLP

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P.2

P.3

MAR 24 '06 04:02PM GRVL ADV SYS DESIGN

The following is an example of an acceptable property rights statement. Statements of this type are, of course, only suitable for situations in which **NO** Agency funds or other considerations were involved in the making or conception of the invention. While this example is in the form of a declaration, a sworn document is equally acceptable.

I (~~we~~) MARK STEADMAN MAIER
citizens of USA
residing at 213 STEADMAN WAY, GREEN, SC. 29650
declare:

That I (we) made and conceived the invention described and claimed in patent application:

Serial Number 11-287,677 filed in the United States of America on NOV 20, 2005
titled A METHOD FOR CREATING A SERPENTINE COOLING CIRCUIT IN A TURBINE BLADE

(Check and complete either I or II below)

(Check III and/or IV below as appropriate)

☒ I. (For Inventors Employed by an Organization) That I (we) made and conceived this invention while employed by GENERAL ELECTRIC. That the invention is related to the work I am (we are) employed to perform and was made within the scope of my (our) employment duties; That the invention was made during working hours and with the use of facilities, equipment, materials, funds, information and services of GENERAL ELECTRIC. Other relevant facts are N/A

That to the best of my (our) knowledge and belief:

☒ III. The invention was not made or conceived in the course of, or in connection with, or under the terms of any contract, subcontract or arrangement entered into with or for the benefit of the United States Atomic Energy Commission or its successors: Energy Research and Development Administration or the Department of Energy.

—AND/OR—

That to the best of my (our) knowledge and belief (and/or) based upon information provided by N/A of _____

☒ IV. The invention was not made (conceived or first actually reduced to practice) under nor is there any relationship of the invention to the performance of any work under any contract of the National Aeronautics and Space Administration.

—OR—

☐ II. (For Self-Employed Inventors) That I (we) made and conceived this invention on my (our) own time using only my (our) own facilities, equipment, materials, funds, information and services. Other relevant facts are _____

The undersigned inventor(s) declare further that all statements made herein of his or her (their) own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Inventor's Signature: [Signature]
Post Office Address: 213 STEADMAN WAY, GREEN, SC
Date: MARCH 24, 2006
Inventor's Signature: _____
Post Office Address: _____
Date: _____

BEST AVAILABLE COPY

Mar 24 2006 4:39PM

CANTOR COLBURN LLP

8602860115

p. 4

MAR 24 '06 02:17PM GRVL ADV SYS DESIGN

P.1

The following is an example of an acceptable property rights statement. Statements of this type are, of course, only suitable for situations in which NO Agency funds or other considerations were involved in the making or conception of the invention. While this example is in the form of a declaration, a sworn document is equally acceptable.

I (We) Robert Alan Brittingham
 citizens of U.S.A.
 residing at 419 Woodson Rd, Piedmont, SC 29673
 declare:

That I (we) made and conceived the invention described and claimed in patent application:

Serial Number 11-287,677 filed in the United States of America on Nov 28, 2005
 titled A Method for Creating a Serpentine Cooling Circuit in a Turbine Blade

(Check and complete either I or II below)

(Check III and/or IV below as appropriate)

☒ I. (For Inventors Employed by an Organization) That I (we) made and conceived this invention while employed by General Electric. That the invention is related to the work I am (we are) employed to perform and was made within the scope of my (our) employment duties; That the invention was made during working hours and with the use of facilities, equipment, materials, funds, information and services of General Electric. Other relevant facts are N/A

That to the best of my (our) knowledge and belief:

☒ III. The invention was not made or conceived in the course of, or in connection with, or under the terms of any contract, subcontract or arrangement entered into with or for the benefit of the United States Atomic Energy Commission or its successors; Energy Research and Development Administration or the Department of Energy.

—AND/OR—

That to the best of my (our) knowledge and belief (and/or) based upon information provided by N/A of

☒ IV. The invention was not made (conceived or first actually reduced to practice) under nor is there any relationship of the invention to the performance of any work under any contract of the National Aeronautics and Space Administration.

—OR—

☐ II. (For Self-Employed Inventors) That I (we) made and conceived this invention on my (our) own time using only my (our) own facilities, equipment, materials, funds, information and services. Other relevant facts are

The undersigned inventor(s) declare further that all statements made herein of his or her (their) own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Inventor's Signature: Robert Alan Brittingham
 Post Office Address: 419 Woodson Rd, Piedmont, SC 29673
 Date: March 24, 2006
 Inventor's Signature:
 Post Office Address:
 Date:

PTO/SB/82 (04-05)

Approved for use through 11/30/2005. OMB 0651-0035

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

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

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

Application Number	10/287,677
Filing Date	11/4/2002
First Named Inventor	Howard Rosen
Art Unit	3744
Examiner Name	Harry B Tanner
Attorney Docket Number	

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

☐ A Power of Attorney is submitted herewith.

OR

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

51413

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

☒ The address associated with
Customer Number:

51413

OR

☐ Firm or
Individual Name

Address

City

State

Zip

Country

Telephone

Email Marc@hankinpatentlaw.com

I am the:

☒ Applicant/Inventor.

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

SIGNATURE of Applicant or Assignee of Record

Signature

Name

Howard Rosen

Date

MARCH 15, 2006

Telephone

(541) 484-2021

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

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.38. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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

American LegalNet, Inc.
www.USCourtForms.com

PAGE 17/18 * RCVD AT 3/16/2006 1:28:40 PM [Eastern Standard Time] * SVR:USPTO-EFXXF-1/21 * DNIS:2738300 * CSID:3102748643 * DURATION (mm-ss):06-48

10/18

LENNOX EXHIBIT 1003

Lennox Industries Inc. v. Rosen Technologies LLC, IPR2023-00716, Page 15

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail**

Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
(703) 746-4000

or **Fax**

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

06/24/2004

David T. Bracken
 The Law Office of David T. Bracken
 4839 Bond Avenue
 Orange, CA 92869



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

Certificate of Mailing or Transmission

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

DAVID T. BRACKEN	(Depositor's name)
D. Bracken	(Signature)
JULY 9, 2004	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/287,677	11/04/2002	Howard Rosen	0208.2A4	5280

TITLE OF INVENTION: THERMOSTAT SYSTEM WITH LOCATION DATA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$665	\$300	\$965	09/24/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
TANNER, HARRY B	3744	236-051000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.563).

- ☐ 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. DAVID T. BRACKEN

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 Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

Director 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)

D. Bracken

JULY 9, 2004

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.

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07/15/2004 HDEMESS2 00000043 10287677

01 FC:1504

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02 FC:1506

635.00 DP

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UNITED STATES DEPARTMENT OF COMMERCE
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Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 06/24/2004

David T. Bracken
The Law Office of David T. Bracken
4839 Bond Avenue
Orange, CA 92869

EXAMINER

TANNER, HARRY B

ART UNIT

PAPER NUMBER

3744

DATE MAILED: 06/24/2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/287,677	11/04/2002	Howard Rosen	0208.2A4	5280

TITLE OF INVENTION: THERMOSTAT SYSTEM WITH LOCATION DATA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$665	\$300	\$965	09/24/2004

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 Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail**

**Mail Stop ISSUE FEE
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Alexandria, Virginia 22313-1450
(703) 746-4000**

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CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/287,677	11/04/2002	Howard Rosen	0208.2A4	5280

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EXAMINER	ART UNIT	CLASS-SUBCLASS
TANNER, HARRY B	3744	236-051000

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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 Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

Director 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)

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/287,677	11/04/2002	Howard Rosen	0208.2A4	5280

7590 06/24/2004

David T. Bracken
The Law Office of David T. Bracken
4839 Bond Avenue
Orange, CA 92869

EXAMINER

TANNER, HARRY B

ART UNIT	PAPER NUMBER
----------	--------------

3744

DATE MAILED: 06/24/2004

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

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

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) 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. 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.

Notice of Allowability	Application No.	Applicant(s)	
	10/287,677	ROSEN, HOWARD	
	Examiner	Art Unit	
	Harry B. Tanner	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 the amendment filed on 4/15/2004.
2. ☒ The allowed claim(s) is/are 1-7 and 9-13.
3. ☒ The drawings filed on 11/04/02 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: _____.

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.

5. ☐ 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.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ 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) | 5. ☐ Notice of Informal Patent Application (PTO-152) |
| 2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) | 6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. ☐ Examiner's Amendment/Comment |
| 4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. ☐ Examiner's Statement of Reasons for Allowance |
| | 9. ☐ Other _____. |


Harry B. Tanner
Primary Examiner

Search Notes



Application No.

10/287,677

Examiner

Harry B. Tanner

Applicant(s)

ROSEN, HOWARD

Art Unit

3744

SEARCHED

Class	Subclass	Date	Examiner
236	51 46R		
455	420		
379	102.05	6/16/2004	<i>HBT</i>

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner
all subclasses above		6/16/04	<i>HBT</i>

SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	DATE	EXMR
NONE	6/16/2004	<i>HBT</i>

Issue Classification 	Application No.	Applicant(s)	
	10/287,677	ROSEN, HOWARD	
	Examiner	Art Unit	
	Harry B. Tanner	3744	

ISSUE CLASSIFICATION											
ORIGINAL					CROSS REFERENCE(S)						
CLASS		SUBCLASS			CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					
236		51			379	102.05					
INTERNATIONAL CLASSIFICATION					236	46R					
G	0	5	D	23/00							
F	2	3	N	5/20							
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				/							
				/							
_____ (Assistant Examiner) (Date)					 Harry B. Tanner Primary Examiner (Primary Examiner) (Date)					Total Claims Allowed: 12	
TA 4/04 (Legal Instruments Examiner) (Date)										O.G. Print Claim(s) 1	

☒ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47	
Final	Original	Final	Original	Final	Original	Final	Original
	1		31		61		121
	2		32		62		122
	3		33		63		123
	4		34		64		124
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U.S. Patent and Trademark Office

Part of Paper No. 20040616

Index of Claims



Application No.

10/287,677

Examiner

Harry B. Tanner

Applicant(s)

ROSEN, HOWARD

Art Unit

3744

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
+	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date											
Final	Original	6/16/04											
1	1	=											
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PATENT APPLICATION FEE DETERMINATION RECORD
 Effective October 1, 2001

Application or Docket Number

10287677

CLAIMS AS FILED - PART I

(Column 1)

(Column 2)

TOTAL CLAIMS	13	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	13 minus 20 = *	
INDEPENDENT CLAIMS	1 minus 3 = *	
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

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

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	370	OR	TOTAL	

CLAIMS AS AMENDED - PART II

415104

(Column 1)		(Column 2)		(Column 3)
CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA
Total	* 13	Minus	** 20	= -
Independent	* 1	Minus	*** 3	= -
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

SMALL ENTITY OR**OTHER THAN SMALL ENTITY**

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

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

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

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

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

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

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

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

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



41

3744

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

THERMOSTAT SYSTEM WITH
LOCATION DATA

Inventor(s): Howard Rosen

Serial No.: 10/287,677

Filing Date: 11/4/2002

Group No.: 3744

Examiner: William E. Wayner

Attorney Docket No.: 0208.2A4

AMENDMENT

RECEIVED

APR 20 2004

TECHNOLOGY CENTER R3700

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

Sir:

In response to the last Office Action, Applicant respectfully requests entry of amendments to the above application as follows:

Claims: Please cancel claim 8 and amend claims 1 and 9 as follows:

1. (currently amended) A location response system with an environmental controller located at a single physical location adapted to be an integral part of a system of environmental sensing or control for a local and substantially enclosed space comprising:
 - A) a physical location of the environmental controller stored as location data in storage means in the controller;
 - B) transmitter means connected to the controller adapted to transmit location data to a remote device physically remote from the controller, so that a location response is induced at the remote device; and
 - C) location response is storage of the location data at the remote device and correlation of the physical location to location response data stored at or available to the remote device or created by processing of location data at the remote device, whereafter location response data is transmitted from the remote device to the controller.

2. (original) The system of Claim 1 in which said transmitter means includes a modem and the remote device is a computer network server.
3. (original) The system of Claim 1 in which said location data includes one or more of the group consisting of a local telephone number or portion thereof, a local zip or postal code, and local latitude and longitude of the physical location of the controller or systems correlated thereto.
4. (original) The system of Claim 1 in which the controller comprises control means which acts on a response of location data for thermostatic functions including structure needed to turn HVAC functions on or off or change operation thereof, impose control setpoints or other control parameters, turn lighting on or off, or those functions accomplished locally or wirelessly by a system of thermostatic control among distributed components.
5. (original) The system of Claim 1 in which the controller comprises means for input of location data by a user at the physical location.
6. (original) The system of Claim 1 in which location response is storage of the location data at the remote device.
7. (original) The system of Claim 1 in which location response is storage of the location data at the remote device and correlation of the physical location to location response data stored at or available to the remote device or created by processing of location data at the remote device.
8. (canceled)
9. (currently amended) The system of Claim & 1 in which location response data is stored in the controller storage means.
10. (original) The system of Claim 9 in which stored location response data is displayed on a display screen at the controller.
11. (original) The system of Claim 9 in which the controller comprises control means for thermostatic functions including structure needed to turn HVAC functions on or off or change operation thereof, impose control setpoints or other control parameters, turn lighting on or off, sense and respond to environmental gases or smoke, or those functions accomplished locally or wirelessly by a system of thermostatic control among

distributed components, and the storage means comprise control data for operation of control means and comparison means for comparison of control data to location response data and change of at least some control data in response to that comparison.

12. (original) The system of Claim 11 in which control data comprises temperature control setpoints for thermostatic control of the system and comparison means comprises means for changing one or more of the temperature control setpoints.
13. (original) The system of Claim 11 in which control data comprises sunrise or sunset data for the physical location for control of local lighting and comparison means comprises means for changing one or more of the parameters for turning local lighting on or off.

REMARKS

Claims 1 and 9 are amended and claim 8 is canceled from the application. Claim 1 incorporates all the limitations of the originally filed claim 8. The last office action stated that such a claim 1 would be allowable over a rejection rejected under 35 U.S.C. § 103 if amended.

Consideration of the above amendments and remarks is requested and it is submitted that such amendments and remarks place the application in a condition for allowance for claims 1-7 and 9-13. Applicant requests entry of amendments and allowance of such claims.

Respectfully submitted,

Dated: April 10, 2004



David T. Bracken

Registration No. 37,522

Phone: (714) 744-4798



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: THERMOSTAT SYSTEM WITH
LOCATION DATA

Inventor(s): Howard Rosen

Serial No.: 10/287,677

Filing Date: 11/4/2002

Group No.: 3744

Examiner: William E. Wayner

Attorney Docket No.: 0208.2A4

**PETITION FOR EXTENSION OF TIME
PURSUANT TO 37 CFR §1.136 AND
§1.17(a) TO (d)**

Last, pending office action mailed: 12/10/2003
Original period for response expired: 3/10/2004
Request for extension of 1 month(s) to: 4/10/2004
Petition fee (small entity) enclosed: \$55.00

RECEIVED

APR 20 2004

TECHNOLOGY CENTER R3700

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

Sir:

Applicant(s) respectfully petition that the period of response to the last, pending office action indicated above be extended for the additional months indicated above. A response to the last, pending office action and the above Petition Fee is enclosed.

Respectfully submitted,

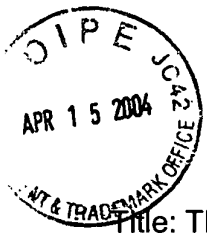
Dated: April 9, 2004

David T. Bracken
Registration No. 37,522
The Law Office of David T. Bracken
4839 East Bond Avenue
Orange, CA 92869
Phone: 714-744-4798 FAX: 714-771-3968

04/16/2004 ZJUHR1 00000009 10287677

01 FC:2251

55.00 OP



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: THERMOSTAT SYSTEM WITH LOCATION
DATA

Inventor(s): Howard Rosen

Serial No.: 10/287,677

Filing Date: 11/4/2002

Group No.: 3744

Examiner: William E. Wayner

Attorney Docket No.: 0208.2A4

TRANSMITTAL LETTER

RECEIVED

APR 20 2004

TECHNOLOGY CENTER R3700

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

Sir:

Transmitted for filing for the above patent
application are the following:

Papers Enclosed:

- ☒ Amendment - 4 p.
- ☒ Petition for Extension of Time - 1 p.
- ☒ Check for \$55

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 with the United States Postal
Service on this date in an envelope for first
class service addressed to: Commissioner
for Patents, PO Box 1450, Alexandria, VA
22313-1450

David T. Bracken

Signature: David T. Bracken

Date of Mailing: April 10, 2004



UNITED STATES PATENT AND TRADEMARK OFFICE

LC

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/287,677	11/04/2002	Howard Rosen	0208.2A4	5280

7590 12/10/2003

David T. Bracken
The Law Office of David T. Bracken
4839 Bond Avenue
Orange, CA 92869

EXAMINER

WAYNER, WILLIAM E

ART UNIT	PAPER NUMBER
----------	--------------

3744

DATE MAILED: 12/10/2003

3

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

Office Action Summary

Application No.

10/287,677

Applicant(s)

HOWARD ROSEN

Examiner

WILLIAM WAYNER

Art Unit

3744

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

Period for Reply

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

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

Status

- 1) ☒ Responsive to communication(s) filed on 11/04/02
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 8-13 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

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

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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

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

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis, in view of Official Notice.

Kikinis provides an air conditioning thermostat 15 at a single location, as defined by a telephone number, a transmitter such as a data network telephone used to transmit location data to a remote location at 21 where a location response is included. Official Notice is taken that an air conditioning thermostat clearly implies an environmental controller making it obvious to do so in Kikinis such as a house furnace although not expressly stated, it is clear that the location data would have to be stored at the controller since it is preprogrammed at 15. (claim 5).

In claim 5 input of location data by the user is clearly suggested at page5, col, 1 second paragraph where it states that the telephone number may be programmed by the user during set up by the user. As to claim 4, Official Notice is taken that it is standard procedure to provide digital thermostats with time variable set points and capability of turning HVAC systems on & off, therefore making it obvious to so provide Kikinis:

Art Unit: 3744

Claims 8-13 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.

Any inquiry concerning this communication should be directed to William E. Wayner at telephone number 703-308-1515.


William Wayner
Primary Examiner

Notice of References Cited			Application No.		Applicant(s)	
			10/287,677		HOWARD ROSEN	
			Examiner		Group Art Unit	Page
			W. W AYNER		3744	1 of 1

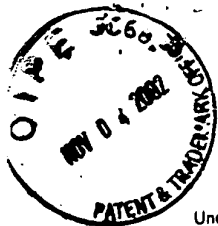
U.S. PATENT DOCUMENTS					
*	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A	5761,083	6/1998	BROWN JR, ET AL	340	925.06
B	5,915,026	6/1999	MANIKOVITZ	340	49
C	6,260,765	7/2001	NATALE ET AL	236	47
D	6,510,212	1/2003	ITO ET AL	379	102.03
E					
F					
G					
H					
I					
J					
K					
L					
M					

FOREIGN PATENT DOCUMENTS						
*	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N						
O						
P						
Q						
R						
S						
T						

NON-PATENT DOCUMENTS		
*	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).)

Part of Paper No. 3



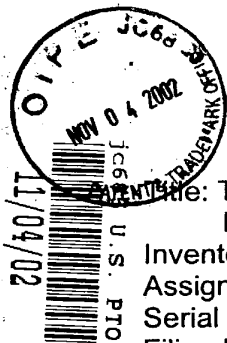
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Sheet _____ of _____

37 CFR 1.501 INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)				Docket Number (Optional) 0208.2A4		10/287,677 ~~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	
M.M.	5896443	4/99	DICHTER	709	220		
M.M.	6161133	12/00	KIKINIS	379	93.09		
	~~6166342~~						
M.M.	6182113	1/01	NARAYANASWAMI	709	203		
M.M.	5568385	10/96	SHELTON	—	—		
M.M.	5999882	12/99	SIMPSON ET AL	702	3		
M.M.	6336142	1/02	KATO ET AL				
FOREIGN PATENT DOCUMENTS							
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
EXAMINER W. WAYNER				DATE CONSIDERED 10/23/03			

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.

11/04/02
10/287,677
U.S. PTO
JCT14



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

A#

Title: THERMOSTAT SYSTEM WITH LOCATION DATA -

Inventor(s): Howard Rosen -
Assignee(s):
Serial No.:
Filing Date:
Group No.:
Examiner:
Attorney Docket No.: 0208.2A4 -

TRANSMITTAL LETTER:
REGULAR PATENT APPLICATION

ASSISTANT COMMISSIONER FOR PATENTS
Washington, DC 20231



Sir:

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

Papers Which Are Required for Filing Date:

- i) Pages of Specification: 12
- ii) Pages of Claims: 3
- iii) Pages of Drawings: 4
- iv) Pages of Abstract: 1

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
service with the United States Postal Service on this
date in an envelope as Assistant Commissioner for
Patents, Washington, DC 20231

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

Additional Papers Enclosed:

- | | |
|---|--|
| ☒ Declaration/Power of Attorney | ☒ Petition to Make Special - 1 p. |
| ☒ An Authorization for \$530 | ☒ Declaration in Support - 2 p. |
| | ☒ Account Mgr. Letter (Royal Bank) - 1 p. |
| | ☒ Information Disclosure Statement / Remarks |
| | ☒ Copies of Cited Prior Art |

Inventor(s)	
#1 Howard Rosen -	Address #1: 5756 Royalmount Avenue, Montreal, Quebec, H4P 1K5 Canada -

Address all correspondence to:

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

- ☒ Applicant(s) claim small entity status for this application as per 37 CFR 1.9 and 27.
☒ Pursuant to 37 CFR 1.211, Applicant hereby requests nonpublication with this application.
The application is not to be published under 35 U.S.C. 122(b). Applicant certifies that the
invention disclosed in the application has not been and will not be the subject of an application
filed in another country, or under a multilateral international agreement, that requires publication
at eighteen months after filing.

David T. Bracken

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

THERMOSTAT SYSTEM WITH LOCATION DATA

INVENTOR: HOWARD ROSEN

This application is a continuation in part of Regular Utility Patent Serial No.
5 10/075,886 , filed February 13, 2002.

Field of the Invention

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

Background of the Invention

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

Modern thermostat systems, which take advantage of the ongoing rapid advances in electronic technology and circuit integration, have many features which provide more precise supervision of the heating and/or cooling equipment to achieve more economical
25 and more comfortable management of the temperature of a conditioned space. Many modern thermostat systems include a real time clock, a memory and a data processor to run a process control program stored in the memory to accurately measure the temperature of a temperature sensor disposed in the conditioned space and to send control signals to the heating and/or cooling equipment to closely control the temperature of the conditioned
30 space. Modern thermostat systems permit anticipating and minimizing hysteresis or overshoot of the temperature in the conditioned space. In addition, the program can

specify different set points at different times of the day and week and may also include a “vacation” mode which employs different set points when the conditioned space is not occupied for an extended period.

Many modern thermostat systems are programmable by a user. Typically, prior art
 5 programmable thermostat system employ a tactile touch pad with various fixed position buttons to be touched in a precise sequence to program set points (which may vary with the day of the week) for programmable time periods which may include a vacation mode. The programming sequence may be followed on a separate display, typically a liquid crystal display.

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

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

Summary of the Invention

A thermostat system according to the invention includes: a temperature sensor for
 20 providing an electrical signal indicative of the temperature of a conditioned space in which the temperature sensor is situated; a liquid crystal display (LCD) for selectively displaying an alphanumeric message; and a processor having: a CPU, real time clock and a memory for storing program and data information. In one embodiment, the data includes a table storing key terms on a predetermined subject (e.g., current and predicted weather
 25 conditions in a given locale). A communications interface is adapted to establish bi-directional communications (via the Internet or some other suitable facility) between the processor and a remote correspondent which is a source of current information on the predetermined subject. Periodically, or on demand if provided for, a program stored in the memory causes the CPU to selectively: establish communications with the remote
 30 correspondent, read the current information and parse the current information against the stored key terms. If a match is found, the current information is further searched for at

least one value associated with the matched key term; and if at least one such value is found, an alphanumeric message is displayed on the LCD to show a first message component representative of the connotation of the matched key term and a second message component representative of the associated value.

5 In a variant embodiment, the remote correspondent provides a service sending, periodically or on demand, predetermined information for display on the LCD. In this variant, there is no parsing against locally stored key terms. In another variant embodiment, the thermostat system can use current weather information received from the first remote correspondent to determine and act if the received information is such that a
10 second remote correspondent interfacing with a remotely controllable thermostat system should be contacted, and send directive information to suitably change the temperature (or other parameter) set point at the second remote site.

Description of the Drawing

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

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

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

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

25 FIG. 4 is a block diagram of a first embodiment of a space conditioning 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;

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

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

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

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

Consider now a first embodiment of the invention. Referring to FIG. 5 as well as FIG. 1, there is stored in the memory 8 (typically, in ASCII format) a series of key terms pertaining to a subject of interest such as the local weather. Exemplary key terms for this subject may be "temperature", "relative humidity", "high", "low", "barometric pressure", etc. The key terms may be stored in the memory during the manufacturing process of the thermostat system or, as will be described below, by user entry using the touchpad 11 and LCD 12.

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

When the current local weather information is transmitted from the remote correspondent 15 via link 16 to the communications interface 14 and thence to the CPU 9, the CPU parses the information against the key terms stored in memory 8 to determine if there is a match. This is easily achieved because the source code (e.g., HTML if the communication is via the Internet) of the information will typically also be in ASCII

format. If the CPU 9 senses a match, the just-received information is searched for the presence of at least one "value" associated with the matched key term. If such a value is found and under control of the CPU 9, a first alphanumeric message component representative of the connotation of the matched key term and a second alphanumeric message component representative of the value associated with the key term are displayed on the LCD 12.

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

As an example, assume that Montreal weather is of interest to an occupant of a conditioned space in the Montreal area which uses the subject thermostat system and that "temperature", "high" and "low" are the key terms for the subject of local weather stored in the memory 8. Periodically, as determined by times stored in the memory 8, the CPU 9 issues signals to access the remote correspondent 15 (a site providing local Montreal weather in the example) and download the current weather information as a data stream. If the CPU finds, by examining and processing the data stream, that the term "temperature" has been received, it looks for the next characters in the data stream which can be a value associated with "temperature"; e.g., it may quickly find "+18°C". With this coupling established, the CPU may access the memory 8 to read the prestored alphanumeric message component "Current Montreal Temperature:" and then concatenate, as a second alphanumeric message component, "18C" and then send the complete message to the LCD 12 which displays: "CURRENT MONTREAL TEMPERATURE: 18°C".

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

While an obvious application for using the invention is acquiring and displaying current weather information, other types of current information may be obtained and displayed in a like manner. For example, current stock quotations for stock indexes and

individual stocks, mutual funds and the like can be automatically acquired, displayed and periodically updated by suitably programming the processor 1 with the address of a site which maintains such information current along with the desired key terms which may, in this example, be NYSE, etc. stock symbols. Thus, the “value” term would be the current stock quote. As an example, if the key term “FMAGX” is matched and an associated value of 102.75 is also found, the alphanumeric message “CURRENT QUOTE FOR MAGELLAN: 102.75” is generated and displayed. To closely track one or more stocks or funds, the remote correspondent can be accessed as often as desired to “refresh” the alphanumeric message showing the current quote. A wide variety of types of information may be programmed, accessed and displayed in a like manner.

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

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

As previously mentioned, the invention is not limited to use in programmable thermostat systems or even to thermostat systems in which correspondent addresses and key terms have previously been entered into memory 8. Still referring to FIG. 1 and also to FIG. 7, in a variant embodiment of the invention, a thermostat system communicates with a remote correspondent 15 which provides a customized service to the user of the thermostat system. In this embodiment of the invention, the user is a subscriber to the

customized service in order to receive known current information on a predetermined schedule. At predetermined times (or on demand), data communications is established between the processor 1 and the remote correspondent 15 which, in this case, provides the customized service. The current information is downloaded and displayed. The resulting

5 messages shown and periodically updated on the LCD 12 may be as shown in exemplary FIG. 6 if, for example, Montreal current temperature, daily high and low temperatures and the current quote for Magellan is what the user has subscribed to receive.

When the service is set up, the user and the business which provides the service via the remote correspondent 15 agree as to what current information (typically more than in

10 the example) will be supplied on an agreed schedule. Depending upon the server-client relationship, either the processor 1 or the remote correspondent 15 may institute the current information transfer at the predetermined times or on demand.

While the Internet is not the only facility which the subject thermostat system may use to communicate with a remote correspondent, it is, at the state-of-the-art the most

15 readily widely available and easily accessible. Thus, FIG. 2 show a typical coupling in which the communications interface 14 sends/receives serial data to/from an external (to the thermostat system) modem 20 via serial link 16. The modem conventionally interfaces with an Internet Service Provider (ISP) 21 which completes the communications link to the remote correspondent in the well-known manner. The modem 20 may be dial-up, cable,

20 DSL or any other type suitable for the communications environment in a given installation.

At the state-of-the-art and as shown in FIG. 3, a modem 24 for communicating with the ISP 21 may be integrated into the communications interface 14 of the input/output unit 14 to eliminate the need for an external modem. Thus, when communications is

25 established with the remote correspondent 15 according to a schedule or upon demand, the data transfer takes place via modem 24 and data link 26 as shown.

Attention is now directed to FIG. 4 which illustrates an optional extension of the subject thermostat system. It will be observed that the ISP 21 is not only in communication with the first remote correspondent 15, but also with a second remote correspondent 26. The second remote correspondent 23 may be another thermostat system

30 (controlling another conditioned space (not shown) with other space conditioning equipment (not shown)) which can be remotely controlled. In this embodiment, data

received from the first remote correspondent 15 as previously described may include specific information which can be interpreted by the processor 1 to require action at the site of the second remote correspondent 23. As an example, assume that the site of the second remote correspondent 23 is a temporarily unoccupied dwelling and that weather data received by the subject thermostat system indicates a predicted significantly low temperature predicted for the region of the site of the second remote correspondent 23. The processor 1 may determine, in response to this new weather information supplied by the first remote correspondent 15, that the heat should be turned on (or the set point raised) at the site of the second remote correspondent 23 in order to protect water pipes against freezing, warm the conditioned space controlled by the second remote correspondent in anticipation of its upcoming occupation, etc.

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

The invention described above includes additional embodiments. In a specific example of these additional embodiments, a thermostat stores data that establishes its physical location for interaction with remote devices located away from that thermostat.

5 Those other devices may be Internet sites transmitting weather data to the thermostat based on the geographic location of the thermostat. More generally, this embodiment uses location based interactions between an environmental controller (with one or more parts such as transmitter means, a display, data storage means or control means) and a remote device which responds to location data received from the controller.

10 Control means for an environmental controller, such as a thermostat, include the structure needed to turn HVAC functions on or off or change operation thereof, impose control setpoints or other control parameters, turn lighting on or off, sense and respond to environmental gases or smoke, or other of the several functions which may be accomplished locally or wirelessly by present day programmable thermostats and their
15 distributed components. Transmitter means for the environmental controller include one or more wireless and/or wired connections to the remote device. In a specific example, transmitter means are a modem with Internet or network connection that receives location data from the environmental controller and transmits the location data to a specific address on the Internet or in the network.

20 Remote devices for the present invention include, as described above, Internet or computer network nodes or other similar devices that receive location data from the transmitter means. A response in the remote device may be as little as simply recording the fact that an environmental controller is at a physical location. Another form of response is for the remote device to use the location data in an operation or algorithm that creates an
25 output stored at the remote device or transmitted from it.

In the above specific example, location data of a thermostat is transmitted from transmission means (a modem) through the Internet to a website maintained to have access to weather or climate information (the remote device). The weather website (the remote device) receives the location data and associates it with local weather data for the
30 thermostat location, which is then transmitted to the thermostat through the modem (a response of the remote device). The thermostat uses the local weather data for display,

stores it in storage means, and/or uses it within control means (a response by the environmental controller). The word "local" with reference to weather data is relative to a desired geographic range and/or time into the future.

The present embodiments of location data are for physical location of an environmental controller, not a specific network address such as an IP address which does not have geographical relevance. Presently, a prior art thermostat may already have stored in it for its network use a unique IP address that identifies the thermostat for control via inputs from the Internet. Location data, unless correlated with that IP address to create a code system, is different from the IP address.

This location data in one form can be as simple as a telephone number or portion thereof, a zip or postal code, longitude and latitude information or other systems or codes that correspond to location information. If location data is a telephone number, which would be easily input into the environmental controller with even a simple user interface, that telephone number can be "looked up" by a server and correlated to a geographical address. In a preferred form of the location data, a first environmental controller will have location data distinguishing it from all other environmental controllers. The way to distinguish between environmental controllers may be with specific codes, such as IP addresses, combined with physical location data which would be used for more than one environmental controller. In, this way, even nearby thermostats can have unique means of receiving geographical information pertaining to its climatic location.

To date, the prior art contains no environmental controllers that have geographical information, such as location data in the form of a zip code or telephone number, stored in them. Location data may take several forms as it is originally input into and through a local environmental controller, output to transmitter means, delivered to and processed by a remote device, and retransmitted by that remote device to the environmental controller or other remote device. Whatever its form, location data correlates in some way to the physical and geographic location of the environmental controller. For example, transmitter means may link the environmental controller to an intervening remote server which has stored in it a correlation between the specific IP address or other specific identifier and the physical location of that environmental controller. In that case, a specific IP address or specific identifier is the functional equivalent of location data and is included in its

definition herein. The invention provides for intervening transmission and/or conversion of forms of location data of the environmental controller until the location data reaches a desired remote device.

As contrasted to the form of the location data, the present embodiments include several ways to make use of location data in a response by a remote device or remote correspondent. For example, it is well known that Internet web sites make certain information and/or algorithms available for use by the user linking to that web site, either for free or at a cost to the user. Automated means are preferred for linking the environmental controller to the web site and causing the web site to respond to the location data.

In one such form, an environmental controller links to a web site and transmits location data and an access code. The access code is appropriately received by the web site and identifies the user as one authorized to have transmitted to it information or algorithm results from the web site. The access code may be structured so that location data is a substantial part of that access code, i.e., the access code is the phone number of the physical location of the environmental controller. The access code may be evaluated by the server for the web site to determine if a previously approved access code is still valid, i.e., whether the user has paid their last bill for access to the web site. In a specific example of this type of response, a user of the invention environmental controller pays the operator of a web site with weather data for a period of access. The user is either issued an access code by the web site operator to be input into the environmental controller or the access code is some code specific to the environmental controller, such as the location code, and is accepted by the web site operator. An access code may include credit card numbers for instant acceptance and debiting at linking to the web site.

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

WHAT IS CLAIMED IS:

- 1 1. A location response system with an environmental controller located at a single
2 physical location adapted to be an integral part of a system of environmental sensing or
3 control for a local and substantially enclosed space comprising:
 - 4 A) a physical location of the environmental controller stored as location data in
5 storage means in the controller;
 - 6 B) transmitter means connected to the controller adapted to transmit location data
7 to a remote device physically remote from the controller, so that a location
8 response is induced at the remote device.
- 1 2. The system of Claim 1 in which said transmitter means includes a modem and the
2 remote device is a computer network server.
- 1 3. The system of Claim 1 in which said location data includes one or more of the group
2 consisting of a local telephone number or portion thereof, a local zip or postal code, and
3 local latitude and longitude of the physical location of the controller or systems correlated
4 thereto.
- 1 4. The system of Claim 1 in which the controller comprises control means which acts on
2 a response of location data for thermostatic functions including structure needed to turn
3 HVAC functions on or off or change operation thereof, impose control setpoints or other
4 control parameters, turn lighting on or off, or those functions accomplished locally or
5 wirelessly by a system of thermostatic control among distributed components.
- 1 5. The system of Claim 1 in which the controller comprises means for input of location
2 data by a user at the physical location.
- 1 6. The system of Claim 1 in which location response is storage of the location data at the
2 remote device.

1 7. The system of Claim 1 in which location response is storage of the location data at the
2 remote device and correlation of the physical location to location response data stored at
3 or available to the remote device or created by processing of location data at the remote
4 device.

1 8. The system of Claim 1 in which location response is storage of the location data at the
2 remote device and correlation of the physical location to location response data stored at
3 or available to the remote device or created by processing of location data at the remote
4 device, whereafter location response data is transmitted from the remote device to the
5 controller.

1 9. The system of Claim 8 in which location response data is stored in the controller
2 storage means.

1 10. The system of Claim 9 in which stored location response data is displayed on a
2 display screen at the controller.

1 11. The system of Claim 9 in which the controller comprises control means for
2 thermostatic functions including structure needed to turn HVAC functions on or off or
3 change operation thereof, impose control setpoints or other control parameters, turn
4 lighting on or off, sense and respond to environmental gases or smoke, or those functions
5 accomplished locally or wirelessly by a system of thermostatic control among distributed
6 components, and the storage means comprise control data for operation of control means
7 and comparison means for comparison of control data to location response data and
8 change of at least some control data in response to that comparison.

1 12. The system of Claim 11 in which control data comprises temperature control
2 setpoints for thermostatic control of the system and comparison means comprises means
3 for changing one or more of the temperature control setpoints.

- 1 13. The system of Claim 11 in which control data comprises sunrise or sunset data for
- 2 the physical location for control of local lighting and comparison means comprises means
- 3 for changing one or more of the parameters for turning local lighting on or off.

1

1 ABSTRACT OF THE DISCLOSURE

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

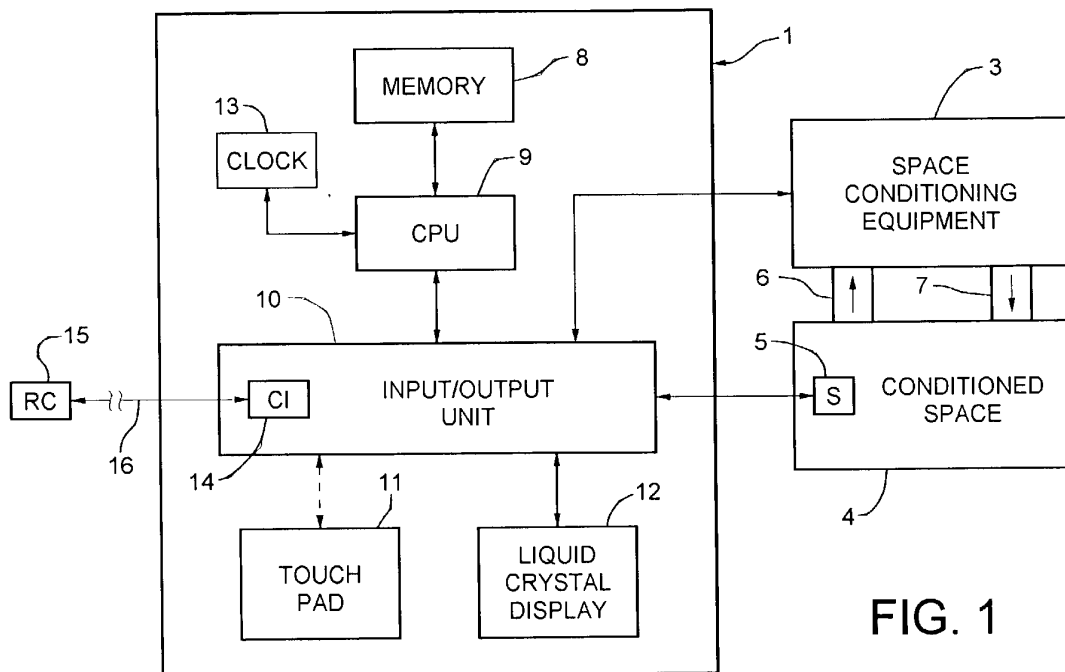


FIG. 1

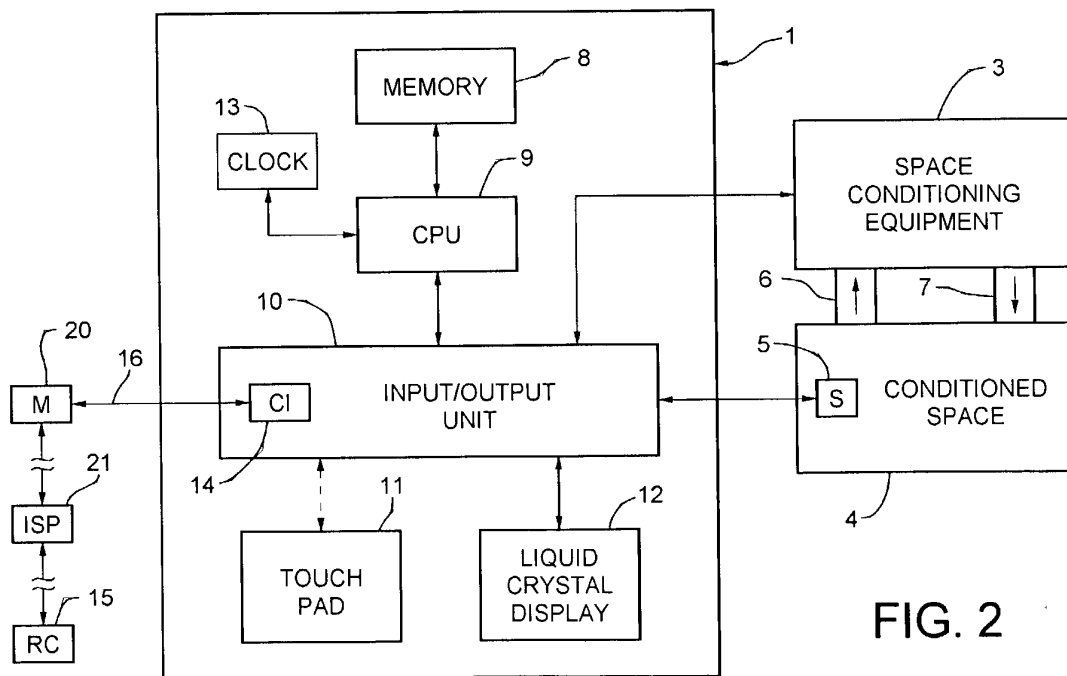


FIG. 2

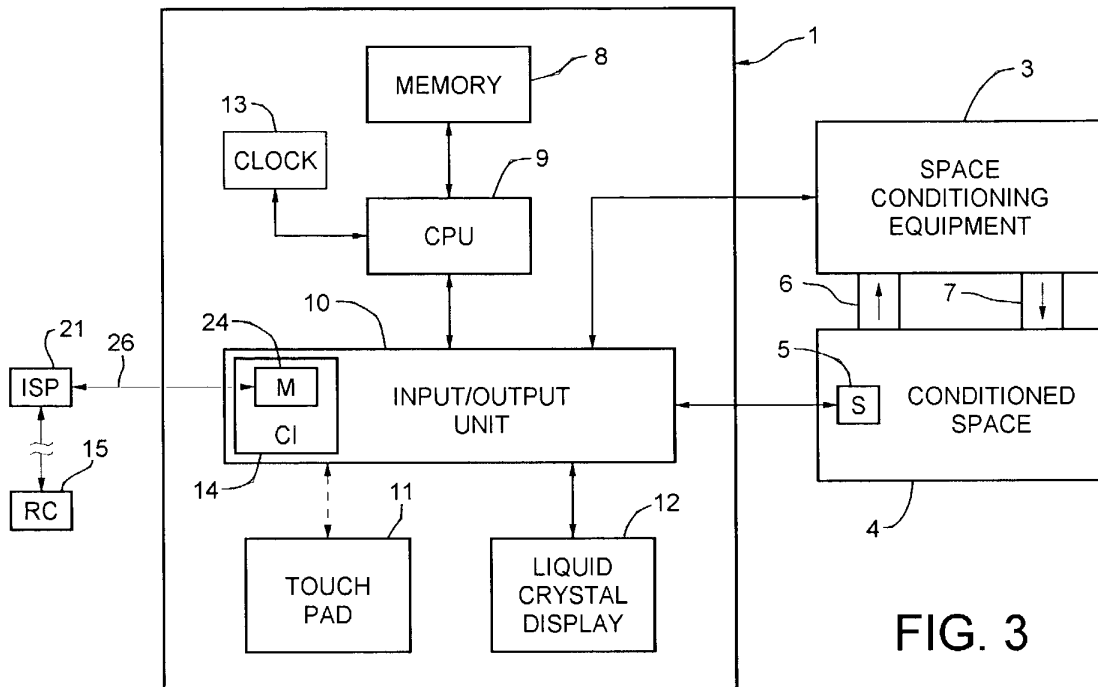


FIG. 3

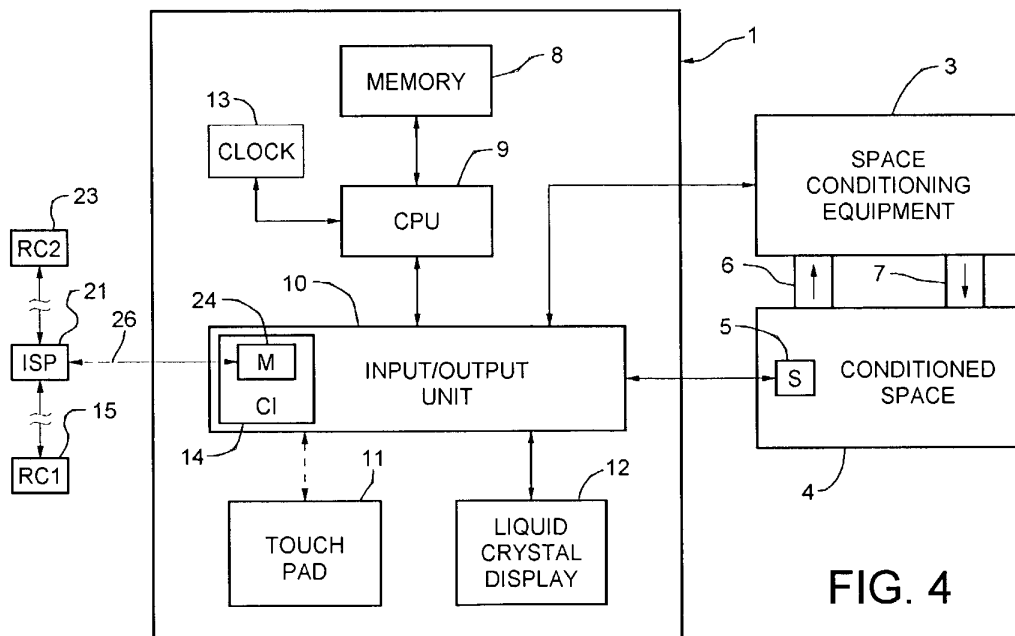
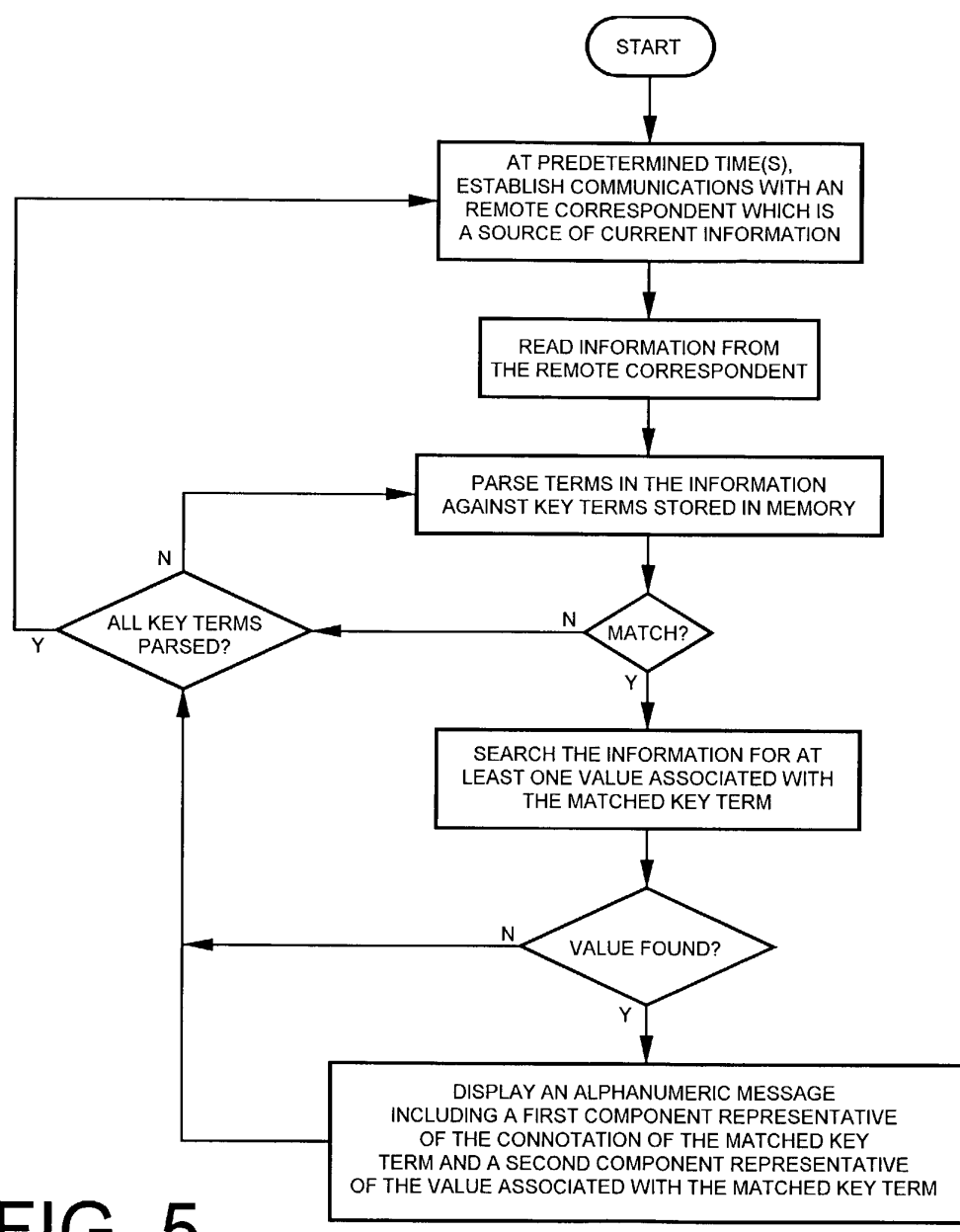
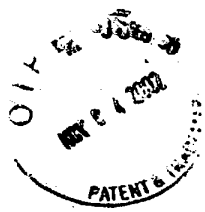
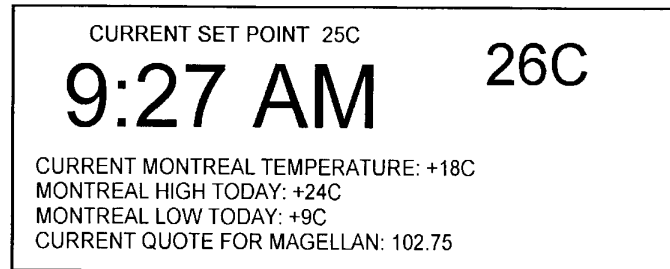


FIG. 4





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FIG. 6

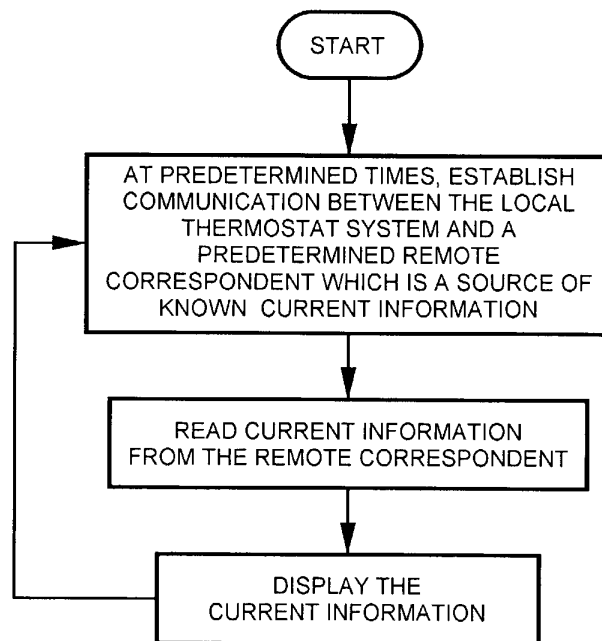
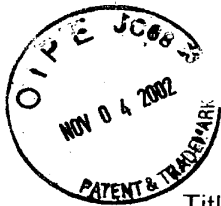


FIG. 7



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: THERMOSTAT SYSTEM WITH
LOCATION DATA -

Inventor(s): Howard Rosen -

Serial No.:

Filing Date:

Group No.:

Examiner:

Attorney Docket No.: 0208.2A4 -

DECLARATION /
POWER OF ATTORNEY

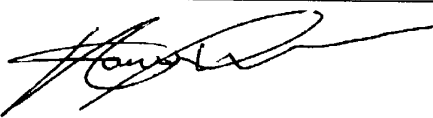
As above-named inventor(s), I (we) hereby declare that:

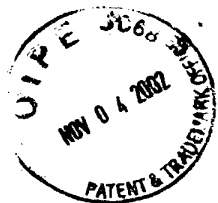
1. My residence and citizenship are as stated by my name.

Full Name of Inventor:		Citizenship:
#1 Howard Rosen -	Address #1: 5756 Royalmount Avenue, Montreal, Quebec, H4P 1K5 Canada -	USA

I (we) further declare that:

2. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention identified above and is attached hereto.
3. I have reviewed and understand the contents of the above identified specification, claims, drawings and abstract and acknowledge my duty to disclose information which is material to the examination of this application in accordance with Title 37 Code of Federal Regulations §1.56.
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.

Inventor Name:	Signature of Inventor:	Date:
#1 Howard Rosen -		



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: THERMOSTAT SYSTEM WITH
LOCATION DATA -

Inventor(s): Howard Rosen -

Assignee(s):

Serial No.:

Filing Date:

Group No.:

Examiner:

Attorney Docket No.: 0208.2A4 -

**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

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		

3574 US-PTO
10/28/02
11/04/02

U.S. UTILITY Patent Application

PATENT NUMBER and
ISSUE DATE

M

APPL NUM	FILING DATE	CLASS	SUBCLASS	GAU	EXAMINER
10287677	11/04/2002	236 454	51	3749	WAYNER

**APPLICANTS: Rosen Howard;

**CONTINUING DATA VERIFIED:

This application is a CIP of 10/075,886 02/13/2002 WAYNER 6,619,555

** FOREIGN APPLICATIONS VERIFIED:

P-C-PUB	DO NOT PUBLISH ☐	RESCIND ☐	
Foreign priority claimed ☐ yes ☐ no		ATTORNEY DOCKET NO	
35 USC 119 conditions met ☐ yes ☐ no		0208.2A4	
Verified and Acknowledged Examiners's initials			
TITLE : Thermostat system with location data			

U.S. DEPT. OF COMM./PAT & TM-PTO-435L (Rev. 12-94)

NOTICE OF ALLOWANCE MAILED		Assistant Examiner		CLAIMS ALLOWED	
				Total Claims	Print Claim for O.G.
ISSUE FEE		Primary Examiner		DRAWING	
Amount Due	Date Paid			Sheets Drwg.	Figs. Drwg.
☐ TERMINAL DISCLAIMER		PREPARED FOR ISSUE		Application Examiner	
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455	420		
379	102.5		

INTERFERENCE SEARCHED			
Class	Sub.	Date	Exmr.

SEARCH NOTES (List databases searched. Attach search strategy inside.)		
	Date	Exmr.
WEATHER SAME	THERMOSTAT	

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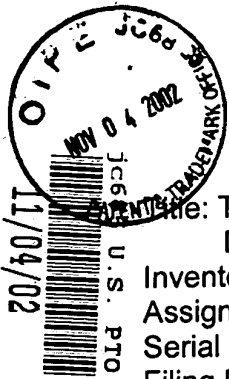
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Title: THERMOSTAT SYSTEM WITH LOCATION DATA -

Inventor(s): Howard Rosen -
Assignee(s):
Serial No.:
Filing Date:
Group No.:
Examiner:
Attorney Docket No.: 0208.2A4

TRANSMITTAL LETTER:
REGULAR PATENT APPLICATION

ASSISTANT COMMISSIONER FOR PATENTS
Washington, DC 20231



Sir:

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

Papers Which Are Required for Filing Date:

- i) Pages of Specification: 12
- ii) Pages of Claims: 3
- iii) Pages of Drawings: 4
- iv) Pages of Abstract: 1

CERTIFICATE OF MAILING (37 CFR 1.08)
I, the person below signing this Certificate of Mailing,
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David T. Bracken

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

Additional Papers Enclosed:

- ☒ Declaration/Power of Attorney
- ☒ An Authorization for \$530
- ☒ Petition to Make Special - 1 p.
- ☒ Declaration in Support - 2 p.
- ☒ Account Mgr. Letter (Royal Bank) - 1 p.
- ☒ Information Disclosure Statement / Remarks
- ☒ Copies of Cited Prior Art

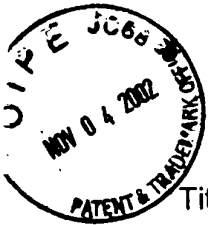
Inventor(s)	
#1 Howard Rosen -	Address #1: 5756 Royalmount Avenue, Montreal, Quebec, H4P 1K5 Canada -

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

- ☒ Applicant(s) claim small entity status for this application as per 37 CFR 1.9 and 27.
- ☒ Pursuant to 37 CFR 1.211, Applicant hereby requests nonpublication with this application.
The application is not to be published under 35 U.S.C. 122(b). Applicant certifies that the
invention disclosed in the application has not been and will not be the subject of an application
filed in another country, or under a multilateral international agreement, that requires publication
at eighteen months after filing.

David T. Bracken

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



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: THERMOSTAT SYSTEM WITH
LOCATION DATA -

Inventor(s): Howard Rosen -

Assignee(s):

Serial No.:

Filing Date:

Group No.:

Examiner:

Attorney Docket No.: 0208.2A4 -

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



Assistant Commissioner for Patents
Washington, DC 20231

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

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September 27th, 2002

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

Attention: Mr. Howard Rosen

Subject: United States Patent & Trademark Department

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

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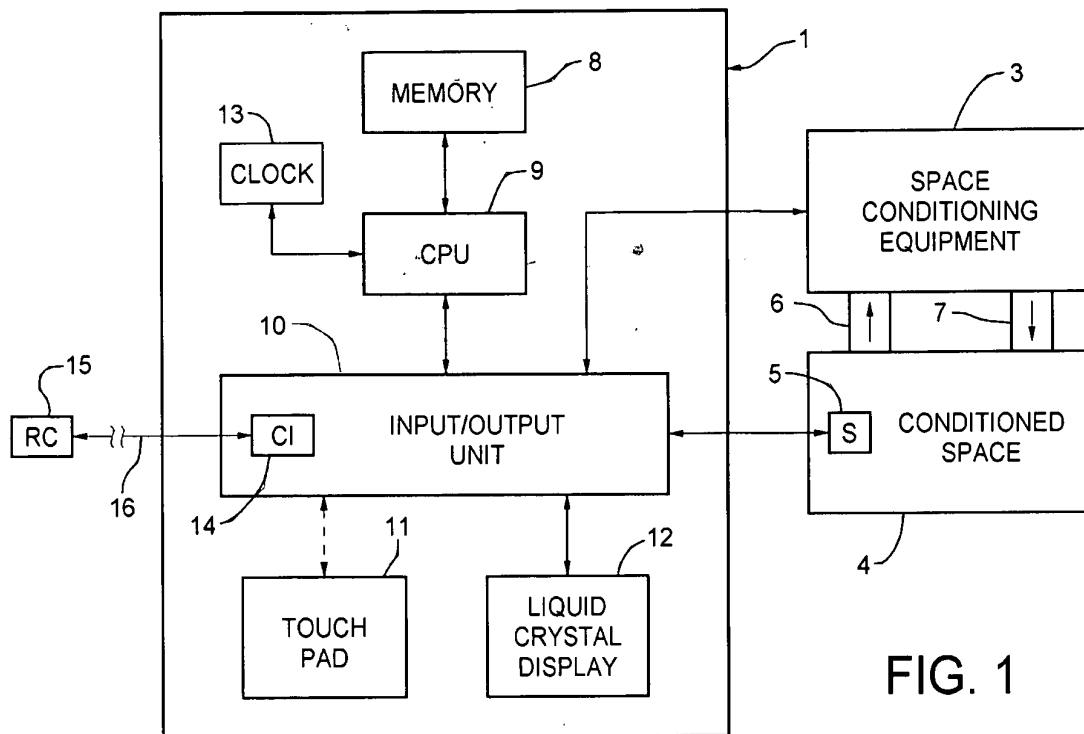


FIG. 1

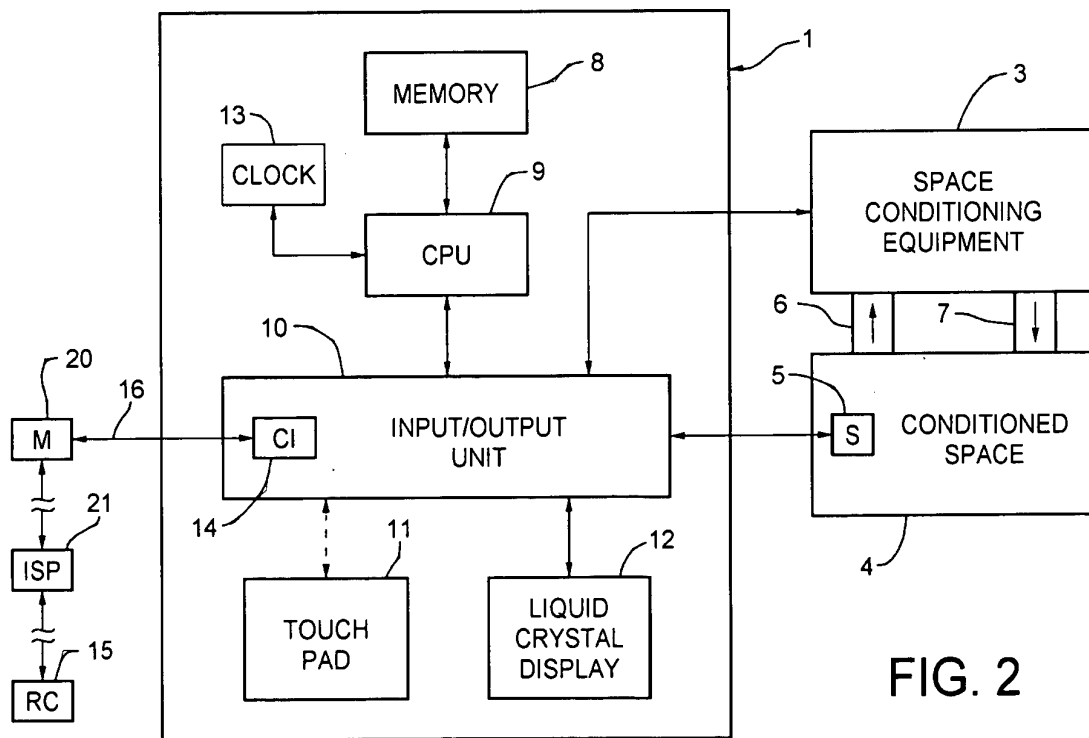
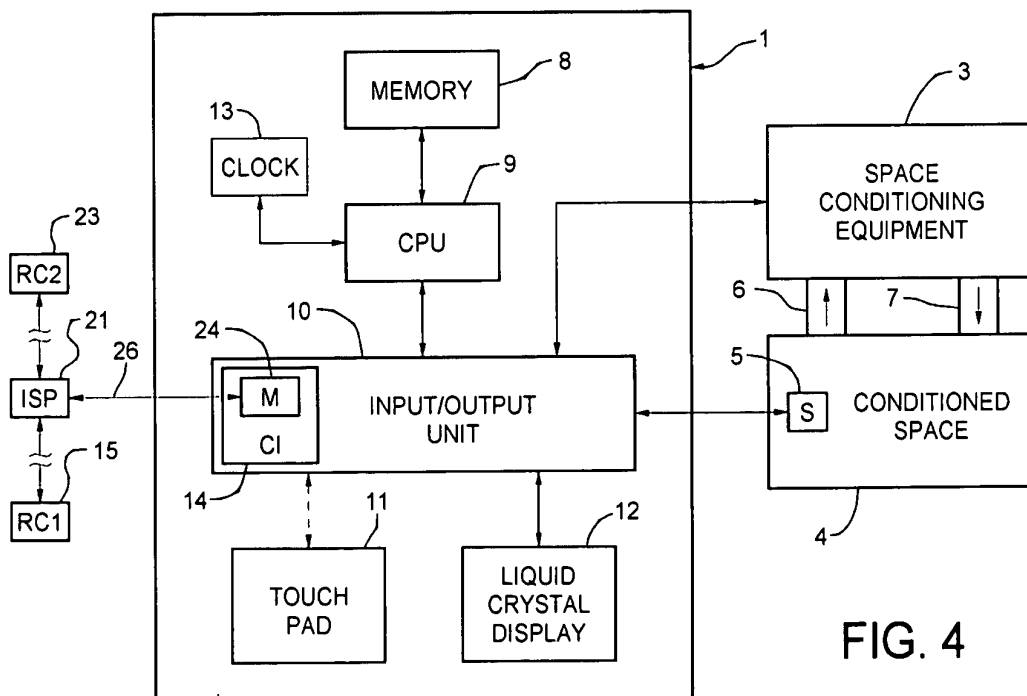
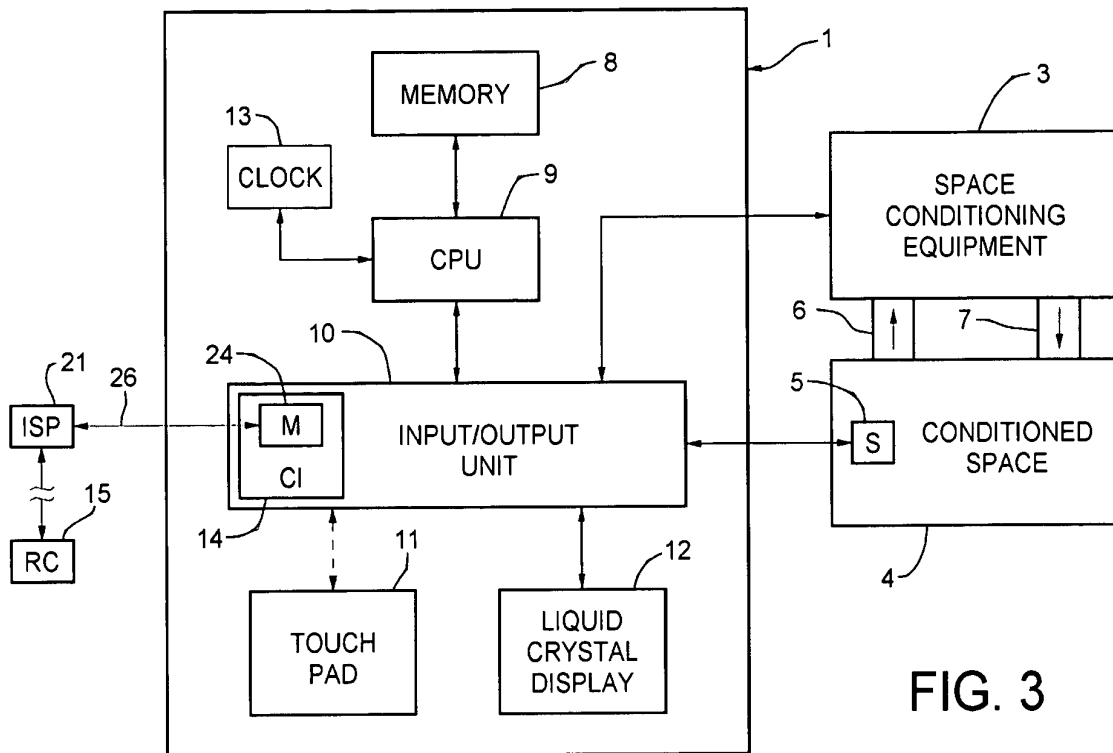


FIG. 2



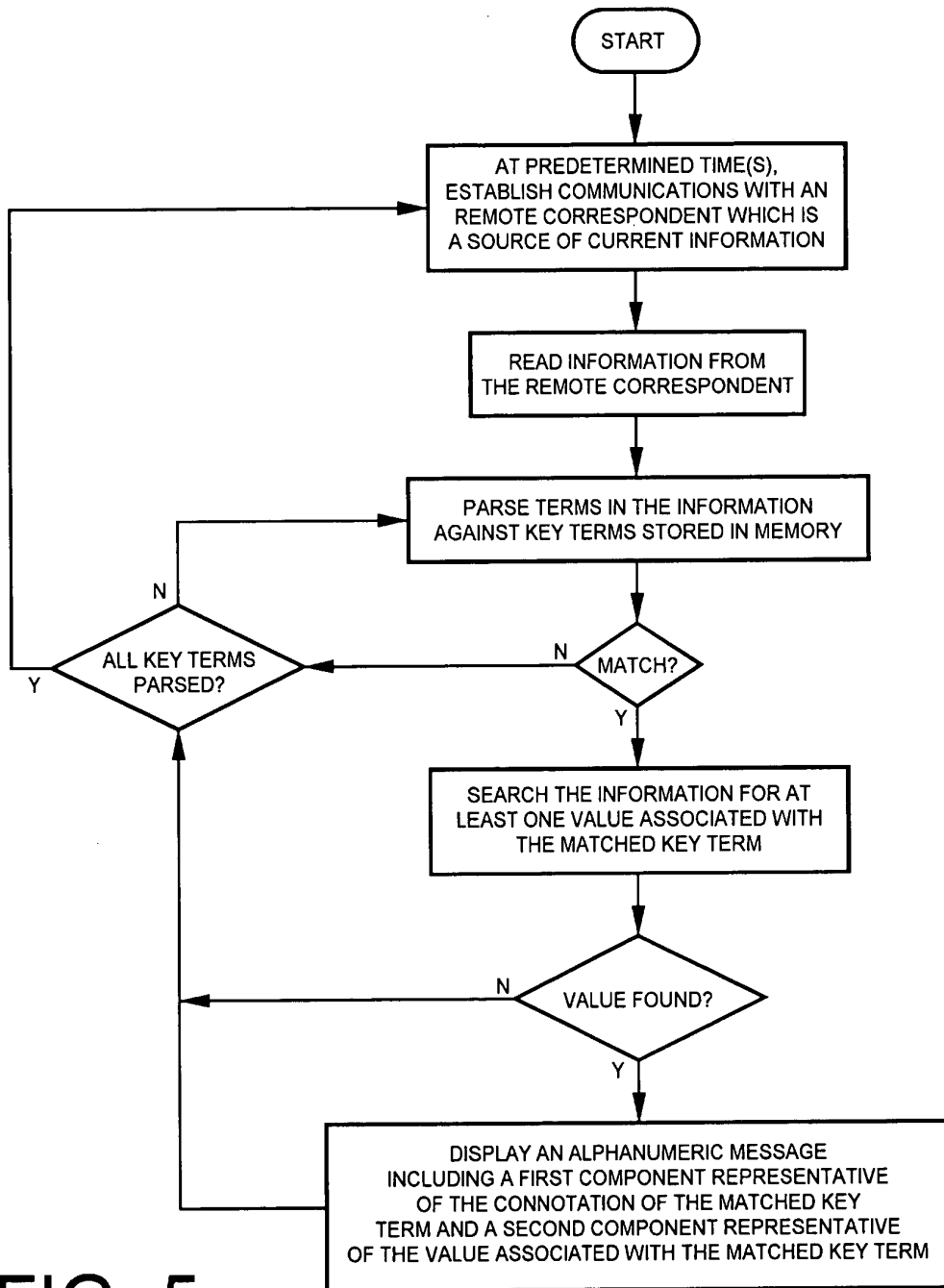
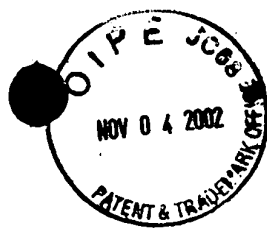
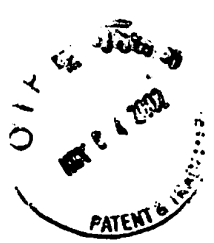
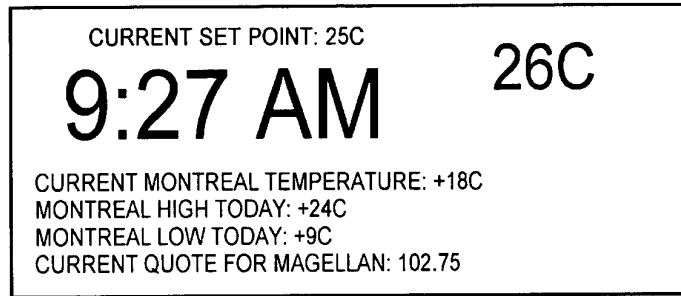


FIG. 5



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FIG. 6

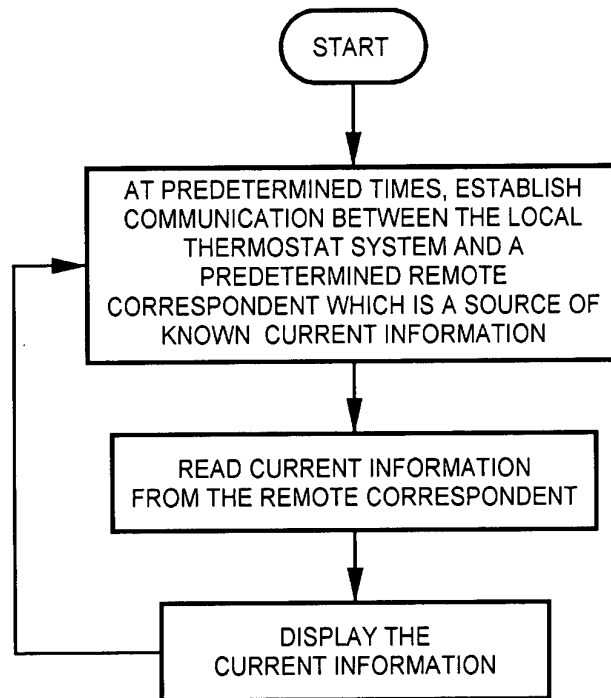


FIG. 7

THERMOSTAT SYSTEM WITH LOCATION DATA

INVENTOR: HOWARD ROSEN

5 This application is a continuation in part of Regular Utility Patent Serial No.
10/075,886 , filed February 13, 2002.

Field of the Invention

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

Background of the Invention

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

Modern thermostat systems, which take advantage of the ongoing rapid advances in electronic technology and circuit integration, have many features which provide more precise supervision of the heating and/or cooling equipment to achieve more economical
25 and more comfortable management of the temperature of a conditioned space. Many modern thermostat systems include a real time clock, a memory and a data processor to run a process control program stored in the memory to accurately measure the temperature of a temperature sensor disposed in the conditioned space and to send control signals to the heating and/or cooling equipment to closely control the temperature of the conditioned
30 space. Modern thermostat systems permit anticipating and minimizing hysteresis or overshoot of the temperature in the conditioned space. In addition, the program can

specify different set points at different times of the day and week and may also include a “vacation” mode which employs different set points when the conditioned space is not occupied for an extended period.

Many modern thermostat systems are programmable by a user. Typically, prior art programmable thermostat system employ a tactile touch pad with various fixed position buttons to be touched in a precise sequence to program set points (which may vary with the day of the week) for programmable time periods which may include a vacation mode. The programming sequence may be followed on a separate display, typically a liquid crystal display.

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

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

Summary of the Invention

A thermostat system according to the invention includes: a temperature sensor for providing an electrical signal indicative of the temperature of a conditioned space in which the temperature sensor is situated; a liquid crystal display (LCD) for selectively displaying an alphanumeric message; and a processor having: a CPU, real time clock and a memory for storing program and data information. In one embodiment, the data includes a table storing key terms on a predetermined subject (e.g., current and predicted weather conditions in a given locale). A communications interface is adapted to establish bi-directional communications (via the Internet or some other suitable facility) between the processor and a remote correspondent which is a source of current information on the predetermined subject. Periodically, or on demand if provided for, a program stored in the memory causes the CPU to selectively: establish communications with the remote correspondent, read the current information and parse the current information against the stored key terms. If a match is found, the current information is further searched for at

least one value associated with the matched key term; and if at least one such value is found, an alphanumeric message is displayed on the LCD to show a first message component representative of the connotation of the matched key term and a second message component representative of the associated value.

5 In a variant embodiment, the remote correspondent provides a service sending, periodically or on demand, predetermined information for display on the LCD. In this variant, there is no parsing against locally stored key terms. In another variant embodiment, the thermostat system can use current weather information received from the first remote correspondent to determine and act if the received information is such that a
10 second remote correspondent interfacing with a remotely controllable thermostat system should be contacted, and send directive information to suitably change the temperature (or other parameter) set point at the second remote site.

Description of the Drawing

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

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

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

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

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

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

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

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

Consider now a first embodiment of the invention. Referring to FIG. 5 as well as FIG. 1, there is stored in the memory 8 (typically, in ASCII format) a series of key terms pertaining to a subject of interest such as the local weather. Exemplary key terms for this subject may be "temperature", "relative humidity", "high", "low", "barometric pressure", etc. The key terms may be stored in the memory during the manufacturing process of the thermostat system or, as will be described below, by user entry using the touchpad 11 and LCD 12.

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

When the current local weather information is transmitted from the remote correspondent 15 via link 16 to the communications interface 14 and thence to the CPU 9, the CPU parses the information against the key terms stored in memory 8 to determine if there is a match. This is easily achieved because the source code (e.g., HTML if the communication is via the Internet) of the information will typically also be in ASCII

format. If the CPU 9 senses a match, the just-received information is searched for the presence of at least one "value" associated with the matched key term. If such a value is found and under control of the CPU 9, a first alphanumeric message component representative of the connotation of the matched key term and a second alphanumeric message component representative of the value associated with the key term are displayed on the LCD 12.

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

As an example, assume that Montreal weather is of interest to an occupant of a conditioned space in the Montreal area which uses the subject thermostat system and that "temperature", "high" and "low" are the key terms for the subject of local weather stored in the memory 8. Periodically, as determined by times stored in the memory 8, the CPU 9 issues signals to access the remote correspondent 15 (a site providing local Montreal weather in the example) and download the current weather information as a data stream. If the CPU finds, by examining and processing the data stream, that the term "temperature" has been received, it looks for the next characters in the data stream which can be a value associated with "temperature"; e.g., it may quickly find "+18°C". With this coupling established, the CPU may access the memory 8 to read the prestored alphanumeric message component "Current Montreal Temperature:" and then concatenate, as a second alphanumeric message component, "18C" and then send the complete message to the LCD 12 which displays: "CURRENT MONTREAL TEMPERATURE: 18°C".

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

While an obvious application for using the invention is acquiring and displaying current weather information, other types of current information may be obtained and displayed in a like manner. For example, current stock quotations for stock indexes and

individual stocks, mutual funds and the like can be automatically acquired, displayed and periodically updated by suitably programming the processor 1 with the address of a site which maintains such information current along with the desired key terms which may, in this example, be NYSE, etc. stock symbols. Thus, the “value” term would be the current stock quote. As an example, if the key term “FMAGX” is matched and an associated value of 102.75 is also found, the alphanumeric message “CURRENT QUOTE FOR MAGELLAN: 102.75” is generated and displayed. To closely track one or more stocks or funds, the remote correspondent can be accessed as often as desired to “refresh” the alphanumeric message showing the current quote. A wide variety of types of information may be programmed, accessed and displayed in a like manner.

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

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

As previously mentioned, the invention is not limited to use in programmable thermostat systems or even to thermostat systems in which correspondent addresses and key terms have previously been entered into memory 8. Still referring to FIG. 1 and also to FIG. 7, in a variant embodiment of the invention, a thermostat system communicates with a remote correspondent 15 which provides a customized service to the user of the thermostat system. In this embodiment of the invention, the user is a subscriber to the

customized service in order to receive known current information on a predetermined schedule. At predetermined times (or on demand), data communications is established between the processor 1 and the remote correspondent 15 which, in this case, provides the customized service. The current information is downloaded and displayed. The resulting
5 messages shown and periodically updated on the LCD 12 may be as shown in exemplary FIG. 6 if, for example, Montreal current temperature, daily high and low temperatures and the current quote for Magellan is what the user has subscribed to receive.

When the service is set up, the user and the business which provides the service via the remote correspondent 15 agree as to what current information (typically more than in
10 the example) will be supplied on an agreed schedule. Depending upon the server-client relationship, either the processor 1 or the remote correspondent 15 may institute the current information transfer at the predetermined times or on demand.

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

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

Attention is now directed to FIG. 4 which illustrates an optional extension of the subject thermostat system. It will be observed that the ISP 21 is not only in communication with the first remote correspondent 15, but also with a second remote correspondent 26. The second remote correspondent 23 may be another thermostat system
30 (controlling another conditioned space (not shown) with other space conditioning equipment (not shown)) which can be remotely controlled. In this embodiment, data

received from the first remote correspondent 15 as previously described may include specific information which can be interpreted by the processor 1 to require action at the site of the second remote correspondent 23. As an example, assume that the site of the second remote correspondent 23 is a temporarily unoccupied dwelling and that weather data received by the subject thermostat system indicates a predicted significantly low temperature predicted for the region of the site of the second remote correspondent 23. The processor 1 may determine, in response to this new weather information supplied by the first remote correspondent 15, that the heat should be turned on (or the set point raised) at the site of the second remote correspondent 23 in order to protect water pipes against freezing, warm the conditioned space controlled by the second remote correspondent in anticipation of its upcoming occupation, etc.

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

The invention described above includes additional embodiments. In a specific example of these additional embodiments, a thermostat stores data that establishes its physical location for interaction with remote devices located away from that thermostat.

5 Those other devices may be Internet sites transmitting weather data to the thermostat based on the geographic location of the thermostat. More generally, this embodiment uses location based interactions between an environmental controller (with one or more parts such as transmitter means, a display, data storage means or control means) and a remote device which responds to location data received from the controller.

10 Control means for an environmental controller, such as a thermostat, include the structure needed to turn HVAC functions on or off or change operation thereof, impose control setpoints or other control parameters, turn lighting on or off, sense and respond to environmental gases or smoke, or other of the several functions which may be accomplished locally or wirelessly by present day programmable thermostats and their
15 distributed components. Transmitter means for the environmental controller include one or more wireless and/or wired connections to the remote device. In a specific example, transmitter means are a modem with Internet or network connection that receives location data from the environmental controller and transmits the location data to a specific address on the Internet or in the network.

20 Remote devices for the present invention include, as described above, Internet or computer network nodes or other similar devices that receive location data from the transmitter means. A response in the remote device may be as little as simply recording the fact that an environmental controller is at a physical location. Another form of response is for the remote device to use the location data in an operation or algorithm that creates an
25 output stored at the remote device or transmitted from it.

In the above specific example, location data of a thermostat is transmitted from transmission means (a modem) through the Internet to a website maintained to have access to weather or climate information (the remote device). The weather website (the remote device) receives the location data and associates it with local weather data for the
30 thermostat location, which is then transmitted to the thermostat through the modem (a response of the remote device). The thermostat uses the local weather data for display,

stores it in storage means, and/or uses it within control means (a response by the environmental controller). The word "local" with reference to weather data is relative to a desired geographic range and/or time into the future.

The present embodiments of location data are for physical location of an environmental controller, not a specific network address such as an IP address which does not have geographical relevance. Presently, a prior art thermostat may already have stored in it for its network use a unique IP address that identifies the thermostat for control via inputs from the Internet. Location data, unless correlated with that IP address to create a code system, is different from the IP address.

This location data in one form can be as simple as a telephone number or portion thereof, a zip or postal code, longitude and latitude information or other systems or codes that correspond to location information. If location data is a telephone number, which would be easily input into the environmental controller with even a simple user interface, that telephone number can be "looked up" by a server and correlated to a geographical address. In a preferred form of the location data, a first environmental controller will have location data distinguishing it from all other environmental controllers. The way to distinguish between environmental controllers may be with specific codes, such as IP addresses, combined with physical location data which would be used for more than one environmental controller. In, this way, even nearby thermostats can have unique means of receiving geographical information pertaining to its climatic location.

To date, the prior art contains no environmental controllers that have geographical information, such as location data in the form of a zip code or telephone number, stored in them. Location data may take several forms as it is originally input into and through a local environmental controller, output to transmitter means, delivered to and processed by a remote device, and retransmitted by that remote device to the environmental controller or other remote device. Whatever its form, location data correlates in some way to the physical and geographic location of the environmental controller. For example, transmitter means may link the environmental controller to an intervening remote server which has stored in it a correlation between the specific IP address or other specific identifier and the physical location of that environmental controller. In that case, a specific IP address or specific identifier is the functional equivalent of location data and is included in its

definition herein. The invention provides for intervening transmission and/or conversion of forms of location data of the environmental controller until the location data reaches a desired remote device.

As contrasted to the form of the location data, the present embodiments include several ways to make use of location data in a response by a remote device or remote correspondent. For example, it is well known that Internet web sites make certain information and/or algorithms available for use by the user linking to that web site, either for free or at a cost to the user. Automated means are preferred for linking the environmental controller to the web site and causing the web site to respond to the location data.

In one such form, an environmental controller links to a web site and transmits location data and an access code. The access code is appropriately received by the web site and identifies the user as one authorized to have transmitted to it information or algorithm results from the web site. The access code may be structured so that location data is a substantial part of that access code, i.e., the access code is the phone number of the physical location of the environmental controller. The access code may be evaluated by the server for the web site to determine if a previously approved access code is still valid, i.e., whether the user has paid their last bill for access to the web site. In a specific example of this type of response, a user of the invention environmental controller pays the operator of a web site with weather data for a period of access. The user is either issued an access code by the web site operator to be input into the environmental controller or the access code is some code specific to the environmental controller, such as the location code, and is accepted by the web site operator. An access code may include credit card numbers for instant acceptance and debiting at linking to the web site.

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

WHAT IS CLAIMED IS:

- 1 1. A location response system with an environmental controller located at a single
2 physical location adapted to be an integral part of a system of environmental sensing or
3 control for a local and substantially enclosed space comprising:
4 A) a physical ^{e.g. ZIP CODE} location of the environmental controller stored as location data in
5 storage means in the controller;
6 B) ^{e.g. modem} transmitter means connected to the controller adapted to transmit location data
7 to a remote device physically remote from the controller, so that a location
8 response is induced at the remote device. ^{RC 2, 9 website with weather info}
- 1 2. The system of Claim 1 in which said transmitter means includes a modem and the
2 remote device is a computer network server.
- 1 3. The system of Claim 1 in which said location data includes one or more of the group
2 consisting of a local telephone number or portion thereof, a local zip or postal code, and
3 local latitude and longitude of the physical location of the controller or systems correlated
4 thereto.
- 1 4. The system of Claim 1 in which the controller comprises control means which acts on
2 a response of location data for thermostatic functions including structure needed to turn
3 HVAC functions on or off or change operation thereof, impose control setpoints or other
4 control parameters, turn lighting on or off, or those functions accomplished locally or
5 wirelessly by a system of thermostatic control among distributed components.
- 1 5. The system of Claim 1 in which the controller comprises means [?] for input of location
2 data by a user at the physical location.
- 1 6. The system of Claim 1 in which location response is storage of the location data at the
2 remote device. [?]

1 7. The system of Claim 1 in which location response is storage of the location data at the
2 remote device and correlation of the physical location to location response data stored at
3 or available to the remote device or created by processing of location data at the remote
4 device.

1 8. The system of Claim 1 in which location response is storage of the location data at the
2 remote device and correlation of the physical location to location response data stored at
3 or available to the remote device or created by processing of location data at the remote
4 device, whereafter location response data is transmitted from the remote device to the
5 controller.

1 9. The system of Claim 8 in which location response data is stored in the controller
2 storage means.

1 10. The system of Claim 9 in which stored location response data is displayed on a
2 display screen at the controller.

1 11. The system of Claim 9 in which the controller comprises control means for
2 thermostatic functions including structure needed to turn HVAC functions on or off or
3 change operation thereof, impose control setpoints or other control parameters, turn
4 lighting on or off, sense and respond to environmental gases or smoke, or those functions
5 accomplished locally or wirelessly by a system of thermostatic control among distributed
6 components, and the storage means comprise control data for operation of control means
7 and comparison means for comparison of control data to location response data and
8 change of at least some control data in response to that comparison.

1 12. The system of Claim 11 in which control data comprises temperature control
2 setpoints for thermostatic control of the system and comparison means comprises means
3 for changing one or more of the temperature control setpoints.

1 13. The system of Claim 11 in which control data comprises sunrise or sunset data for
 2 the physical location for control of local lighting and comparison means comprises means
 3 for changing one or more of the parameters for turning local lighting on or off.

1

1 ABSTRACT OF THE DISCLOSURE

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



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: THERMOSTAT SYSTEM WITH
LOCATION DATA -

Inventor(s): Howard Rosen -

Serial No.:

Filing Date:

Group No.:

Examiner:

Attorney Docket No.: 0208.2A4

DECLARATION /
POWER OF ATTORNEY

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

1. My residence and citizenship are as stated by my name.

Full Name of Inventor:		Citizenship:
#1 Howard Rosen -	Address #1: 5756 Royalmount Avenue, Montreal, Quebec, H4P 1K5 Canada -	USA

I (we) further declare that:

2. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention identified above and is attached hereto.
3. I have reviewed and understand the contents of the above identified specification, claims, drawings and abstract and acknowledge my duty to disclose information which is material to the examination of this application in accordance with Title 37 Code of Federal Regulations §1.56.
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.

Inventor Name:	Signature of Inventor:	Date:
#1 Howard Rosen -		



1003 EXHIBIT 1003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: THERMOSTAT SYSTEM WITH
LOCATION DATA -

Inventor(s): Howard Rosen -

Assignee(s):

Serial No.:

Filing Date:

Group No.:

Examiner:

Attorney Docket No.: 0208.2A4 -

**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

PATENT APPLICATION SERIAL NO. _____

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

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(5/87)

*U.S. Government Printing Office: 2001 — 481-697/59173

LENNOX EXHIBIT 1003

PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2001

Application or Docket Number

10287677

CLAIMS AS FILED - PART I

(Column 1)

(Column 2)

TOTAL CLAIMS	13	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	13 minus 20 = *	
INDEPENDENT CLAIMS	1 minus 3 = *	
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

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

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	370	OR	TOTAL	

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	*	Minus	**
	Independent	*	Minus	***
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

SMALL ENTITY
OROTHER THAN
SMALL ENTITY

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

(Column 1)

(Column 2)

(Column 3)

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

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

(Column 1)

(Column 2)

(Column 3)

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

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

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

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

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

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



#2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title: THERMOSTAT SYSTEM WITH
LOCATION DATA -

Inventor(s): Howard Rosen -

Assignee(s):

Serial No.:

Filing Date:

Group No.:

Examiner:

Attorney Docket No.: 0208.2A4 -

INFORMATION DISCLOSURE
STATEMENT - REMARKS



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