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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/801,773	09/24/2013	8542111	3781/1010	7047

2101 7590 09/04/2013

Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

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

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

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Eveline Wesby-van Swaay, Stratford-upon-Avon, UNITED KINGDOM;
M2M SOLUTIONS LLC, Stratford-upon-Avon, UNITED KINGDOM

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/801,773	03/13/2013	Eveline Wesby-van Swaay	3781/1010	7047

2101 7590 08/14/2013

Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

EXAMINER	
NGUYEN, NAM V	

ART UNIT	PAPER NUMBER
2682	

NOTIFICATION DATE	DELIVERY MODE
08/14/2013	ELECTRONIC

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

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptomail@sunsteinlaw.com

Supplemental Notice of Allowability	Application No. 13/801,773	Applicant(s) WESBY-VAN SWAAY, EVELINE	
	Examiner NAM V. NGUYEN	Art Unit 2682	AIA (First Inventor to File) Status No

-- 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 *7/12/13*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *21-50*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   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. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 7/12/13
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/NAM V NGUYEN/
Primary Examiner, Art Unit 2682

Practitioner's Docket No. 3781/1010 *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Eveline Wesby-van Swaay

Application No.:	13/801,773	Art Unit/Group No.:	2682
Filing Date:	March 13, 2013	Examiner:	Nguyen, Nam V.
		Conf. No.:	7047

For: PROGRAMMABLE COMMUNICATOR

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

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

List of Sections Forming Part of This Supplemental Information Disclosure Statement

The following sections are being submitted for this Supplemental Information Disclosure Statement:

1. [x] Preliminary Statements
2. [x] Forms PTO/SB/08A and 08B (substitute for Form PTO-1449)
3. [ ] Statement as to Information Not Found in Patents or Publications
4. [ ] Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted
5. [ ] Cumulative Patents or Publications
6. [x] Copies of Listed Information Items Accompanying This Statement
7. [ ] Concise Explanation of Non-English Language Listed Information Items
   - 7A. [ ] EPO Search Report
   - 7B. [ ] English Language Version of EPO Search Report
8. [ ] Translation(s) of Non-English Language Documents
9. [ ] Concise Explanation of English Language Listed Information Items (Optional)
10. [x] Identification of Person(s) Making This Supplemental Information Disclosure Statement

Section 1. Preliminary Statements

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

The filing of this supplemental information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this supplemental information disclosure statement shall not be construed as an admission against interest in any manner. *Notice of January 9, 1992, 1135 O.G. 13-25, at 25.*

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Eveline Wesby-van Swaay	Attorney Docket:	3781/1010
Serial No:	13/801,773	Art Unit/Group No.:	2682
Filing Date:	March 13, 2013	Examiner Name:	Nguyen, Nam V.
		Conf. No.:	7047
Invention:	PROGRAMMABLE COMMUNICATOR		

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

OTHER DOCUMENTS			
Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
/N.N./	**HN**	U.S.D.C. for the District of Delaware	Defendant's Answering Brief, 39 pages (served on June 21, 2013)

Examiner Signature: /Nam Nguyen/

Date Considered: 08/08/2013

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

Section 6. Copies of Listed Information Items Accompanying This Statement

Legible copies of all items listed in Forms PTO/SB/08A and 08B (substitute for Form PTO-1449) accompany this information statement.

[x] Exception(s) to above:

U.S. patent citations are not included pursuant to the United States Patent and Trademark Office's September 21, 2004 waiver of the copy requirement in 37 CFR 1.98 for cited pending U.S. patent citations when the patent citations are available in the USPTO's IFW system.

[ ] Items in prior application, from which an earlier filing date is claimed for this application, as identified in Section 4.

[ ] Cumulative patents or publications identified in Section 5.

Section 10. Identification of Person Making This Supplemental Information Disclosure Statement

The person making this certification is the practitioner of record.

Dated: July 12, 2013

/Jonathan C. Lovely, #60,821/
SIGNATURE OF PRACTITIONER

Reg. No. 60,821

Jonathan C. Lovely
(type or print name of practitioner)

Tel. No.: (617) 443-9292

Sunstein Kann Murphy & Timbers LLP
125 Summer Street, 11th Floor
Firm/Street Address

Customer No.: 002101

Boston, MA 02110-1618
City/State/Zip Code

03781/01010 1922781.1

Practitioner's Docket No. 3781/1010 ***PATENT***

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Eveline Wesby-van Swaay

Application No.:	13/801,773	Art Unit/Group No.:	2682
Filing Date:	March 13, 2013	Examiner:	Nguyen, Nam V.
		Conf. No.:	7047

For: PROGRAMMABLE COMMUNICATOR

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

STATEMENT FOR INFORMATION DISCLOSURE UNDER 37 C.F.R. SECTION 1.97(e)

NOTE: A statement must state either: "(1) that each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement, or (2) that no item of information contained in the information disclosure statement was cited in any communication from a foreign patent office in a counterpart foreign application and to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in Section 1.56(c) more than three months prior to the filing of the information disclosure statement." 37 C.F.R. Section 1.97(e).

NOTE: "Section 1.97(e) makes it clear that a certification could contain either of two statements. One statement is that each item of information in an information disclosure statement was cited in a search report from a patent office outside the U.S. not more than three months prior to the filing date of the statement. Under this certification, it would not matter whether any individual with a duty actually knew about any of the information cited before receiving the search report. In the alternative, the certification could state that no item of information contained in the information disclosure statement was cited in any communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual having a duty to disclose more than three months prior to the filing of the statement." Notice of January 9, 1992, 1135 O.G. 13-25, at 13. (emphasis added). Thus: "If an item of information is submitted within three months of being cited in any communication from a foreign patent office in a counterpart foreign application, the certification can be properly made regardless of any individual's previous knowledge of the information." Id., 1135 O.G. at 19.

NOTE: "The certification can be based on present, good faith knowledge about when information became known without a search of files being made." Thus, for example, the certification of Section 1.97(e) does not preclude the use of the certification in an application by corporations whose practitioners have over the years reviewed thousands of patents and technical publications, even though they are unaware of the relevance of any one thereof to the application. Notice of January 9, 1992, 1135 O.G. 13-15, at 19.

NOTE: A copy of the foreign search report need not be submitted with the certification. Notice of April 20, 1992 (1138 O.G. 37-41, 40).

NOTE: "The phrase 'after making reasonable inquiry' makes it clear that the individual making the certification has a duty to make reasonable inquiry regarding the facts that are being certified. The certification can be made by a registered practitioner who represents a foreign client and who relies on statements made by the foreign client as to the date the information first became known. A registered practitioner who receives information from a client without being informed whether the information was known for more than three months, however, cannot make the certification without making reasonable inquiry. For example, if an inventor gave a publication to the attorney prosecuting an application with the intent that it be cited to the Office, the attorney should inquire as to when that inventor became aware of the publication and should not submit a certification under 37 C.F.R. 1.97(e)(2) to the Office until a satisfactory response is received. The certification can be based on present, good faith knowledge about when information became known without a search of files being made." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

NOTE: "Although it is recognized that an individual actually becomes aware of the information in the communication from a foreign patent office sometime after it was mailed, the mailing date of such a communication, if it occurs prior to a first awareness of the same information, would determine the date for filing of an information disclosure statement without a fee" in a certification procedure under Section 1.97(e). Notice of January 9, 1992, 1135 O.G. 13-25, at 19 (emphasis added).

NOTE: The mere absence of an item of information for a foreign patent office communication is not intended to represent an opportunity to delay the submission of a item known more than three months prior to the filing of an information disclosure statement to an individual having the duty of disclosure under Section 1.56. 62 Fed. Reg. 53,131, 53,150 (Oct. 10, 1997).

NOTE: "The certification under Section 1.97(e) should be made by a person who has knowledge of the facts being certified. The certification can be made by a practitioner who represents a foreign client and who relies on statements made by the foreign client as to the date the information first became known. A practitioner who receives information from a client without being informed whether the information was known for more than three months, however, cannot make the certification without making reasonable inquiry." Notice of January 9, 1992, 1135 O.G. 13-25 at 19.

NOTE: "The term counterpart foreign patent application means that a claim for priority has been made in either the U.S. application or a foreign application based on the other, or that the disclosures of the U.S. and foreign patent applications are substantively identical (e.g., an application filed in the European Patent Office claiming the same U.K. priority as claimed in the U.S. application)." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

NOTE: "Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent or inventor." 37 C.F.R. Section 1.56(d) and

"Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:
(1) each inventor named in the application:
(2) each attorney or agent who prepares or prosecutes the application; and
(3) every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application." 37 C.F.R. Section 1.56(c).

IDENTIFICATION OF INFORMATION DISCLOSURE STATEMENT FOR WHICH THIS STATEMENT IS BEING MADE

1. This statement is being made for the Information Disclosure Statement
   [x] accompanying this statement.
   [ ] filed _____.
   Date

STATEMENT

2. I, the person(s) signing below state:

[ ] that each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. 37 C.F.R. Section 1.97(e)(1).

NOTE: The three month period starts from the mailing date of the foreign patent office communication. Notice of January 9, 1992, 1135 O.G. 13-25 at 19. The mailing date is the "date on the communication by the foreign patent office." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

OR

[x] that no item of information contained in the information disclosure statement was cited in any communication from a foreign patent office in a counterpart foreign application and to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in Section 1.56(c) more than three months prior to the filing of the information disclosure statement. 37 C.F.R. Section 1.97(e)(2).

NOTE: "The time at which information 'was known to any individual designated in 37 C.F.R. 1.56(c)' is the time when the information was discovered in association with the application even if awareness of the materiality came later." Notice of April 20, 1992 (1138 O.G. 37-41, 40).

IDENTIFICATION OF PERSON(S) MAKING THIS STATEMENT

3. The person making this statement is

(check each applicable item)

(a) [ ] the inventor(s) who signs below

_____

SIGNATURE OF INVENTOR

_____

(type name of inventor who is signing)

(b) [ ] a person who is substantively involved in the preparation or prosecution of the application, and who is associated with the inventor, with the assignee, or with anyone to whom there is an obligation to assign the application (37 C.F.R. Section 1.56(c)) and who signs below.

SIGNATURE OF PERSON MAKING STATEMENT

(type name of person who is signing)

Address of person who is signing

(c) [x] the practitioner who signs below on the basis of the information:

(check each applicable item)

[ ] supplied by the inventor(s).
[ ] supplied by an individual designated in Section 1.56(c).
[x] in the practitioner's file.

/Jonathan C. Lovely, #60,821/
SIGNATURE OF PRACTITIONER

Reg. No. 60,821

Jonathan C. Lovely
(type or print name of practitioner)

Tel. No. (617) 443-9292

125 Summer Street, 11th Floor
Firm/Address

Customer No.: 002101

Boston, MA 02110-1618
Address

03781/01010 1922800.1

Practitioner's Docket No. 3781/1010 *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Wesby-van Swaay
Application No.: 13/801,773 Group No.: 2682
Filed: March 13, 2013 Examiner: Nam V. Nguyen
For: Programmable Communicator

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF PAYMENT OF ISSUE FEE (37 C.F.R. § 1.311)

1. Applicant hereby pays the issue fee for the attached Issue Fee Transmittal PTOL-85.

2. Applicant

A. Asserted small entity status in this application on March 13, 2013 by submission of a written assertion of small entity status (37 C.F.R. § 1.27(c)(1)

It is confirmed that small entity status for this application has been checked and it is still in effect and is being asserted.

3. Fee (Issue):

Application status is a small entity with a utility fee of $890.00.

4. Fees (Publication)

The publication fee has already been paid on March 13, 2013.

5. Total Fees Due

The total amount of fee due is:

issue fee		$890.00
TOTAL FEE(S) DUE	$890.00	

6. Assignee's Name and Address To Be Printed On Patent is as follows (37 C.F.R. § 3.81):

Name of Assignee:	M2M Solutions LLC
Address:	Camden House, School Lane
Residence (City and State or Country):	Tiddington, Stratford-upon-Avon, United Kingdom

Assignee category or categories (not printed on patent): Corporation or other private group entity

7. Payment of total fee due:

Authorization is hereby made to charge the amount of $890.00 to Deposit Account No. 19-4972.

Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

Date: August 14, 2013

/Jonathan C. Lovely, #60,821/
Jonathan C. Lovely
Registration No. 60,821
Sunstein Kann Murphy & Timbers LLP
125 Summer Street
Boston, MA 02110-1618
617-443-9292
Customer No. 02101

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

2101 7590 06/14/2013
Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

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

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/801,773	03/13/2013	Eveline Wesby van-Swaay	3781/1010	7047

TITLE OF INVENTION: Programmable Communicator

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$890	$0	$0	$890	09/16/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, NAM V	2682	340-539120

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

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

1 Sunstein Kann Murphy & Timbers LLP
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: M2M Solutions LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Tiddington, Stratford-upon-Avon, United Kingdom

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 19-4972 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29	NOTE: Absent a valid certification of Micro Entity Status (see form PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
❑ Applicant asserting small entity status. See 37 CFR 1.27	NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
❑ Applicant changing to regular undiscounted fee status.	NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature /Jonathan C. Lovely, #60,821/ Date August 14, 2013

Typed or printed name Jonathan C. Lovely Registration No. 60,821

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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.

Electronic Patent Application Fee Transmittal

Application Number:	13801773
Filing Date:	13-Mar-2013
Title of Invention:	Programmable Communicator
First Named Inventor/Applicant Name:	Eveline Wesby-van Swaay
Filer:	Jonathan Lovely
Attorney Docket Number:	3781/1010

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	2501	1	890	890
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**890**

Electronic Acknowledgement Receipt

EFS ID:	16589349
Application Number:	13801773
International Application Number:	
Confirmation Number:	7047
Title of Invention:	Programmable Communicator
First Named Inventor/Applicant Name:	Eveline Wesby-van Swaay
Customer Number:	2101
Filer:	Jonathan Lovely
Filer Authorized By:	
Attorney Docket Number:	3781/1010
Receipt Date:	14-AUG-2013
Filing Date:	13-MAR-2013
Time Stamp:	16:18:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$890
RAM confirmation Number	3384
Deposit Account	194972
Authorized User	

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

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

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

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

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

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	ram3781_1010_IssueFeePayment.pdf	238143 d06a77b08b02c0c98ae104a410be1d07a82f682a	no	4
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	29994 442a92b5c29bf80e89c33521cc156aa7e01defb1	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	268137		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

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
13/801,773	03/13/2013	Eveline Wesby-van Swaay	3781/1010

CONFIRMATION NO. 7047

2101
Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

PUBLICATION NOTICE

OC000000062967896

Title: Programmable Communicator

Publication No.US-2013-0196633-A1
Publication Date:08/01/2013

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/801,773	03/13/2013	2682	1233	3781/1010	20	1

CONFIRMATION NO. 7047

CORRECTED FILING RECEIPT

2101
Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

OC000000062610207

Date Mailed: 07/19/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Eveline Wesby-van Swaay, Stratford-upon-Avon, UNITED KINGDOM;

Applicant(s)

M2M SOLUTIONS LLC, Stratford-upon-Avon, UNITED KINGDOM

Assignment For Published Patent Application

M2M SOLUTIONS LLC, Stratford-upon-Avon, UNITED KINGDOM

Power of Attorney: The patent practitioners associated with Customer Number 02101

Domestic Priority data as claimed by applicant

This application is a CON of 13/328,095 12/16/2011
which is a CON of 12/538,603 08/10/2009 PAT 8094010
which is a CON of 11/329,212 01/10/2006 PAT 7583197
which is a CON of 10/296,571 01/21/2003 ABN
which is a 371 of PCT/EP01/05738 05/18/2001

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
FINLAND 20001239 05/23/2000 No Access Code Provided

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 04/16/2013
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/801,773**

Projected Publication Date: 08/01/2013

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****
Title

Programmable Communicator

Preliminary Class

340

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

Practitioner's Docket No. 3781/1010 *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Eveline Wesby-van Swaay

Application No.:	13/801,773	Art Unit/Group No.:	2682
Filing Date:	March 13, 2013	Examiner:	Nguyen, Nam V.
		Conf. No.:	7047

For: PROGRAMMABLE COMMUNICATOR

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

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

List of Sections Forming Part of This Supplemental Information Disclosure Statement

The following sections are being submitted for this Supplemental Information Disclosure Statement:

1. [x] Preliminary Statements
2. [x] Forms PTO/SB/08A and 08B (substitute for Form PTO-1449)
3. [ ] Statement as to Information Not Found in Patents or Publications
4. [ ] Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted
5. [ ] Cumulative Patents or Publications
6. [x] Copies of Listed Information Items Accompanying This Statement
7. [ ] Concise Explanation of Non-English Language Listed Information Items
   - 7A. [ ] EPO Search Report
   - 7B. [ ] English Language Version of EPO Search Report
8. [ ] Translation(s) of Non-English Language Documents
9. [ ] Concise Explanation of English Language Listed Information Items (Optional)
10. [x] Identification of Person(s) Making This Supplemental Information Disclosure Statement

Section 1. Preliminary Statements

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

The filing of this supplemental information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this supplemental information disclosure statement shall not be construed as an admission against interest in any manner. *Notice of January 9, 1992, 1135 O.G. 13-25, at 25.*

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Eveline Wesby-van Swaay	Attorney Docket:	3781/1010
Serial No:	13/801,773	Art Unit/Group No.:	2682
Filing Date:	March 13, 2013	Examiner Name:	Nguyen, Nam V.
		Conf. No.:	7047
Invention:	PROGRAMMABLE COMMUNICATOR		

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

OTHER DOCUMENTS			
Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
	HN	U.S.D.C. for the District of Delaware	Defendant's Answering Brief, 39 pages (served on June 21, 2013)

Examiner Signature: _____

Date Considered: _____

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

Section 6. Copies of Listed Information Items Accompanying This Statement

Legible copies of all items listed in Forms PTO/SB/08A and 08B (substitute for Form PTO-1449) accompany this information statement.

[x] Exception(s) to above:

U.S. patent citations are not included pursuant to the United States Patent and Trademark Office's September 21, 2004 waiver of the copy requirement in 37 CFR 1.98 for cited pending U.S. patent citations when the patent citations are available in the USPTO's IFW system.

[ ] Items in prior application, from which an earlier filing date is claimed for this application, as identified in Section 4.

[ ] Cumulative patents or publications identified in Section 5.

Section 10. Identification of Person Making This Supplemental Information Disclosure Statement

The person making this certification is the practitioner of record.

Dated: July 12, 2013

/Jonathan C. Lovely, #60,821/
SIGNATURE OF PRACTITIONER

Reg. No. 60,821

Jonathan C. Lovely
(type or print name of practitioner)

Tel. No.: (617) 443-9292

Sunstein Kann Murphy & Timbers LLP
125 Summer Street, 11th Floor
Firm/Street Address

Customer No.: 002101

Boston, MA 02110-1618
City/State/Zip Code

03781/01010 1922781.1

Practitioner's Docket No. 3781/1010 ***PATENT***

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Eveline Wesby-van Swaay

Application No.:	13/801,773	Art Unit/Group No.:	2682
Filing Date:	March 13, 2013	Examiner:	Nguyen, Nam V.
		Conf. No.:	7047

For: PROGRAMMABLE COMMUNICATOR

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

STATEMENT FOR INFORMATION DISCLOSURE UNDER 37 C.F.R. SECTION 1.97(e)

NOTE: A statement must state either: "(1) that each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement, or (2) that no item of information contained in the information disclosure statement was cited in any communication from a foreign patent office in a counterpart foreign application and to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in Section 1.56(c) more than three months prior to the filing of the information disclosure statement." 37 C.F.R. Section 1.97(e).

NOTE: "Section 1.97(e) makes it clear that a certification could contain either of two statements. One statement is that each item of information in an information disclosure statement was cited in a search report from a patent office outside the U.S. not more than three months prior to the filing date of the statement. Under this certification, it would not matter whether any individual with a duty actually knew about any of the information cited before receiving the search report. In the alternative, the certification could state that no item of information contained in the information disclosure statement was cited in any communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual having a duty to disclose more than three months prior to the filing of the statement." Notice of January 9, 1992, 1135 O.G. 13-25, at 13. (emphasis added). Thus: "If an item of information is submitted within three months of being cited in any communication from a foreign patent office in a counterpart foreign application, the certification can be properly made regardless of any individual's previous knowledge of the information." Id., 1135 O.G. at 19.

NOTE: "The certification can be based on present, good faith knowledge about when information became known without a search of files being made." Thus, for example, the certification of Section 1.97(e) does not preclude the use of the certification in an application by corporations whose practitioners have over the years reviewed thousands of patents and technical publications, even though they are unaware of the relevance of any one thereof to the application. Notice of January 9, 1992, 1135 O.G. 13-15, at 19.

NOTE: A copy of the foreign search report need not be submitted with the certification. Notice of April 20, 1992 (1138 O.G. 37-41, 40).

NOTE: "The phrase 'after making reasonable inquiry' makes it clear that the individual making the certification has a duty to make reasonable inquiry regarding the facts that are being certified. The certification can be made by a registered practitioner who represents a foreign client and who relies on statements made by the foreign client as to the date the information first became known. A registered practitioner who receives information from a client without being informed whether the information was known for more than three months, however, cannot make the certification without making reasonable inquiry. For example, if an inventor gave a publication to the attorney prosecuting an application with the intent that it be cited to the Office, the attorney should inquire as to when that inventor became aware of the publication and should not submit a certification under 37 C.F.R. 1.97(e)(2) to the Office until a satisfactory response is received. The certification can be based on present, good faith knowledge about when information became known without a search of files being made." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

NOTE: "Although it is recognized that an individual actually becomes aware of the information in the communication from a foreign patent office sometime after it was mailed, the mailing date of such a communication, if it occurs prior to a first awareness of the same information, would determine the date for filing of an information disclosure statement without a fee" in a certification procedure under Section 1.97(e). Notice of January 9, 1992, 1135 O.G. 13-25, at 19 (emphasis added).

NOTE: The mere absence of an item of information for a foreign patent office communication is not intended to represent an opportunity to delay the submission of a item known more than three months prior to the filing of an information disclosure statement to an individual having the duty of disclosure under Section 1.56. 62 Fed. Reg. 53,131, 53,150 (Oct. 10, 1997).

NOTE: "The certification under Section 1.97(e) should be made by a person who has knowledge of the facts being certified. The certification can be made by a practitioner who represents a foreign client and who relies on statements made by the foreign client as to the date the information first became known. A practitioner who receives information from a client without being informed whether the information was known for more than three months, however, cannot make the certification without making reasonable inquiry." Notice of January 9, 1992, 1135 O.G. 13-25 at 19.

NOTE: "The term counterpart foreign patent application means that a claim for priority has been made in either the U.S. application or a foreign application based on the other, or that the disclosures of the U.S. and foreign patent applications are substantively identical (e.g., an application filed in the European Patent Office claiming the same U.K. priority as claimed in the U.S. application)." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

NOTE: "Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent or inventor." 37 C.F.R. Section 1.56(d) and

"Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:
(1) each inventor named in the application:
(2) each attorney or agent who prepares or prosecutes the application; and
(3) every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application." 37 C.F.R. Section 1.56(c).

IDENTIFICATION OF INFORMATION DISCLOSURE STATEMENT FOR WHICH THIS STATEMENT IS BEING MADE

1. This statement is being made for the Information Disclosure Statement
   [x] accompanying this statement.
   [ ] filed _____.
   Date

STATEMENT

2. I, the person(s) signing below state:

[ ] that each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. 37 C.F.R. Section 1.97(e)(1).

NOTE: The three month period starts from the mailing date of the foreign patent office communication. Notice of January 9, 1992, 1135 O.G. 13-25 at 19. The mailing date is the "date on the communication by the foreign patent office." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

OR

[x] that no item of information contained in the information disclosure statement was cited in any communication from a foreign patent office in a counterpart foreign application and to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in Section 1.56(c) more than three months prior to the filing of the information disclosure statement. 37 C.F.R. Section 1.97(e)(2).

NOTE: "The time at which information 'was known to any individual designated in 37 C.F.R. 1.56(c)' is the time when the information was discovered in association with the application even if awareness of the materiality came later." Notice of April 20, 1992 (1138 O.G. 37-41, 40).

IDENTIFICATION OF PERSON(S) MAKING THIS STATEMENT

3. The person making this statement is

(check each applicable item)

(a) [ ] the inventor(s) who signs below

_____

SIGNATURE OF INVENTOR

_____

(type name of inventor who is signing)

(b) [ ] a person who is substantively involved in the preparation or prosecution of the application, and who is associated with the inventor, with the assignee, or with anyone to whom there is an obligation to assign the application (37 C.F.R. Section 1.56(c)) and who signs below.

SIGNATURE OF PERSON MAKING STATEMENT

(type name of person who is signing)

Address of person who is signing

(c) [x] the practitioner who signs below on the basis of the information:

(check each applicable item)

[ ] supplied by the inventor(s).
[ ] supplied by an individual designated in Section 1.56(c).
[x] in the practitioner's file.

/Jonathan C. Lovely, #60,821/
SIGNATURE OF PRACTITIONER

Reg. No. 60,821

Jonathan C. Lovely
(type or print name of practitioner)

Tel. No. (617) 443-9292

125 Summer Street, 11th Floor
Firm/Address

Customer No.: 002101

Boston, MA 02110-1618
Address

03781/01010 1922800.1

Electronic Patent Application Fee Transmittal

Application Number:	13801773
Filing Date:	13-Mar-2013
Title of Invention:	Programmable Communicator
First Named Inventor/Applicant Name:	Eveline Wesby van-Swaay
Filer:	Jonathan Lovely
Attorney Docket Number:	3781/1010

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	2806	1	90	90
		Total in USD ($)		**90**

Electronic Acknowledgement Receipt

EFS ID:	16303209
Application Number:	13801773
International Application Number:	
Confirmation Number:	7047
Title of Invention:	Programmable Communicator
First Named Inventor/Applicant Name:	Eveline Wesby van-Swaay
Customer Number:	2101
Filer:	Jonathan Lovely
Filer Authorized By:	
Attorney Docket Number:	3781/1010
Receipt Date:	12-JUL-2013
Filing Date:	13-MAR-2013
Time Stamp:	15:42:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$90
RAM confirmation Number	2401
Deposit Account	194972
Authorized User	

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

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

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

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

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

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Supplemental_Information_Disclosure_Statement.pdf	158378 1d93dfdd6d2eb0d9f296dc1f955c8950b380b739	yes	11
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Transmittal Letter		1	2	
	Information Disclosure Statement (IDS) Form (SB08)		3	11	
Warnings:					
Information:					
2	Other Reference-Patent/App/Search documents	Ref_HN.pdf	584757 25c6c89cda7f7b087ca7b2fb0c96f50aacb09b78	no	39
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	29805 7c8b40a51a9a14312789fc662639b560d2b63039	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	772940		

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

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

<u>New International Application Filed with the USPTO as a Receiving Office</u>
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Practitioner's Docket No. 3781/1010 *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Eveline Wesby-van Swaay

Application No.:	13/801,773	Art Unit/Group No.:	2682
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For: PROGRAMMABLE COMMUNICATOR

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

TRANSMITTAL OF SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT AFTER MAILING DATE OF FINAL ACTION, NOTICE OF ALLOWANCE OR ACTION THAT CLOSES PROSECUTION BUT BEFORE PAYMENT OF ISSUE FEE (37 C.F.R. § 1.97(d)) TIME OF TRANSMITTAL OF ACCOMPANYING INFORMATION DISCLOSURE STATEMENT

1. The information disclosure statement transmitted herewith is being filed ***after*** a final action under § 1.113, or a notice of allowance under § 1.311, whichever occurs first, but before, or simultaneously with, the payment of the issue fee.

STATEMENT AND FEE

2. In accordance with the requirements of 37 C.F.R. § 1.97(d):

   A. Accompanying this transmittal is a statement, as specified in 37 C.F.R. § 1.97(e).
   B. Applicant submits the fee set forth in § 1.17(p) ($90.00, at the small entity rate)

FEE DUE

3. Fee due (§ 1.17(p)): $90.00

METHOD OF PAYMENT OF FEE

4. Authorization is hereby made to charge the amount of $90.00 to Deposit Account No. 19-4972.

Charge any additional fees required by this paper or credit any overpayment to Deposit Account No. 19-4972.

Date: July 12, 2013

/Jonathan C. Lovely, #60,821/

Jonathan C. Lovely
Registration No. 60,821
SUNSTEIN KANN MURPHY & TIMBERS LLP
Customer Number 02101
125 Summer Street
Boston, MA 02110-1618
UNITED STATES

03781/01010 1922797.1

Practitioner's Docket No. 3781/1010 *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Eveline Wesby-van Swaay

Application No.: 13/801,773
Filed: 03/13/2013
For: Programmable Communicator

Group No.: 2682
Examiner: Nguyen, Nam V.

MAIL STOP MISSING PARTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CORRECTED FILING RECEIPT

1. Attached is a copy of the official filing receipt received from the PTO in the above application for which issuance of a corrected filing receipt is respectfully requested.

2. There is an error with respect to the following, which was incorrectly entered onto the Application Data Sheet at the time of filing.

3. Also attached is a Supplemental Application Data Sheet.

Error in	*Correct data*
1. Inventor's name	1. Wesby-van Swaay, Eveline

Date: July 9, 2013

/Jonathan C. Lovely, #60,821/
Jonathan C. Lovely
Registration No. 60,821
SUNSTEIN KANN MURPHY & TIMBERS LLP
125 Summer Street
Boston, MA 02110-1618
617-443-9292
Customer No. 02101

03781/01010 1920790.1

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	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/801,773	03/13/2013	2642	833	3781/1010	20	1

CONFIRMATION NO. 7047

2101
Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

FILING RECEIPT

OC000000060486354

Date Mailed: 04/22/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Eveline Wesby van-Swaay, Stratford-upon-Avon, UNITED KINGDOM;

Applicant(s)

M2M SOLUTIONS LLC, Stratford-upon-Avon, UNITED KINGDOM

Assignment For Published Patent Application

M2M SOLUTIONS LLC, Stratford-upon-Avon, UNITED KINGDOM

Power of Attorney: The patent practitioners associated with Customer Number 02101

Domestic Priority data as claimed by applicant

This application is a CON of 13/328,095 12/16/2011
which is a CON of 12/538,603 08/10/2009 PAT 8094010
which is a CON of 11/329,212 01/10/2006 PAT 7583197
which is a CON of 10/296,571 01/21/2003 ABN
which is a 371 of PCT/EP01/05738 05/18/2001

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
FINLAND 20001239 05/23/2000 No Access Code Provided

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 04/16/2013
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/801,773**

Projected Publication Date: 08/01/2013

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****
Title

Programmable Communicator

Preliminary Class

455

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

PTO/AIA/14 (08-12)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	3781/1010
	Application Number	
Title of Invention	Programmable Communicator	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Eveline		~~Wesby van Swaay~~ Wesby-van Swaay	

Residence Information (Select One) ○ US Residency ◉ Non US Residency ○ Active US Military Service

City	Stratford-upon-Avon	Country of Residence i	GB

Mailing Address of Inventor:

Address 1	Camden House, School Lane		
Address 2	Tiddington		
City	Stratford-upon-Avon	**State/Province**	
Postal Code	CV37 7AJ	**Country** i	GB

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	02101		
Email Address	patents@sunsteinlaw.com	Add Email	Remove Email

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	3781/1010
	Application Number	
Title of Invention	Programmable Communicator	

Application Information:

Title of the Invention	Programmable Communicator		
Attorney Docket Number	3781/1010	**Small Entity Status Claimed** ☒	
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		**Sub Class (if any)**	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	3	**Suggested Figure for Publication (if any)**	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not 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.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	02101		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13/328095	2011-12-16
Prior Application Status	Patented		Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13/328095	Continuation of	12/538603	2009-08-10	8094010	2012-01-10

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	3781/1010
	Application Number	
Title of Invention	Programmable Communicator	

Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12/538603	Continuation of	11/329212	2006-01-10	7583197	2009-09-01
Prior Application Status	Abandoned			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
11/329212	Continuation of	10/296571	2003-01-21		
Prior Application Status	Expired			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
10/296571	a 371 of international	PCT/EP01/05738	2001-05-18		

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Priority Claimed
20001239	FI	2000-05-23	◉ Yes ○ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Authorization to Permit Access:

☒ Authorization to Permit Access to the Instant Application by the Participating Offices

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

PTO/AIA/14 (08-12)
Approved for use through 01/31/2014. OMB 0651-0032
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 contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	3781/1010
	Application Number	
Title of Invention	Programmable Communicator	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

◉ Assignee	○ Legal Representative under 35 U.S.C. 117	○ Joint Inventor
○ Person to whom the inventor is obligated to assign.	○ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here. ☒

Organization Name	M2M Solutions LLC		
Mailing Address Information:			
Address 1	Camden House, School Lane		
Address 2	Tiddington		
City	Stratford-upon-Avon	**State/Province**	
Country	GB	Postal Code	CV37 7AJ
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Non-Applicant Assignee Information:

Providing assignment information in this section does not subsitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	3781/1010
	Application Number	
Title of Invention	Programmable Communicator	

Assignee 1

Complete this section only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest), as the patent application publication will include the name of the applicant(s).

If the Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country [i]		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications

Signature	/Jonathan C. Lovely, #60,821/			Date (YYYY-MM-DD)	2013-03-13 -07-09
First Name	Jonathan C.	Last Name	Lovely	Registration Number	60821

Additional Signature may be generated within this form by selecting the Add button.

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	16266157
Application Number:	13801773
International Application Number:	
Confirmation Number:	7047
Title of Invention:	Programmable Communicator
First Named Inventor/Applicant Name:	Eveline Wesby van-Swaay
Customer Number:	2101
Filer:	Jonathan Lovely
Filer Authorized By:	
Attorney Docket Number:	3781/1010
Receipt Date:	09-JUL-2013
Filing Date:	13-MAR-2013
Time Stamp:	16:13:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Corrected Filing Receipt	klw3781_1010_ReqCorrFilingRcpt.pdf	109791 e75d4a3c349c9028a672ba0f5886d061d1ff3dfd	no	4

Warnings:	
Information:	

2	Application Data Sheet	klw3781_1010_newADS.pdf	2392414 db98c1bfe4cd425e9e8e7fb20e239e02d3cedd02	no	6

Warnings:	
Information:	
This is not an USPTO supplied ADS fillable form	
Total Files Size (in bytes):	2502205

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	13/801,773	WESBY VAN-SWAAY ET AL.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 6/5/13	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

ANDRE ROBINSON

2 TDS WERE APPRVD.

U.S. Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

2101 7590 06/14/2013
Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

EXAMINER
NGUYEN, NAM V

ART UNIT	PAPER NUMBER
2682	

DATE MAILED: 06/14/2013

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/801,773	03/13/2013	Eveline Wesby van-Swaay	3781/1010	7047

TITLE OF INVENTION: Programmable Communicator

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$890	$0	$0	$890	09/16/2013

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

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

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

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

2101 7590 06/14/2013
Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

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

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/801,773	03/13/2013	Eveline Wesby van-Swaay	3781/1010	7047

TITLE OF INVENTION: Programmable Communicator

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$890	$0	$0	$890	09/16/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, NAM V	2682	340-539120

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

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

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29	NOTE: Absent a valid certification of Micro Entity Status (see form PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
❑ Applicant asserting small entity status. See 37 CFR 1.27	NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
❑ Applicant changing to regular undiscounted fee status.	NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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.

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/801,773	03/13/2013	Eveline Wesby van-Swaay	3781/1010	7047

2101 7590 06/14/2013

Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

EXAMINER	
NGUYEN, NAM V	
ART UNIT	PAPER NUMBER
2682	

DATE MAILED: 06/14/2013

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

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

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

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

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 13/801,773	Applicant(s) WESBY VAN-SWAAY ET AL.	
	Examiner NAM V. NGUYEN	Art Unit 2682	AIA (First Inventor to File) Status No

-- 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 *6/5/13*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *21-50*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   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: _____.

   Interim copies:

   a) ☐ All b) ☐ Some c) ☐ None of the: Interim copies of the priority documents have been 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. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☒ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/NAM V NGUYEN/
Primary Examiner, Art Unit 2682

Allowable Subject Matter

This communication is in response to applicant's amendment which is filed June 5, 2013 in the application of Van Swaay for a "programmable communicator" filed May 10, 2013.

Applicant submits a Terminal Disclaimer to overcome the rejection of the Claims 21-50 Under the Doctrine of Double Patenting. The Terminal Disclaimer is approved. Therefore, examiner withdraws the Double Patenting rejection.

Claims 21-50 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V Nguyen whose telephone number is 571-272-3061. The examiner can normally be reached on Mon-Fri, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Bugg can be reached on 571- 272-2998. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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

/NAM V NGUYEN/
Primary Examiner, Art Unit 2682

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13801773	WESBY VAN-SWAAY ET AL.
	Examiner	Art Unit
	NAM V NGUYEN	2682

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
340	539.12; 573.4; 693.5; 7.29; 7.33; 7.52	6/8/13	NN
455	456; 456.2; 418; 419; 425	6/8/13	NN
379	142; 373; 375	6/8/13	NN

SEARCH NOTES		
Search Notes	Date	Examiner
Search EAST: USPAT; USPUB; EPO; JPO; and Derwent.	6/8/13	NN
Search Terms: authorized list in cellular hone with monitoring device; external device monitoring; monitor central station; monitor module with address; code number/id address and/or number;	6/8/13	NN
Updated from 11/329,212	6/8/13	NN
Updated from 12/538,603	6/8/13	NN
updated from 13/328,095	6/8/13	NN

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
SAME AS	ABOVE	6/8/13	NN

	/N.V.N./ Primary Examiner.Art Unit 2682

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

BIB DATA SHEET

CONFIRMATION NO. 7047

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
13/801,773	03/13/2013 RULE	340	2682	3781/1010

APPLICANTS

Eveline Wesby van-Swaay, Stratford-upon-Avon, UNITED KINGDOM;
M2M SOLUTIONS LLC, Stratford-upon-Avon, UNITED KINGDOM

**** CONTINUING DATA ***************************

This application is a CON of 13/328,095 12/16/2011 Yes /NN/
which is a CON of 12/538,603 08/10/2009 PAT 8094010
which is a CON of 11/329,212 01/10/2006 PAT 7583197
which is a CON of 10/296,571 01/21/2003 ABN
which is a 371 of PCT/EP01/05738 05/18/2001

**** FOREIGN APPLICATIONS *************************** Yes /NN/

FINLAND 20001239 05/23/2000

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
04/16/2013

Foreign Priority claimed	35 USC 119(a-d) conditions met	Verified and Acknowledged	Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
☑ Yes ☐ No	☑ Yes ☐ No	/NAM V NGUYEN/ Examiner's Signature	☐ NN Initials	UNITED KINGDOM	3	20	1

ADDRESS

Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618
UNITED STATES

TITLE

Programmable Communicator

FILING FEE RECEIVED		
1233	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13801773	WESBY VAN-SWAAY ET AL.
	Examiner	Art Unit
	NAM V NGUYEN	2682

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/23/2013	06/08/2013							
	1	-	-							
	2	-	-							
	3	-	-							
	4	-	-							
	5	-	-							
	6	-	-							
	7	-	-							
	8	-	-							
	9	-	-							
	10	-	-							
	11	-	-							
	12	-	-							
	13	-	-							
	14	-	-							
	15	-	-							
	16	-	-							
	17	-	-							
	18	-	-							
	19	-	-							
	20	-	-							
1	21	✓	=							
2	22	✓	=							
3	23	✓	=							
4	24	✓	=							
5	25	✓	=							
6	26	✓	=							
7	27	✓	=							
8	28	✓	=							
9	29	✓	=							
10	30	✓	=							
11	31	✓	=							
12	32	✓	=							
13	33	✓	=							
14	34	✓	=							
15	35	✓	=							
16	36	✓	=							

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13801773	WESBY VAN-SWAAY ET AL.
	Examiner	Art Unit
	NAM V NGUYEN	2682

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/23/2013	06/08/2013							
17	37	✓	=							
18	38	✓	=							
19	39	✓	=							
20	40	✓	=							
21	41	✓	=							
22	42	✓	=							
23	43	✓	=							
24	44	✓	=							
25	45	✓	=							
26	46	✓	=							
27	47	✓	=							
28	48	✓	=							
29	49	✓	=							
30	50	✓	=							

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13801773	WESBY VAN-SWAAY ET AL.
	Examiner	**Art Unit**
	NAM V NGUYEN	2682

CPC		
Symbol	**Type**	**Version**

CPC Combination Sets				
Symbol	**Type**	**Set**	**Ranking**	**Version**

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION												
CLASS	**SUBCLASS**	**CLAIMED**									**NON-CLAIMED**					
340	539.12	G	0	8	B	23 / 00 (2006.01.01)										
CROSS REFERENCE(S)		G	0	8	B	5 / 22 (2006.01.01)										
		H	0	4	Q	1 / 30 (2006.01.01)										
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**															
340	573.4	7.29	7.32	7.52												

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	30	
/NAM V NGUYEN/ Primary Examiner.Art Unit 2682	6/8/13	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13801773	WESBY VAN-SWAAY ET AL.
	Examiner	**Art Unit**
	NAM V NGUYEN	2682

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	30	
/NAM V NGUYEN/ Primary Examiner.Art Unit 2682	6/8/13	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13801773	WESBY VAN-SWAAY ET AL.
	Examiner	**Art Unit**
	NAM V NGUYEN	2682

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17	13	33	29	49								
	2		18	14	34	30	50								
	3		19	15	35										
	4		20	16	36										
	5	1	21	17	37										
	6	2	22	18	38										
	7	3	23	19	39										
	8	4	24	20	40										
	9	5	25	21	41										
	10	6	26	22	42										
	11	7	27	23	43										
	12	8	28	24	44										
	13	9	29	25	45										
	14	10	30	26	46										
	15	11	31	27	47										
	16	12	32	28	48										

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	30	
/NAM V NGUYEN/ Primary Examiner.Art Unit 2682	6/8/13	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

Practitioner's Docket No. 3781/1010 ***PATENT***

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Eveline Wesby-van Swaay

Application No.: 13/801,773
Filed: 03/13/2013
For: Programmable Communicator

Group No.: 2682
Examiner: Nguyen, Nam V.

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

AMENDMENT TRANSMITTAL

1. Transmitted herewith is an amendment for this application. Also attached are two Terminal Disclaimers.

STATUS

2. Applicant is a small entity. A statement was already filed.

EXTENSION OF TERM

3. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply. Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

FEE PAYMENT

4. Authorization is hereby made to charge the amount of $320.00 for two Terminal Disclaimers to Deposit Account No. 19-4972.

Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

FEE DEFICIENCY

5. If an additional extension and/or fee is required, charge Account No. 19-4972.

If an additional fee for claims is required, charge Account No. 19-4972.

Date: June 5, 2013

/Jonathan C. Lovely, #60,821/
Jonathan C. Lovely
Registration No. 60,821
SUNSTEIN KANN MURPHY & TIMBERS LLP
125 Summer Street
Boston, MA 02110-1618
617-443-9292
Customer No. 02101

03781/01010 1901307.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Wesby van-Swaay	Att'y Docket:	3781/1010
Appln. No.:	13/801,773	Filing Date:	March 13, 2013
Customer No.:	02101	Conf. No.:	7047
Examiner:	Nguyen, Nam V.	Art Unit:	2682
Invention:	PROGRAMMABLE COMMUNICATOR		

FILED BY USPTO ELECTRONIC FILING SYSTEM

Mail Stop RESPONSE
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Response

Dear Sir:

Applicants respectfully submit this response to the Office Action dated May 30, 2013 and request that the following remarks be considered.

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

Remarks/Arguments begin on page 8 of this paper.

LISTING OF THE CLAIMS

1 – 20 (Cancelled)

21. (Previously Presented) A programmable communicator device comprising:

a wireless communications circuit for communicating through an antenna over a communications network;

a programmable interface for establishing a communication link with at least one monitored technical device, wherein the programmable interface is programmable by wireless packet switched data messages;

a processing module configured to authenticate one or more wireless transmissions sent from a programming transmitter and received by the programmable communicator device by determining if at least one transmission contains a coded number;

wherein the programmable communicator device is configured to use a memory to store at least one telephone number or IP address included within at least one of the transmissions as one of one or more permitted callers if the processing module authenticates the at least one of the transmissions including the at least one telephone number or IP address and the coded number by determining that the at least one of the transmissions includes the coded number;

wherein the programmable communicator device is configured to use an identity module for storing a unique identifier that is unique to the programmable communicator device;

and wherein the one or more wireless transmissions from the programming transmitter comprises a General Packet Radio Service (GPRS) or other wireless packet switched data message;

and wherein the programmable communicator device is configured to process data received through the programmable interface from the at least one monitored technical device.

22. (Previously Presented) A programmable communicator device according to claim 21,

wherein the processing module is configured to process data received through the programmable interface from the at least one monitored technical device in response to programming instructions received in an incoming wireless packet switched data message.

23. (Previously Presented) A programmable communicator device according to claim 21, wherein the programmable communicator device comprises the identity module.

24. (Previously Presented) A programmable communicator device according to claim 21 wherein the wireless communications circuit is configured to receive wireless transmissions compliant with Bluetooth wireless air interface standards.

25. (Previously Presented) A programmable communicator device according to claim 21 wherein each permitted caller has a corresponding stored telephone number or IP address from which the programmable communicator device is permitted to receive incoming wireless transmissions for processing.

26. (Previously Presented) A programmable communicator device according to claim 21 wherein each permitted caller has a corresponding stored telephone number or IP address to which the wireless communications circuit is permitted to send outgoing wireless transmissions.

27. (Previously Presented) A programmable communicator device according to claim 21 wherein each permitted caller has a corresponding stored telephone number or IP address from which the programmable communicator device is permitted to receive incoming wireless transmissions for processing, and to which the wireless communications circuit is permitted to send outgoing wireless transmissions.

28. (Previously Presented) A programmable communicator device according to claim 21 further configured to request that an at least one monitored technical device send data

through the programmable interface for processing by the programmable communicator device.

29. (Previously Presented) A programmable communicator device according to claim 21 further configured to transmit the processed data to an at least one monitoring device either periodically or in response to a data request initiated by the monitoring device.

30. (Previously Presented) A programmable communicator device according to claim 29, wherein the processing module is configured to cause the processed data to be transmitted to the at least one monitoring device.

31. (Previously Presented) A programmable communicator device according to claim 29 further configured to determine whether the data request initiated by the monitoring device includes a required access code.

32. (Previously Presented) A programmable communicator device according to claim 31, wherein the processing module is configured to determine whether the data request includes the required access code.

33. (Previously Presented) A programmable communicator device according to claim 21 further configured to determine whether the processed received data indicates a change in status of the at least one monitored technical device that crosses a threshold parameter, or that otherwise indicates an alarm condition.

34. (Previously Presented) A programmable communicator device according to claim 33 further configured to send an at least one transmission for alerting an at least one monitoring device of said change in status or other alarm condition.

35. (Previously Presented) A programmable communicator device according to claim 21 further configured to request that an at least one monitored technical device send data

through the programmable interface for receipt by the programmable communicator device.

36. (Previously Presented) A programmable communicator device according to claim 21 further configured to transmit the received data to an at least one monitoring device either periodically or in response to a data request initiated by the monitoring device.

37. (Previously Presented) A programmable communicator device according to claim 36, wherein the processing module is configured to cause the received data to be transmitted to the at least one monitoring device in response to programming instructions received in an incoming wireless packet switched data message.

38. (Previously Presented) A programmable communicator device according to claim 36, wherein the processing module is configured to cause the received data to be transmitted to the at least one monitoring device.

39. (Previously Presented) A programmable communicator device according to claim 21 further configured to transmit the received data to an at least one monitoring device either periodically or in response to a data request initiated by the monitoring device in response to programming instructions received in an incoming wireless packet switched data message.

40. (Previously Presented) A programmable communicator device according to claim 21 configured to process an at least one data monitoring or data collection request contained in an at least one transmission received from an at least one monitoring device.

41. (Previously Presented) A programmable communicator device according to claim 21 further comprising a location processing module configured to determine an at least one location of the programmable communicator device, and wherein the programmable communicator device is configured to respond to an at least one transmission initiated by

an at least one monitoring device requesting that said location data be sent to the monitoring device.

42. (Previously Presented) A programmable communicator device according to claim 21 further comprising a location processing module configured to determine an at least one location of the programmable communicator device, and wherein the programmable communicator device is configured to respond to an at least one transmission initiated by an at least one monitoring device requesting that said location data be sent to the monitoring device in response to programming instructions received in an incoming wireless packet switched data message.

43. (Previously Presented) A programmable communicator device according to claim 42 wherein the location processing module comprises a Global Positioning System (GPS) module.

44. (Previously Presented) A programmable communicator device according to claim 21 wherein the monitored technical device is a sensor device.

45. (Previously Presented) A programmable communicator device according to claim 21 wherein the monitored technical device is a health monitoring system.

46. (Previously Presented) A programmable communicator device according to claim 45 wherein the programmable communicator device is configured to receive data from the health monitoring system through the programmable interface representing at least one of body temperature, blood pressure, periodic or continuous electrocardiogram heart rhythm, blood glucose concentration, blood electrolyte concentration, kidney function, liver function, and labor contractions.

47. (Previously Presented) A programmable communicator device according to claim 46 wherein the programmable communicator device is configured to receive data from the

health monitoring system through the programmable interface in response to programming instructions received in an incoming wireless packet switched data message.

48. (Previously Presented) A programmable communicator device according to claim 21 wherein the monitored technical device is a vending machine.

49. (Previously Presented) A programmable communicator device according to claim 21 wherein the monitored technical device is a home or domestic appliance.

50. (Previously Presented) A programmable communicator device according to claim 21 wherein the monitored technical device is at least one of a door status monitoring device, a window status monitoring device, a proximity detector device, and a fire alarm device.

REMARKS

Applicants would like to thank the examiner for the review of the present application and prior art. Applicants request reconsideration of the pending claims in view of the following remarks. Applicants previously cancelled claims 1-20 and added claims 21-50. Accordingly, claims 21-50 are currently under consideration in this application. No new matter has been added.

Double Patenting

The office action rejects claims 21-50 on the grounds of nonstatutory obviousness-type double patenting. In particular, the office action suggests that claims 21-50 of the present application are unpatentable over claims 1-134 of U.S. Patent No. 7,583,197. The office action also suggests that claims 21-50 of the present application are unpatentable over claims 1-197 of U.S. Patent No. 8,094,010. To expedite prosecution, Applicant submits herewith terminal disclaimers with respect to U.S. Patent Nos. 7,583,197 and 8,094,010.

The office action also provisionally rejects claims 21-50 as being unpatentable over claims 21-51 of copending application no. 13/328,095. Applicants would like to note that Application No. 13/328,095 currently stands rejected and is not expected to issue as a patent before the present application, which is in condition for allowance. Therefore, Applicants do not believe that a terminal disclaimer with respect to U.S. Application No. 13/328,095 is required in the present application.

Accordingly, in view of the above, Applicants believe that the double patenting rejections made within the office action are now moot.

It is believed that the application is in condition for allowance and Applicant respectfully requests that a notice of allowance be issued. Applicant does not believe any extension of time is required. However, if an extension of time is required, please charge the associated fee and any additional fees required by this paper or credit any overpayment to deposit account number 19-4972. Applicant also requests that the

examiner contact applicant's attorney, Jonathan Lovely, if it will assist in processing this application through issuance.

DATE: June 5, 2013

Respectfully submitted,

/Jonathan C. Lovely, #60,821/

Jonathan C. Lovely
Registration No. 60,821
Attorney for Applicant
Sunstein Kann Murphy & Timbers LLP
125 Summer Street
Boston, MA 02110-1618
(617) 443-9292
03781/01010 1900927.1

PTO/SB/26 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional) 3781/1010

In re Application of: Eveline Wesby-van Swaay

Application No.: 13/801,773

Filed: March 13, 2013

For: Programmable Communicator

The owner*, M2M Solutions LLC, of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term **prior patent** No. 7,583,197 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

expires for failure to pay a maintenance fee;
is held unenforceable;
is found invalid by a court of competent jurisdiction;
is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
has all claims canceled by a reexamination certificate;
is reissued; or
is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

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

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 60,821

/Jonathan C. Lovely, #60,821/ — Signature
June 5, 2013 — Date

Jonathan C. Lovely — Typed or printed name

(617) 443-9292 — Telephone Number

☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

PTO/SB/26 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional) 3781/1010

In re Application of: Eveline Wesby-van Swaay

Application No.: 13/801,773

Filed: March 13, 2013

For: Programmable Communicator

The owner*, M2M Solutions LLC, of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term **prior patent** No. 8,094,010 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

expires for failure to pay a maintenance fee;
is held unenforceable;
is found invalid by a court of competent jurisdiction;
is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
has all claims canceled by a reexamination certificate;
is reissued; or
is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

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

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 60,821

/Jonathan C. Lovely, #60,821/ — Signature
June 5, 2013 — Date

Jonathan C. Lovely — Typed or printed name

(617) 443-9292 — Telephone Number

☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	13801773
Filing Date:	13-Mar-2013
Title of Invention:	Programmable Communicator
First Named Inventor/Applicant Name:	Eveline Wesby van-Swaay
Filer:	Jonathan Lovely
Attorney Docket Number:	3781/1010

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Statutory or Terminal Disclaimer	1814	2	160	320
		Total in USD ($)		**320**

Electronic Acknowledgement Receipt

EFS ID:	15954252
Application Number:	13801773
International Application Number:	
Confirmation Number:	7047
Title of Invention:	Programmable Communicator
First Named Inventor/Applicant Name:	Eveline Wesby van-Swaay
Customer Number:	2101
Filer:	Jonathan Lovely
Filer Authorized By:	
Attorney Docket Number:	3781/1010
Receipt Date:	05-JUN-2013
Filing Date:	13-MAR-2013
Time Stamp:	13:37:34
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$320
RAM confirmation Number	11614
Deposit Account	194972
Authorized User	

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

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

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

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

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

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	klw3781_1010_Amendment.pdf	152649 82d4a372b5ee9763a5f799dfb716b11f6bef351d	no	11
Warnings:					
Information:					
2	Statutory disclaimers per MPEP 1490.	klw3781_1010_TermDisclaimer1.pdf	170142 ff1a1782ac810fe38f5fa974129a207b69adbd0e	no	1
Warnings:					
Information:					
3	Statutory disclaimers per MPEP 1490.	klw3781_1010_TermDisclaimer2.pdf	170142 6acf521f0391a79ce257cf7c89f242a06e828ce7	no	1
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	29638 896f4c8a3e1d8a2850fc237522b7bf34d8cc113c	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	522571		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/801,773	Filing Date 03/13/2013	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **06/05/2013**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 30	Minus	** 20	= 10	X $40 =	400
Independent (37 CFR 1.16(h))	* 1	Minus	***3	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	**400**

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

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

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

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

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

LIE
/TAMMY L. ACREE/

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/801,773	03/13/2013	Eveline Wesby van-Swaay	3781/1010	7047

2101 7590 05/30/2013

Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

EXAMINER	
NGUYEN, NAM V	

ART UNIT	PAPER NUMBER
2682	

NOTIFICATION DATE	DELIVERY MODE
05/30/2013	ELECTRONIC

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

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptomail@sunsteinlaw.com

Office Action Summary	Application No. 13/801,773	Applicant(s) WESBY VAN-SWAAY ET AL.	
	Examiner NAM V. NGUYEN	Art Unit 2682	AIA (First Inventor to File) Status No

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *5/10/13*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ 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

5)☒ Claim(s) *21-50* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *21-50* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

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

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *13 March 2013* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

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)).

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

Interim copies:

a)☐ All b)☐ Some c)☐ None of the: Interim copies of the priority documents have been received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/14/13*.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

The application of Van Swaay for a "programmable communicator" filed May 10, 2013 has been examined.

This application claims foreign priority based on the application 20001239 filed May 23, 2000 in Finland. Receipt is acknowledged of papers submitted under 35 U.S.C 119(a) – (d), which papers have been placed of record in the file.

This application is a CON of 13/328,095 filed December 16, 2011, which is a CON of 12,538,603 filed August 10, 2009 which is now US PAT No. 8,094,010, which is a CON of 11/329,212 filed January 10, 2006 which is now US PAT No. 7,583,197, which is a CON of 10/296,571 filed January 21, 2003 which is abandoned, which is a 371 of PCT/EP01/05738 filed May 18, 2001.

A preliminary amendment to the claims 1-20 has been entered and made of record. Claims 1-20 are cancelled. The new set of claims 21-50 are introduced.

Claims 21-50 are now pending.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 21-50 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-134 of U.S. Patent No. 7,583,197. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Referring to independent Claim 21 of the application, the programmable communicator device includes a wireless communications circuit, a programmable interface, a processing module, and a memory module The different is that the independent Claim 21 of the application recites wherein the one or more wireless transmissions from the programming transmitter comprises GPRS or other wireless packet switched data message which would be obvious to one skilled in the art to use for wireless transmissions in the independent claims 1, 29, 40, 68, 79 and 107 of the U.S. Patent No. 7,583,197.

The following claims are patentably similar from each other:

Application	Patent No. 7,583,197
21	1, 29, 40, 68, 79 and 107

2. Claims 21-50 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-197 of U.S. Patent No. 8,094,010. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Referring to independent Claim 21 of the application, the programmable communicator device includes a wireless communications circuit, a programmable interface, a processing module, and a memory module. The different is that the independent Claim 21 of the application use alternative languages for the similar limitations as the independent claims 1, 52, 104 and 151 of the U.S. Patent No. 8,094,010.

The following claims are patentably similar from each other:

Application	Patent No. 8,094,010
21	1, 52, 104 and 151

3. Claims 21-50 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 21-51 of copending Application No

13/328,095. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Referring to independent Claim 21 of the application, the programmable communicator device includes a wireless communications circuit, a programmable interface, a processing module, and a memory module. The different is that the independent Claim 21 of the application use alternative languages for the similar limitations as the independent claim 21 of the copending Application No 13/328,095.

The following claims are patentably similar from each other:

Application	Copending Application No 13/328,095
21	21

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V. Nguyen whose telephone number is 571-272-3061. The examiner can normally be reached on Mon-Fri, 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Brian Zimmerman can be reached on 571- 272-3059. The fax phone numbers for the

organization where this application or proceeding is assigned are 571-273-8300 for regular communications.

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

/NAM V NGUYEN/
Primary Examiner, Art Unit 2682

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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S2	2	"7297044"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/20 15:15
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S29	11	("6551165").URPN.	USPAT	OR	ON	2012/07/06 22:50
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S39	1700	transmit$4 same message adj2 identifier	USPAT	OR	ON	2012/07/07 14:48
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S41	2899	transmit$4 same message adj2 code	USPAT	OR	ON	2012/07/07 15:04
S42	478	S41 and "340"/$.ccls.	USPAT	OR	ON	2012/07/07 15:04
S43	0	S42 and program same toy	USPAT	OR	ON	2012/07/07 15:04
S44	7	S42 and program and toy	USPAT	OR	ON	2012/07/07 15:04
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S55	5	event adj2 identifier and source adj2 identifier and (program$4 adj2 block)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/02 10:36
S56	5	event adj2 identifier and source adj2 identifier and (program$4 adj2 block$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/02 10:37
S57	75	event adj2 identifier and (program$4 adj2 block$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/02 10:38
S58	36	("20020013802" | "20020088926" | "20030008684" | "20030129944" | "20030135533" | "20030149741" | "20030161327" | "20030174731" | "20030177275" | "20030178273" | "20030233485" | "20040142682" | "20040174855" | "20040199613" | "20040266480" | "20050057370" | "20050060704" | "20060005132" | "20060181406" | "20070180436" | "20080112313" | "4843606" | "5245608" | "5774461" | "5892769" | "6195760" | "6266781" | "6295447" | "6366826" | "6411991" | "6437692" | "6522628" | "6611834" | "7020501" | "7069027" | "7076211").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/12/02 10:42
S59	171	identifier and (program$4 adj2 block$4) and toy$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/02 10:47
S60	3	S59 and (source adj2 identifier)	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/12/02 10:48

			EPO; JPO; DERWENT; IBM_TDB			

5/ 23/ 2013 7:50:23 PM
C:\ Users\ nnguyen2\ Documents\ EAST\ Workspaces\ 13801773-programmable communicator dev.wsp

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13801773	WESBY VAN-SWAAY ET AL.
	Examiner	Art Unit
	NAM V NGUYEN	2682

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
340	539.12; 573.4; 693.5; 7.29; 7.33; 7.52	5/22/13	NN
455	456; 456.2; 418; 419; 425	5/22/13	NN
379	142; 373; 375	5/22/13	NN

SEARCH NOTES		
Search Notes	Date	Examiner
Search EAST: USPAT; USPUB; EPO; JPO; and Derwent.	5/22/13	NN
Search Terms: authorized list in cellular hone with monitoring device; external device monitoring; monitor central station; monitor module with address; code number/id address and/or number;	5/22/13	NN
Updated from 11/329,212	5/22/13	NN
Updated from 12/538,603	5/22/13	NN
updated from 13/328,095	5/22/13	NN

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

	/N.V.N./ Primary Examiner.Art Unit 2682

Practitioner's Docket No. 3781/1010 *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Wesby van-Swaay

Application No.:	13/801,773	Art Unit/Group No.:	2642
Filing Date:	March 13, 2013	Examiner:	Not yet assigned
		Conf. No.:	7047 Nam Nguyen

For: PROGRAMMABLE COMMUNICATOR

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

INFORMATION DISCLOSURE STATEMENT

List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this Information Disclosure Statement:

1. [x] Preliminary Statements
2. [x] Forms PTO/SB/08A and 08B (substitute for Form PTO-1449)
3. [ ] Statement as to Information Not Found in Patents or Publications
4. [x] Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted
5. [ ] Cumulative Patents or Publications
6. [x] Copies of Listed Information Items Accompanying This Statement
7. [ ] Concise Explanation of Non-English Language Listed Information Items
   - 7A. [ ] EPO Search Report
   - 7B. [ ] English Language Version of EPO Search Report
8. [x] Translation(s) of Non-English Language Documents
9. [ ] Concise Explanation of English Language Listed Information Items (Optional)
10. [x] Identification of Person(s) Making This Information Disclosure Statement

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 1. Preliminary Statements

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. *Notice of January 9, 1992, 1135 O.G. 13-25, at 25.*

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Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Wesby van-Swaay	Attorney Docket:	3781/1010
Serial No:	13/801,773	Art Unit/Group No.:	2642
Filing Date:	March 13, 2013	Examiner Name:	Not yet assigned
		Conf. No.:	7047

Invention: PROGRAMMABLE COMMUNICATOR

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

U.S. PATENT DOCUMENTS					
Examiner Initials	**Reference Number**	**Document Number**	**Issue Date**	**Inventor**	**Class/Subclass**
	AA	US 4,465,904	Aug. 14, 1984	Gottsegen et al.	179/5 R
	AB	US 4,658,096	Apr.14, 1987	West, Jr. et al.	3379/59
	AC	US 4,855,713	Aug. 8, 1989	Brunius	340/506
	AD	US 4,908,853	Mar. 13, 1990	Matsumoto	379/355
	AE	US 4,951,029	Aug. 21, 1990	Severson	340/506
	AF	US 5,012,234	Apr. 30, 1991	Dulaney et al.	340/825.44
	AG	US 5,276,729	Jan. 4, 1994	Higuchi et al.	379/58
	AH	US 5,293,418	Mar. 8, 1994	Fukawa	379/58
	AI	US 5,348,008 A	Sep. 20, 1994	Bornn et al.	128/642
	AJ	US 5,381,138	Jan. 10, 1995	Stair et al.	340/825.44
	AK	US 5,396,264	Mar. 7, 1995	Falcone et al.	345/146
	AL	US 5,544,661 A	Aug. 13, 1996	Davis et al.	128/700
	AM	US 5,548,271	Aug. 20, 1996	Tsuchiyama et al.	340/311.1
	AN	US 5,581,599	Dec. 3, 1996	Tsuji et al.	379/63
	AO	US 5,581,803	Dec. 3, 1996	Grube et al.	455/54.1
	AP	US 5,623,533	Apr. 22, 1997	Kikuchi et al.	379/58
	AQ	US 5,689,442	Nov. 18, 1997	Swanson et al.	364/550
	AR	US 5,689,563	Nov. 18, 1997	Brown et al.	380/23
	AS	US 5,742,233 A	Apr. 21, 1998	Hoffman et al.	340/573
	AT	US 5,742,666	Apr. 21, 1998	Alpert	379/58
	AU	US 5,745,049	Apr. 28, 1998	Akiyama et al.	340/870.17
	AV	US 5,752,976	May 19, 1998	Duffin et al.	607/32
	AW	US 5,771,455	Jun. 23, 1998	Kennedy III et al.	455/456
	AX	US 5,774,804	Jun. 30, 1998	Williams	455/419
	AY	US 5,802,460	Sep. 1, 1998	Parvulescu et al.	455/92
	AZ	US 5,831,545	Nov. 3, 1998	Murray et al.	340/825.49
	BA	US 5,878,339	Mar. 2, 1999	Zicker et al.	455/419
	BB	US 5,884,161	Mar. 16, 1999	Hegeman	455/414
	BC	US 5,903,634	May 11, 1999	Wakabayashi et al.	379/127
	BD	US 5,940,752	Aug. 17, 1999	Henrick	455/419
	BE	US 5,946,636	Aug. 31, 1999	Uyeno et al.	455/566

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

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U.S. PATENT DOCUMENTS					
Examiner Initials	**Reference Number**	**Document Number**	**Issue Date**	**Inventor**	**Class/Subclass**
	BF	US 5,948,064	Sep. 7, 1999	Bertram et al.	709/225
	BG	US 5,960,366	Sep. 28, 1999	Duwaer	455/556
	BH	US 5,974,312	Oct. 26, 1999	Hayes, Jr. et al.	455/419
	BI	US 5,995,603	Nov. 30, 1999	Anderson	379/142
	BJ	US 5,997,476 A	Dec. 7, 1999	Brown	600/300
	BK	US 5,999,990	Dec. 7, 1999	Sharrit et al.	710/8
	BL	US 6,026,293	Feb. 15, 2000	Osborn	455/411
	BM	US 6,031,828	Feb. 29, 2000	Koro et al.	370/336
	BN	US 6,038,491 A	Mar. 14, 2000	McGarry et al.	700/231
	BO	US 6,041,229	Mar. 21, 2000	Turner	455/420
	BP	US 6,072,396	Jun. 6, 2000	Gaukel	340/573.4
	BQ	US 6,075,451	Jun. 13, 2000	Lebowitz et al.	340/825.06
	BR	US 6,078,948	Jun. 20, 2000	Podgorny et al.	709/204
	BS	US 6,108,521	Aug. 22, 2000	Foladore et al.	455/31.3
	BT	US 6,125,273	Sep. 26, 2000	Yamagishi	455/411
	BU	US 6,144,859	Nov. 7, 2000	LaDue	455/511
	BV	US 6,148,197	Nov. 14, 2000	Bridges et al.	455/432
	BW	US 6,157,318	Dec. 5, 2000	Minata	340/825.44
	BX	US 6,172,616	Jan. 9, 2001	Johnson et al.	340/870.12
	BY	US 6,198,390 B1	Mar. 6, 2001	Schlager et al.	340/540
	BZ	US 6,208,039	Mar. 27, 2001	Mendelsohn et al.	307/52
	CA	US 6,208,839	Mar. 27, 2001	Davani	455/31.3
	CB	US 6,208,854	Mar. 27, 2001	Roberts et al.	455/417
	CC	US 6,215,994	Apr. 10, 2001	Schmidt et al.	455/419
	CD	US 6,230,002	May 8, 2001	Flodén et al.	455/411
	CE	US 6,275,143	Aug. 14, 2001	Stobbe	340/10.34
	CF	US 6,288,641	Sep. 11, 2001	Casais	340/539
	CG	US 6,289,084	Sep. 11, 2001	Bushnell	379/67.1
	CH	US 6,295,449	Sep. 25, 2001	Westerlage et al.	455/422
	CI	US 6,308,083	Oct. 23, 2001	King	455/556
	CJ	US 6,314,270	Nov. 6, 2001	Uchida	455/67.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Wesby van-Swaay	Attorney Docket:	3781/1010
Serial No:	13/801,773	Art Unit/Group No.:	2642
Filing Date:	March 13, 2013	Examiner Name:	Not yet assigned
		Conf. No.:	7047

Invention: PROGRAMMABLE COMMUNICATOR

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

U.S. PATENT DOCUMENTS					
Examiner Initials	**Reference Number**	**Document Number**	**Issue Date**	**Inventor**	**Class/Subclass**
	CK	US 6,377,161	Apr. 23, 2002	Gromelski et al.	340/7.45
	CL	US 6,411,198	Jun. 25, 2002	Hirai et al.	340/7.6
	CM	US 6,424,623	Jul. 23, 2002	Borgstahl et al.	370/230
	CN	US 6,442,432	Aug. 27, 2002	Lee	607/59
	CO	US 6,487,478	Nov. 26, 2002	Azzaro et al.	701/24
	CP	US 6,496,777	Dec. 17, 2002	Tennison et al.	701/213
	CQ	US 6,519,242 B1	Feb. 11, 2003	Emery et al.	370/338
	CR	US 6,553,418	Apr. 22, 2003	Collins et al.	709/224
	CS	US 6,567,671 B2	May 20, 2003	Amin	455/550
	CT	US 6,573,825	Jun. 3, 2003	Okano	340/7.51
	CU	US 6,577,881	Jun. 10, 2003	Ehara	455/563
	CV	US 6,606,508	Aug. 12, 2003	Becker et al.	455/567
	CW	US 6,611,755	Aug. 26, 2003	Coffee et al.	701/213
	CX	US 6,633,784	Oct. 14, 2003	Lovelace II et al.	700/65
	CY	US 6,658,586	Dec. 2, 2003	Levi	714/4
	CZ	US 6,759,956	Jul. 6, 2004	Menard et al.	340/539.19
	DA	US 6,832,102	Dec. 14, 2004	I'Anson	455/556.1
	DB	US 6,833,787	Dec. 21, 2004	Levi	340/539.13
	DC	US 6,873,842	Mar. 29, 2005	Elayda et al.	455/418
	DD	US 6,900,737 B1	May 31, 2005	Ardalan et al	340/870.02
	DE	US 6,922,547	Jul. 26, 2005	O'Neill et al.	455/17
	DF	US 6,970,917	Nov. 29, 2005	Kushwaha et al.	709/217
	DG	US 6,985,742 B1	Jan. 10, 2006	Giniger et al.	455/456.1
	DH	US 6,988,989	Jan. 24, 2006	Weiner et al.	600/300
	DI	US 7,027,808	Apr. 11, 2006	Wesby	455/419
	DJ	US 7,084,771 B2	Aug. 1 2006	Gonzalez	340/573.1
	DK	US 7,254,601	Aug. 7, 2007	Baller et al.	709/200
	DL	US 7,558,564	Jul. 7, 2009	Wesby	455/419
	DM	US 7,583,197	Sep. 1, 2009	Wesby Van Swaay	340/573.4
	DN	US 7,599,681	Oct. 6, 2009	Link II et al.	455/411
	DO	US 8,094,010	Jan. 10, 2012	Wesby-van Swaay	340/539.12

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Wesby van-Swaay	Attorney Docket:	3781/1010
Serial No:	13/801,773	Art Unit/Group No.:	2642
Filing Date:	March 13, 2013	Examiner Name:	Not yet assigned
		Conf. No.:	7047
Invention:	PROGRAMMABLE COMMUNICATOR		

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

U.S. PATENT PUBLICATION DOCUMENTS					
Examiner Initials	**Reference Number**	**Document Number**	**Publication Date**	**Inventor**	**Class/ Subclass**
	DP	US 2001/0001234	May 17, 2001	Addy et al.	340/531
	DQ	US 2002/0046353	Apr. 18, 2002	Kishimoto	713/202
	DR	US 2002/0080938	Jun. 27, 2002	Alexander III et al.	379/106.01
	DS	US 2002/0198997	Dec. 26, 2002	Linthicum et al.	709/227
	DT	US 2003/0176952	Sep. 18, 2003	Collins et al.	700/286
	DU	US 2010/0035580	Feb. 11, 2010	Wesby - Van Swaay	455/411
	DV	US 2012/0088474 A1	Apr. 12, 2012	Wesby-van Swaay	455/411

FOREIGN PATENT DOCUMENTS						
Examiner Initials	**Reference Number**	**Country Code**	**Document Number**	**Publication Date**	**Patentee or Applicant**	**Class/Subclass**
	DW	EP	0 432 746 A2	Jun. 19, 1991	Siemens Nixdorf Inf Syst	H04M 1/57
	DX	EP	0 432 746 A2 **[English Abstract]**	Jun. 19, 1991	Siemens Nixdorf Inf Syst	H04M 1/57
	DY	EP	0 524 652 A2	Jan. 27, 1993	Ransome Industries Ltd	H04M 1/274
	DZ	WO	95/05609 A2	Feb. 23, 1995	Real Time Data	G01R 27/14
	EA	JP	07-087211 A	Mar. 31, 1995	Fuji Facom Corp	H04M 11/00
	EB	JP	07-087211 A **[English Abstract]**	Mar. 31, 1995	Fuji Facom Corp	H04M 11/00
	EC	JP	09-64950	Mar. 7, 1997	Hitachi Ltd	H04M 1/02
	ED	JP	09-64950 **[English Abstract]**	Mar. 7, 1997	Hitachi Ltd	H04M 1/02

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

FOREIGN PATENT DOCUMENTS						
Examiner Initials	**Reference Number**	**Country Code**	**Document Number**	**Publication Date**	**Patentee or Applicant**	**Class/Subclass**
	EE	EP	0 772 336 A2	May 7, 1997	Straeuli et al.	H04M 9/00
	EF	EP	0 772 336 A2 **[English Abstract]**	May 7, 1997	Straeuli et al.	H04M 9/00
	EG	WO	97/23104 A1	Jun. 26, 1997	Ericsson Inc	H04Q 7/22
	EH	DE	196 25 581 A1	Dec. 18, 1997	Plaas-Link	G08B 25/10
	EI	DE	196 25 581 A1 **[English Abstract]**	Dec. 18, 1997	Plaas-Link	G08B 25/10
	EJ	DE	197 07 681 C1	May 7, 1998	Erbel et al.	H04M 1/00
	EK	DE	197 07 681 C1 **[English Abstract]**	May 7, 1998	Erbel et al.	H04M 1/00
	EL	WO	98/51059 A2	Nov. 12, 1998	Easy-Phone GmbH	H04M 1/72
	EM	WO	98/56197 A1	Dec. 10, 1998	Telia AB	H04Q 7/22
	EN	CA	2 293 393 A1	Dec. 23, 1998	Swisscom AG	H04Q 007/32
	EO	WO	99/13629 A1	Mar. 18, 1999	Wesby et al.	H04M 1/72
	EP	WO	99/34339 A2	Jul. 8, 1999	Ameritech Corp	G08B 29/00
	EQ	WO	99/49680 A1	Sep. 30, 1999	Bellsouth Intellectual Property Corp.	H04Q 7/22
	ER	WO	99/56262 A1	Nov. 4, 1999	1st International Security Technology OY	G08B 21/100
	ES	WO	00/18175 A2	Mar. 30, 2000	Urbanija et	H04Q 9/00

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					al.	
	ET	JP	2000-115859 A	Apr. 21, 2000	Ericsson Inc.	H04Q 7/38
	EU	JP	2000-115859 A **[English Abstract]**	Apr. 21, 2000	Ericsson Inc.	H04Q 7/38
	EV	EP	0 996 302 A1	Apr. 26, 2000	Compagnie Financiere Alcatel	H04Q 7/32
	EW	EP	0 996 302 A1 **[English Abstract]**	Apr. 26, 2000	Compagnie Financiere Alcatel	H04Q 7/32
	EX	JP	2000-135384 A	May 16, 2000	Fujitsu Ltd	A63H 3/33
	EY	JP	2000-135384 A **[English Abstract]**	May 16, 2000	Fujitsu Ltd	A63H 3/33
	EZ	WO	00/56016 A1	Sep. 21, 2000	Siemens AG Österreich	H04L 12/28
	FA	WO	00/70889 A1	Nov. 23, 2000	Medtronic Physio-Control Manufacturing Corp	H04Q 7/08
	FB	WO	01/03414 A1	Jan. 11, 2001	Musco Corp	H04M 11/00
	FC	JP	2001-177668 A	Jun. 29, 2001	Toshiba Corp	H04M 11/00
	FD	JP	2001-177668 A **[English Abstract]**	Jun. 29, 2001	Toshiba Corp	H04M 11/00
	FE	JP	2001-249860 A	Sep. 14, 2001	Kenwood Corp	G06F 13/00

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Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

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	FF	JP	2001-249860 A **[English Abstract]**	Sep. 14, 2001	Kenwood Corp	G06F 13/00
	FG	JP	2002-077438 A	Mar. 15, 2002	Sony Corp	H04M 11/00
	FH	JP	2002-077438 A **[English Abstract]**	Mar. 15, 2002	Sony Corp	H04M 11/00
	FI	EP	1 013 055 B1	Apr. 27, 2005	Wesby et al.	H04M 1/72

OTHER DOCUMENTS			
Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
	FJ	European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+)*; Network architecture (GSM 03.02, version 5.0.0), TS/SMG-030302Q, 20 pages (March, 1996)
	FK	European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface* (GSM 11.11, version 5.3.0), TS/SMG-091111QR1, 113 pages (July, 1996)
	FL	European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+); Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface* (GSM 11.14, version 5.1.0), TS/SMG-091114Q, 54 pages (August, 1996)
	FM	European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+); Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment*

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OTHER DOCUMENTS			
Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
			(SIM - ME) interface„ GSM 11.14, version 5.4.0), TS/SMG-091114Q, 56 pages (July, 1997)
	FN	ETSI European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+); AT command set for GSM Mobile Equipment (ME)* (GSM 07.07, version 5.5.0), RE/SMG-040707QR3, 97 pages (February, 1998)
	FO	European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface* (GSM 11.11, version 7.2.0, Release 1998), SMG version only, not for publication, 133 pages (March, 1999)
	FP	European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+); Use of Data Terminal Equipment - Data Circuit terminating; Equipment (DTE - DCE) interface for Short Message Service (SMS) and Cell Broadcast Service* (CBS) (GSM 07.05, version 7.0.0, Release 1998), Available SMG only, 66 pages (March, 1999)
	FQ	European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module – Mobile Equipment (SIM-ME) interface,* (GSM 11.11, version 7.4.0, Release 1998), 134 pages (December, 1999)
	FR	European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+); Specification of the SIM application toolkit for the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface*(GSM 11.14, version 6.2.0, Release 1997), 82 pages (November, 1998)

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Wesby van-Swaay	Attorney Docket:	3781/1010
Serial No:	13/801,773	Art Unit/Group No.:	2642
Filing Date:	March 13, 2013	Examiner Name:	Not yet assigned
		Conf. No.:	7047

Invention: PROGRAMMABLE COMMUNICATOR

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

OTHER DOCUMENTS			
Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
	FS	GEMPLUS	*Gemplus' start SIM card for advanced GSM services*, Microprocessor Cards, GemXplore98 Product Sheet, 2 pages (May, 1999)
	FT	Novatel Wireless	*Novatel CDPD (Cellular Digital Packet Data) Software*, 42 pages (1999)
	FU	Phonetics, Inc.	*Sensaphone 2000 User's* Manual, Version 3.0, 118 pages (January, 1998)
	FV	Phonetics, Inc.	*Sensaphone 1104, Sensaphone 1108 Potential Disasters*, Science/Health/Labs archived website page (http://www.sensaphone.com/pages/HealthPage.html), 2 pages (December, 1998)
	FW	Siemens	*Siemens Private Communication Systems, Technical Description of the Siemens A1* , Edition 5, 53 pages (January, 1998)
	FX	Siemens	*Siemens GSM Module M1 User Guide*, 76 pages (1996)
	FY	Siemens	*Cellular Engine Siemens M20 / M20 Terminal, Technical Description* ,Version 4, 198 pages (December, 1998)
	FZ	Siemens	*Cellular Engine Siemens M20 / M20 Terminal, Technical Description*, Version 5, 209 pages (March, 1999)
	GA	Siemens	*Cellular Engine Siemens M20 / M20 Terminal, Technical Description* , Version 7, 221 pages (October, 1999)
	GB	Sierra Wireless	*Dart 200 CDPD Modem, For CDPD Versions 1.0 and 1.1, User's Guide*, 206 pages (January, 1998)
	GC	Sine Systems, Inc.	*Model RFC-1/B, Remote Facilities Controller, archived website page*

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Wesby van-Swaay	Attorney Docket:	3781/1010
Serial No:	13/801,773	Art Unit/Group No.:	2642
Filing Date:	March 13, 2013	Examiner Name:	Not yet assigned
		Conf. No.:	7047

Invention: PROGRAMMABLE COMMUNICATOR

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

OTHER DOCUMENTS			
Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
			(http://www.sinesys.com/html/rfcl.html) 4 Pages (February, 1998)
	GD	Sine Systems, Inc.	*Remote Facilities Controller, Model RFC-1/B, Relay Panel, Model RP-8, Installation and Operation,* 97 pages (1999)
	GE	Sine Systems, Inc.	*Model RFC-1/B Remote Facilities Controller: Dial-up/Automated Transmitter Control System,* Press Release, 2 pages (July, 1999)
	GF	Telital	*GSM Datablock Product Specification,* Revision 2, 30 pages (November, 1997)
	GG	Telital	Technologies archived website page (http://www.telital.com/technologE.html) 2 pages (April, 2000)
	GH	Telital Automotive	*Telltal Automotive GM360, Technical Specification,* 36 pages (February, 1999)
	GI	Telital Automotive	*Telefono GSM Datablock II con funzioni Voce/Dati/Fax/SMS,* 91 pages (February, 1999)
	GJ	Telular Corporation	*Annual Report,* 48 pages (1998)
	GK	WAVECOM	*Wavecom GSM Modem,* Wavecom *WM01-G900,* Version 7.3, Reference WCOM/GSM/WMO1-G900/modATcmd, 67 pages (December, 1997)
	GL	WAVECOM	*WISMO Wireless Standard Module, WM1B-G1900 PCS Module Specifications driven by AT commands,* Version 1.2, Reference WCOM/PCS/8001 45 pages (September, 1998)
	GM	WAVECOM	*WM02 Modem Series GSM 900 /1800 /1900 User*

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Wesby van-Swaay	Attorney Docket:	3781/1010
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Invention: PROGRAMMABLE COMMUNICATOR

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

OTHER DOCUMENTS			
Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
			Manual, 23 pages (April, 1999)
	GN	WAVECOM	*WISMO Wireless Standard Module, WM2C-G900/G1800 EGSM/DCS DUAL BAND Module Specifications,* Verion 0.7, Reference:WCOM/GSM/WM2C_07, 51 pages (September, 1999)
	GO	Azzaro et al.	Provisional Application – 60/162,249, dated October 28, 1999 (21 pages)
	GP	3GPP (3rd Generation Partnership Project)	*3rd Generation Partnership Project; Technical Specification Group Terminals; Characteristics of the USIM Application* (3G TS 31.102, version 3.0.), 104 pages (January, 2000)
	GQ	3GPP (3rd Generation Partnership Project)	*3rd Generation Partnership Project; Technical Specification Group Terminals; AT command set for 3GPP User Equipment* (UE) (3G TS 27.007, version 3.4.0, Release 1999), 154 pages (March, 2000)
	GR	3GPP (3rd Generation Partnership Project)	*3rd Generation Partnership Project; Technical Specification Group Terminals;* USIM Application Toolkit (USAT) (3G TS 31.111, version 3.0.0, Release 1999), 138 pages (April, 2000)
	GS	Akselsen et al.	*Telemedicine and ISD,* IEEE Communications Magazine, pp. 46-51 (January, 1993)
	GT	Bettstetter et al.	*GSM Phase 2+ General Packet Radio Service GPRS: Architecture, Protocols, and Air Interface,* IEEE Communications Surveys, http://www.comsoc.org/pubs/surveys Vol. 2, No.3, pp. 2-14 (1999)
	GU	Bult et al.	*Low Power Systems for Wireless Microsensors,* UCLA

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

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Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
			Electrical Engineering Department, Los Angeles, CA and Rockwell Science Center, Thousand Oaks, CA, 5 pages (1996)
	GV	Carman et al / NAI Labs	*A Communications Security Architecture and Cryptographic Mechanisms for Distributed Sensor Networks,* DARPA/ITO Sensor IT Workshop, 24 pages (October, 1999)
	GW	Chandrakasan et al.	*Design Considerations for Distributed Microsensor Systems,* Department of EECS, Massachusetts Institute of Technology, Cambridge, MA, IEEE 1999, Custom Intergrated Circuits Conference, 8 Pages (1999)
	GX	Godfrey	*A Comparison of Security Protocols in a Wireless Network Environment,* A thesis presented to the University of Waterloo, Ontario, Canada, 87 pages (1995)
	GY	Hodes et al.	*Composable ad hoc location-based services for heterogeneous mobile clients,* Wireless Networks 5, pp. 411-427 (1999)
	GZ	Istepanian et al.	*Design of mobile telemedicine systems using GSM and IS-54 cellular telephone standards,* Journal of Telemedicine and Telecare, Vol. 4, Supplement 1, pp. 80-82 (1999)
	HA	Istepanian	*Modelling of GSM-based Mobile Telemedical System,* Proceedings of the 20th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Vol. 20, No. 3, pp. 1166-

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

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Serial No:	13/801,773	Art Unit/Group No.:	2642
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Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
			1169 (1998)
	HB	Kahn et al.	*Next Century Challenges: Mobile Networking for "Smart Dust"*, Department of Electrical Engineering and Computer Science, 8 pages (1999)
	HC	Miles	*System Monitoring, Messaging and Notification,* Proceedings of SAGE-AU, 15 pages (June, 1999)
	HD	Pavlopoulos et al.	*A Novel Emergency Telemedicine System Based on Wireless Communication Technology - "Ambulance",* IEEE Transactions on Information in Biomedicine, Vol. 2, No.4, pp. 261-267 (1998)
	HE	Prasad et al.	*Security Architecture for Wireless LANs: Corporate & Public Environment,* IEEE VTC, pp. 283-287 (2000)
	HF	Redl et al.	*GSM and Personal Communications Handbook*,ISBN 0-89006-957-3, 80 pages (1998)
	HG	Schlumberger	*Schlumberger Java SIMs and Over-the-Air Server Allow Sunday to Evolve Phones Into Multi-Service Terminals*, 3 pages (July, 1999)
	HH	Steiner et al.	*Kerberos: An Authentication Service for Open Network Systems,* Project Athena, Massachusetts Institute of Technology, 15 pages (1988)
	HI	Taylor et al.	*Internetwork Mobility: The CDPD Approach,* 334 pages (June, 1996)
	HJ	Wu et al.	*A Mobile System for Real-Time Patient- Monitoring with Integrated Physiological Signal Processing* Proceedings of the First Joint BMES/EMBS Conference Serving Humanity, Advancing

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Invention: PROGRAMMABLE COMMUNICATOR

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

OTHER DOCUMENTS			
Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
			Technology, Atlanta, GA (October, 1999)
	HK	U.S.D.C. for the District of Delaware	Defendant's Initial Invalidity Contentions, including Appendix A-Z, AA and DD, 1046 pages (served on March 8, 2013)
	HL	U.S.D.C. for the District of Delaware	Defendant's Kowatec's Initial Invalidity Contentions, 3 pages (served April 15, 2013)
	HM	U.S.D.C. for the District of Delaware	Appendices DD-EE for Defendant's Kowatec's Initial Invalidity Contentions, 126 pages (served on April 15, 2013)

Examiner Signature: /Nam Nguyen/

Date Considered: 05/23/2013

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

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 4. Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted

This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior application Serial Number: 13/328,095, filed December 16, 2013.

[X] This application also relies, under 35 U.S.C. section 120, on the earlier filing date of prior application Serial Number: 12/538,603, filed August 10, 2009.

[X] This application also relies, under 35 U.S.C. section 120, on the earlier filing date of prior application Serial Number: 11/329,212, filed January 10, 2006.

[X] This application also relies, under 35 U.S.C. section 120, on the earlier filing date of prior application Serial Number: 10/296,571, filed, May 18, 2001.

The following references were submitted to, and/or cited by, the Office in the prior application(s) and, therefore, are not required to be provided in this application:

References: **AA, AC-AE, AG-AH, AJ-AK, AM-AR, AT-BI, BK-BM, BO-CP, CR, CT-DC, DE-DU, DW-DY, EA-EL, EO-EP, ET-FI, FM, FQ, GO**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 6. Copies of Listed Information Items Accompanying This Statement

Legible copies of all items listed in Forms PTO/SB/08A and 08B (substitute for Form PTO-1449) accompany this information statement.

[x] Exception(s) to above:

U.S. patent citations are not included pursuant to the United States Patent and Trademark Office's September 21, 2004 waiver of the copy requirement in 37 CFR 1.98 for cited pending U.S. patent citations when the patent citations are available in the USPTO's IFW system.

[ ] Items in prior application, from which an earlier filing date is claimed for this application, as identified in Section 4.

[ ] Cumulative patents or publications identified in Section 5.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 8. Translation(s) of Non-English Language Documents

Submitted herewith is an English translation of the following foreign language patents, publications or information or of those portions of those patents, publications or information considered to be material:

Reference **DX** is believed to be the English abstract of Reference **DW**
Reference **EB** is believed to be the English abstract of Reference **EA**
Reference **ED** is believed to be the English abstract of Reference **EC**
Reference **EF** is believed to be the English abstract of Reference **EE**
Reference **EI** is believed to be the English abstract of Reference **EH**
Reference **EK** is believed to be the English abstract of Reference **EJ**
Reference **EJ** is believed to be the English abstract of Reference **EI**
Reference **EU** is believed to be the English abstract of Reference **ET**
Reference **EW** is believed to be the English abstract of Reference **EV**
Reference **EY** is believed to be the English abstract of Reference **EX**
Reference **FD** is believed to be the English abstract of Reference **FC**
Reference **FF** is believed to be the English abstract of Reference **FE**
Reference **FH** is believed to be the English abstract of Reference **FG**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Section 10. Identification of Person Making This Information Disclosure Statement

The person making this certification is the practitioner of record.

Dated: May 14, 2013

/Jonathan C. Lovely, #60,821/
SIGNATURE OF PRACTITIONER

Reg. No. 60,821

Jonathan C. Lovely
(type or print name of practitioner)

Tel. No.: (617) 443-9292

Sunstein Kann Murphy & Timbers LLP
125 Summer Street, 11th Floor
Firm/Street Address

Customer No.: 002101

Boston, MA 02110-1618
City/State/Zip Code

03781/01010 1885579.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.N./

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13801773	WESBY VAN-SWAAY ET AL.
	Examiner	Art Unit
	NAM V NGUYEN	2682

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/23/2013								
	1	-								
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	34	✓								
	35	✓								
	36	✓								

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13801773	WESBY VAN-SWAAY ET AL.
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	NAM V NGUYEN	2682

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☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/23/2013								
	37	✓								
	38	✓								
	39	✓								
	40	✓								
	41	✓								
	42	✓								
	43	✓								
	44	✓								
	45	✓								
	46	✓								
	47	✓								
	48	✓								
	49	✓								
	50	✓								

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BIB DATA SHEET

CONFIRMATION NO. 7047

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
13/801,773	03/13/2013 RULE	340	2682	3781/1010

APPLICANTS

Eveline Wesby van-Swaay, Stratford-upon-Avon, UNITED KINGDOM;
M2M SOLUTIONS LLC, Stratford-upon-Avon, UNITED KINGDOM

**** CONTINUING DATA **************************** Yes /NN/

This application is a CON of 13/328,095 12/16/2011
which is a CON of 12/538,603 08/10/2009 PAT 8094010
which is a CON of 11/329,212 01/10/2006 PAT 7583197
which is a CON of 10/296,571 01/21/2003 ABN
which is a 371 of PCT/EP01/05738 05/18/2001

**** FOREIGN APPLICATIONS *************************** None /NN/

FINLAND 20001239 05/23/2000

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
04/16/2013

Foreign Priority claimed	35 USC 119(a-d) conditions met	Verified and Acknowledged	Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
☐ Yes ☑ No	☐ Yes ☑ No	/NAM V NGUYEN/ Examiner's Signature	NN Initials	UNITED KINGDOM	3	20	1

ADDRESS

Sunstein Kann Murphy & Timbers LLP
125 SUMMER STREET
BOSTON, MA 02110-1618
UNITED STATES

TITLE

Programmable Communicator

FILING FEE RECEIVED		
1233	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

Electronic Acknowledgement Receipt

EFS ID:	15767128
Application Number:	13801773
International Application Number:	
Confirmation Number:	7047
Title of Invention:	Programmable Communicator
First Named Inventor/Applicant Name:	Eveline Wesby van-Swaay
Customer Number:	2101
Filer:	Jonathan Lovely
Filer Authorized By:	
Attorney Docket Number:	3781/1010
Receipt Date:	14-MAY-2013
Filing Date:	13-MAR-2013
Time Stamp:	11:39:05
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	HK_1.pdf	10448492 1a04bafdba7e4451c6d97a3c5cfed43a8d4bfc7f	no	248

Warnings:	
Information:	

2	Non Patent Literature	HK_2.pdf	10461021 987f4eeeaff7e5f00387c961a0c5541a5408a98f	no	157
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Information:					
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Information:					
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Warnings:					
Information:					
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Information:					
6	Non Patent Literature	HK_6.pdf	10329518 d5925227cc110a11751fe0e892b106f4facaa76f	no	187
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8	Non Patent Literature	HL.pdf	78836 66faf917c341c6fce1c0b0419f292d7250419fd7	no	3
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9	Non Patent Literature	HM.pdf	3756602 0fe4e4a77fe366166f5c95ad3d11b6a65ebf5f43	no	126
Warnings:					
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			Total Files Size (in bytes):	71220671	

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New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Practitioner's Docket No. 3781/1010 *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Wesby van-Swaay

Application No.:	13/801,773	Art Unit/Group No.:	2642
Filing Date:	March 13, 2013	Examiner:	Not yet assigned
		Conf. No.:	7047

For: PROGRAMMABLE COMMUNICATOR

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

INFORMATION DISCLOSURE STATEMENT

List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this Information Disclosure Statement:

1. [x] Preliminary Statements
2. [x] Forms PTO/SB/08A and 08B (substitute for Form PTO-1449)
3. [ ] Statement as to Information Not Found in Patents or Publications
4. [x] Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted
5. [ ] Cumulative Patents or Publications
6. [x] Copies of Listed Information Items Accompanying This Statement
7. [ ] Concise Explanation of Non-English Language Listed Information Items
   - 7A. [ ] EPO Search Report
   - 7B. [ ] English Language Version of EPO Search Report
8. [x] Translation(s) of Non-English Language Documents
9. [ ] Concise Explanation of English Language Listed Information Items (Optional)
10. [x] Identification of Person(s) Making This Information Disclosure Statement

Section 1. Preliminary Statements

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. *Notice of January 9, 1992, 1135 O.G. 13-25, at 25.*

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

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U.S. PATENT DOCUMENTS					
Examiner Initials	**Reference Number**	**Document Number**	**Issue Date**	**Inventor**	**Class/Subclass**
	AA	US 4,465,904	Aug. 14, 1984	Gottsegen et al.	179/5 R
	AB	US 4,658,096	Apr.14, 1987	West, Jr. et al.	3379/59
	AC	US 4,855,713	Aug. 8, 1989	Brunius	340/506
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	FK	European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface* (GSM 11.11, version 5.3.0), TS/SMG-091111QR1, 113 pages (July, 1996)
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	FO	European Telecommunications Standards Institute (ETSI)	*Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface* (GSM 11.11, version 7.2.0, Release 1998), SMG version only, not for publication, 133 pages (March, 1999)
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	FT	Novatel Wireless	*Novatel CDPD (Cellular Digital Packet Data) Software*, 42 pages (1999)
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	GJ	Telular Corporation	*Annual Report,* 48 pages (1998)
	GK	WAVECOM	*Wavecom GSM Modem,* Wavecom *WM01-G900,* Version 7.3, Reference WCOM/GSM/WMO1-G900/modATcmd, 67 pages (December, 1997)
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Wesby van-Swaay	Attorney Docket:	3781/1010
Serial No:	13/801,773	Art Unit/Group No.:	2642
Filing Date:	March 13, 2013	Examiner Name:	Not yet assigned
		Conf. No.:	7047

Invention: PROGRAMMABLE COMMUNICATOR

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

OTHER DOCUMENTS			
Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
			Electrical Engineering Department, Los Angeles, CA and Rockwell Science Center, Thousand Oaks, CA, 5 pages (1996)
	GV	Carman et al / NAI Labs	*A Communications Security Architecture and Cryptographic Mechanisms for Distributed Sensor Networks,* DARPA/ITO Sensor IT Workshop, 24 pages (October, 1999)
	GW	Chandrakasan et al.	*Design Considerations for Distributed Microsensor Systems,* Department of EECS, Massachusetts Institute of Technology, Cambridge, MA, IEEE 1999, Custom Intergrated Circuits Conference, 8 Pages (1999)
	GX	Godfrey	*A Comparison of Security Protocols in a Wireless Network Environment,* A thesis presented to the University of Waterloo, Ontario, Canada, 87 pages (1995)
	GY	Hodes et al.	*Composable ad hoc location-based services for heterogeneous mobile clients,* Wireless Networks 5, pp. 411-427 (1999)
	GZ	Istepanian et al.	*Design of mobile telemedicine systems using GSM and IS-54 cellular telephone standards,* Journal of Telemedicine and Telecare, Vol. 4, Supplement 1, pp. 80-82 (1999)
	HA	Istepanian	*Modelling of GSM-based Mobile Telemedical System,* Proceedings of the 20th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Vol. 20, No. 3, pp. 1166-

Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

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			1169 (1998)
	HB	Kahn et al.	*Next Century Challenges: Mobile Networking for "Smart Dust"*, Department of Electrical Engineering and Computer Science, 8 pages (1999)
	HC	Miles	*System Monitoring, Messaging and Notification,* Proceedings of SAGE-AU, 15 pages (June, 1999)
	HD	Pavlopoulos et al.	*A Novel Emergency Telemedicine System Based on Wireless Communication Technology - "Ambulance",* IEEE Transactions on Information in Biomedicine, Vol. 2, No.4, pp. 261-267 (1998)
	HE	Prasad et al.	*Security Architecture for Wireless LANs: Corporate & Public Environment,* IEEE VTC, pp. 283-287 (2000)
	HF	Redl et al.	*GSM and Personal Communications Handbook,*ISBN 0-89006-957-3, 80 pages (1998)
	HG	Schlumberger	*Schlumberger Java SIMs and Over-the-Air Server Allow Sunday to Evolve Phones Into Multi-Service Terminals,* 3 pages (July, 1999)
	HH	Steiner et al.	*Kerberos: An Authentication Service for Open Network Systems,* Project Athena, Massachusetts Institute of Technology, 15 pages (1988)
	HI	Taylor et al.	*Internetwork Mobility: The CDPD Approach,* 334 pages (June, 1996)
	HJ	Wu et al.	*A Mobile System for Real-Time Patient- Monitoring with Integrated Physiological Signal Processing* Proceedings of the First Joint BMES/EMBS Conference Serving Humanity, Advancing

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Examiner Initials	**Reference Number**	**Author**	**Title of Article, Title of Journal, Volume Number, Page Numbers, Date**
			Technology, Atlanta, GA (October, 1999)
	HK	U.S.D.C. for the District of Delaware	Defendant's Initial Invalidity Contentions, including Appendix A-Z, AA and DD, 1046 pages (served on March 8, 2013)
	HL	U.S.D.C. for the District of Delaware	Defendant's Kowatec's Initial Invalidity Contentions, 3 pages (served April 15, 2013)
	HM	U.S.D.C. for the District of Delaware	Appendices DD-EE for Defendant's Kowatec's Initial Invalidity Contentions, 126 pages (served on April 15, 2013)

Examiner Signature: _____

Date Considered: _____

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

Section 4. Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted

This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior application Serial Number: 13/328,095, filed December 16, 2013.

[X] This application also relies, under 35 U.S.C. section 120, on the earlier filing date of prior application Serial Number: 12/538,603, filed August 10, 2009.

[X] This application also relies, under 35 U.S.C. section 120, on the earlier filing date of prior application Serial Number: 11/329,212, filed January 10, 2006.

[X] This application also relies, under 35 U.S.C. section 120, on the earlier filing date of prior application Serial Number: 10/296,571, filed, May 18, 2001.

The following references were submitted to, and/or cited by, the Office in the prior application(s) and, therefore, are not required to be provided in this application:

References: **AA, AC-AE, AG-AH, AJ-AK, AM-AR, AT-BI, BK-BM, BO-CP, CR, CT-DC, DE-DU, DW-DY, EA-EL, EO-EP, ET-FI, FM, FQ, GO**

Section 6. Copies of Listed Information Items Accompanying This Statement

Legible copies of all items listed in Forms PTO/SB/08A and 08B (substitute for Form PTO-1449) accompany this information statement.

[x] Exception(s) to above:

U.S. patent citations are not included pursuant to the United States Patent and Trademark Office's September 21, 2004 waiver of the copy requirement in 37 CFR 1.98 for cited pending U.S. patent citations when the patent citations are available in the USPTO's IFW system.

[ ] Items in prior application, from which an earlier filing date is claimed for this application, as identified in Section 4.

[ ] Cumulative patents or publications identified in Section 5.

Section 8. Translation(s) of Non-English Language Documents

Submitted herewith is an English translation of the following foreign language patents, publications or information or of those portions of those patents, publications or information considered to be material:

Reference **DX** is believed to be the English abstract of Reference **DW**
Reference **EB** is believed to be the English abstract of Reference **EA**
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Reference **FF** is believed to be the English abstract of Reference **FE**
Reference **FH** is believed to be the English abstract of Reference **FG**

Section 10. Identification of Person Making This Information Disclosure Statement

The person making this certification is the practitioner of record.

Dated: May 14, 2013

/Jonathan C. Lovely, #60,821/
SIGNATURE OF PRACTITIONER

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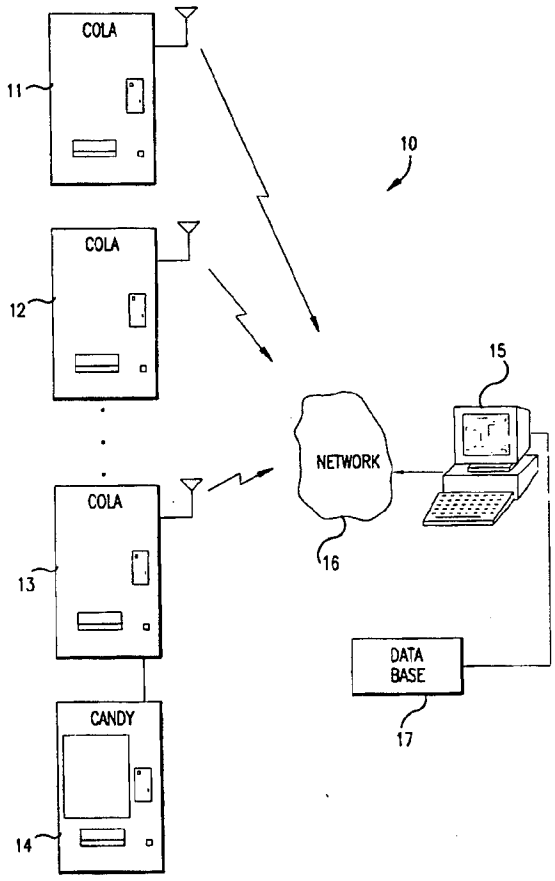
(54) Title: SYSTEM FOR MONITORING REMOTE VENDING MACHINES

(57) Abstract

A system for remotely monitoring a plurality of vending machines from a central computer. The system includes a sensing and communication circuit that monitors the operation of the vending machine, translates the monitored operation into a common signal form whatever the machine, and transmits data packets including pertinent information back to the central computer. The sensing and communication circuit includes a plurality of sensors disposed throughout the vending machine. A microprocessor reads the output signals produced by the sensors and generates a data packet that is indicative of the sensor values and the operation of the vending machine. This microprocessor is coupled to a modem that transmits the data packet over a network to the central computer system. The central computer is similarly equipped with a modem to receive the data packets. Information regarding the operation of the vending machines is displayed in a graphical format or printed in reports to allow a user to quickly determine the status of a remote vending machine. Further the data on the machines can be historically processed so as to provide status over time information.



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SYSTEM FOR MONITORING REMOTE VENDING MACHINES

Technical Field

The present invention relates to communications systems in general and, in particular, to systems for monitoring the operation of one or more remote vending machines and transmitting data from the remote vending machines to a central computer system.

Background Art

This application is a continuation in part of Application U.S. Serial No. 08/108,815 filed August 18, 1993, System For Monitoring Remote Vending Machines.

Vending machines, once provided by bottlers or shopkeepers solely as a secondary source of advertising or as a convenience to customers, are now viewed as significant sources of income. However, in order to operate a series of vending machines at a profit, an efficient system must be provided for adequately insuring security, maintaining, filling and removing money collected at the machines. Typically, a route of a number of vending machines employs service technicians who restock the machines, empty money and perform minor repairs on-site. These technicians often have a schedule to visit each vending machine at a predetermined time interval. The particular time interval used is often based on prior experience concerning when the machine will need refilling or when the change box will become full. If the service visits are too infrequent, the machine can remain empty for a period of time, thereby missing sales opportunities. Alternatively, if the service visits are too frequent, then the service technician's services are not being efficiently used. Also, visits are typically scheduled over a route of machines grouped together by geography no matter a particular machine's service needs.

In order to help vending machine operators become more efficient, prior systems for monitoring remote

vending machines have been proposed. For example, Sedam U.S. Patent 4,412,292 discloses a system that monitors the status of a vending machine and transmits data to a central computer via a dedicated phone line. Cedrone U.S. Patent 4,766,548 discloses a system for monitoring the operation of a machine and periodically reporting data from the machine to a central computer via a non-dedicated telephone line.

While such prior art systems have been available for several years, they have not achieved widespread use in the marketplace. One reason for this is that these systems require each remote vending machine to be connected to its own telephone line. Providing each vending machine with a telephone line presents numerous problems including the fact that the telephone company must be called to install a line for each machine. The telephone line extending from the machine is subject to vandalism or unauthorized use and the fact that once a vending machine is coupled to a telephone line, it is inconvenient to move the machine to another location.

An alternative communications system between a vending machine and central computer is disclosed in Jackson U.S. Patent 5,142,694. Jackson discloses a system whereby a dedicated, special purpose radio communication system is used to transmit information from the remote vending machines to the central computer. The problem with this type of radio frequency communication system is that a vending machine operator must purchase specific radio communications equipment for which the operator may not have the skill or support staff to maintain. Also, the operator may have to lease space throughout a given geographic area at which to place numerous radio transceivers or repeaters. Finally, such a radio communication system occupies space on the radio frequency spectrum that may be prohibitively expensive to purchase or utilize.

In addition to the above, most vending machine manufacturers have proprietary wiring and internal communication systems within their vending machines, wiring and communication systems which may even vary between successive machines of the same model type. This presents problems for any monitoring of the operation of remote vending machines by typically requiring a system to be useable with only a single type of machine. This necessitates a uniquely designed and built monitoring and communication system for each type of machine. The uniqueness of individual machines also presents problems in developing correct monitoring system reports due to the difference between the information available machine to machine.

In light of the problems with the prior art systems for monitoring and communicating with a remote vending machine, there is a need for a new type of vending machine monitoring system. The system should not require a dedicated telephone line to be connected to each vending machine or the use of specialized radio frequency communication equipment. The system should allow the owner or operator of one or more vending machines to automatically keep count of the product delivered by the machine, the money collected, maintenance problems, and/or alarm conditions experienced at a remote vending machine. The information should be presented to an operator in an intuitive fashion, thereby allowing the user to readily determine the status of a remotely located vending machine. The information should be retained and/or organized so as to communicate meaningful data about the user's business, and then be summarized in reports on conditions.

In addition, the information should be presented to the operator in a common way for all vending machines so as to allow the operator to more easily comprehend and act on such information.

Disclosure Of Invention

The present invention is a system for monitoring the operation of a remotely located vending machine. A plurality of sensors are disposed in the vending machine to sense the operation of the machine, as well as machine malfunctions. Preferably these sensors are tied in directly but not invasively to the machines wiring harness. The sensors are coupled to a microprocessor circuit, which reads the set of output signals produced by the sensors. The microprocessor creates data packets that are indicative of the output signals to be transmitted to a central computer system. The data packets of many units may be combined for unitary transmission. A modem is used to transmit the data packets to the central computer system over a network. The data packets are received by a second modem coupled to the central computer system and the information regarding the output signals of the sensors are stored in a database.

The central computer displays the information received from the vending machine in alternate formats, including graphically so that a user is able to easily determine the operating condition of the vending machine. In addition, the central computer is optionally able to transmit data packets to the remote vending machine in order to read the memory of the microprocessor in the vending machine, rewrite the memory of the microprocessor, set operating conditions of the vending machine that constitute an alarm condition, and define what alarm conditions are critical.

The central computer optionally can also transmit data to the remote vending machine that sets a password for a service technician to be entered upon servicing the vending machine as well as transmitting message data to be read by the service technician during a service call. The present invention may also include a handheld data entry terminal that is used by a service technician to inform the microprocessor of the amount of

product added, the money removed from the machine, the amount of change left in the change counter, etc. if the system utilizes such at the machines location. The handheld terminal can communicate with the microprocessor using an infrared optical link or through a lead, which is attachable to a serial plug in the vending machine. The data is retained and can be manipulated in the central computer so as to enable the operator to utilize the data meaningfully over time on a comprehensive basis.

Brief Description Of The Drawings

The foregoing aspects and many of the attendant advantages of items in the invention will become more readily appreciated as the same becomes better understood by reference to the following detailed description, when taken in conjunction with the accompanying drawings, wherein:

FIGURE 1 is a block diagram of a system for remotely monitoring a plurality of vending machines according to the present invention;

FIGURE 2 is a representational block diagram of the system for monitoring a plurality of vending machines as shown in figure 1;

FIGURE 3 is a representational block diagram of a tap in adaptor assembly for use in adapting individual unique machines to the sensing and communication circuit of the present invention;

FIGURE 4 is a block diagram of a sensing and communication circuit according to the present invention that is disposed in a remote vending machine;

FIGURE 5 is a state diagram showing the operation of the sensing and communication circuit disposed in a remote vending machine;

FIGURE 6 is a flow chart showing the operation of the sensing and communication circuit in a control mode;

FIGURE 7 is a flow chart showing the operation of the sensing and communication circuit in a communications mode;

FIGURE 8 is a flow chart showing the operation of the sensing and communication circuit in a service mode;

FIGURE 9 is a flow chart showing operation of the sensing and communication circuit in an analyze mode;

FIGURE 10 is a flow chart showing the operation of the sensing and communication circuit in an alarm mode;

FIGURE 11 is a diagram showing the structure of a data packet transmitted between a remote vending machine and a central computer system;

FIGURE 12 shows a handheld data entry terminal that is used to enter data directly to the sensing and communication circuit shown in FIGURE 4;

FIGURE 13 is a block diagram of the handheld data entry terminal;

FIGURE 14 shows a graphical representation of a remote vending machine that is produced by the central computer system; and,

FIGURE 15 shows a graphical representation of a route of remote vending machines that are monitored by the present invention.

Modes For Carrying Out The Invention

FIGURE 1 is a block diagram of a system 10 for remotely monitoring a plurality of vending machines according to the present invention. The system 10 monitors the operation of a plurality of remote vending machines 11, 12, 13, 14 and transmits data indicative of the operation of the vending machines to a central computer system 15. Each vending machine is equipped with a plurality of sensors (not shown) that monitor the operation of the machine to determine the amount of product dispensed, whether there has been any unauthorized entry, if there has been power failure, as well as other

operating conditions as will be described in further detail below. The sensors may be directly tapped into the wiring harness or otherwise present. Each vending machine further includes a modem (not shown) that is used to transmit data to the central computer system 15 over a link 16 that is provided by a network.

As will be further described below, each vending machine is equipped with a sensing and communication circuit that reads the data from a plurality of sensors and transmits one or more data packets to the central computer 15. The central computer 15 includes a suitable modem, which is coupled to the network in order to receive the data packets. The central computer system includes a database system 17 that stores the information received from each remote vending machine as well as produces written reports. The central computer 15 can read from the database to inform a user of the operating status of any vending machine that is or was in contact with the central computer.

Although the present invention is described with respect to vending machines and in particular to soft drink dispensing machines, those skilled in the art will realize that the present invention can be used with other types of vending machine, such as cigarette and candy machines, telephones, copiers, as well as numerous other types of machines where it is desirable to remotely monitor the operation of the machine.

FIGURE 2 is a block diagram of an example electronic system for remotely monitoring a plurality of vending machines according to the present invention.

The invention begins with the vending machines. The vending machines are devices which provide the consumer with goods and/or services dependent upon receipt of some kind of payment. Most goods type vending machines are similar in that they typically contain an inventory of a variety of items for acquisition by the consumer. Each of these items is individually present in a certain

quantity, with payment for varying items typically being different for different types of goods and/or services. The vending machines also typically contain a coin slot or dollar bill receptor and occasionally a credit card or other identifying card for consumer payment for the goods and/or services. Some vending machines further contain some sort of temperature altering means such as a refrigerator cooling mechanism or a heating/cooling system. In addition to the above, vending machines typically have some sort of secure method for allowing service personnel to physically open the vending machine box in order to replenish the inventory and otherwise maintain the machine. Typical vending machines thus have a great deal in common with each other no matter what the particular goods or services they may be providing and no matter whom the manufacturer.

In spite of the above commonality, the actual physical mechanical and electrical parts of each vending machine vary dramatically between types of vending machines and also vary between the many individual manufacturers of such vending machines. Further, it is not uncommon for even a set type of a particular vending machine manufactured by a single company to have differing internal components, albeit a more subtle difference than the ones previously set forth.

In order to compensate for these vast electrical and mechanical differences between vending machines, the present invention uses data acquisition units 20 so as to interconnect varying types of vending machines to a single universal system while also providing a relatively uniform signal content, this recognizes the common elements of virtually all vending machines. The data acquisition units 20 themselves can be hard wired into location, otherwise connected and/or it may be a system designed to interconnect partially or totally directly with the manufacturers wiring harness in the vending machines. This latter is preferred. It may differ between machines

and/or contain custom electronics and/or smart chip type programming individualized for a given machine or otherwise differing locations within the remote monitoring system. Its various functions can also be separated and located at differing places across the remote monitoring system. In any instance, the purpose of the data acquisition unit is to provide for a single type of output with a relatively constant signal format no matter what the particular vending machine may be. The data acquisition unit thus provides a common type of signal for representing or indicating the available inventory of any particular item, the operational parameters of the machine, and other operational elements present in most vending machines. By reducing the varying nature of the elements of the vending machines no matter what the manufacture to common elements at the vending machine, the remainder of the system 10 can be the substantially the same for any installation, this even though the system may be utilized with many differing types of vending machines.

An example data acquisition unit system is shown in figure 3. In this figure, the example vending machine has a wiring harness containing three connectors 22, 23, 24. This recognizes the varying systems that may exist in any particular vending machine. Connector 22 of these particular connectors is matrix coded in order to provide a multiplicity of functions far in excess of the number of wires (matrix coding is fairly typical)(see for example Giacomo U.S. Patent 4,598,378). The nature and operation of these wires and their functioning are familiar to any one skilled in the art.

The particular data acquisition unit 20 shown in FIGURE 3 has some forty inputs (12 for row information, 12 for column information, 8 for alarm, and 8 for other information like signal duration). The alarm inputs may be set for automatic immediate or delayed transmission. The particular data acquisition unit 20 shown is a

universal data acquisition unit for interconnection to many differing type of systems. It thus has a number of inputs which allows interconnection to most types of vending machines (in the example shown 40 contacts in number) even though for a given machine not all contacts might be utilized. With this number of incoming matrix contacts, the data acquisition unit 20 can output a common signal representative of 144 vending choices in addition to any other operational element sensors to the later described remote link unit 30. Note that it is not necessary for the decoding or processing of signals, matrix or otherwise, to occur at the data acquisition unit 20. In specific, the data acquisition unit 20 could as shown in FIGURE 3 merely record the signal content on the various wires and/or sensors in the vending machine, signal content including the occurrence of simultaneous events. This signal content could then be passed over the later described network with a computer at the remote monitoring location utilizing a specific sub-routine to decode and utilize the signal content. While this would increase the complexity of the software at the computer, it could lower the cost of the data acquisition unit 20. In the event of this type of splitting of the functions of the data acquisition unit 20, the common signal output would preferably be a specific number of possible data information signals (for example 40 for all machines in a system) together with a simultaneous occurrence coding for at least some of such signals. By decoding the common signal at the later described computer 15, the length of the common signal is reduced relative to a decoded signal. If desired, the date acquisition unit 20 could decode the signal content of the inputs to reflect the actual information thereon. The output would still be in a common signal form, albeit decoded. It is preferred that no matter what the common signal form is, any information that has not changed between transmissions should be ignored. This could be accomplished by the transmission

of a short no-data code for such inputs, an end data code at the end of a row after the last active vend cycle in that row, or otherwise. This reduces the length of the common signal for a particular machine to that necessary to accurately reflect the status of that particular machine. For example in a three column machine, 141 of the described matrix coded vend indicators are irrelevant. They can thus be omitted for this particular machine without compromise to the overall system. This processing preferably occurs at the later described remote link unit 30.

Preferably the common signals are converted into serial form by the data acquisition unit 20.

The contacts of the data acquisition unit 20 shown are interconnected to the connectors 22, 23, 24 in the vending machine through a custom made tap cable assembly 25. This assembly 25 would be custom made for each basic type of vending machine so as to allow easy plug in type interconnection to the various vending machines. Thus for a multiplicity of machines a single data acquisition unit could be utilized merely by changing the tap cable assembly. The tap cable assembly shown would preferably be connected to the machine recognizing the nature of the data acquisition unit 20. In the example shown, row signals to row inputs, column signals to column inputs, etc. This provides for a common output for all machines.

The data acquisition unit 20 itself converts the specific signals on the wiring harness 22, 23, 24 into a common type of output signals for use with a later system. Note that in addition to the electrical and mechanical parts already in the vending machine, additional sensors may be provided, which sensors were not included in the original vending machine. Examples of this would be a compressor status sensor, temperature, door switch sensor, and a display malfunction sensor. These sensors would be provided by the remote sensing company, and individually

run 27 into the system. This can be directly (as in respect to machine 13) or indirectly through the data acquisition unit 20 (as shown in respect to machine 14). This latter is preferred in that it reduces the number of wires interconnecting with the later described universal bus. Certain sensors could be located on the data acquisition unit's circuit board so as to minimize the necessity of individual placement thereof. An example of this would be use of a photo electric eye sensor for door opening instead of a direct door sensor.

The output signals from the data acquisition unit 20 may include vend events typically identified by row and column to the later described remote link unit 30. This is typically an intermittent signal. The data acquisition unit 20 also provides information relative to the other operational elements of the vending machine. Examples include temperature, compressor status, change out, intrusion alarm, and other parameters. These typically are on/off steady state or longer length signals. In the preferred embodiment shown, these latter are fed into special alarm inputs on the data acquisition unit 20, thus recognizing their special status.

In the preferred embodiment disclosed, the common communication standard includes utilizing the same signal content for every vending machine no matter what its type, preferably a standard based on the most complex machine typical to a particular vending operator. For example, for each machine, the information could contain location identification code, machine identification code, inventory by row and column (for example 12x12), entry status, compressor status, temperature status, coin changer status, power status, and unit link status. This would be true even if a specific particular machine had lesser capabilities, for example, no rows, three columns, and no compressor, temperature, or coin changer status sensors. Programming, a specific no signal bit, and/or lack of signal content would inform the later described

computer of the particular machines actual capabilities. Again, the decoding and/or processing of the signals could occur at a differing location. In the preferred embodiment shown, the decoding occurs at the later described computer.

The amount of inventory, especially for certain vendors where it is difficult to physically determine, would preferably be updated indirectly based on some indirect parameter, for example based on the number of coffee cups or snacks of a particular type dispensed (i.e., vend events). While approximate, this would avoid the necessity of direct measurement via a separate sensor. This inventory can be maintained at the vending machine or at the remote monitoring location as later set forth. The latter is preferred.

Note also that although this matrix data acquisition unit 20 is shown by way of example, other data acquisition units could be utilized. Indeed a given system might produce the common signal content with a variety of data acquisition units. This might include the set forth matrix coded unit 20 of figure 3, a universal column only unit, and/or specifically designed unique machine specific units. For further example, an individual hard-wired data acquisition unit could be provided by reverse engineering the signals on the cables, for example 22, 23, 24, so as to have the data acquisition unit 20 detect the respective operations of the various parts of the machine and to provide a signal indicative of these conditions in a common form on the universal bus 21. Appropriate diodes, transistors, smart chip PROM based devices, and/or integrated circuits could be utilized in the data acquisition units. This latter technique would be particularly appropriate under circumstances where a given manufacturer utilizes a common wiring technique in many given machines across its product line or where certain machines follow certain universal techniques. In addition as previously set forth, the mere existence of

signals could be passed along the universal bus with the intelligent decoding and utilization of such signals occurring at a differing location, for example the later described remote link unit 30 or computer 16. Although much more time consuming, during installation the data acquisition unit 20 could also be hard wired directly to the various sensed components in the particular vending machine, such connections preferably being made in the same manner no matter what the type or manufacture of the vending machine.

The universal bus 21 interconnects the data acquisition units to the remote link unit 30. The nature of the bus 21 is not important. The bus could be over the power lines (as with an X-10 bus), short range radio, hard wired, or otherwise. While technically nothing prevents this bus 21 from being a parallel bus, due to present communications technology serial communication across the later described network is preferred. For this reason at someplace in the system it is preferred that the signals representative of vending machine conditions be present in serial form. In the embodiment shown and described this conversion occurs at the location of the data acquisition unit 20, either integral or closely associated therewith. This simplifies the bus 21 while allowing also for serial communication between the described slave units and the master communications unit as well.

The bus 21 is preferably bidirectional so as to allow the remote link unit 30 to sequentially contact each machine connected thereto for singular processing. The bus 21 disclosed is a hard wired RS-485 bus.

The remote link unit 30 is designed to control the communication of a particular location of vending machines through the network 16. Normally, the same type of remote link unit 30 would be utilized for any particular vendor's operations. This lowers cost and simplifies the installation. Preferably this remote link unit 30 utilizes common memory and communication standard

commands so as to lower the costs of the later described network 16. Note that since there is only normally one remote link unit 30 per location, the remote link unit 30 can include some processing capacity (for example decoding of signals across the bus 21 from the data acquisition units 20 or keeping track of things such as inventory) in addition to its communications capacity without unduly increasing the cost per vending machine of the system.

The particular remote link unit 30 disclosed includes a central processing unit link controller and a machine status memory.

The link controller operates the network 16 depending on status of the signals coming down the universal bus 21 or, optionally, as instructed by the computer 15. An example of the former would be if one of the various alarm circuits for the vending machines 13, 14 are triggered or if the system was set up for automatic transmittal at a certain time in the day. An example of the latter would be the computer 15 actively polling the particular location in order to ascertain the status of the various vending machines.

As the status of the vending machines changes, the signals over the universal bus 21 shown are stored in the vend event and status memory. It is preferred that this memory be non-volatile in order to maintain its information under power loss and other abusive conditions. In respect to routine information, for example, status of vend events, the information is stored in the memory subject to forwarding to the computer 15 at an acceptable time. In the case of other, for example alarm information, this information is normally in addition automatically passed from the remote link unit 30 to the network 16, and thus to the computer 15, automatically at a time when the computer 15 is first able to receive such information. This allows for the vending machine operator to be informed of problems with the machine even though the operator is not then in interconnection with the

particular vending machine. A simple way to provide for this automatic transmission could be based on alarm determinative factors, for example based on the specific input to a data acquisition unit 20 or on the length or nature of the signals output from the various sensors. In respect to the former, the remote link unit 30 can be programmed to pass along automatically any signal that is fed into an alarm input (or perhaps only specific ones) of this data acquisition units 20. Optionally the data acquisition units 20 could have critical alarm inputs for immediate transmitting and non-critical alarm inputs for routine transmission. In respect to the latter, routine information (for example a vend cycle of a particular item or change deposit) are short signals while non-routine information (for example door open or temperature malfunction) are longer length typically constant signals. One could therefore easily provide an automatic transmission means to pass the latter automatically across the network while storing shorten length signals for regular transmission. In the case a signal might be of longer length while being considered non-critical, an addition device, for example a one shot and short length hold circuit, could allow sensing but not automatic transmittal of the signal. An example of a long length non-critical signal might come from a column inventory depletion sensor. Additional example, if the remote link unit 30 was programmable, it could be programmed to only send certain alarm signals automatically, waiting for normal transmission for non-critical alarms. Further example automatic transmission of alarms could occur at this remote link unit with the computer at the remote monitoring location programmed to recognize and display as alarms only those specifically enabled by the operator, preferably storing others for later recognition.

In addition to the above, it is preferred that the operator using the system be notified of a critical alarm status. For this reason, virtually every later

described screen the operator views has a green dot that turns red on an enabled alarm condition. By clicking on this red dot, the operator is directly connected to the screen showing the alarm together with its nature. If there are multiple alarms, they are presented sequentially.

As previously set forth, in the preferred embodiment disclosed, the common communication standard includes utilizing the same signal content for every vending machine no matter what its type, preferably a standard based on the most complex machine typical to a particular vending operator. Programming a no signal bit and/or lack of signal content would inform the later described computer of the particular machines actual capabilities.

Normally there is one remote link unit per location, this whether the vending machine is a stand alone or is banked with other machines. In the latter preferably everything after the universal bus 21 is located in a single vending machine, the communicating master unit, with the other banked vending machines, slave units, interconnected thereto. This master/slave adaptation lowers the cost of the system by allowing one communicating remote link unit 30 per bank of vending machines. It is also possible with appropriate connections (for example short range ratio, power line X-10, or hard-wired) between various banks at a given location, only one remote link unit 30 per location. This significantly lowers the cost and complexity of the overall system.

The remote link unit 30 normally has its own unique address so as to allow individual access thereto. Further, normally there is some additional security, such as a password or encryption system, in order to maintain the unit safe from outside intervention.

It is preferred that a local interface 31 be provided in respect to the remote link unit 30 so as to

allow service and maintenance personnel to determine and correct any problems with the system. The local interface 31 is typically a handheld key pad with display. Such an interface 31 allows the personnel to operate the remote link unit locally.

It is preferred for cost reasons that the remote link 30 act primarily as a store and forward device, transmitting a common signal showing the number of vend cycles by row and column and, as appropriate, the status of the other operational elements of the particular machine. (This information preferably would be provided by no signal if conditions were unchanged.) Again the common signals could be signal existence including simultaneous coding with this information utilized and decoded at the later described computer or it could be actual data such as vend cycle and alarm status. For cost considerations, the remote link 30 can be a transmit only unit programmed to transmit its vend data along the later described network at a particular time. This vend data could be transmitted a number of times at spaced periods to insure reception at the computer by redundancy. Differing remote units would be programmed to send their respective information at differing times so as to avoid overlap if a single channel is utilized. An in use sensor and delay would prevent simultaneous transmission in the event of overlap. The delay would be preferably be preset to a period of known no transmission occurrence, even in the event multiple remote units are delayed. (After transmittal, if desired, the vend data could be stored in a memory as inactive information so as to provide a fail safe backup. However, since the same information can be ascertained by physical examination of the machine, this is optional.) Again for cost considerations, any alarms could be set to trigger immediate transmittal without record into memory. (Since alarms normally have steady state, they will maintain themselves until the indicated condition is taken care of.)

The remote link unit 30 optionally can have its own processing unit programmed with various types of information and also to auto reset to predefined defaults at the end of a service cycle (with or without auto-reset code input). In respect to inventory, these defaults preferably are the maximum number of items set as present in any particular vending slot. The defaults also may include the various thresholds, temperatures, and/or conditions for alarms and/or particular indications in the later described computer 15. With the local interface 31, the service personnel can update the inventory if there is a discrepancy in any particular individual slot as well as redefining the other various attributes of the link controller and/or memory.

The remote link unit 30 communicates with the computer 15 over a network 16. The network 16 is any sort of communication system which will allow data from the remote link unit 30 to be provided to the computer 15. This includes radio, cellular phone, and other known communication systems. Wireless systems are preferred. Note that due to the limited data which has to be transferred on the network 16, the requirement for the speed, clarity, and lack of noise for the network is minimal. Redundant and relatively slow transmittal is acceptable.

The network 16 can be bidirectional, allowing communication as well from the computer 15 to the remote link unit 30 as well. This would also allow the computer 15 to verify that all the information has in fact been received from the remote link unit 30. It would also allow the computer 15 to initiate transmission of data from the remote link unit 30, to modify the operation of the link controller and/or contents of the remote link unit 30 memory, and to otherwise remotely operate the system 10.

With more sophisticated electronic indication vending machines, the bidirectional network 16 could also

be utilized to alter the pricing of various commodities. An example of this would be lowering the cost of coffee at a particular time as an employee benefit or in order to get rid of stale inventory. A further example of this would be to increase the cost of particular items during periods of high demand and/or low inventory.

A controller 32 is located between the network 16 and the computer 15. The purpose of this controller 32 is to allow the computer 15 to control the network 16. In the particular embodiment disclosed, the controller 32 also converts the incoming and outgoing data into a form transmittable over the network. This currently would be serial digital data.

The controller 32 in addition is interconnected to a separate alarm indicator 33. This alarm indicator provides a direct indication of the nature and location of an incoming alarm. This allows the operator to utilize the computer 15 for other types of independent processing. It also provides an alarm indication under circumstances when the computer 15 is off line for whatever reason. Note in the case of multiple tasking computer, the alarm indication could be provided also by a load and stay resident program that constantly analyzes the incoming signal for an alarm indication, becoming active upon the receipt thereof. This would also allow for the generation of a red alarm dot on any screen of the display (for example a word processing program).

The computer 15 communicates with the controller 32 in order to operate the network 16. The particular computer 15 disclosed communicates with the controller 32 over an RS-232 serial cable. In addition, the computer 15 analyzes the incoming data in order to provide a readout of the status of the various vending machines which are interconnected thereto. If the common signals are coded, decoding would preferably occur before data processing.

Normally, the computer 15 obtains the data by polling the remote communicating master units for vending

information. As each individual communicating master unit has its own ID code, it is possible for a single computer 15 to extract this information from multiple vending locations without confusion. The computer 15 would normally actively poll or automatically receive data from the various communicating master units under its control sequentially at certain set times. Since all of the incoming data is in a uniform condition due to the data acquisition unit 20, a single database with uniform parameters can be utilized no matter what the make or model of the polled vending machine.

For cost considerations, the computer 15 could keep track of the inventory located in a particular machine by the number of vend cycles for a particular item (for example instead of the remote link unit 30 doing so). These vend cycles would be cumulatively added within the computer with the result subtracted from the number programmed into the machine (normally the maximum number of that item the machine can contain). This programming could occur automatically (for example upon entering a particular machine make and model) and/or manually. The computer would preferably reset to the number programmed into the machine on indication of a service call. The service person would be under instructions to fill each item to this amount. The computer would thus track inventory theoretically. Minor deviances would be accepted as a cost of this simpler system. Optionally these deviances could be tracked, for example by using the local interface. One could also use computer or bar coded inventory control to automatically update the number programmed into the machine to the actual amount of inventory actually used by service personnel. Under this system since the computer generates the inventory requirements, the computer would update its memory based on the inventory actually ordered by the machine. With such a system, it would be possible to have the computer generate an inventory requirement by normal container

multiples (for example 24 in the case of pop cans) with the inventory reflected in the computer updated by such container multiples.

Ideally, the computer 15 contains a long term memory into which it archives historical data. This long term memory allows the operator to track what is occurring in the vending machines over a period of time. This allows the operator to determine what is selling and what is not, where it is selling, when he must rotate the stock, the maintenance condition of the vending machine, the problems that any particular vending machine may have had, and other historical attributes of the vending machine and its operation.

The particular system disclosed, in addition to the above, includes a data records system 34 and a paging system 35.

The data records system 34 directly archives data from the controller 32 into a record system independently from the computer 15. This automatically backs up the vending machine status data in the event of damage to the computer and/or vandalism. It also provides for third party acquisition of the data from the vending machines, for example for a university study on the purchasing habits of the American public.

The paging system 35 directly contacts an individual at remote locations with the status of the vending machines, most particularly if an alarm occurs. This allows an individual who is not on-site of the computer 15 to be made aware of an alarm condition so that it may be handled. Preferably, the pager system 35 automatically provides the individual with the location of the vending machine together with the type of alarm. This latter allows the individual to selectively ignore a low inventory alarm while advising him of the seriousness of an intrusion alarm. This prevents the inconvenience to the operator of what might otherwise be considered to be nuisance alarms. The pager transmitter is preferably

located at the computer 15. This allows a single paging transmitter to be utilized for an entire vending route.

The above block figure is given by way of example and it is to be understood that the positioning of the parts may be changed and/or combined without deviating from the overall operation disclosed.

FIGURE 4 is an example block diagram of a hard wired sensing and communication circuit 50 representative of a complex remote link unit 30 according to the present invention. Each remote vending machine shown is equipped with a sensing and communication circuit 50 in order to monitor the operation of the vending machine and transmit data packets to the central computer system over a network.

The sensing and communication circuit 50 shown includes a plurality of optocouplers 52, which detect the presence of a 120 volt AC or other power signal within the vending machine. For example, a typical signal could be a vend event for one item within the machine. Each optocoupler has five leads 54, 56, 58, 60 and 62. In this case, the first lead 54 is coupled to the element within the vending machine at which the application of power is to be sensed. The second input lead 56 is connected to a neutral line. An output lead 58 is coupled to an I/O point 80. The lead 58 shown carries a digital logic level signal that indicates the presence or absence of the 120 volt AC signal on the input lead 54. The optocoupler 52 itself is powered by a DC voltage supplied on the lead 60 and is coupled to ground by the lead 62. In a typical vending machine, all of the motors, the compressor and indication lights are powered with the power signal, in this case 120 volts AC. Therefore, a plurality of optocouplers 52 are used to monitor the operation of these elements.

The sensing and communication circuit 50 also includes one or more switches 70. These switches typically are DC. A typical example would be an out of

units temperature sensor. In the example given, each switch includes a lead 72 that is pulled to a logic high voltage (i.e., +5 volts) by a resistor 74 that is coupled to the voltage supply (i.e., +V). Closing the switch 70 connects the lead 72 to a ground potential through a lead 76. The lead 72 is coupled to the I/O point 80. The example sensing and communication circuit 50 further includes other sensors, in this case a temperature sensor circuit 77, which monitors the temperature of the vending machine. The temperature sensor 77 provides an output signal on a lead 78 that is coupled to an input of the I/O port 80. This temperature circuit 77 provides a logic high level signal if the temperature within the vending machine exceeds a predetermined maximum. A logic low level signal is produced on the lead 78 if the temperature is below the predetermined maximum.

The example I/O port 80 is coupled to a microprocessor 84 by a conventional set of bus and control leads 82. The I/O point 80 shown includes at least three 8-bit registers (not separately shown) that can be coupled to the output signals provided by up to 24 sensors. The status of these sensors is thus determined by reading one bit of one of the 8-bit registers. For example, assume bit two of a register is coupled to an optocoupler sensor that detects when a power 120 volt AC signal is applied to an "exact change required" light in the vending machine. By reading bit two, the microprocessor can tell if exact change is required. This type of long term or length signal is easily detected at a single time. Other parameters in the vending machine can only be detected by keeping track of the sensor inputs over time. For example, assume bit three of a register in the I/O port is coupled to an optocoupler that senses when power is applied to a compressor in the vending machine. By reading bit three and keeping track of when it is a logic and when it is a logic zero over a period of time, the

microprocessor can determine how many times the compressor cycles. Excessive cycling indicates a faulty compressor.

Also coupled to the example microprocessor shown, through the set of bus and control leads 82 is a nonvolatile random access memory (RAM) 86 and a read only memory (ROM) 88. The ROM 88 shown has encoded thereon a suitable computer program that causes the microprocessor to read the signals produced by the plurality of sensors and transmit the status of the sensors to the central computer 20 as will be described.

The example sensing and communication circuit also preferably includes a universal asynchronous receiver/transmitter (UART) 90 and a modem 94. The UART 90 converts parallel data transmitted on the bus 82 to asynchronous serial data that is in turn transmitted on a lead 92 to the modem 94 as well as converting serial data received by the modem 94 to parallel data that can be read by the microprocessor 84. The modem 94 shown is a 1200 baud modem that is designed to transmit and receive digital signals using a modulated analog carrier signal that is transmitted over a network. Other transmission standards could also be utilized. Coupled to the example modem 94 is a suitable antenna 96 that transmits and receives signals oven the network. For ease of programming and compatibility, the modem 94 shown is a Hayes compatible and transmits and receives digital data using a well defined protocol. Other modems and speeds could also be utilized as well as other communication techniques. Programming such a modem will be readily apparent to one of ordinary skill in the computer communications art.

The sensing and communication circuit 50 shown includes an infrared serial port 100 which is coupled by a lead 102 to an infrared transmitter 104 and an infrared receiver 106. The infrared serial point is used to transmit and receive data from a handheld data entry terminal carried by a service technician.

Additionally, in this unit a serial jack 108 is coupled to the lead 102 in order to transmit and receive data from a handheld data entry terminal that is plugged directly into the serial jack.

Finally, a battery backup circuit 110 can be used to operate a communication circuit if power to the vending machine is interrupted.

FIGURE 5 is an example state diagram 150 showing a plurality of modes in which the example microprocessor that runs the sensing and communication circuit 50 could operate. The example microprocessor has at least five distinct modes: a control mode 160, a communications mode 190, a service mode 250, an analyze mode 290 and an alarm mode 340.

Upon powering up of the sensing and communication circuit, the example microprocessor immediately enters the control mode 160. Here the microprocessor polls the modem for a connect signal received from the central computer system. Once a connect signal is received, the microprocessor leaves the control mode and enters the communication mode 190 in order to transmit and receive data packets to and from the central computer system. If there is excessive noise on the communication link or the modem detects a disconnect signal, the microprocessor leaves the communication mode 190 and returns to the control mode 160.

If no signal is received, the example microprocessor shown polls the I/O point 80 shown in FIGURE 4 to determine the status of the plurality of sensors disposed in the vending machine. If one of the sensor inputs indicates an alarm condition, the microprocessor leaves the control mode and enters an alarm mode 340.

In the example alarm mode, it is determined if the alarm condition is critical. If the alarm is not critical, the microprocessor returns to the control mode and will inform the central computer system of the alarm

condition the next time the central computer system shown contacts by a call to the remote vending machine. If the alarm is critical, the remote vending machine initiates a call to the central computer system and immediately informs it of the alarm condition.

Another condition the example microprocessor looks for (by reading the sensor inputs) is a service call made by a service technician. Upon detecting that a switch disposed in the door of the vending machine has been activated by someone opening the door, the microprocessor shown waits for a code or predetermined amount of time for a service technician to enter a predetermined Personal Identification Number (PIN). If this is entered within the predetermined time, the microprocessor leaves the control mode 160 and enters a sensor mode 250. In the service mode, the service technician could typically enter data regarding the amount of product added to the machine, the amount of money removed from the machine and the amount of change placed in the change maker. Once the example microprocessor detects that the service call is complete, a check is preferably made whether the remote vending machine should initiate a call to or otherwise contact the central computer system immediately or should wait until the central computer system calls the remote vending machine in order to inform the central computer that a service call has been completed. If the remote vending machine is instructed to contact the central computer system upon completion of the service call, the microprocessor leaves the service mode 250 and enters the communications mode 190. Otherwise, the microprocessor leaves the service mode 250 and returns to the control mode 160.

In the example communication mode 190, the example microprocessor transmits and receives data packets to and from the central computer system over the network 16. After all the data packets have been sent from the remote vending machine to the central computer system, the

vending machine might query the central computer system to see if the central computer needs to transmit any data to the remote vending machine. If a data packet is received from the central computer system, the microprocessor leaves the communication mode 190 and enters an analyze mode 290.

In the example analyze mode, the data packet shown received is tested to determine the appropriate type of action the microprocessor should take. Possible actions include transmitting the contents of the microprocessor's memory, reprogramming the microprocessor's memory, testing the alarm system, reprogramming the communications to the central computer system, and resetting the alarm criteria and/or a set of alarm response bits that define which alarm conditions are critical. Once the received data packet is analyzed and the example microprocessor has performed the task required by the data packet, the microprocessor shown leaves the analyze mode and returns to the communications mode in order to wait for an additional data packet to be transmitted. If the microprocessor was instructed by the received data packet to test the alarm system, the microprocessor leaves the analyze mode 290 and enters the alarm mode 340.

FIGURE 6 is an example flow chart showing in greater detail the steps that might be taken by the example microprocessor as it is operating in the control mode 160 described above. Starting at a step 162, the microprocessor proceeds to set up the modem in a standard protocol at step 164, a Hayes 1200 baud protocol shown. In the example, the data transmitted by the modem is transmitted using a modulated analog carrier signal over an ordinary communications medium. As will be described in this example in further detail below, this is possible because the amount of data transmitted between the remote vending machine and the central computer system is relatively small and the data is retransmitted if it is

not received correctly. Thus, the present invention is able to withstand errors that may occur during transmission and does not require the use of a modem that is specifically designed for transmitting high speed digital data.

Once the example modem has been set up, the microprocessor shown then polls the modem for a connect signal to be generated by a call received from the central computer over the network at a step 166. If the connect signal has been received, the modem is instructed to go "off hook" at a step 170 and the microprocessor enters the communications mode at a step 172. If no connect signal is received, the example microprocessor reads the I/O port 80 to determine the status of the plurality of sensor inputs at a step 174. At a step 176, it is determined if an alert condition exists. In some cases this is accomplished simply by reading the status of the sensor output signals. For example, if the output signal of the temperature sensor is a logic 1, then a temperature alarm exists. Other alarm conditions can be determined by following the changes in the sensor output signals over time such as the compressor cycles example described above. If an alarm condition exists, the microprocessor leaves the control mode and enters the alarm mode at a step 178.

If no alarm condition is present, the example microprocessor reads the status of a switch connected to the door of the vending machine at step 180 in order to determine whether the door of the vending machine has been opened. If the door has been opened, the microprocessor shown enters a service mode at a step 182. If the door is not open, the microprocessor loops back to step 166 where the modem is again polled to determine if a connect signal has been received.

FIGURE 7 is an example flow chart showing the steps taken by the microprocessor shown when operating in the communications mode 190. Upon entering the

communications mode from the control mode, the microprocessor polls the modem to determine if there is excessive noise or if a carrier is no longer present over the network at a step 192. If the answer at step 192 is yes, the microprocessor returns to the control mode at a step 194. Assuming that the noise on the communications link is not excessive and the carrier signal is still present, the microprocessor polls the modem to determine if a recognizable signal, a "not acknowledge" (NAK) signal shown has been received at step 196. Under the communications protocol followed by the remote vending machines and the central computer system, the central computer system indicates to the remote vending machines that any data packets are to be transmitted by first sending the NAK signal. If no NAK signal is received, the microprocessor returns to the control mode at a step 198.

Each data packet to be sent to the central computer is maintained on a queue within the example microprocessor's RAM. Each data packet has generally the same structure. Data packets are differentiated by a "packet type" byte in the data packet.

FIGURE 11 shows an example structure of the data packets transmitted between the central computer system and the remote vending machines in the above example system of figure 4. Each data packet 360 preferably begins with a marker byte 362. The ASCII symbol for a colon is used for the marker byte shown. Following the marker byte shown, is a packet length byte 364 indicating the entire length of the data packet excluding the marker byte. A pair of bytes 366 indicate the unit ID. Each vending machine within the monitoring and communication system has a unique unit ID. Following the unit ID bytes shown is a sequence number byte 368. This byte is incremental each time a unit transmits a data packet to the central computer system. By keeping track of the sequence number, the central computer is able to determine if a data packet has been missed. Following the sequence

number shown is a packet type byte 370, which indicates the type of data to be transmitted. It is the packet type which informs either the central computer or the vending machine how to interpret the data which follows in a series of bytes 372. Following the data, the data packet shown includes a pair of checksum bytes 374 that allow the receiving microprocessor to determine if an error occurred during transmission of the data packet. The following illustrates the sequence of bytes that are inserted into a specific data section of five types of data packets transmitted between the vending machine and the central computer. The type of data packet shown is specified in the packet type bytes as described above. The following example packet types can be used to transmit information regarding a soft drink vending machine having eight columns filled with cans of product. Those skilled in the art will recognize that the data packet types can be easily modified depending on the particular type of machine being monitored. Note that although the example system utilizes only eight columns, it technically has 23 sensor inputs. It thus is able to provide data for inventory items in excess of the eight columns shown.

DATA PACKETS TRANSMITTED FROM THE VENDING MACHINE TO CENTRAL COMPUTER SYSTEM

TYPE 1

(Illustrates Status of Vending Machine)

Byte Name	Description
B1	value of sensor inputs 0-7
B2	value of sensor inputs 8-15
B3	value of sensor inputs 16-23
C1	total product in column 1
C2	total product in column 2
C3	total product in column 3
C4	total product in column 4

C5	total product in column 5
C6	total product in column 6
C7	total product in column 7
C8	total product in column 8
CP	number of compressor cycles

TYPE 2

(Service Packet)

Byte Name	Description
C1	column 1 product added
C2	column 2 product added
C3	column 3 product added
C4	column 4 product added
C5	column 5 product added
C6	column 6 product added
C7	column 7 product added
C8	column 8 product added
CARM	cash removed
CHLF	change left

TYPE 3

(Alarm Bits)

0x0001	total product level below criterion
0x0002	column product level below criterion
0x0004	change depleted
0x0008	temperature limit exceeded
0x0010	intrusion alarm
0x0020	compressor cycles exceed criterion
0x0040	checksum RAM program area bad

0x0080	link test
0x0100	service completed
0x0200	call for machine repair
0x0400	repair completed

TYPE 4

(RAM Data Dump)

Byte Name	Description
ADDR	starting address
D0	data byte 0
D1	data byte 1
D2	data byte 2
D3	data byte 3
D4	data byte 4
D5	data byte 5
D6	data byte 6
D7	data byte 7
D8	data byte 8
D9	data byte 9
DA	data byte A
DB	data byte B
DC	data byte C
DD	data byte D
DE	data byte E
DF	data byte F

This data packet is given by example, while with other data systems other data packets may be utilized.

Referring now to the example FIGURE 7, once a NAK signal has been received at step 196, the microprocessor begins transmitting a data packet to the central computer by first getting a data packet first on the queue at a step 206. The data packet is then transmitted at a step 208. Following transmission, the

microprocessor shown again polls the modem to determine if another NAK signal has been received at step 210. If the central computer transmits another recognizable signal, a NAK signal shown, the microprocessor knows that the transmission did not arrive correctly. Therefore, the microprocessor loops back to step 208 and the data packet is again transmitted. If no NAK signal is received in step 210, the microprocessor proceeds to a step 212 wherein the modem is polled to see if an acknowledge a second recognizable signal ("ACK") shown, has been received. If no ACK signal has been received, the program returns to the control mode at a step 214. If an ACK signal is received, the microprocessor knows the central computer system has received the data packet correctly and the data packet transmitted is removed from the queue at step 216.

After removing the data packet from the queue, the example microprocessor determines if the queue is empty at a step 218. If the queue is not empty, the microprocessor loops back to step 206 and the next data packet is transmitted as described above.

Once the queue of data packets to be transmitted is empty, the microprocessor shown proceeds to a step 220 wherein an ACK signal is transmitted to the central computer system. This ACK signal indicates to the central computer system that the remote vending machine is ready to accept data packets transmitted from the central computer to the remote vending machine. The data packets transmitted from the central computer to the remote vending machine. In the specific example shown these data packets are defined by packet type as follows:

DATA PACKETS TRANSMITTED FROM CENTRAL COMPUTER TO THE REMOTE VENDING MACHINE

TYPE 101

(Transmit 16 Bytes of Microprocessor's Memory from Starting Address)

Byte Name	Description
ADDR	starting address (2 bytes)

TYPE 102

(Rewrite N Bytes of Microprocessor's Memory from Starting Address)

Byte Name	Description
ADDR	starting address (2 bytes)
D0...DN	n data bytes (n = packet length minus 9)

TYPE 103

(Rewrite Phone Number of Central Computer)

Byte Name	Description
PH1...PH36	36 bytes phone number (blank-no outbound alarm)

TYPE 104

(Set Vending Machine's Alarm Criteria)

Byte Name	Description
CA	compressor cycles per day max
CI	compressor cycles per day min
UNID	rewrite unit ID of vending machine
CB	checksum bad alarm enabled - 1

CC	compressor cycles alarm enabled - 1
IN	intrusion alarm enabled - 1
TE	temperature exceeded alarm enabled - 1
CD	change depleted alarm enabled - 1
CP	column product alarm criterion - 1 byte
TPBC	total product alarm criterion - 2 bytes
SV	send service packet upon servicing complete alarm enabled - 1

TYPE 105

(Reset Vending Machine's Alarm Bits)

Byte Name	Description
BPBP	set alarm bit pattern - 2 bytes

TYPE 106

(Set PIN for Service Technician)

Byte Name	Description
PWI...PW7	7 bytes of numeric data define PIN

TYPE 107

(Record Message for Service Technician)

Byte Name	Description
ME1...ME16	16 bytes of alphanumeric data for service technician

In a step 222, the example microprocessor determines if an ASCII representation of a colon symbol as previously set forth has been transmitted. As shown in FIGURE 11, this recognizable symbol marks the beginning of all of the data packets transmitted between the vending machine and the central computer. If no colon symbol is transmitted, the microprocessor returns to the control mode at a step 224. Once a colon symbol has been transmitted, the microprocessor shown determines if the entire data packet has been received correctly at a step 226. If the data packet has not been received correctly, the microprocessor causes the modem to transmit a NAK signal at a step 220 to indicate the data packet was not received correctly. The example microprocessor then loops back to step 222 and looks for the beginning of the same data packet to be retransmitted.

If the data packet was received correctly, the program branches to the analyze mode 290 to perform the task indicated by the data packet as will be described in further detail below. Upon returning from the analyze mode, the microprocessor shown causes the modem to transmit an ACK signal at a step 232 that indicates to the central computer that the data packet has been received and acted upon, and that the vending machine is waiting for another data packet to be transmitted. This process continues until the central computer fails to transmit another data packet whereupon the microprocessor returns to the control mode at the step 224.

In some cases (i.e., when a critical alarm condition exists or if the microprocessor is programmed to alert the central computer system immediately after a

service call is completed), the example microprocessor will initiate a call to the central computer system. At a step 200, the microprocessor instructs the modem to connect the central computer. The microprocessor then polls the modem to determine if a carrier is present in a step 202. If no carrier is present, the microprocessor loops back to step 200 and dials again. Upon establishing a connection with the central computer system, the microprocessor transmits an alarm or data service complete packet that has been previously placed on the queue. Transmission of the data packet to the central computer takes place as described above.

FIGURE 8 is a flow chart showing the steps taken by the example microprocessor when operating in the service mode 250. Upon entering the service mode from the control mode when the microprocessor shown detects the door to the vending machine has been opened, the microprocessor determines if the service technician enters a PIN or recognizable signal within a predetermined amount of time (for example ten seconds). The particular PIN is stored in the microprocessor's RAM and can be modified at any time by the central computer system. If the PIN is not entered within this predetermined amount of time, the microprocessor sets an intrusion alarm bit at step 254 and returns to the control mode at step 256. The microprocessor then detects the intrusion alarm bit as being set and enters the alarm mode.

Assuming the PIN has been entered in the predetermined amount of time, the example microprocessor then asks the service technician to enter information regarding the service to be completed. In step 258, the microprocessor queries the technician for the total amount of product added in each column of the vending machine. In a step 260, the microprocessor asks the service technician to enter the total amount of cash removed from the machine. In a step 262, the microprocessor asks for the amount of change left in the coin changer. After the

service is complete, the microprocessor generates a service data packet and places the packet on the queue at a step 264.

Once the service call is complete, the example microprocessor reads the status of a service packet bit in a pair of alarm response code bytes in a step 266. This bit indicates whether the vending machine is to contact the central computer upon completion of the service call should wait to inform the central computer of the information obtained from the service technician the next time the central computer calls the vending machine. If the service packet bit indicates the central computer is to be called at the completion of the service, the microprocessor data packet proceeds to the communications mode at a step 268. If the status of the service packet bit indicates the microprocessor is not to call the central computer upon completion of the service call, then the microprocessor returns to the control mode at a step 270.

FIGURE 9 is an example flow chart showing the steps that might be taken by the microprocessor when operating in the analyze mode 290. Upon entering the analyze mode from the communications mode, the microprocessor reads the packet type of data indicated by byte 4 of the received data packet as shown in FIGURE 11. Byte 4 shown informs the microprocessor what type of action is to be taken. At a step 294 it is determined whether the data packet is of type 101. If the data packet is of type 101, the microprocessor transmits the contents of its RAM memory beginning at a starting address which is read from the received data packet in step 296. At step 298, the example microprocessor causes the modem to transmit 16 bytes of data beginning at the starting address. Once the data has been transmitted, the program returns to the communications mode at step 334.

In step 300 shown, it is determined the data packet is of type 102. Data packet type 102 indicates to

the example microprocessor that it is to rewrite portions of its RAM memory with data values transmitted from the central computer system. At step 102, the microprocessor reads the starting address and determines the number of bytes to be rewritten. The number of bytes is determined by the value of the packet length byte minus nine. In step 304 shown, the new memory values are read and the RAM memory is rewritten starting at the starting address determined in step 302. Upon rewriting the RAM memory, the microprocessor returns to the communications mode.

In step 306 shown, it is determined if the data packet is of type 103. This data packet type causes the microprocessor to modify the communication parameters to the central computer. In step 308, the microprocessor reads 36 bytes of data. These 36 bytes are stored at the central computer in step 310. After rewriting, the microprocessor returns to the communications mode.

In step 102 shown, it is determined if the data packet is of type 104. This data packet type causes the microprocessor to rewrite its alarm response data which sets the alarm conditions for the vending machine. In step 314, the microprocessor reads the new alarm response data and in step 316, the microprocessor overrides the previous alarm response data. After the alarm response data has been rewritten, the microprocessor returns to the communications mode.

In step 318 shown, the example microprocessor determines if the data packet is of type 105. Type 105 packets cause the microprocessor to artificially set the bits in a pair of bytes which define the alarm conditions of the vending machine as described above. After the alarm bytes have been set, the microprocessor goes to the alarm mode in step 122 wherein the alarm bytes are transmitted to the central computer system.

If the example data packet is not of type 105, the microprocessor determines if the message is of type 106 at step 124. Data packet type 106 causes the

microprocessor to read seven bytes of PIN's for the service technician. The old PIN is overwritten at a step 328 before returning to the communications mode.

Finally, the example microprocessor determines if the received data packet is of type 107 at a step 330. Data packet type 107 records 16 bytes of alphanumeric data that is recorded for the service technician to be read during the next service call. The message bytes are stored in memory at a step 332 before the microprocessor returns to the communications mode.

FIGURE 10 is an example of a flow chart showing the steps taken by the microprocessor shown in the alarm mode 340. Upon entering the alarm mode from the control mode, the microprocessor reads the alarm response bytes in step 342. In step 346, the microprocessor compares the alarm bytes described above and compares them to the alarm response bytes in order to determine if the alarm condition is critical. If the alarm is set as critical, the microprocessor generates an alarm data packet and places it on the queue in a step 348 before going to the communications mode in step 350. If the alarm is not critical, the microprocessor simply returns to the control mode at step 352.

FIGURE 12 is an example of a diagram of a handheld data entry terminal 400 that might be used by a service technician to enter data into the shown microprocessor. With this system, the service technician can inform the system of the amount of product added to the machine, the amount of money removed, the content of the change counter, as well as other data. The handheld terminal 400 disclosed has a case 402 that includes a series of keys 406 and an enter button 408. The keys 406 are used to type alphanumeric data on a display 404, which is transmitted to the microprocessor upon hitting an enter key 408. Communication preferably takes place between the microprocessor and the handheld terminal using either a conventional infrared transmitter/receiver indicated at

410 or via mechanical connection such as a stereo plug 412. In the stereo plug one channel is used to transmit from the handheld unit while the other channel is used to receive prompts from the vending machine.

FIGURE 13 is an example block diagram of the handheld data entry terminal 400 described above. This specific handheld terminal includes its own microprocessor 420, a read only memory 424 and a random access memory 426 which are coupled to the microprocessor on a set of bus and control leads 422. Additionally, the keys 406 and display 404 are also connected to the microprocessor on the bus 422. The microprocessor shown communicates with the sensing and communication circuit in the vending machine via a serial point 430. The port shown is a serial port connected to drive an infrared transmitter 432. Additionally, the infrared receiver 434 is used to receive infrared signals transmitted from the sensing and communication circuit to the handheld unit. If a mechanical plug is used, the transmit and receive signals are coupled to a conventional plug, which is inserted by the service technician and allows an appropriate connector to the vending machine. The handheld terminal 400 shown is powered by a battery 428. It could also be powered by the vending machine.

Upon receipt of the information relative to the vending machine from the remote link unit 30 over the network 16, the information shown is then available at the computer for selective presentation and manipulation.

In the invention of the present application, due to the data acquisition units, virtually all of the information needed in respect to the vending machines can be located in a single database, can be processed with the same programming, and can be visually presented with a limited number of easily understood video screens.

In respect to the single database, all of the data for every machine in a single system is preferably stored in a single database having a number of fields and

name identity matching that of the maximum capabilities of the common signal. This allows the data for every machine to be present for analysis and presentation in a unified manner. This includes the generation of graphic representations of vending machines as well as the development of reports and other matters. It is noted that there will be empty fields in this type of system. These empty fields as present in the database preferably are ignored in developing the graphic representations and/or reports generated by this system. This can be accomplished by a sub-routine in the processing software blanking empty fields.

It is noted that in the event that the common signals are decoded (as in the described FIGURE 3 matrix system) and/or otherwise processed by the computer preferably this occurs prior to storage in the database.

In respect to the same programming, this programming would develop the graphic representations and reports in a common manner from the database. This common manner would preferably include a data inhibition or blanking sub-routine set to recognize empty fields in the processing of the data and automatically act accordingly.

In respect to the graphic representation, this could include automatically developing the representations to present only the active field information, and modifying the display appropriately. For example, if a particular machine had five columns of inventory, a compressor that cycles, a temperature alarm, and an entry alarm, once utilized or preset, these items would be presented on the screen; this even though the temperature alarm icon and entry alarm icon may be inactive (i.e., normal) at the time of presentation. Further, although the programming may be capable of generating an image having 15 columns, only the active five columns would appear. This could be spread out over the entire column area or could appear as one third the available area as set by an operator. However, since there is no for

example change empty sensor or field, the change icon would never appear on the screen.

In respect to the limited screens due to the use of a common signal content, one screen could technically be utilized for all machines, preferably as set forth with software programmed to ignore and not display non-data parameters. For example, with a machine having only 12 columns of inventory and an intrusion door open switch, no temperature sensor, no compressor sensor, and no other sensor, only the active information (12 columns of inventory plus the door open switch) would be presented: The missing sensors would never appear for this machine (although they would if applicable for a different machine). The software thus preferably has the ability to present a very complex screen while the system itself tracks the available data presenting on the screen and processing only the available data. Non-information, empty fields, are ignored. Further, the data can be manipulated by a limited number of computer sub-routines to provide uniform information for the vending machines. This could allow a single graphic representation to be utilized for all vending machines; presenting the common elements of the vending machines in a single manner no matter what the type or nature of the particular machine.

Note that although there are over many hundreds of specific vending machines (over 200), due to the basic commonality between machines, the basic and important date can be presented with a lesser number of screens. For example, it has been ascertained that about 20 basic screen images of vending machines will allow the presentation of most vending machines on the market today.

It is preferred that there be a central data base having the display information for these basic screens. Thus upon the specification of an appropriate screen either manual or automatic, the computer 15 would generate the appropriate image of a vending machine

accurately representative of the machine then being presented.

Other parts of the screen, for example the various condition icons, can be similarly generated.

It is noted that when an inventory of an item is developed on the screen, it is preferred that the items comprising this inventory be developed with images representative thereof. For example, if a pop can machine has columns of inventory, the circular end sections of pop cans would be shown in such columns. Additional example if change status is shown, a flat rectangle representative of the edges of the coins would be shown in the change area.

Due to the common signal content, technically a single graphic display could be utilized for all vending machines; Specifically displaying the common information regardless of the type of machine. The reason for this is that the operator does not care about what any given machine is, only what its status, and this status is primarily dependent on the common operational elements. Also some operators will rely primarily on the reports generated by the system.

For operator intuitive convenience, it is preferred that a number of screens be utilized representing types of machines. For example, seven screens: 1) pop/container; 2) candy; 3) snacks; 4) frozen ice cream/popsicles; 5) coffee/cocoa/tea; 6) pop/liquid, and 7) service utilized would enable a vendor to cognitively ascertain the nature of most common food type vending machines (as set forth above, 20 screens would allow an accurate representation of most machines). A further set of screens, for example a communications screen and a route screen, would allow access to the system.

Preferably, a screen would be designed to be able to display the optimum number of pieces of information for the majority of all vending machines, with

machines having lesser capabilities being presented in a modified form as previously set forth. For example, there are some very large pop/container vending machines which have nine column selections in a single row, each holding approximately 75 cans. There are also pop/container type vending machines which have but three columns, each holding 25 cans. The basic screen program under these circumstances would be designed to have the capability of presenting the larger machine data. This would be the default condition of the screen. However, upon entering of the smaller machine's type or capabilities, the screen would be automatically modified so as to present but the needed information (i.e., three columns with a 25 can maximum capability instead of nine columns each having 75 can capability of which only three are used and then only 1/3 full). This usage allows a particular vendor to use a limited number of common screens, even one, to obtain all of the information which is necessary to understand the operating status of a vast number of vending machines, each of which may be of a different type and each of which may be manufactured by a different company.

In addition to presenting the information to the operator visibly on a screen in a uniform manner, the system is able to store data and generate common reports for each machine, again totally independent of the exact nature and/or manufacture of any particular machine. This again is due to the use of the data acquisition unit to provide for common signal information for all machines. Due to this, the report information which can be developed can be supplier specific irrespective of the exact nature of the goods. For example, the need for a given quantity of pop/containers, candy, and coffee for a given location can be printed out in the same list independent of the actual machines needing such inventory. For additional example, the number and type of alarms in a wide geographic area could be printed out. Further example the specific inventory needs and optimal route assignments for

a particular vendor operator. Similarly as previously set forth, a single database can be used for all incoming information, such database amenable for manipulation by software in any manner desired by the operator. This allows the use of value added services without the necessity of developing a unique program for each particular manufacturer's particular type of machine. Further, common summaries can be developed across the entire database by the operator.

It is preferred that the database have sufficient names and fields to handle information from the most complex vending machine in a given system. Due to the use of common signals for every vending machine, these fields would be automatically filled with data from the system. Additional fields could include for example the type and nature of the specific vending machine, its physical location by street address, and physical placement, the communication standards for such machine including route, link name, identification and number, the nature and pricing of the varied items of inventory, the various alarms available together with their triggering points (upper and/or lower), and importance (i.e., automatic transmission on occurrence enablement), together with other programmed elements.

It is preferred that the data processing, for example the graphic display on the screen and the processing software, be programmed to ignore non-active names and fields. For example for a three column pop machine, a 49 inventory item capable system would preferably ignore the 46 empty fields in producing the screen images and any reports for this machine. For additional example no compressor or temperature icon would be utilized for a dry snack machine. A separate database having information that can be called up by the identity of a particular machine could be utilized to initially set up the data processing standards for that machine.

In all systems, it is possible that reports be generated and inventory replaced in multiple unit container multiples (for example the archtypical 24 can pop box). This reduces odd lots while maximizing operator convenience.

Turning now to FIGURE 14, a diagram of a typical user interface produced by the central computer system is shown.

The central computer system provides a display of each vending machine being monitored (pop/container machine shown). With other types of vending machines (phone, snacks, cigarettes, etc.) it is preferred the display reflect the type of vending machine. Typically a limited number of universal displays will provide the required information as set forth previously. Indeed, due to the common signal content, a single screen could be utilized (preferably as set forth automatically adapted by available data so as to present only pertinent information).

The display 450 disclosed includes various icons and images that are representative of the elements of vending machines. Preferably these icons have an appearance intuitively similar to the items that they represent (example later given). Due to the common elements in vending machines, a minimum number of icons need be utilized. The particular icons utilized can be automatically generated by software based on database information or can be separately entered.

The particular display 450 disclosed includes a vending machine icon 452, which looks like the vending machine itself. This enables even the most unskilled operator to appreciate the status of that particular machine. The specific icon 452 discussed includes a series of columns each having a column count box 456 that indicates the number of product in the column, as well as a bar graph 458, which visually indicates how the number of cans in the column compares to the length of the

column. Preferably, the number of columns and/or rows displayed for a given machine are equal in number to the actual number of columns and/or rows, with the bar graph at 100% when any particular column at the machine is full. This type of presentation is easily developed from the generic type of machine, the number of columns, and/or the total maximum number of containers per column and/or as entered on initial set up of the computer. For example, in a pop/container machine, the selection of the pop/container machine would initially develop a display having a default number of columns (and no rows) each with a certain default maximum number of containers. The entering of the actual number of columns and/or rows would alter the default display to the actual number of columns and/or rows (for example from 12 columns down to 6 columns). The entering of the actual number of maximum containers would likewise alter the default display respectively (for example from 75 down to 50). The bar graphs per item would remain at 100% until further manual or automatic (i.e., in use) input modified the number of cans per column. This use of defaults is preferred because it provides the operator with a usable (albeit not optimized) system with a minimum of inputs. Alternate schemes could be used including not presenting any columns and/or rows and/or any number of containers until the proper data is available. In any event, it is preferred that the display be automatically generated from a single subroutine having variable inputs. It could also be developed automatically from a pre-installed database by the entering of a specific make and model vending machine.

With altering input of other generic types of machines, other initial displays will be developed, displays that could be different than a column type display. For example, a generic type snack machine might have many options developed in an X by Y column/row matrix (for example 7x7), with the display having 3d type bar protruding out of the screen in a step manner (number of

snacks at the end of each bar) while a generic type cigarette machine might use only columns like the example pop/container machine. In addition, the displays could have either or both decreasing or increasing indicators. As an example of the latter, a hotel might as a courtesy extend to a guest a credit of $50.00 worth of services or supplies on the guests room card key before room payment. As the guest bought pop or used the phone, this initial $50.00 credit could appear as an increasing bar, indicating the total usage. The charges could also be billed directly to the room (possibly subject to an upper limit). In addition, in this case, warning indicators might appear at the top of the bar not bottom. Thus the displays, although of a few generic types, might differ in actual presentation.

In general, columns are preferred subject to screen resolution limitations.

Note that historical type information can be presented in the display. This could occur by presenting multiple graphic displays showing vend cycles over time on a single screen (in narrow columns), by requiring an operator to click on a particular column to display multiple columns showing historical data in respect to that particular item, or otherwise.

The icons that are developed in the graphic representation are preferably accomplished dependent on the available active data and/or the programming of the machine. These include as follows:

The particular display 452 shown includes a power icon 460 that represents a power connection to the vending machine. If power is interrupted, the icon 460 will flash to the user thereby informing the user that the remote vending machine is without power. This type of sensor and indication and others would be common to most electrically powered machines.

The particular machine disclosed is a pop/container vending machine. Other types of machines,

vending goods, and/or services could be utilized. This type of pop/container machine normally includes a compressor. Abnormal cycling of a compressor, either low or high, is an indication of either a refrigeration loop or general machine malfunction. In addition, the cost of electricity for operation increases. For this reason, preferably a compressor cycling sensor and indicator is included in devices utilizing temperature altering mechanisms (i.e., cold or hot). A compressor icon 460 that represents a compressor is graphically illustrated in the display and has located below it a compressor cycles box 464 indicating the number of compressor cycles completed in a 24-hour period. Should the number of compressor cycles exceed or be less than predefined limits as set by the alarm response bytes described above, the compressor icon 460 will light.

In the particular machine disclosed, loss of refrigeration will not potentially cause injury. However, most people prefer cold pop to warm pop. For this reason, a temperature sensor and indicator is preferably included in the system 10. This type of sensor would be utilized with most machines containing temperature changing devices.

A thermometer icon 466 is provided to indicate when the temperature is out of a predefined range. Again, if the temperature range is abnormal, the thermometer icon 466 will flash.

Other types of universal sensors could also be utilized with many differing types of vending machines. Examples of these in the preferred embodiment disclosed include: A coin icon 468 represents when exact change is needed. If the coin icon 468 flashes, a user knows that the change counter is out of change. A key icon 470 representing an unauthorized entry flashes when the door to the vending machine is opened and either no PIN or an incorrect PIN was entered. A communications icon 472 represents the communications link between the remote