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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	01/18/2022	11226793	MERZ010.001C3	2925

20995 7590 12/28/2021

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

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.

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

Wayne BARATTA, Poughkeepsie, NY;
Quentin OLSON, Port Townsend, WA;

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

CLOUDOFCHANGE, LLC, Poughkeepsie, NY;

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IR103 (Rev. 10/09)

PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	Unknown
	Filing Date	Herewith
	First Named Inventor	Wayne Baratta, et al.
	Art Unit	Unknown
(Multiple sheets used when necessary)	Examiner	Unknown
SHEET 1 OF 2	Attorney Docket No.	MERZ010.001C3

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number *Number - Kind Code (if known)* Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	1	5,818,428	10-06-1998	Eisenbrandt, et al.	
Change(s) applied to document, /S.D./ 12/10/2021	**2**	5,956,716	09-21-1999	~~Intervu, Inc~~ Kenner, et al.	
	3	5,987,426	11-16-1999	Goodwin, III	
	4	6,304,886	10-16-2001	Bernardo et al.	
	5	6,629,080	09-30-2003	Kolis	
	6	6,993,498	01-31-2006	Deaton et al.	
	7	7,015,945	03-21-2006	~~Visilinx Inc.~~ Sullivan	
	8	7,051,091	05-23-2006	Cohen, et al.	
	9	9,317,844	04-19-2016	Richelson et al.	
	10	20010037245	11-01-2001	Ranganath et al.	
	11	2003/0041330	02-27-2003	Smith	
	12	2003/0120546	06-26-2003	Cusack et al.	
	13	2004/0128199	07-01-2004	~~Chicken Out, Inc~~ Cusack et al.	
	14	2004/0181454	09-16-2004	Manno	
	15	2005/0021409	01-27-2005	Michaud, Jr., et al.	
	16	200/50182680	08-18-2005	Jones e tal.	
	17	20070/005685	01-04-2007	Chau et al.	
	18	2008/0077872	03-27-2008	~~Yed Ltd.~~ Zeevi et al.	
	19	2008/0208698	08-28-2008	Olson et al.	
	20	2009/0182630	07-16-2009	Otto et al.	
	21	2011/0218872	09-08-2011	Richelson et al.	
	22	2016/0253645	09-01-2016	Ciabarra et al.	
	23	2017/0300301 filed as U.S. Application No. 15/635097, including its file history (MERZ010.001C2)	10-19-2017	Baratta et al.	

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.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

T[1] - Place a check mark in this area when an English language Translation is attached.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Wayne BARATTA
	Art Unit	2192
	Examiner Name	Unassigned
	Attorney Docket Number	MERZ010.001C3

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6002395	A	1999-12-14	Wagner et al.	
If you wish to add additional U.S. Patent citation information please click the Add button.						

U.S.PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					
If you wish to add additional U.S. Published Application citation information please click the Add button.						

FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] ¡	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐
If you wish to add additional Foreign Patent Document citation information please click the Add button								

NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

EFS Web 2.1.17

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Wayne BARATTA
	Art Unit	2192
	Examiner Name	Unassigned
	Attorney Docket Number	MERZ010.001C3

	1		☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/ROKIB MASUD/	Date Considered	12/07/2021

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Wayne BARATTA
	Art Unit	2192
	Examiner Name	Unassigned
	Attorney Docket Number	MERZ010.001C3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ 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. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Keith M. Lim/	Date (YYYY-MM-DD)	2017-12-19
Name/Print	Keith M. lim	Registration Number	68,912

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

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 record s.

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.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
	First Named Inventor	Wayne Baratta
	Art Unit	3687
(Multiple sheets used when necessary)	Examiner	Masud, Rokib
SHEET 1 OF 1	Attorney Docket No.	MERZ010.001C3

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number *Number - Kind Code (if known)* Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	1	US2007/0276763 A1	11-29-2007	Kleinman et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document *Country Code-Number-Kind Code* Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T[1]

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	2	MICROS Simphony™, http://www.micros.com:80/Products/Simphony/, dated 2006, in 1 page.	
	3	MICROS Simphony™, http://www.micros.com:80/Products/Simphony/, dated 2006, in 1 page.	
	4	MICROS Simphony™, http://www.micros.com:80/Products/Simphony/, dated 2006, in 1 page	
	5	MICROS mymicros.net, http://www.micros.com:80/Products/Simphony/, dated 2006, in 1 page.	
	6	MICROS Restaurants, http://www.micros.com:80/Products/Simphony/, dated 2006, in 2 pages.	

28164181

Examiner Signature	/ROKIB MASUD/	Date Considered	12/08/2021

*__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.

T[1] - Place a check mark in this area when an English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Baratta, Wayne
	Art Unit	3687
	Examiner Name	Rokib Masud
	Attorney Docket Number	MERZ010.001C3

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					
If you wish to add additional U.S. Patent citation information please click the Add button.						

U.S.PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					
If you wish to add additional U.S. Published Application citation information please click the Add button.						

FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] ¡	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐
If you wish to add additional Foreign Patent Document citation information please click the Add button								

NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Baratta, Wayne
	Art Unit	3687
	Examiner Name	Rokib Masud
	Attorney Docket Number	MERZ010.001C3

	1	MICROS Delivers Harmony to POS Technology with Simphony(TM). The Industry's First True Enterprise POS Solution, Featuring Service Oriented Architecture, Debuts at FS/TEC, October 10, 2007, 3 pp.	☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/ROKIB MASUD/	Date Considered	12/08/2021

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Baratta, Wayne
	Art Unit	3687
	Examiner Name	Rokib Masud
	Attorney Docket Number	MERZ010.001C3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ 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. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Keith M. Lim/	Date (YYYY-MM-DD)	2018-02-23
Name/Print	Keith M. Lim	Registration Number	68,912

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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 record s.

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.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

UNITED STATES
PATENT AND TRADEMARK OFFICE

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Alexandria, VA 22313 - 1450
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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
15/827,948	12/07/2021 07:53:41 PM ET	MERZ010.001C3

Title of Invention

WEB-BASED POINT OF SALE BUILDER

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	2925	FILED BY	Tyler Chin
PATENT CENTER #	60429261	AUTHORIZED BY	keith lim
CUSTOMER #	20995	FILING DATE	11/30/2017
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Wayne BARATTA

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 2598	E2021B7J54400031	Wendy Castorena

PRE-AUTHORIZED ACCOUNT	PRE-AUTHORIZED CATEGORY
111410	37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees)

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1501	UTILITY ISSUE FEE	1200.00	1	1200.00
			TOTAL AMOUNT:	$1,200.00

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 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.

COMMENTS ON EXAMINER'S REASONS FOR ALLOWANCE

First Inventor: Baratta, Wayne	**Conf. No.:** 2925
App. No.: 15/827948	**Filed:** November 30, 2017
Examiner: Masud, Rokib	**Art Unit:** 3687
Title: WEB-BASED POINT OF SALE BUILDER	

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

Dear Commissioner:

In response to the Notice of Allowance mailed on December 1, 2021, Applicant respectfully submits the following comments.

Applicant takes no position regarding any reasons for allowance presented by the Examiner (in the Notice of Allowance and/or elsewhere in the application's file history) other than the positions Applicant may have previously taken during prosecution. Therefore, any reasons for allowance presented by the Examiner should not be attributed to Applicant as an indication of the basis for Applicant's belief that the claims are patentable. Furthermore, Applicant respectfully submits that there may also be additional reasons for patentability of the claimed subject matter not explicitly stated in this record and Applicant does not waive its rights to such arguments by not further addressing such reasons herein.

Applicant also respectfully reserves the right to traverse the characterizations of what any particular reference shows or discloses, of what any combination of references shows or discloses, or the appropriateness of combining references. Applicant does not acquiesce to the characterizations of what any of the references discussed in Examiner's Statement of Reasons for Allowance (the "Statement") disclose or suggest. Further, by making certain amendments to the claims, Applicant is not conceding that previously pending claims are not patentable. Rather, the amendments are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the application's disclosure. Accordingly, reviewers of this or any child or related prosecution history shall not reasonably infer that the Applicant has made any disclaimers or disavowals of any subject matter.

Applicant respectfully traverses the Statement to the extent it suggests that patentability rests on a particular feature, or combination of particular features, of a particular claim or claims. It is each claim, taken as a whole and independent from other claims, that determines patentability. Moreover, Applicant respectfully traverses the Statement to the extent it paraphrases or summarizes limitations of the claims or implies that any of the claims requires something other than the combination of recited limitations. Applicant does not acquiesce to the Statement's characterization or interpretation of the claim language.

Applicant respectfully objects to the Statement to the extent it may imply that patentability of the dependent claims rests solely on patentability of the independent claims. Applicant respectfully submits that each claim is patentable because of the particular combination of recited limitations.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: December 6, 2021

By:/Keith M Lim/_____
Keith M Lim
Registration No. 68,912
Registered Practitioner
(949) 760-0404

54579147

UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
15/827,948	**12/07/2021 07:53:41 PM ET**	**MERZ010.001C3**

Title of Invention

WEB-BASED POINT OF SALE BUILDER

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	2925	FILED BY	Tyler Chin
PATENT CENTER #	60429261	FILING DATE	11/30/2017
CUSTOMER #	20995	FIRST NAMED INVENTOR	Wayne BARATTA
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	keith lim

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
2021-12-06 Issue Fee - MERZ010.001C3.pdf	1	Issue Fee Payment (PTO-85B)	161 KB
2021-12-06 Comments on Allowance - MERZ010.001C3.pdf	2	Post Allowance Communication - Incoming	22 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
2021-12-06 Issue Fee -	659F1B12ED3FBC7A9939EF0D80ACBA79EBF42FF58135E81FB

MERZ010.001C3.pdf	C176D421D4CA23E3B077FC94250ABE0450A96ECAC2B93EC2DBF0E17E63D804171FDB38107F177C2
2021-12-06 Comments on Allowance - MERZ010.001C3.pdf	77E1BFE9574C28AE63DF84B88C2FEE19FA60254922C292815EDAFC4371E8B46FA9F0710980C8EEBBC17A28403BF861885C2A20C2C86E36F8B0D3BC868814CE06

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 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.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (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)

20995 7590 12/01/2021
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

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 transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

TITLE OF INVENTION: WEB-BASED POINT OF SALE BUILDER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	03/01/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
MASUD, ROKIB	3687	705-028000

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 03-09 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 Knobbe, Marten, Olson & Bear, 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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Cloudofchange, LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Poughkeepsie, NY

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

4a. Fees submitted: ☒ Issue Fee ❑ Publication Fee (if required) ❑ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

☒ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge ~~the required fee(s)~~, any deficiency, or credit any overpayment to Deposit Account No. 11-1410

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

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
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.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Keith M Lim/ Date 2021-12-03

Typed or printed name Keith M Lim Registration No. 68,912

PTOL-85 Part B (08-18) Approved for use through 01/31/2020 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

20995 7590 12/01/2021

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER	
MASUD, ROKIB	
ART UNIT	PAPER NUMBER
3687	

DATE MAILED: 12/01/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

TITLE OF INVENTION: WEB-BASED POINT OF SALE BUILDER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	03/01/2022

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: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (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)

20995 7590 12/01/2021
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

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

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(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

TITLE OF INVENTION: WEB-BASED POINT OF SALE BUILDER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	03/01/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
MASUD, ROKIB	3687	705-028000

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 03-09 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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). 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. Fees submitted: ❑Issue Fee ❑Publication Fee (if required) ❑Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

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❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

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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.
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NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 12/01/2021

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER	
MASUD, ROKIB	

ART UNIT	PAPER NUMBER
3687	

DATE MAILED: 12/01/2021

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

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

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.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B 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 30 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.

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. 15/827,948	Applicant(s) BARATTA et al.	
	Examiner ROKIB MASUD	Art Unit 3687	AIA (FITF) 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 amendment and argument filed on October 29, 2021.
   ☐ 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 See Continuation Sheet . 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 _____.
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 _____.

/ROKIB MASUD/
Primary Examiner, Art Unit 3687

Continuation of 3. The allowed claim(s) is/are: 3-6,8-36,39-43 and 45-50

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 29, 2021 has been entered.

Hence, this Office Action responds to the amendment and argument filed by applicant ton October 29, 2021 in response to the Office Action mailed on July 22, 2021.

Priority

This application is a continuation of U.S. Patent application serial number 12/012,666, filed on February 05, 2008.

Status of the Claims

- Claims 3-6, 8-36, 39-43, and 45-50 are pending.
- Claims 3, 26, 41 and 43 are currently amended.
- Claims 1-2, 7, 37-38 and 44 are cancelled.
- Claim 50 is new.

Allowance

Claims 3-6, 8-36, 39-43, and 45-50 are allowed. Applicant's amendment and argument filed on October 29, 2021 is considered and they are persuasive.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of these claims is the inclusion of the limitation of claim 1 of configuring the one or more POS terminals with the information over the network to create or modify based on the further Information regarding one or more POS transactions the one or more POS screens displayed on the one or more POS terminals; and wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; wherein said further information regarding the one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals, which is not found in the prior art of records. The other independent claims contain similar subject matter and the dependent claims are also allowable based on their dependency on the independent claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROKIB MASUD whose telephone number is (571)270-5390. The examiner can normally be reached Mon-Fri 8:00-5:00.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fahd Obeid can be reached on 571-270-3324. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROKIB MASUD/
Primary Examiner, Art Unit 3687

Applicant-Initiated Interview Summary	**Application No.** 15/827,948	**Applicant(s)** BARATTA et al.		
	Examiner ROKIB MASUD	**Art Unit** 3687	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
ROKIB MASUD	Primary Examiner	Telephonic
Keith Lim	Attorney	
Alistair Forster	Attorney	

Date of Interview: 26 October 2021

Issues Discussed:

35 U.S.C. 103

Applicant discussed the proposed amendment to overcome prior art rejections. No agreement was reached.

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Notice of References Cited	Application/Control No. 15/827,948	Applicant(s)/Patent Under Reexamination BARATTA et al.	
	Examiner ROKIB MASUD	Art Unit 3687	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20060235755-A1	10-2006	Mueller; Raymond J.	G06Q30/06	705/15
*	B	US-20050049921-A1	03-2005	Tengler, Craig D.	G06Q10/087	705/15
*	C	US-20070265935-A1	11-2007	Woycik; Thomas E.	G07F9/002	705/65
*	D	US-6384850-B1	05-2002	McNally; Keith R.	G06F16/9577	715/810
*	E	US-20020194074-A1	12-2002	Jacobs, Eric L.L.	G07G1/145	705/16
	F					
	G					
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	I					
	J					
	K					
	L					
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	Art Unit
	ROKIB MASUD	3687

CPC - Searched*		
Symbol	Date	Examiner
G06Q 20/20; G06Q 20/202	07/04/2019	R. M.

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
705	16; 34	07/04/2019	R. M.

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST, GOOGLE PATENT, NPL, IDS	07/04/2019	R. M.
PE2E SEARCH	11/19/2021	R. M.
IP.COM SEARCH	11/19/2021	R. M.

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
705	27.1	11/12/2020	R. M.

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	**Art Unit**
	ROKIB MASUD	3687

CPC							
Symbol						**Type**	**Version**
G06F	/	8	/	30		F	2013-01-01
G06Q	/	30	/	06		I	2013-01-01
G06F	/	8	/	34		I	2013-01-01
G06Q	/	20	/	20		I	2013-01-01
H04L	/	67	/	02		I	2013-01-01
G06Q	/	20	/	202		I	2013-01-01

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	44	
/ROKIB MASUD/ Primary Examiner, Art Unit 3687	20 November 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	3	3

U.S. Patent and Trademark Office — Part of Paper No.: 20211105

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	Art Unit
	ROKIB MASUD	3687

INTERNATIONAL CLASSIFICATION				
CLAIMED				
G06Q	/	10	/	00

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
705	28

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					
705	27.1					

NONE (Assistant Examiner) (Date)	Total Claims Allowed: 44	
/ROKIB MASUD/ Primary Examiner, Art Unit 3687 (Primary Examiner) 20 November 2021 (Date)	O.G. Print Claim(s) 3	O.G. Print Figure 3

U.S. Patent and Trademark Office Part of Paper No.: 20211105

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	**Art Unit**
	ROKIB MASUD	3687

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

CLAIMS

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

NONE (Assistant Examiner) (Date)	**Total Claims Allowed:** 44	
/ROKIB MASUD/ Primary Examiner, Art Unit 3687 (Primary Examiner) (Date) 20 November 2021	O.G. Print Claim(s) 3	O.G. Print Figure 3

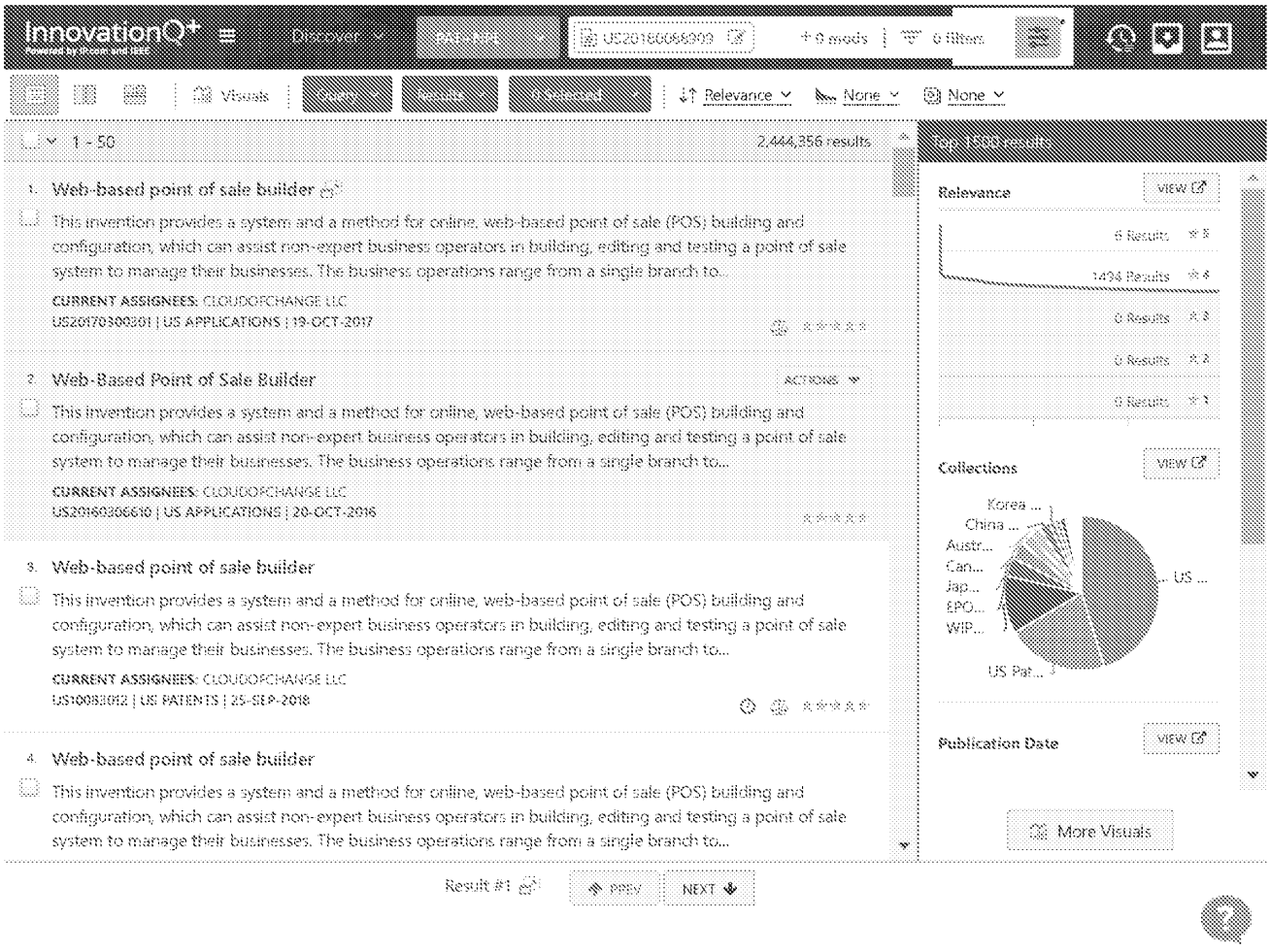
U.S. Patent and Trademark Office Part of Paper No.: 20211105

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	42646	(web network remote) ADJ ((server host database system) SAME (subscri$9))	(US-PGPUB; USPAT)	OR	ON	ON	2021/11/20 10:35 PM
L2	8396	L1 AND @PY<"2008"	(US-PGPUB; USPAT)	OR	ON	ON	2021/11/20 10:35 PM
L3	1	"20050021409"	(US-PGPUB; USPAT)	OR	ON	ON	2021/11/20 10:36 PM
L4	405	(inventory price cost sales) AND ((web ADJ server) server SAME database) SAME (hardware software) SAME ((cash ADJ register) POS (point ADJ of ADJ sale)) AND (subscriptS4 subscrib$4)	(US-PGPUB; USPAT)	OR	ON	ON	2021/11/20 10:36 PM
L5	4	"20150121482" "20050097040"	(US-PGPUB; USPAT)	OR	ON	ON	2021/11/20 10:38 PM
L6	158	(inventory price cost sales) SAME ((web ADJ server) server SAME database) SAME (hardware software) SAME ((cash ADJ register) POS (point ADJ of ADJ sale)) AND (subscriptS4 subscrib$4)	(US-PGPUB; USPAT)	OR	ON	ON	2021/11/20 10:38 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.


InnovationQ+
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US20160086009
0 mods
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Visuals
Query
Results
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None
None
1 - 50
2,444,356 results
Top 1000 results
1. Web-based point of sale builder
This invention provides a system and a method for online, web-based point of sale (POS) building and configuration, which can assist non-expert business operators in building, editing and testing a point of sale system to manage their businesses. The business operations range from a single branch to...
CURRENT ASSIGNEES: CLOUDOFCHANGE LLC
US20170300301 | US APPLICATIONS | 19-OCT-2017
2. Web-Based Point of Sale Builder
ACTIONS
This invention provides a system and a method for online, web-based point of sale (POS) building and configuration, which can assist non-expert business operators in building, editing and testing a point of sale system to manage their businesses. The business operations range from a single branch to...
CURRENT ASSIGNEES: CLOUDOFCHANGE LLC
US20160306610 | US APPLICATIONS | 20-OCT-2016
3. Web-based point of sale builder
This invention provides a system and a method for online, web-based point of sale (POS) building and configuration, which can assist non-expert business operators in building, editing and testing a point of sale system to manage their businesses. The business operations range from a single branch to...
CURRENT ASSIGNEES: CLOUDOFCHANGE LLC
US10083012 | US PATENTS | 25-SEP-2018
4. Web-based point of sale builder
This invention provides a system and a method for online, web-based point of sale (POS) building and configuration, which can assist non-expert business operators in building, editing and testing a point of sale system to manage their businesses. The business operations range from a single branch to...
Relevance
VIEW
6 Results
1494 Results
0 Results
0 Results
0 Results
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Korea ...
China ...
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Can...
Jap...
EPO...
WIP...
US ...
US Pat...
Publication Date
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 11/12/2021

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER
MASUD, ROKIB

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
11/12/2021	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):

efiling@knobbe.com
jayna.cartee@knobbe.com

PTOL-90A (Rev. 04/07)

Applicant-Initiated Interview Summary	**Application No.** 15/827,948	**Applicant(s)** BARATTA et al.		
	Examiner ROKIB MASUD	**Art Unit** 3687	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
ROKIB MASUD	Primary Examiner	Telephonic
Keith M. Lim	Attorney	
Alistair Forster	Attorney	

Date of Interview: 26 October 2021

Issues Discussed:

35 U.S.C. 103

Applicant discussed the proposed amendment to overcome prior art rejections. No agreement was reached.

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor	:	Wayne Baratta
App. No.	:	15/827948
Filed	:	November 30, 2017
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Masud, Rokib
Art Unit	:	3687
Conf. No.	:	2925

SUPPLEMENTAL AMENDMENT

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

Dear Commissioner:

This is further to the Final Office Action dated July 22, 2021, and Applicant's response thereto filed on October 15, 2021 concurrently with a Request for Continued Examination, taking into consideration the Interview with the Examiner on October 26, 2021.

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

Summary of Interview begins on page 13 of this paper.

Remarks begin on page 14 of this paper.

AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Canceled)

3. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; ~~and~~

receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items;

configure the one or more POS terminals with the information over the network to create or modify based on the further information regarding one or more POS transactions the one or more POS screens displayed on the one or more POS terminals; and

~~receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items;~~

wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of

employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information;

wherein said further information regarding the one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

4. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to run on a computing device.

5. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations.

6. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

7. (Cancelled)

8. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions.

9. (Previously Presented) The web-based point of sale (POS) builder system of claim 8, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

10. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the information regarding one or more POS transactions

comprises one or more of the employee clock information, the customer add/update information, the item add/update information, or the promotion information.

11. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the information regarding one or more POS transactions are viewable via the POS builder interface.

12. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces comprise one or more buttons or keys.

13. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

14. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is accessible via a web browser.

15. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces are accessible on the POS builder interface.

16. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to:

receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens; and

update the at least one of the one or more POS screens on the one or more POS terminals based on the second information.

17. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to store information regarding the one or more POS screens.

18. (Previously Presented) The web-based point of sale (POS) builder system of

claim 3, wherein the at least one server is located remotely from the one or more POS terminals.

19. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminals are in use performing one or more POS transactions.

20. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals use the one or more POS screens after completing a pending POS transaction.

21. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to maintain information regarding POS screens for separate sets of POS terminals separately.

22. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein instructions to the POS builder interface for programmatic creation and modification of the POS terminals are not formatted in programming code.

23. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to maintain information regarding the one or more POS screens.

24. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises one or more attributes of the one or more items.

25. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS terminals are configured to perform transactions independently of a connection with the network.

26. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one POS terminal configured to:

display one or more POS screens;

communicate with at least one server over a network comprising the Internet;

receive, over the network from the at least one server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

~~create or modify the one or more POS screens based on the received information; and~~

perform one or more transactions with respect to the one or more items; and

transmit, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items; and

create or modify based on the received information or further information the one or more POS screens;

wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and

wherein said one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS

terminals.

27. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal comprises a plurality of POS terminals in a plurality of locations.

28. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to:

capture one or more videos using one or more cameras while performing the one or more transactions; and

correlate the one or more videos with the one or more transactions.

29. (Previously Presented) The web-based point of sale (POS) builder system of claim 28, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

30. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the one or more display interfaces comprise one or more buttons or keys.

31. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

32. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one server is located remotely from the at least one POS terminal.

33. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to perform the one or more transactions in real time while the one or more POS screens are created or modified.

34. (Previously Presented) The web-based point of sale (POS) builder system of claim 33, wherein the at least one POS terminal uses the created or modified one or more POS screens after completing a pending POS transaction.

35. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises one or more attributes of the one or more items.

36. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

37. (Canceled).

38. (Canceled)

39. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to perform the one or more transactions without a connection to the web server and transmit the information regarding the one or more transactions to the at least one web server after performing the one or more transactions and when the connection to the web server is established.

40. (Previously Presented) The web-based point of sale (POS) builder system of claim 39, wherein the at least one POS terminal is further configured to store locally the information regarding the one or more transactions.

41. (Currently Amended) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

communicating with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receiving, over the network from a POS builder interface, information

used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; ~~and~~-

receiving, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items; and

provisioning the one or more POS terminals with the information over the network to create, or modify based on the further information the one or more POS screens displayed on the one or more POS terminals; ~~and~~

~~receiving, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items;~~

wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and

wherein said further information regarding the one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

42. (Currently Amended) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

displaying one or more POS screens;

communicating with at least one server over a network comprising the Internet;

receiving, over the network from the at least one server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

~~creating or modifying the one or more POS screens based on the received information; and~~

performing one or more transactions with respect to the one or more items; ~~and~~

transmitting, to the at least one server, over the network, further information regarding one or more transactions corresponding to the one or more items; and

creating or modifying based on the received information the one or more POS screens;

wherein the further information regarding the one or more transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and

wherein said further information regarding the one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

43. (Currently Amended) A web-based point of sale (POS) builder

system comprising:

at least one server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information for creating or modifying functionality of the one or more POS terminals; ~~and~~

~~configure the one or more POS terminals with the information over the network to create of modify the functionality of the one or more POS terminals;~~

receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items; and

configure the one or more POS terminals with the information over the network to create, or modify based on the further information the functionality of the one or more POS terminals;

wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and

wherein said further information regarding the one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

44. (Canceled)

45. (Previously Presented). The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to create or modify at least one of: a position or operation of a first display interface of the one or more display interfaces, wherein the first display interface comprises an input interface element.

46. (Previously Presented). The web-based point of sale (POS) builder system of claim 45, wherein the input interface element comprises a touch screen input interface element.

47. (Previously Presented). The web-based point of sale (POS) builder system of claim 26, wherein a position or operation of a first display interface of the one or more display interfaces is created or modified, wherein the first display interface comprises an input interface element.

48. (Previously Presented). The web-based point of sale (POS) builder system of claim 47, wherein the input interface element comprises a touch screen input interface element.

49. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the input interface element comprises a data interface for inputting at least some of said further information.

50. (New) The web-based point of sale (POS) builder system of claim 3, wherein to configure the one or more POS terminals comprises dynamically configuring the one or more POS terminals specific for the corresponding customer based on the one or more transactions by the corresponding customer.

SUMMARY OF INTERVIEW

The Applicant thanks the Examiner for the Interview conducted on October 26, 2021. The interview was between Examiner Rokib Masud and the Applicant's representatives Keith Lim and Alistair Forster. Pending Claims 3, 26 and 41 to 43 that were rejected or objected to in the Office Action were discussed along with U.S. Patent Publication No. 2006/0235755 ("MUELLER"). In particular, the discussion focused on the claim amendments made by the Applicant in its Office Action Response of October 15, 2021. The discussion also focused on the section 102 rejections of Claims 3, 26 and 41 to 43 and the nature of "POS transactions" as well as the content and source/destination of the information communicated therewith. As discussed during the interview, MUELLER fails to disclose (i) the communication of information relating to POS transactions; (ii) the inclusion of information relating to a POS transaction in such information; and (iii) the transmission of such information from a POS terminal to a central server. The Applicant is providing herein an amendment that clarifies the issues raised during the interview.

REMARKS

This paper is responsive to the final Office Action dated July 27, 2021 (the "Office Action"). Applicant thanks Examiner Rokib Masud for the courtesy extended to Applicant's representative during the telephone interview conducted on August 4, 2021.

By the foregoing amendments, Applicant has amended the application as follows:

Claims 3, 26, and 41 to 43 have been amended.

Claim 50 is newly presented.

Support for the amendments and new claims can be found in the specification as filed and the originally filed claims. No new matter has been added.

Claims 3 to 6, 8 to 36, 39 to 43, and 45 to 50 are currently pending in the application. In view of the foregoing amendments and following remarks, Applicant respectfully submits that the application is in condition for allowance.

RESPONSE TO REJECTIONS BASED ON THE PRIOR ART

The Office Action rejected Claims 3 to 6, 10 to 27, 30 to 36, 39-43, and 45 to 48 under 35 U.S.C. § 102(a) as allegedly being anticipated by U.S. Patent Publication No. 2006/0235755 ("MUELLER"). The Office Action rejected Claims 8-9 and 28-29 under 35 U.S.C. § 103(a) as allegedly being unpatentable over MUELLER in view of U.S. Patent Publication No. 2005/0049921 ("TENGLER"). Applicant respectfully traverses the rejections.

1. *35 U.S.C. §102(a) in view of MUELLER*

The Office Action rejected Claims 3 to 6, 10 to 27, 30 to 36, and 39-43 under 35 U.S.C. § 102(a) as allegedly being anticipated by MUELLER. Specifically, the Office alleged that MUELLER discloses all the elements of independent Claims 3, 26, 41, 42 and 43, including the features "receive, from at least one of the one or more POS terminals over the network, information regarding one more POS transactions" and "wherein the information regarding the one or more POS transactions [...] comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information" which were allegedly disclosed by MUELLER. Applicant respectfully traverses these rejections. However, for the sake of expedited

prosecution, Applicant amended the claims in its October 15, 2021 response and, in view of comments during the October 26, 2021 interview, further amends the claims hereby.

As discussed during the October 26, 2021 interview, the Applicant notes that MUELLER does not disclose, suggest, or disclose the sending of POS transaction data from a POS terminal to a centralized POS server. Rather MUELLER is limited to distributing "rules" to localized POS servers (see paragraph 0056). Such POS servers are limited to communicating "transaction history" to a centralized server. Accordingly, MUELLER does not disclose any embodiment in which the "further information" POS transaction can be communicated from POS terminals to a centralized server and, via which, a POS terminal or the POS screens thereof can be modified by a POS builder interface. In particular, none of the Abstract or Paragraphs 36 or 71 of MUELLER, as specifically cited on Pages 3 to 4 of the last Office Action in respect of essentially all the elements of independent claim 3 as currently on file, disclose any of the following features:

- the receiving of information relating to a POS transaction by a centralized server as sent by a POS terminal;
- a "POS terminal" that is configured to send information regarding a POS transaction to a central server;
- a "POS transaction" occurring at the "one or more POS terminals" by "corresponding customers"; or
- as modified by this Supplemental Amendment, MUELLER does not disclose a system that can "modify [the POS terminal or POS screens thereon] based on the POS transaction information" received at the centralized server from a POS terminal.

The Examiner has also alleged that MUELLER, specifically citing the abstract thereof and at paragraphs 36 and 71, discloses the claimed element of a "POS builder interface" from which information is received that is used to create or modify POS screens. The Applicant submits that MUELLER does not disclose the foregoing claimed features at the referenced locations in MUELLER as cited by the Examiner or otherwise.

The Applicant further notes the following additional observations relating to features claimed in a number of dependent claims that the Examiner has alleged to be disclosed by MUELLER:

The Examiner alleged that MUELLER, specifically in the abstract and paragraphs 36 and 71, disclosed a POS builder system in which one or more POS terminals comprise a plurality of POS terminals in a plurality of locations as claimed in Claims 5 and 27. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose POS terminals in "a plurality of locations" (e.g. different stores).

The Examiner alleged that MUELLER, specifically in the abstract and paragraphs 36 and 71, disclosed a POS builder system in which information regarding one or more POS transactions are viewable via the POS builder interface as claimed in Claim 11. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose a POS builder interface nor do they disclose the ability to view POS transaction information thereby.

The Examiner alleged that MUELLER, in paragraphs 73 to 74, disclosed a POS builder system in which the one or more display interfaces comprise one or more buttons or keys as claimed in Claim 12 and 30. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose a POS screen having display interfaces comprising one or more buttons or keys, but rather refer to amending "presentation slots" on a display panel. The display panel is a separate component from the POS terminal disclosed in MUELLER.

The Examiner alleged that MUELLER, in paragraphs 73 to 74, disclosed a POS builder system in which the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces as claimed in Claim 13 and 31. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose received information comprising information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces, but merely refer to amending "presentation slots" on a display panel. The display panel is a separate component from the POS terminal disclosed by MUELLER.

The Examiner alleged that MUELLER, in paragraphs 73 to 75, disclosed a POS builder system in which the POS builder interface is accessible via the internet as claimed in Claim 14. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose a POS builder interface that is accessible via the internet.

The Examiner alleged that MUELLER, in paragraphs 73 to 75, disclosed a POS builder system in which the one or more display interfaces of the POS terminal are accessible on the POS builder interface as claimed in Claim 15. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose one or more display interfaces of the POS terminal that are accessible on a POS builder interface.

The Examiner alleged that MUELLER, in paragraphs 104, 115-116, and 148, disclosed a POS builder system in which the at least one server is further configured to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminals are in use performing one or more POS transactions as claimed in Claim 19 and 33. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose the foregoing elements and are limited to modifying slots on a display panel based on rules stored on a local server. The display panel is a separate component from the POS terminal of MUELLER.

The Examiner alleged that MUELLER, in the abstract and paragraphs 36 and 71, disclosed a POS builder system in which the one or more POS terminals use the one or more POS screens after completing a pending POS transaction as claimed in Claims 20 and 34. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose one or more POS terminals that use one or more POS screens after completing a pending POS transaction.

The Examiner alleged that MUELLER, in paragraphs 104, 115-116, and 148-149, disclosed a POS builder system in which at least one server is further configured to maintain information regarding POS screens for separate sets of POS terminals separately as claimed in Claim 21. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not refer to the maintaining of information regarding POS screens for separate sets of POS terminals separately, and in fact does not maintain any such information but rather provisions the information based on common rules sets for multiple display terminals.

The Examiner alleged that MUELLER, in the abstract and paragraphs 36 and 71, disclosed a POS builder system in which instructions to a POS builder interface for programmatic creation and modification of POS terminals are not formatted in programming code as claimed in Claim 22. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not refer to the foregoing elements and in fact do not disclose the concept of POS builder interface instructions, whether formatted in programming code or otherwise.

The Examiner alleged that MUELLER, in the abstract and paragraphs 36 and 71, disclosed a POS builder system in which POS terminals are configured to perform transactions independently of a connection with the network as claimed in Claim 25. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose a system that performs independently of a connection with a network, and in fact require network connection from POS terminals and display panels to the local POS server where rules are stored (see paragraph 71 of MUELLER).

The Examiner alleged that MUELLER, in paragraphs 34 to 35, disclosed a POS builder system in which at least one POS terminal is further configured to perform the one or more transactions without a connection to the web server and transmit the information regarding one or more transactions to a one web server after performing the one or more transactions and when the connection to the web server is established as claimed in Claim 39. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose the foregoing elements, and in fact require continued communicative connection to a POS server. See for, example, in paragraph 34 of MUELLER, which requires the connected elements of MUELLER to be connected using any of a number of different communications mechanisms.

The Examiner alleged that MUELLER, in paragraphs 30 to 31, disclosed a POS builder system in which a POS builder interface is configured to create or modify at least one of: a position or operation of a first display interface of the one or more display interfaces, wherein the first display interface comprises an input interface element as claimed in Claim 45 and 47. The Applicant disagrees and notes that the referenced locations in MUELLER as cited by the Examiner do not disclose the foregoing elements.

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2. *35 U.S.C. § 103(a) over MUELLER in view TENGLER*

Claims 8-9 and 28-29 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over MUELLER in view of U.S. Patent Publication No. 2005/0049921 ("TENGLER").

For at least the same reasons set forth above, the Applicant submits that claims 8-9 and 28-29 recite subject that is not disclosed or suggested by MUELLER, and these deficiencies are not overcome by TENGLER. TENGLER also fails to disclose the concept of "POS transaction" information that received from a POS terminal, "wherein the POS transaction information comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information." TENGLER further does not disclose the concept of a POS builder interface.

As such, the instantly claimed subject matter is *prima facie* non-obvious over MUELLER in view of TENGLER. Taken together or apart, the features of MUELLER and TENGLER, in the words of the Administrative Patent Judge Moore, are "not equivalent to the more complex creation and changing of POS functions in real time [as provided by] the instant application."

The Applicant respectfully submits that, for at least the reasons stated above, Independent Claims 3, 26, 41, 42 and 43, as well as all claims depending therefrom, which by definition include at least the same elements, are patentable over MUELLER in view of TENGLER and requests withdrawal of this objection.

CONCLUSION

The Applicant believes that all issues raised in the Office Action have been addressed and that allowance of the pending claims is appropriate. The Examiner is respectfully requested to

contact the undersigned by telephone at 949-721-6350 if it is believed that such contact would further the examination of the present application.

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: October 29, 2021

By:/Keith M Lim/_____
Keith M Lim
Registration No. 68912
Registered Practitioner
949-721-6350

UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. Box 1450
Alexandria, VA 22313 - 1450
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
15/827,948	**10/29/2021 07:54:37 PM ET**	**MERZ010.001C3**

Title of Invention

WEB-BASED POINT OF SALE BUILDER

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	2925	FILED BY	Tyler Chin
PATENT CENTER #	60377139	FILING DATE	11/30/2017
CUSTOMER #	20995	FIRST NAMED INVENTOR	Wayne BARATTA
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	keith lim

Documents

TOTAL DOCUMENTS: 4

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
2021-10-29 Supplemental Amendment-MERZ010.001C3.pdf		20	-	149 KB
2021-10-29 Supplemental Amendment-MERZ010.001C3-SA...pdf	(1-1)	1	Supplemental Response or Supplemental Amendment	19 KB
2021-10-29 Supplemental Amendment-MERZ010.001C3-CLM.pdf	(2-12)	11	Claims	113 KB
2021-10-29 Supplemental Amendment-MERZ010.001C3-	(13-13)	1	Applicant summary of interview with examiner	59 KB

INTRVIEW.APP.pdf				
2021-10-29 Supplemental Amendment-MERZ010.001C3-REM.pdf	(14-20)	7	Applicant Arguments/Remarks Made in an Amendment	98 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
2021-10-29 Supplemental Amendment-MERZ010.001C3.pdf	896FE2F65BF56B7C753783473621369 0D456EF345EC755B40F4585DA93DFBBE0BA11DC78366E80444CA1F148A857CA41B131D59ACA859B0409F189CD21F1B460
2021-10-29 Supplemental Amendment- MERZ010.001C3-SA...pdf	93E6E3EF3F63843C0EA1AC4A0AFAFE70BED8FD25B6989BAF9CD1B9A1E0657DB011453641023F5A005C1767E1C7C527B423A29906444591F30A02F3F1DB488EBF
2021-10-29 Supplemental Amendment- MERZ010.001C3-CLM.pdf	F68098B6DEFD6228262125F5C293AD5E871BF9E08C26C60F20A745904B81D690915A008BE8A2D5F83A2BA6DE54D5F67B317E5F2EE3A0D23B98A05B7F8D4E37F4
2021-10-29 Supplemental Amendment- MERZ010.001C3-INTRVIEW.APP.pdf	7E2EA6D0944C2C0C305C56A42600ED6AF9F46C30F2C9E4A0AEEB7940382227FCC2FA43569216AF699D995944CDF31B6147921F95E718EBF114206B6E67B98BE2
2021-10-29 Supplemental Amendment- MERZ010.001C3-REM.pdf	6E293E7CBAFBBAF3EF9BF5EB989935E68AECA2249784AA50DD95C6F02437C61C08BB03B6F8E58977D34E4A6A25A31A81F43EC44607288B65B3446F22B3CBF94B

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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 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)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/827,948	Filing Date 11/30/2017	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

	(Column 1)	(Column 2)			
FOR	NUMBER FILED	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 $80 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $420 =	
☐ 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	10/29/2021	(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))	* 43	Minus	** 43	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 5	Minus	*** 5	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

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 $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ 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.	SLIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/LISA R WRIGHT/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Sale Accounting Date:10/20/2021

Sale Item Reference Number	Effective Date
15827948	10/15/2021

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20210JA00054523	1202	CLAIMS IN EXCESS OF 20	$100.00	Deposit Account
I20210JA00054523	1201	INDEPENDENT CLAIMS IN EXCESS OF 3	$480.00	Deposit Account

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	15827948	Filing Date	2017-11-30	Docket Number (if applicable)	MERZ010.001C3	Art Unit	3687
First Named Inventor	Baratta, Wayne			Examiner Name	Masud, Rokib		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 111410

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

X Patent Practitioner Signature

Applicant Signature

EFS - Web 2.1.16

PTO/SB/30EFS (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Keith M Lim/	Date (YYYY-MM-DD)	2021-10-14
Name	Keith M Lim	Registration Number	68912

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

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.

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
15/827,948	10/15/2021 05:23:52 PM ET	MERZ010.001C3

Title of Invention

WEB-BASED POINT OF SALE BUILDER

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	2925	FILED BY	Tyler Chin
PATENT CENTER #	60355982	AUTHORIZED BY	keith lim
CUSTOMER #	20995	FILING DATE	11/30/2017
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Wayne BARATTA

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 2598	E20210EH25492116	Christina Graul

PRE-AUTHORIZED ACCOUNT	PRE-AUTHORIZED CATEGORY
111410	37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees)

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1820	REQUEST FOR CONTINUED EXAMINATION (RCE)- 2ND AND SUBSEQUENT REQUEST (SEE 37 CFR 1.114)	2000.00	1	2000.00

TOTAL AMOUNT:	$2,000.00

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 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
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Alexandria, VA 22313 - 1450
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
15/827,948	**10/15/2021 05:23:52 PM ET**	**MERZ010.001C3**

Title of Invention

WEB-BASED POINT OF SALE BUILDER

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CUSTOMER #	20995	FIRST NAMED INVENTOR	Wayne BARATTA
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	keith lim

Documents

TOTAL DOCUMENTS: 5

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
2021-10-15 RCE MERZ010.001C3.pdf		3	Request for Continued Examination (RCE)	1318 KB
2021-10-15 Amendment or Response - MERZ010.001C3.pdf		19	-	98 KB
2021-10-15 Amendment or Response - MERZ010.001C3-AMSB.pdf	(1-1)	1	Amendment Submitted/Entered with Filing of CPA/RCE	18 KB
2021-10-15 Amendment or Response - MERZ010.001C3-CLM.pdf	(2-12)	11	Claims	57 KB

2021-10-15 Amendment or Response - MERZ010.001C3-INTRVIEW.APP.pdf	(13-13)	1	Applicant summary of interview with examiner	24 KB
2021-10-15 Amendment or Response - MERZ010.001C3-REM.pdf	(14-19)	6	Applicant Arguments/Remarks Made in an Amendment	48 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
2021-10-15 RCE MERZ010.001C3.pdf	B5149F53DBE8F68AA5AD93B5E34717CEADC0A056993629D146B7169D04049CD283168C8CAC8EF4AAB64A37AE740ACE1A72B8279CFA139CE92D3FD6ABA97365AC
2021-10-15 Amendment or Response - MERZ010.001C3.pdf	11AA7622C7CE3886A052180EC675442314 8CB54EB5610F20BDAFF90CAE76870AB6D85362FF6FCF76B30740D68FD42440618581775C254FA74FE807EBDC20866F
2021-10-15 Amendment or Response - MERZ010.001C3-AMSB.pdf	73E20A9E0A064092A747D7CCA041EFF5FB0BDBBE13E352A92FC662A909F8C97FECDC89B71C905B2C1D6A6AB9B77C4EA57FDE908853711E92F656FEDDA419F6DA
2021-10-15 Amendment or Response - MERZ010.001C3-CLM.pdf	F853C1D6551F63C403C31975596347CD858C6156B5ADC5FCE3288FA617A2EB084531AEDD31B0A1CBE2C1FC8FE578F242A2E9DB1714857B09E047C9BFCC2154E5
2021-10-15 Amendment or Response - MERZ010.001C3-INTRVIEW.APP.pdf	B1B611C2C4A848093DECEA59E593A6F83623504DA5EC4F25021E26CCD8F15D12AFCA97C3DBCA11A0CAD41EF4F5986618D54056611FA0D420E4033AE232C3FF03
2021-10-15 Amendment or Response - MERZ010.001C3-REM.pdf	5348C713DCFC5FAAF04FA1BEDB8D5BB6CDE83436811EC776FD4F9F208B03A84F9B59B165D85F62CF1BE61588DFDC4CE3E8AD6E2F5BF7285BD0532D138D8AAD8E

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 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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor	:	Wayne Baratta
App. No.	:	15/827948
Filed	:	November 30, 2017
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Masud, Rokib
Art Unit	:	3687
Conf. No.	:	2925

OFFICE ACTION RESPONSE

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

Dear Commissioner:

This is in response to the Final Office Action dated July 22, 2021, the shortened statutory period for which runs until October 22, 2021, taking into consideration the Interview with the Examiner on August 4, 2021.

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

Summary of Interview begins on page 13 of this paper.

Remarks begin on page 14 of this paper.

AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Canceled)

3. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; and

configure the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals; and

receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items;

wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory

information;

wherein said one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

4. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to run on a computing device.

5. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations.

6. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

7. (Previously Cancelled)

8. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions.

9. (Previously Presented) The web-based point of sale (POS) builder system of claim 8, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

10. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the information regarding one or more POS transactions comprises one or more of the employee clock information, the customer add/update information, the item add/update information, or the promotion information.

11. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the information regarding one or more POS transactions are viewable via the POS builder interface.

12. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces comprise one or more buttons or keys.

13. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

14. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is accessible via a web browser.

15. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces are accessible on the POS builder interface.

16. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to:

receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens; and

update the at least one of the one or more POS screens on the one or more POS terminals based on the second information.

17. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to store information regarding the one or more POS screens.

18. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is located remotely from the one or more POS terminals.

19. (Previously Presented) The web-based point of sale (POS) builder system of

claim 3, wherein the at least one server is further configured to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminals are in use performing one or more POS transactions.

20. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals use the one or more POS screens after completing a pending POS transaction.

21. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to maintain information regarding POS screens for separate sets of POS terminals separately.

22. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein instructions to the POS builder interface for programmatic creation and modification of the POS terminals are not formatted in programming code.

23. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to maintain information regarding the one or more POS screens.

24. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises one or more attributes of the one or more items.

25. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS terminals are configured to perform transactions independently of a connection with the network.

26. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one POS terminal configured to:

display one or more POS screens;

communicate with at least one server over a network comprising the Internet;

receive, over the network from the at least one server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

create or modify the one or more POS screens based on the received information; and

perform one or more transactions with respect to the one or more items; and

transmit, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items;

wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and

wherein said one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

27. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal comprises a plurality of POS terminals in a plurality of locations.

28. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to:

capture one or more videos using one or more cameras while performing the one or more transactions; and

correlate the one or more videos with the one or more transactions.

29. (Previously Presented) The web-based point of sale (POS) builder system of claim 28, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

30. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the one or more display interfaces comprise one or more buttons or keys.

31. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

32. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one server is located remotely from the at least one POS terminal.

33. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to perform the one or more transactions in real time while the one or more POS screens are created or modified.

34. (Previously Presented) The web-based point of sale (POS) builder system of claim 33, wherein the at least one POS terminal uses the created or modified one or more POS screens after completing a pending POS transaction.

35. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises one or more attributes of

the one or more items.

36. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

37. (Canceled).

38. (Canceled)

39. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to perform the one or more transactions without a connection to the web server and transmit the information regarding the one or more transactions to the at least one web server after performing the one or more transactions and when the connection to the web server is established.

40. (Previously Presented) The web-based point of sale (POS) builder system of claim 39, wherein the at least one POS terminal is further configured to store locally the information regarding the one or more transactions.

41. (Currently Amended) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

communicating with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receiving, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; and-

provisioning the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals; and

receiving, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items;

wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and

wherein said one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

42. (Currently Amended) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

displaying one or more POS screens;

communicating with at least one server over a network comprising the Internet;

receiving, over the network from the at least one server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

creating or modifying the one or more POS screens based on the received information; and

performing one or more transactions with respect to the one or more items; and

transmitting, to the at least one server, over the network, further information regarding one or more transactions corresponding to the one or more items; and

wherein the further information regarding the one or more transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and

wherein said one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

43. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information for creating or modifying functionality of the one or more POS terminals; and

configure the one or more POS terminals with the information over the network to create of modify the functionality of the one or more POS

terminals;

receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items;

wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and

wherein said one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

44. (Canceled)

45. (Previously Presented). The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to create or modify at least one of: a position or operation of a first display interface of the one or more display interfaces, wherein the first display interface comprises an input interface element.

46. (Previously Presented). The web-based point of sale (POS) builder system of claim 45, wherein the input interface element comprises a touch screen input interface element.

47. (Previously Presented). The web-based point of sale (POS) builder system of claim 26, wherein a position or operation of a first display interface of the one or more display interfaces is created or modified, wherein the first display interface comprises an input interface element.

48. (Previously Presented). The web-based point of sale (POS) builder system of claim 47, wherein the input interface element comprises a touch screen input interface element.

49. (New) The web-based point of sale (POS) builder system of claim 3, wherein the input interface element comprises a data interface for inputting at least some of said further information.

Application No.:
Filing Date:

SUMMARY OF INTERVIEW

The Applicant thanks the Examiner for the Interview conducted on August 4, 2021. The interview was between Examiner Rokib Masud and the Applicant's representatives Keith Lim and Alistair Forster. Pending Claims 3, 26 and 41 to 43 that were rejected or objected to in the Office Action were discussed along with U.S. Patent Publication No. 2006/0235755 ("MUELLER"). In particular, the discussion focused on the claim amendments made by the Applicant in its Office Action Response of April 7, 2021. A concern was raised of the deletion of certain subject matter from the independent claims. The discussion also focused on the section 102 rejections of Claims 3, 26 and 41 to 43 and the nature of "POS transactions" as well as the nature and source of the information communicated therewith. As discussed during the interview, MUELLER fails to disclose (i) the communication of information relating to POS transactions; (ii) the inclusion of information relating to a transaction in such information; and (iii) the transmission of such information from a POS terminal to a central server. The Applicant is providing herein an amendment that clarifies the issues raised during the interview, including to remove the deletion that caused the Examiner to be concerned that there was an expansion of claim scope. Moreover, Applicant is presenting a new claim that further distinguishes from the MUELLER reference.

REMARKS

This paper is responsive to the final Office Action dated July 27, 2021 (the "Office Action"). Applicant thanks Examiner Rokib Masud for the courtesy extended to Applicant's representative during the telephone interview conducted on August 4, 2021.

By the foregoing amendments, Applicant has amended the application as follows:

Claims 3, 26, and 41 to 43 have been amended.

Claim 49 is newly presented.

Support for the amendments and new claims can be found in the specification as filed and the originally filed claims. No new matter has been added.

Claims 3 to 6, 8 to 36, 39 to 43, and 45 to 49 are currently pending in the application. In view of the foregoing amendments and following remarks, Applicant respectfully submits that the application is in condition for allowance.

RESPONSE TO REJECTIONS BASED ON THE PRIOR ART

The Office Action rejected Claims 3 to 6, 10 to 27, 30 to 36, 39-43, and 45 to 48 under 35 U.S.C. § 102(a) as allegedly being anticipated by U.S. Patent Publication No. 2006/0235755 ("MUELLER"). The Office Action rejected Claims 8-9 and 28-29 under 35 U.S.C. § 103(a) as allegedly being unpatentable over MUELLER in view of U.S. Patent Publication No. 2005/0049921 ("TENGLER"). Applicant respectfully traverses the rejections.

1. *35 U.S.C. §102(a) in view of MUELLER*

The Office Action rejected Claims 3 to 6, 10 to 27, 30 to 36, and 39-43 under 35 U.S.C. § 102(a) as allegedly being anticipated by MUELLER. Specifically, the Office alleged that MUELLER discloses all the elements of independent Claims 3, 26, 41, 42 and 43, including the features "receive, from at least one of the one or more POS terminals over the network, information regarding one more POS transactions" and "wherein the information regarding the one or more POS transactions [...] comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information" which were allegedly disclosed by MUELLER. Applicant respectfully traverses these rejections. However, for the sake of expedited prosecution, Applicant has amended the claims.

As discussed during the August 24, 2021 interview, the Applicant notes that MUELLER does not disclose, suggest, or disclose the sending of POS transaction data that comprises any of "employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information," as explicitly required by independent claims 3, 26, and 41 to 43. Nor does MUELLER disclose, suggest, or disclose "receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items." In this regard, the Applicant notes the following:

- None of the Abstract or Paragraphs 36 or 71 of MUELLER, as cited on Pages 3 to 4 of the last Office Action in respect of independent claim 3 currently on file, disclose the receiving of information relating to a POS transaction *by the server as sent by a POS terminal*
- None of the Abstract or Paragraphs 36 or 71 of MUELLER disclose a "POS terminal" that is configured to send information regarding a POS transaction to a server
- None of the Abstract or Paragraphs 36 or 71 of MUELLER disclose a "POS transaction" occurring at the "one or more POS terminals" by "corresponding customers" as now required by the new further limitation in amended independent claims 3, 26, and 41 to 43, submitted herewith.

In fact, even while Mueller refers to the communication of "transaction history" from a POS server to the headquarter server at paragraph [0056], this reference in fact serves to further distinguish MUELLER from the claimed subject matter, particularly as amended hereby, since such transaction history of MUELLER, which is not explicitly not the same as the claimed "further information" regarding POS transactions, must be sent from a POS server to another headquarter server, rather than from a POS terminal.

Notwithstanding the foregoing, the Applicant has further amended independent claims 3, 26, and 41 to 43, as submitted herewith, to clarify the nature of the POS transaction information, as well as that it must be associated with "transactions by corresponding customers respectively associated with at least one of said one or more POS terminals." No new matter

has been added by way of this amendment. Accordingly, the instantly claimed subject matter is directed to transaction data originating from, and relating to, specific transactions occurring at the one or more POS terminals.

The Applicant directs the Examiner's attention to Appeal No. 2013-002915 in which Administrative Patent Judge Moore held in respect of now issued US Patent No. 9,400,640, from which the instant application claims a benefit (emphasis added):

> "In particular, Appellants contend that Sullivan's description of **selecting, analyzing, and reporting of financial transactions is not equivalent to the more complex creation and changing of POS functions in real time of the instant application**. *Id*. at 8. Appellants' argument is persuasive."

Applicant submits that the claimed receipt of POS transaction information, relating to transactions occurring at the POS terminals and which include specified types of information, is necessary to achieve the "more complex creation and changing of POS functions in real time" that MUELLER fails to disclose and/or enable. MUELLER in fact, since it is limited to a rule-based analysis, and transmission of data from a store server to a central server, as opposed to communication from a POS terminal, must necessarily be static in its POS functionality relative the "more complex and changing" POS functions of the instant application.

For example, MUELLER discloses that a "price associated with a menu item is **determined automatically** based at least in part on **revenue management information**." See MUELLER, Abstract (emphasis added.) Further, in paragraph 71, MUELLER discloses that "the POS server operates in accordance with **one or more databases of rules**. Various embodiments of **the present invention may be implemented by merely defining and selecting appropriate rules to govern the functionality of the POS server**, as will be apparent to those of skill in the art. Such rules can specify, e.g., **how to identify when to make pricing updates, the amount by which to adjust a price, how to determine whether to provide an offer/advertisement and/or where to display the offer/advertisement, and/or how to create or select items to make available for sale** (and/or how to remove items)." (emphasis added). MUELLER uses this pre-existing database of rules to implement functionality of the POS *server*. This is in direct contrast to the "more complex creation and changing of POS functions in real time" as referred to by Administrative Patent Judge Moore.

Accordingly, the Applicant respectfully submits that, for at least the reasons stated above, Independent Claims 3, 26, 41, 42 and 43, as well as all claims depending therefrom are allowable over MUELLER and requests withdrawal of this objection.

2. *35 U.S.C. § 103(a) over MUELLER in view TENGLER*

Claims 8-9 and 28-29 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over MUELLER in view of U.S. Patent Publication No. 2005/0049921 ("TENGLER").

For at least the same reasons set forth above, the Applicant submits that claims 8-9 and 28-29 recite subject that is not disclosed or suggested by MUELLER, and these deficiencies are not overcome by TENGLER. TENGLER also fails to disclose the concept of "POS transaction" information that received from a POS terminal, "wherein the POS transaction information comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information."

As such, the instantly claimed subject matter is *prima facie* non-obvious over MUELLER in view of TENGLER. Taken together or apart, the features of MUELLER and TENGLER, in the words of the Administrative Patent Judge Moore, are "not equivalent to the more complex creation and changing of POS functions in real time of the instant application."

The Applicant respectfully submits that, for at least the reasons stated above, Independent Claims 3, 26, 41, 42 and 43, as well as all claims depending therefrom, which by definition include at least the same elements, are patentable over MUELLER in view of TENGLER and requests withdrawal of this objection.

NEW CLAIM

Applicant respectfully submits that new claim 49 is patentable at least because of the dependency from a patentable base claim. New claim 49 is also patentable because of the additional features recited therein.

CONCLUSION

The Applicant believes that all issues raised in the Office Action have been addressed and that allowance of the pending claims is appropriate. The Examiner is respectfully requested to contact the undersigned by telephone at 949-721-6350 if it is believed that such contact would further the examination of the present application.

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: October 15, 2021

By:/Keith M Lim/_____
Keith M Lim
Registration No. 68912
Registered Practitioner
949-721-6350

| ~~AMEND~~

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 15/827,948	Filing Date 11/30/2017	☐ 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 $80 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $420 =	
☐ 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	10/15/2021	(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))	* 43	Minus	** 42	= 1		x $100 =	100
	Independent (37 CFR 1.16(h))	* 5	Minus	*** 4	= 1		x $480 =	480
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	580

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 $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ 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.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/NICOLE C LAWRENCE/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 08/10/2021

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IRVINE, CA 92614

EXAMINER
MASUD, ROKIB

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
08/10/2021	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):

efiling@knobbe.com
jayna.cartee@knobbe.com

PTOL-90A (Rev. 04/07)

Applicant-Initiated Interview Summary	**Application No.** 15/827,948	**Applicant(s)** BARATTA et al.		
	Examiner ROKIB MASUD	**Art Unit** 3687	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
ROKIB MASUD	Primary Examiner	Telephonic
Keith M. Lim	Attorney	
Alistair Forster	Attorney	

Date of Interview: 04 August 2021

Issues Discussed:

35 U.S.C. 102

Applicant discussed the prior art rejections. No agreement was reached.

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 07/22/2021

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EXAMINER
MASUD, ROKIB

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
07/22/2021	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):

efiling@knobbe.com
jayna.cartee@knobbe.com

PTOL-90A (Rev. 04/07)

Office Action Summary	**Application No.** 15/827,948	**Applicant(s)** BARATTA et al.	
	Examiner ROKIB MASUD	**Art Unit** 3687	**AIA (FITF) 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 MONTHS 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 07 April 2021.

☐ 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) 3-6,8-36,39-43 and 45-48 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) 3-6,8-36,39-43 and 45-48 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 _____ 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.

Attachment(s)

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

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

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

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

This Office Action responds to the amendment and argument filed by applicant on April 07, 2021 in response to the Office Action mailed on January 07, 2021.

Priority

This application is a continuation of U.S. Patent application serial number 15/635,097, filed on 06/27/2017, which is a continuation of U.S. Patent application serial number 15/198,117, filed on 06/30/2016, which is a continuation of U.S. Patent application serial number 12/012,666, filed on 02/05/08.

Status of the Claims

- Claims 3-6, 8-36, 39-43 and 45-48 are pending.
- Claims 3, 8, 10-11, 26, and 41-43 -are currently amended.
- Claims 1-2, 7, 37-38 and 44 are cancelled.
- Claims 45-48 are new.

Claim Rejections - 35 USC § 102

1. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the

statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

2. The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claim(s) 3-6, 10-27, 30-36, 39-43 and 45-48 is/are rejected under pre-AIA 35 U.S.C. 102(a)1]as being anticipated by Mueller et al. (US 2006/0235755, hereinafter Mueller).

With respect to **claims 3, 26 and 41-43**, Mueller discloses a web-based point of sale (POS) builder system (abstract) comprising:

at least one server (abstract, paragraphs [0030], [0036]) configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens (abstract, paragraphs [0036], [0071]);

receive, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items (abstract, paragraphs [0036], [0071]); and

configure the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals (abstract, paragraphs [0036], [0071]); and

receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items (abstract, paragraphs [0036], [0071]);

wherein the further information regarding the one or more POS transactions, comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information (abstract, paragraphs [0036], and paragraph [0071] states "Such rules can specify, e.g., how to identify when to make pricing updates, the amount by which to adjust a price, how to determine whether to provide an offer/advertisement and/or where to display the offer/advertisement, and/or how to create or select items to make available for sale (and/or how to remove items)").

With respect to **claim 4** Mueller discloses a web-based point of sale (POS) builder system, wherein the POS builder interface is configured to run on a computing device (abstract, paragraphs [0036], [0071]).

With respect to **claims 5 and 27**, Mueller discloses a web-based point of sale (POS) builder system, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations (abstract, paragraphs [0036], [0071]).

With respect to **claims 6 and 36**, Mueller discloses a web-based point of sale (POS) builder system, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs (abstract, paragraphs [0036], [0071]).

With respect to **claim 10**, Mueller discloses a web-based point of sale (POS) builder system, wherein the information regarding one or more POS transactions comprises one or more

of the employee clock information, the customer add/update information, the item add/update information, or the promotion information (paragraphs [0059] and [0071]).

With respect to **claim 11**, Mueller discloses a web-based point of sale (POS) builder system, wherein the information regarding one or more POS transactions are viewable via the POS builder interface (abstract, paragraphs [0036], [0071]).

With respect to **claims 12 and 30**, Mueller discloses a web-based point of sale (POS) builder system, wherein the one or more display interfaces comprise one or more buttons or keys (paragraphs [0073] – [0074]).

With respect to **claims 13 and 31**, Mueller discloses a web-based point of sale (POS) builder system, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces (paragraphs [0073] – [0074]).

With respect to **claim 14**, Mueller discloses a web-based point of sale (POS) builder system, wherein the POS builder interface is accessible via a web browser (paragraphs [0073] – [0075]).

With respect to **claim 15**, Mueller discloses a web-based point of sale (POS) builder system, wherein the one or more display interfaces are accessible on the POS builder interface (paragraphs [0073] – [0075]).

With respect to **claim 16**, Mueller discloses a web-based point of sale (POS) builder system, wherein the at least one server is further configured to:

receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens (abstract, paragraphs [0036], [0071]); and

update the at least one of the one or more POS screens on the one or more POS terminals based on the second information (abstract, paragraphs [0036], [0071]).

With respect to **claim 17**, Mueller discloses a web-based point of sale (POS) builder system, wherein the at least one server is further configured to store information regarding the one or more POS screens (abstract, paragraphs [0036], [0071]).

With respect to **claims 18 and 32**, Mueller discloses a web-based point of sale (POS) builder system, wherein the at least one server is located remotely from the one or more POS terminals (abstract, paragraph [0155]).

With respect to **claims 19 and 33**, Mueller discloses a web-based point of sale (POS) builder system wherein the at least one server is further configured to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminals are in use performing one or more POS transactions (paragraph [0104], [0115] – [0116] and [0148]).

With respect to **claims 20 and 34**, Mueller discloses a web-based point of sale (POS) builder system wherein the one or more POS terminals use the one or more POS screens after completing a pending POS transaction (abstract, paragraphs [0036], [0071]).

With respect to **claim 21**, Mueller discloses a web-based point of sale (POS) builder system wherein the at least one server is further configured to maintain information regarding POS screens for separate sets of POS terminals separately (paragraph [0104], [0115] – [0116] and [0148]-[0149]).

With respect to **claim 22**, Mueller discloses a web-based point of sale (POS) builder system wherein instructions to the POS builder interface for programmatic creation and

modification of the POS terminals are not formatted in programming code (abstract, paragraphs [0036], [0071]).

With respect to **claim 23**, Mueller discloses a web-based point of sale (POS) builder system wherein the at least one server is further configured to maintain information regarding the one or more POS screens (abstract, paragraphs [0036], [0071]).

With respect to **claims 24 and 35**, Mueller discloses a web-based point of sale (POS) builder system, wherein the received information comprises one or more attributes of the one or more items (paragraph [0104], [0115] – [0116] and [0148]).

With respect to **claim 25**, Mueller discloses a web-based point of sale (POS) builder system wherein the POS terminals are configured to perform transactions independently of a connection with the network (abstract, paragraphs [0036], [0071]).

With respect to **claim 39**, Mueller discloses a web-based point of sale (POS) builder system wherein the at least one POS terminal is further configured to perform the one or more transactions without a connection to the web server and transmit the information regarding the one or more transactions to the at least one web server after performing the one or more transactions and when the connection to the web server is established (paragraphs [0034] – [0035]).

With respect to **claim 40**, Mueller discloses a web-based point of sale (POS) builder system wherein the at least one POS terminal is further configured to store locally the information regarding the one or more transactions (paragraph [0221]).

With respect to **claims 45 and 47**, Mueller discloses a web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to create or modify at least one of: a position or operation of a first display interface of the one or more display

interfaces, wherein the first display interface comprises an input interface element (abstract and paragraphs [0030] – [0031]).

With respect to **claims 46 and48**, Mueller discloses a web-based point of sale (POS) builder system, wherein the input interface element comprises a touch screen input interface element (paragraph [0040]).

Claim Rejections - 35 USC § 103

4. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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

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

6. Claims 8-9 and 28-29 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mueller in view of Tengler et al. (US 2005/0049921, hereinafter Tengler).

Mueller discloses all of the limitations above but does not explicitly disclose the feature of wherein the at least one web server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions and wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

However, Tengler teaches the feature wherein the at least one web server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions and wherein the one or more videos and the one or more POS transactions are indexed using a same clock (paragraphs [0018] and [0103]).

Therefore it would have been obvious for one of ordinary skill in the art to have modified the feature of Mueller to include the feature wherein the at least one web server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions and wherein the one or more videos and the one or more POS transactions are indexed using a same clock, as taught by Tengler in order to facilitate the transaction.

Response to Arguments

Applicant's arguments filed on April 07, 2021 have been fully considered but they are not persuasive.

With respect to applicant's argument regarding the amendment of the independent claims examiner notes that abstract, paragraphs [0036], and paragraph [0071] of Mueller reference discloses the features stating, "Such rules can specify, e.g., how to identify when to make pricing updates, the amount by which to adjust a price, how to determine whether to provide an offer/advertisement and/or where to display the offer/advertisement, and/or how to create or select items to make available for sale (and/or how to remove items)".

Examiner notes no other remarks or arguments. Accordingly, the rejection remains as is.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROKIB MASUD whose telephone number is (571)270-5390. The examiner can normally be reached on Mon-Fri 8:00-5:00.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fahd Obeid can be reached on 571-270-3324. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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 https://ppair-my.uspto.gov/pair/PrivatePair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROKIB MASUD/
Primary Examiner, Art Unit 3687

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	**Art Unit**
	ROKIB MASUD	3687

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

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant					☐ CPA		☐ T.D.		☐ R.1.47	
CLAIM		**DATE**								
Final	Original	07/03/2020	12/30/2020	07/17/2021						
	3	✓	✓	✓						
	4	✓	✓	✓						
	5	✓	✓	✓						
	6	✓	✓	✓						
	7	✓	-	-						
	8	✓	✓	✓						
	9	✓	✓	✓						
	10	✓	✓	✓						
	11	✓	✓	✓						
	12	✓	✓	✓						
	13	✓	✓	✓						
	14	✓	✓	✓						
	15	✓	✓	✓						
	16	✓	✓	✓						
	17	✓	✓	✓						
	18	✓	✓	✓						
	19	✓	✓	✓						
	20	✓	✓	✓						
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	24	✓	✓	✓						
	25	✓	✓	✓						
	26	✓	✓	✓						
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	35	✓	✓	✓						
	36	✓	✓	✓						
	37	✓	-	-						
	38	✓	-	-						
	39	✓	✓	✓						
	40	✓	✓	✓						
	41	✓	✓	✓						
	42	✓	✓	✓						
	43	✓	✓	✓						
	44	✓	-	-						

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	Art Unit
	ROKIB MASUD	3687

CLAIM		DATE								
Final	Original	07/03/2020	12/30/2020	07/17/2021						
	45			✓						
	46			✓						
	47			✓						
	48			✓						

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	Art Unit
	ROKIB MASUD	3687

CPC - Searched*		
Symbol	Date	Examiner
G06Q 20/20; G06Q 20/202	07/04/2019	R. M.

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
705	16; 34	07/04/2019	R. M.

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST, GOOGLE PATENT, NPL, IDS	07/04/2019	R. M.

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
705	27.1	11/12/2020	R. M.

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S20	6	"9208528"	USPAT	OR	OFF	2020/12/01 10:00
S21	2	(("9208528") or ("20030041329")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/12/01 10:00
S22	8	(("20060235755") or ("20070265935") or ("20070175995") or ("20050049921") or ("20070175992") or ("5920312") or ("20020194074") or ("6384850")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2021/01/02 15:34
S25	319	(inventory price cost sales) and ((web adj server) server same database) same(hardware software) same ((cash adj register) POS (point adj of adj sale)) and (subscriptS4 subscrib$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2021/01/02 17:35
S27	2	(("9208528") or ("20030041329")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2021/01/02 17:35
S28	1,112	(web network remote) adj ((server host database system) same(subscri$9))	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2021/01/02 17:35
S29	319	(inventory price cost sales) and ((web adj server) server same database) same(hardware software) same ((cash adj register) POS (point adj of adj sale)) and (subscriptS4 subscrib$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2021/02/24 14:29
S30	21	S29 @py<"2006"	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	AND	OFF	2021/02/24 14:29
S31	325	(inventory price cost sales) and ((web adj server) server same database) same(hardware software) same ((cash adj register) POS (point	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	OFF	2021/07/17 09:27

		adj of adj sale)) and (subscriptS4 subscrib$4)	DERWENT; IBM_TDB			
S32	21	S31 @py<"2006"	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	AND	OFF	2021/07/17 09:27
S33	1	("20060235755").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2021/07/17 11:15
S34	142,248	(G06F8/30 or G06Q20/202 or G06Q20/20 or H04L67/02 or G06Q30/06 or G06F8/34).cpc.	US-PGPUB; USPAT; EPO; DERWENT; IBM_TDB	OR	OFF	2021/07/17 13:01
S35	116,766	(G06F8/30 and G06Q20/202 and G06Q20/20 or H04L67/02 or G06Q30/06 or G06F8/34).cpc.	US-PGPUB; USPAT; EPO; DERWENT; IBM_TDB	OR	OFF	2021/07/17 13:01
S36	50,108	(G06F8/30 and G06Q20/202 and G06Q20/20 and H04L67/02 or G06Q30/06 or G06F8/34).cpc.	US-PGPUB; USPAT; EPO; DERWENT; IBM_TDB	OR	OFF	2021/07/17 13:01
S37	8,464	(G06F8/30 and G06Q20/202 and G06Q20/20 and H04L67/02 and G06Q30/06 or G06F8/34).cpc.	US-PGPUB; USPAT; EPO; DERWENT; IBM_TDB	OR	OFF	2021/07/17 13:02
S38	8	(G06F8/30 and G06Q20/202 and G06Q20/20 and H04L67/02 and G06Q30/06 and G06F8/34).cpc.	US-PGPUB; USPAT; EPO; DERWENT; IBM_TDB	OR	OFF	2021/07/17 13:02

7/17/2021 1:07:39 PM
C:\Users\rmasud\Documents\EAST\Workspaces\Web Based Point of Sale.wsp

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor	:	Wayne Baratta
App. No.	:	15/827948
Filed	:	November 30, 2017
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Masud, Rokib
Art Unit	:	3687
Conf. No.	:	2925

OFFICE ACTION RESPONSE

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

Dear Commissioner:

This is in response to the non-final Office Action dated January 7, 2021, the shortened statutory period for which runs until April 7, 2021 and the Notice to File Corrected Application Papers dated December 17, 2020.

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Summary of Interview begins on page 14 of this paper.

Remarks begin on page 15 of this paper.

AMENDMENTS TO THE SPECIFICATION

Please amend lines 10-14 on page 1:

This application is related to docket number TY2006-001, filed on February 26, 2007, ~~serial number 11,710,722~~ US App. No. 11/710,722 and docket number TY2006-002, filed on February 26, 2007, ~~serial number 11,710,723~~ US App. No. 11/710,723, which are herein incorporated by reference in its entirety.

AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Canceled)

3. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; and

configure the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals; and

receive, from at least one of the one or more POS terminals over the network, <u>further</u> information regarding one or more POS transactions corresponding to the one or more items;

wherein the <u>further</u> information regarding the one or more POS transactions~~, the information used for creating or modifying the one or more POS screens, or a combination thereof~~ comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount

information, taxation information, item cost information, or inventory information.

4. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to run on a computing device.

5. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations.

6. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

7. (Cancelled)

8. (Currently Amended) The web-based point of sale (POS) builder system of claim [[1]]3, wherein the at least one [[web]] server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions.

9. (Previously Presented) The web-based point of sale (POS) builder system of claim 8, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

10. (Currently Amended) The web-based point of sale (POS) builder system of claim 3[[7]], wherein the information regarding one or more POS transactions comprises one or more of the employee clock information, the customer add/update information, the item add/update information, or the promotion information.

11. (Currently Amended) The web-based point of sale (POS) builder system of claim [[l]]3, wherein the information regarding one or more POS transactions are viewable via the POS builder interface.

12. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces comprise one or more buttons or keys.

13. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

14. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is accessible via a web browser.

15. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces are accessible on the POS builder interface.

16. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to:

receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens; and

update the at least one of the one or more POS screens on the one or more POS terminals based on the second information.

17. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to store information regarding the one or more POS screens.

18. (Previously Presented) The web-based point of sale (POS) builder system of

claim 3, wherein the at least one server is located remotely from the one or more POS terminals.

19. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminals are in use performing one or more POS transactions.

20. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals use the one or more POS screens after completing a pending POS transaction.

21. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to maintain information regarding POS screens for separate sets of POS terminals separately.

22. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein instructions to the POS builder interface for programmatic creation and modification of the POS terminals are not formatted in programming code.

23. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one server is further configured to maintain information regarding the one or more POS screens.

24. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises one or more attributes of the one or more items.

25. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS terminals are configured to perform transactions

independently of a connection with the network.

26. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one POS terminal configured to:

display one or more POS screens;

communicate with at least one server over a network comprising the Internet;

receive, over the network from the at least one server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

create or modify the one or more POS screens based on the received information; and

perform one or more transactions with respect to the one or more items; and

transmit, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items;

wherein the further information regarding the one or more POS transactions~~, the information used for creating or modifying the one or more POS screens, or a combination thereof~~ comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information.

27. (Previously Presented) The web-based point of sale (POS) builder system of claim

26, wherein the at least one POS terminal comprises a plurality of POS terminals in a plurality of locations.

28. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to:

capture one or more videos using one or more cameras while performing the one or more transactions; and

correlate the one or more videos with the one or more transactions.

29. (Previously Presented) The web-based point of sale (POS) builder system of claim 28, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

30. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the one or more display interfaces comprise one or more buttons or keys.

31. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

32. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one server is located remotely from the at least one POS terminal.

33. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to perform the one or more transactions in real time while the one or more POS screens are created or modified.

34. (Previously Presented) The web-based point of sale (POS) builder system of

claim 33, wherein the at least one POS terminal uses the created or modified one or more POS screens after completing a pending POS transaction.

35. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises one or more attributes of the one or more items.

36. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

37. (Canceled).

38. (Canceled)

39. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to perform the one or more transactions without a connection to the web server and transmit the information regarding the one or more transactions to the at least one web server after performing the one or more transactions and when the connection to the web server is established.

40. (Previously Presented) The web-based point of sale (POS) builder system of claim 39, wherein the at least one POS terminal is further configured to store locally the information regarding the one or more transactions.

41. (Currently Amended) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

communicating with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receiving, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; and-

provisioning the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals; and

receiving, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items;

wherein the further information regarding the one or more POS transactions~~, the information used for creating or modifying the one or more POS screens, or a combination thereof~~ comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information.

42. (Currently Amended) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

displaying one or more POS screens;

communicating with at least one server over a network comprising the Internet;

receiving, over the network from the at least one server, information used for

creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

creating or modifying the one or more POS screens based on the received information; and

performing one or more transactions with respect to the one or more items; and

transmitting, to the at least one server, over the network, further information regarding one or more transactions corresponding to the one or more items; and

wherein the further information regarding the one or more transactions~~, the information used for creating or modifying the one or more POS screens, or a combination thereof~~ comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information.

43. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information for creating or modifying functionality of the one or more POS terminals; and

configure the one or more POS terminals with the information over the

network to create of modify the functionality of the one or more POS terminals;

receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items;

wherein the further information regarding the one or more POS transactions~~, the information used for creating or modifying the functionality of the one or more POS terminals, or a combination thereof,~~ comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information.

44. (Canceled)

45. (New). The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to create or modify at least one of: a position or operation of a first display interface of the one or more display interfaces, wherein the first display interface comprises an input interface element.

46. (New). The web-based point of sale (POS) builder system of claim 45, wherein the input interface element comprises a touch screen input interface element.

47. (New). The web-based point of sale (POS) builder system of claim 26, wherein a position or operation of a first display interface of the one or more display interfaces is created or modified, wherein the first display interface comprises an input interface element.

48. (New). The web-based point of sale (POS) builder system of claim 47, wherein the

input interface element comprises a touch screen input interface element.

SUMMARY OF INTERVIEW

The Applicant thanks the Examiner for the Interview conducted on February 24, 2021. The interview was between Examiner Rokib Masud and the Applicant's representatives Keith Lim and Alistair Forster. Pending Claims 3, 26 and 41 to 43 that were rejected or objected to in the Office Action were discussed along with U.S. Patent Publication No. 2006/0235755 ("MUELLER"). In particular, the discussion focused on the following: section 102 rejections of Claims 3, 26 and 41 to 43 and the Applicant's proposed amendment regarding the clarification of "POS transactions" and the information communicated therewith. As discussed during the interview, MUELLER fails to disclose the communication of information relating to POS transactions. The Applicant is providing herein the amendment that was proposed during the interview. Moreover, Applicant is presenting new claims that further distinguish from the MUELLER reference.

REMARKS

This paper is responsive to the non-final Office Action dated January 7, 2021 (the "Office Action") and the Notice to File Corrected Application Papers dated December 17, 2020. Applicant thanks Examiner Rokib Masud for the courtesy extended to Applicant's representative during the telephone interview conducted on February 24, 2021.

By the foregoing amendments, Applicant has amended the application as follows:

The specification has been amended according to the Notice to File Corrected Application Papers on December 17, 2020.

Claims 3, 8, 10, 26, and 41 to 43 have been amended.

Claims 45 to 48 are newly presented.

Support for the amendments and new claims can be found in the specification as filed and the originally filed claims. No new matter has been added.

Claims 3 to 6, 8 to 36, and 39 to 43 are currently pending in the application. In view of the foregoing amendments and following remarks, Applicant respectfully submits that the application is in condition for allowance.

RESPONSE TO CLAIM OBJECTIONS

The Office Action objected to claims 8-11. Applicant has amended claims 8 and 10-11. Accordingly, applicant respectfully requests withdrawal of the objection to claims.

RESPONSE TO REJECTIONS BASED ON THE PRIOR ART

The Office Action rejected Claims 3 to 6, 10 to 27, 30 to 36, and 39-43 under 35 U.S.C. § 102(a) as allegedly being anticipated by U.S. Patent Publication No. 2006/0235755 ("MUELLER"). The Office Action rejected Claims 8-9 and 28-29 under 35 U.S.C. § 103(a) as allegedly being unpatentable over MUELLER in view of U.S. Patent Publication No. 2005/0049921 ("TENGLER"). Applicant respectfully traverses the rejections.

1. 35 U.S.C. §102(a) in view of MUELLER

The Office Action rejected Claims 3 to 6, 10 to 27, 30 to 36, and 39-43 under 35 U.S.C. § 102(a) as allegedly being anticipated by MUELLER. Specifically, the Office alleged that MUELLER discloses all the elements of independent Claims 3, 26, 41, 42 and 43, including the features "receive, from at least one of the one or more POS terminals over the

network, information regarding one more POS transactions" and "wherein the information regarding the one or more POS transactions [...] comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information" which were allegedly disclosed by MUELLER. Applicant respectfully traverses these rejections. However, for the sake of expedited prosecution, Applicant has amended the claims.

As discussed during the February 24, 2021 interview, the Applicant notes that MUELLER is directed to automatically updating pricing, and fails to disclose the receipt of "POS transaction" information from POS terminals. Further, it does not disclose such POS transaction information that comprises the further specified types of information as recited in the amended claims submitted herewith, such as "employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information." During the interview, Applicant directed the Examiner's attention to Appeal No. 2013-002915 where Administrative Patent Judge Moore held (emphasis added):

> "In particular, Appellants contend that Sullivan's description of selecting, analyzing, and reporting of financial transactions "**is not equivalent to the more complex creation and changing of POS functions in real time of the instant application**. *Id.* at 8. Appellants' argument is persuasive."

While the Applicant and the Examiner acknowledged that this comment related to a different reference, Applicant pointed out to the Examiner that the receipt of POS transaction information that includes the further specified types of information is exemplary of the "more complex creation and changing of POS functions in real time" that MUELLER, like Sullivan, fails to disclose and/or enable.

For at least the same reasons, therefore, Applicant respectfully submits that MUELLER does not disclose or suggest the features "receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items" and "wherein the further information regarding the one or more POS transactions comprises one or more of employee clock information, customer

add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information" as recited in amended Claim 3 in combination with other limitations.

In contrast, MUELLER discloses that a "price associated with a menu item is **determined automatically** based at least in part on **revenue management information**." See MUELLER, Abstract (emphasis added.) Further, in paragraph 71, MUELLER discloses that "the POS server operates in accordance with **one or more databases of rules**. Various embodiments of **the present invention may be implemented by merely defining and selecting appropriate rules to govern the functionality of the POS server**, as will be apparent to those of skill in the art. Such rules can specify, e.g., **how to identify when to make pricing updates, the amount by which to adjust a price, how to determine whether to provide an offer/advertisement and/or where to display the offer/advertisement, and/or how to create or select items to make available for sale** (and/or how to remove items)." (emphasis added). In other words, MUELLER, use a pre-existing database of rules to govern functionality of the POS server and to implement, e.g. make price updates, offer advertisements, and create or select items to make available for sale.

Applicant submits that this not the same as receiving "POS transaction" information at the POS server from the one or more POS terminals. Further, it does not disclose the specific types of POS transaction information as recited by the amended claims. Applicant submits that, in view of at least the foregoing differences, the instantly claimed subject matter is novel in view of MUELLER.

Nevertheless, for the sake of expedited prosecution, Applicant further amends the claims. Briefly, each of Independent Claims 3, 26 and 41 to 43 have been amended to clarify that "the further information regarding the one or more POS transactions comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information." No new matter is added by this amendment.

Accordingly, the Applicant respectfully submits that, for at least the reasons stated above, Independent Claims 3, 26, 41, 42 and 43, as well as all claims depending therefrom are allowable over MUELLER and requests withdrawal of this objection.

2. *35 U.S.C. § 103(a) over MUELLER in view TENGLER*

Claims 8-9 and 28-29 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over MUELLER in view of U.S. Patent Publication No. 2005/0049921 ("TENGLER").

For at least the same reasons set forth above, the Applicant submits that claims 8-9 and 28-29 recite subject that is not disclosed or suggested by MUELLER, and these deficiencies are not overcome by TENGLER. TENGLER also fails to disclose the concept of "POS transaction" information that received from a POS terminal, "wherein the POS transaction information comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information."

As such, the instantly claimed subject matter is *prima facie* non-obvious over MUELLER in view of TENGLER. Taken together or apart, the features of MUELLER and TENGLER, in the words of the Administrative Patent Judge Moore, are "not equivalent to the more complex creation and changing of POS functions in real time of the instant application."

The Applicant respectfully submits that, for at least the reasons stated above, Independent Claims 3, 26, 41, 42 and 43, as well as all claims depending therefrom, which by definition include at least the same elements, are patentable over MUELLER in view of TENGLER and requests withdrawal of this objection.

NEW CLAIMS

Applicant respectfully submits that new claims are patentable at least because of the dependency from a patentable base claim. New claims are also patentable because of the additional features recited therein.

CONCLUSION

The Applicant believes that all issues raised in the Office Action have been addressed and that allowance of the pending claims is appropriate. The Examiner is respectfully requested to

contact the undersigned by telephone at 949-721-6350 if it is believed that such contact would further the examination of the present application.

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: April 7, 2021

By:/Keith M Lim/_____
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Registered Practitioner
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34173947

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
15/827,948	**04/07/2021 02:46:57 PM ET**	**MERZ010.001C3**

Title of Invention

WEB-BASED POINT OF SALE BUILDER

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	2925	FILED BY	Tyler Chin
PATENT CENTER #	60172187	FILING DATE	11/30/2017
CUSTOMER #	20995	FIRST NAMED INVENTOR	Wayne BARATTA
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	keith lim

Documents

TOTAL DOCUMENTS: 5

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
2021-04-07 Amendment MERZ010.001C3.pdf		19	-	95 KB
2021-04-07 Amendment MERZ010.001C3-A....pdf	(1-1)	1	Amendment/Req. Reconsideration-After Non-Final Reject	19 KB
2021-04-07 Amendment MERZ010.001C3-SPEC.pdf	(2-2)	1	Specification	18 KB
2021-04-07 Amendment MERZ010.001C3-CLM.pdf	(3-13)	11	Claims	56 KB
2021-04-07 Amendment	(14-14)	1	Applicant summary of interview	24 KB

MERZ010.001C3-INTRVIEW.APP.pdf			with examiner	
2021-04-07 Amendment MERZ010.001C3-REM.pdf	(15-19)	5	Applicant Arguments/Remarks Made in an Amendment	45 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
2021-04-07 Amendment MERZ010.001C3.pdf	08CB9060A1A7B82370E89D75B0B48227FE523EAFA44B4A15356CE818FE533FC6145E320AD618827B2CBC8F1ABD7B7A681999F470DBFC4B3FA897562A6F7F4595
2021-04-07 Amendment MERZ010.001C3-A....pdf	51E961D745BD7572F0A803EC342C6048495EFA011A596BC7E7B8309363765A52AD4CFBD1DC69A4C5F1F0ADE6D234186E039864F98E279D5CE0AC3766B1379FCF
2021-04-07 Amendment MERZ010.001C3-SPEC.pdf	7F76C6FFBE697258017157E7372A7B44EDE339B30900866CB2AB73DF2651220E7249DB287C98B647FA38B0D22012B6D434B60B05D6E8FD05C28AC0D1AE5A37E8
2021-04-07 Amendment MERZ010.001C3-CLM.pdf	7E6D1CBBC026087A567A659E531A78B97B37A4759A179F8D1B940B31828B54C9DF8769F7B7DDA884D3BA6624691F1DB4493A866059ECC4A0BE0436F438030925
2021-04-07 Amendment MERZ010.001C3-INTRVIEW.APP.pdf	C39E1AE8F63573B317726F97758AB2D06DB1B51EB03B38276C346FB4C37EADEED78031BACF9430EA8C95A63C682248E9FB25CA02B0E96B11838CDB2A9BE15BAB
2021-04-07 Amendment MERZ010.001C3-REM.pdf	ED279333CBDE10B38D898225672A85AC32B6D4447B07B4A50C396E6E5CAF3622F84E17154D28380962E8E24605C8B650E1ECCD566DFD89461A6ED5334DA97503

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 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
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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 15/827,948	Filing Date 11/30/2017	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

	(Column 1)	(Column 2)			
FOR	NUMBER FILED	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 $80 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $420 =	
☐ 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

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	04/07/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 42	Minus	** 42	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 4	Minus	*** 4	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ 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.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/DENISE T LILES/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 03/04/2021

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER
MASUD, ROKIB

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
03/04/2021	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):

efiling@knobbe.com
jayna.cartee@knobbe.com

PTOL-90A (Rev. 04/07)

Applicant-Initiated Interview Summary	**Application No.** 15/827,948	**Applicant(s)** BARATTA et al.		
	Examiner ROKIB MASUD	**Art Unit** 3687	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
ROKIB MASUD	Primary Examiner	Telephonic
Keith M. Lim	Attorney	
Alistair Forster		

Date of Interview: 24 February 2021

Issues Discussed:

35 U.S.C. 103

Applicant discussed the prior art rejections.

Proposed Amendment(s)

Applicant discussed the proposed amendment of claim 3 and new presented claims 45-48. No agreement was reached.

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 01/07/2021

KNOBBE MARTENS OLSON & BEAR LLP
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IRVINE, CA 92614

EXAMINER
MASUD, ROKIB

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
01/07/2021	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):

efiling@knobbe.com
jayna.cartee@knobbe.com

PTOL-90A (Rev. 04/07)

Office Action Summary	**Application No.** 15/827,948	**Applicant(s)** BARATTA et al.	
	Examiner ROKIB MASUD	**Art Unit** 3687	**AIA (FITF) 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 MONTHS 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 14 December 2020.

☐ 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) 3-6,8-36 and 39-43 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) 3-6,8-36 and 39-43 is/are rejected.

8) ☑ Claim(s) 8-11 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 _____ 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.

Attachment(s)

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

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date 12/14/2020.

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

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 14, 2020 has been entered.

Hence, this Office Action responds to the amendment and argument filed by applicant on December 14, 2020 in response to the Office Action mailed on November 20, 2020.

Priority

This application is a continuation of U.S. Patent application serial number 15/635,097, filed on 06/27/2017, which is a continuation of U.S. Patent application serial number 15/198,117, filed on 06/30/2016, which is a continuation of U.S. Patent application serial number 12/012,666, filed on 02/05/08.

Status of the Claims

- Claims 3-6, 8-36 and 39-43 are pending.
- Claims 3, 8, 10-11, 16-19, 21, 23, 26-32, 34-36, 39-43 are currently amended.
- Claims 1-2, 7, 37-38 and 44 are cancelled.

Claim Objections

1. Claims 8-11 are objected to because of the following informalities: Claims 8, 10 and 11 depend on the cancelled claims and claim 9 is also objected based upon it's dependency on claim 8. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

3. The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claim(s) 3-6, 10-27, 30-36 and 39-43 is/are rejected under pre-AIA 35 U.S.C. 102(a)1] as being anticipated by Mueller et al. (US 2006/0235755, hereinafter Mueller).

With respect to **claims 3, 26 and 41-43**, Mueller discloses a web-based point of sale (POS) builder system (abstract) comprising:

at least one server (abstract, paragraphs [0030], [0036]) configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens (abstract, paragraphs [0036], [0071]);

receive, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items (abstract, paragraphs [0036], [0071]); and

configure the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals (abstract, paragraphs [0036], [0071]); and

receive, from at least one of the one or more POS terminals over the network, information regarding one or more POS transactions corresponding to the one or more items (abstract, paragraphs [0036], [0071]);

wherein the information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information (abstract, paragraphs [0036], [0071]).

With respect to **claim 4** Mueller discloses a web-based point of sale (POS) builder system, wherein the POS builder interface is configured to run on a computing device (abstract, paragraphs [0036], [0071]).

With respect to **claims 5 and 27**, Mueller discloses a web-based point of sale (POS) builder system, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations (abstract, paragraphs [0036], [0071]).

With respect to **claims 6 and 36**, Mueller discloses a web-based point of sale (POS) builder system, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs (abstract, paragraphs [0036], [0071]).

With respect to **claim 10**, Mueller discloses a web-based point of sale (POS) builder system, wherein the information regarding one or more POS transactions comprises one or more of the employee clock information, the customer add/update information, the item add/update information, or the promotion information (paragraphs [0059] and [0071]).

With respect to **claim 11**, Mueller discloses a web-based point of sale (POS) builder system, wherein the information regarding one or more POS transactions are viewable via the POS builder interface (abstract, paragraphs [0036], [0071]).

With respect to **claims 12 and 30**, Mueller discloses a web-based point of sale (POS) builder system, wherein the one or more display interfaces comprise one or more buttons or keys (paragraphs [0073] – [0074]).

With respect to **claims 13 and 31**, Mueller discloses a web-based point of sale (POS) builder system, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces (paragraphs [0073] – [0074]).

With respect to **claim 14**, Mueller discloses a web-based point of sale (POS) builder system, wherein the POS builder interface is accessible via a web browser (paragraphs [0073] – [0075]).

With respect to **claim 15**, Mueller discloses a web-based point of sale (POS) builder system, wherein the one or more display interfaces are accessible on the POS builder interface (paragraphs [0073] – [0075]).

With respect to **claim 16**, Mueller discloses a web-based point of sale (POS) builder system, wherein the at least one server is further configured to:

receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens (abstract, paragraphs [0036], [0071]); and

update the at least one of the one or more POS screens on the one or more POS terminals based on the second information (abstract, paragraphs [0036], [0071]).

With respect to **claim 17**, Mueller discloses a web-based point of sale (POS) builder system, wherein the at least one server is further configured to store information regarding the one or more POS screens (abstract, paragraphs [0036], [0071]).

With respect to **claims 18 and 32**, Mueller discloses a web-based point of sale (POS) builder system, wherein the at least one server is located remotely from the one or more POS terminals (abstract, paragraph [0155]).

With respect to **claims 19 and 33**, Mueller discloses a web-based point of sale (POS) builder system wherein the at least one server is further configured to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminals are in use performing one or more POS transactions (paragraph [0104], [0115] – [0116] and [0148]).

With respect to **claims 20 and 34**, Mueller discloses a web-based point of sale (POS) builder system wherein the one or more POS terminals use the one or more POS screens after completing a pending POS transaction (abstract, paragraphs [0036], [0071]).

With respect to **claim 21**, Mueller discloses a web-based point of sale (POS) builder system wherein the at least one server is further configured to maintain information regarding POS screens for separate sets of POS terminals separately (paragraph [0104], [0115] – [0116] and [0148]-[0149]).

With respect to **claim 22**, Mueller discloses a web-based point of sale (POS) builder system wherein instructions to the POS builder interface for programmatic creation and modification of the POS terminals are not formatted in programming code (abstract, paragraphs [0036], [0071]).

With respect to **claim 23**, Mueller discloses a web-based point of sale (POS) builder system wherein the at least one server is further configured to maintain information regarding the one or more POS screens (abstract, paragraphs [0036], [0071]).

With respect to **claims 24 and 35**, Mueller discloses a web-based point of sale (POS) builder system, wherein the received information comprises one or more attributes of the one or more items (paragraph [0104], [0115] – [0116] and [0148]).

With respect to **claim 25**, Mueller discloses a web-based point of sale (POS) builder system wherein the POS terminals are configured to perform transactions independently of a connection with the network (abstract, paragraphs [0036], [0071]).

With respect to **claim 39**, Mueller discloses a web-based point of sale (POS) builder system wherein the at least one POS terminal is further configured to perform the one or more transactions without a connection to the web server and transmit the information regarding the

one or more transactions to the at least one web server after performing the one or more transactions and when the connection to the web server is established (paragraphs [0034] – [0035]).

With respect to **claim 40**, Mueller discloses a web-based point of sale (POS) builder system wherein the at least one POS terminal is further configured to store locally the information regarding the one or more transactions (paragraph [0221]).

Claim Rejections - 35 USC § 103

5. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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

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

7. Claims 8-9 and 28-29 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Mueller in view of Tengler et al. (US 2005/0049921, hereinafter Tengler).

Mueller discloses all of the limitations above but does not explicitly disclose the feature of wherein the at least one web server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions and wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

However, Tengler teaches the feature wherein the at least one web server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions and wherein the one or more videos and the one or more POS transactions are indexed using a same clock (paragraphs [0018] and [0103]).

Therefore it would have been obvious for one of ordinary skill in the art to have modified the feature of Mueller to include the feature wherein the at least one web server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions and wherein the one or more videos and the one or more POS transactions are indexed using a same clock, as taught by Tengler in order to facilitate the transaction.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROKIB MASUD whose telephone number is (571)270-5390. The examiner can normally be reached on Mon-Fri 8:00-5:00.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fahd Obeid can be reached on 571-270-3324. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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 https://ppair-my.uspto.gov/pair/PrivatePair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROKIB MASUD/
Primary Examiner, Art Unit 3687

Notice of References Cited	Application/Control No. 15/827,948	Applicant(s)/Patent Under Reexamination BARATTA et al.	
	Examiner ROKIB MASUD	Art Unit 3687	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20060235755-A1	10-2006	Mueller; Raymond J.	G06Q30/06	705/15
*	B	US-20050049921-A1	03-2005	Tengler, Craig D.	G06Q10/087	705/15
*	C	US-20070265935-A1	11-2007	Woycik; Thomas E.	G07G1/14	705/65
*	D	US-6384850-B1	05-2002	McNally; Keith R.	G06F16/9577	715/810
*	E	US-20020194074-A1	12-2002	Jacobs, Eric L.L.	G07G1/145	705/16
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	Art Unit
	ROKIB MASUD	3687

CPC - Searched*		
Symbol	Date	Examiner
G06Q 20/20; G06Q 20/202	07/04/2019	R. M.

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
705	16; 34	07/04/2019	R. M.

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST, GOOGLE PATENT, NPL, IDS	07/04/2019	R. M.

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
705	27.1	11/12/2020	R. M.

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	**Art Unit**
	ROKIB MASUD	3687

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

CLAIMS

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

CLAIM		DATE								
Final	Original	07/03/2020	12/30/2020							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
	6	✓	✓							
	7	✓	-							
	8	✓	✓							
	9	✓	✓							
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	11	✓	✓							
	12	✓	✓							
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	40	✓	✓							
	41	✓	✓							
	42	✓	✓							
	43	✓	✓							
	44	✓	-							

PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
	First Named Inventor	Wayne Baratta
	Art Unit	3687
(Multiple sheets used when necessary)	Examiner	Masud, Rokib
SHEET 1 OF 2	Attorney Docket No.	MERZ010.001C3

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number *Number - Kind Code (if known)* Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	1	2001/0037245	11-01-2001	Ranganath	
	2	2003/0236755	12-25-2003	Dagelet	
	3	2006/0026502	02-02-2006	Dutta	
	4	5,889,863	03-30-1999	Weber	
	5	7,086,584	08-08-2006	Stoutenburg et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document *Country Code-Number-Kind Code* Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T[1]
	6	GB 2369201	02-22-2002	Abacus Epos Limited		
	7	WO2003065178	08-07-2003	Visa U.S.A., Inc.		
	8	WO2001065427	09-07-2001	Thin Technologies Ltd		
	9	WO2001018629	03-15-2001	C-SAM, Inc.		
	10	WO2005115074	12-08-2005	Soares Pi Farias, Alexandre		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	11	Van der Vlugt, Michel, and Sambasivam, Samuel. "Redesign of Stand-Alone Applications into Thin-Client/Server Architecture". Retrieved from: http://proceedings.informingscience.org/InSITE2005/I57f13Vulg.pdf. (2005).	
	12	CloudofChange, LLC v. NCR Corporation, Defendant's First Amended Invalidity Contentions, August 19, 2020	
	13	CloudofChange, LLC v. NCR Corporation, Defendant's Final Invalidity Contentions, August 31, 2020	
	14	Exhibit A1: Invalidity of U.S. Patent No. 9,400,640 based on US2007265935 ("Woycik")(FIRST SUPPLEMENT)	
	15	Exhibit A2: Invalidity of U.S. Patent No. 10,083,012 based on US2007265935 ("Woycik")(FIRST SUPPLEMENT)	
	16	Exhibit A3: Invalidity of U.S. Patent No. 9,400,640 based on US20070175992 ("Brown")(FIRST SUPPLEMENT)	
	17	Exhibit A3: Invalidity of U.S. Patent No. 9,400,640 based on US20070175992 ("Brown")(SECOND SUPPLEMENT)	

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.	

T[1] - Place a check mark in this area when an English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
	First Named Inventor	Wayne Baratta
	Art Unit	3687
(Multiple sheets used when necessary)	Examiner	Masud, Rokib
SHEET 2 OF 2	Attorney Docket No.	MERZ010.001C3

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	18	Exhibit A4: Invalidity of U.S. Patent No. 10,083,012 based on US20070175992 ("Brown")(FIRST SUPPLEMENT)	
	19	Exhibit A4: Invalidity of U.S. Patent No. 10,083,012 based on US20070175992 ("Brown")(SECOND SUPPLEMENT)	
	20	Exhibit A5: Invalidity of U.S. Patent No. 9,400,640 based on US5920312 ("Wagner")(FIRST SUPPLEMENT)	
	21	Appendix A6: Invalidity of U.S. Patent No. 10,083,012 based on US5920312 ("Wagner")(FIRST SUPPLEMENT)	
	22	Exhibit A7: Invalidity of U.S. Patent No. 9,400,640 based on US20020194074 ("Jacobs")(FIRST SUPPLEMENT)	
	23	Exhibit A8: Invalidity of U.S. Patent No. 10,083,012 based on US20020194074 ("Jacobs")(FIRST SUPPLEMENT)	
	24	Exhibit A9: Invalidity of U.S. Patent No. 9,400,640 based on US20060235755 ("Mueller")(FIRST SUPPLEMENT)	
	25	Exhibit A10: Invalidity of U.S. Patent No. 10,083,012 based on US20060235755 ("Mueller")(FIRST SUPPLEMENT)	
	26	Exhibit A11: Invalidity of U.S. Patent No. 9,400,640 based on US20050049921 ("Tengler")(FIRST SUPPLEMENT)	
	27	Exhibit A12: Invalidity of U.S. Patent No. 10,083,012 based on US20050049921 ("Tengler")(FIRST SUPPLEMENT)	
	28	Exhibit A13: Invalidity of U.S. Patent No. 9,400,640 based on the Cybertill System (FIRST SUPPLEMENT)	
	29	Exhibit A13: Invalidity of U.S. Patent No. 9,400,640 based on the Cybertill System	
	30	Exhibit A14: Invalidity of U.S. Patent No. 10,083,012 based on the Cybertill System (FIRST SUPPLEMENT)	
	31	Exhibit A14: Invalidity of U.S. Patent No. 10,083,012 based on the Cybertill System	
	32	Exhibit B7: Invalidity of U.S. Patent No. 9,400,640 based on US6384850 ("McNally")(FIRST SUPPLEMENT)	
	33	Exhibit B8: Invalidity of U.S. Patent No. 10,083,012 based on US6384850 ("McNally")(FIRST SUPPLEMENT)	

Examiner Signature /ROKIB MASUD/	Date Considered 12/19/2020

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T[1] - Place a check mark in this area when an English language Translation is attached.

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S11	1	("20030041330").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/10/31 00:15
S12	3	(("20080243637") or ("20070011173") or ("8423420")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/04/05 13:58
S13	0	("20140249947").PN.	USPAT; USOCR	OR	OFF	2018/04/05 15:36
S14	1	("20140249947").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/04/05 17:31
S15	309	(inventory price cost sales) and ((web adj server) server same database) same(hardware software) same ((cash adj register) POS (point adj of adj sale)) and (subscriptS4 subscrib$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2020/07/06 08:49
S17	1	("20140327629").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/07/06 11:20
S18	315	(inventory price cost sales) and ((web adj server) server same database) same(hardware software) same ((cash adj register) POS (point adj of adj sale)) and (subscriptS4 subscrib$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2020/11/15 20:35
S20	6	"9208528"	USPAT	OR	OFF	2020/12/01 10:00
S21	2	(("9208528") or ("20030041329")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/12/01 10:00
S22	8	(("20060235755") or ("20070265935") or ("20070175995") or ("20050049921") or ("20070175992") or ("5920312") or ("20020194074") or ("6384850")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2021/01/02 15:34
S23	319	(inventory price cost sales) and ((web adj server) server same database) same(hardware software) same ((cash adj register) POS (point adj of adj sale)) and (subscriptS4 subscrib$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2021/01/02 17:34
S24	39	S23 @py<"2008"	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	AND	OFF	2021/01/02 17:34
S25	319	(inventory price cost sales) and ((web adj server) server same database)	US-PGPUB; USPAT; USOCR;	OR	OFF	2021/01/02 17:35

		same(hardware software) same ((cash adj register) POS (point adj of adj sale)) and (subscriptS4 subscrib$4)	FPRS; EPO; DERWENT; IBM_TDB			
S27	2	(("9208528") or ("20030041329")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2021/01/02 17:35

1/2/2021 5:37:49 PM
C:\Users\rmasud\Documents\EAST\Workspaces\Web Based Point of Sale.wsp

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 12/17/2020
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER	
MASUD, ROKIB	

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
12/17/2020	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):

jayna.cartee@knobbe.com
efiling@knobbe.com

PTOL-90A (Rev. 04/07)

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Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Application No. : 15827948
Applicant : Baratta
Filing Date : 11/30/2017
Date Mailed : 12/17/2020

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Notice of Allowance Mailed

This application has been accorded an Allowance Date and is being prepared for issuance. The application, however, is incomplete for the reasons below.

Applicant is given two (2) months from the mail date of this Notice within which to respond. This time period for reply is extendable under 37 CFR 1.136(a) for only TWO additional MONTHS.

The informalities requiring correction are indicated in the attachment(s). If the informality pertains to the abstract, specification (including claims) or drawings, the informality must be corrected with an amendment in compliance with 37 CFR 1.121 (or, if the application is a reissue application, 37 CFR 1.173). Such an amendment may be filed after payment of the issue fee if limited to correction of informalities noted herein. See Waiver of 37 CFR 1.312 for Documents Required by the Office of Patent Publication, 1280 Off. Gaz. Patent Office 918 (March 23, 2004). In addition, if the informality is not corrected until after payment of the issue fee, for purposes of 35 U.S.C. 154(b)(1)(iv), "all outstanding requirements" will be considered to have been satisfied when the informality has been corrected. A failure to respond within the above-identified time period will result in the application being ABANDONED.

See attachment(s).

A copy of this notice MUST be returned with the reply. Please address response to "Mail Stop Issue Fee, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450".

/Marsha Palmer-Lee/
Publication Branch
Office of Data Management
(571) 272-4200

Application No. 15827948

IDENTIFICATION OF APPLICATION DEFICIENCIES IN APPLICATION FILED ON OR AFTER SEPTEMBER 16, 2012

☐ Applicant must provide legible text for the following item(s).

- ☐ Specification filed , page(s) .
- ☐ Claims filed , claim(s) .
- ☐ Other: .

☐ Applicant must provide missing information on the following page(s) of the specification by amending the specification to add the missing text. No new matter may be added.
Page/line no(s).

☒ The specification refers to one or more applications by attorney docket number and does not show the U.S. application number(s). Applicant must supply the U.S. application number in place of each attorney docket number.
Page/line no(s). 1 Line 10-11

☐ Applicant must provide an Abstract of the Disclosure.

☐ The Application Data Sheet (ADS dated) does not supply the inventor's city and/or does not supply the inventor's U.S. state and/or does not supply the inventor's country. Applicant must submit a signed, in accordance with 37 CFR 1.76(e) and 1.33(b), application data sheet that corrects this deficiency. To be in compliance with 37 CFR 1.76, the corrected application data sheet must identify the information being changed by using underlining for additions and strikethroughs or brackets for deletions.

☐ Other:

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	15827948	Filing Date	2017-11-30	Docket Number (if applicable)	MERZ010.001C3	Art Unit	3687
First Named Inventor	Baratta, Wayne			Examiner Name	Masud, Rokib		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☐ Amendment/Reply
- ☒ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 111410

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

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PTO/SB/30EFS (02-18)
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Signature	/Vladislav Z. Teplitskiy/	Date (YYYY-MM-DD)	2020-12-14
Name	Vladislav Z. Teplitskiy	Registration Number	68069

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

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INFORMATION DISCLOSURE STATEMENT

First Inventor	:	Wayne Baratta
App. No.	:	15/827948
Filed	:	November 30, 2017
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Masud, Rokib
Art Unit	:	3687
Conf. No.	:	2925

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

References and Listing

Pursuant to 37 CFR 1.56, an Information Disclosure Statement listing references is provided herewith. Copies of any listed foreign and non-patent literature references are being submitted. Any foreign references may also include English abstract(s) and/or machine translation(s), but no representation is made as to their accuracy.

If the Examiner would like additional information regarding these references or if anything is unclear, the Examiner is invited to contact the undersigned for assistance.

No Disclaimers

To the extent that anything in the Information Disclosure Statement or the listed references could be construed as a disclaimer of any subject matter supported by the present application, Applicant hereby rescinds and retracts such disclaimer.

Timing of Disclosure

This Information Disclosure Statement is being filed within three months of the filing date or date of national phase entry, with an RCE or before receipt of a First Office Action after an RCE, and no fee is believed to be required.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: December 14, 2020

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
	First Named Inventor	Wayne Baratta
	Art Unit	3687
(Multiple sheets used when necessary)	Examiner	Masud, Rokib
SHEET 1 OF 2	Attorney Docket No.	MERZ010.001C3

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number *Number - Kind Code (if known)* Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	1	2001/0037245	11-01-2001	Ranganath	
	2	2003/0236755	12-25-2003	Dagelet	
	3	2006/0026502	02-02-2006	Dutta	
	4	5,889,863	03-30-1999	Weber	
	5	7,086,584	08-08-2006	Stoutenburg et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document *Country Code-Number-Kind Code* Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T[1]
	6	GB 2369201	02-22-2002	Abacus Epos Limited		
	7	WO2003065178	08-07-2003	Visa U.S.A., Inc.		
	8	WO2001065427	09-07-2001	Thin Technologies Ltd		
	9	WO2001018629	03-15-2001	C-SAM, Inc.		
	10	WO2005115074	12-08-2005	Soares Pi Farias, Alexandre		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	11	Van der Vlugt, Michel, and Sambasivam, Samuel. "Redesign of Stand-Alone Applications into Thin-Client/Server Architecture". Retrieved from: http://proceedings.informingscience.org/InSITE2005/I57f13Vulg.pdf. (2005).	
	12	CloudofChange, LLC v. NCR Corporation, Defendant's First Amended Invalidity Contentions, August 19, 2020	
	13	CloudofChange, LLC v. NCR Corporation, Defendant's Final Invalidity Contentions, August 31, 2020	
	14	Exhibit A1: Invalidity of U.S. Patent No. 9,400,640 based on US2007265935 ("Woycik")(FIRST SUPPLEMENT)	
	15	Exhibit A2: Invalidity of U.S. Patent No. 10,083,012 based on US2007265935 ("Woycik")(FIRST SUPPLEMENT)	
	16	Exhibit A3: Invalidity of U.S. Patent No. 9,400,640 based on US20070175992 ("Brown")(FIRST SUPPLEMENT)	
	17	Exhibit A3: Invalidity of U.S. Patent No. 9,400,640 based on US20070175992 ("Brown")(SECOND SUPPLEMENT)	

Examiner Signature	Date Considered
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
	First Named Inventor	Wayne Baratta
	Art Unit	3687
(Multiple sheets used when necessary)	Examiner	Masud, Rokib
SHEET 2 OF 2	Attorney Docket No.	MERZ010.001C3

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	18	Exhibit A4: Invalidity of U.S. Patent No. 10,083,012 based on US20070175992 ("Brown")(FIRST SUPPLEMENT)	
	19	Exhibit A4: Invalidity of U.S. Patent No. 10,083,012 based on US20070175992 ("Brown")(SECOND SUPPLEMENT)	
	20	Exhibit A5: Invalidity of U.S. Patent No. 9,400,640 based on US5920312 ("Wagner")(FIRST SUPPLEMENT)	
	21	Appendix A6: Invalidity of U.S. Patent No. 10,083,012 based on US5920312 ("Wagner")(FIRST SUPPLEMENT)	
	22	Exhibit A7: Invalidity of U.S. Patent No. 9,400,640 based on US20020194074 ("Jacobs")(FIRST SUPPLEMENT)	
	23	Exhibit A8: Invalidity of U.S. Patent No. 10,083,012 based on US20020194074 ("Jacobs")(FIRST SUPPLEMENT)	
	24	Exhibit A9: Invalidity of U.S. Patent No. 9,400,640 based on US20060235755 ("Mueller")(FIRST SUPPLEMENT)	
	25	Exhibit A10: Invalidity of U.S. Patent No. 10,083,012 based on US20060235755 ("Mueller")(FIRST SUPPLEMENT)	
	26	Exhibit A11: Invalidity of U.S. Patent No. 9,400,640 based on US20050049921 ("Tengler")(FIRST SUPPLEMENT)	
	27	Exhibit A12: Invalidity of U.S. Patent No. 10,083,012 based on US20050049921 ("Tengler")(FIRST SUPPLEMENT)	
	28	Exhibit A13: Invalidity of U.S. Patent No. 9,400,640 based on the Cybertill System (FIRST SUPPLEMENT)	
	29	Exhibit A13: Invalidity of U.S. Patent No. 9,400,640 based on the Cybertill System	
	30	Exhibit A14: Invalidity of U.S. Patent No. 10,083,012 based on the Cybertill System (FIRST SUPPLEMENT)	
	31	Exhibit A14: Invalidity of U.S. Patent No. 10,083,012 based on the Cybertill System	
	32	Exhibit B7: Invalidity of U.S. Patent No. 9,400,640 based on US6384850 ("McNally")(FIRST SUPPLEMENT)	
	33	Exhibit B8: Invalidity of U.S. Patent No. 10,083,012 based on US6384850 ("McNally")(FIRST SUPPLEMENT)	

Examiner Signature	Date Considered
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(12) UK Patent Application (19) GB (11) 2 369 201 (13) A

(43) Date of A Publication 22.05.2002

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(51) INT CL[7]
G06F 17/60

(52) UK CL (Edition T)
G4A AUXF

(56) Documents Cited
GB 2362009 A

(58) Field of Search
UK CL (Edition T) **G4A AUXF**
INT CL[7] **G06F 17/60**

(54) Abstract Title
Retail transaction processing method and apparatus

(57) A retail, financial transaction method and apparatus which aid integration of customer-based internet transaction systems and EPOS transaction systems. An EPOS till(s) (21, 22) and an online customer(s) (12) are both coupled to the same transaction sever (10), over internet links (11). The transaction server has a transaction processing unit and a transaction database common to both EPOS transactions and online customer transactions. A second database may be available via a second server for interrogation. Also a till unit and/or an internet processing unit may be provided on the server.

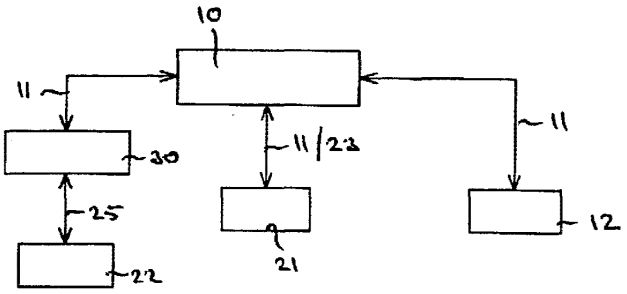


Fig 2

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The claims were filed later than the filing date but within the period prescribed by Rule 25(1) of the Patents Rules 1995.

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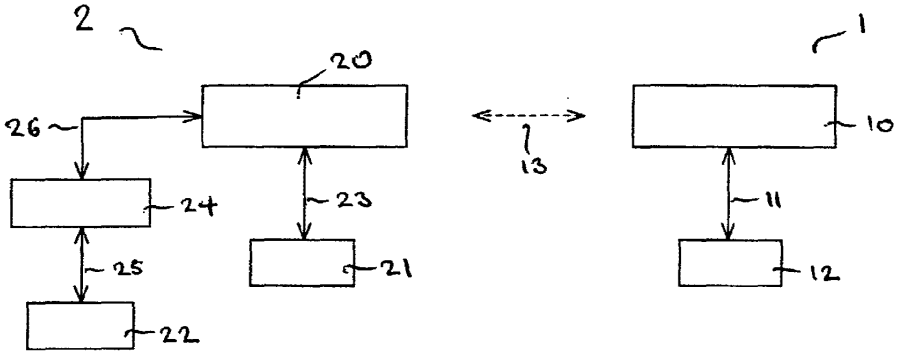


Fig. 1

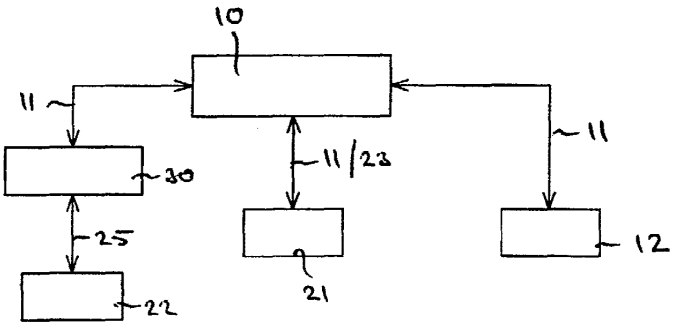


Fig 2

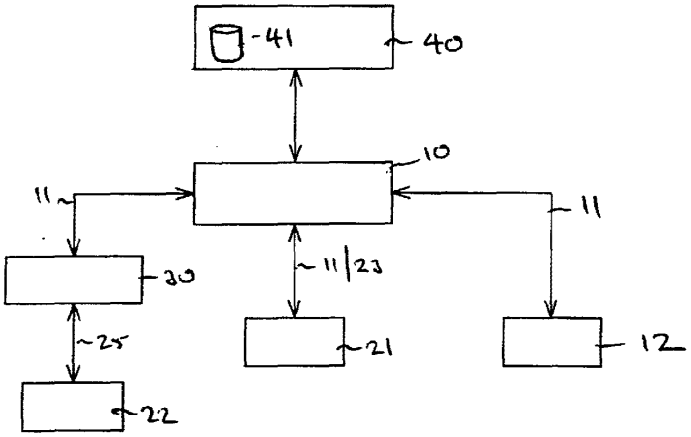


Fig 5

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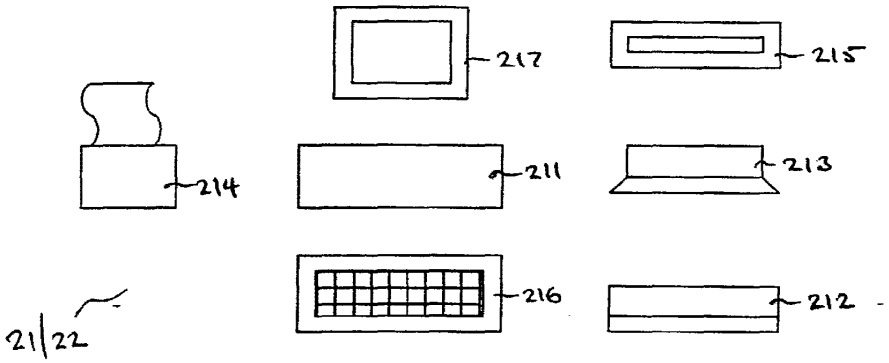


Fig 3

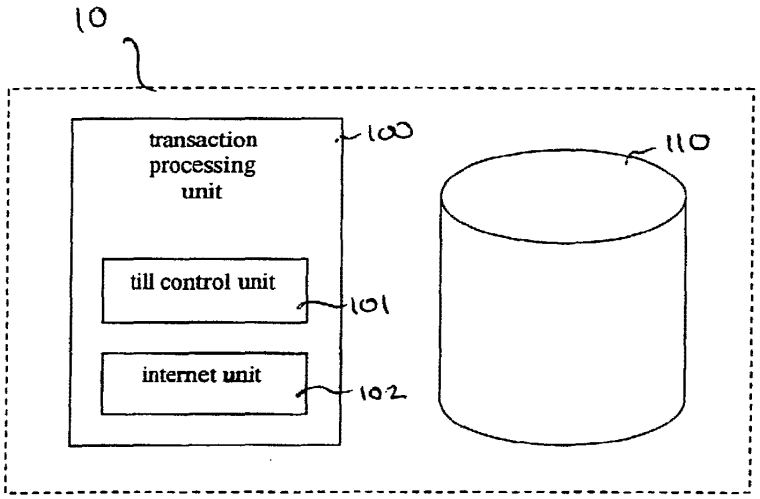


Fig 4

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Transaction Processing Method and Apparatus

The present invention relates in general to a method and apparatus for processing commercial transactions and in particular, but not exclusively, to a method and apparatus for processing retail transactions by a retailer.

It is known to provide simple transaction processing capabilities over a global computer network such as the internet, where the user may browse a catalogue of goods and place an order. More advanced systems provide payment facilities such as credit card authorisation. The customer order is transmitted to a despatch centre such as a retail store or a warehouse and the goods are despatched to the customer. More advanced systems then provide feedback to the user confirming that the goods have been despatched.

It also known to process transactions occurring at a retail store (or similar) using an electronic point of sale (EPOS) transaction system including one or more till apparatus. However, a problem arises in that the internet transaction system and the EPOS transaction system are inherently incompatible and it has proved very difficult to effectively integrate the two systems. Some degree of synchronisation is known, with the internet transaction system typically holding a subset of the stock and price data available in the EPOS transaction system and updated at regular intervals such as every twenty four hours. However, data clashes frequently occur, for example with the last item of stock being sold both on the internet

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transaction system and in-store over the EPOS transaction system - resulting in at least one disappointed customer.

An aim of the present invention is to provide a transaction processing method and apparatus addressing the problems of the prior art described above or otherwise. A preferred aim of the present invention is to provide a transaction processing method and apparatus for simultaneously providing both internet transactions and EPOS transactions. Other features and advantages of the invention will be apparent from the description which follows.

According to a first aspect of the present invention there is provided a transaction processing method, comprising the steps of: providing a transaction server including a transaction processing unit and a transaction database; coupling at least one EPOS till to the server and performing an EPOS transaction by entering data at the till, transmitting the data to the server, processing the data at the server and returning a result to the till; and coupling an online customer apparatus to the server and performing an internet transaction by entering data at the customer apparatus, transmitting the data to the server, processing the data at the server, and returning a result to the customer apparatus.

Preferably, the till and the customer apparatus are both coupled to the server by the internet. Preferably, a plurality of tills are coupled to the server, and a plurality of customer apparatus are coupled to the server. Preferably, data received from a till, and data received from a customer apparatus are both processed by the

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transaction processing unit with reference to the transaction database.

Also according to the present invention there is provided a transaction processing apparatus, comprising: a transaction server including a transaction processing unit and a transaction database, the server being couplable to at least one EPOS till for performing an EPOS transaction by entering data at the till, transmitting the data to the server, processing the data at the server, and returning a result to the till, the server also being couplable to an online customer apparatus for performing an internet transaction by entering data at the customer apparatus, transmitting the data to the server, processing the data at the server, and returning a result to the customer apparatus.

Preferably, the apparatus comprises a second server containing a second database coupled to the server, for performing a database interrogation using both the transaction database and the second database.

Preferably, the server comprises a till control unit for controlling operations of the till during an EPOS transaction. Also, the server comprises an internet transaction unit for controlling operations of the customer apparatus during processing of an internet transaction.

According to a second aspect of the present invention there is provided a transaction processing method for use with a transaction server and at least one EPOS till both coupled to the internet, the method comprising the steps

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of: performing an EPOS transaction by entering data at the till, transmitting the data to the server over the internet, processing the data at the server, and returning a result to the till over the internet.

This aspect of the invention is particularly suited for use where the server is remote from the till. For example, the till is provided in a retail store at a physical location remote from the transaction server located in a data processing centre. Preferably, a plurality of tills, and ideally a large number of tills, are each coupled to the transaction server over the internet for the processing of transactions. Conveniently, each till only incurs local call costs for connection to the internet as does the transaction server, substantially reducing the costs of communications.

For a better understanding of the invention, and to show how embodiments of the same may be carried into effect, reference will now be made, by way of example, to the accompanying diagrammatic drawings in which:

Figure 1 is a schematic view of a prior art EPOS and internet transaction system;

Figure 2 is a schematic view of a transaction processing system according to a first preferred embodiment of the present invention;

Figure 3 is a schematic view of an EPOS till;

Figure 4 is a schematic view of a server;

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Figure 5 is a schematic view of a transaction processing system according to a second embodiment of the present invention.

The preferred embodiments of the present invention will be described with reference to the example environment of a retail store selling goods both to customers making transactions in person whilst visiting the store, and to customers ordering online over a global computer network such as the internet. The teachings of the present invention are not limited solely to this environment, and are applicable to other practical embodiments.

Referring to Figure 1, a typical prior art transaction system is shown for processing EPOS transactions and internet transactions. An internet transaction system 1 includes an internet server 10 coupled to the internet 11 for access by online customers 12 using customer apparatus such as a home PC. An EPOS transaction system 2 includes an EPOS server 20 typically provided in the headquarters of the retailer coupled to one or more EPOS tills 21 in a main retail site over a local area network 23, and optionally coupled to remote EPOS tills 22 such as in a second retail site controlled by a remote EPOS server 24 and a separate local area network 25 with a dedicated communications link 26 to the main EPOS server 21.

Where it is desired to sell the same goods both from a retail site using the EPOS transaction system 2 and over the internet using the internet transaction system 1, then some form of data synchronisation must take place using a link 13 between the EPOS server 20 and the internet server

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10. Typically, the internet server 10 holds a subset of a stock database controlled by the EPOS server 20 and is periodically updated such as every twenty-four hours, giving rise to potential data inconsistency. Hence, in the prior art, orders placed using the internet transaction system 1 are subject to confirmation and must wait for synchronisation with the EPOS transaction system 2.

In the prior art EPOS transaction system 2, a problem arises in that the communications link 26 between the main EPOS server 20 and a remote EPOS server 24 is relatively expensive to use and maintain, requiring, for example, a leased line or call-charged ISDN line. Further, communications between the remote tills 22 and the EPOS server 20 can suffer unacceptable delay.

Referring to Figure 2, the transaction processing system of the present invention comprises a server 10 coupled via the internet 11 to online customers 12, to EPOS tills 21 in a main store, and to EPOS tills 22 in a remote store. As will be explained below, the network topography of the transaction system of the present invention has many advantages.

The server 10 holds an integrated transaction database suitable for use in both internet transactions and EPOS transactions. Further, the server 10 provides application software for processing both internet transactions and EPOS transactions.

To perform EPOS transactions, the or each till 21, 22 comprises an internet access application suitable for

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communication over the internet and displaying web pages (for example written in HTML or SHTML). As shown in Figure 3, each till 21 is configured appropriate for use by a till operator in a retail store and includes, for example, a general purpose processing unit 211 coupled to a cash drawer 212, a bar code reader 213, a receipt printer 214 and a customer display unit 215, together with a keyboard 216 and operator display unit 217. The processing unit 211 is coupled to the server 10 by an internet communications link 11. The remote EPOS tills 22 are configured similar to the EPOS tills 21 with a suitable internet communications link 11 employed according to the location thereof. Conveniently, the communications link 11 includes access to the internet through a local internet server 30 over a local area network 25.

Where the EPOS tills 21 are provided in the vicinity of the server 10, such as in the same retail store, then the communications link 11 is suitably a local area network 23 such that the server and the tills 21 form a local intranet. However, any suitable communications link may be employed, and there is no need for the tills 21 to remain in the vicinity of the server 10. In a preferred embodiment, the operations of the server 10 are performed, for example, at a remote data processing and web hosting facility. Advantageously, the server 10 need not be owned or managed by the retailer. Further, the server 10 need not be dedicated to one particular system, and many logically separate transaction processing systems may share the same server 10, such that several different retailers or other commercial entities each employ a third

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party data management and data processing service to host their transaction processing server.

Referring to Figure 4, EPOS transactions are processed at the server 10 by a transaction processing unit 100 with reference to a transaction database 110. The transaction processing unit 100 includes a till control unit 101 for controlling the or each till 21, 22 during a transaction. In use, one of the tills 21 accesses the till control unit 101 of the server 10 over the communications link 11 with data appropriate to a transaction, such as a list of goods scanned by a barcode reader 213. The till control unit 101 receives the incoming data and the transaction processing unit 100 processes the transaction with reference to the transaction database 110 returning processed transaction data to the till 21 for display on the operator till display unit 217 and/or the user display unit 215 as appropriate. Hence, processing of the transaction takes place at the server 10 with relatively minimal processing taking place at the till 21. The till 21 acts as a data input and output device to collect data for transmission to the server 10, and to display results of transaction processing taking place at the server 10.

Referring again to Figure 2, internet transactions requested by an online customer 12 are processed by an internet processing unit 102 of the transaction processing unit 100 of the server 10. Conveniently, the internet processing unit 102 and the till control unit 101 share access to the same transaction database 110. Hence, there is no data inconsistency between EPOS transactions and internet transactions. Advantageously, an online customer can receive immediate confirmation that an order will be

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fulfilled, since there is no longer any delay waiting for database synchronisation. Further, the delay before goods are despatch to the customer is substantially reduced.

Access to the transaction database 110 is limited by permissions granted to each till 21, 22, and to each online customer 12. For example, a relatively limited set of transaction data from the transaction database 110 is available to an online customer 12, such as only a catalogue of goods with retail prices plus account information appropriate to that customer. By contrast, greater information is available to each till 21, 22, for example allowing interrogation of all or many selected customer accounts, together with transaction data, stock levels, and more detailed pricing information.

The transaction processing unit 100 suitably includes a stock control unit for monitoring stock levels in the store which can be interrogated on request by any of the tills 21, 22 and/or by an online customer 12 to check stock levels at this store or any other store. The transaction processing unit 100 also includes an accounting unit for receiving and recording transaction data and producing accounting reports. Conveniently, the accounting reports provide powerful management information, including customer history and contact management records, stock control records, and sales analysis. Further, the accounting unit is coupled to the internet 11, such that the accounting reports are available for access remotely from any suitable internet terminal including, for example, a WAP phone. Hence, a user with management access to the transaction processing system can obtain information from the transaction

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processing unit 100 online over the internet. Further, such management and accounting reports produced by the accounting unit cover both transactions occurring through the tills 21,22 and occurring through online customers 12. Previously, forming a comprehensive set of accounts has required a large quantity of data transfer, often performed manually.

In the preferred embodiment, the transaction processing unit 100 includes a credit card authorisation unit (not shown) for authorising credit card transactions. Advantageously, the credit card authorisation unit is common to both EPOS transactions and internet transactions.

Referring to Figure 5, in a second preferred embodiment of the present invention the server 10 of the transaction processing system 1 is coupled, suitably by an internet communications link 11, to a second server 40. The second server 40 provides a second database 41 holding, for example, stock data of a wholesaler or of a manufacturer of goods sold by the retailer. Hence, stock enquiries processed by the transaction processing unit 100 of the retailer's server 10 are optionally linked to the second database 41 so that, for example, stock levels earlier in the supply chain can be interrogated. In another example, orders placed by an online customer 12 or at a till 21, 22 can be fulfilled by reference to the second database 41. If desired, goods are despatched from the manufacturer or other commercial entity responsible for the second server 40, direct to the online customer 12 or the store appropriate to the till 21,22 or any other suitable location, and optionally an appropriate

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transaction is entered against the transaction database 110 by the transaction processing unit 100. In one example embodiment, the customer receives their goods direct from the manufacturer, whilst payment and invoicing is handled through the retailer.

A transaction processing method and apparatus have been described which enable both EPOS transactions and internet transactions to be performed quickly and efficiently without requiring any data synchronisation. Further, the communications network for the EPOS transactions is simplified and takes advantage of lower cost communications routes.

The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise,

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each feature disclosed is one example only of a generic series of equivalent or similar features.

The invention is not restricted to the details of the foregoing embodiment(s). The invention extend to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

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Claims

1. A transaction processing method, comprising the steps of:

providing a transaction server including a transaction processing unit and a transaction database;

coupling at least one EPOS till to the server and performing an EPOS transaction by entering data at the till, transmitting the data to the server, processing the data at the server and returning a result to the till; and

coupling an online customer apparatus to the server and performing an internet transaction by entering data at the customer apparatus, transmitting the data to the server, processing the data at the server, and returning a result to the customer apparatus.

2. A method as claimed in claim 1, wherein the till and the customer apparatus are both coupled to the server by the internet.

3. A method as claimed in claim 1 or 2, wherein a plurality of tills are coupled to the server, and a plurality of customer apparatus are coupled to the server.

4. A method as claimed in any of claims 1 to 3, wherein data received from a till, and data received from a customer apparatus are both processed by the transaction processing unit with reference to the transaction database.

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5. A method as claimed in any of claims 1 to 4, comprising coupling the server to a second server containing a second database, and performing a database interrogation using both the transaction database and the second database.

6. A method as claimed in any of claims 1 to 5, comprising providing a till control unit on the server for controlling operations of the till during an EPOS transaction.

7. A method as claimed in any of claims 1 to 6, comprising providing an internet transaction unit on the server for controlling operations of the customer apparatus during processing of an internet transaction.

8. A transaction processing apparatus, comprising:

a transaction server including a transaction processing unit and a transaction database, the server being couplable to at least one EPOS till for performing an EPOS transaction by entering data at the till, transmitting the data to the server, processing the data at the server, and returning a result to the till, the server also being couplable to an online customer apparatus for performing an internet transaction by entering data at the customer apparatus, transmitting the data to the server, processing the data at the server, and returning a result to the customer apparatus.

9. An apparatus as claimed in claim 8, wherein the till and the customer apparatus are both couplable to the server by the internet.

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10. An apparatus as claimed in claim 8 or 9, wherein a plurality of tools are couplable to the server, and a plurality of customer apparatus are couplable to the server.

11. An apparatus as claimed in any of claims 8 to 10, wherein the server is arranged to process data received from a till and data received from a customer apparatus both by the transaction processing unit with reference to the transaction database.

12. An apparatus as claimed in any of claims 8 to 11, comprising a second server containing a second database coupled to the server, for performing a database interrogation using both the transaction database and the second database.

13. An apparatus as claimed in any of claims 8 to 12, wherein the server comprises a till control unit for controlling operations of the till during an EPOS transaction.

14. An apparatus as claimed in any of claims 8 to 13, wherein the server comprises an internet transaction unit for controlling operations of the customer apparatus during processing of an internet transaction.

15. A transaction processing method substantially as hereinbefore described with reference to Figure 2 or Figure 5 of the accompanying drawings.

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16. A transaction processing apparatus substantially as hereinbefore described with reference to Figures 2, 4 or 5 of the accompanying drawings.

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INVESTOR IN PEOPLE

Application No: GB 0014363.6 **Examiner:** David P Maskery
Claims searched: 1 - 16 **Date of search:** 18 March 2002

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Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X, E	GB 2362009 A	(INSITU) See Fig 4, page 5 lines 15 - 18, page 6 line 12 to page 9 line 14,page 13 lines 6 - 8, and page 14 line 17 to page 15 line 20.	1 - 14

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
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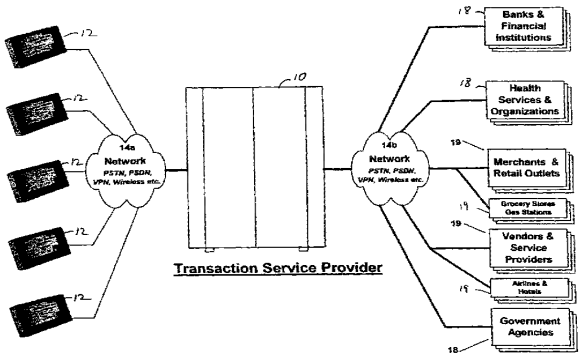
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(54) Title: SYSTEM AND METHOD FOR SERVICING ELECTRONIC TRANSACTIONS



(57) Abstract: A service transaction provider for administering a plurality of accounts for a client, includes a computer, having a processor, a data storage medium, and a network port. The storage medium is configured to store the clients' personal information, account information, and transactional information. The processor configured to create a database of client information including the client's personal information, account information corresponding to a plurality of accounts associated with the client, and transactional information corresponding to a plurality of transactions conducted by the client; designate as confidential a predetermined first portion of the database client information; designate as non-confidential a predetermined second portion of the database of client information non-confidential; and provide the client with access to the first and second portions of the database of client information via the network port. In an additional embodiment of the transaction service provider, the storage medium is further configured to store information corresponding to a plurality of vendors and the processor is further configured to create a database of vendor information; receive a transaction request from a client; analyze information in the database of vendor information; analyze information in the database of client information; and provide a suggested transaction to the client based on the information in the database of vendor information and the database of client information. The processor may be further configured to establish a communication with a vendor via the network port; disclose information from the predetermined second portion of the database of client information to the vendor; receive information from the vendor; and provide information received from the vendor to the client. The processor may be further configured to establish a communication with a service institution via the network port; receive transactional

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information corresponding to the client from the service institution; and add the transactional information received from the service institution to the database of client information. The processor may be further configured to establish communication with the client via the network port; receive information from the client; and add the information received from the client to the database of client information. The processor may be further configured to reconcile information received from the service institution with information received from the client.

SYSTEM AND METHODS FOR SERVICING ELECTRONIC TRANSACTIONS

BACKGROUND

This invention relates to a system and methods of servicing transactions involving electronic transaction devices, such as universal electronic transaction cards ("UET cards"), and conventional plastic credit cards. The invention also relates to methods of administering a plurality of client accounts for an electronic transaction device or conventional cards.

UET Cards are one type of electronic transaction device known to store, transmit, and receive personal, account, and transactional information. See U.S. Patent No. 5,590,038, which is incorporated herein by reference. Generally, a UET Card may be a pocket sized device, having a microprocessor, random access memory, a display, and input means, and may be capable of storing personal information such as the card owner's name, address, date of birth, signature, and likeness, as well as the client's social security number. The UET card may also be capable of storing the client's employee number (if applicable), insurance policy number or numbers for various type of insurance, club membership account numbers, credit card company account numbers for a variety of credit card

companies, automatic banking numbers for one or more bank accounts, and any other financial or personal transactional information. The UET card may also be capable of processing transactional information and communicating with central processing units or computers operated by the providers of services, such as credit card institutions, banks, health care providers, retailers, wholesalers or other providers of goods or services. The UET card may also be capable of communicating with personal computers, including those used by retailers (point of sale computers), and personal computers used in other business applications or at home. For example, a person may use a single electronic transaction device to conduct financial transactions relating to several credit, debit, or deposit accounts, such as accounts normally associated with VISA, MASTERCARD, AMERICAN EXPRESS, DISCOVER, or ATM (Automatic Teller Machine) banking transactions.

The term "electronic transaction device" as used herein is not limited to a UET Card. In addition to UET Cards, other devices are known which may be used to conduct electronic transactions. Also, known general purpose hand held computers may be programmed to conduct electronic transactions. These hand held computers typically use operating systems such as, but not limited to, Palm OS or Microsoft Windows CE. It is contemplated that these hand held computers may be adapted to be electronic transaction devices with appropriate programming.

An electronic transaction device allows a client to customize and add functionality to the device as per the client's own specific requirements. The electronic transaction device may be an "Information Organizer," which in the present environment goes beyond conventional personal information managers. The electronic transaction device allows the client to store, organize and efficiently

use personal information, account information, and transactional information.

While these electronic transaction devices have many advantages, including the advantage of combining numerous accounts into a single device, electronic transaction devices do not necessarily reduce the number of service institutions with which the person transacts to maintain the accounts. Rather, known electronic transaction devices may require a client to communicate with each service institution on an independent basis. Also, there may be an instance where a client wishes to continue using a conventional plastic card, yet have additional access and control over account information.

Vendors and clients are also believed to value and collect information about each other. Information that vendors are believed to value includes information about their customers, such as their preferences, requirements and needs. Approaches like database marketing, relationship marketing, permission marketing, and loyalty programs have evolved over time with the overall objective to allow vendors to gather as much information about their potential market as possible, in turn to sell more of their goods and services. For example, vendors may use personal information during direct marketing campaigns (for example, direct mail, telemarketing, or e-mail), or to judge the efficiency of ongoing marketing campaigns with regard to a particular market (for example, advertisements directed to all VISA cardholders).

Despite the value of the information to the vendor, the client typically receives nothing in return for the information that the client surrendered during a transaction or inquiry. Thus, many clients may decline to provide requested information, which may in turn degrade

the overall marketing effectiveness of the vendor and the satisfaction of the end customer.

Clients may wish to have additional controls over the release of personal information and account information to various vendors. A client's control over the release of personal information and account information may be required to counteract the extensive efforts and practices of vendors and merchants to obtain information about their markets. Efforts to collect information may include, for example, computer servers that publish Web pages on the Internet which may record the identities of persons viewing information regarding a service or product, and place "cookies," files identifying when a person visited a Web page, on computers of persons viewing a Web page. Also, telephone calls to service centers may record the telephone number, by way of "Caller ID," as well as the address from which the person called. Accordingly, simply inquiring about a service or product may result in a person unknowingly or unintentionally disclosing personal information without any benefit to that person.

Information gathering may also occur during transactions. When using a conventional plastic credit card to purchase goods or services, at a minimum the client must disclose his or her name, service institution, and account number. Often times, additional information, such as an address, telephone number, credit card expiration date, etc. is requested from the client before a transaction is completed.

Clients, like the vendors, may also value information. Information that clients are believed to value includes information about products and services that service institutions and/or vendors have to offer. For example, clients may be interested in airline flight schedules and available fares to a given airline. A client's access to

such information is now greatly increase with the advent of telephone call centers and Internet Web pages. However, traditional guards or protectors of privacy have been let down and redefined, creating a certain sense of insecurity. Furthermore, clients have at least partially lost control over their own information. For example, simply calling a vendor to inquire on prices and availability of a product may result in an unintentional disclosure (through caller identification information) of the caller's name, address, and telephone number. Also, many Web pages deny access to information regarding a vendor's products or services if a client attempts to control the release of information by prohibiting "cookies" on the client's personal computer. Therefore, an impasse may result when a vendor requires more information than a client is willing to release. Such an impasse benefits neither the client nor the vendor.

Many clients want tighter control over their personal information, allowing them to obtain the highest benefit for a disclosure of information when it comes to dealing with the vendors, allowing only so much information to be disclosed for the product or service they desire. Accordingly, there is a need for a service that allows a more efficient use of information, especially as a bargaining tool for better and/or less costly services and products.

Furthermore, currently the vendors have superior information in many respects to the information accessible by the client. The vendors may have sources of information about their market coming from direct or indirect surveys, buying pattern analysis, transaction records and analysis, credit ratings and bureaus, patterns of Web pages visited and purchases made through Web pages, to name a few. Clients would benefit from access to similar information to "level the playing field."

SUMMARY

What is needed is a transaction service provider positioned between a client and a vendor. The transaction service provider could retrieve information, or negotiate for goods or services, from a vendor based on limited information extracted from the client's confidential personal, account, or transactional information, without disclosing the client's identity. Such a transaction service provider would be able to provide accurate and detailed information that the vendors value, while maintaining confidentiality of additional client information.

A transaction service provider, especially, although not necessarily, in conjunction with an electronic transaction device, allows a client to interact with service institutions and vendors conveniently, securely, and, if desired, anonymously, with less paperwork and more value added services.

In one embodiment of the invention, a service transaction provider for administering a plurality of accounts for a client, includes a computer, having a processor, a data storage medium, and a network port. The storage medium is configured to store the clients' personal information, account information, and transactional information. The processor configured to create a database of client information including the client's personal information, account information corresponding to a plurality of accounts associated with the client, and transactional information corresponding to a plurality of transactions conducted by the client; designate as confidential a predetermined first portion of the database client information; designate as non-confidential a predetermined second portion of the database of client information non-confidential; and provide the client with

access to the first and second portions of the database of client information via the network port.

In an additional embodiment of the transaction service provider, the storage medium is further configured to store information corresponding to a plurality of vendors and the processor is further configured to create a database of vendor information; receive a transaction request from a client; analyze information in the database of vendor information; analyze information in the database of client information; and provide a suggested transaction to the client based on the information in the database of vendor information and the database of client information. The processor may be further configured to establish communication with a vendor via the network port; disclose information from the predetermined second portion of the database of client information to the vendor; receive information from the vendor; and provide information received from the vendor to the client. The processor may be further configured to establish a communications with a service institution via the network port; receive transactional information corresponding to the client from the service institution; and add the transactional information received from the service institution to the database of client information. The processor may be further configured to establish communication with the client via the network port; receive information from the client; and add the information received from the client to the database of client information. The processor may be further configured to reconcile information received from the service institution with information received from the client.

A method for using an electronic transaction device with an electronic transaction service provider may include the steps of registering the electronic transaction device

with the electronic transaction device service provider, registering a plurality of accounts corresponding to a plurality of service institutions, providing a data connection between the electronic transaction device and the electronic transaction device service provider, and storing account information for a plurality of service institutions at the electronic transaction device service provider. The step of registering the electronic transaction device may include registering a client associated with the electronic transaction device with the electronic transaction service provider, collecting and storing personal information from the client, setting up a file on the client and initiating use of the electronic transaction device, archiving the client's password, and archiving the client's data stored on the electronic transaction device. The step of registering the plurality of accounts may include storing account information, storing transactional information, including archiving transactional information older than a predetermined date, and reconciling transactional information with corresponding service institutions.

The step of registering a plurality of accounts corresponding to a plurality of service institutions may also include the steps of storing account information in the database of client information; storing transactional information; and reconciling transactional information received from the electronic transaction device with transactional information received from the plurality of service institutions.

The method for using an electronic transaction device with an electronic transaction service provider may also include the steps of providing access to a database of client information to the client and analyzing transactional information in the database of client

information for a plurality of accounts. The method for using an electronic transaction device with an electronic transaction service provider may also include the steps of designating a portion of the client database non-confidential; analyzing the portion of the client database designated as non-confidential for preferences and patterns; and providing analyzed transactional information to a plurality of vendors.

As used herein, the term "service institution" includes any business, service, governmental agency, or other entity, which issues any type of card commonly carried by an individual for the purposes of identification, credit transactions, bank transactions, frequent traveler rewards transactions, licensing, registration or similar functions. Examples of service institutions include, but are not limited to, Banks & Financial Institutions, Health Services, Hospitals and related Organizations, Manufacturers, Vendors, Merchants and Retail Outlets, and Various Government Agencies and other institutions, such as Universities etc. In a healthcare embodiment, "service institutions" may include pharmacies, laboratories, and insurance companies, or any other entity with which a physician or other healthcare provider may use professionally. "Vendors," as used herein, means any seller of goods and/or provider of services. This is a broad term, including, but not limited to, various retailers, service providers, such as health care, insurance, and communication service providers, airlines, etc. A "service institution," may also be a "vendor," and vice-versa. For example, a department store is a vendor. Also, the department store may issue credit cards to its customers, in which case it would also be a service institution.

The information stored, transmitted, or received by the electronic transaction device may include personal information of the client of the electronic transaction device. It may also include account information for each service institution with which the client has an account. As used herein, the term "account information" includes any identifying designation which identifies the electronic transaction device client with a service institution, including but not limited to the client's name, address, phone number, social security number, credit card account numbers, bank account numbers, investment account numbers, license numbers, identification numbers, insurance account numbers, medical identification numbers, and the like. In a health care embodiment, "account information" may include information relating to patients of a physician or other health care provider.

The information stored, transmitted, or received by the electronic transaction device may also include transactional information for accounts with service institutions in which the electronic transaction device client has an account. As used herein, the term "transactional information" includes one or more individual financial transactions, such as credit card transactions, investment transactions, medical treatments, medical payments, insurance payments, and the like. Transactional information may include, but is not limited to, information such as a subtotal, tax, tip gratuity, date, vendor, an image of the receipt, and an image of the client's signature. Transactional information may also include a description of goods or services purchased, including a vendor's stockkeeping codes. In a health care embodiment, "transactional information" may include information regarding the care of a patient, such as office visits,

treatments given, medication prescribed, payments for treatments, and the like.

The electronic transaction device may also be used to conduct transactions involving promotional information. As used herein, "promotional information" includes advertisements, electronic facsimiles of coupons, and usage incentives such as frequent flier miles, cash back rebates, or any of various incentive programs offered by credit card issuers.

An electronic transaction device may also be used to conduct transactions involving stored cash value information. As used herein, "stored cash value information" includes information relating to a cash balance which may be stored on the electronic transaction device, credits or debits to the cash balance, a traveler's checks balance which may be stored on the electronic transaction device, credits or debits to the traveler's check balance and graphical images of various denominations of currency and traveler's checks.

An electronic transaction device 12 may also be used to conduct transactions involving government entitlement programs. For example, food stamps, veteran's benefits, or other entitlements may be stored on the electronic transaction device 12. The governmental agency issuing an entitlement could limit use of the benefits to certain stores or goods or services.

The transaction service provider is not limited to "clients" being consumers with credit card accounts. Transaction service providers are applicable to other fields, such as healthcare. In such an embodiment, the "client" may be a physician or other healthcare provider who uses the transaction service provider to administer healthcare transactions involving a plurality of patient accounts.

The foregoing advantages are some examples of the advantages provided by the present invention, and are not intended to be exhaustive. Specific examples of the implementation of the invention are shown in the drawings and are discussed herein. Those examples are intended provide examples of the invention, not to limit it. The scope of the invention is expressed in the claims.

DESCRIPTION OF THE DRAWINGS

Figure 1 is a block diagram of a system involving an electronic transaction device service provider.

Figure 2 is a block diagram of one example of a transaction service provider in combination with a transaction environment.

Figure 3 is another block diagram of an example of a transaction service provider in combination with a transaction environment.

Figure 4 is a block diagram of an example of a transaction service provider.

Figure 5 is a block diagram of a client interaction portion of an example of a transaction service provider.

Figure 6 is a block diagram of a vendor interaction portion of an example of a transaction service provider.

Figure 7 is a block diagram of another portion of an example of a transaction service provider.

Figure 8 is a flow chart of examples of steps of interaction conducted by a transaction service provider.

Figure 9 is a flow chart of examples of steps of vendor interaction conducted by a transaction service provider.

Figure 10 is a flow chart of examples of steps conducted by a transaction service provider.

DETAILED DESCRIPTION

An embodiment of a transaction service provider 10 is illustrated in Figure 1. In the embodiment illustrated in Fig. 1, the transaction service provider provides an interface between the clients and the service institutions.

A plurality of electronic transaction devices 12 is coupled to network 14a. The electronic transaction device 12 may be a UET Card. The electronic transaction device 12 may be provided with interfaces to communicate with personal computers, printers, point of sale terminals, ATMs, and additional devices, through various means, including, but not limited to, conventional magnetic and bar code displays and readers, smart card (ICC) readers, infrared (such as an IrDA standard) or Proximity RF transceivers. See, for example, U.S. Patent No. 5,590,038. From a physical connectivity standpoint, the plurality of electronic transaction devices 12 could be coupled to the Network 14a using any or all of these communication interfaces. For example, an electronic transaction device 12 could be directly coupled to the transaction service provider thought network 14a. Alternatively, an electronic transaction device 12 may be coupled indirectly, through a personal computer 16 (Fig. 3) and then through the network 14a. The network 14a could be any of the prevailing Public Switched Telephone Networks (PSTN), Public Switched Data Networks (PSDN), Virtual Private Networks (VPN), Wireless Networks etc., or any other network which allows dial up facilities or/and digital packet switching as per existing protocols and standards.

Additionally, electronic transaction devices 12 may communicate directly to each other via the described interfaces and exchange designated information. For example, one electronic transaction device 12 may directly transfer stored cash value or account information to

another electronic transaction device 12 via an infra-red port.

In another example, an electronic transaction device 12 may be used as an intermediary to conduct a transaction. In this example, a client may wish to pay for a restaurant bill with a credit card account on an electronic transaction device 12. Rather than requesting that the client physically hand over the electronic transaction device to complete the transaction, a restaurant server may present the bill on another electronic transaction device 12. After reviewing the bill, the client may select a credit card account on the client's electronic transaction device 12 and transmit the account information to the restaurant server's electronic transaction device 12. The restaurant server may then authenticate the account information and the transaction at the restaurant's POS terminal 20, and return an electronic receipt of the transaction to the client's electronic transaction device 12. The client may then sign the electronic receipt on the client's electronic transaction device 12 and return transmit the signed receipt to the restaurant server's electronic transaction device 12. As an added safety measure, the client's account number may be automatically deleted from the restaurant server's electronic transaction device after a predetermined period of time or when the signed electronic receipt entered in the restaurant's POS terminal 20.

A plurality of service institutions 18 and vendors 19 are connected to the transaction service provider by network 14b. Network 14b, like network 14a, could be any or all of the PSTN, PSDN, VPN, Wireless Networks, or any other network which allows dial up facilities or/and digital packet switching as per existing protocols and standards. Network 14b may be, but is not necessarily the

same as Network 14a. For example, if a given service institution uses a PSDN for network 14b, one client may use a PSTN for network 14a, another client may use wireless telephony or PCS communications for network 14a, while a third client may use a PSDN for network 14a.

The transaction device service provider 10 may be accessed by a client having an electronic transaction device 12 as follows. The client establishes a data connection between the electronic transaction device 12 and the transaction service provider 10 via network 14a. As described in U.S. Patent No. 5,590,038, a variety of interfaces may be used to assist in establishing a data connection with an electronic transaction device 12, such as infra-red wireless, radio frequency wireless, and metallic contact wire-based interfaces. The transaction service provider 10 includes means for storing information, such as known magnetic optical, and electronic storage media.

Referring now to Fig. 2, an embodiment of the present invention is illustrated in combination with a known transaction environment used by service institutions. Networks 14a and 14b are illustrated as a single network 14. Network 14 is connected to the transaction service provider, a plurality of service institutions, and a plurality of Point of Sale ("POS") terminals 20. POS terminals, as the term is used herein, refers to terminals used by service institutions to conduct transactions including, but not limited to, vendor operated sales terminals, such as the card readers found at grocery stores, automatic teller machines ("ATMs"), filling station fuel pumps, governmental agency terminals, such as those which may be used by Motor Vehicle Inspectors, highway toll booths, or any other terminal equipment related to a service institution or vendor. A Point of Sale terminal 20

may also comprise an electronic commerce server connected to the Internet.

A plurality of electronic transaction devices 12 may connect to the network 14 or directly to POS terminal 20. Connecting an electronic transaction device 12 to a POS terminal 20, for example, would allow the client to conduct a transaction, such as making a purchase from a vendor using a service institution account, such as MasterCard, Visa card, American Express, Diners Club, Discover card, or other credit or debit card. In addition, conventional plastic cards may be used at the POS terminal 20.

Coupling an electronic transaction device 12 to the network 14 would allow the electronic transaction device 12 to communicate information with the transaction service provider. This communication of information would complete a loop between the client and the POS terminals provided by the various service institutions, and the transaction service provider. Also, a vendor's POS terminal 20 may be accessed by the electronic transaction device 12 via network 14, such as a purchase through an Internet Web page.

Referring now to Fig. 3, an embodiment of the transaction service provider 10 is illustrated. In the example illustrated in Fig. 3, a transaction service provider 10 includes a network of e-Commerce servers and databases, with support network and connectivity equipment. A suitable e-Commerce server may include a general purpose computer, including a processor, a data storage medium, and a network port. As used herein; the indefinite article "a" means one or more unless specifically indicated otherwise. For example, "a processor" may include a plurality of processors. The transaction service provider includes an e-Commerce server 22, transaction service provider archive 24, a internal server 26 and internal database 28. The

e-Commerce server 22 may be physically combined on the same server with the internal server 26. Also, the transaction service provider archive 24 may be combined with the internal database 28. However, much of the information handled by transaction service provider is confidential. Accordingly, it may be desirable to employ physically and/or logically separate servers and databases to facilitate the inclusion of security firewalls 30. For example, in the illustrated example, a first firewall 30 may be included between the network 14 and the e-Commerce server 22, and a second firewall 30 may be included between the e-Commerce server 22 and the internal server 26.

The e-Commerce server 22 may be a conventional network server. The e-Commerce server 22 includes a network port which allows both the electronic transaction device 12 and the service institutions to connect to the service institution 18 through network 14. The e-Commerce server 22 handles the bulk of the interfacing with the electronic transaction devices and/or personal computers and the service institutions. The transaction service provider archive 24 may be stored on any suitable data storage medium, including, but not limited to, magnetic or optical disk drives, magnetic tape drive, solid-state memory, or any other suitable means for storing information. Transaction service provider archive 24 is a database of personal, account, transactional, and/or promotional information. A portion of the database of personal, account, transactional, and/or promotional information corresponding to a given client may be accessed by an electronic transaction device 12 registered to that client through the transaction service provider. Alternatively, the client may use a personal computer 16 to access the transaction service provider archive 24. In addition, the transaction service provider may have access to information

in the transaction service provider archive 24 corresponding to a plurality of clients, subject to restrictions on use of that information as may be designated by each individual client.

The internal server provides backend processing for support functions including Customer Service, Operations Management, Accounting, Marketing & Advertising, and various other Business Processes. The internal server 26 and the internal database 28 are generally not accessible by electronic transaction devices.

In the example illustrated in Fig. 3, the e-Commerce server 22 of the transaction service provider 10 is also connected to a banking environment through a firewall 30. In this illustrated example, a POS terminal 20 is connected through a firewall 30 and a payment gateway 32 to an acquiring bank 34. Acquiring bank 34 is connected to a banking network 36. Additional banks 38 are connected to the banking network. The transaction service provider 10 is connected to the banking environment through at least one of the banks through the firewall 30.

In this example, an electronic transaction device 12 may be used at the POS terminal 20, in this case, an ATM. In other examples, conventional plastic credit cards or ATM cards may be used at the POS terminal 20. Transaction and account information is then transmitted from the POS terminal 20 via the service institutions to the transaction service provider 10.

In this manner, electronic transaction devices, conventional credit cards, or a combination of the two, may be used to conduct additional transactions with the same or additional vendors. Also, the client may use a number of different accounts to conduct transactions. For example, the client may use a conventional card at an ATM then use and an electronic transaction device 12 to charge an

airline ticket to a selected credit account and credit frequent flyer miles to the user's airline frequent flier account. The transaction and account information for each transaction may then be forwarded by the respective service institution handling the transaction to the transaction service provider 10.

In the example of transactions involving use of an electronic transaction device 12, the transaction information is also recorded by the electronic transaction device 12. The information stored on the electronic transaction device 12 may then be reconciled with the information recorded by the transaction service provider 10 by establishing communication between the electronic transaction device 12 and the transaction service provider 10. In the illustrated example, communications are established through a personal computer 16 and network 14. However, electronic transaction devices may be configured with appropriate communications circuits to allow direct connection to any of the embodiments of network 14.

In the example of transactions involving conventional plastic cards, the transaction service provider 10 records and stores transaction information for a plurality of transactions occurring on a plurality of accounts. Accordingly, a client who uses conventional cards has the benefit of consolidated reporting of transactions without carrying an electronic transaction device 12.

The transaction service provider 10 may request personal information, such as a client's name, address, telephone number, and other identifying information. The transaction service provider 10 may set up a file on the client and initiate use of the transaction service provider 10 and, optionally, an electronic transaction device 12 and/or conventional plastic credit cards or other accounts.

For a registered client, the transaction service provider 10 may archive a list of the client's passwords (or any other security codes) for the client's electronic transaction device 12 and store the client's personal information. The transaction service provider 10 may also archive additional personal information, such as address and contact lists, calendars, to-do lists, and other software and/or databases which the client may have installed on the electronic transaction device 12.

The transaction service provider archive 24 stores information relating to a plurality of clients. The information includes, but is not limited to, personal, financial, account, transactional, personal preferences, and promotional information. Examples of the information include:

a) Personal
   1. Name
   2. Address - Home, Work
   3. Telephone - Home, Work
   4. Social Security
   5. Date of Birth
   6. Marital Status
   7. Drivers License, Insurance Cards, Employer Identification Cards etc.
   8. Number of Children and other family details

b) Financial
   1. Credit Card, Debit Card, Cash Cards etc.
   2. Income - Information regarding various sources etc.
   3. Bank Accounts - Information regarding the different Banks, the different types of accounts, Balances etc.
   4. Payment Information - Mortgages, Loans, Bills etc.
   5. Investment Information - Stocks, Bonds, Equity, Real Estate etc.
   6. Transaction Information - Amounts, Form of Payment, Date of Transactions, Details on Purchases etc.

c) Health
   1. Gender, Height, Weight, Blood Group, Color - Hair, Skin, Eyes etc.
   2. Medical Profile - Detail information regarding past and present medical history which would include various surgeries done, prescribed medications, past illnesses and ailments, allergies, ongoing medication

and treatment, hereditary or genetic concerns, family history, etc.
3. Name and other contact details of doctors - Personal Physicians, Specialists etc.
4. Name and other details regarding the Clinics, Hospitals, Emergency Services and Laboratories previously visited, and/or preferred for future needs

d) Information Manager
1. Appointments
2. Address and telephone book
3. To Do lists
4. Memos and notes

e) Miscellaneous
1. Preferences - Likes and dislikes, certain products and services required on an ongoing basis etc.
2. Insurance providers, Telephone companies - local, long distance and wireless, Hotels, Airlines, Auto Rental companies, Retail outlets and Merchants, Club Memberships - previously used and/or preferred for future needs
3. Family details, Birth dates etc.

The transaction service provider 10 may also facilitate applying for new accounts from service institutions 18, or renewing existing accounts. The client may download new account applications from the transaction service provider 10. The client would then send the new application, or request for renewal, to the transaction service provider 10, which would then contact the corresponding service institution 18. Once the application or renewal is approved, the transaction service provider 10 would notify the client, and the client would be able to download the account information necessary to use the new or renewed account.

Alternatively, the transaction service provider 10 may assume some or all of the functions of a service institution and issue credit cards or other accounts.

Referring now to Fig. 4, various client services and products may be offered by the transaction service provider 10, either independently or through a partnering service

institution. A "partnering service institution" means an institution that provides a portion of the services associated with a given account. In the example of a credit card, a service institution may be MASTER CARD. A partnering service institution may be an issuing bank that issues MASTER CARD accounts, such as CITIBANK. The client services may include personal services 40, financial services 42, shopping and purchasing services 44, health services 46, and miscellaneous services 48.

Personal services 40 include privacy, shielding, new device, new account, account removal, device removal, lost card, lost device, resume card, resume device, awards and promotions, bill paying, transaction records and data management, analysis and consultation, and grouping services.

Privacy services include maintaining the confidentiality of all information that the transaction service provider 10 has access to regarding their clients. Controlled and partial access to this information would only be given to the service institutions on prior consent by the client to fulfill a specific objective, such as conducting a purchase or obtaining a service on behalf of the transaction service provider 10 client.

Shielding services include restricting and controlling access to clients' information from the various service institutions and vendors.

New device services include issuing a new electronic transaction device 12 to a client. Issuing a new electronic transaction device 12 would include issuing the device hardware and/or setting up the various interfaces and applications for the client, which in turn would include the registration of the new client, creation and storage of passwords etc.

Issue account services include activating specific accounts, such as credit cards, on an electronic transaction device 12. The application for new cards from the issuing banks and service institutions may be provided by the transaction service provider 10, or alternately by the issuing service institution. Once the application has been approved by the issuing service institution, the specific card(s) may be downloaded from the transaction service provider 10 to the electronic transaction device 12.

Issue account services may also include activating a sub-account for a particular account. The sub-account may have limits imposed by a client. For example, a client may wish to allow a child to have use of a certain credit card account. The transaction service provider 10 may download the appropriate account information into a electronic transaction device 12 assigned to the child. Furthermore, the client may wish to impose preset spending limits on the child's use of the sub-account. The client may designate with the transaction service provider 10 that the sub-account be used no more than given number of times per week, or set spending limits per transaction or per a given timeframe, or authorize only certain types of transactions (e.g., gasoline and grocery purchases, but not department store purchases).

Account removal services include removing a particular account, such as a credit card (and freezing the various services associated with that particular card) from an electronic transaction device 12. Device removal services include terminating all services associated with an electronic transaction device 12.

Lost electronic transaction device services include freezing all services in the event of a lost device.

Resume Services include setting up a new electronic transaction device 12 and resumption of the services.

Awards & Promotions services include offering and allowing the client to download various awards and promotions based on their transactions and records. In one example, electronic coupons may be downloaded. These promotions may be offered directly by the service institutions and vendors. Alternatively, promotions may be offered directly to the clients by the transaction service provider 10.

Bill paying services include the transaction service provider 10 paying the client's bills, based on an independent arrangement. This arrangement at times may be in terms of offering a better interest rate and payment plan compared to the Service Institutions, an insurance plan against unemployment, theft etc. or simply a service for their client's convenience.

Transaction Records & Data Management services include creating a database of transaction records, and allowing access to the transaction service provider clients. For example, a client could access the database corresponding to the client and request all transactions concerning a given vendor. The transaction service provider 10 would return all transactions concerning that vendor for all accounts registered with the transaction service provider 10.

Analysis & Consultation Services include offering transaction service provider clients analysis and consultations based on their transaction records and history. Such services may include, for example, professional services such as tax and accounting services.

Financial services 42 include banking services, retail services, investment services, and insurance services.

Banking Services include e-Banking, e-Cash, e-Check, Bill payments, Loans, Mortgages, and Tax Services. Retail Services include Credit Cards (MasterCard, Visa, American Express, Discover, Diners Club etc.), Purchases, Loyalty, Rewards. Investment Services include Stocks, Bonds, Portfolio Management. Insurance Services include insurance for Auto, Home, Life, Business.

Shopping and purchasing services 44, also referred to as "customer agent" services, include matching, identifying, purchasing, negotiating and analytic services.

Matching Services include matching a client's specific requirement with the various vendor or Service Institutions offerings. For example, if a client wishes to buy a refrigerator, the client may engage the matching service of the transaction service provider 10. The transaction service provider 10 would then contact the various vendors that sell refrigerators and collect the information, including model designations and prices for the client, and in turn provide that information to the client. The transaction service provider 10 may suggest the best bargain for the client in terms of the preferences detailed by the client, with an emphasis on cost, features, warranty etc.

When the transaction service provider 10 contacts the vendors, it may release certain information selected by the client to enhance the quality of the responses, and withhold other information. In the example of the refrigerator, the client may authorize the release of information such as the number of persons living in the client's household. This information may assist the vendor in suggesting an appropriately-sized model for the client to purchase. However, the transaction service provider 10 would not disclose other personal information, such as the client's name, address, or telephone number.

This service would be extended to all products and services offered by the service institutions associated with the transaction service provider 10. In another example, a client may wish to negotiate airfare to a selected destination. To enhance his or her bargaining power, the client may authorize the disclosure of his or her travel history for during the previous year. A particular carrier may value the repeat business that the client has given the airline in the past and may wish to offer a special fare to retain that loyal client rather than lose that client to another airline. The transaction service provider 10 can use the client's travel history as a bargaining tool without disclosure of the client's identity. Thus, the transaction service provider 10 acts as the Customer's Agent, negotiating for information to conduct purchases on behalf of the client without revealing the clients identity to the vendor until the actual purchase is finalized.

Additional services of the shopping and purchasing services include identifying goods and services, purchasing goods and services, negotiating terms, such as quantity discounts, payment terms, etc., custom design and particular requirements, analytic services, such as reports on products and services by consumer advocacy groups, independent reports and analysis etc.

Health Services include compiling a health profile, including history and data. Health services also include conducting hospital interactions for the purposes of updating medical history, bill payments, medical insurance etc., HMO interactions, Emergency Services - Ambulance, Personal Physician etc., interactions with Insurance Companies, Drug Stores & Pharmacies.

Miscellaneous Services include government services, educational services, telecom services, transportation

services, weather services, including emergency notification of dangerous weather events, and special events.

Government Services include Department of Motor Vehicle services, Passport and Visa, services, IRS and Tax related services, Social Security and Welfare services, etc.

Educational Services include School and College related information -registration, course selection, tuition payment plans and arrangements, library resources etc.

Telecom Services include Service provider selection, Net Access, Billing and Conflict resolution, Custom Services etc.

Transportation services include Gas, Parking, Toll, Violation/Ticket Payments, Car rentals - reservations, payments, coupons etc., Airline Services - Reservations, Ticketing, Check In, Frequent Flier and Bonus Miles etc., Hotel Reservations, Restaurant - Suggestions and Reservations.

Based on the profile created and various services offered by the transaction service provider 10, the transaction service provider 10 is in the unique position to safeguard the interests of the clients by isolating their identity from the vendors, and at the same time giving the clients access to the products, services, promotions and advertising they desire.

The transaction service provider 10 also addresses the interests of the vendors. Again, since the transaction service provider 10 is in the unique position, where it has access to the information designated non-confidential by a plurality of clients, the transaction service provider 10 can offer the vendors services such as customer acquisition services 50, target marketing services 52, marketing

research services, 54, and inter-vendor collaboration services 56.

Customer Acquisition Services 50 include matching up clients with a vendor's goods or services. Since the transaction service provider 10 would have a very comprehensive profile on their clients, they are in the unique position to offer vendors a steady flow of customers for their products and services. Considering the time and resources the vendors commit to develop a loyal customer base, this service would prove invaluable.

Target Marketing Services 52 include assisting vendors in targeting a well-focused market. The transaction service provider 10 is also in a position to assist the vendors in targeting their marketing efforts based on the client profile information the transaction service provider 10 has access to, considerably reducing the efforts directed towards "non-existing" markets by the vendors and increasing their overall profitability.

Marketing Research Services 54 include assisting a vendor in providing appropriate goods and services. Based on the fact that the transaction service provider 10 has a comprehensive profile on their clients, which includes detail preferences, likes-dislikes etc., the transaction service provider 10 can assist their partnering vendors in developing better products and custom tailored services.

Inter-Vendor Collaboration Services 56 include matching vendors and service institutions. Apart from a large client base, the transaction service provider 10 will also have a large number of service institutions and vendors as registered members, with a comprehensive profile on their products and services. This would allow the transaction service provider 10 to act as a "catalyst" for the Service Institutions for the purposes of forming

alliances, mergers or possibly even acquisitions, to offer better products and services to their customers.

Considering the sensitivity surrounding the nature of information regarding their clients and service institutions that the transaction service provider 10 will have access to, it is of paramount importance that confidentiality be maintained. The only client information that the transaction service provider 10 will release to the vendors will be pre-approved by the clients, and with the objective of providing a better product or service. This information surrounding the clients may be distributed into three categories, profiles, transaction record analysis, and preferences.

Regarding the profiles category, this is the information compiled by the transaction service provider 10 on their clients through direct means - interactive questionnaires, surveys, interviews, through pre-approved external agencies etc. With respect to Transaction Records Analysis, this is the information compiled by the transaction service provider 10 through analysis of its client's records, buying patterns and frequency, preferences based on these analysis etc. Regarding preferences, this is the information compiled by the transaction service provider 10 through preferences, like and dislikes etc., specified by the client.

Referring now to Fig. 5, a portion of one example of the transaction service provider 10 system dealing with the client-side information consolidation process is illustrated. Clients, both electronic transaction device clients and conventional card clients, may connect to the transaction service provider 10 through the network 14. The transaction service provider 10 collects information regarding the client as set forth above. The transaction service provider 10 may use an expert system 60 to analyze

clients' personal, transactional, and account information. Information input to such a client data consolidation expert system 60 may include Registration & Initialization Information 62, Client Profile Information 64, Transaction & Records Analysis Information 66, and Specific Flag Information 68, such as Privacy and Secrecy Specifications, Special Preferences, etc.

Apart from these inputs, the other information being fed into the Client Data Consolidation expert system 60 may include Direct Input 70 specific instructions from the client and Consolidated Input 72 from the service institutions and vendors. For instance, the Registration Information 62 would be compiled based on surveys and interviews, the complete Client Profile 64 compiled using information from external agencies, over and above the direct information provided by the clients. The Transaction and Records Analysis 66 conducted by the transaction service provider 10 would be offered as a service to the client in the desired form and format, and would also be fed back into the expert system to form an input to the overall service offerings to the clients by the transaction service provider 10. The Specific Flag Information 68 and Direct Input 70 by the clients form the preferences outlined by the clients. The consolidated input from the Service Institutions, may include information about the vendors that would affect the overall client profile, and consequently the services offered to the clients. The output of this client data consolidation expert system 60 may be provided as an input to a knowledge-based system 74 of the transaction service provider 10, which would eventually decide the services being offered to the Clients and the Service Institutions 76. As shown in Fig. 5, the client data consolidation expert system is preferably isolated from the other processes to ensure the

confidentiality of designated confidential information by the clients.

Referring now to Fig. 6, a portion of one example of the transaction service provider 10 system relating to the vendor data consolidation process is illustrated. The transaction service provider 10 may use another expert system 78 to perform the vendor data consolidation. The expert system collects and assembles a complete profile on the service institutions and vendors through various sources, may include profile information 80, products & services information 82, marketing & advertising information 84, information in terms of future releases of products and services 86 (e.g., "Future Attractions").

This information would be compiled from the service institutions 18 and vendors 19. The complete profile may be provided as another input to the knowledge-based system 74, which would eventually determine the services offered to the client, service institutions and vendors. Two sources which form a direct input to the knowledge-based system 74 are the services and products subscribed by the clients which the Service Institutions are committed to provide directly to the clients 88 (e.g. Credit Card services - If a client has applied to Citibank for a MasterCard, Citibank is obligated to provide this service to the client. The interfaces for this credit card would be downloaded onto the electronic transaction device 12 by the client from the transaction service provider 10. The transaction service provider 10 provides the initiation, registration and maintenance of the account, tracking and storing all transactions, and forms the intermediary as discussed before between Citibank and the clients). The other illustrated input sources are the promotions, awards offered by the Service Institutions directly to the clients 90 (e.g. Frequent flyer miles offered by American Airlines

to a transaction service provider client). Again, this processing environment would be kept isolated from the other transaction service provider 10 processes.

Figure 7 illustrates an example of a complete system, at the center of which is the knowledge-based system. The knowledge based system operates based on the various inputs it receives and the guidelines defined by the transaction service provider charter. The various inputs to the knowledge based system may include the outputs of the Client Data Consolidation & Service Institution Data Consolidation expert systems 60 and 78, the respective Archives 24 which store all the relevant Client Data and Service Institution Data, a Customer Service Input 92 which handles all direct requests from the clients, all Security guidelines 94 ensuring confidentiality and the Services and Products, the Benefits and Promotions offered by the Service Institutions directly to the clients 96, and additional services 98 other than those provided by the transaction service provider 10. The output of the knowledge-based system 74 determines the various services offered by the transaction service provider 10 to the clients and to the Service Institutions 18. These services include "Match-up" services 99, Analysis and Consultation Services 100, and Client Data Archives 102. The transaction service provider 10 may also offer promotions and awards 104 based on client transaction records, allowing their clients and Service Institutions to download these awards along with other ongoing services and products. The transaction service provider 10 also provides controlled client profiles and requirements to vendors and service institutions 106.

Figure 8 is a flow chart of an example of steps for initiating a client and the client's electronic transaction device 12. The steps need not be followed in the exact

order as illustrated. Also, with the exception of the first step, the illustrated client interaction steps are equally applicable to clients who use conventional plastic cards rather than the illustrated electronic transaction devices. Also, as mentioned earlier, the electronic transaction device 12 may be used to interface with the transaction service provider 10 and various Service Institution POS Terminals, other Terminal equipment etc.

The first illustrated step, step 110, is send a new electronic transaction device 12 to client. Step 110 is not a pre-requisite for transaction service provider services, and is performed only if requested by Client. Additional illustrated steps are step 112, New Client Initiation & Registration, step 114, Create Initial Client Profile, and step 116, Offer transaction service provider Products & Services to Clients. Products & Services offered to Clients include Personal Services, Financial Services, Shopping & Purchasing Services, Health Services, and Miscellaneous Services. Continuing with Fig. 8, step 118 is perform Overall Client & Account Maintenance, step 120 is Update Client Profile, and step 122 is Check whether transaction service provider 10 services are canceled. If the services are not canceled, step 124 relating to New Services, Products & Promotions Offered to Clients, Based on Client Profile or Direct Client Request may be executed. If the services are canceled, step 126, Account Termination Procedure may be executed.

Referring now to Fig. 9, a flow chart of an example of Service Institution Interaction with the transaction service provider 10 is illustrated. The illustrated steps include step 130, Create Initial Service Institution Profile. The profile may include a Company/Institution Profile, a Products Profile, and a Services Profile. Additional steps include step 132, Offer Products, Services

& Promotions to transaction service provider clients, step 134, perform overall transaction service provider Client & Account Maintenance, and step 136 receive transaction service provider Client Feedback. The feedback may include Existing Products, Services & Promotions, and Custom or Special Requests. As a result, Service Institutions Profile may be updated.

Continuing with the steps in Fig. 9, step 138 is Offer transaction service provider Services to Service Institutions and vendors. The services include Customer Acquisition, Target Marketing, Marketing Research, and Inter-Vendor Collaboration. Step 140 is create New Customers for Service Institutions and vendors.

At step 142, the transaction service provider 10 checks whether transaction service provider services are terminated. If the transaction service provider services are not terminated, then the step 132 is repeated. If transaction service provider services are terminated, step 144, membership termination procedure is executed.

Figure 10 outlines an example of transaction service provider service flow. The flow chart makes certain assumptions, one of which is that the client wishes to use an electronic transaction device 12 provided by the transaction service provider 10. The example also makes the assumption that the client wishes to apply for a MasterCard credit card offered by Citibank, and that the Client wishes to purchase a Refrigerator. A refrigerator is used merely as an example, the service flow would essentially remain the same for any other product or service offered by a vendor associated with the transaction service provider 10.

Referring now to Fig. 10, step 150 is new client registration with transaction service provider 10. Step 152 is new electronic transaction device 12 requested by client. Step 154 is client completes credit card

application. In this example, the application is for a MasterCard, which is issued by Citibank. When client application is approved by Citibank, step 156 is transaction service provider 10, notifies client. The client may also be notified directly by Citibank.

Step 158 is Citibank MasterCard "Loaded" onto clients electronic transaction device 12 by the transaction service provider 10. Step 160 is client profile updated.

Step 162 is information for new refrigerator requested by client. The request may be based on the clients' profile, or alternately on direct request by client. Step 164 is transaction service provider 10 collects information on refrigerators from multiple vendors. Step 166 is transaction service provider 10 analyzes client profile and presents "Best Bargain" and options.

In step 168, Vendors may send additional information, promotions etc. on "Refrigerators" to the transaction service provider 10 as part of ongoing profile update. In step 170, updated information is sent to client. In step 172, the client makes decision to purchase a particular refrigerator.

Referring now to Fig. 11, one example of how to issue a secondary card (sub-account) is illustrated. Step 174 is a client requests a secondary card. Typically, the client is already a user of an electronic transaction device. Step 176 is the transaction service provider 10 prompts the client to specify secondary card requirements. Step 178 indicates the information request to program the secondary card. Step 180 is transaction service provider downloads specifications to the secondary card. Step 182 is the transaction service provider card issuer monitor secondary card activity. Step 184 is provision for the transaction service provider 10 to terminate the secondary card under certain circumstances. Step 186 is the transaction service

provider, provides a summary of use of the secondary card to the client.

In operation, the transaction service provider 10 may make the client's account and transactional information available to the client via known telephone and computer interfaces. Such interfaces may include interactive telephone menu and computer interface. The transaction service provider 10 may also provide a database of transactional information for a plurality of service institutions and vendors. This database enables the client to analyze transactional information across accounts from different service institutions. For example, a client may wish to review all transactions previously designated as "business expenses" or "tax deductible." The transaction service provider 10 could provide all transactions from all registered accounts, even from different service institutions.

With respect to specific types of service institutions, a bank, for example, the transaction service provider 10 may keep a log of cash transactions, store and transfer money between accounts, and automatically pay bills, among other services. With respect to credit card accounts, for example, the transaction service provider 10 may update credit limit information and calculate remaining credit based on transactional information.

The transaction service provider 10 may also provide a gateway to other service institutions 18. For example, when the client's electronic transaction device 12 is coupled to the transaction service provider 10, a further coupling may be made to service institutions 18 corresponding to the client's accounts, or to vendors which the client may wish to purchase goods or services.

Security precautions to reduce the potential for electronic transaction device 12 misuse may include the

transaction service provider 10 matching a serial number of the electronic transaction device 12 with the client's social security number, or some other unique identifier, allowing service institutions 18 to reconcile account and transactional information based on the serial number of the electronic transaction device 12, compiling a list of misplaced or stolen electronic transaction devices 12, and locking or deleting personal information, account information, and/or transactional information from misplaced or stolen electronic transaction devices 12.

Promotional information may be downloaded onto the electronic transaction device 12 in several ways. For example, the transaction service provider 10 may provide a gateway to one or more service institutions 18. The transaction service provider 10 may also assemble promotional information from a plurality of service institutions and/or vendors and download the information to the electronic transaction device 12. The transaction service provider 10 may also provide promotional information to an electronic transaction device 12 independent of any service institutions. Also, vendors may download promotional information to electronic transaction devices from POS terminals 20 during a transaction.

The client may connect the electronic transaction device 12 to the transaction service provider 10. The connection may be established directly by the electronic transaction device 12, or through an interface circuit or personal computer 16.

In another example of account reconciliation, the electronic transaction device 12 transmits the transactional information to the transaction service provider 10, which in turn stores the transactional information. The transaction service provider 10 is then coupled via network 14 to each service institution 18

corresponding to an account used by the client to conduct an electronic transaction. The service institutions 18 may be coupled one at a time, in series, or simultaneously. Once coupled, the transactional information transmitted to the transaction service provider 10 is compared to the information transmitted to the service institutions 18 from the point of sale terminals 20. Any discrepancies are noted and relayed to the client and the service institutions 18.

WHAT IS CLAIMED IS:

1. A service provider for administering a plurality of accounts for a client, comprising:

a) a computer, having a processor, a data storage medium, and a network port;

b) the storage medium configured to store the clients' personal information, account information, and transactional information;

c) the processor configured to:

1) create a database of client information including the client's personal information, account information corresponding to a plurality of accounts associated with the client, and transactional information corresponding to a plurality of transactions conducted by the client;

2) designate as confidential a predetermined first portion of the database client information;

3) designate as non-confidential a predetermined second portion of the database of client information non-confidential;

4) provide the client with access to the first and second portions of the database of client information via the network port.

2. The transaction service provider of claim 1, wherein:

a) the storage medium is further configured to store information corresponding to a plurality of vendors; and

b) the processor is further configured to:

1) create a database of vendor information;

2) receive a transaction request from a client;

3) analyze information in the database of vendor information;

4) analyze information in the database of client information;
5) provide a suggested transaction to the client based on the information in the database of vendor information and the database of client information.

3. The transaction service provider of claim 2, wherein:
a) the processor is further configured to:
1) establish communication with a vendor via the network port;
2) disclose information from the predetermined second portion of the database of client information to the vendor;
3) receive information from the vendor;
4) provide information received from the vendor to the client.

4. The transaction service provider of claim 1, wherein:
a) the processor is further configured to:
1) establish a communications with a service institution via the network port;
2) receive transactional information corresponding to the client from the service institution;
3) add the transactional information received from the service institution to the database of client information.

5. The transaction service provider of claim 1, wherein:
a) the processor is further configured to:
1) establish communication with the client via the network port;

2) receive information from the client; and
3) add the information received from the client to the database of client information.

6. The transaction service provider of claim 5, wherein the information received from the client includes transaction information.

7. The transaction service provider of claim 5, wherein the information received from the client includes personal information.

8. The transaction service provider of claim 5, wherein the information received from the client includes account information.

9. The transaction service provider of claim 5, wherein the information received from the client includes promotional information.

10. The transaction service provider of claim 5, wherein the processor is further configured to establish communication with an electronic transaction device and transactional information is received from the electronic transaction device.

11. The transaction service provider of claim 1, wherein:
a) the processor is further configured to:
1) establish communications with a service institution via the network port;
2) receive information corresponding to the client from the service institution;

3) add the information received from the service institution to the database of client information;
4) establish communication with the client via the network port;
5) receive information from the client;
6) add the information received from the client to the database of client information; and
7) reconcile the information received from the service institution with the information received from the client.

12. A method for using an electronic transaction device with a transaction service provider, comprising:
registering the electronic transaction device with the transaction service provider;
registering a plurality of accounts corresponding to a plurality of service institutions;
providing a data connection between the electronic transaction device and the transaction service provider;
creating a database of client information including personal information, account information, and transactional information; and
storing account information for a plurality of service institutions in the database of client information.

13. The method of claim 12, wherein the step of registering the electronic transaction device with the transaction service provider further comprises the steps of:
registering a client associated with the electronic transaction device with the transaction service provider;
collecting and storing personal information from the client in the database of client information;
archiving a password corresponding to the client; and

archiving the personal information stored on the electronic transaction device in the database of client information.

14. The method of claim 12, wherein the step of registering a plurality of accounts corresponding to a plurality of service institutions further comprises the steps of:

storing account information in the database of client information;

storing transactional information; and

reconciling transactional information received from the electronic transaction device with transactional information received from the plurality of service institutions.

15. The method of claim 12, further comprising the steps of providing access to a database of client information to the client and analyzing transactional information in the database of client information for a plurality of accounts.

16. The method of claim 12, further comprising the steps of:

designating a portion of the client database non-confidential;

analyzing the portion of the client database designated as non-confidential for preferences and patterns; and

providing analyzed transactional information to a plurality of vendors.

17. The method of claim 12, further comprising the step of downloading promotional information to the

electronic transaction device from the transaction service provider.

18. The method of claim 17, wherein the step of downloading promotional information further comprises assembling promotional information from a plurality of vendors.

19. The method of claim 12, wherein the electronic transaction device is a universal electronic transaction card.

20. A system for using an electronic transaction device having access to a network and a plurality of point of sale terminals, the electronic transaction device associated with a client and a plurality of service institution accounts, the system comprising:

a) a plurality of service institutions coupled to a network, each service institution further coupled to the plurality of point of sale terminals.

b) a transaction service provider having a storage medium configured to store database of client information, including personal information, account information, and transactional information associated with the client;

c) a network port configured to communicate with a plurality of electronic transaction devices and with a plurality of service institutions; and

d) a processor, configured to:

1) receive transactional information from the electronic transaction device associated with the client via the network port;

2) store transactional information received from the electronic transaction device associated with the client in the database of client information;

3) receive transactional information associated with the client from the plurality of service institutions via the network port; and

4) store the transactional information received from the plurality of service institutions in the database of client information.

21. The system of claim 20, wherein the processor of the transaction service provider is further configured to reconcile transactional information received from the electronic transaction device with transactional information received from the plurality of service institutions.

22. A system for conducting and reconciling electronic transactions, comprising:

a plurality of electronic transaction devices, each electronic transaction device having access to a network;

a transaction service provider coupled to the network;

a plurality of service institutions coupled to the electronic transaction device service provider;

a plurality of point of sale terminals coupled to the plurality of service institutions, wherein each point of sale terminal provides access to the plurality of electronic transaction devices.

23. The system of claim 22, wherein the plurality of electronic transaction devices includes a plurality of universal electronic transaction cards.

24. The system of claim 22, wherein the plurality of electronic transaction devices includes a plurality of hand held computers programmed to conduct electronic transactions.

25. The system of claim 22, wherein the point of sale terminals provide access to the plurality of electronic transaction devices by infra-red communication.

26. The system of claim 22, wherein the point of sale terminals provide access to the plurality of electronic transaction devices by radio frequency wireless communication.

27. The system of claim 22, wherein the point of sale terminals provide access to the plurality of electronic transaction devices by metallic contact communication.

28. The system of claim 22, wherein the point of sale terminals provide access to the plurality of electronic transaction devices by bar code communication.

29. A method for conducting and reconciling an electronic transaction with an electronic transaction device, an electronic transaction device service provider, a service institution, and a point of sale terminal, comprising:

conducting an electronic transaction at the point of sale terminal with the electronic transaction device;

storing transactional information on the electronic transaction device;

transmitting transactional information from the point of sale terminal to the service institution;

transmitting transactional information stored on the electronic transaction device to the electronic transaction device service provider;

coupling the electronic transaction device service provider with the service institution;

comparing transactional information transmitted to the electronic transaction device service provider with the transactional information transmitted to the service institution.

30. The method of claim 29, wherein the step of conducting an electronic transaction further comprises conducting a plurality of electronic transactions.

31. The method of claim 29, wherein the step of transmitting transactional information from the point of sale terminal to the service institution further comprises transmitting transactional information from a plurality of point of sale terminals to a plurality of service institutions.

32. The method of claim 29, wherein the step of coupling the electronic transaction device service provider with the service institution further comprises coupling the electronic transaction device service provider with a plurality of service institutions.

33. The method of claim 29, wherein the step of comparing the transactional information transmitted to the electronic transaction device service provider with the transactional information transmitted to the service institution further comprises comparing the transactional information transmitted to the electronic transaction device service provider with the transactional information transmitted to a plurality of service institutions.

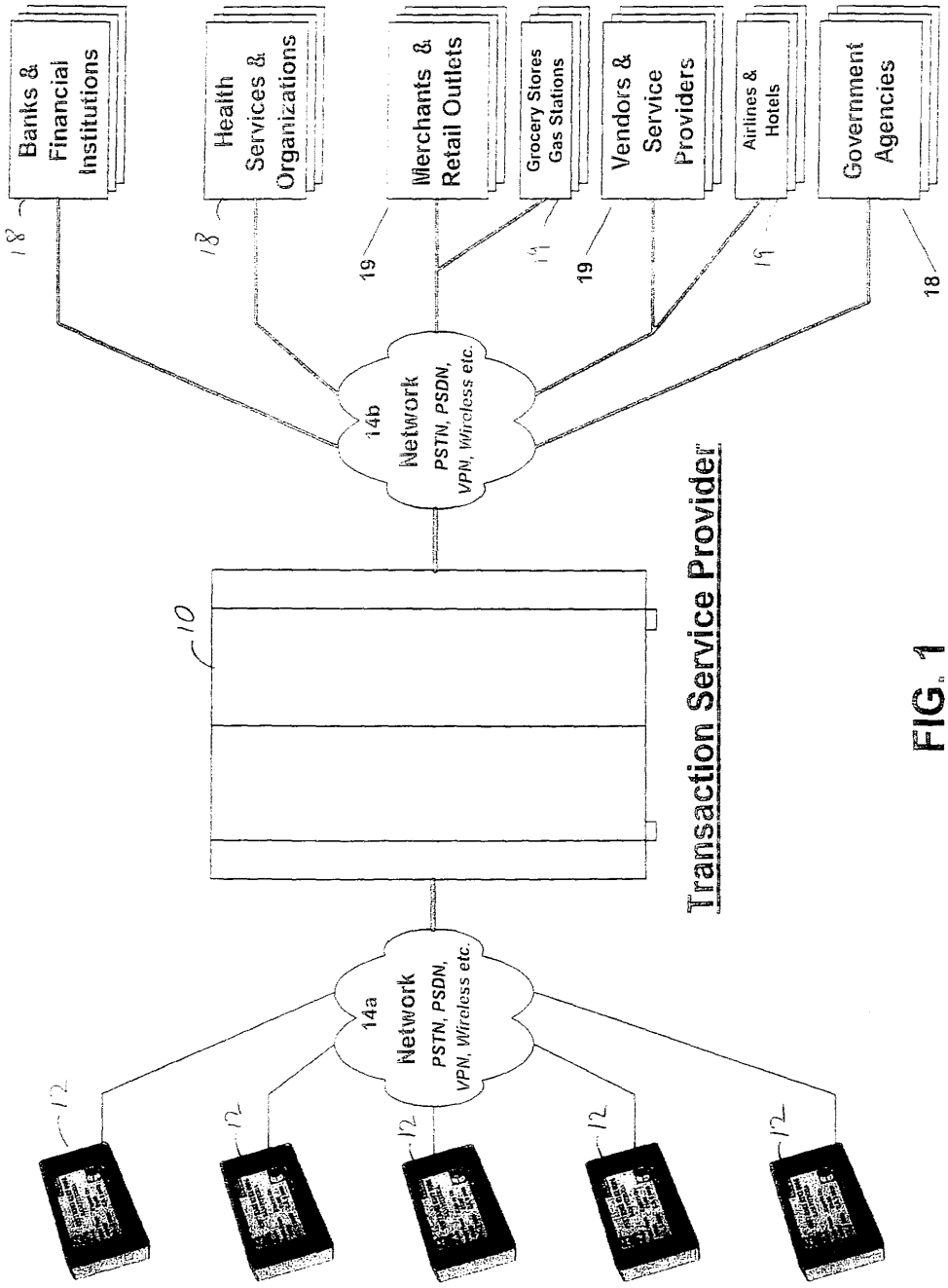

Banks & Financial Institutions
Health Services & Organizations
Merchants & Retail Outlets
Grocery Stores Gas Stations
Vendors & Service Providers
Airlines & Hotels
Government Agencies
18
19
14b Network PSTN, PSDN, VPN, Wireless etc.
10
Transaction Service Provider
14a Network PSTN, PSDN, VPN, Wireless etc.
12

FIG. 1

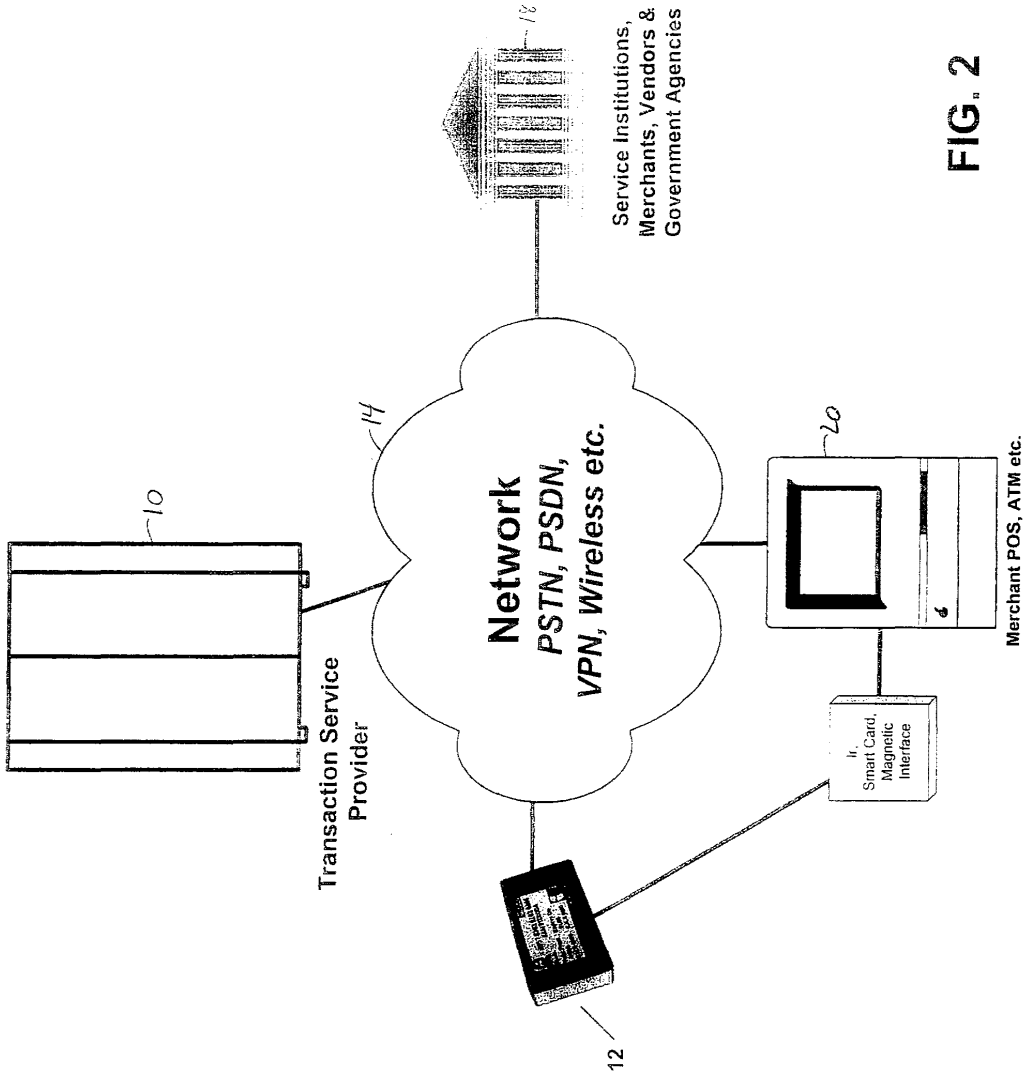

Service Institutions, Merchants, Vendors & Government Agencies
Network
PSTN, PSDN, VPN, Wireless etc.
Transaction Service Provider
Merchant POS, ATM etc.
Ir, Smart Card, Magnetic Interface
10
12
14
16
18
20

FIG. 2

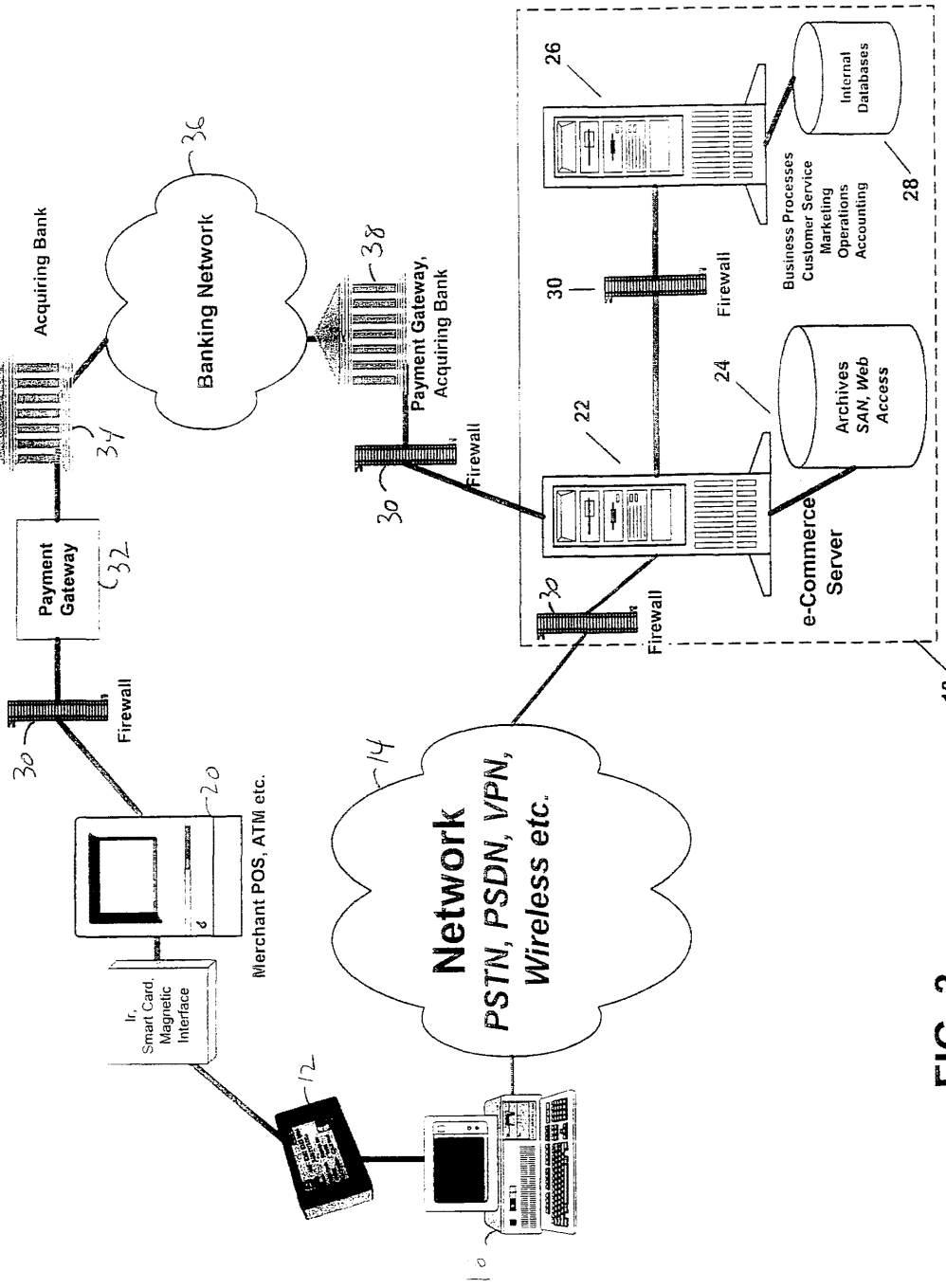

Acquiring Bank
Banking Network
Payment Gateway, Acquiring Bank
Payment Gateway
Firewall
Merchant POS, ATM etc.
Ir, Smart Card, Magnetic Interface
Network
PSTN, PSDN, VPN, Wireless etc.
e-Commerce Server
Archives SAN, Web Access
Business Processes
Customer Service
Marketing
Operations
Accounting
Internal Databases
10
12
14
20
22
24
26
28
30
32
34
36
38

FIG. 3

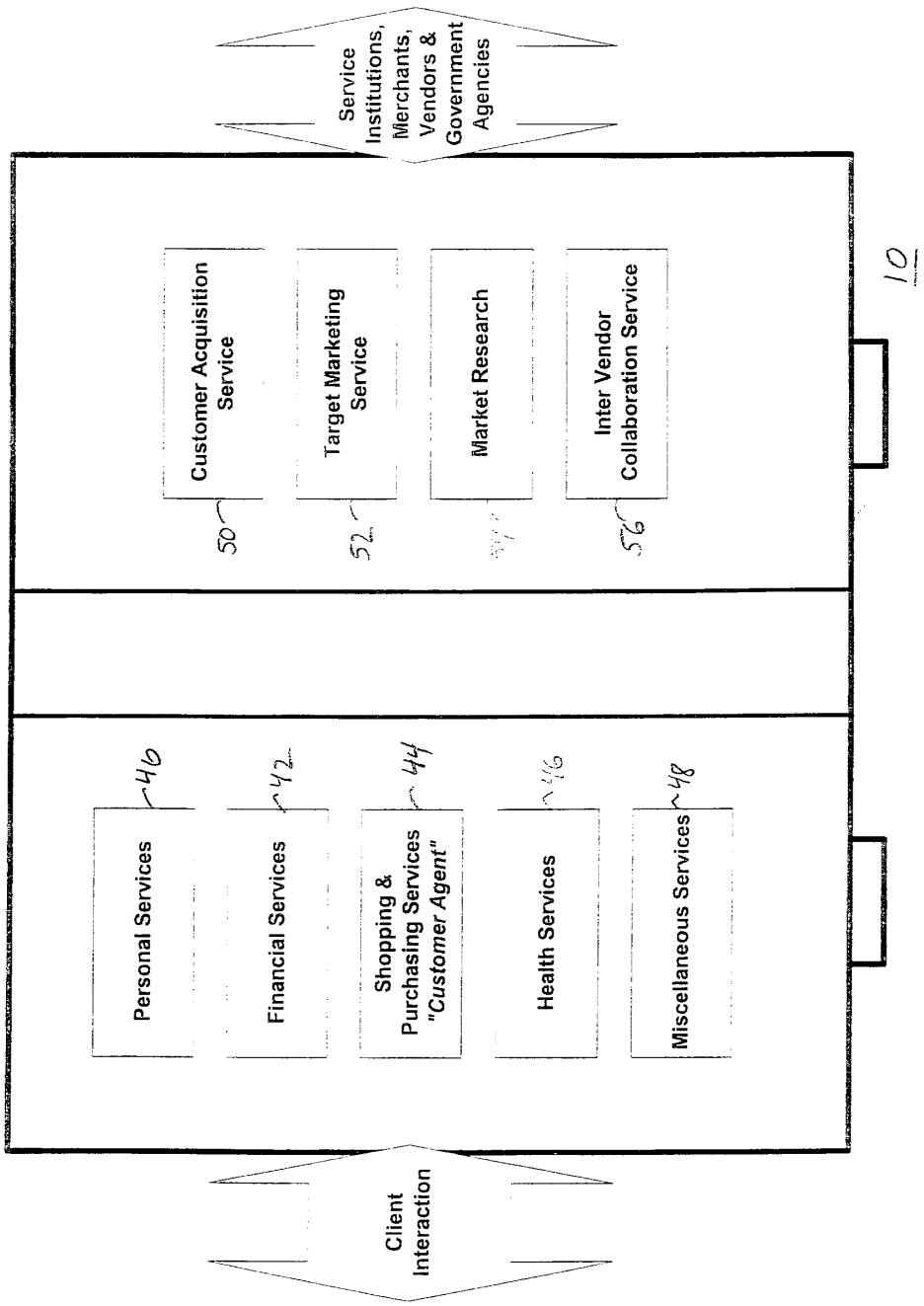

Service Institutions, Merchants, Vendors & Government Agencies
Customer Acquisition Service
Target Marketing Service
Market Research
Inter Vendor Collaboration Service
50
52
54
56
10
Personal Services
Financial Services
Shopping & Purchasing Services "Customer Agent"
Health Services
Miscellaneous Services
46
42
44
46
48
Client Interaction
Transaction Service Provider

FIG. 4

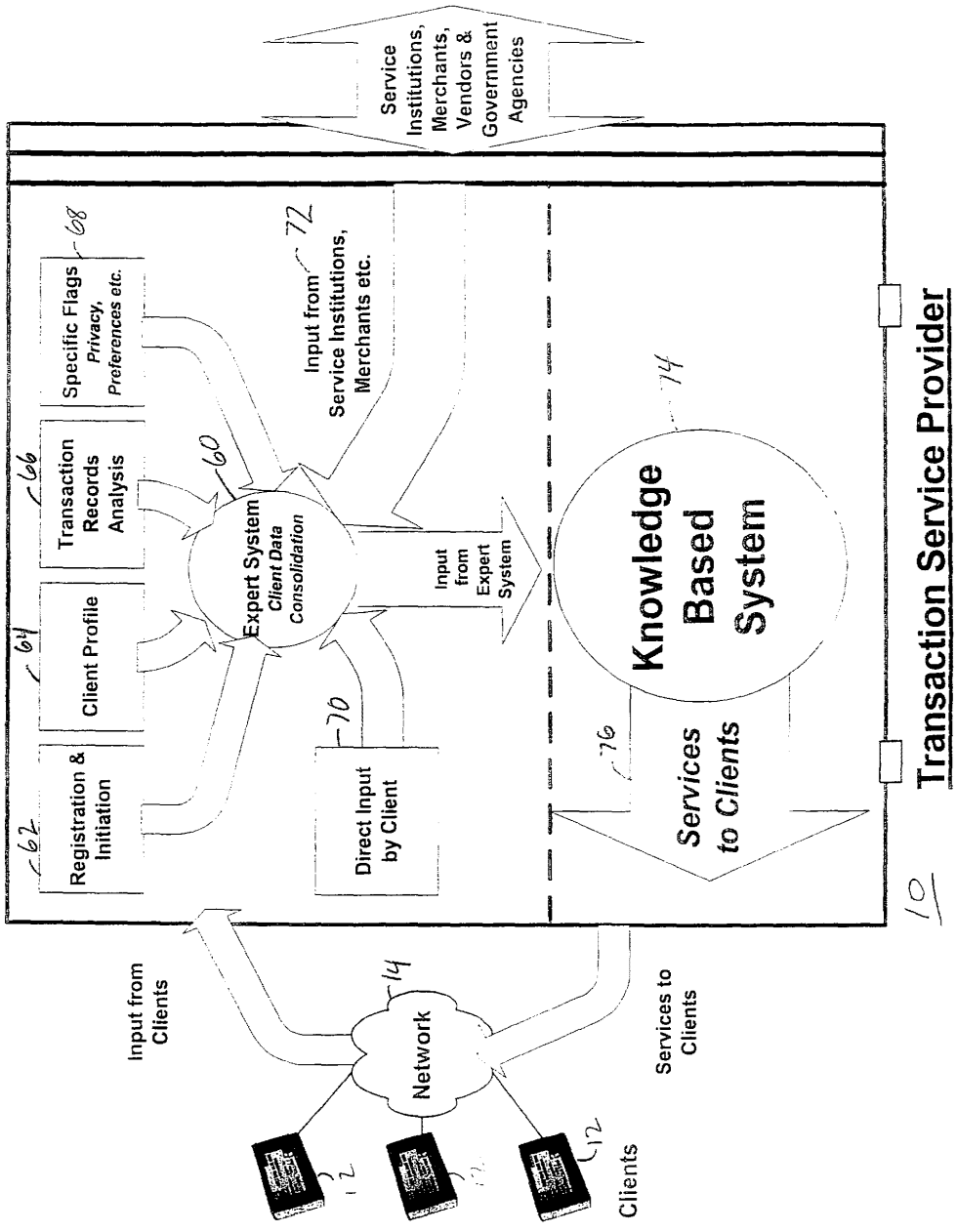

Service Institutions, Merchants, Vendors & Government Agencies
Specific Flags Privacy, Preferences etc.
68
Transaction Records Analysis
66
Client Profile
64
Registration & Initiation
62
Expert System Client Data Consolidation
60
Input from Service Institutions, Merchants etc.
72
Input from Expert System
Direct Input by Client
70
Knowledge Based System
74
Services to Clients
76
Transaction Service Provider
10
Input from Clients
Network
14
Services to Clients
Clients
12

FIG. 5

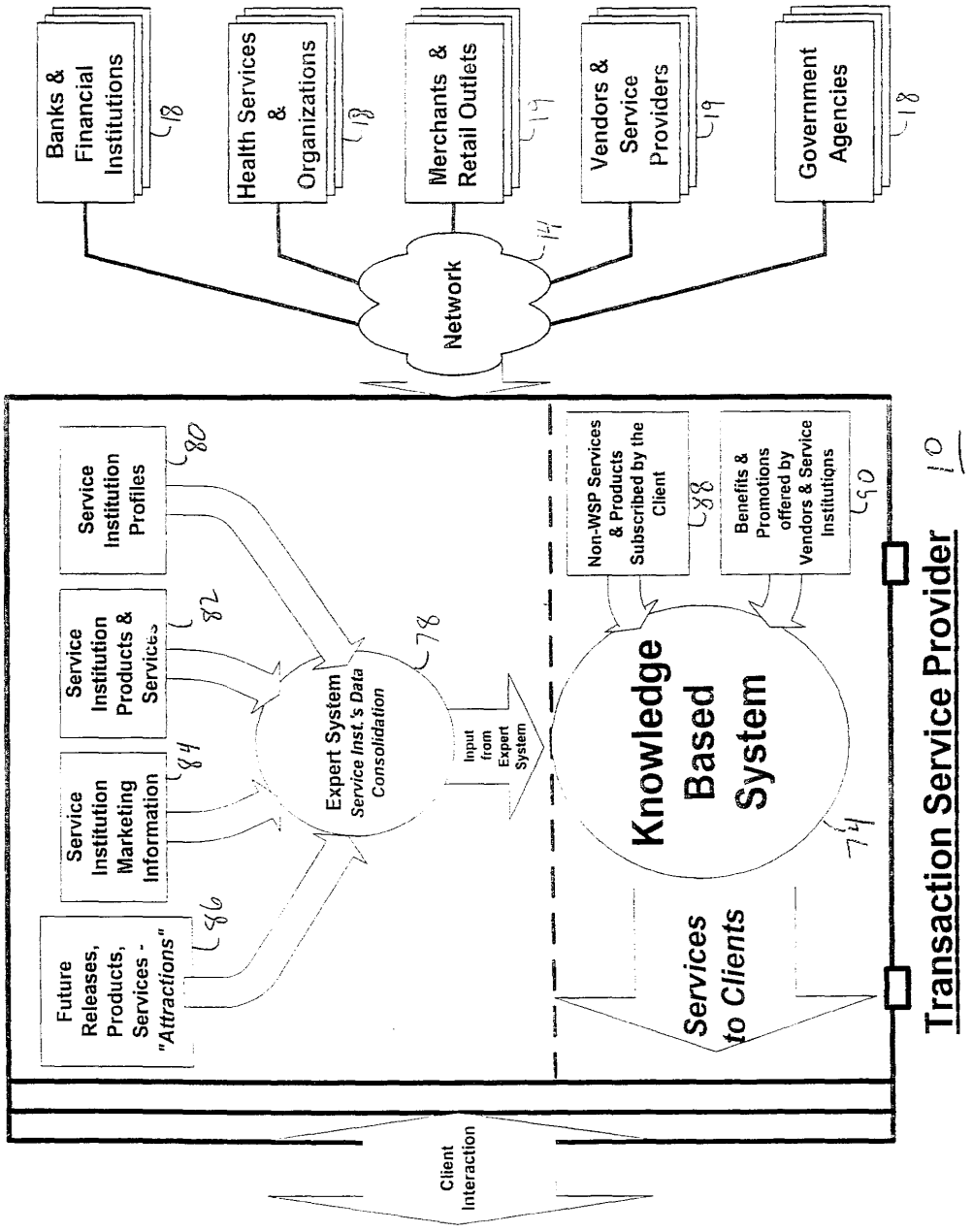

Banks & Financial Institutions
18
Health Services & Organizations
18
Merchants & Retail Outlets
19
Vendors & Service Providers
19
Government Agencies
18
Network
14
Service Institution Profiles
80
Service Institution Products & Services
82
Service Institution Marketing Information
84
Future Releases, Products, Services - "Attractions"
86
Expert System
Service Inst.'s Data Consolidation
78
Input from Expert System
Non-WSP Services & Products Subscribed by the Client
88
Benefits & Promotions offered by Vendors & Service Institutions
90
Knowledge Based System
74
Services to Clients
Transaction Service Provider
10
Client Interaction

FIG. 6

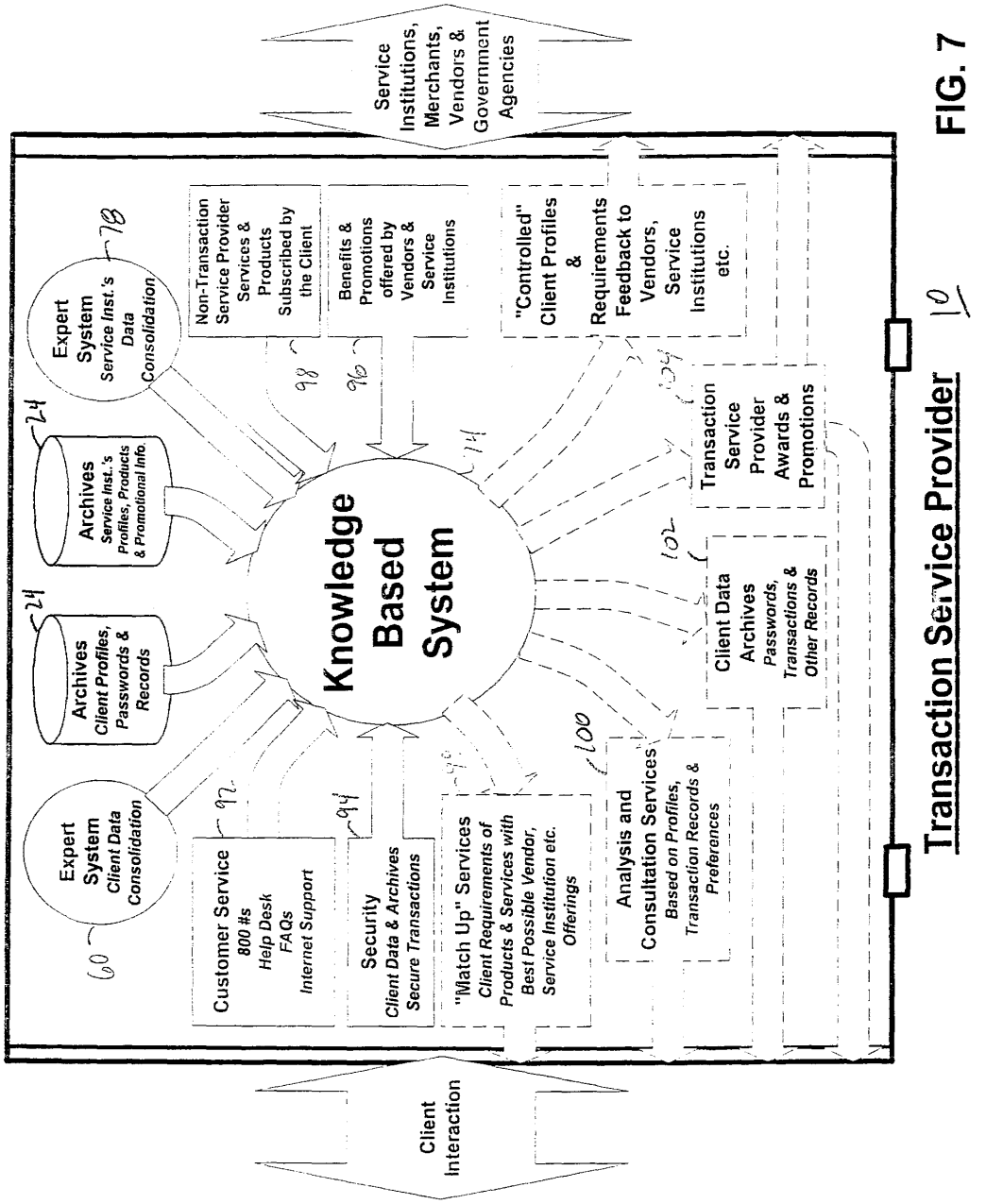

Service Institutions, Merchants, Vendors & Government Agencies
Transaction Service Provider
10
Knowledge Based System
Expert System Service Inst.'s Data Consolidation
18
Archives Service Inst.'s Profiles, Products & Promotional Info.
24
Archives Client Profiles, Passwords & Records
24
Expert System Client Data Consolidation
60
Non-Transaction Service Provider Services & Products Subscribed by the Client
98
Benefits & Promotions offered by Vendors & Service Institutions
96
"Controlled" Client Profiles & Requirements Feedback to Vendors, Service Institutions etc.
104
Transaction Service Provider Awards & Promotions
Client Data Archives Passwords, Transactions & Other Records
102
Customer Service 800 #s Help Desk FAQs Internet Support
92
Security Client Data & Archives Secure Transactions
94
"Match Up" Services Client Requirements of Products & Services with Best Possible Vendor, Service Institution etc. Offerings
Analysis and Consultation Services Based on Profiles, Transaction Records & Preferences
100
Client Interaction

FIG. 7

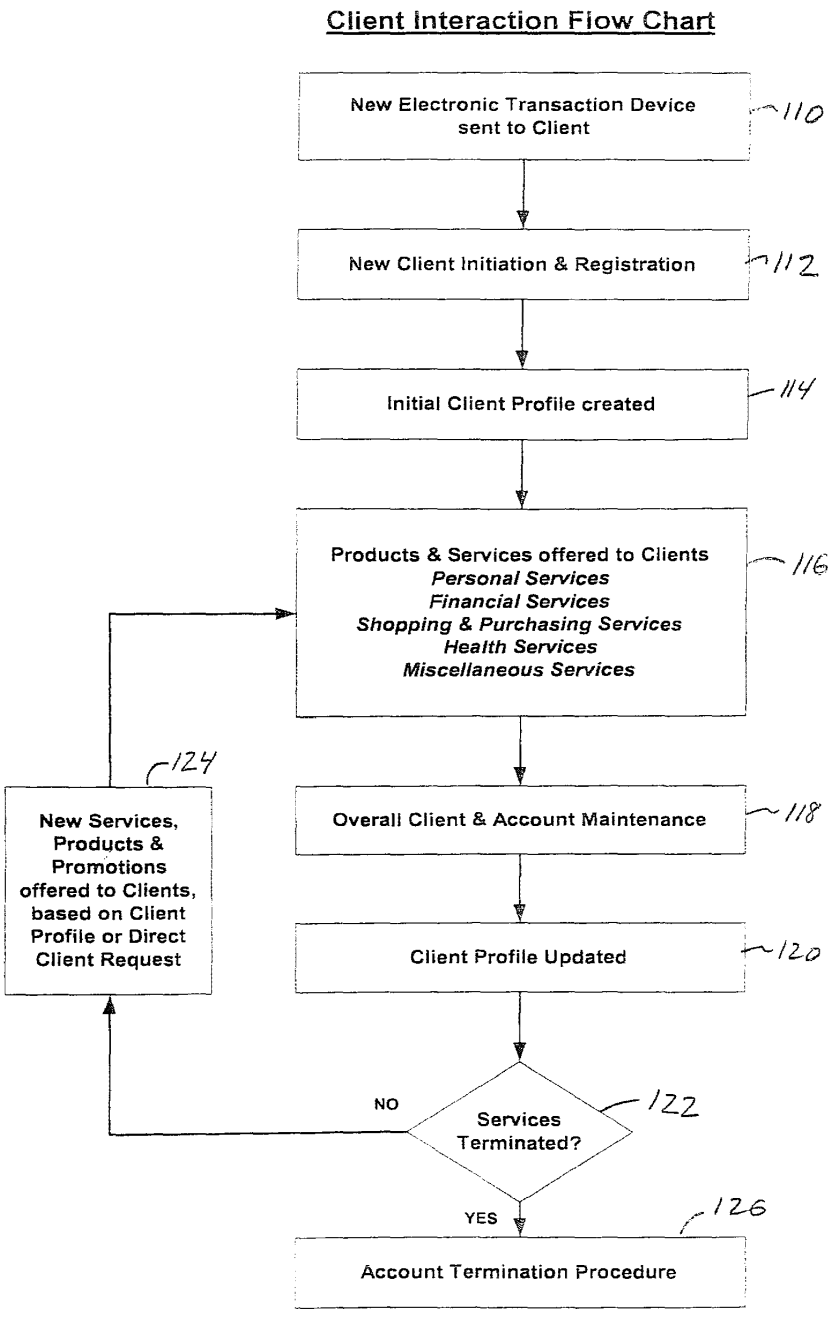

Client Interaction Flow Chart
New Electronic Transaction Device sent to Client
110
New Client Initiation & Registration
112
Initial Client Profile created
114
Products & Services offered to Clients
Personal Services
Financial Services
Shopping & Purchasing Services
Health Services
Miscellaneous Services
116
Overall Client & Account Maintenance
118
Client Profile Updated
120
Services Terminated?
122
NO
YES
New Services, Products & Promotions offered to Clients, based on Client Profile or Direct Client Request
124
Account Termination Procedure
126

FIG. 8

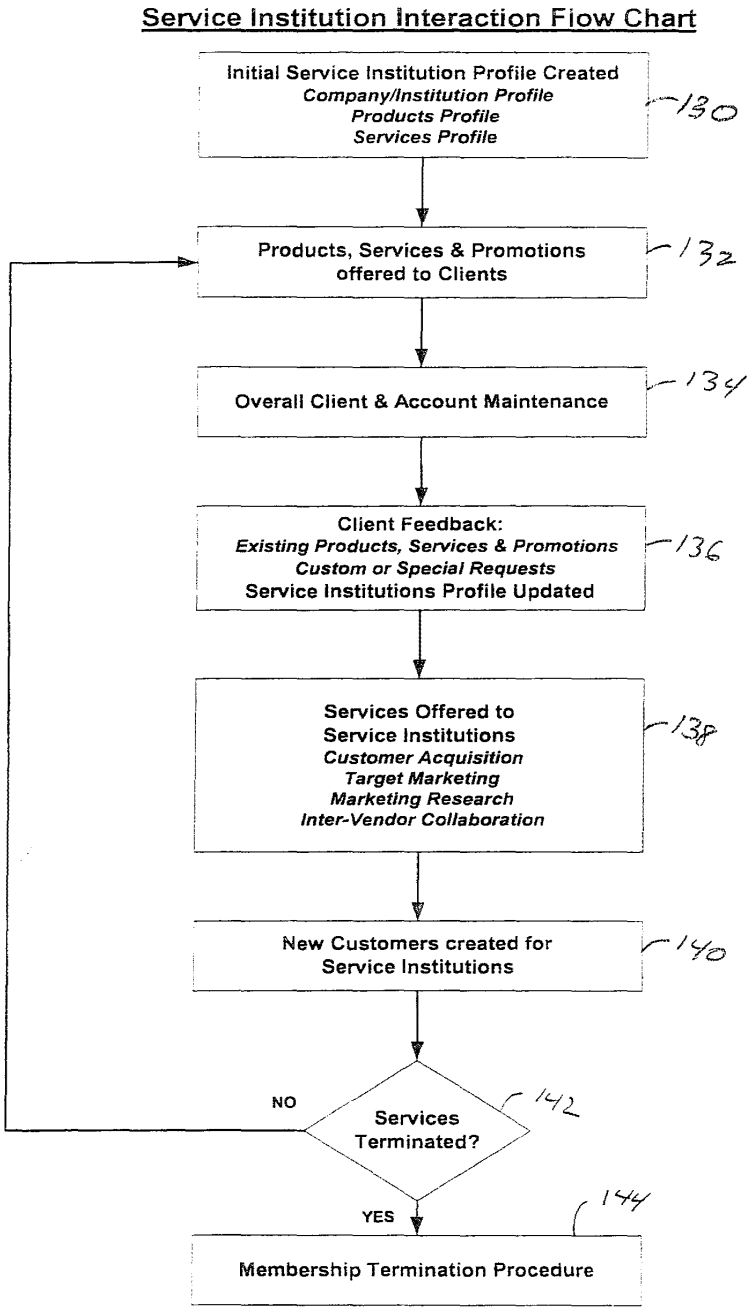

Service Institution Interaction Flow Chart
Initial Service Institution Profile Created
Company/Institution Profile
Products Profile
Services Profile
130
Products, Services & Promotions offered to Clients
132
Overall Client & Account Maintenance
134
Client Feedback:
Existing Products, Services & Promotions
Custom or Special Requests
Service Institutions Profile Updated
136
Services Offered to Service Institutions
Customer Acquisition
Target Marketing
Marketing Research
Inter-Vendor Collaboration
138
New Customers created for Service Institutions
140
NO
Services Terminated?
142
YES
144
Membership Termination Procedure

FIG. 9

Service Example

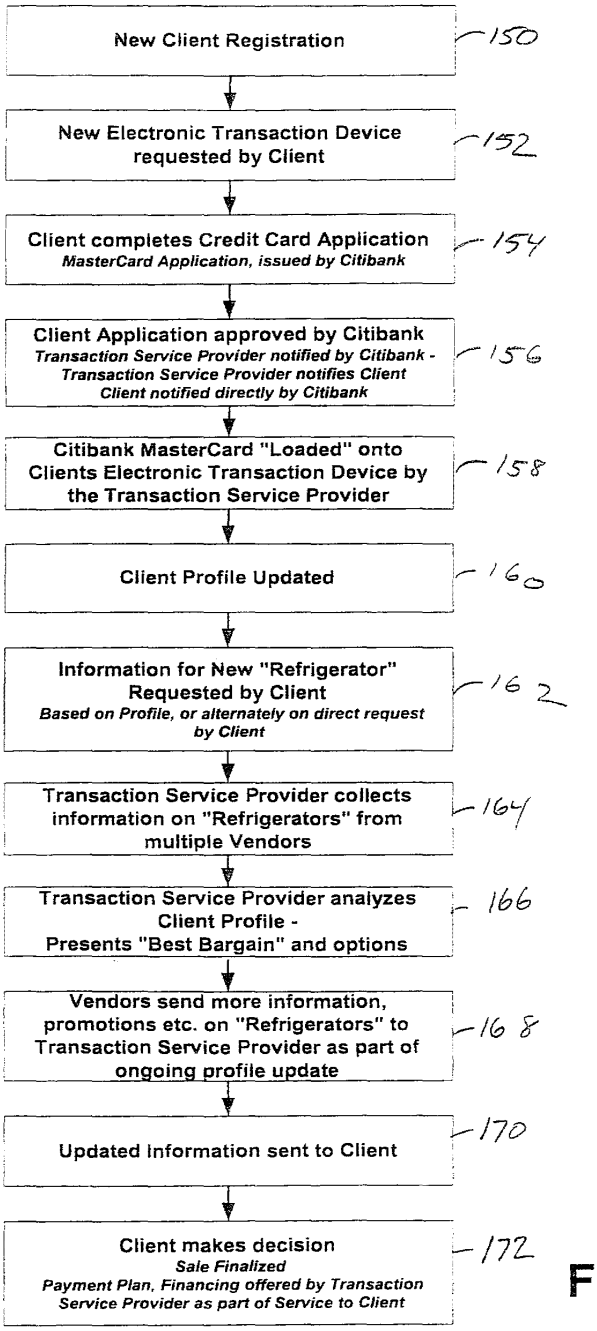


FIG. 10

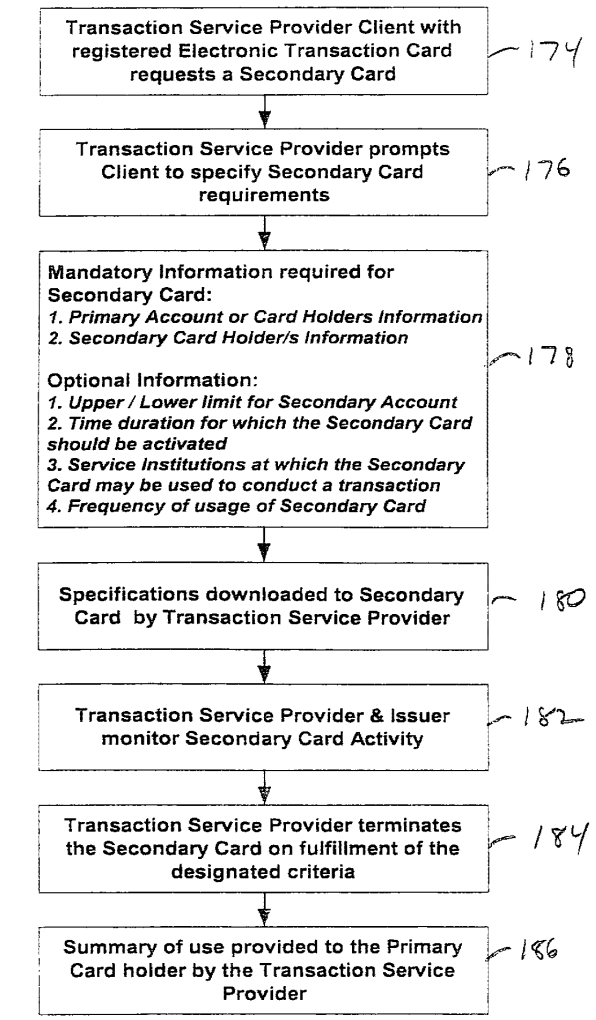

Secondary Card Download Procedure
Transaction Service Provider Client with registered Electronic Transaction Card requests a Secondary Card
174
Transaction Service Provider prompts Client to specify Secondary Card requirements
176
Mandatory Information required for Secondary Card:
1. Primary Account or Card Holders Information
2. Secondary Card Holder/s Information
Optional Information:
1. Upper / Lower limit for Secondary Account
2. Time duration for which the Secondary Card should be activated
3. Service Institutions at which the Secondary Card may be used to conduct a transaction
4. Frequency of usage of Secondary Card
178
Specifications downloaded to Secondary Card by Transaction Service Provider
180
Transaction Service Provider & Issuer monitor Secondary Card Activity
182
Transaction Service Provider terminates the Secondary Card on fulfillment of the designated criteria
184
Summary of use provided to the Primary Card holder by the Transaction Service Provider
186

FIG. 11

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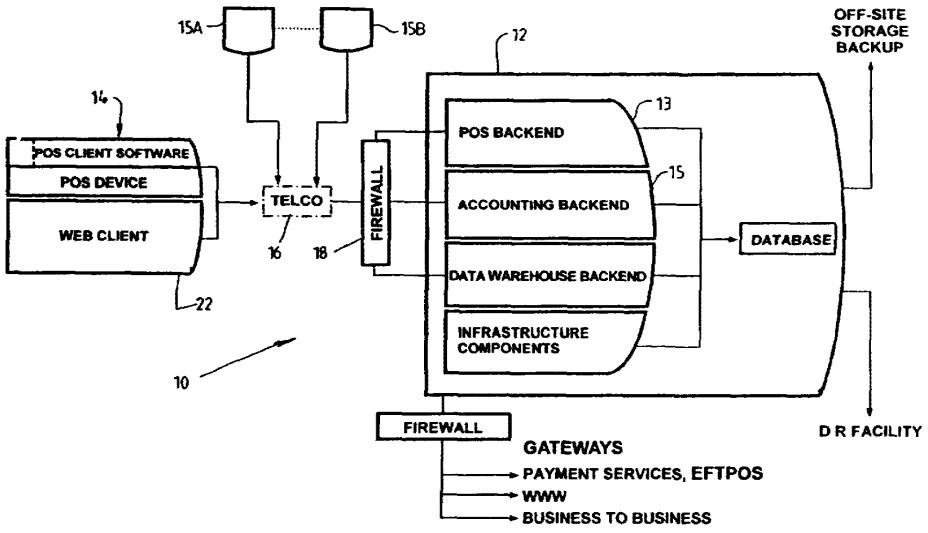
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Published:
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: POINT OF SALE SYSTEM



(57) Abstract: A method of conducting a point of sale (POS) transaction includes providing a POS device at the location of the transaction, providing a server at a location remote from the POS device, providing a means of communication between the POS device and the server and downloading a POS program from the server to POS device. The POS program controlls the operation of the POS device to conduct a sale. The POS device then receives details of the transaction transmitting details of the POS transaction from POS device to the server. The details of the POS transaction are then stored in a database within the server. A point of sale (POS) system, includes a plurality of POS devices for conducting POS transactions and a server.

WO 01/65427 A1

POINT OF SALE SYSTEM

Field of the Invention

The present invention relates to a point of sale system and a method of conducting a point of sale transaction.

Background of the Invention

A simple form of a point of sale system is a standard cash register. The typical manner of use of the cash register is as follows: a sales person enters the price of the product being purchased; the amount of cash tendered is entered; the cash register displays the change to be given and opens a cash drawer for the sales person to place the received payment within and provide any change necessary. A slightly more sophisticated cash register incorporates at least one of: a weighing scale for products purchased by weight; a barcode reader that scans the barcode of the product to automatically look up the price of the product stored on a central computer via a local area network; a connection to an EFTPOS machine, where the price of the goods being purchased is passed from the cash register to the EFTPOS machine for conducting an EFTPOS transaction; and a receipt printer for printing a receipt for the sale.

The standard cash register suffers from many disadvantages, such as the price of the product needs to be entered by the sales person or the cash register needs to be pre-programmed with particular buttons relating to the particular prices of each item. This arrangement is not particularly flexible. For example, if a new tax is applied to a good or the tax rate is changed, the cash register may need to be re-programmed. Cash registers connected by a network to a central computer are somewhat more flexible but still suffer from disadvantages, such as the cash register is limited in its capabilities by its programming. Price changes are made to a database stored on the central computer. If there are several stores, the price needs to be charged in each store or if centralised by a wide area network, individual pricing for each store is more difficult. The cost of the networked cash register is also rather expensive. In addition, the flexibility of the software underpinning the central computer and its database of product prices is generally limited. Accounting or marketing reports are difficult to produce and from the

sales records and a software product able to provide this is often beyond the means of small retailers.

The present invention seeks to provide a point of sale system that is more flexible at a reasonable cost.

Summary of the Invention

According to a first aspect of the present invention there is provided a method of conducting a point of sale (POS) transaction, including;

providing a POS device at the location of the transaction;

providing a server at a location remote from the POS device;

providing a means of communication between the POS device and the server;

providing a POS program for the POS device, the POS program controlling the operation of the POS device to conduct a sale;

the POS device receiving details of the transaction;

transmitting details of the POS transaction from POS device to the server; and

storing the details of the POS transaction in a database within the server.

According to a second aspect of the present invention there is a point of sale (POS) system, including;

a plurality of POS devices for conducting POS transactions, the POS devices configured to be loaded with a POS program for controlling the operation of the POS device to conduct the POS transaction and provide the server with details of the POS transactions; and

a server arranged to communicate with the POS devices, the server configured to store the details of each POS transaction in a database storage means.

Preferably the server downloads the POS device with updates to the POS program.

Preferably the POS program is preloaded on the POS device. Alternatively the POS program is downloaded periodically or on start up of the POS device.

Preferably, the server provides each POS device with reference data or updates to the reference data, the reference data including the price of each product.

Preferably, each POS device is configured to provide a virtual machine within which the POS program is interpreted. Preferably, each POS device includes a data processing means for executing the interpreted POS program and a memory for holding the POS program and reference data.

Preferably, each POS device includes an input means. More preferably, the input means is at least one of: a keyboard, a weight measuring scale, a bar code reader, a touch screen, a mouse, or an EFTPOS terminal.

Preferably, each POS device includes an output means. More preferably, the output means is at least one of a display, a receipt printer, a cash drawer opening trigger, or an EFTPOS terminal.

Preferably, each POS device includes a non-volatile storage means for buffering the data containing the details of the point of sale transaction before it is provided to the server.

Preferably, each POS device is also configured to act as a browser for interacting with the data stored on the server. Preferably, the POS device is preloaded with a browser application. Alternatively, the server downloads a browser program to the POS device to operate each POS device as the browser.

Preferably, each POS device communicates with the server over a virtual private network.

Preferably, the update of the POS program along with the transfer of the reference data from the server to the POS device is conducted by a POS backend application. Preferably, the reference data is provided by the server from within the database.

Preferably, the POS backend application also receives the transmitted data from each POS device and stores it within the database. Preferably, the POS backend application also facilitates the updating or modification of the reference data stored in the database by the browser operating on a POS device.

Preferably, the server is also configured to run an accounting backend application for providing a web page based facility to provide recording and reporting of the transaction details stored on the database.

Preferably, the database stores the transmitted data and the reference data according to a multi-client model where access to data is restricted so that one client cannot access another client's data.

Preferably, the reference data is specific to each client using the point of sale system.

Detailed Description of the Invention

In order to provide a better understanding, a preferred embodiment of the present invention will now be described in detail, by way of example only, with reference to the accompanying drawings, in which;

Figure 1 is a schematic representation of a preferred embodiment of the point of sale system of the present invention;

Figure 2 is a schematic representation of a POS device of the point of sale system of Figure 1;

Figure 3 is a schematic representation of a server of the point of sale system of Figure 1;

Figure 4 is a schematic representation of sub-systems within the server of Figure 3 and information passed to and from the point of sale device of Figure 1;

Figure 5 is a schematic representation of management layers of a backend sub-system of the server of Figure 3;

Figure 6 is a schematic representation showing mapping between a business

model and chart of accounts;

Figure 7 is a schematic representation of client specific stock structure;

Figure 8 is a schematic representation of a warehouse structure showing stock transfers from a warehouse to different sales locations within a client business structure;

Figure 9 is a schematic representation showing the relationship between an item category attribute of an item and a user defined product group structure;

Figure 10 is a schematic representation showing relationship between multiple supplier details and a preferred supplier file.

Figure 11 is a schematic representation showing the transfer of data between the POS device and the server of Figure I for conducting a point of sale transaction; and

Figure 12 is a schematic representation showing the transfer of data between the POS device and the server of Figure I for obtaining an accounting report.

Referring to Figure 1, there is shown a point of sale (POS) system 10 which includes a server 12, a plurality of POS devices 14, 15A to 15B and a virtual private network 16 facilitating communication between each of the POS devices 14, 15A to 15B and the server 12. The server 12 is provided with a firewall 18 to provide secure access to the server and protect data held within. The POS device 14 is a "thin client" of the server 12, that runs a virtual environment, such as a Java virtual machine that allows uploaded Java language programs to be executed within the virtual machine environment. The server 12 provides an Accounting Backend 15 accessible via a browser running on the POS device 14 or an external PC or laptop.

Referring to Figure 2, the POS device 14 is a terminal 20 located at the point the sale is made. It may be loaded with two main components, a point of sale client component and a back office access component. Each of these components is a Java program downloaded from the server 12 through the virtual private network 16 to the POS device 14 and executed within the Java virtual machine. The POS device 14 can be provided with special facilities to cater for a specific industry the POS device 14 is used within.

These include input and output means 24. This may be for example, a screen, a keyboard, a weight measuring scale, a bar code reader, a touch screen, a receipt printer, a bar code scanner or a mouse. The POS device I/O communicates with the substantive POS program 28 using a Java Application Programming Interface (API) called "JavaComm". A smart card device 26 or an EFTPOS terminal may also be included. The smart card device 26 communicates with the POS program 28 using API's called "Opencard" and "SwingGUI". The EFTPOS facility is provided by an appropriate card reader and proprietary Java software for interfacing the card reader with the POS program 28.

The POS device 14 also includes non-volatile (persistent) storage means 32 that allows for storage of downloaded reference data along with transaction details. The reference data will include data necessary for the program to operate. For example, the reference data may include information necessary to scan a bar code, look up a product description, price and applicable tax. Once the transaction is conducted, transaction data such as the quantity, the product code, the price and tax of the transaction form part of the transaction details that are stored in the storage means 32. In case of communication difficulties with the server 12 the details are buffered and can be re-sent when communication is re-established. These details are transmitted to the server over the virtual private network 16. The storage means 32 may be in the form of, for example, a hard disk drive or flash EEPROM. A hard disk drive is preferred.

Back office access may be through a standard web browser 30 installed on the POS device 14. Alternatively, a web browser 34 may be accessed on a desktop or laptop computer 22 that has a screen and keyboard 24. The computer 22 accesses the back office access facilities in the form of World Wide Web pages using Hypertext Transfer Protocol (HTTP) through public access Internet 23. A web browser 34 acts an alternative to using the POS device to provide maintenance facilities including maintaining the POS backend files, such as pricing, products, customers, employees, as well as access to accounting functions on the server such as, cash book, purchases and sales reports.

The POS program 28 uses a "Store and Forward Messaging" API 36, to communicate with the server 12 using Java Message Service (JMS) protocol and Extensible Markup Language (XML) over the virtual private network 16. This API receives and transmits messages and XML from the server 12. An "Inventory and User Changes Input" API 38 also communicates with the server 12 over the virtual private network by JMS/XML. This API receives reference data including inventory prices from the server 12. The standard browser 30 receives downloaded back office report web pages from the server 12 by HTTP. The POS program 28 communicates with the storage means 32 via a file I/O protocol. Other communication between the server is by Remote Method Invocation (RMI) and Internet Interoperability Protocol (IIOP).

The POS device 14 is able to operate autonomously in the event of communication failure by buffering the reference data such as price tables and storing sales information. The information is forwarded upon re-establishment of communication. Full functionality of the POS device 14 may not have to be provided if there is communication problem.

Referring to Figure 1, the backend system is provided within the server 12. This includes a "POS Backend" 13 and an "Accounting Backend" 15. The POS Backend 13 provides business logic, data access, authentication, configuration and gateway services to the "client" POS device 14. It also provides the web browser client user interface via standard web page technology. The "Accounting Backend" 15 provides business logic, web client interface, data access and gateway services to implement an accounting system. The Accounting Backend also provides capabilities for managing multi-site customers, managing the data and reporting requirements for tax compliance, and a data warehouse that provides storage of information obtained from POS sales in order to provide market data. The data may be provided in a generic form so that privacy issues can be overcome. The backend access is via either the POS device 14 using a web browser client 22 or via a computer running a standard web browser.

Referring to Figure 3, the server 12 receives communication via the virtual private network 16 from the plurality of POS devices 14, 15A to 15B. The server 12 is a high end system capable of receiving, processing and transmitting a large number of messages from the POS devices. The server 12 runs application service provider software 40 capable of providing applications in the form of the POS program and browser interface to the plurality of POS devices 14, 15A to 15B. The application server 40 runs a number of Java applications to service the requests in a client server relationship. In particular, it uses the Enterprise Java Beans component model. From the figure, it can be seen that "POS Session Beans" 46, "Inventory Session Beans" 48 and "Accounting Session Beans" 50 interact with "Entity Beans" 52 to provide the POS backend and accounting backend shown in Figure 1. Each Entity Bean relates to an account or a customer and each Session Bean relates to a transfer between accounts. The business process represented by the Session Bean calls other Session Beans and ultimately acts on one or more Entity Beans. The application server also runs applications 54 which dynamically generate hypertext mark up language pages in response to browser requests according to the Java Server Pages (JSP) standard. Applications provide presentation logic in the system and interact with the Java bean Session Beans to obtain the information for display in the HTML pages.

A data warehouse backend 74 and other infrastructure components backends are also provided. The data warehouse 74 may be interrogated to provide real time mass market information.

The application server software communicates via an asynchronous POS messaging processing 42 process that runs on the server 12. Asynchronous POS messaging listen to a common queue of messages from the POS devices. The messaging processes ensure that individual messages are delivered to one of the receiving processes of the application server 40. The processes complete the business processing for the POS transaction by calling the session beans in the application server.

In peak traffic, the messaging processes may run behind in processing the queue, however the messaging software ensures that the messages are queued until one of the processes is able to take delivery of the message. The process is therefore invisible to the user of the POS device 14. The messages are stored and forwarded by the Store and Forward Messaging component 36 running on the POS device 14.

Where a POS sales transaction or an adjustment is made by direct interface, the inventory and user changes output process 44 broadcasts to the POS devices that receive this inventory in the reference data. A broadcast may be, for example, by a JMS compliant messaging system. This is received by an inventory and user changes input 38 of each POS device.

A general enquiry and user access maintenance facility is available to perform enquiry and maintenance functions directly to the main service systems, such as to provide security information maintenance, but could also be used to provide direct access to inventory and accounting information similar to the functions performed by the POS devices or Internet browser. These facilities are provided by devices such as a screen or keyboard 56.

Gateways provide access to external systems such as an EFTPOS gateway 60 to a financial switch, as well as the possibility for alternative data feed options for specific customers. The Gateways feed to external systems through another firewall.

A permanent EFTPOS connection 60 that is able to receive data relating to EFTPOS transactions may communicate with a "Java Communications" API 62 that forwards necessary data to the Application Server 40 for storage within the database 70. Other gateways may be provided such as "Connections to External Systems" 64 via an appropriate protocol such as Common Object Request Broker Architecture (CORBA) to facilitate connection to for example, suppliers or credit checking.

A Relational Database Management System 68 written for example in Oracle or DB2 is

provided to access the database 70. The database 70 stores reference data provided to POS devices along with data relating to the details of each transaction conducted on the POS devices. A data mining system 72 may also be provided now that access is the data warehouse 74.

The accounting backend provides a GUI (graphical user interface) to provide access to financial applications hosted on the server. The ASP model provides flexibility in the functionality provided to the POS device client. The ASP infrastructure also allows access to the accounting backend by business advisers such as accountants.

Referring to Figure 4, the processes running on the server and relationships therebetween are shown. "TTL" is a high level organisation process administering the whole system. A plurality of client processes sit beneath the TTL processes 90. Configuration and security processing is implemented on a "Client Registration and Management" process 100. This contains functionality to define and manage period processing, user authorisation, business hierarchy and POS device configuration. An "Inventory" process 102 provides inventory and expense reporting and operates a perpetual inventory based on stock levels and purchase order generation. It is also able to interface with an "Accounts Payable" process 104 to manage supplier relationships. The Accounts Payable process is implemented on a "Supplier File" 106 and contains functionality to manage suppliers and associated payments and manage orders and stock receipting. POS transaction details are provided to a "POS Transactions" process 108 that provides stock movement to inventory processing services. Optionally, other services may be implemented, such as account sales and member pricing to a "Membership Scheme" service and "Accounts Receivable Scheme Service".

A "Preferred Supplier" database provides the opportunity to capitalise on discounted pricing, consolidated ordering and enhances data mining.

An "Accounts Receivable" service may be implemented based on the client's "Customer" process 110 to provide functionality to manage consumer credit risk,

manage consumer aging, payment and tracking and notification, prepare balance sheets and manage consumer performance and status reporting. An "In-store Management Scheme Service" may be implemented based on the client's Customer process 110 to provide functionality to manage special processing and manage membership reporting, including performance and profitability. A "Loyalty Scheme" service may be provided to the client's "Customer" process 110 with and provides functionality to manage point distribution, accumulation, enqiury and redemption and manage loyalty reporting, including status and customer notification. A "Lay-by Scheme Service" may be implemented in the client's "Customer" process 110 to provide functionality to manage stock holdings, manage lay-by reporting including status and customer notification and manage payment for transactions.

The "POS Transactions" process 108 is able to prepare consolidated profit and loss statements, perform consolidated bank reconciliation, prepare consolidated balance sheets, and may provide point changes, including redemption at the point of sale to the loyalty scheme process, provide loyalty and membership information and provide changes to status due to payments, creation or cancellation to lay-by scheme processing service.

A "Data Extract" process 112 provides a feed to other external systems, such as including accounting packages A "Configuration Security" process 114 may provide functionality to define the client's business model and client user access restrictions.

Referring to Figure 5, the back office management sub-system provides control and configuration functionality necessary to configure applications. The functions are grouped into a Global Management Layer 120 and a Client Management Layer 122. The Global Management Layer deals with information for all users of the system such as master product files, industry specific inventory lists, master configuration perimeters, application components, etc. The Client Management Layer deals with information specific to a client, such as stock item lists, customer lists and specific configuration of the POS device (terminal) to suit the needs of the client. Access to these functions can

be limited to a systems administrator of the particular client.

Referring to Figure 6, a client business model may be adopted having levels of hierarchy. In this example, there is a client level 130, where each client is a business using the point of sale system. When a point of sale device is connected, the client is registered and provided with unique client identification to identify all the client's transactions. The client has the option to configure a business model to suit the structure of the business. The next level down is multiple business units 132. All POS devices must belong to a business unit of a client. The business unit may be broken down further into divisions 134. All POS devices within the division are defined as belonging to a particular division. Division may be further broken down into stores 136, stores may be broken down into departments 138. Consolidations are able to occur within that business level. Accounting reports are also able to be consolidated to view the financial performance of the business across levels. Transaction data is consolidated up the hierarchy from lower levels. The consolidation information flow enables the generation of reports from queries to provided global views of key business performance indicators.

Referring to Figure 7, an inventory management module supports multi-levelled definition of stock item details. At the top level a master product file 140 is maintained, with industry specific stock files 142 also managed at the top level to select stock items that are industry specific, such as a deli, newsagent etc. The client will have access to both the master product file and the industry specific files, relevant to the client's industry. A client at each business level is able to define stock items 144 as well as other item information that are specific to the client, such as specific packaging options, menu, price structure, weight, etc. Inventory adjustments and stock takes associated with spoilage, structure, stock movement associated with fulfilment processing is supported.

Referring to Figure 8, a warehouse structure is able to be defined where the physical location of stock items are tracked. Where stock items are received and transferred to

other warehouses or POS locations, the location is known. The warehouse has an equivalent structure in the chart of accounts to maintain the value of the stock. The stock transfer of transactions manages the transfer of stock from warehouses to sales locations. The client in store A12 organises supply from the warehouse or store under division A2.

Referring to Figure 9, a user defined multi-levelled product grouping may be provided for, where each stock item is assigned an item category. The user would be able to build a hierarchy of product groups based on the available item categories to aid in report and data mining transactions. Three levels can be provided and the user can dynamically define the naming of grouping levels.

Referring to Figure 10, a preferred supplier file can be maintained, which contains supplier details including stock order codes and packaging and also defines the supplier access allowed to the inventory product master files. A supply of a product can add or modify established products and relevant data to the inventory in a timely manner and include such items as stock availability and lead times. The client can maintain a supply file based on either the preferred supplier or created by the client. This enables the client to utilise the supply data or data source from other registries.

Referring to Figure 11, the POS device can conduct POS transactions without connecting to the server. These transactions are stored in the POS device until a connection to the server is initiated and a connection established. The transfer of data between a point of sale device 14 and the server 12 is shown undertaking a POS program update, an update of reference data and recording of a POS transaction on the server. The POS device 14 contacts the server 12. In reply, the server 12 transfers updates to the POS program to the POS device 14. The POS program then downloads the updated reference data. The POS device 14 acknowledges receipt of updates to the POS program and reference data. The details of the sales transactions, since the last transfer, are transferred from the POS device to the server. The transaction details are stored in the database. The server then acknowledges receipt of the transfer details to the

POS device.

Referring to Figure 12, there is shown the transfer of data for obtaining an accounting report. The POS device contacts the server from a browser session. When a particular report is selected a request is sent from the POS device to the server and the report assembled in Hypertext Markup Language format from the details stored in the database this report page is downloaded to the browser running on the POS device. The POS device then acknowledges receipt to the browser.

Now that the preferred embodiment of the present invention has been described, it will be clear that it has at least the following advantages:

a) The point of sale system provides a great degree of flexibility, as updates to the POS program may be downloaded at the initialisation of the POS device thereby incorporating any amendments or improvements to the point of sale program functionality;

b) The point of sale device need not be particularly sophisticated as it is a "thin client" and thus is relatively inexpensive to position at points of sale within a business;

c) The majority of the processing is conducted in the server, which provides a secure off-site storage of transaction details;

d) The server can provide the majority of accounting and back office functionality, so that the client business does not need to incur the expense of setting up systems to provide these functions; and

e) A number of different businesses can be serviced by the server, transaction details, and other sensitive information can be partitioned but the information can be used in a generic sense for data mining to provide valuable marketing information.

The skilled addressee will realise that modifications and variations can be made to the present invention without departing from the basic inventive concept. Such modifications maybe for example:

a) The POS program may be initially downloaded;

b) The network servicing the POS devices may be a wide area network rather than

a virtual private network using existing Internet infrastructure;

c) The business model used may be different so that a variety of reports and transaction handling can occur;

d) The functionality of the POS device can be varied depending on the application within the user's business, for example weighing scales may be used, or bar code reader or a touch screen or other appropriate input or output devices according to the businesses needs; and

e) The software that performs the control of the POS devices and the server need not be implemented using the Java language.

Such modifications and variations are intended to be within the scope of the present invention, the nature of which is to be determined from the foregoing description.

CLAIMS

1. A method of conducting a point of sale (POS) transaction, including the steps of:

providing a POS device at the location of the transaction;

providing a server at a location remote from the POS device;

providing a means of communication between the POS device and the server;

providing a POS program for the POS device, the POS program controlling the operation of the POS device to conduct a sale;

the POS device receiving details of the transaction;

transmitting details of the POS transaction from POS device to the server; and

storing the details of the POS transaction in a database within the server.

2. A method according to claim 1, wherein the server downloads reference data to the POS device for use in the POS transaction including the price of each product.

3. A method according to claim 1, wherein the POS program is interpreted within a virtual machine in the POS device.

4. A method according to claim 1, wherein the communication between the server and the POS device is over a virtual private network.

5. A method according to claim 1, wherein the POS device is preloaded on the POS device.

6. A method according to claim 1, wherein the server is provided with a POS backend server that downloads the POS program to the POS device.

7. A method according to claim 1, wherein the server downloads updates to the reference data to the POS device.

8. A method according to claim 1, wherein data including the details of the POS

transaction is transmitted from the POS device to the server is stored in a data base.

9. A method according to claim 2, wherein the POS device is provided with a browser program.

10. A method according to claim 2, wherein a browser program is downloaded form the server to the POS device, whereby the POS device is operated as a browser.

11. A method according to claim 9, wherein the browser is used to update or modify the reference data stored in a database in the server.

12. A method according to claim 9, wherein the browser is used to provide a web based report facility for reporting transaction details stored in a database of the server.

13. A method according to claim 1, wherein data in the server is stored in a database according to a multi-client model that limits access to the data according to their client status.

14. A method according to claim 1, wherein the POS device receives an input from an input means for selecting a product to purchase.

15. A method according to claim 1, wherein the POS device provides an output to an output means for facilitating the POS transaction.

16. A point of sale (POS) system, comprising:

a plurality of POS devices for conducting POS transactions, the POS devices configured to be loaded with a POS program for controlling the operation of the POS device to conduct the POS transaction and provide the server with details of the POS transactions; and

a server arranged to communicate with the POS devices, the server configured to store the details of each POS transaction in a database storage means.

17. A POS system according to claim 16, wherein the server downloads the POS device with updates to the POS program.

18. A POS system according to claim 16, wherein the POS program is preloaded on the POS device.

19. A POS system according to claim 16, wherein the POS program is downloaded periodically or on startup of the POS device.

20. A POS system according to claim 16, wherein the server is configured to download reference data or updates to the reference data to each POS device for use in each POS transaction, the reference data including the price of each product.

21. A POS system according to claim 15, wherein each POS device is configured to provide a virtual machine within which the POS program is interpreted.

22. A POS system according to claim 16, wherein each POS device includes a data processing means for executing the interpreted POS program and a memory for holding the POS program and reference data.

23. A POS system according to claim 16, wherein each POS device includes an input means.

24. A POS system according to claim 23, wherein the input means is at least one of: a keyboard, a weight measuring scale, a bar code reader, a touch screen, a mouse, or an EFTPOS terminal.

25. A POS system according to claim 16, wherein each POS device includes an output means.

26. A POS system according to claim 25, wherein the output means is at least one of a display, a receipt printer, a cash drawer opening trigger, or an EFTPOS terminal.

27. A POS system according to claim 16, wherein each POS device includes a non-volatile storage means for buffering the data containing the details of the point of sale transaction before it is provided to the server.

28. A POS system according to claim 16, wherein each POS device is also configured to act as a browser for interacting with the data stored on the server.

29. A POS system according to claim 16, wherein the POS device is loaded with a browser program to operate the POS device as a browser.

30. A POS system according to claim 16, wherein the server downloads a browser program to the POS device to operate each POS device as the browser.

31. A POS system according to claim 16, wherein each POS device communicates with the server over a virtual private network.

32. A POS system according to claim 16, wherein the downloading of the POS program to each POS device by the server, along with the transfer of the reference data from the server to the POS device is conducted by a POS backend application.

33. A POS system according to claim 16, wherein the reference data is provided by the server from within the database.

34. A POS system according to claim 32, wherein the POS backend application also receives the transmitted data from each POS device and stores it within the database.

35. A POS system according to claim 32, wherein the POS backend application also facilitates the updating or modification of the reference data stored in the database by

the browser operating on a POS device.

36. A POS system according to claim 16, wherein the server is also configured to run an accounting backend application for providing a web page based report facility to record and report the transaction details stored on the database.

37. A POS system according to claim 16, wherein the database stores the transmitted data and the reference data according to a multi-client model where access to data is restricted so that one client cannot access another client's data.

38. A POS system according to claim 16, wherein the reference data is specific to each client using the point of sale system.

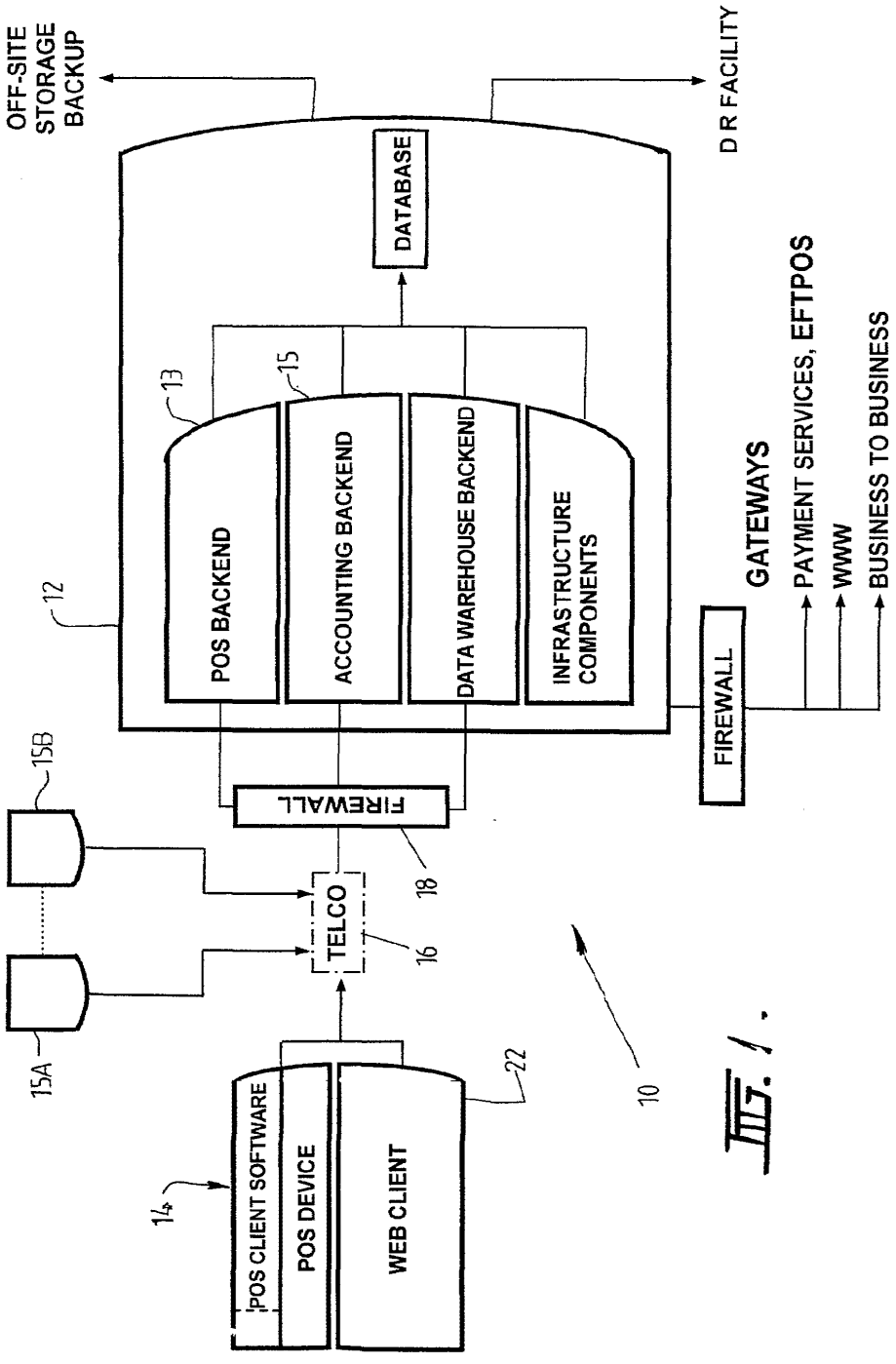
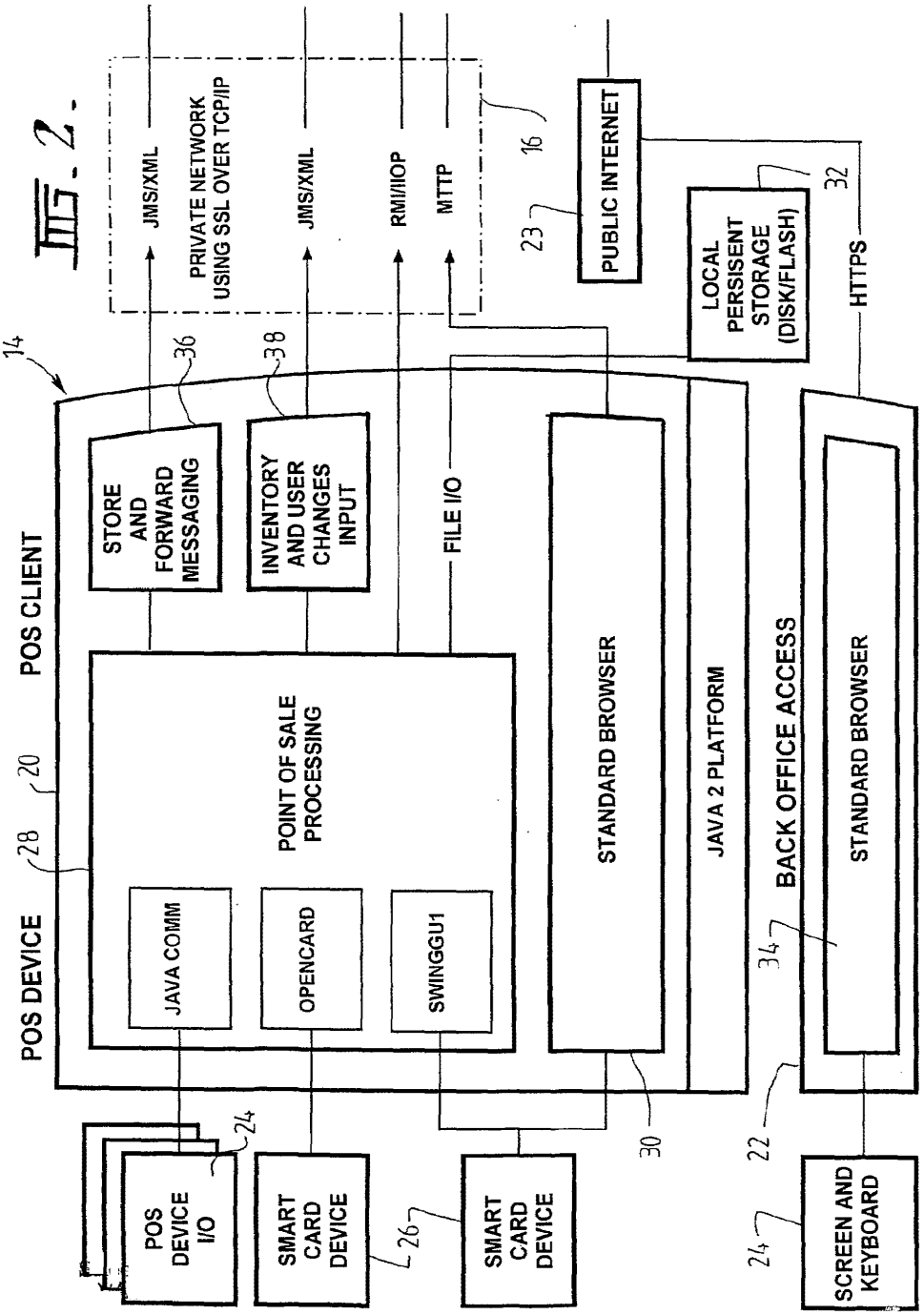

OFF-SITE STORAGE BACKUP
D R FACILITY
DATABASE
13
15
POS BACKEND
ACCOUNTING BACKEND
DATA WAREHOUSE BACKEND
INFRASTRUCTURE COMPONENTS
12
GATEWAYS
PAYMENT SERVICES, EFTPOS
WWW
BUSINESS TO BUSINESS
FIREWALL
FIREWALL
15B
18
TELCO
16
15A
10
14
POS CLIENT SOFTWARE
POS DEVICE
WEB CLIENT
22

FIG. 1.


FIG. 2.
JMS/XML
PRIVATE NETWORK USING SSL OVER TCP/IP
JMS/XML
RMI/IIOP
MTTP
16
PUBLIC INTERNET
23
LOCAL PERSISENT STORAGE (DISK/FLASH)
32
HTTPS
14
36
38
STORE AND FORWARD MESSAGING
INVENTORY AND USER CHANGES INPUT
FILE I/O
STANDARD BROWSER
JAVA 2 PLATFORM
BACK OFFICE ACCESS
STANDARD BROWSER
POS CLIENT
20
28
POINT OF SALE PROCESSING
JAVA COMM
OPENCARD
SWINGGU1
POS DEVICE
24
POS DEVICE I/O
SMART CARD DEVICE
26
SMART CARD DEVICE
30
34
22
24
SCREEN AND KEYBOARD

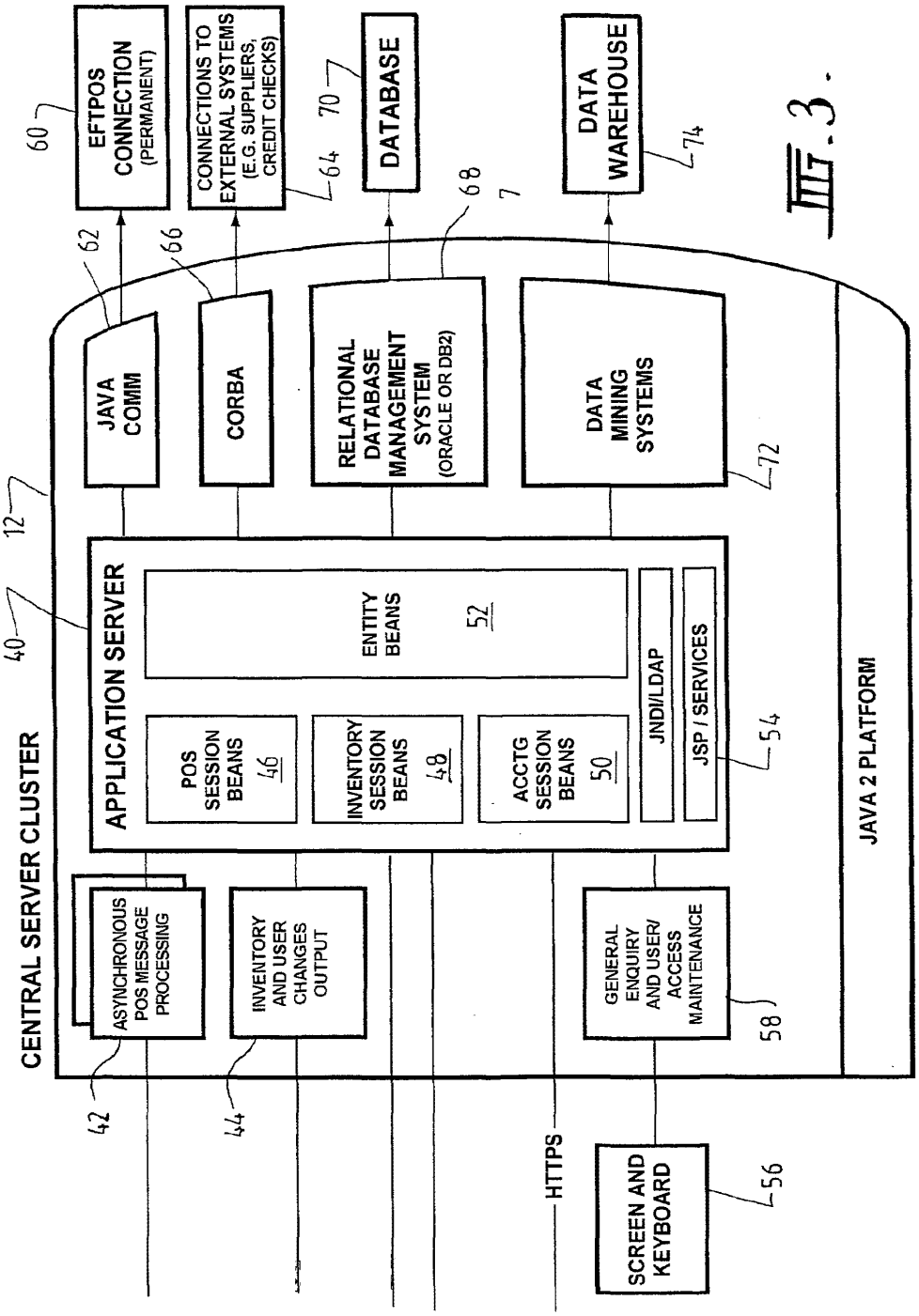

CENTRAL SERVER CLUSTER
12
40
APPLICATION SERVER
ENTITY BEANS
52
POS SESSION BEANS
46
INVENTORY SESSION BEANS
48
ACCTG SESSION BEANS
50
JNDI/LDAP
JSP / SERVICES
54
JAVA 2 PLATFORM
JAVA COMM
62
CORBA
66
RELATIONAL DATABASE MANAGEMENT SYSTEM (ORACLE OR DB2)
68
DATA MINING SYSTEMS
72
EFTPOS CONNECTION (PERMANENT)
60
CONNECTIONS TO EXTERNAL SYSTEMS (E.G. SUPPLIERS, CREDIT CHECKS)
64
DATABASE
70
DATA WAREHOUSE
74
ASYNCHRONOUS POS MESSAGE PROCESSING
42
INVENTORY AND USER CHANGES OUTPUT
44
GENERAL ENQUIRY AND USER ACCESS MAINTENANCE
58
HTTPS
SCREEN AND KEYBOARD
56

FIG. 3.

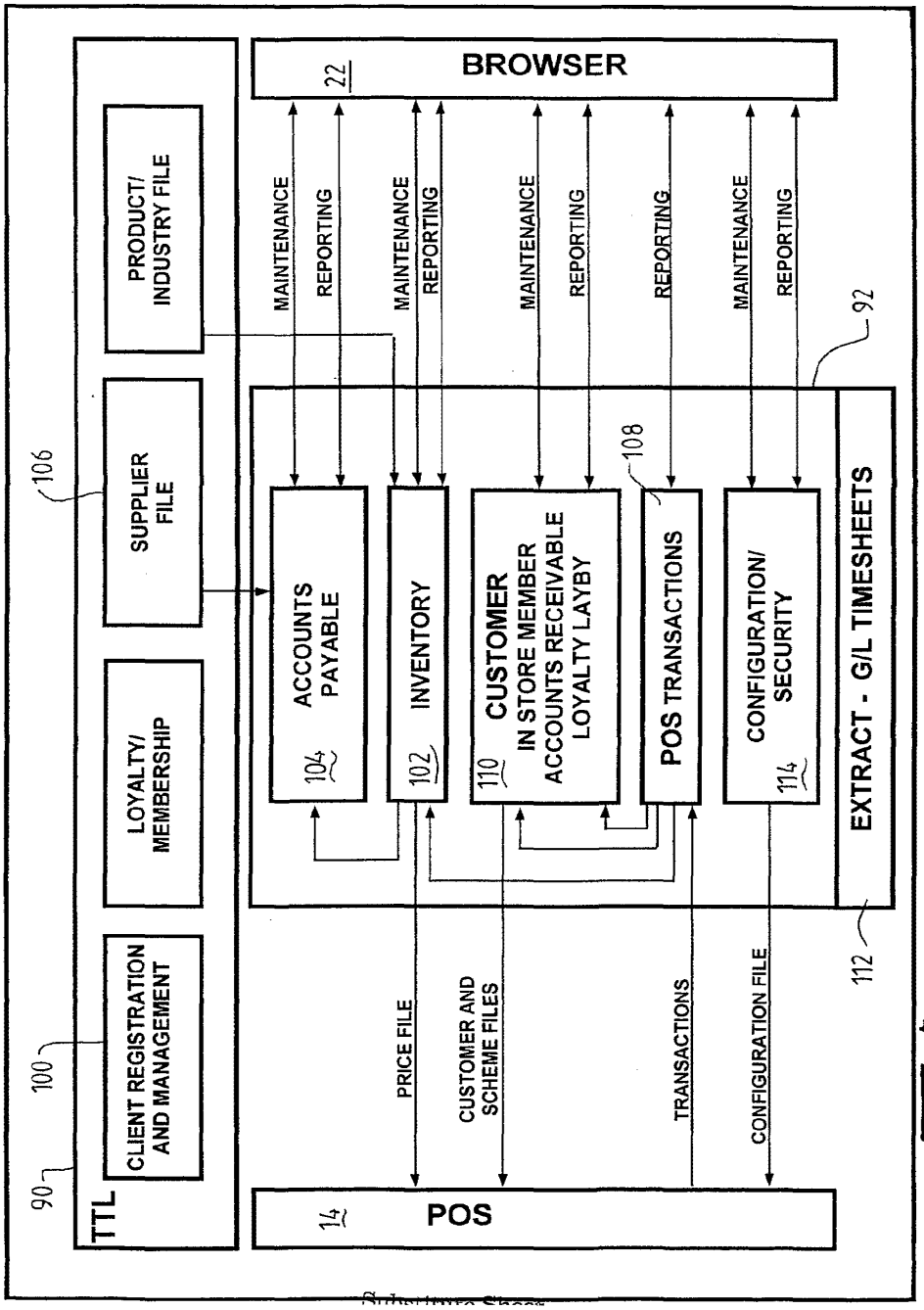

BROWSER
22
PRODUCT/ INDUSTRY FILE
SUPPLIER FILE
106
LOYALTY/ MEMBERSHIP
CLIENT REGISTRATION AND MANAGEMENT
100
TTL
90
MAINTENANCE
REPORTING
MAINTENANCE
REPORTING
MAINTENANCE
REPORTING
REPORTING
MAINTENANCE
REPORTING
92
ACCOUNTS PAYABLE
104
INVENTORY
102
CUSTOMER
IN STORE MEMBER
ACCOUNTS RECEIVABLE
LOYALTY LAYBY
110
108
POS TRANSACTIONS
CONFIGURATION/ SECURITY
114
EXTRACT - G/L TIMESHEETS
112
PRICE FILE
CUSTOMER AND SCHEME FILES
TRANSACTIONS
CONFIGURATION FILE
14
POS

Fig. 4.

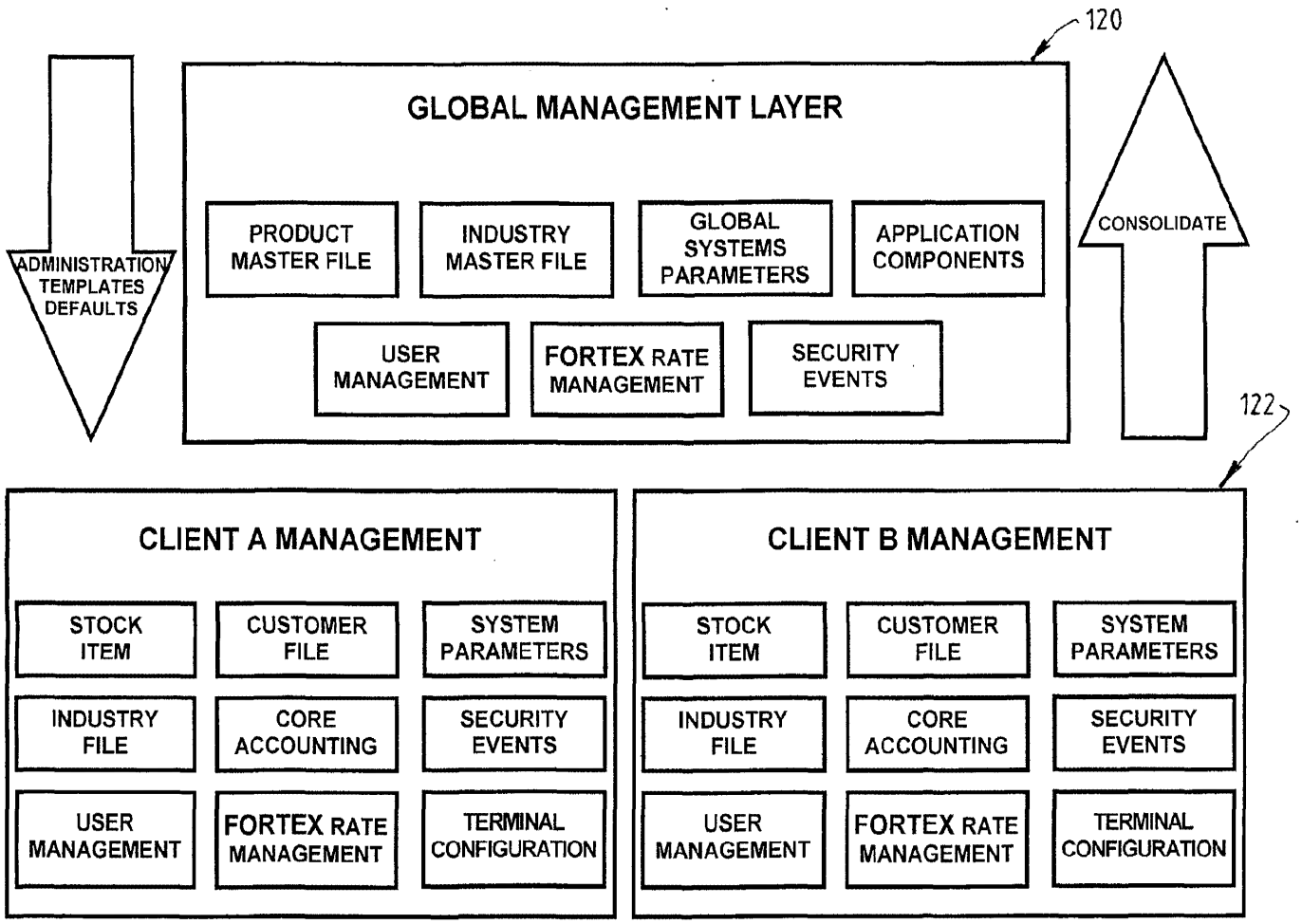


FIG. 5.

SUBSTITUTE SHEET (RULE 26) RO/AU

SUBSTITUTE SHEET (RULE 26) RO/AU

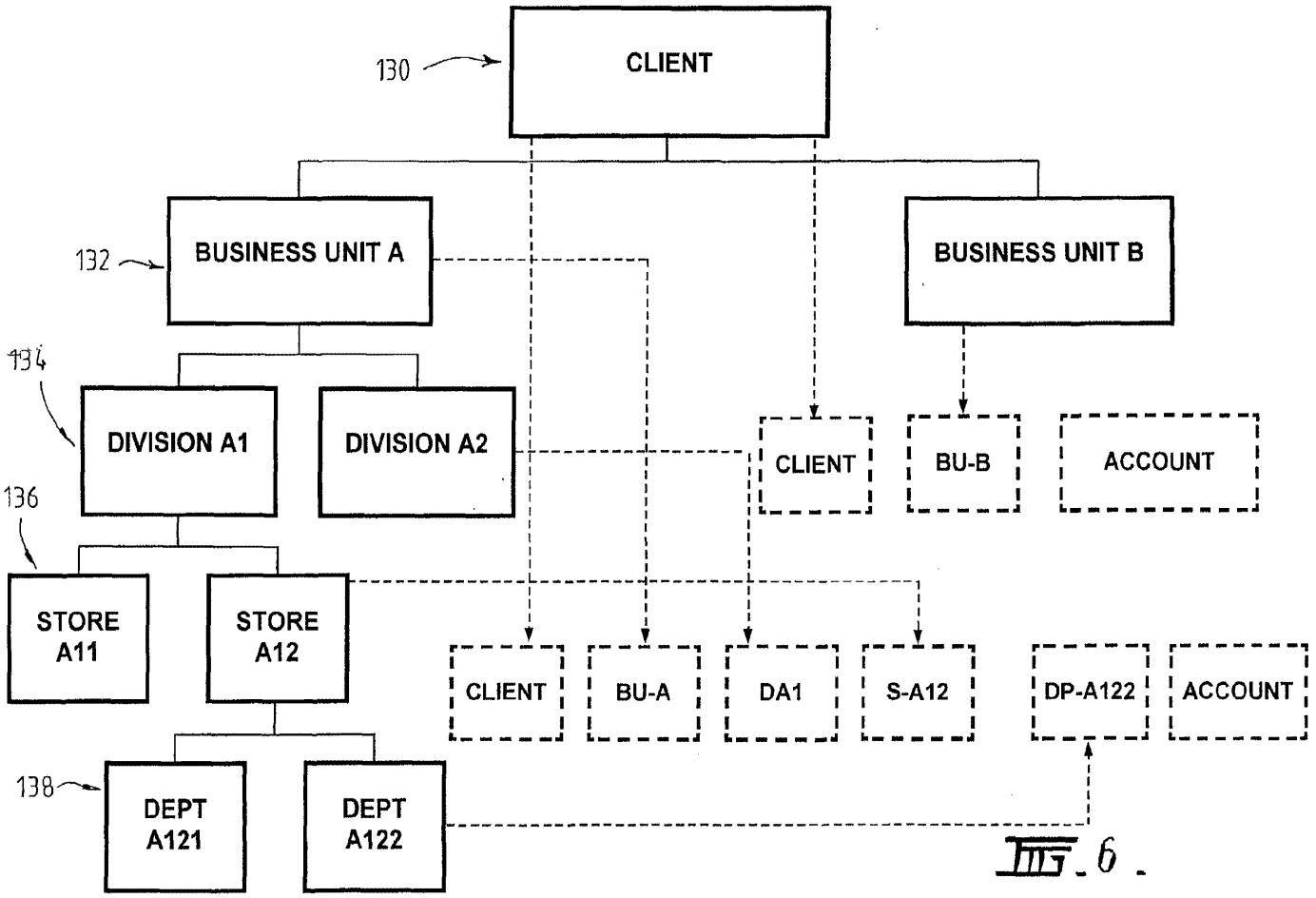


FIG. 6.

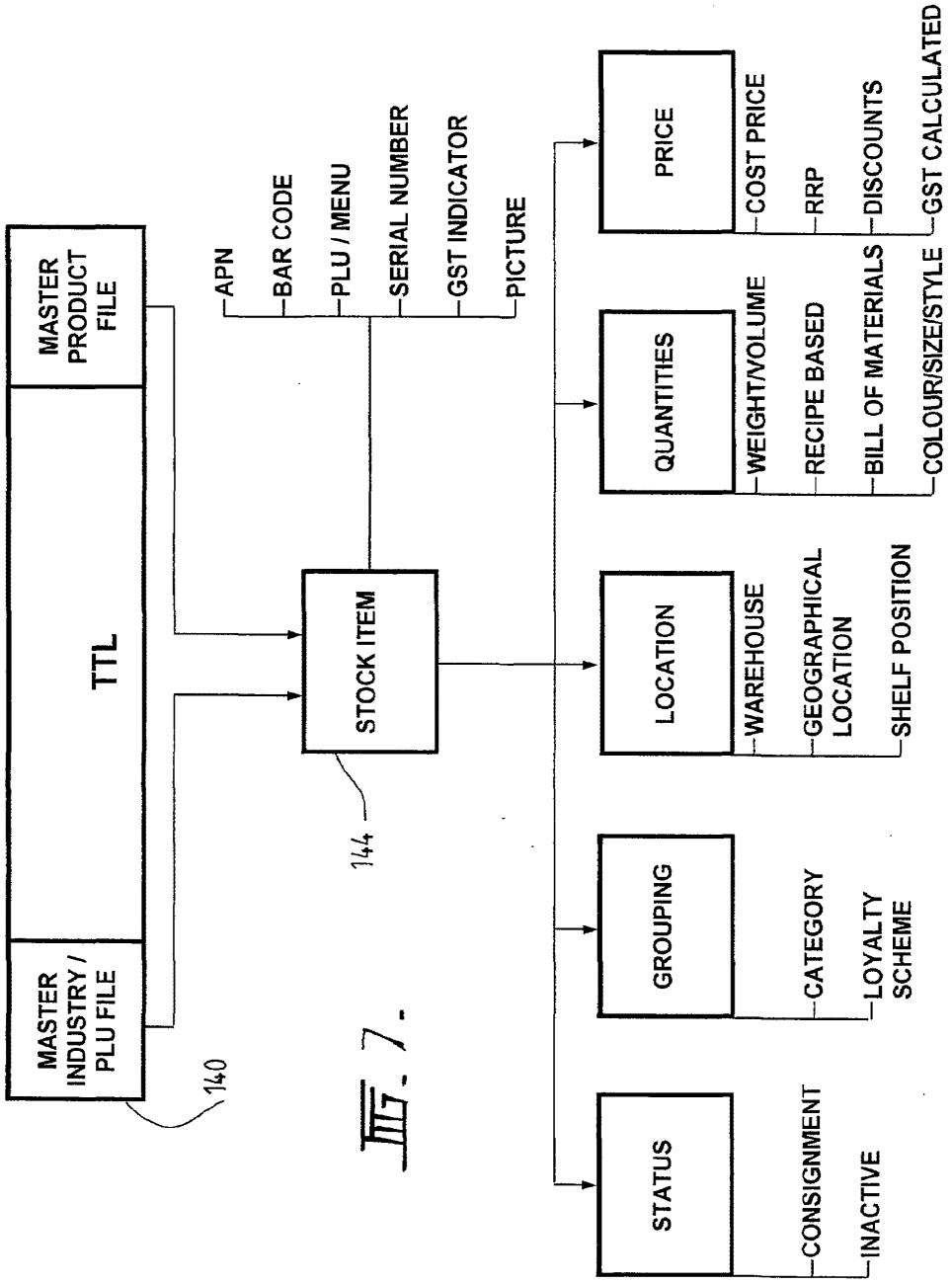
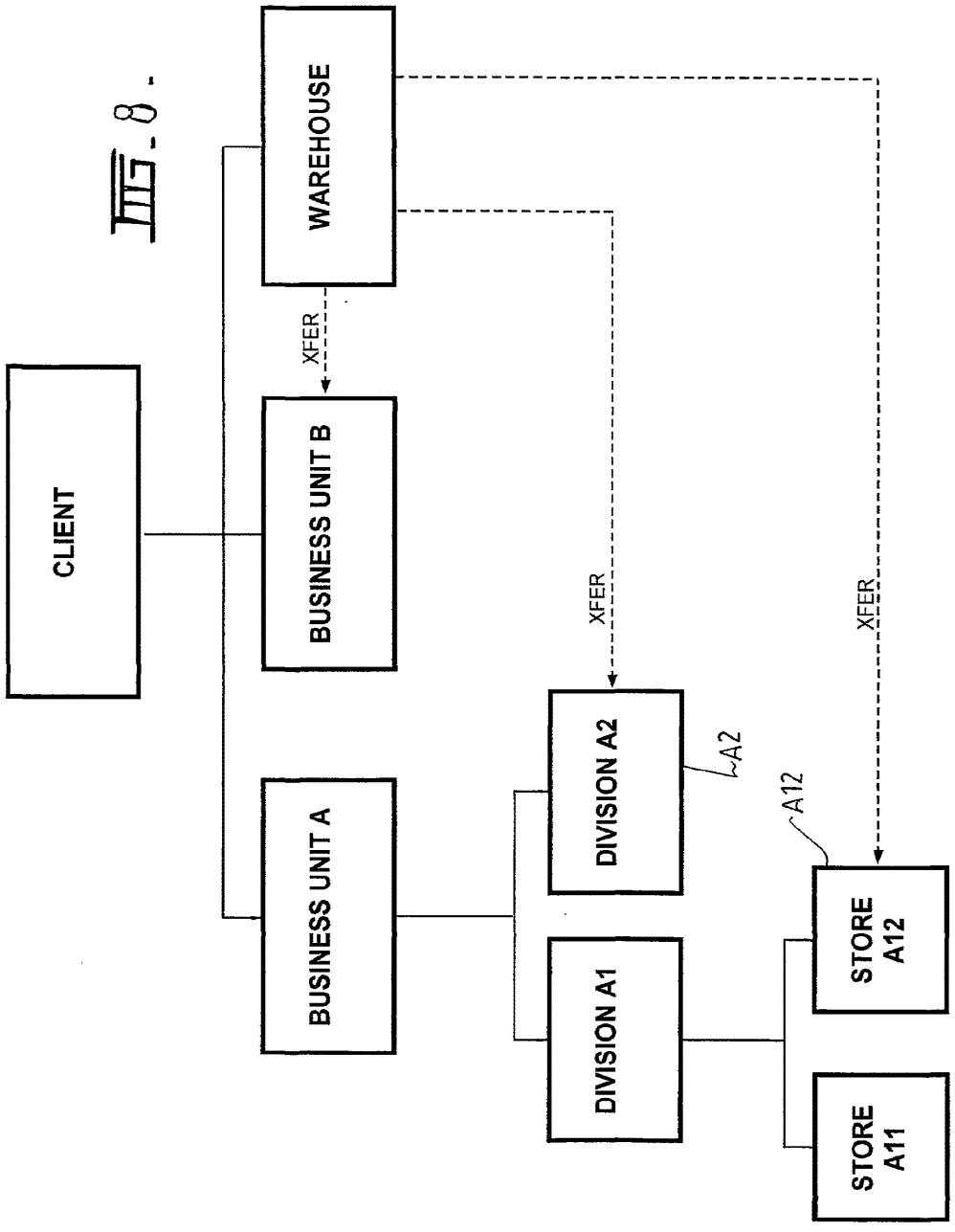

MASTER PRODUCT FILE
TTL
MASTER INDUSTRY / PLU FILE
140
144
STOCK ITEM
APN
BAR CODE
PLU / MENU
SERIAL NUMBER
GST INDICATOR
PICTURE
PRICE
COST PRICE
RRP
DISCOUNTS
GST CALCULATED
QUANTITIES
WEIGHT/VOLUME
RECIPE BASED
BILL OF MATERIALS
COLOUR/SIZE/STYLE
LOCATION
WAREHOUSE
GEOGRAPHICAL LOCATION
SHELF POSITION
GROUPING
CATEGORY
LOYALTY SCHEME
STATUS
CONSIGNMENT
INACTIVE

FIG. 7.

FIG. 8.


WAREHOUSE
XFER
CLIENT
BUSINESS UNIT B
XFER
XFER
BUSINESS UNIT A
DIVISION A2
~A2
A12
DIVISION A1
STORE A12
STORE A11

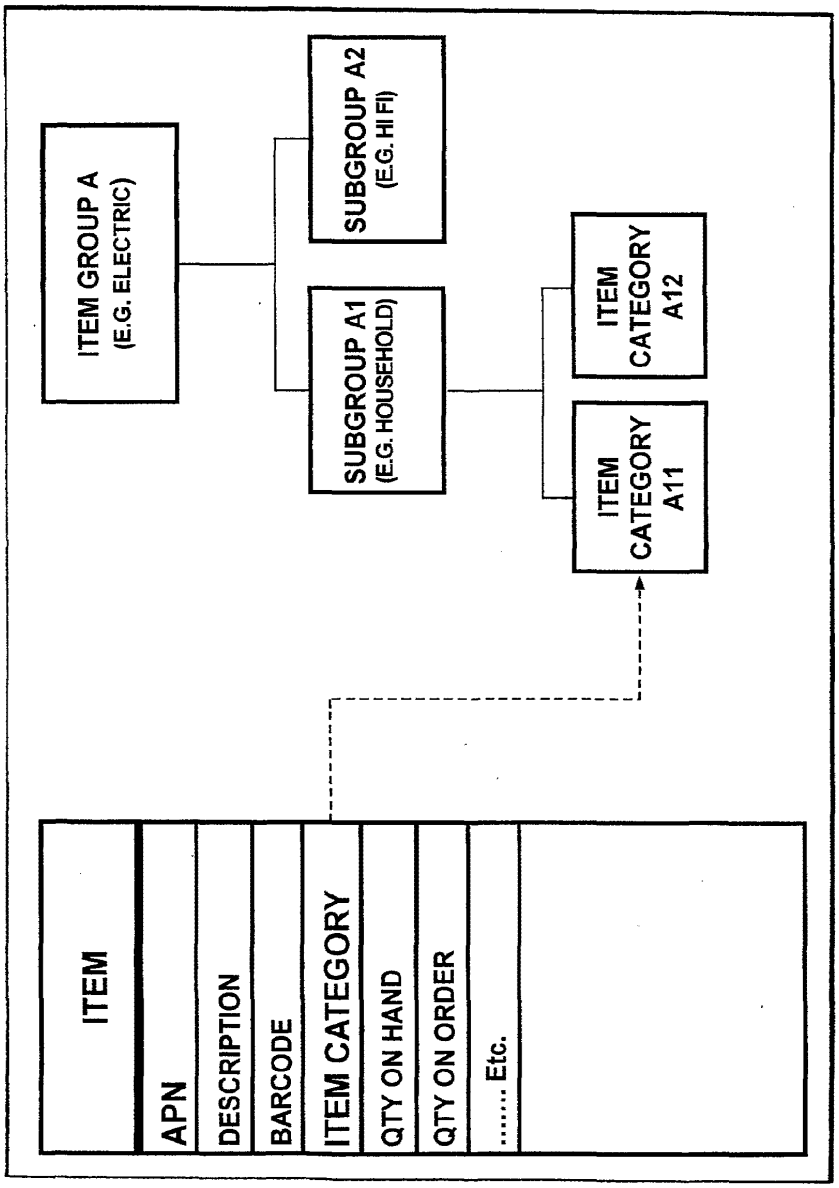

ITEM
APN
DESCRIPTION
BARCODE
ITEM CATEGORY
QTY ON HAND
QTY ON ORDER
..... Etc.
ITEM GROUP A
(E.G. ELECTRIC)
SUBGROUP A1
(E.G. HOUSEHOLD)
SUBGROUP A2
(E.G. HI FI)
ITEM CATEGORY A11
ITEM CATEGORY A12

FIG. 9.

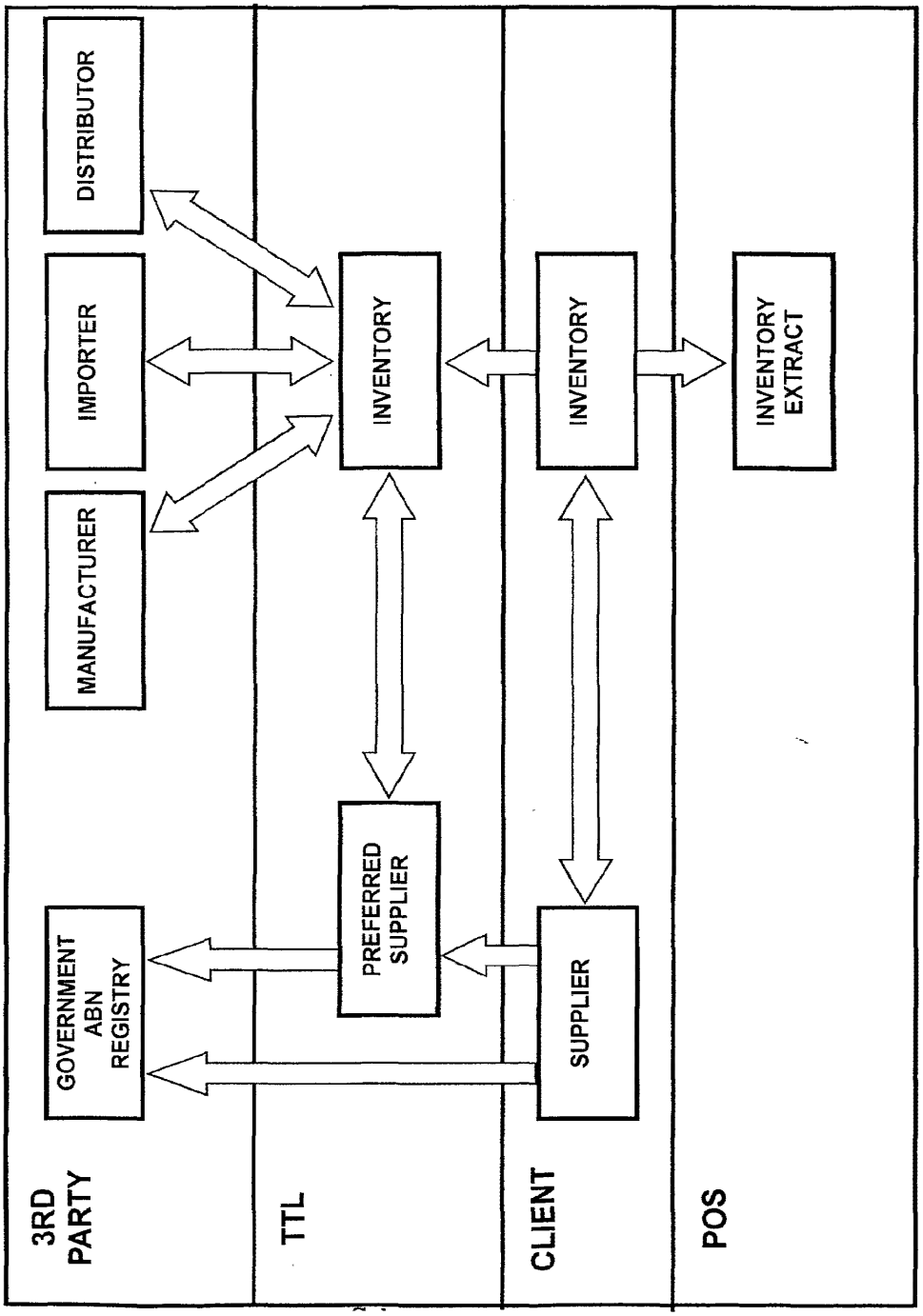

DISTRIBUTOR
IMPORTER
MANUFACTURER
INVENTORY
INVENTORY
INVENTORY EXTRACT
PREFERRED SUPPLIER
SUPPLIER
GOVERNMENT ABN REGISTRY
3RD PARTY
TTL
CLIENT
POS

FIG. 10.

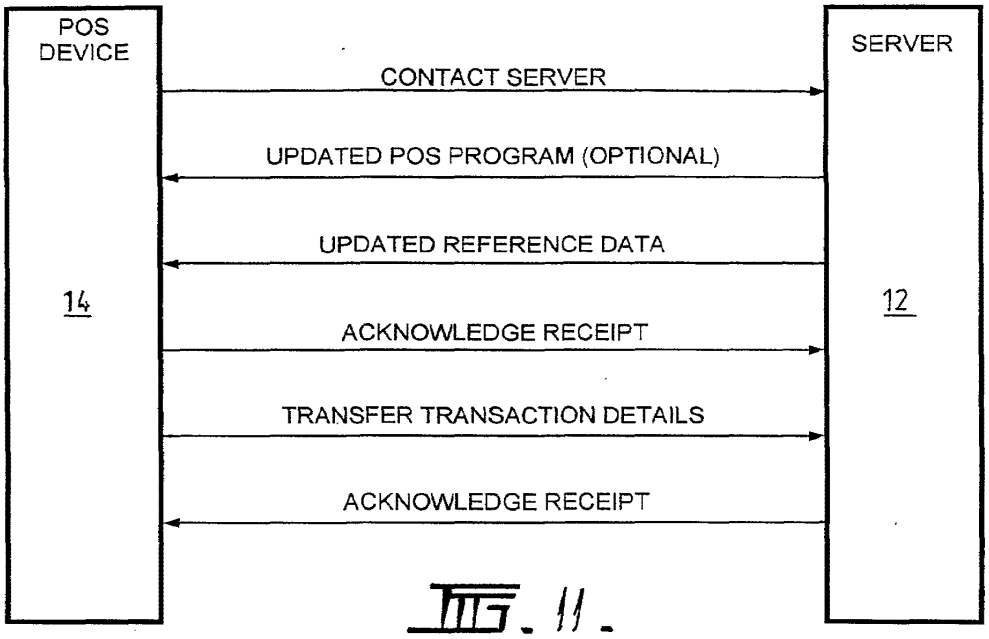

POS DEVICE
SERVER
CONTACT SERVER
UPDATED POS PROGRAM (OPTIONAL)
UPDATED REFERENCE DATA
14
12
ACKNOWLEDGE RECEIPT
TRANSFER TRANSACTION DETAILS
ACKNOWLEDGE RECEIPT

FIG. 11.

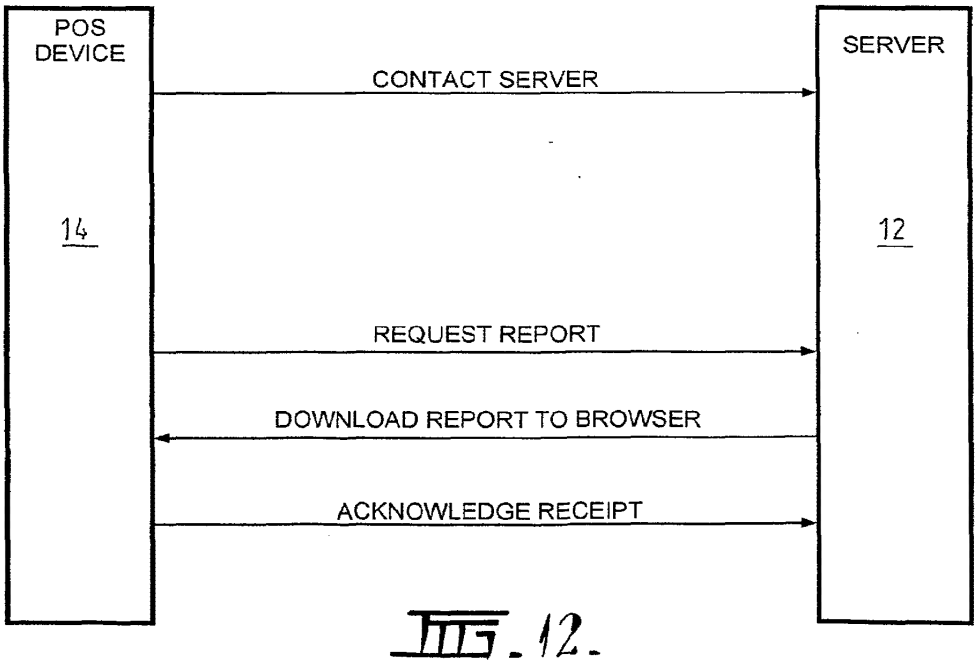

POS DEVICE
SERVER
CONTACT SERVER
14
12
REQUEST REPORT
DOWNLOAD REPORT TO BROWSER
ACKNOWLEDGE RECEIPT

FIG. 12.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU01/00225

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. [7]: G06F 17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC7: G06F 17/--

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WPAT, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/51074 (Chip Application Technologies Limited) 31 August 2000) See whole document	1-38

☐ Further documents are listed in the continuation of Box C ☒ See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
30 May 2001	7 June 2001
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer **MICHAEL C. LANDER** Telephone No : (02) 6283 2494

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU01/00225

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member	
WO	00/51074	AU	27846/00

END OF ANNEX

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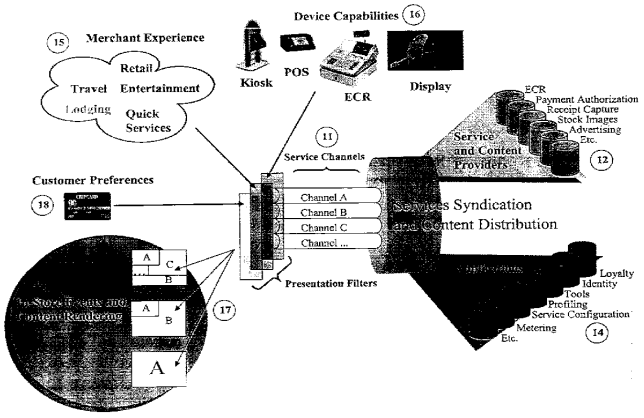
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Declarations under Rule 4.17:

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[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR PROVIDING MULTIPLE SERVICES VIA A POINT-OF-SALE PORTAL ARCHITECTURE



(57) Abstract: A secure point-of-sale (POS) portal architecture for delivering multiple services is provided. According to one exemplary aspect of the architecture, a number of services offered by various parties are integrated for delivery to merchants. The parties offering the services include, for example, payment processors and merchant acquirers and other external value-added service providers. The integrated services, in turn, are offered to merchants and/or their respective customers via one or more POS devices and its supporting system infrastructure at the merchant locations. The integrated services include, for example, acceptance of multiple payment instruments, payment processing, user dialog management, sales promotion and customer support, loyalty programs, back office processing, receipt capture, employee training, risk management, dispute resolution, system security, system administration etc. Moreover, these integrated services may be customized based on a merchant's particular requirements to provide a specific environment for delivering these services.

WO 03/065178 A2

KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

METHOD AND SYSTEM FOR PROVIDING MULTIPLE SERVICES VIA A POINT-OF-SALE PORTAL ARCHITECTURE

CROSS-REFERENCES TO RELATED APPLICATIONS

[01] The present application claims the benefit of priority under 35 U.S.C. §.119 from U.S. Provisional Patent Application Serial No. 60/353,800, entitled "METHOD AND SYSTEM FOR PROVIDING MULTIPLE SERVICES VIA A POINT-OF-SALE PORTAL ARCHITECTURE" filed on January 30, 2002, the disclosure of which is hereby incorporated by reference in its entirety for all purposes.

BACKGROUND OF THE INVENTION

[02] The present invention generally relates to a new retail point-of-sale (POS) service architecture. More specifically, the present invention relates to a method and system for providing multiple services via a point-of-sale portal architecture.

[03] With the rapid development of the Internet and e-commerce, current merchant point-of-sale delivery systems are at a state of imminent change. At the center of this shift are consumers with little discretionary time and expectations for convenience and personal attention from merchants. Aware of how consumers are viewing commerce, merchants want to leverage these developments, as they always have, to increase sales, reduce costs and ensure customer loyalty.

[04] Current retail POS systems are essentially static and are ineffective in delivering new personalized services. For the most part, today's POS infrastructure is designed primarily to facilitate consumer payment authorization and provides very limited capability for non-payment business services. As a result, current POS infrastructure supports almost exclusively magnetic stripe debit and credit cards. Implementing new functionality and services at a current POS terminal is difficult, slow and expensive. Hence, it would be desirable to provide a new POS portal architecture that is capable of delivering new functionality and services as well as accommodating additional alternative payment instruments and devices.

SUMMARY OF THE INVENTION

[05] The present invention takes advantage of the business environment created by the Internet. An exemplary embodiment of the present invention integrates a merchant's physical and Internet channels forming a comprehensive point-of-service environment. Furthermore, this environment also allows for the customization of services specific to each merchant, its customers and/or service provider.

[06] According to one exemplary aspect of the present invention, a number of services offered by various parties are integrated at the POS service portal for delivery to merchants. The parties offering the services include, for example, payment processors, merchant acquirers and other external value-added service providers. The integrated services, in turn, are offered to merchants and/or their respective customers via one or more POS devices and its supporting system infrastructure at the merchant locations. The integrated services include, for example, payment processing, user dialog management, sales promotion and customer support, loyalty programs, back office processing, employee training, risk management, dispute resolution, system security, system administration etc. Moreover, these integrated services may be customized based on a merchant's particular requirements to provide a specific environment for delivering these services.

[07] According to one exemplary embodiment of the present invention, the architecture includes one or more POS devices, an in-store appliance server and a services syndication hub. The services syndication hub integrates third-party services received from various service providers and configures the integrated services for delivery to the in-store appliance server. The in-store appliance server, in turn, configures the integrated services to be delivered to the POS devices so as to accommodate the different capabilities of POS devices.

[08] Reference to the remaining portions of the specification, including the drawings and claims, will realize other features and advantages of the present invention. Further features and advantages of the present invention, as well as the structure and operation of various embodiments of the present invention, are described in detail below with respect to accompanying drawings. Like reference numbers indicate identical or functionally similar elements.

BRIEF DESCRIPTION OF THE DRAWINGS

[09] Fig. 1 is a simplified schematic diagram illustrating the logical design of an exemplary embodiment of a point-of-sale portal architecture in accordance with the present invention;

[10] Fig. 2 is a simplified schematic diagram illustrating an exemplary embodiment of the physical architecture of the point-of-sale portal architecture in accordance with the present invention; and

[11] Fig. 3 is a simplified block diagram illustrating an exemplary embodiment of the software architecture of the point-of-sale portal architecture in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[12] The present invention in the form of one or more exemplary embodiments will now be described. According to an exemplary embodiment of the present invention, a point-of-sale portal architecture ("POS Portal") is provided to deliver a syndication of value-added services using Internet based technologies. In one exemplary embodiment, the POS Portal includes a POS device that supports a browser, an in-store appliance server that manages dialogs for the POS device and a services syndication hub that aggregates various services requested by the in-store appliance server. The POS Portal employs Internet connectivity, network and system security, and universal access control. The use of the POS Portal allows merchants and affiliated service providers to configure specific interactive dialogs and contents for their customers. The POS Portal further allows the merchants to tailor the merchandising and the transaction flows to enhance the customer's shopping experience at the store. Moreover, the POS Portal provides the functionality to collect and analyze transaction patterns for statistics and risk management purposes. The POS Portal also enables the authorization of all major payment instruments and supports a variety of authentication methods including magnetic stripe, chip, PIN, and biometric mechanisms. Furthermore, the POS Portal is secure and allows for trust-based security integration of merchant and service provider systems. Fig. 1 illustrates the logical design of an exemplary embodiment of the POS Portal in accordance with the present invention.

[13] Referring to Fig. 1, the logical design of an exemplary embodiment of the POS Portal is illustrated. The POS Portal integrates a number of services 12 offered by third party vendors or service providers. One or more of these services 12 may include trade-specialized services offered by third party vendors including, for example, electronic cash

register management, payment authorization, receipt capture, and advertising. Furthermore, one or more of these services 12 preferably conform to industry standards for web services. These integrated third-party services are then offered, in whole or in part, to subscribers such as merchants. For illustrative purposes, a subscriber may be referred to as a merchant. In other words, subscribers can selectively choose or subscribe to individual one(s) of the integrated third-party services 12 according to their respective business needs. Based on the specific choice of a subscriber, the POS Portal configures and presents the selected third-party services to that subscriber.

[14] The POS Portal also includes a number of application services 14. These application services 14 are utilized by the POS Portal to integrate, coordinate, configure and present the third-party services 12 in a seamless manner. For example, one application service includes a metering application that keeps track of the usage of each subscribed service by a subscriber thereby allowing the subscriber to be billed appropriately. Another application service includes a loyalty application that monitors the usage of each subscribed service in order to award earned credits or rewards to specific customers or merchants. In addition, these application services 14 may include specific customized services requested by a subscriber. For example, a subscriber who is a merchant may desire to offer the subscribed services for use by its customers or employees in a particular manner to provide branding or a specific "look and feel" that characterizes the merchant's brand and offerings.

[15] As mentioned above, the POS Portal is able to offer the integrated third-party services 12 and the application services 14 to subscribers in a seamless manner. In order to do that, the POS Portal is equipped to present the third-party services 12 and the application services 14 to the subscribers in different manners depending on a number of factors, such as, the subscribers' respective business needs as well as their respective system and application requirements including, for example, the capabilities of POS devices 16 used by a particular subscriber.

[16] For example, the merchant experience and business needs may differ due to the merchant's particular line of business 15. One subscriber may be a merchant in the travel industry while another subscriber may be in the retail business. Since different industries very often have their own particular requirements, different subscribers may choose to have different combinations of subscribed services, customization and user experience.

[17] Services syndication and content distribution may also vary depending on the subscriber's customization requirements 11. For example, as shown in Fig. 1, a first subscriber may wish to subscribe to services A, B and C, a second subscriber may wish to

subscribe to services A and B, a third subscriber may wish to subscribe to only service A, and a fourth subscriber (not shown) may wish to subscribe to services A, B and C but have these services delivered in a manner different from that of the first subscriber. Even though all four subscribers subscribe service A, service A may be presented differently by the POS Portal in each instance. The presentations and rendering 17 of the services at the subscriber's store locations can be further customized or filtered depending on the in-store events and the customer's preferences.

[18] In addition, the services presentation may vary due to the hardware requirements of each subscriber. A subscribed service may be delivered in various manners depending on the capabilities of the POS devices 16. POS devices 16 include, for example, a POS terminal, a kiosk, an electronic cash register and a display monitor.

[19] Furthermore, in some instances, the services presentation may also vary depending on the preferences or behavior of a subscriber's customers 18. A subscriber may choose to deliver different subscribed services to different customers. For example, a subscriber who is a retailer may choose to deliver varying levels of promotional services to target different customers based on their spending habits.

[20] Fig. 2 illustrates an exemplary embodiment of the physical components of the POS Portal. The POS Portal can be conceptually categorized into three system domains, namely, the POS devices or terminals 20, in-store appliance servers 28 and a services syndication hub 30, each of which will be further described below. It should be understood that the components shown herein merely illustrate an exemplary system configuration and system interactions for each specific domain. Alternatively, for example, some application services of the POS Portal could be deployed to multiple in-store appliance servers 28 each supporting one or more POS devices 20 for performance purposes or other reasons. Based on the disclosure and teachings provided herein, a person of ordinary skill in the art will know of other ways to implement the POS Portal in accordance with the present invention.

[21] The POS devices 20 are located at a merchant or point-of-sale location. Each of the POS devices is configured to deliver one or more of the subscribed services to a merchant's customers and/or employees. In addition, the POS devices 20 are capable of performing a number of functions including, for example, managing PIN entry, signature capturing, content rendering, providing a cash register interface, and functioning as a card reader, etc.

[22] At the merchant location, the POS 20 devices are implemented such that they are capable of operating in conjunction with a number of existing physical merchant devices

and peripherals. For example, the POS devices 20 are able to interface with an in-store network and, alternatively, deliver stand-alone operations in the event of network unavailability. In Fig. 2, a POS device 20 is, for instance, connected to both a cash register 22 and the merchant's back office applications 24 via a local area network 26. The system security protection for the POS Portal is provided by firewalls supporting SSL or virtual private network (VPN), and security modules in the POS device 20. POS devices 20 and the in-store appliance server 28 are digitally certified. Certificate-based authentication is used to authenticate the POS devices 20 before they can connect to the in-store appliance server 28 and subsequently to the services syndication hub 30. The POS Portal leverages standard Internet protocols such as TCP/IP, HTTPS, SOAP, WSDL. The POS Portal also utilizes the network transport common to the Internet including, for example, Digital Subscriber Lines (DSL), Integrated Services Digital Network (ISDN), cable modem or wireless broadband connectivity. These network access methods provide the digital data bandwidth in the range of 64Kbps to 1.544 Mbps and higher, readily available at most merchant locations.

[23] The POS device 20 is the primary service delivery component of the POS Portal. The POS device 20 can be configured to deliver specific services subscribed to by a particular merchant. The POS device 20 is an intelligent network device, i.e., it can host applications and process transactions from a wide range of systems and services such as the cash register 22, the in-store appliance server 28, the merchant's back office applications 24 and third party services from affiliated providers via the Internet 31. An exemplary embodiment of the POS device 20 has the following operating characteristics:

- an embedded real time operating system
- a built-in Internet browser
- a touch sensitive screen
- audio
- supports a number of peripherals (magnetic stripe, smart card reader and check readers, keyboards, printers, PIN pad, etc.)
- supports high resolution color graphics and signature image capture
- supports Internet protocols and networking (TCP/IP, Ethernet and Wireless 802.11b, Bluetooth, etc.)
- interfaces to the electronic cash register environment (ECR)
- supports field upgradeable and network loadable system and application modules
- supports EMV specifications
- supports PKI based security specifications

[24] In one exemplary embodiment, the POS device 20 has a color, touch sensitive screen that supports signature capture, printers, keyboards and other peripherals. Furthermore, the POS Portal can be implemented using Internet technologies and standards

thereby enabling easy deployment and distribution of applications. Browser plug-ins, host-based applications and downloadable software components provide regular application updates for the POS device 20. This leads to user-friendly applications that are seamlessly customized to specific merchant categories, such as grocery, retail, gas stations, restaurants or other consumer sales outlets.

[25] The POS device 20 communicates with the in-store appliance server 28 using the Internet HTTPS protocol. It should be understood that other computing devices can also be used in the POS Portal. The POS Portal can tailor the dialogs specific to the respective capabilities of these other computing devices. These other computing devices include, for example, electronic cash registers, display panels used for product discount offerings or kiosks for activities such as account setup, information inquiry, product or service configuration, etc.

[26] The in-store appliance server 28 is configured to handle communications with the services syndication hub 30 and the POS devices 20. The in-store appliance server 28 acts as the POS service coordinator and POS content server at the merchant location. For example, the in-store appliance server 28 receives and manages services supplied by the services syndication hub 30. The services are then delivered by the in-store appliance server 28 to the POS devices 20 based on the specific requirements of the merchant. In addition, since there may be different types of POS devices 20 at a merchant location, the in-store appliance server 28 is capable of delivering the services to the POS devices 20 based on the respective capabilities or configurations of the POS devices 20. The in-store appliance server 28 then further directs the customer-POS dialog or interactions that follows the desired transaction flows.

[27] The in-store appliance server 28 further provides flexible integration with other components of the merchant's existing systems, such as electronic cash registers 22 and merchant back office systems 24. This capability allows merchant environments to continue leveraging their technology investments. For instance, the higher bandwidth POS device 20 can enable the collection of detailed commercial card data obtained from the merchant system. In order to carry out its function, the in-store appliance server 28 manages a number of integrated services, such as, user dialog management, device management and the interface to the merchant's sales and back office functionality.

[28] As mentioned above, the in-store appliance server 28 communicates with both the POS devices 20 and the services syndication hub 30. The in-store appliance server 28 may communicate with the POS devices 20 via a private computer network, such as, a local

area network 26. In an exemplary embodiment, the in-store appliance server 28 is located at a merchant location. Alternatively, the in-store appliance server 28 may be hosted by a service provider at a location separate from the merchant location. As to communications with the services syndication hub 30, the in-store appliance server 28 may communicate with the services syndication hub 30 via either a public computer network, such as, the Internet, or a private computer network, such as, a virtual private network.

[29] In an exemplary embodiment, the in-store appliance server 28 is implemented for a large merchant utilizing a number of servers which support packet filtering firewalls, routers, load balancing units, application servers for security, performance monitoring and screen presentation for POS devices. Exemplary characteristics of the hardware used to implement the in-store appliance server 28 are, for example, high reliability and availability, and support for server clustering and plug and play components. Physical redundancy for processors, memory, disk and power supplies are also included. For a smaller merchant this configuration can be scaled down and still provide basic in-store functionality.

[30] The services syndication hub 30 acts as the merchant's gateway to third-party services , and coordinates the transactions between a merchant's in-store appliance server 28 and the affiliated service providers 31. The services syndication hub 30 is primarily enabled by network connectivity and middleware software interfacing to the service providers 31. The communications between the services syndication hub 30 and the third party service providers 31 may be conducted via a private computer network, such as, a virtual private network 32. In general, portions of the service processing are carried out at the data centers of the service providers 31 while the services syndication hub 30 performs a packaging and distribution role.

[31] Furthermore, the services syndication hub 30 enforces service agreements, operating policies and regulations and rules among participating parties. For example, subscribers are likely to choose to subscribe different sets of services. The services syndication hub 30 ensures that the proper set of subscribed services is delivered to the appropriate subscriber. In addition, a service provider 31 may have different service agreements with different subscribers. As one of its functions, the services syndication hub 30 coordinates a subscribed service to be delivered to a subscriber according to the terms and conditions of the service agreement with that particular subscriber. The terms and conditions of the service agreement may specify, for example, the quality and level of service to be provided.

[32] Also, the services syndication hub 30 ensures that the third party service providers 31 and the in-store appliance server 28 are in compliance with certain sets of operating policies and/or regulations. One such set of operating policies and/or regulations may be directed to minimum security requirements that need to be satisfied by the third party service providers 31 and the in-store appliance server 28 in order to achieve end-to-end secure communications or service delivery between a third party service provider 31 and a POS device 20.

[33] In an exemplary embodiment, the services syndication hub 30 is implemented using high-performance processors or servers. Preferably, each processor or server has the same core reliability and availability requirements necessarily for a mission-critical data center supporting 24x7 operations. The services syndication hub 30 also includes application firewalls and proxies that ensure secure and authorized access to all services.

[34] Moreover, in order to manage and provide the integrated third-party services, the services syndication hub 30 includes a number of infrastructure and application components. For example, the services syndication hub 30 includes a suite of applications that provide aggregation, personalization, dynamic distribution of content and connectivity between third-party services and existing payment systems. The services syndication hub 30 is able to communicate with various service providers in order to provide the integrated third-party services. These various service providers 31 include, for example, payment processors, merchant acquirers and external value-added service providers. Value-added applications for processors and acquirers can include the processing and analysis of customer survey information, administration of loyalty programs, authorization services for a variety of payment instruments and many others enabled by the POS Portal. Value-added services, such as, signature and receipt images can be captured and retrieved online for dispute resolution, reducing the time spent on this process by customers, merchants and other parties. In-store training classes can be conducted for merchant staff via the Internet. Advertising and cross selling approaches at the POS Portal can be implemented as an integral part of the merchant's overall sales process. Each system interaction is designed to comply with customer standing or employee training levels and can be altered based on seasonal sales promotions.

[35] The POS Portal utilizes a computer network, such as, the Internet, to enable a variety of new applications and permit a consolidation of service providers. For example, merchants can accept payment instruments from checks to chip cards to digital cash and receive payment authorization from a consolidated source.

[36] Ubiquitous, high speed Internet access provisioning has matured and is consolidating around a few well-known service providers. Given that many merchants are just beginning to upgrade their infrastructures to take advantage of the Internet, their services can be bundled with a point-of-service offering. Voice over IP and streaming video enable a variety of merchant applications including back office functions such as, store security monitoring and real time help desk technical support.

[37] In an exemplary embodiment, the POS Portal and the network connectivity used to link up its various components are largely constructed of standard components. One of the benefits of leveraging standard technologies and development environments is the ability to readily use technology components and value-added services developed by third parties.

[38] With the POS Portal, these value-added services can be seamlessly integrated into the point-of-service workflow. The modularity of the components allows the merchants and its service providers to assemble these components to provide the desired point-of-service capability. As described above, networking, value-added services and information is packaged around the payment authorization process to enhance revenue potential.

[39] Fig. 3 illustrates an exemplary embodiment of the software architecture and system components used in constructing the POS Portal. The exemplary software architecture is comprised of four service domains: Device Services 50, In-store Services 51, Services Syndication 52 and Integration Services 53. The software components utilized in these service domains are further grouped by their functionality 54: Presentation, Application Environment, Infrastructure, Operating System/Network and Development Tools. The exemplary software architecture is based on object-oriented component or modular technologies. Software component architectures allow pieces of the POS Portal to be developed independently and deployed on a number of operating systems. Programming languages such as C++, Java and associated application development tools enable a highly productive development environment 65, 75, 85 and 95. Readily available software also plays a role in the POS Portal providing distributed on-line services and specialized applications. Each merchant location can deploy a variety of the POS Portal software technologies depending on the needs and the technical sophistication of the merchant.

[40] The software architecture of the POS Portal implements standard Internet protocols such as TCP/IP, HTTPS, SOAP, WSDL as its primary communication interface within the POS Portal and with external Integration Services 53. The data formats of the POS Portal utilize standard XML schema, HTML, and other industry data conventions for the

system compatibility and interoperability of service offerings. The software components of the POS Portal are digitally signed to ensure that they are capable of running securely wherever they are deployed. The certified software components also protect the POS Portal against unauthorized or malicious use of the services. The content and transactional data, XML or non-XML formatted, are also digitally signed and encrypted to prevent unauthorized access. The security architecture of the POS Portal provides the merchants with the assurance to conduct the business in a trustworthy, secure environment.

[41] On the left hand side of Fig. 3 are the Device Services 50 used to deploy Internet-based applications in this environment. The Device Services 50 are designed to operate in the resource-constrained environment of a POS device. Limited screen size, processor capability and memory make the price point of the device acceptable to merchants but still provide significantly more functionality than today's POS terminals. Special design considerations are examined to both maintain or improve response times for checkouts and inform or collect input from the customer or employee. User interface strategy and design are combined to maximize customer attention span for message delivery and receipt in accordance with the merchant's customer experience requirements.

[42] The presentation functionality of the Device Services 50 is carried out by an embedded web browser 61. From security and language perspectives, the browser supports Secure Socket Layer (SSL) and standard markup and scripting (Cascade Style Sheet (CSS), Extensible Markup Language (XML), Hypertext Markup Language (HTML) and scripts). Using Internet standards allows the browser 61, the web servers 71 at the in-store appliance server 28 and the web servers 81 at the services syndication hub 30 to communicate in a secure, cohesive manner.

[43] The application environment 62 for the POS device is a portable virtual machine kernel designed for constrained processing capabilities found in POS devices, cellular phones and PDA's. Applications in this environment can be loaded into device memory improving device boot up and response times. The web browser is the primary software component supporting the POS device's external interface and allows data exchange between POS Portal services, cash register and other applications. Additional functionality provides high-resolution graphics and audio support and ability to upgrade software via the network.

[44] A connectivity infrastructure 63 of the Device Services 50 is provided by device driver architecture in the virtual machine. It is flexible and designed to support

peripherals as well as interfaces to ECRs. Frameworks and tool kits 65 are available to support networking options.

[45] The POS device 20 uses a Real Time Embedded Operating System (RTOS) 64 as its system platform. The RTOS performs functions supporting I/O, error handling, system storage management, etc. RTOS is designed for embedded systems and addresses areas of speed, memory size, field-upgrade ability, etc. Total device functionality is split between RTOS and virtual machine kernel, allowing each to perform system tasks suited to their respective strengths.

[46] The In-store Services 51 are based on distributed software component architecture and are primarily hosted at the in-store appliance server 28. The configurable application environment 72 and its underlying infrastructure 73 provide the localized operating platform that meets the merchant's specific system requirements. While the POS/ECR interface and the back office integrations can be localized, most of the In-store Services 51 such as device management, payment gateway interface and content management work in conjunction with Service Syndication 52 and Integration Services 53 to form a complete, deliverable service suite. For instance, with the POS Portal architecture, the In-store Services 51 are able to support personalization and distribution of content and services received from the services syndication hub 30 and, in turn, deliver them to POS devices 20. In an exemplary embodiment, content presentation, merchant content management, security and business logic tailored to the merchant's requirements are typical merchant applications provided by the In-store Services 51.

[47] In an exemplary embodiment, a standard web server 71 is included as part of the In-store Services 51 to provide the presentation layer for content provisioning and service delivery. The In-store Services 51 work in conjunction with firewalls, Service Syndication 52 and POS browsers to provide SSL for security. Standard scripting and markup languages are supported.

[48] A number of system-wide applications such as device management, personalization, payment gateway are also part of the POS Portal. One such application relates to device management. The POS Portal utilizes a number of services for device authentication, presentation, monitoring and software download support. In-store Services 51 performs many of these services and has the ability to work with the device registration management of Service Syndication 52 to recognize a target device and its operating environment. Initially, most of the deployed POS devices will have known characteristics. Over time, presentation content will come from disparate parties and the diversity of POS

devices accessing services will increase. The POS Portal architecture anticipates this and can accommodate this device upgrade life cycle. Using web pages as input, content rendering software working in conjunction with device management provides content adaptation according to target device capability, security features and network bandwidth. Content adaptation examples are:

- Data transcoding to support device capabilities (For example, images are converted to black and white for devices that do not support color).
- Data compression.
- Content mode transformation, such as video into frame sets.
- Classification of objects to identify and eliminate redundancy.
- Prioritization of data types for transmission.
- Encryption characteristics.

[49] The POS Portal resolves many of the issues around trouble-shooting and maintenance of the POS environment. For example, The In-store Services 51 have the ability to monitor the quality of service of each device and can pinpoint problems before they become an issue for the merchant. Once identified, repair can be initiated via the network or physical action taken. Another aspect of system maintenance is the ability to upgrade system features via the network. High bandwidth and portable application components make this a seamless effort.

[50] Horizontal applications 72, 82 and vertical applications 92 delineate the application component space in the software architecture of the POS Portal. In general, horizontal applications 72, 82 are core system components usually constructed by infrastructure providers and support common service requirements regardless of the industry. Each could be customized for specific uses within a vendor provided framework. Device registration management, content distribution management and personalization are examples of horizontal applications. Vertical applications 92 are software components tailored to a particular trade and usually built by vertical industry specialists. Loyalty and virtual branding programs, advertising, manufacturing configuration, hotel, restaurant, retail and travel applications are examples of vertical applications.

[51] One of the horizontal applications of the POS Portal relates to content management. The ability to combine content from service providers, merchants and POS applications enables more meaningful interactions to be conducted with customers. Creation, aging, approving, posting, distributing and refreshing content are workflow processes incorporated in components which may be developed by vendors for this purpose.

[52] A further horizontal application of the POS Portal relates to personalization. Personalization enables delivery of customized content according to user profile information. Personalization, both for the merchant and customers, provides the basis for loyalty programs and enables one-to-one marketing programs. It allows a merchant to recognize when to supply information as needed and allow customers to choose how and what information they would like to receive. Each dialog interaction can be logged and analyzed to create an individual profile of preferences and characteristics. Information gleaned from a dialog assists in providing a tailor-made product matching individual choice. Developing and managing a variety of profiles is valuable to building a point-of-sale service relevant to customers and sought after by merchants.

[53] Security, systems management, directory services, gateways, asynchronous messaging and data transformation are system services of the POS Portal's capabilities that allow integration of backend services into a coherent customer experience. Many of these services exist at all levels of the software architecture ranging from the application environment and the system infrastructure through operating systems and networks. Service location, mutual authentication, non-repudiation and service authorization are also the integral parts of the software architecture of the POS Portal.

[54] Furthermore, the operating systems 94 on the side of the service providers are transparent to the POS Portal. The services and tools mentioned above are also applicable for Integration Services 53. There are other tools that may be implemented depending on the needs of service provider integration. For example, a message queuing product that provides a specific level of guaranteed delivery could be used to support non-repudiation or performance requirements for an application.

[55] The POS Portal also includes a number of vertical applications 92. As described above, the POS Portal is used to aggregate, target and distribute service provider information and services. In order to perform these functions, the context and supporting systems for the integration of third-party services are provided by the infrastructure 83 and operating environment 84 of the Service Syndication 52 in Fig 3. These types of context are incorporated into the design of the POS Portal and the integration environment 93 of the service providers. The application platform supports various business interactions defined by the POS Portal's operating rules and policies. Decisions about privacy, fee structures, dispute resolution, etc., can also be incorporated into the profile management of the POS Portal.

[56] A vertical application in the POS Portal relates to payment processing. Payment instruments and types accepted by merchants can be expanded and the POS Portal

supports various approaches including, for example, checks, micro payments, digital cash, chip and magnetic stripe card products. Information about payments is collected at various application levels across the system architecture of the POS Portal. The data from payment transactions collected at the POS device are sent to and aggregated by In-store Services 51. The payment transaction then is passed to the services syndication hub 30 via the payment gateway interface. Upon the receipt of the payment authorization request from the merchant, the Service Syndication 52, based on the established agreement and roles, chooses an appropriate payment gateway for authorization and returns the appropriate results to the merchant on completion. To interface seamlessly with merchant acquirers, payment processors and card issuers, the Service Syndication 52 emulates legacy payment messaging through vendor provided software that implements data format transformations. The transaction data can be used later in the processing flow for value-added services, such as, receipt capture, fraud detection, purchasing pattern analysis, etc. if the merchant chooses to subscribe these services.

[57] It should be understood that other vertical applications suiting the needs of hotels, restaurants, retail stores, travel agencies and other trades could be built. Each vertical business dialog is different. In some cases, only an employee will be reviewing information from the system; in others, the dialog will be shared by employees and customers; and in yet some others, only the customers will interact with the system.

[58] Additional vertical applications when combined with other services can potentially provide new sources of revenue to merchants. An example of this is the delivery of advertising through in-store POS devices, display panels and kiosks. Another application could recognize valued customers and prompt employees to upgrade the services or products offered during a sale. Still others could create the capability to set up co-branded loyalty programs between a number of merchants and financial institutions.

[59] The application environment 82 of the services syndication hub 30 provides the integration of all available services in Fig. 3 ensuring an ability to incorporate a matrix of services offered by third party vendors. As mentioned above, security, system management, directory services, content management, gateways and formatting components are an integral part of the architecture.

[60] Service providers offer an opportunity to extend their offered services through the POS Portal in a plug and play infrastructure 83. The Services Syndication 52 uses common Internet technology to link various service providers to provide these on-line services. The variety of services is not limited but as an example the following can be

provided including receipt capture, certificate management, advertising, etc. Receipt capture is a service that stores purchase receipt and signature image for post-sale retrievals. The information can be retrieved online upon demand for dispute resolutions rather than using the conventional way of scanning or faxing original documents between parties. Sales documents can be displayed via a browser and e-mailed between parties for references. Certificate management can ease the merchant's burden of creating and maintaining certificates used to authenticate devices and customers, freeing up employees for other duties. Advertising creation, maintenance and distribution used for POS devices can be performed by vendors that specialize in this area.

[61] Additional services and new payment models and systems that leverage the Internet can be integrated in the POS Portal. Increasingly, a number of vendors are developing on-line services using web services XML standards for the generation and exchange of typical business objects including purchase orders, invoices, etc. These can all be used in the POS Portal to facilitate creation, pricing, configuration and support of service and goods procurement enabled by the POS Portal.

[62] As described above, the POS Portal of the present invention can be implemented using both software and hardware. It should be understood that the descriptions provided above are merely for illustrative purposes. It will be clear to a person of ordinary skill in the art that the present invention can be implemented in many different configurations and/or manners, using software, hardware or a combination of both.

[63] It is further understood that the examples and embodiments described herein are for illustrative purposes only and that various modifications or changes in light thereof will be suggested to persons skilled in the art and are to be included within the spirit and purview of this application and scope of the appended claims. All publications, patents, and patent applications cited herein are hereby incorporated by reference for all purposes in their entirety.

WHAT IS CLAIMED IS:

1. A secure point-of-sale system for providing multiple services, comprising:

one or more computing devices;

a services syndication hub configured to integrate a plurality of services; and

an appliance server configured to receive and manage one or more of the plurality of services from the services syndication hub and control the one or more computing devices to allow one or more of the plurality of services received by the appliance server to be presented and accessed.

2. The system of claim 1 wherein the one or more computing devices include one of the following: a point-of-sale device, an electronic cash register, a display and a kiosk.

3. The system of claim 1 wherein at least one of the one or more computing devices is configurable to allow one or more of the plurality of services to be presented in one or more configurations.

4. The system of claim 1 wherein at least one of the one or more computing devices is capable of performing content rendering.

5. The system of claim 1 wherein at least one of the one or more computing devices is capable of handling one or more payment instruments.

6. The system of claim 1 wherein at least one or more of the computing devices is located at a subscriber location; and

wherein the appliance server is either located at the subscriber location or hosted by a service provider.

7. The system of claim 1 wherein the services syndication hub is connected to the appliance server via a computer network.

8. The system of claim 7 wherein the computer network is either a public computer network or a private computer network.

9. The system of claim 8 wherein the public computer network is the Internet.

10. The system of claim 1 wherein one or more of the plurality of services received by the appliance server are to be presented and accessed by a subscriber and/or its customers.

11. The system of claim 1 wherein how one or more of the plurality of services received by the appliance server are to be presented and accessed by a customer are determined based on past activities of the customer.

12. The system of claim 1 wherein the one or more of the plurality of services to be received by the appliance server are to be presented based on criteria specified by a subscriber.

13. The system of claim 10 wherein the subscriber is a merchant.

14. The system of claim 1 wherein one or more of the plurality of services to be integrated by the services syndication hub are respectively provided by one or more service providers.

15. The system of claim 1 wherein which one or more of the plurality of services are to be received by the appliance server is determined based on a subscriber service agreement.

16. The system of claim 1 wherein the appliance server is further configured to interact with one or more subscriber's back-office applications.

17. The system of claim 1 wherein the plurality of services are integrated and delivered to the appliance server in accordance with a set of operating regulations.

18. The system of claim 1 wherein the services syndication hub further includes a plurality of applications configured to support integration of the plurality of services.

19. The system of claim 1 wherein one or more of the plurality of services conform to industry standards for web services.

20. The system of claim 1 wherein the services syndication hub further includes a plurality of applications, at least one of the plurality of applications being designed to serve a specific purpose based on a subscriber's requirements; and

wherein one or more of the plurality of services are respectively provided by one or more of the plurality of applications.

21. The system of claim 20 wherein the plurality of applications include a metering application, a loyalty application and a personalization application.

22. The system of claim 1 wherein the plurality of services includes a plurality of trade-specialized services.

23. The system of claim 1 wherein the plurality of services include a payment processing service, a receipt capture service, a certificate management service, and an advertising service.

24. The system of claim 1 wherein interactions between human users and the one or more computing devices, interactions between the one or more computing devices and the appliance server, interactions between the appliance server and the services syndication hub and interactions between the services syndication hub and service providers providing the plurality of services are secure.

25. A secure point-of-sale system for delivering multiple services, comprising:

a services syndication hub configured to integrate a plurality of services;

a plurality of appliance servers, each appliance server configured to receive and manage one or more of the plurality of services from the services syndication hub; and

a plurality of point-of-sale devices associated with each of the plurality of appliance servers;

wherein each appliance server is further configured to control its associated plurality of point-of-sale devices to allow one or more of the plurality of services received from the services syndication hub to be presented and accessed via the plurality of point-of-sale devices.

26. The system of claim 25 wherein each appliance server is associated with a merchant; and

wherein for each appliance server, one or more of the plurality of services to be received from the services syndication hub are to be presented based on criteria specified by the associated merchant.

27. The system of claim 26 wherein an appliance server and its associated plurality of point-of-sale devices that are associated with the merchant are located at the merchant's location, or alternatively, the appliance server is hosted by a service provider at a location separate from the merchant location and the associated plurality of point-of-sale devices are located at the merchant location.

28. The system of claim 25 wherein at least one of the plurality of point-of-sale devices is configurable to allow one or more of the plurality of services to be presented in one or more configurations.

29. The system of claim 25 wherein at least one of the plurality of point-of-sale devices is capable of performing content rendering.

30. The system of claim 25 wherein at least one of the plurality of point-of-sale devices is capable of handling one or more payment instruments.

31. The system of claim 25 wherein the services syndication hub is connected to the plurality of appliance servers via one or more computer networks.

32. The system of claim 31 wherein the one or more computer networks include the Internet or private computer networks.

33. The system of claim 25 wherein the one or more of the plurality of services received by each appliance server are to be presented and accessed by a merchant and/or its customers.

34. The system of claim 26 wherein how one or more of the plurality of services received by each appliance server are to be presented and accessed by a customer are determined based on the associated merchant's requirements and past activities of the customer.

35. The system of claim 25 wherein one or more of the plurality of services to be integrated by the services syndication hub are respectively provided by one or more service providers.

36. The system of claim 25 wherein which one or more of the plurality of services are to be received by each appliance server are determined based on a service agreement executed by a merchant associated with that appliance server.

37. The system of claim 25 wherein at least one of the plurality of appliance servers is further configured to interact with one or more merchant's back-office applications.

38. The system of claim 25 wherein the plurality of services are integrated and delivered to the plurality of appliance servers in accordance with a set of operating regulations.

39. The system of claim 25 wherein the services syndication hub further includes a plurality of applications configured to support integration of the plurality of services.

40. The system of claim 39 wherein the plurality of applications include a metering application, a loyalty application and a personalization application.

41. The system of claim 25 wherein the services syndication hub further includes one or more applications, each application being designed to serve a specific purpose based on a merchant's requirements; and

wherein one or more of the plurality of services to be integrated by the services syndication hub are respectively provided by the one or more applications.

42. The system of claim 25 wherein the plurality of services include a plurality of trade-specialized services.

43. The system of 25 wherein one or more of the plurality of services conform to industry standards for web services.

44. The system of claim 25 wherein the plurality of services include a payment processing service, a receipt capture service, a certificate management service and an advertising service.

45. The system of claim 25 wherein interactions between human users and the plurality of point-of-sale devices, interactions between each appliance server and its associated plurality of point-of-sale devices, interactions between the plurality of appliance servers and the services syndication hub and interactions between the services syndication hub and service providers providing the plurality of services are secure.

46. A secure point-of-sale system for delivering multiple services, comprising:

one or more services syndication hubs, each services syndication hub configured to integrate a plurality of services, one or more of the plurality of services being respectively provided by one or more service providers, each services syndication hub further including a plurality of applications, one or more of the plurality of applications being configured to support integration of the plurality of services and one or more of the plurality of applications being customized applications designed based on merchants' requirements to respectively provide one or more of the plurality of services;

a plurality of appliance servers, each appliance server configured to receive and manage one or more of the plurality of services from at least one of the one or more services syndication hubs, wherein which one or more of the plurality of services are to be received by each appliance server are determined based on a service agreement executed by a merchant associated with that appliance server; and

a plurality of point-of-sale devices associated with each of the one or more appliance servers;

wherein each appliance server is further configured to control its associated plurality of point-of-sale devices to allow one or more of the plurality of services received from at least one of the one or more services syndication hubs to be presented and accessed via the plurality of point-of-sale devices;

wherein for each appliance server, one or more of the plurality of services received from at least one of the one or more services syndication hubs are to be presented based on criteria specified by the associated merchant.

47. The system of claim 46 wherein an appliance server and its associated plurality of point-of-sale devices that are associated with the merchant are located at the merchant's location, or alternatively, the appliance server is hosted by a service provider at a location separate from the merchant's location and the associated plurality of point-of-sale devices are located at the merchant's location.

48. The system of claim 46 wherein at least one of the plurality of point-of-sale devices is configurable to allow the one or more of the plurality of services to be presented in one or more configurations.

49. The system of claim 46 wherein at least one of the plurality of point-of-sale devices is capable of performing content rendering.

50. The system of claim 46 wherein at least one of the plurality of point-of-sale devices is capable of handling one or more payment instruments.

51. The system of claim 46 wherein the one or more services syndication hubs are connected to the plurality of appliance servers via one or more computer networks.

52. The system of claim 51 wherein the one or more computer networks include the Internet or private computer networks.

53. The system of claim 46 wherein one or more of the plurality of services received and managed by each appliance server are to be presented and accessed by its associated merchant and/or the merchant's customers.

54. The system of claim 46 wherein how the one or more of the plurality of services received by each appliance server are to be presented and accessed by a customer are determined based on the associated merchant's requirements and past activities of the customer.

55. The system of claim 46 wherein at least one of the plurality of appliance servers is further configured to interact with one or more back-office applications.

56. The system of claim 46 wherein the plurality of services are integrated and delivered to the plurality of appliance servers in accordance with a set of operating regulations.

57. The system of claim 46 wherein the plurality of applications include a metering application, a loyalty application and a personalization application.

58. The system of claim 46 wherein at least one services syndication hub further includes a plurality of applications, at least one of the plurality of applications being designed to serve a specific purpose based on a merchant's requirements; and

wherein one or more of the plurality of services to be integrated by the at least one services syndication hub are respectively provided by the plurality of applications.

59. The system of claim 46 wherein the plurality of services include a plurality of trade-specialized services.

60. The system of claim 46 wherein one or more of the plurality of services conform to industry standards for web services.

61. The system of claim 46 wherein the plurality of services include a payment processing service, a receipt capture service, a certificate management service and an advertising service.

62. The system of claim 46 wherein interactions between a human user and a point-of-sale device, interactions between each appliance server and its associated plurality of point-of-sale devices, interactions between the plurality of appliance servers and the one or more services syndication hubs and interactions between the one or more services syndication hubs and the one or more service providers are secure.

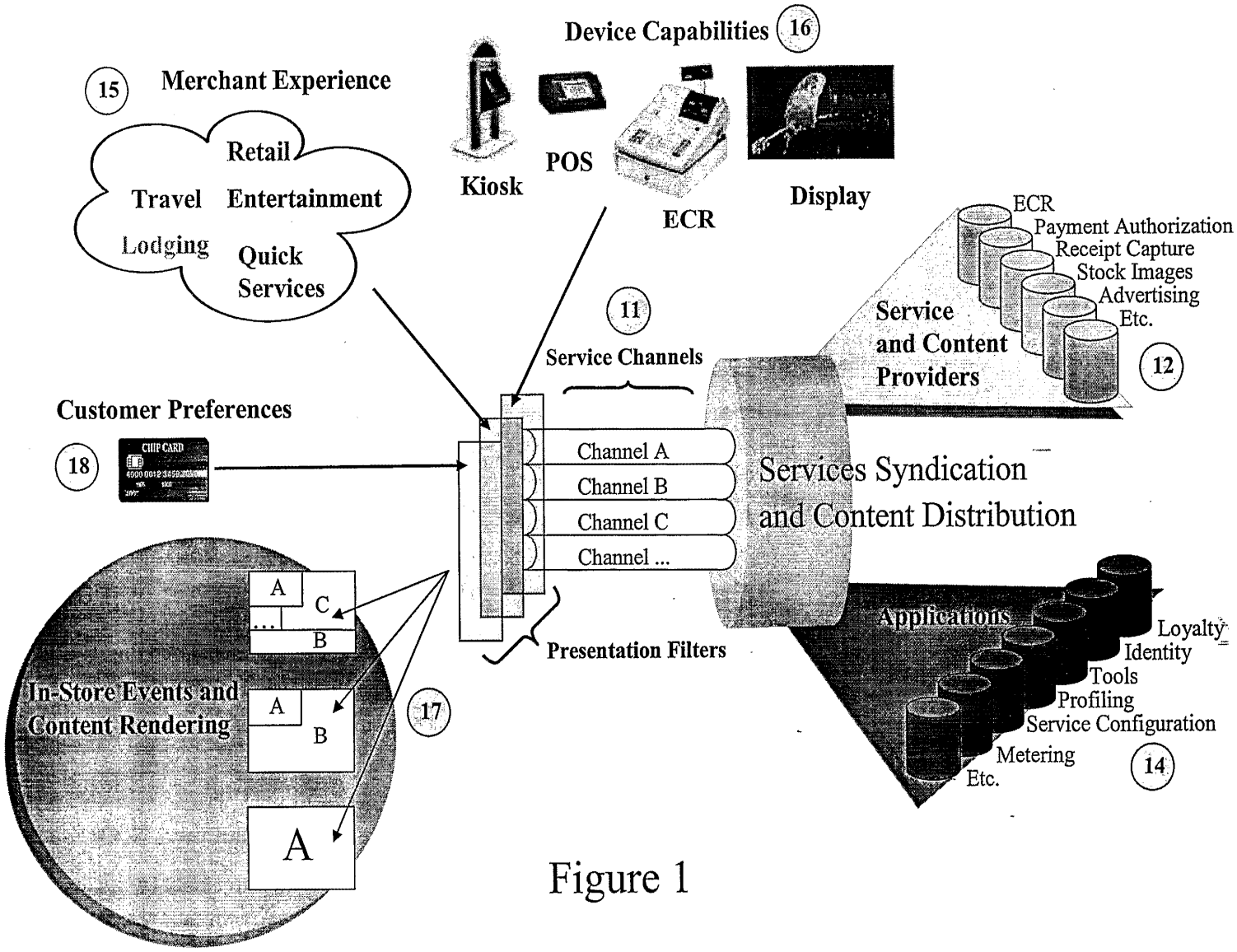

Device Capabilities 16
15 Merchant Experience
Retail
Travel
Entertainment
Lodging
Quick Services
Kiosk
POS
ECR
Display
ECR
Payment Authorization
Receipt Capture
Stock Images
Advertising
Etc.
Service and Content Providers
12
11
Service Channels
Customer Preferences
18
Channel A
Channel B
Channel C
Channel ...
Services Syndication and Content Distribution
Presentation Filters
Applications
Loyalty
Identity
Tools
Profiling
Service Configuration
Metering
Etc.
14
In-Store Events and Content Rendering
17
A
C
B
A
B
A

Figure 1

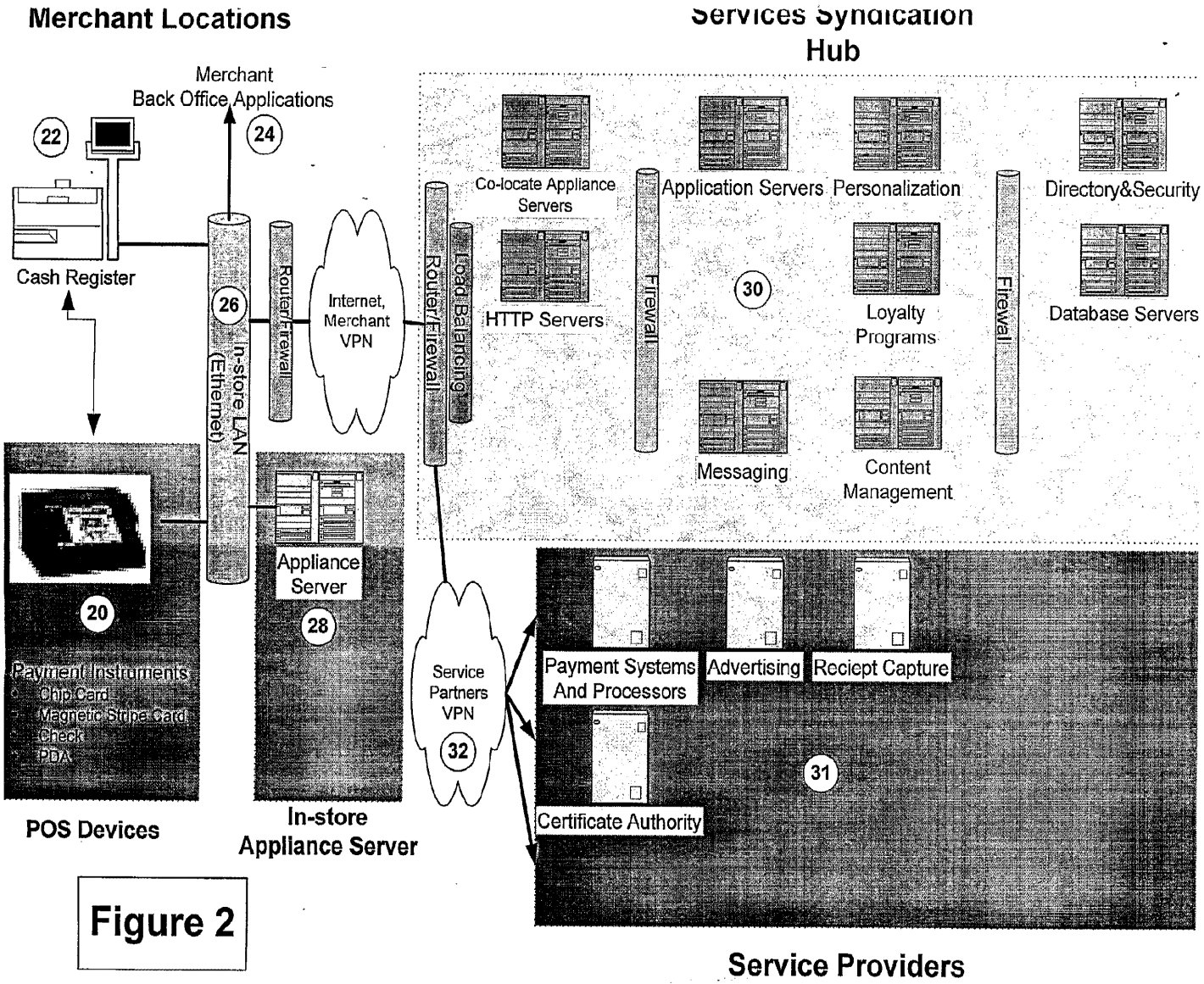
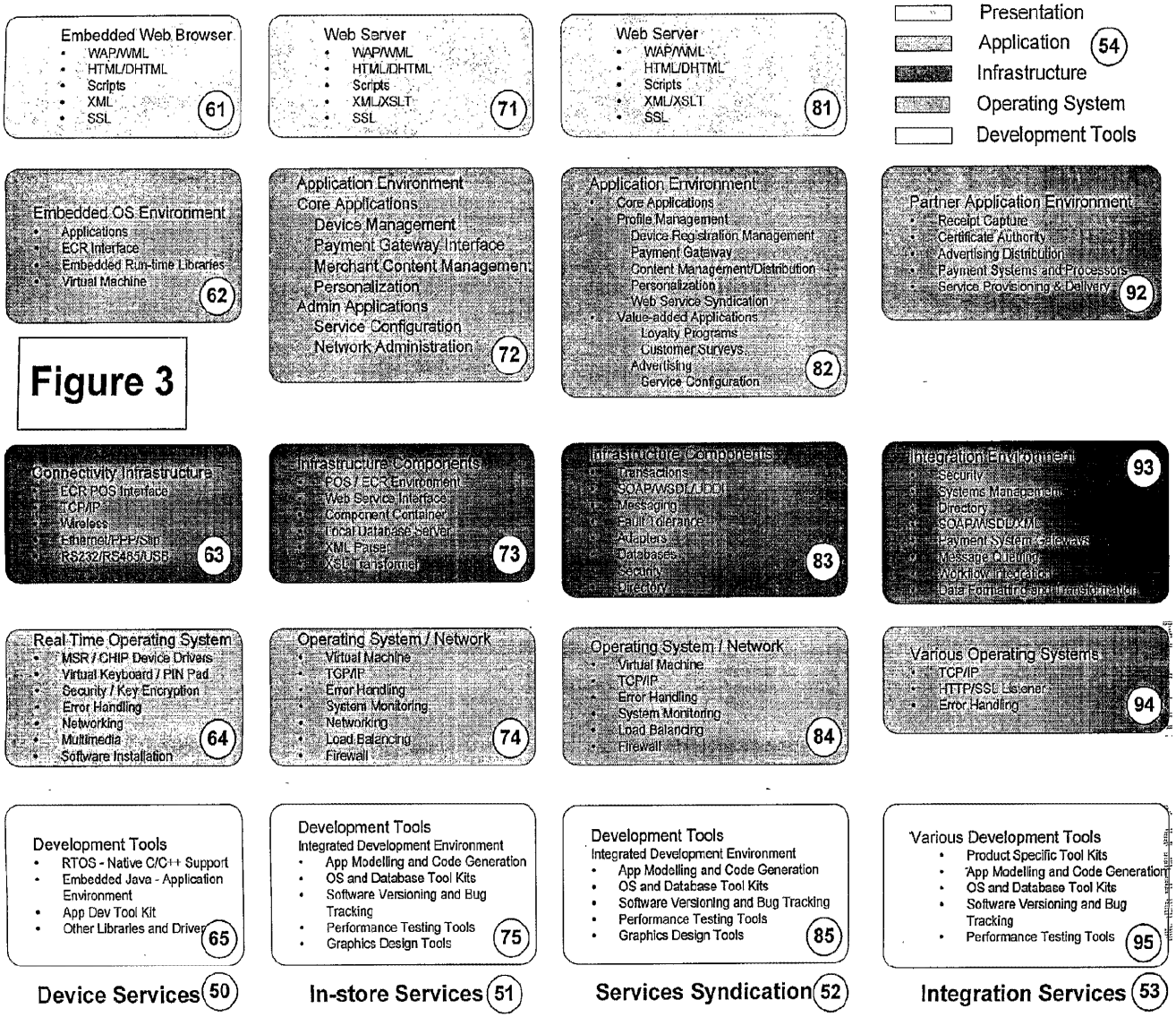

Merchant Locations
Services Syndication Hub
Merchant Back Office Applications
22
24
Cash Register
26
In-store LAN (Ethernet)
Router/Firewall
Internet, Merchant VPN
Load Balancing Router/Firewall
Co-locate Appliance Servers
HTTP Servers
Firewall
Application Servers
30
Personalization
Loyalty Programs
Messaging
Content Management
Firewall
Directory&Security
Database Servers
Appliance Server
28
20
Payment Instruments
Chip Card
Magnetic Stripe Card
Check
PDA
POS Devices
In-store Appliance Server
Service Partners VPN
32
Payment Systems And Processors
Advertising
Reciept Capture
31
Certificate Authority
Service Providers

Figure 2


Presentation
Application 54
Infrastructure
Operating System
Development Tools
Embedded Web Browser
WAP/WML
HTML/DHTML
Scripts
XML
SSL
61
Web Server
WAP/WML
HTML/DHTML
Scripts
XML/XSLT
SSL
71
Web Server
WAP/WML
HTML/DHTML
Scripts
XML/XSLT
SSL
81
Embedded OS Environment
Applications
ECR Interface
Embedded Run-time Libraries
Virtual Machine
62
Application Environment
Core Applications
Device Management
Payment Gateway Interface
Merchant Content Management
Personalization
Admin Applications
Service Configuration
Network Administration
72
Application Environment
Core Applications
Profile Management
Device Registration Management
Payment Gateway
Content Management/Distribution
Personalization
Web Service Syndication
Value-added Applications
Loyalty Programs
Customer Surveys
Advertising
Service Configuration
82
Partner Application Environment
Receipt Capture
Certificate Authority
Advertising Distribution
Payment Systems and Processors
Service Provisioning & Delivery
92
Figure 3
Connectivity Infrastructure
ECR POS Interface
TCP/IP
Wireless
Ethernet/PPP/Slip
RS232/RS485/USB
63
Infrastructure Components
POS / ECR Environment
Web Service Interface
Component Container
Local Database Server
XML Parser
XSLT Transformer
73
Infrastructure Components
Transactions
SOAP/WSDL/UDDI
Messaging
Fault Tolerance
Adapters
Databases
Security
Directory
83
Integration Environment
93
Security
Systems Management
Directory
SOAP/WSDL/XML
Payment System Gateways
Message Queuing
Workflow Integration
Data Formatting and Transformation
Real Time Operating System
MSR / CHIP Device Drivers
Virtual Keyboard / PIN Pad
Security / Key Encryption
Error Handling
Networking
Multimedia
Software Installation
64
Operating System / Network
Virtual Machine
TCP/IP
Error Handling
System Monitoring
Networking
Load Balancing
Firewall
74
Operating System / Network
Virtual Machine
TCP/IP
Error Handling
System Monitoring
Load Balancing
Firewall
84
Various Operating Systems
TCP/IP
HTTP/SSL Listener
Error Handling
94
Development Tools
RTOS - Native C/C++ Support
Embedded Java - Application Environment
App Dev Tool Kit
Other Libraries and Drivers
65
Development Tools
Integrated Development Environment
App Modelling and Code Generation
OS and Database Tool Kits
Software Versioning and Bug Tracking
Performance Testing Tools
Graphics Design Tools
75
Development Tools
Integrated Development Environment
App Modelling and Code Generation
OS and Database Tool Kits
Software Versioning and Bug Tracking
Performance Testing Tools
Graphics Design Tools
85
Various Development Tools
Product Specific Tool Kits
App Modelling and Code Generation
OS and Database Tool Kits
Software Versioning and Bug Tracking
Performance Testing Tools
95
Device Services 50
In-store Services 51
Services Syndication 52
Integration Services 53

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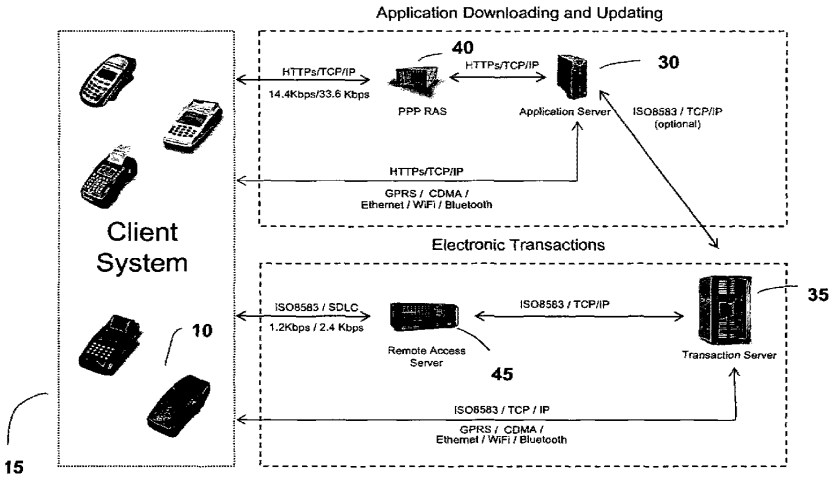
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(54) Title: SYSTEM FOR ACCESSING A POS TERMINAL, METHOD FOR DOWNLOADING AND UPDATING APPLICATIONS AND METHOD FOR PERFORMING ELECTRONIC OPERATION USING SUCH A SYSTEM



(57) Abstract: The present invention refers to system for accessing POS terminals (10), with or without pin pad, using a client system (15) to connect such POS terminal (10) to a network comprised by at least one server (30), the system enabling any POS terminal (10) to execute applications (25) located in such servers, through a plurality of specific protocols (20) in a process similar to the Internet, as well to download and update applications from application servers (30) and to perform electronic operations in transaction serves (35).

WO 2005/115074 A2

Title: **SYSTEM FOR ACCESSING A POS TERMINAL, METHOD FOR DOWNLOADING AND UPDATING APPLICATIONS AND METHOD FOR PERFORMING ELECTRONIC OPERATION USING SUCH A SYSTEM.**

FIELD OF THE INVENTION

The present invention relates to a system for accessing POS and pin pad devices using a client system connected by a network to at least one server as well as to a method for updating and downloading application and performing a plurality of operations using said system.

DESCRIPTION OF THE PRIOR ART

Many companies in the industry of electronic operations (health-care insurance, loyalty, pre paid reload, gift card, etc.) are constantly seeking for solutions to improve their services and offer new ones, becoming more competitive.

Prior to the advent of the present invention, the users, also known as acquirers, had been provided with technologically limited terminals.

Regarding portability, each Point-of-Sale terminal, herein called POS terminal, comprised only their proprietary hardware and operating system. Accordingly, applications needed to be rewritten and adapted for each terminal model, in a laborious and expensive process. Application sharing was also insufficient since POS terminals used in the network were able only to send and receive transaction data, without taking advantage of other network facilities such as application servers. Also, since applications were hard-coded into the POS terminals (fat client), it was extremely difficult, maybe impossible, to use different applications on the same machine due to memory and development restrictions.

In this way, each POS terminal used to be independently updated in a non-automated process. Lately, heterogeneous environments and remote upgrading systems provided by manufacturers of POS terminals used to be applied in upgrading processes. However, such terminals and their respective upgrading systems were not compatible with each other, requiring specific knowledge and maintenance staff for each system and each vendor, thus replicating efforts and costs.

Another problem existing in the prior art was the necessity of having advanced programming skills as well as a deep knowledge of the proprietary operating environment of each terminal manufacturer on the market, regarding its specificity. It resulted in a huge amount of costs in training staffs, application development and maintenance, and consequently, it limited the scope of available POS services and applications.

OBJECTIVE OF THE INVENTION

In view of the drawback above indicated, the invention provides a system for accessing POS devices transforming POS networks into service networks and reducing costs in implementing and managing such POS networks.

Another objective of the present invention is to provide a system which features more portability to applications in different models of POS terminals as well as allows sharing of multiple applications in the same POS device.

A further objective of the present invention is to provide a system for accessing devices that enable users to execute an application in POS terminal made by different vendors with no need for customization.

An important aspect of the invention is that the system is engineered to complement the use of standard POS terminals, not to compete with them since many companies, as VeriFone, Ingenico, Lipman, Sagem, Axalto and Intellect among others, have already developed such POS terminal a long time ago.

SUMMARY OF THE INVENTION

The invention refers to a client system for accessing POS and pin pad devices, connecting such POS terminal to a network comprised by at least one server. The system enables any POS terminal to execute applications located in application servers connected to the POS network using TCP/IP (Internet, Intranets, VPNs, etc.) and, WML (Wireless Markup Language) pages and scripts, in a process similar to the Internet.

The client system technology implements a thin-client model for the client/server architecture. It assumes that the client has direct access to

the server, where all business logic remains. This assumption intrinsically offers two major advantages to software development and maintenance. Application development occurs entirely at the server side where many high productivity tools are available and client side application can be automatically upgraded immediately after a server side update.

WAP standard, aiming at first generation cell phones, is concerned with communication penalties between the client and the server. Therefore, WAP forum has specified some information persistence and data validation mechanisms that dramatically reduce the amount of information exchanged through the network during successive WML (Wireless Markup Language) pages transition. Unchanged screen page requests may also be avoided with HTTP or WSP Web protocols cache mechanisms, although still relying on a client-driven updating process. Hence, together with WMLScript data validation routines, WML browsing almost resembles a POS application flow of screens.

WML is a declarative markup language targeted to create data entry screens. It offers basic input typing facilities and basic choice selection. It has a volatile variable environment meant to store information among screens of the same transaction flow. WMLScript is a tiny scripting language designed to simple data validation script writing. Neither WML nor WMLScript provide any persistent data storage neither assumes the presence of any particular peripheral device.

By analogy, the client system concept was brought to POS terminals. Particularly, WML browsers have shown to be the closest standard that would offer to a POS terminal the web and browsing benefits even still lacking some key features required by electronic operations, such as receipt printing and transaction history storage, among others.

POS terminals used to have peripherals, like magnetic card reader, thermal printer, pin pad entry device, smart card readers and other serial devices that are commonly integrated through a standard RS-232 interface such as a bar code reader, a Mifare contact-less card reader and / or a check reader. Besides peripheral device access, POS applications demand some

features not available on standard WML and WMLScript definitions such as persistent data record store, ISO8583 message formatting, classified information cryptography, and enhanced data entry support, EMV transaction authorization and, for dial up terminals, SDLC and X.28 legacy network support. Moreover, a server driven cache update policy was required in order to fit current transaction servers upgrading mechanisms.

As it will be described in the present invention, the client system technology allows the use of the POS terminal as a "low cost" platform for multiple applications sharing and value added services, turning a POS network into a "de facto" service network.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 depicts a POS terminal connected to multiple networks via different communication protocols.

Figure 2 depicts the individual customization of each POS terminal taught by the state of the art.

Figure 3 depicts how the invention makes capable the communication of any customized POS terminal with an application server.

Figure 4 depicts an uploading-downloading diagram and an electronic operation diagram being executed by the present invention.

Figure 5 depicts a diagram with POS client system application upload-download sequence.

Figure 6 depicts a diagram with POS client system Electronic operations sequence.

Figure 7 depicts the POS client system architecture and protocol layers.

DETAILED DESCRIPTION OF THE INVENTION

The present invention consists of a system for accessing and connecting customized POS terminals 10 to any network, using a specific client system 15. When in operation, the client system 15 assumes the control of all resources of the POS terminals 10 acting as an operational system. It enables any POS terminal 10 to execute applications 25 located in application servers 30 connected to the POS network using TCP/IP (Internet, Intra-

nets, VPNs, etc.) and WML (Wireless Markup Language) pages and scripts in a process similar to the Internet. The client system 15 also enable the same application 25 to use multiple communication protocols 20 when connected to distinct access networks, thus making it possible the use of TCP/IP, legacy networks (SDLC and X.28, for example) and others (GSM, GPRS, CDMA, Ethernet, Wi-Fi, Bluetooth, IR, etc) as shown in figure 1. Further, the client system 15 also has an advanced caching feature with the purpose of increasing data-exchange speed, allowing even true offline operations. The client system 15 still recognizes and controls all of the input and output devices connected to the POS, such as magnetic card readers, smart card readers, printers, pin pads, bar code readers, check readers, keyboards, Mifare contact-less card reader and so forth.

The access to application servers 30 provided by the present invention makes it possible to bring to the POS network all of the flexibility and functionalities available on the Internet on what concerns services and applications. As a result, it reduces the maintenance costs and adds flexibility to the process of applications upgrading. Moreover, because of the possibility of using distinct physical networks, the application upgrading process does not compromise the average data exchange time, which use legacy networks based on SDLC or other asynchronous protocols.

Figure 2 shows how POS terminals 10 were usually upgraded. Prior to the present invention, the application needed to be customized, so as each porting has to be carried out for each POS terminal model. Such operation used to be executed individually, requiring specific knowledge and maintenance staff for each POS terminal system.

As it can be seen from Figure 3, the client system operational environment allows sharing of an arbitrary amount of applications 25 in only one POS terminal 10, using application servers 30 connected through the network, also enabling to upgrade such applications remote and automatically and in real time.

PREFERRED EMBODIMENT OF THE INVENTION

In order to solve the problems described above, the present in-

vention defines web client system extensions that adapt a standard WAP browser to use the POS peripherals and extend it to perform electronic operations.

The solution solves an existing problem with a new technology, joining the reliability and execution speed of ISO 8583 operations over legacy protocols, such as SDLC and X.28, with the maintainability and development speed of web applications.

When in operation, this client system 15 assumes the control of all of the POS terminal resources acting as the operational system itself. It enables any POS terminal 10 to run web applications 25 downloaded from application servers 30 connected to the POS network using HTTP on top of TCP/IP, optionally secured by SSL protocol, in a process similar to the Internet. TCP/IP access to the application server 30 can be done using a simple dial up connection, or a broadband network like, GPRS, CDMA 1X, Ethernet II and WiFi (IEEE 802.11).

POS web applications, consisting of WML pages, scripts and other files, perform ISO8583 electronic operations with the transaction server 35, pretending to be a conventional C application. Such operations flow both over SDLC/X.28 dial up connections or over TCP/IP broad band networks.

This scheme is shown on Figure 4. By observing such figure, it is possible to detect the two distinct situations on the POS client system 15 life cycle. The first one is when it connects to the application server 30 to download or update the web application and the second when this application 25 connects to the transaction server 35 to perform an electronic transaction.

Application download can be detailed within the following steps, according to Figure 5:

1. Technician types the application server connection settings
2. POS client system 15 connects to a Remote Access Server (RAS) 45 or attaches to a broadband network.
3. POS client system 15 receives an Internet Protocol (IP) address.

4. POS client system 15 establishes a Transfer Control Protocol (TCP) session with the application server 30 and sends an application download/update request, usually with a HTTP (or HTTPs) POST command.

5. Application server 30 processes the request.

6. Application server 30 contacts the transaction server 35, pretending to be the POS Terminal 10, with an ISO8583 message on a TCP/IP connection.

7. Transaction server 35 responds to the application server 30 with the POS client system configuration settings.

8. Application server 30 processes the application settings and builds a customized version of the Web Application.

9. Application server 30 sends to the POS client system 15 the web application pages, scripts and data files.

10. POS client system 15 process the files received.

11. POS client system 15 emits a receipt of application download/updating completion to the technician

12. POS client system 15 automatically starts the Web Application.

The steps 6 and 7 above are optional in the solution. In another use case, the application server can simply download the whole application without the need of the application customization process or access to the transaction server.

Further, electronic operations perform a simpler process that can be detailed with the following steps, as shown in Figure 6:

1. POS user types the transaction data;

2. POS client system 15 connects to a Remote Access Server (RAS) 45 or attaches to a broadband network.

3. POS client system 15 receives network access.

4. POS client system builds an ISO8583 message.

5. POS client system sends the ISO8583 message to the transaction server 35.

6. Transaction server 35 responds to the POS client system with an ISO8583 message.

7. POS client system 15 process the received message.

8. POS client system 15 emits a transaction receipt.

1. ARCHITECTURE AND PROTOCOL LAYERS

In order to better define the invention the architecture of client system is detailed below and divided in specific layers as illustrated in Figure 7.

1.1 – Communication Protocol

Regarding communication protocols, the client system is able to run operations through one of the following protocols: TCP/IP/PPP, SDLC, X.28, GSM, GPRS, CDMA, Ethernet, Wi-Fi, Bluetooth, IR, etc. The application is in charge of selecting which protocol shall be used during a operation.

1.2 – Security Protocol

The thin-client application exchanges data with the web server through the HTTPS protocol, which is based on the SSL 3.0 standard. The SSL layer runs on top of the TCP protocol and provides support for an HTTP client to establish secure connection with any compliant server.

The client system supports the following cipher suites: RSA+RC4+MD5 and RSA+3DES+MD5. Both of them support server certificate authentication and client certificate authentication in the PEM format. The cipher suite with 3DES also supports client certificate authentication in the PKCS12 format.

1.3 – Transaction Protocols

The client system supports HTTP, ISO8583 and XML operations. HTTP operations are available through WML tag <go> and both GET and POST commands are supported. ISO8583 and XML operations are offered by WMLScript extensions. All protocols may coexist at the same application and may connect to distinct servers according to the application settings.

1.4 – Run Time Engine

After prompting the user interface, the client system keeps waiting for the user interaction to trigger events against the runtime engine. These

events are handled according to the current page definitions and may trigger some local WMLScript processing or invoking another page to be loaded. When a new WML page is loaded, it is parsed by the WML customized XML parser and a DOM syntax tree is generated. The tree is then traversed and the runtime internal structures are set to respond properly to the next user generated events. Both pages and scripts may be found at the cache of the client system or may be requested to an HTTP(S) server.

1.5 – Multi-Application Manager (MAM)

The client system Multi-Application Manager allows more than one application resides and to be executed in the same POS. The client system isolates applications from other applications using different virtual execution environment. The resources (WMLs, scripts, data files and variables) can be created, read or updated by the owner application only.

The applications can be configured into the terminal from a PC, using a serial communication, or can be fetched from a server, over TCP/IP. The basic configuration is stored in a table of applications (TA) in the POS that stores information about the current set of applications.

MAM main functionalities:

- Application Automatic Load, Update or Delete– The master application, which has privileged rights and usually belongs to the POS owner, can request a application table update from the sever, in order to add, delete or update applications in that terminal. The same operation can be done for a technician through the configuration menu. See Multi-Application Configuration functionality described below.
- Communication Between Applications – the client system permits communication between applications. Application A can start application B, as well as send parameters from an application to another.
- Switching Between Applications – User can switch from an application to another by pressing a soft key that calls the client system main menu. From it users can select other applications.
- Application Table Validation – A Key is used to verify if the current valid application table (TA) belongs to the current POS. If the key does

not match, a new TA is necessary.

- Multi-Application Configuration - An interface for the POS operator. Through it is possible to execute basic configuration and operation functions, including delete, add or update applications.

1.6 - EMV Protocol Standard Library

In order to abstract distinct manufacturer's terminal capabilities regarding the EMV protocol, the client system assumes the existence of an EMV library. This library is, actually, a PINPad interface library that encapsulates all the interactions between the client system and the POS EMV kernel.

The client system offers the EMV Library to the thin-client application as a WMLScript extension library, named PINPadLib.

2. CLIENT SYSTEM EXTENSIONS

Both WML and WML Script Languages were originally designed to create WEB Sites that can be displayed in WAP browsers, which are usually available in cell phones. In order to fulfill the requirements of a standard POS application, the invention defines some extensions to WML and WML Script Languages.

This set of WML tags, attributes and script functions allow, among other characteristics, that POS applications running over the client system: 1) access devices usually available in POS terminals such as card readers, printer, barcode readers, pin pad, Mifare contact-less card readers, check readers, etc...; 2) use multiple communication protocols when connected to distinct access networks (SDLC, X.28, TCP/IP, PPP, GPRS, CDMA, WNB, etc...); 3) persistent data record store; 4) access the EMV kernel presents in the POS operating system; 5) ISO8583 message formatting; 6) classified information cryptography; etc...

The complete list of extensions as well as their detailed functionality is described below.

2.1 - Tag Extensions to the WML Language

This section presents the new tags, and their attributes, provided to a WAP browser in order to turn it into a POS client system.

Tag	Description	Interpreted Attributes
beep	Starts beeping in the specified frequency until a key is hit.	frequency times – number of times the beep must go off. sync (true | false) – plays the beep in exhibition time (true) or in runtime (false) when a redirection occurs
form	Allows data entry in pages containing tags <input> automatically positioning the cursor on the next field when hitting the <enter> key. If the number of lines between the two fields is higher than the number of lines on screen, the cursor will be positioned on the last line on screen. Its function is similar to tag's <p>, being defined in the same scope and accepting the same attributes and content.	None
pinpad	Makes it possible to use the pinpad in WML pages. It can be defined in the same scope as tag's <input>. Just like tag's <input>, it cannot have any content. The attributes explanation is on screen	name – Name of the variable that receives the entry. title – Text presented on the pinpad display maxlength – maximum length of the entry string type (text | hidden | password) - text and password are similar to the tag input homonym. Hidden, doesn't repeat the typed; it is used to confirm values masterkey – Encoded Key that goes with the pinpad (Provider) workingkey - Encoded Key provided by the user (Client) account – Card Number (More frequently used for

		VISA)
pre	Works in a similar way as HTML homonym tag. Shows a text with its contents in the way it was written. Has a similar function as tag <p>, being defined in the same scope and accepting the same attributes and contents.	None
report	Enables printing reports. The tag's contents are printed instead of being displayed on the screen. Its function is similar to tag's <p>, being defined in the same scope and accepting the same attributes and contents	footerLFs – Number of line-feeds characters at the end of the report height (1 | 2) – font height width (1 | 2) – font width
Setenv	Attributes and behavior are similar to <setvar>. The difference is that this one sets variables in the browsers persistent environment	name - Name of the variable receiving the value value – Value to be assigned
Setfield	Attributes and behavior are similar to <postfield>. The difference is that this one sets a field into a Flexi-record structure to be sent to another application through a "vmac://" scheme href of the tag <go>	name – Flexi-record Id of the field to be set. value – Value to be assigned type – Type of the field (string | int | long)

2.2 –Attributes Extensions to the WML Language

This section presents the new attributes, values and standard attributes new behavior, provided to a WAP browser in order to turn it into a POS client system.

Tag	Attributes	Description
	newcontext = (true | false | vars)	**New value:** "vars" value initializes just the variables.
	autoprint = (true | false)	**New attribute:** Automatically prints the current card contents.
	dialup = (true | false)	**New attribute:** Connects automatically when showing the card.

Card	hangup = (true | false)	**New attribute:** Disconnects automatically when showing the card.
	persist = (true | false | last | none)	**New attribute:** Permits a deck to be persisted:
		true – It will create a copy of the current file using the name "persist.wml". The older persisted file will be rename to "last_persist.wml"
		false - No actions will be taken.
		last – It will rename "last_persist.wml" to "persist.wml".
		none – It will erase the file "persist.wml" so that it is not undesirably used.
	onrefresh = hRef	**New attribute:** url to go when the refresh intrinsic event is triggered
	onuserevent = hRef	**New attribute:** url to go when any user event (card switpe, keystroke, barcode reading) is triggered. Usually useful to idle screens.
	onvalidate = hRef	**New attribute:** url to go after every input confirmation in the card current.
Go	Localsrc = hRef	**New attribute:** Path to the local file for the get and put operation.
	src = hRef	**New attribute:** Path to the remote file for the get and put operati-

		on.
	delimiter	**New attribute:** Delimiter for the postfields list.
	user	**New attribute:** User login for servers that require access authorization.
	password	**New attribute:** User password for servers that require access authorization.
	hRef = hRef	**New behavior:** Send OS MAM events to other applications if set with a URLs like "os-mam://LogAppName:EventNo". Arguments can be passed through TLV record structure with <setfield> tag or through HTTP format with "?" get syntax or with <postfield> tag.
Input	align = (left | right)	**New attribute:** Text aligns inside the input space.
	Device = (keypad | keyboard | barcode | magnetic)	**New attribute:** Selected data entry device. Possible values are: magnetic – Magnetic card reader; barcode – Barcode reader; keyboard – External keyboard; keypad – Standard keyboard.
	type = (text | password | currency)	**New value:** The currency value forces the input value to have cents (e.g. "0.00")
	alarm = (true | false)	**New attribute:** If true, sounds a beep when the input size has

		been reached.
	filler	**New attribute:** Character to fill the input area in order to let the user aware of the size of the input. Its presence forces input masks to be shown prior typing and caret is suppressed.
	fullformat = (true | false)	**New attribute:** Requires the entire input field to be fulfilled.
	literals = (true | false)	**New attribute:** If true, suppresses the format characters form the variable value.
One-vent	type=(... | onrefresh | onusere-vent | onvalidate)	**New value:** New "intrinsic" events that are triggered the same way as their <card> attribute counterparts.
Timer	abort = (true | false)	**New attribute:** Indicates if the timer can be disabled when a key is hit

2.3 - WML Script Functions Extensions to the WML Script Standard Libraries

This section presents extensions to the WML Script standard libraries, provided to a WAP browser in order to turn it into a POS client system. The definitions of such extensions Script Functions are explained below of the table.

WML Script Standard Library	**WML Script Extended Functions**
FLOAT	toFloat(value)
STRING	setElementsPos(String, separator, nElements)
	elementAtPos(elementPos)
	formatCurrency(currencyString)
	isNumeric(string)
	toUpper (string)
	toLower (string)
	padRight (string, pad, len)

	padLeft (string, pad, len)
URL	loadFile (url, fileName)
	loadToCache (url)
WMLBROWSER	setEnv(Name, Value)
	goExt(url, method, bIsBack)
	beep(Freq, nTimes)
	hangUp()
	dialup()
	Persist()
	setPostfield (name, value)
	clearCacheWithTag (tag)
	getFirstVarName ()
	getNextVarName ()
	getPrevVarName ()
	pin2pin()
	dial(StringtoWhere)
	upLoad()
	addEnv(varName, increment)
	appendVar(varName, value)
	setEnvFromVars(varName, varList)
	setVarsFromEnv(varName)
	getVarFromEnv(envVarName, varName)
	deleteContext(appName)
	isConnected()
	installApp(appDataFile)
	setVarFromVars(varName, varList)
	setVarsFromVar(varName)
	getVarFromVar(wmlVarName, varName)
	getVarFromStr(wmlsStringOrVar, varName)
DIALOGS	show(message, defaultInput)
	showStatus(message, defaultInput)

Specific functions created to the POS client system:

toFloat(value) – This function returns the floating-point representation of a

given value. This function executes, exactly, the same type conversions defined for WMLScript language. An invalid *value* returns the string "invalid". Required to force type conversion when typed variables are used.

setElementsPos(String, separator, nElements) - This function stores *nElements* of *String* separated by *separator*. In case it succeeds, it returns an integer, which contains the position of the last character of the last element stored. Usually, it's used before a call to String.elementAtPos(elementPos) shown below.

elementAtPos(elementPos) - This function returns the element of a string, which is in the position *elementPos*. The string must already have been organized with the application of the function setElementsPos*(String, separator, nElements)*. If the string is not already organized by function *setElementsPos*, the one that was previously organized will be used. In case of error, it returns *invalid*.

formatCurrency(currencyString) – This function formats a String in currency notation, separating the cents with a comma or period mark, as well as the thousands and so on. The function returns the String formatted or *invalid* in case it fails.

isNumeric(string) - This function returns true if the argument can successfully be converted to a numeric value, otherwise, it returns false.

toUpper (string) - This function returns string argument converted to uppercase.

toLower (string) - This function returns string argument converted to lowercase.

padRight (string, pad, len) - This function returns string argument right-padded with *pad* character up to the length *len*.

padLeft (string, pad, len) - This function returns string argument left-padded with *pad* character up to the length *len*.

loadFile (url, fileName) - This function retrieves the content denoted by the absolute *url and save at a file named fileName*. It already strips out HTTP headers and returns the HTTP result code (200 means Ok).

loadToCache (url) - This function retrieves the content denoted by the abso-

lute *url* and stores it in the client system cache for future usage. It returns the HTTP result code (200 means Ok).

setEnv(Name, Value) - This is an extension that receives as parameters the name of the environment variable of POS and the value to be attributed to this variable. Returns *true* if it succeeds changing the variable *value* or false, if it does not. In case of failure (invalid parameters, for example), it returns *invalid*.

goExt(url, method, bIsBack) - This extension of the function WMLBrowser.go() allows the forward or return to a defined URL. The return to a WML page will require the realization of the "onenterbackward" event, in case it is foreseen. It receives as parameters the *url*, the *method* (POST or GET), and a logic value *bIsBack*, indicating the return to the URL. Returns the empty string in case it succeeds, otherwise, it returns *invalid*.

beep(Freq, nTimes) - This function emits a sound in the output device in the frequency specified by *Freq*, and the number of times specified by *nTimes*. Returns the empty string in case it succeeds, otherwise, it returns *invalid*.

hangUp() - This function disconnects the POS from the telephone line. Returns the empty string.

dialup() - This function starts the asynchronous connection of POS to the telephone line. Returns the empty string.

persist() - This function generates a copy of the current Script with the name "i:persist.wmlsc". In case this file already exists, it will be renamed to "i:last_persist.wmlsc". Returns the number of bytes recorded in the file "i:persist.wmlsc". If the current script have already erased itself by clearing the cache, then the result of calling persist is undefined and may result in runtime error.

setPostfield (name, value) - This function sets post fields that are supposed to be sent with the next call to WMLBrowser.goExt(href,"POST",true). It returns the empty string if it succeeds, otherwise it returns invalid.

clearCacheWithTag (tag) - This function erases from cache every file that presents a "VWTag:" HTTP header beginning with *tag*.

getFirstVarName () - This function returns the name of the first environment

variable. Together with getNextVarName() and getPrevVarName(), it offers an iterator to the persistent environment.

getNextVarName () - This function returns the name of the first environment variable. Together with getFirstVarName() and getPrevVarName(), it offers an iterator to the persistent environment.

getPrevVarName () - This function returns the name of the first environment variable. Together with getFirstVarName() and getNextVarName(), it offers an iterator to the persistent environment.

pin2pin() - This function starts an Operating System driven "back to back" client system clone.

dial(String toWhere) - This function set the dial parameters from a configuration in a record store. Returns the connection status.

getConStatus() - This function returns an integer whose value is the connection status.

upLoad() – This function starts the "back to back" application cloning upload.

addEnv(varName, increment) - This function receives as parameters the name of the environment variable of POS and an integer value to be added to this variable's current value. If the variable does not exists it is created with the value received as parameter. Returns true if it succeeds changing the variable value or false, if it does not. In case of failure (invalid parameters, for example), it returns invalid.

appendVar(varName, value) – This function receives as parameters the name of the environment variable of POS and a string value to be appended to this variable's current value. If the variable does not exists it is created with the value received as parameter. Returns true if it succeeds changing the variable value or false, if it does not. In case of failure (invalid parameters, for example), it returns invalid.

setEnvFromVars(varName, varList) - This function sets the environment variable varName with the variables defined in the semi-colon separated var name list varList. It returns the len of the string set to varName, which should be saved for future usage with the functions setVarsFromEnv() or getVarFro-

mEnv().

setVarsFromEnv(varName) - This function sets the WML context with the variables got from the value of environment variable varName. It returns the number of variables set, which should have been saved with function setEnvFromVars().

getVarFromEnv(envVarName, varName) - This function returns the value of the variable named varName from the value of environment variable envVarName. If the variable is not defined by the value it returns the empty string.

deleteContext(appName) - This Function completely deletes the files of application named appName. It can only be called by the POS Master Application.

isConnected() - This function replaces getConStatus() returns a Boolean indicating whether the connection is on.

installApp(appDataFile) - This function installs an application from a datafile named appDataFile and returns a integer indicating the error code. If this function runs well, terminal will be restarted and retrun code will not be tested.

setVarFromVars(varName, varList) - This function sets WML variable varName with the variables defined in the semi-colon separated var name list varList. It returns the len of the string set to varName, which should be saved for future usage with the functions setVarsFromVar() or getVarFromVar().

setVarsFromVar(varName) - This function sets the WML context with the variables got from the value of the WML variable varName. It returns the number of variables set, which should have been saved with function setVarFromVars().

getVarFromVar(wmlVarName, varName) - This function returns the value of the variable named varName from the value of WML variable wmlVarName. If the variable is not defined by the value it returns the empty string.

getVarFromStr(wmlsStringOrVar, varName) - This function returns the value of the variable named varName from the value of a WMLScript variable or string wmlsStringOrVar. If the variable is not defined by the value it returns

the empty string.

show(message, defaultInput) - This function shows a message on the POS screen and continue the execution regardless the user's request. In case it succeeds, it returns the empty string, otherwise, it returns *invalid*.

showStatus(message, defaultInput) - This function shows a message in the Status line on the POS screen. In case it succeeds, it returns the empty string, otherwise, it returns *invalid*.

2.4 – WML Script Libraries and Functions - Extensions to the WML Script Standard Libraries

This section presents the WML Script extension libraries provided to a WAP browser in order to turn it into a POS client system.

Extended Library	Extended Functions
RECORDSTORE	openStore (Name, CreateIfNecessary)
	CloseStore(StoreId)
	deleteStore (Name)
	getNumRecords(StoreId)
	getSize(StoreId)
	addRecord(StoreId, Record)
	deleteRecord(StoreId, RecordId)
	getRecord(StoreId, RecordId)
	getNextRecordId(StoreId, RecordId)
	getRecordSize(StoreId, RecordId)
	setRecord(StoreId, RecordId, RecordValue)
	createDatabase(BaseName, SourceName)
	findRecord (DB, Key, Pos, Separator, Ordered)
	setOrderKey(DB, Pos, Separator)
	findFirstRecord(StoreId)
	findNextRecord(StoreId)
	findRepeatedRecord (DB, Key, Pos, Separator, Ordered)
	defragStore (StoreName)
	appendLastRecord (StoreId, string)
	addRecordFromVars (StoreId, varList)

	setVarsFromRecord (StoreId, RecordId)
	getVarFromRecord (StoreId, RecordId, VarName)
	setView(DB, Key, Pos, Separator)
	deleteView(DB)
	setFilterView((DB, Key, Pos, Separator)
CONSOLE	print(string)
	printLn(string)
CRYPTO	encrypt (Message, SessionKey)
	decrypt(Message, SessionKey)
	encrypt2DES (Message, SessionKey)
	decrypt2DES (Message, SessionKey)
	xor (string1, string2)
	encrypt2DESHexa (Message, SessionKey)
	decrypt2DESHexa (Message, SessionKey)
	encryptHexa (Message, SessionKey)
	decryptHexa(Message, SessionKey)
PRINTER	open()
	setWidthMode(mode)
	setHeightMode(mode)
	print(string)
	printLn(string)
	close()
	printLGO(LOGOFileName)
CARD	checkRanges(currentPAN, privateLabelSuffix)
	checkRangesInStore (currentPAN, StoreName)
SYSTEM	currentTimeSecs ()
	datetime2Seconds (datetime)
	seconds2datetime (seconds)
	isValidDate (datetime)
	datetime ()
	currentTicks ()
ISO	charToHex(String)
	hexToChar(String)

	readPackager(String)
	transactMessage(String host, Int port, String fieldlist, String channel, String header, String trailler, String mandatoryFields)
	transactFromRecord(String host, Int port, Int storeId, Int recordId, String channel, String header, String trailer, String mandatoryFields)
	transactFromRecordToVar(String host, Int port, Int storeId, Int recordId, String channel, String header, String trailer, String mandatoryFields)
	hexToInt(String hexa, Boolean BigEndian)
	intToHex(Int i, Boolean BigEndian)

Specific libraries and functions created to the POS client system:

2.4.1 - RECORDSTORE Extended Library

The aim of this library is to allow the persistence of information, storing the data in indexed files.

List of Functions:

openStore (Name, CreateIfNecessary) - This function receives as parameters the name of the file to be created and a boolean variable CreateIfNecessary, pointing if the file should be created in case it doesn't exists. At the same time of the file creation, also a respective index file is created. Returns an integer with the index (id) of the open file or invalid, in case fails to open or create the file.

closeStore(StoreId) - This function receives as parameter the index (StoreId) of the opened file, closing the data and index files. Returns an integer with the index (StoreId) of the closed file. If it does not succeed on closing the file or if StoreId does not exist, it returns invalid.

deleteStore (Name) - This function receives as parameter a string, Name, containing the name of the opened file and deletes this data file, as well as its index file. Returns an integer greater or equal to zero if it succeeds deleting the files. If it does not succeed, it returns *invalid*.

getNumRecords(StoreId) - This function receives as parameter an integer, StoreId, containing the index of the opened file and obtains the number or records registered. Returns and integer greater or equal to zero if it succeeds

obtaining the number of records. Otherwise, it returns invalid.

getSize(StoreId) - This function receives as parameter an integer, StoreId, containing the index of the opened file and gets its size in bytes. If the operation is successful it returns an integer with the file size (total number of bytes), otherwise it returns invalid.

addRecord(StoreId, Record) - This function receives as parameter an integer, StoreId, containing the index of the opened file and one string, Record, containing the data to be included in the file. If it succeeds appending, it returns an integer with the index of the appended record in the data file, otherwise, it returns invalid.

deleteRecord(StoreId, RecordId) - This function receives two integers as parameters: StoreId, containing the index of the opened file and RecordId, containing the index of the record to be excluded of the file. If it succeeds deleting, it returns an integer with the index of that deleted record, otherwise, it returns invalid.

getRecord(StoreId, RecordId) - This function receives two integers as parameters: StoreId, containing the index of the opened file and RecordId, containing the index of the record to be retrieved. If it succeeds the reading operation, it returns an integer with the index of that retrieved record, otherwise, it returns invalid.

getNextRecordId(StoreId, RecordId) - This function receives two integers as parameters: StoreId, containing the index of the opened file and RecordId, containing the index of the previous record to be retrieved. If it succeeds finding the index of the next record, it returns the index as an integer, otherwise, it returns invalid.

getRecordSize(StoreId, RecordId) - This function receives two integers as parameters: StoreId, containing the index of the opened file and RecordId, containing the index of the record to be sized. If it succeeds finding the record index, it returns an integer with its size in bytes, otherwise, it returns invalid.

setRecord(StoreId, RecordId, RecordValue) - This function receives as parameter the integers StoreId, containing the index of the opened file and Re-

cordId, containing the index of the record to be changed and the string RecordValue, containing the new values to be recorded. This function is useful to update information in a given record, as long as it does not alter its size. In case of well-succeeded changing, the RecordId of that record will be returned, otherwise the return value will be invalid. If the size of the record is not the same, it returns invalid. In this case, it must be excluded and new information in a new record should be recorded.

createDatabase(BaseName, SourceName) - This function creates a record store under the name Basename from a source file SourceName, both provided as parameters. The function returns a zero or a positive integer if it succeeds. It returns invalid if it can not create the record store.

findRecord (DB, Key, Pos, Separator, Ordered) - This function searches a string Key located in the position Pos related to the Separator. If the file DB is organized in relation to the desired field, the parameter Ordered may be equal to true, allowing the realization of a binary search in DB.

setOrderKey(DB, Pos, Separator) - This function defines the search order in the DB file according to the position Pos in relation to the separator, for the functions findFirsRecord() and findNextRecord().

findFirstRecord(StoreId) - This function receives as parameter the handle (StoreId) of the opened file and returns its first record index. Function setOrderKey() must have been called previously. Returns an integer index related to the position of the first record according to the order defined by the function setOrderKey(DB, Pos, Separator), or invalid in case of failure (it can't open the file, for example).

findNextRecord(StoreId) - This function receives as parameter the handle (StoreId) of the opened file and returns the next record index. Function findFirstRecord() must have been called previously. Returns an integer index related to the position of the next record according to the order defined by the function setOrderKey(DB, Pos, Separator), or invalid in case of failure (it can't open the file, for example).

findRepeatedRecord (DB, Key, Pos, Separator, Ordered) - This function works like findRecord(), but it considers the occurrence of records with re-

peated keys. Returns the Id of the founded record.

defragStore (StoreName) - This function physically removes deleted records from the RecordStore named StoreName. The record Store must not be opened when it is called. It returns invalid if it fails.

appendLastRecord (StoreId, string) - This function appends the string argument to the content of the last physical record, if it is not deleted. It should to be called right after addRecord(). It returns the RecordId.

addRecordFromVars (StoreId, varList) - This function adds a record to opened RecordStore identified by StoreId with the variables defined in the semicolon separated var name list varList. It returns the id of the added record, which should be saved for future usage with the functions setVarsFromRecord() or getVarFromRecord().

setVarsFromRecord (StoreId, RecordId) - This function sets the WML context with the variables got from the record identified with RecordId of the opened RecordStore identified by StoreId. It returns the id of added record read, which should have been saved with function addRecordFromVars().

getVarFromRecord (StoreId, RecordId, VarName) - This function returns the value of the variable named VarName from the record identified with RecordId of the opened RecordStore identified by StoreId. If the variable is not defined by the record it returns the empty string.

setView(DB, Key, Pos, Separator) - This function defines a navigation filter for a record store DB, having value key on the field at the position Pos in relation to the separator. The record store is supposed to be ordered by the same field. Views created with this function offer a fully transparent selection at the record store to the basic navigation functions.

deleteView(DB) - This function deletes the records selected by the view currently set for a record store DB.

setFilterView(DB, Key, Pos, Separator) - This function defines a navigation filter for a record store DB, having value key on the field at the position Pos in relation to the separator. The record store is not supposed to be ordered by any field. Views created with this function offer a fully transparent selection at the record store to the basic navigation functions, although records out of the

view will be sequentially skipped when RecordStore.getNextRecordId() be called .

2.4.2 CONSOLE Extended Library

This Library contains a set of functions used for application debugging.

List of Functions:

print(string) – This function shows the text of debugging *string* in the information window of the client system. No new line character is inserted after the text. Returns 1 if it succeeds on showing or, otherwise, *invalid*.

printLn(string) – This function shows the debugging text *string* on the information window of the client system. It inserts a new line character after the text. Returns 1 if it succeeds showing, otherwise, it returns *invalid*.

2.4.3 CRYPTO Extended Library

This Library contains a set of functions used for the ciphering and deciphering of information to be transmitted with more security through the web.

List of Functions:

encrypt (Message, SessionKey) - This function returns the *message* parameter encrypted with DES algorithm . If *message* size is greater than 512 bytes or if the ciphering does not succeed, the message returns *invalid*. SessionKey is the 16 bytes string corresponding to an 8 byte key hex-encoded. The return value is an ascii string hex-encoded with the double length of the *Message* argument.

decrypt(Message, SessionKey) - This function returns the message parameter decrypted with DES algorithm. If *Message* size is greater than 1024 bytes or if the ciphering does not succeed, the message returns *invalid*. SessionKey is the 16 bytes string corresponding to an 8 byte key hex-encoded. *Message* parameter is supposed to be an ascii hex-encoded string with the double length of the returned value.

encrypt2DES (Message, SessionKey) - This function returns the *message* parameter encrypted with DES algorithm. Prior to encrypting, it prefixs the *Message* with the BCD representation of its length. If *Message* size is grea-

ter than 512 bytes or if the ciphering does not succeed, the message returns *invalid*. SessionKey is the 16 bytes string corresponding to an 8 byte key hex-encoded. The return value is an ascii string hex-encoded with the double length of the *Message* argument.

decrypt2DES (Message, SessionKey) - This function returns the message parameter decrypted with DES algorithm. If *Message* size is greater than 1024 bytes or if the ciphering does not succeed, the message returns *invalid*. *Message* parameter is supposed to be an ascii string hex-encoded with the double length of the returned value plus the size of the length of the string.

xor (string1, string2) - This function receives two hex-encoded ascii strings and returns the hex-encoded ascii string corresponding to xor between their binary values.

encrypt2DESHexa (Message, SessionKey) - This function returns the *message* parameter encrypted with DES algorithm. Prior to encrypting, it prefix the *Message* with the BCD representation of its length. *Message* argument is supposed to be an hex-encoded ascii string. If Message length is greater than 1024 bytes or if the ciphering does not succeed, the message returns *invalid*. SessionKey is the 16 bytes string corresponding to an 8 byte key hex-encoded. The return value is an ascii string hex-encoded with the same length of the *Message* argument.

decrypt2DESHexa (Message, SessionKey) - This function returns the message parameter decrypted with DES algorithm. If *Message* size is greater than 1024 bytes or if the ciphering does not succeed, the message returns *invalid*. SessionKey is the 16 bytes string corresponding to an 8 byte key hex-encoded. *Message* parameter is supposed to be an ascii string hex-encoded with the same length of the returned value plus the size of the length of the string.

encryptHexa (Message, SessionKey) - Same as encrypt, but message is in hexadecimal representation. The return value is an ascii string hex-encoded with the double length of the *Message* argument.

decryptHexa(Message, SessionKey) - Same as encrypt, but message is in hexadecimal representation. The return value is the message parameter de-

crypted with DES algorithm.

2.4.4 - PRINTER Library

This library contains a set of functions used for printing.

List of Functions:

open() - This function opens the output to the printer. If it succeeds, it returns the obtained handle, otherwise it returns invalid.

setWidthMode(mode) - This function configures the width to the font being sent to the printer, taking as a base the mode parameter. Mode must be conversion to integer or floating-point compliant. If it succeeds it returns true, if not or the parameter mode is illegal, it returns invalid.

setHeightMode(mode) - This function configures the height of the font being sent to the printer, taking as a base the parameter mode. Mode must be conversion to integer or floating-point compliant. If it succeeds it returns true, if not or the parameter mode is illegal, it returns invalid.

print(string) - This function prints the content of string. Returns true if the print succeeds, otherwise, it returns invalid.

printLn(string) - This function prints the content of string and adds a new line character after the print. Returns true if the print succeeds, otherwise, it returns invalid.

close() - This function closes the output to the printer, returning an empty string ("").

printLogo(LOGOFileName) - This function receives as parameter the path to the file where the bitmap, in LGO format, that will be printed is located. The function returns either a negative value in case it fails or "1" in case it succeeds printing.

2.4.4 CARD Library

This library contains a set of functions used for financial card BIN range check.

List of functions:

checkRanges(currentPAN, privateLabelSuffix) - This function checks the range of the given card PAN against those read from the POS environment on variables MAX*lblX* and MIN*lblX*, where lbl stands for the given privateLa-

belSuffix and X stands for the counter of ranges for that label. X begins at 0. If the currentPAN fits to range X then INF*lbl*X. If it does not fit to any range, it returns *invalid*. If no private label suffix is give, it assumes default value "PAN".

checkRangesInStore (currentPAN, StoreName) - This function checks the range of the given card PAN against those read from the records of the StoreName RecordStore. Each record is supposed to have a semi-colon separated three-element string, .e.g "4400;4999;returnedinfo". The PAN is checked against the two first elements of each record until it fits in-between them. The function returns the third element of the first record that fits. If it does not fit to the range of any record, it returns *invalid*.

2.4.5 SYSTEM Library

This library contains a set of functions used for accessing system time utilities.

List of functions:

currentTimeSecs () - This function returns the current POS time in seconds from 01/01/1970, 00:00:00.

datetime2Seconds (datetime) - This function returns the number of seconds passed from 01/01/1970, 00:00:00 to the date and time expressed by *datetime* with format "YYYYMMDDHHMMSS".

seconds2datetime (seconds) - This function returns the date and time corresponding to number of seconds passed from 01/01/1970, 00:00:00 expressed by *seconds*. Return value is with format "YYYYMMDDHHMMSS".

isValidDate (datetime) - This function returns true if the datetime argument is expresses a valid date/time with format "YYYYMMDDHHMMSS".

datetime () - This function returns the current POS date and time. Return value format is "YYYYMMDDHHMMSS".

currentTicks () - This function returns the number of milliseconds since the POS was started.

2.4.6 ISO Library

This library contains a set of functions to deal with ISO-8583 messages.

charToHex(String) -This function receives a String as Input and returns another String with the HEXADECIMAL representation of the input String in ASCII.

hexToChar(String) - This function receives a String as Input that is a HEXADECIMAL representation of a String (in ASCII) and returns the String represented. The returning String will always have the half size of the source String. If the source String length is odd, the function will return *invalid*.

readPackager(String) - This function updates the packager used to pack the ISO-8583 message. The input String is the PATH of the file with the packager definition.

The returning value is the error code. If return is zero, no error occurred.

The format of the file that defines the packager is:

FIELDID=PACKAGER;LEN<;INNERPACKAGER FILEPATH>

Example:

#this is a comment
0=IFB_NUMERIC;4
1=IFB_BITMAP;16
2=IFB_LLNUM;19
3=IFB_NUMERIC;6
#4=IFB_NUMERIC;12
34=IFB_LLLIBINARY;999;f:subdef.pdf

To reduce the size of the file and decrease the parsing time, space characters are not allowed in a packager definition file. This file is a regular text file (text format).

The ISO fields have a packager, that identifies the format the data will be sent in the ISO message. A field can, optionally, have inner fields. A inner packager can be defined to let the client system parse the field. To this happens, a file path containing the inner packager definition can be specified.

The possible packagers are: IFB_BITMAP, IF_HEX, IFA_LLHEX, IFA_LLLHEX, IFB_LLHEX, IFB_LLLHEX, IF_BINARY, IFA_LLBINARY, IFA_LLLBINARY, IFB_LLBINARY, IFB_LLLBINARY, IF_CHAR, IFA_LCHAR,

IFA_LLCHAR, IFA_LLLCHAR, IFB_LLCHAR, IFB_LLLCHAR, IFA_NUMERIC, IFA_LLNUM, IFA_LLLNUM, IFB_NUMERIC, IFB_LLNUM, IFB_LLLNUM, I-FA_AMOUNT, IFB_AMOUNT, IFB_LLLIHEX, IFB_LLLIBINARY, IFB_LLLICHAR and IFB_LLLINUM.

There are 6 types of packager: Numeric, Amount, Character, Hexa, Binary and Bitmap.

The L, LL or LLL characters indicates the maximum size of a field. If a field is IFA_LLLNUM, means that its size cannot be greater than 999.

The IFA or IFB prefix indicates that the numeric portion of a field is stored in ASCII or BCD.

The 'I' in some packager names (ex: IFB_LLLINUM) indicates that the field will be identified. This is useful for defining inner packagers, where the inner fields should be identified.

Numeric: This packager receives a String with a numeric representation (ex:"12345").

Results:

IFA_NUMERIC: 12345	(number sent as a String)
IFA_LLNUM: 0512345	(the field size in ASCII)
IFA_LLLNUM: 00512345	(the field size in ASCII)
IFB_NUMERIC: x12 x34 x50	(number stored in BCD)
IFB_LLNUM: x05 x12 x34 x50	(field size also in BCD)
IFB_LLLNUM: x00 x05 x12 x34 x50	(field size also in BCD)
IFB_LLLINUM: x00 x05 x23 x12 x34 x50	(id is 23. Also in BCD)

Amount: This packager is similar to the numeric, except the fact that is preceded by a character that indicates the signal. The input for this packager may be a String like "D12050".

Results:

IFA_AMOUNT: C12345	(number sent as a String)
IFB_AMOUNT: x43 x12 x34 x50	(number sent in BCD)

Character: This packager receives a String like "this text is ok! 12345".

Results:

IFA_CHAR: 12345	(field sent as a String)

IFA_LCHAR: 512345 (the field size in ASCII)
IFA_LLCHAR: 0512345 (the field size in ASCII)
IFA_LLLCHAR: 00512345 (the field size in ASCII)
IFB_CHAR: x31 x32 x33 x34 x35 (field sent as a String)
IFB_LLCHAR: x05 x31 x32 x33 x34 x35 (field size in BCD)
IFB_LLLCHAR: x00 x05 x31 x32 x33 x34 x35 (field size also in BCD)
IFB_LLLICHAR: x00 x05 x23 x31 x32 x33 x34 x35(id is 23. Also in BCD)

Hexa:

This packager receives a String representing (in hexadecimal) a binary field. The hexa String is converted into a binary field and appended in the message.

Results:

IF_HEX: x31 x32 x33 x34 x35 (field sent in binary)
IFA_LLHEX: x30 x35 x31 x32 x33 x34 x35 (size (05) in ASCII)
IFA_LLLHEX: x30 x30 x35 x31 x32 x33 x34 x35 (size (005) in ASCII)
IFB_LLHEX: x05 x31 x32 x33 x34 x35 (size (05) in BCD)
IFB_LLLHEX: x00 x05 x31 x32 x33 x34 x35 (size (005) in BCD)

Binary:

This packager receives a binary buffer and creates a binary field in the message. As there is not a binary type for WMLScript, this packager was intentionally created to wrap inner fields. The inner fields may be numeric + char and the outer field should be defined as binary. As packing the inner fields, the binary buffer result (outer field) will be packed automatically as binary by the engine.

Results:

IF_BINARY: x31 x32 x33 x34 x35 (field sent in binary)
IFA_LLBIN: x30 x35 x31 x32 x33 x34 x35 (size (05) in ASCII)
IFA_LLLBIN: x30 x30 x35 x31 x32 x33 x34 x35 (size (005) in ASCII)
IFB_LLBIN: x05 x31 x32 x33 x34 x35 (size (05) in BCD)
IFB_LLLBIN: x00 x05 x31 x32 x33 x34 x35 (size (005) in BCD)

Bitmap:

This is a special packager that stores a binary bitmap in the mes-

sage. This bitmap is created based on the existence of the message fields. This packager is used for field 1.

transactMessage(String host, Int port, String fieldlist, String channel, String header, String trailler, String mandatoryFields) - This function sends and receives a message based on the packager configured and the fieldlist used. The field list is a String that wrap the field names that will be sent in the message. The tokens are separated by a ';' character. Fields are named by the rule f<field ID>. If the name sent is an sub field name, the rule is f<field iD>s<sub ID>.

Example of a field list:

"f0;f2;f3;f28;f11;f34s0;f34s2s0;f34s2s2;f34s3;f34s5;f41;f70"

f34 is composed by f34s0, f34s2, f34s3 and f34s5, while f34s2 is composed by f34s2s0 and f34s2s2. Here we found three levels of inner fields.

The header and trailer to be sent in the message are hexadecimal strings representing the binary header and trailer that will be sent.

Example:

"0600030001" generates x06 x00 x03 x00 x01

The selected channel reflects the way the message length is stored in the message. The available channels are: "ASCII", "RAW", "NAC" and "NCC".

Example (message size is 256):

ASCII: x30 x32 x35 x36 ("0256")

RAW: x00 x00 x01 x00 (0000-0000 0000-0000 0000-0001 0000-0000)

NAC: x01 x00 (0000-0001 0000-0000)

NCC: x02 x56 (BCD)

The values for the fields sent in the fieldlist parameter, has to store values as variables in memory. You may set them with "WMLBrowser.setvar(fieldname, value);".

The message will be sent to the server and the script will block waiting for the response. If errors occur it will be retrieved as the function re-

turning value, otherwise zero will be returned.

The response message is parsed by the packager rules. The fields and sub fields found will be saved into variables in memory too. The convention naming for that response variables are the same for the sending, but instead of a 'f' preceding the ID a 'r' will be the suffix.

The mandatoryFields argument is a String formatted as fieldlist is. It forces the response to be checked. If a mandatory field is missing an error occurs and the transaction is not processed.

From the moment the function returns and so on, the application has to recover the variables, verify them and do what is desired to do. Maybe print a receipt.

transactFromRecord(String host, Int port, Int storeId, Int recordId, String channel, String header, String trailer, String mandatoryFields) - This function sends and receives a message based on the packager configured and the ISO fields set. The fields are stored in a Record of a RecordStore. The RecordStore identification is passed as the storeId parameter and the Record identification is passed as recorded parameter. In order to build a record with the ISO fields, you should use the addRecordFromVars() function of the RecordStore library.

This function offers an alternative way to set arguments (in this case, the ISO fields) for a ISO transaction.

The header and trailer to be sent in the message are hexadecimal strings representing the binary header and trailer that will be sent.

Example:

"0600030001" generates x06 x00 x03 x00 x01

The selected channel reflects the way the message length is stored in the message. The available channels are: "ASCII", "RAW", "NAC" and "NCC".

Example (message size is 256):

ASCII: x30 x32 x35 x36 ("0256")

RAW: x00 x00 x01 x00 (0000-0000 0000-0000 0000-0001 0000-0000)

NAC: x01 x00 (0000-0001 0000-0000)

NCC: x02 x56 (BCD)

The mandatoryFields argument is a list of fields to be checked if present in the response.

Example of a mandatoryFields list:

"f0;f2;f3;f28;f11;f34s0;f34s2s0;f34s2s2;f34s3;f34s5;f41;f70"

f34 is composed by f34s0, f34s2, f34s3 and f34s5, while f34s2 is composed by f34s2s0 and f34s2s2. Here we found three levels of inner fields.

MandatoryFields forces the response to be checked. If a mandatory field is missing, an error occurs and the transaction is not processed.

The response message fields are stored in a new Record of the RecordStore and its id is the function returning value. To restore the fields in variables you should call the SetVarsFromRecord() function of the RecordStore library. The variables are set using the same nomenclature rule as transactMessage() does.

transactFromRecordToVar(String host, Int port, Int storeId, Int recordId, String channel, String header, String trailer, String mandatoryFields) - This function sends and receives a message based on the packager configured and the ISO fields set. The fields are stored in a Record of a RecordStore but the return is set to the WML Variable named ISORESP. If result length exceeds the WML maximum variables length (512), exceeding bytes are split into 500 bytes variables named ISORESP*n*, n=1... WML Variable ISONRESP is also set with the total number of variables needed to store the result, including ISORESP. The RecordStore identification is passed as the storeId parameter and the Record identification is passed as recorded parameter. In order to build a record with the ISO fields, you should use the addRecordFromVars() function of the RecordStore library.

This function offers an alternative way to set arguments (in this case, the ISO fields) for an ISO transaction.

The header and trailer to be sent in the message are hexadecimal strings representing the binary header and trailer that will be sent.

Example:

"0600030001" generates x06 x00 x03 x00 x01

The selected channel reflects the way the message length is stored in the message. The available channels are: "ASCII", "RAW", "NAC" and "NCC".

Example (message size is 256):

ASCII: x30 x32 x35 x36 ("0256")

RAW: x00 x00 x01 x00 (0000-0000 0000-0000 0000-0001 0000-0000)

NAC: x01 x00 (0000-0001 0000-0000)

NCC: x02 x56 (BCD)

The mandatoryFields argument is a list of fields to be checked if present in the response.

Example of a mandatoryFields list:

"f0;f2;f3;f28;f11;f34s0;f34s2s0;f34s2s2;f34s3;f34s5;f41;f70"

f34 is composed by f34s0, f34s2, f34s3 and f34s5, while f34s2 is composed by f34s2s0 and f34s2s2. Here we found three levels of inner fields.

MandatoryFields forces the response to be checked. If a mandatory field is missing, an error occurs and the transaction is not processed.

The response message fields are stored in a new Record of the RecordStore and its id is the function returning value. To restore the fields in variables you should call the SetVarsFromRecord() function of the RecordStore library. The variables are set using the same nomenclature rule as transactMessage() does.

hexToInt(String hexa, Boolean BigEndian) - This function receives an hexadecimal representation of as Integer. The Integer in the script engine is four bytes long, so the hexa parameter can be a string of 2, 4, 6 or 8 character long, representing the Integer bytes. This representation can be as a "Big Endian" or "Little Endian", and this is informed in the in the Boolean parameter BigEndian (if working with a big endian representation, set it to true). The returning value is the desired Integer.

intToHex(Int i, Boolean BigEndian) - This function converts an integer into an hexadecimal representation of a Integer.

Additionally, the client system contains a library called PinPad that contains a set of functions used for accessing the PIN Pad device and the POS EMV Kernel through the EMV standard interface.

This invention is to be applied in a variety of business areas, such as healthcare services / insurance, loyalty, remote banking, bill payment, prepaid reload financial, gift card, money transfer, and age verification, time and labor management, among others.

The application herein described is an embodiment of the possibilities provided by the invention. Many different application modes can be designed, using different connection means even devices and network. The true scope of the invention is defined by the claims.

CLAIMS

1. System for accessing a POS terminal (10) comprising a client system (15) which connects such POS terminal (10) to the network using a plurality of communication (20) and transaction protocols, the client system (15) including at least one customized WML and Script extension added to preexisting WAP standards which comprises:

means for accessing a plurality of peripheral devices;

means for downloading and updating applications (25) from application servers (30);

means for executing electronic operations with transaction servers (35) using different transaction protocols; and

means for supporting multi-applications independently carried out in logical distinct environments.

2. System for accessing a POS terminal according to claim 1, wherein said different transaction protocols are HTTP, ISO 8583 or XML.

3. System for accessing a POS terminal according to claim 1, wherein the communication protocols (20) can be selected from a group consisting of TCP/IP, PPP, SDLC, X.28, GPRS, CDMA, CDMA 1X, Ethernet, GSM, Wi-Fi, Bluetooth and IR.

4. System for accessing a POS terminal according to claim 1, wherein the peripheral devices can be selected from a group consisting of magnetic card readers, smart card readers, printers, pin pads, bar code readers, check readers, keyboards, Mifare contact-less card reader and sensitive touch screen.

5. System for accessing a POS terminal according to claim 1, wherein the customized WML and Script extension added to preexisting WAP standards further comprises means for executing electronic operation with chip cards.

6. Method for downloading and updating applications using the system as defined in one of claims 1 to 5, comprising the steps of:

connecting the POS client system (15) with a network to receive an address;

establishing a transfer control protocol session between the client system (15) with the application server (30);

sending an application download/update request;

processing the request in application server (30);

sending to the POS client system (15) the application pages, scripts and data files.

7. Method for downloading and updating applications using the system according to claim 6, wherein the step of processing the request in application server (30) further comprises the steps of:

contacting the transaction server (35) with a message on a TCP/IP connection;

receiving an answer from transaction server (35) with the POS client system configuration settings;

processing the application settings and builds a customized version of the web application; and

sending to the POS client system (15) the customized application pages, scripts and data files.

8. Method for downloading and updating applications, according to claim 6, wherein the connection of POS terminal (10) to a network is executed with a remote access server (45) or via a broadband network.

9. Method for downloading and updating applications, according to claim 6, wherein the address provided by network is preferable an Internet Protocol (IP).

10. Method for downloading and updating applications, according to claim 6, wherein the step of sending an application download/update request is accompanied with a HTTP (or HTTPs) POST or GET commands.

11. Method for downloading and updating applications, according to claim 7, wherein the step of contacting the transaction server is carried out with a message in ISO8583 format.

12. Method for downloading and updating applications, according to claim 6, wherein, after the step of sending the application pages, scripts and data files, the method further comprising the steps of processing the files

received and emitting a receipt of application download/updating completion.

13. Method for performing electronic operations using the system as defined in one of claims 1 to 5, comprising the steps of:

connecting the POS client system (15) with a network to receive permission;

building a transaction message and sending such message to the transaction server (35);

receiving a response from transaction server (35) to the POS client system (15) with a transaction message.

14. Method for performing electronic operations according to claim 13, wherein the connection of POS terminal (10) to a network is executed with a remote access server (45) or via a broadband network.

15. Method for performing electronic operations according to claim 13, wherein the transaction message is in ISO 8583 format.

16. Method for performing electronic operations according to claim 13, wherein, after the step of receiving a response from transaction server, the method further comprising the steps of processing the messages received and emitting a transaction receipt.

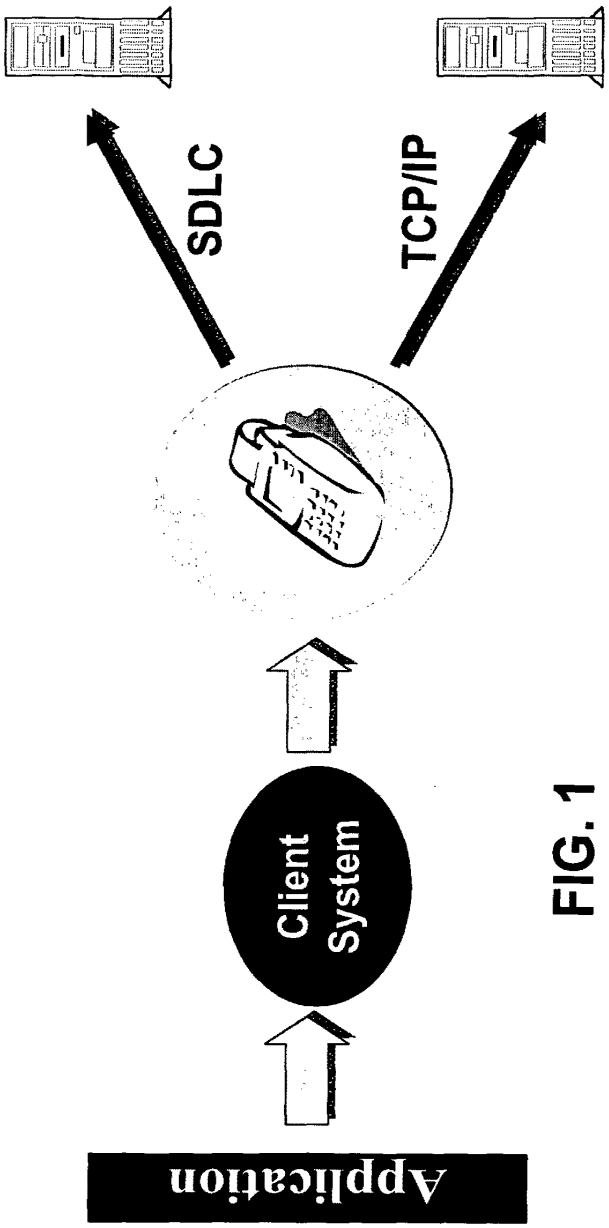


FIG. 1

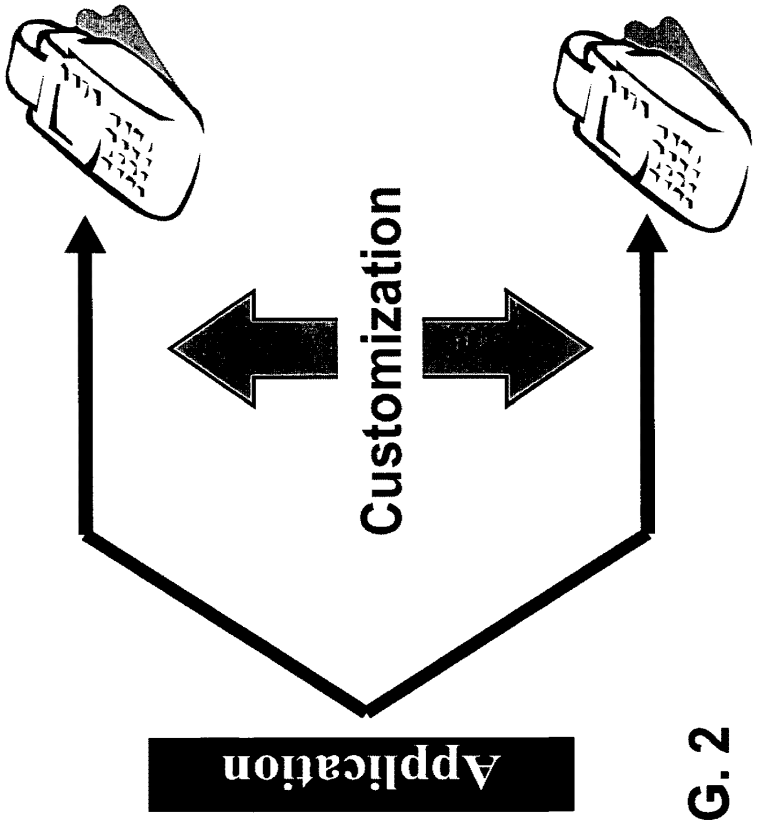


FIG. 2

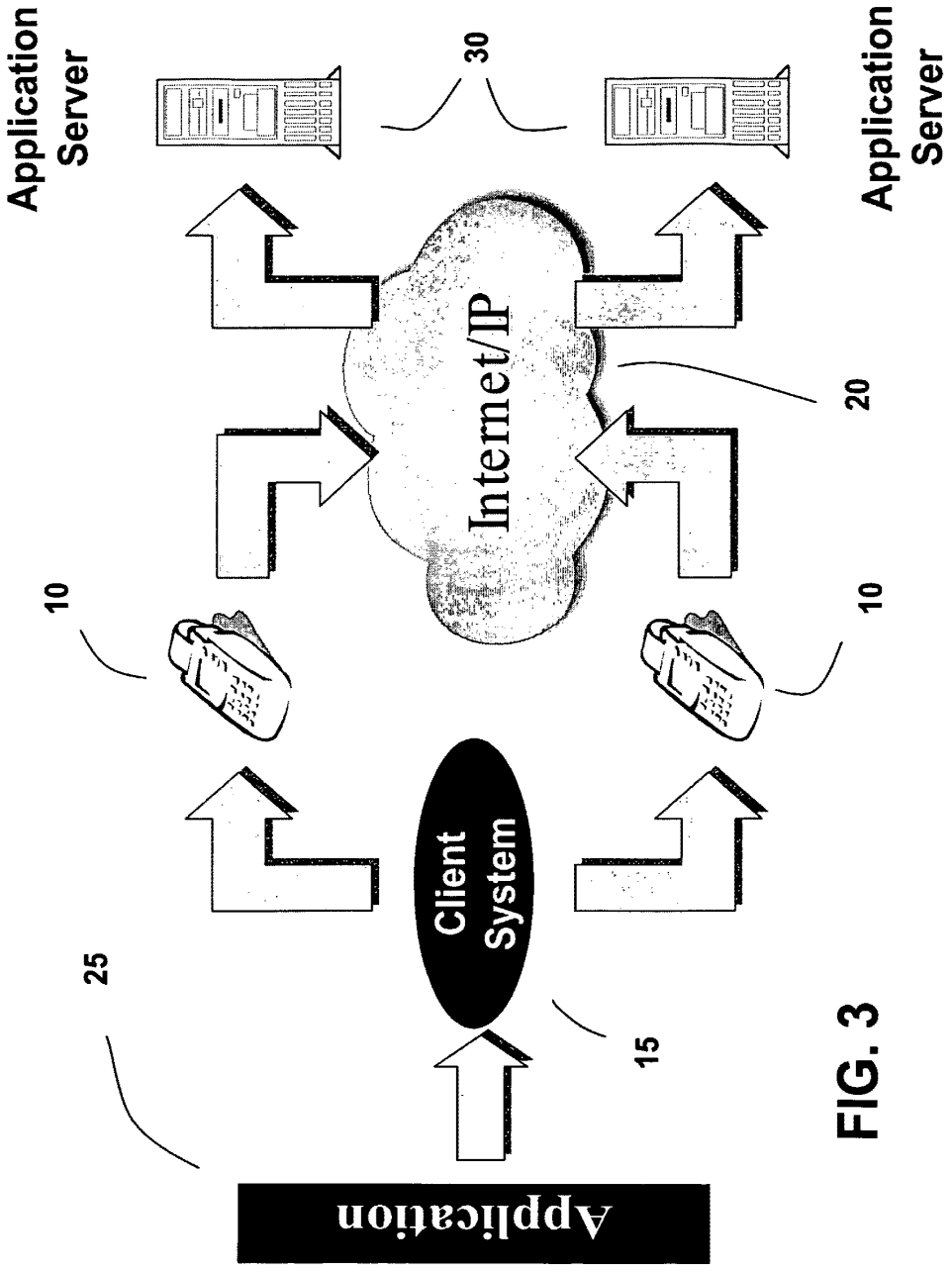

Application Server
30
Application Server
Internet/IP
20
10
10
Client System
25
15
Application

FIG. 3

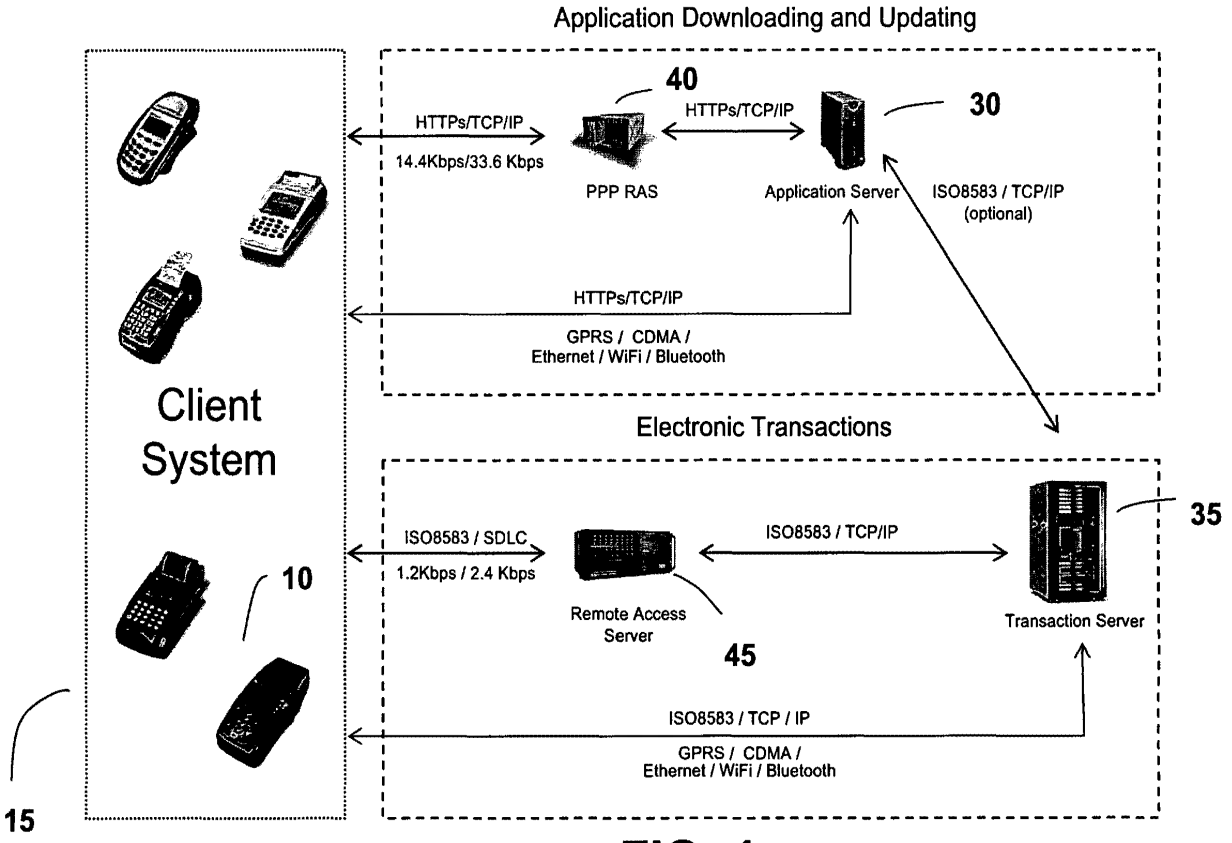

Application Downloading and Updating
40
HTTPs/TCP/IP
14.4Kbps/33.6 Kbps
PPP RAS
HTTPs/TCP/IP
30
Application Server
ISO8583 / TCP/IP
(optional)
HTTPs/TCP/IP
GPRS / CDMA /
Ethernet / WiFi / Bluetooth
Client
System
Electronic Transactions
ISO8583 / SDLC
1.2Kbps / 2.4 Kbps
Remote Access
Server
45
ISO8583 / TCP/IP
35
Transaction Server
10
ISO8583 / TCP / IP
GPRS / CDMA /
Ethernet / WiFi / Bluetooth
15

FIG. 4

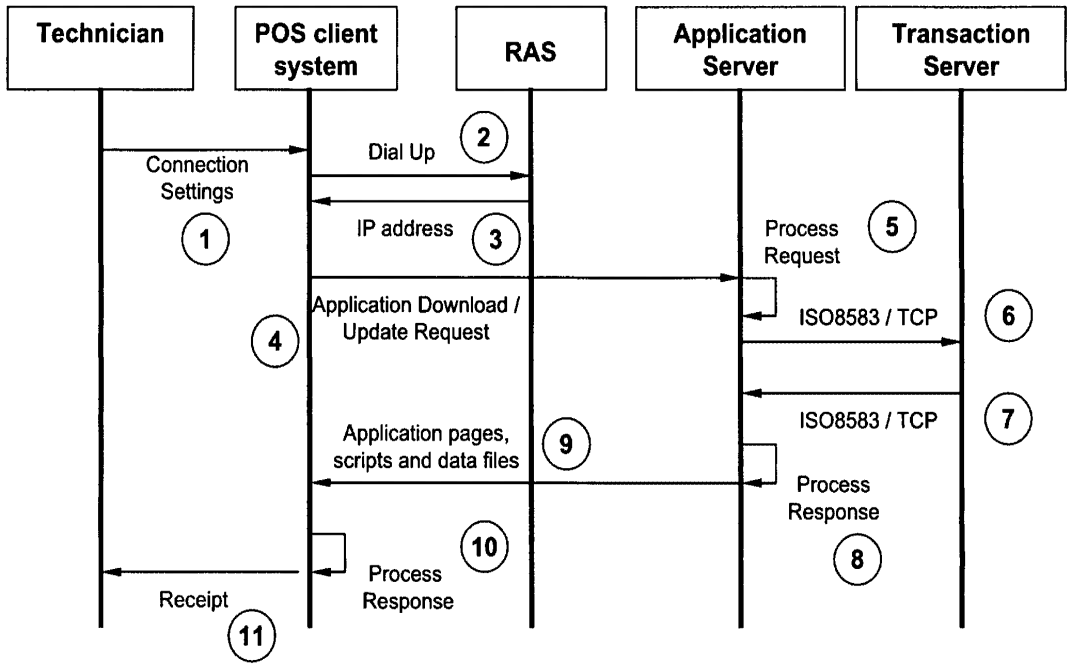

Technician
POS client system
RAS
Application Server
Transaction Server
Connection Settings
1
Dial Up
2
IP address
3
Application Download / Update Request
4
Process Request
5
ISO8583 / TCP
6
ISO8583 / TCP
7
Process Response
8
Application pages, scripts and data files
9
Process Response
10
Receipt
11

FIG. 5

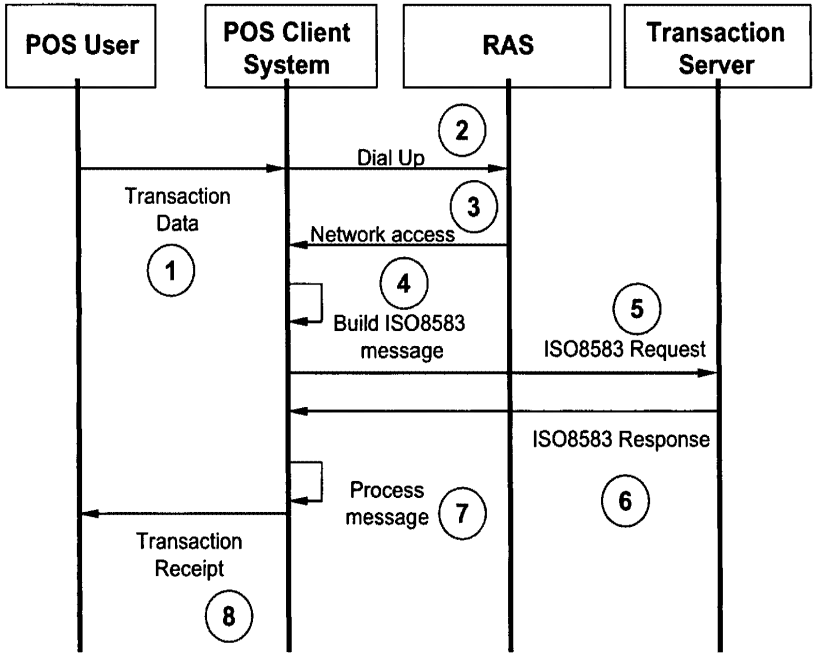

POS User
POS Client System
RAS
Transaction Server
2
Dial Up
Transaction Data
3
Network access
1
4
Build ISO8583 message
5
ISO8583 Request
ISO8583 Response
6
Process message
7
Transaction Receipt
8

FIG. 6

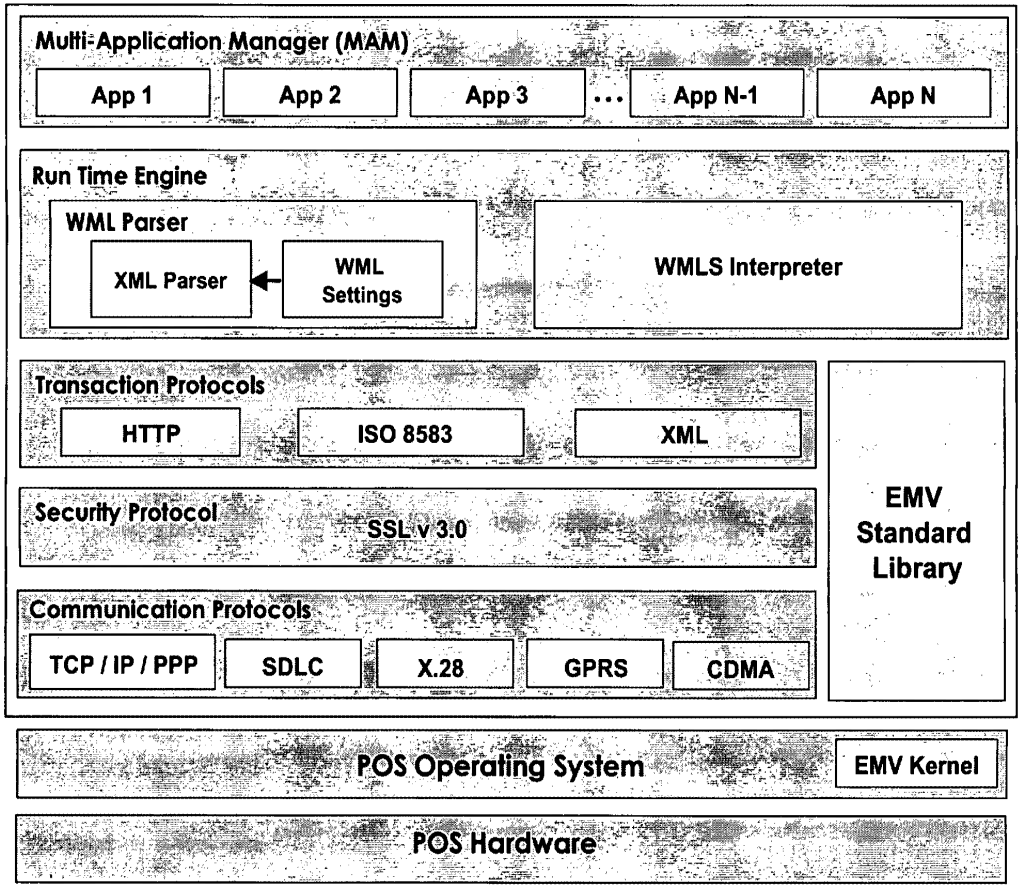

Multi-Application Manager (MAM)
App 1
App 2
App 3
...
App N-1
App N
Run Time Engine
WML Parser
XML Parser
WML Settings
WMLS Interpreter
Transaction Protocols
HTTP
ISO 8583
XML
Security Protocol
SSL v 3.0
Communication Protocols
TCP / IP / PPP
SDLC
X.28
GPRS
CDMA
EMV Standard Library
POS Operating System
EMV Kernel
POS Hardware

FIG. 7

Electronic Patent Application Fee Transmittal					
Application Number:	15827948				
Filing Date:	30-Nov-2017				
Title of Invention:	WEB-BASED POINT OF SALE BUILDER				
First Named Inventor/Applicant Name:	Wayne BARATTA				
Filer:	Vladislav Z. Teplitskiy/Tyler Chin				
Attorney Docket Number:	MERZ010.001C3				
Filed as Large Entity					
Filing Fees for Utility under 35 USC 111(a)					
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($)
Miscellaneous:				
RCE- 1ST REQUEST	1801	1	1360	1360
		Total in USD ($)		**1360**

Electronic Acknowledgement Receipt	
EFS ID:	41373442
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Vladislav Z. Teplitskiy/Elizabeth Rutherford
Filer Authorized By:	Vladislav Z. Teplitskiy
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	14-DEC-2020
Filing Date:	30-NOV-2017
Time Stamp:	15:20:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$1360
RAM confirmation Number	E2020BDF21236088
Deposit Account	111410
Authorized User	Elizabeth Rutherford
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	2020-12-14_RCE_MERZ010-001C3.pdf	1349961 1077f624ab31a0e76a09b2a55885c29c728178e6	no	3
Warnings:					
Information:					
2		2020-12-14_IDS_MERZ010-001C3.pdf	54919 27773eed0241fff495ad0c22f8649f6e4ca99d1c	yes	4
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Transmittal Letter		1	2	
	Information Disclosure Statement (IDS) Form (SB08)		3	4	
Warnings:					
Information:					
3	Non Patent Literature	ExA1-640_Chart_US20070265935_Woycik.pdf	569229 a0f5ed74bdd1f498d4ba6a580f6fefb916e20638	no	11
Warnings:					
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4	Non Patent Literature	ExA2-012_Chart_US20070265935_Woycik.pdf	812758 700312ca4481d5e7aebba0f17af1d412ee2b5d8b	no	12
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5	Non Patent Literature	ExA3-640ChartUS20070175992Brown.pdf	424762 b8f6e212e1aed405f9da85f192fae09cbeeab872	no	10
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Information:					

6	Non Patent Literature	ExA9.pdf	167422 a748aa4dcd96d34c04295c6ff0f4a93c032ea1ef	no	11
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Information:					
8	Non Patent Literature	ExA11.pdf	165563 6f620babcdceda0fd8e4535fc3776318998d0dff	no	12
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9	Non Patent Literature	ExA3640ChartUS20070175992 Brown.pdf	441951 1fba7c108ff20430c92beae04b154d58a06894af	no	12
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10	Non Patent Literature	ExA12.pdf	691128 c60f901a3717ff5b989a2ce292e942003e8de2a7	no	14
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12	Non Patent Literature	ExA13-1.pdf	110560 88eb25868e08061b9cb35775ef114ade05036cd3	no	7
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Information:					
19	Non Patent Literature	ExA7640ChartUS20020194074Jacobs.pdf	137241 e945fd99b9b85a1b0c3ac4e1a294faf2f2135399	no	9
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Information:					
21	Non Patent Literature	ExB7.pdf	139246 1c191d242e13928cee6c17b03f478b18f27d4086	no	9
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22	Non Patent Literature	ExB8.pdf	603408 9ed376e0b1884f5c289b69e60b9800fd7868b647	no	12
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Information:					
23	Foreign Reference	GB2369201A.PDF	651406 da32241f92f1b9ca8f40739d58f5d39edf894ac9	no	20
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Information:					
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Information:					

27	Foreign Reference	WO2005115074.PDF	2022989 e780b90f32cf6a78ea9f315698a8dfd29297be6d	no	49
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28	Non Patent Literature	VLUGT-Redesign_of_Stand-Alone_Applications_into.PDF	571195 73d438c632139f7c4a753571870f067d877ee715	no	20
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Information:					
31	Fee Worksheet (SB06)	fee-info.pdf	30558 43aad41bfd6d2b40dc0b3b08fe744e13ed769564	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	20651355		

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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.

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United States Patent and Trademark Office
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www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

20995 7590 11/20/2020

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER
MASUD, ROKIB

ART UNIT	PAPER NUMBER
3687	

DATE MAILED: 11/20/2020

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

TITLE OF INVENTION: WEB-BASED POINT OF SALE BUILDER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	02/22/2021

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: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (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)

20995 7590 11/20/2020
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
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IRVINE, CA 92614

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 transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

TITLE OF INVENTION: WEB-BASED POINT OF SALE BUILDER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	02/22/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
MASUD, ROKIB	3687	705-016000

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 03-09 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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). 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. Fees submitted: ❑Issue Fee ❑Publication Fee (if required) ❑Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

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

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
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.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 11/20/2020

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EXAMINER	
MASUD, ROKIB	
ART UNIT	PAPER NUMBER
3687	

DATE MAILED: 11/20/2020

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

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

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.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B 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 30 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.

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. 15/827,948	Applicant(s) BARATTA et al.	
	Examiner ROKIB MASUD	Art Unit 3687	AIA (FITF) 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 amendment and argument filed on October 06, 2020.
   ☐ 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 3-6,8-36 and 39-43 . 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 5/18/2020.
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 _____.

/ROKIB MASUD/
Primary Examiner, Art Unit 3687

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

This Office Action responds to the amendment and argument filed by applicant on October 06, 2020 in response to the Office Action mailed on July 09, 2020.

Priority

This application is Continuation of U.S. Application No. 12/012,666, filed February 05, 2008.

Status of the Claims

- Claims 3-6, 8-36 and 39-43 are pending.
- Claims 3, 8, 10-11, 16-19, 21, 23, 26-32, 34-36, 39-43 are currently amended.
- Claims 1-2, 7, 37-38 and 44 are cancelled.

Allowance

Claims 3-6, 8-36 and 39-43 are allowed. Applicant's amendment and argument filed on October 06, 2020 have been considered and they are persuasive.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of these claims is the inclusion of the limitation of claim 3 of configuring the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals; and

receive, from at least one of the one or more POS terminals over the network, information regarding one or more POS transactions corresponding to the one or more items, wherein the information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information, which is not found in the prior art of records. The other independent claims contain similar subject matter and the dependent claims are also allowable based on their dependency on the independent claims.

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".

Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROKIB MASUD whose telephone number is (571)270-5390. The examiner can normally be reached on Mon-Fri 8:00-5:00.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is

encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fahd Obeid can be reached on 571-270-3324. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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 https://ppair-my.uspto.gov/pair/PrivatePair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROKIB MASUD/
Primary Examiner, Art Unit 3687

Notice of References Cited	Application/Control No. 15/827,948	Applicant(s)/Patent Under Reexamination BARATTA et al.	
	Examiner ROKIB MASUD	Art Unit 3687	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-6002395-A	12-1999	Wagner; Samuel J.	G06F9/451	715/763
*	B	US-7015945-B1	03-2006	Sullivan; Patrick J.	G08B13/19671	348/150
*	C	US-20040181454-A1	09-2004	Manno, Michael	G06Q20/202	705/21
*	D	US-20050021409-A1	01-2005	Michaud, Gene R. JR.	G07G1/14	705/16
*	E	US-20080077872-A1	03-2008	Zeevi; Dani	G06F8/38	715/762
*	F	US-20040128199-A1	07-2004	Cusack, Bob	G06Q20/20	705/16
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	**Art Unit**
	ROKIB MASUD	3687

CPC							
Symbol						**Type**	**Version**
G06F	/	8	/	30		F	2013-01-01
G06Q	/	30	/	06		I	2013-01-01
G06F	/	8	/	34		I	2013-01-01
G06Q	/	20	/	20		I	2013-01-01
H04L	/	67	/	02		I	2013-01-01
G06Q	/	20	/	202		I	2013-01-01

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	38	
/ROKIB MASUD/ Primary Examiner, Art Unit 3687	15 November 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	3	3

U.S. Patent and Trademark Office — Part of Paper No.: 20200702

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	**Art Unit**
	ROKIB MASUD	3687

INTERNATIONAL CLASSIFICATION				
CLAIMED				
G06Q	/	10	/	00

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
705	28

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					
705	27.1					

NONE (Assistant Examiner) (Date)	**Total Claims Allowed:** 38	
/ROKIB MASUD/ Primary Examiner, Art Unit 3687 (Primary Examiner) 15 November 2020 (Date)	O.G. Print Claim(s) 3	O.G. Print Figure 3

U.S. Patent and Trademark Office Part of Paper No.: 20200702

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	Art Unit
	ROKIB MASUD	3687

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

CLAIMS

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	38	
/ROKIB MASUD/ Primary Examiner, Art Unit 3687	15 November 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	3	3

U.S. Patent and Trademark Office Part of Paper No.: 20200702

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	Art Unit
	ROKIB MASUD	3687

CPC - Searched*		
Symbol	Date	Examiner
G06Q 20/20; G06Q 20/202	07/04/2019	R. M.

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
705	16; 34	07/04/2019	R. M.

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST, GOOGLE PATENT, NPL, IDS	07/04/2019	R. M.

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
705	27.1	11/12/2020	R. M.

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S10	1	("20070273763").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/10/31 00:10
S11	1	("20030041330").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/10/31 00:15
S12	3	(("20080243637") or ("20070011173") or ("8423420")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/04/05 13:58
S13	0	("20140249947").PN.	USPAT; USOCR	OR	OFF	2018/04/05 15:36
S14	1	("20140249947").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/04/05 17:31
S15	309	(inventory price cost sales) and ((web adj server) server same database) same(hardware software) same ((cash adj register) POS (point adj of adj sale)) and (subscriptS4 subscrib$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2020/07/06 08:49
S16	21	S15 @py<"2006"	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	AND	OFF	2020/07/06 08:49
S17	1	("20140327629").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/07/06 11:20
S18	315	(inventory price cost sales) and ((web adj server) server same database) same(hardware software) same ((cash adj register) POS (point adj of adj sale)) and (subscriptS4 subscrib$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2020/11/15 20:35
S19	21	S18 @py<"2006"	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	AND	OFF	2020/11/15 20:35

11/15/2020 8:41:12 PM
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PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
	First Named Inventor	Wayne Baratta
	Art Unit	3687
(Multiple sheets used when necessary)	Examiner	Masud, Rokib
SHEET 1 OF 3	Attorney Docket No.	MERZ010.001C3

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number *Number - Kind Code (if known)* Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	1	5,920,312	07-06-1999	Wagner	
	2	6,384,850	05-07-2002	McNally	
	3	2002/0194074	12-19-2002	Jacobs	
	4	2003/0078849	04-24-2003	Snyder	
	5	2004/0143512	07-22-2004	Sturr	
	6	2005/0021409	01-27-2005	Michaud	
	7	2005/0049921	03-03-2005	Tengler	
	8	2006/0235755	10-19-2006	Mueller	
	9	2007/0175992	08-02-2007	Brown	
	10	2007/0265935	05-01-2007	Woycik	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document *Country Code-Number-Kind Code* Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T[1]
	11	EP 1450324 A1	05-03-2017	VISUAL JAPAN KK		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	12	Defendant's Invalidity Contentions in Case No: 6:19-CV-00513-ADA, CloudofChange, LLC, v. NCR Corporation, dated February 24, 2020 in 27 pages.	
	13	Exhibit A1: Invalidity of U.S. Patent No. 9,400,640 based on US2007265935 (“Woycik”) in 10 pages.	
	14	Exhibit A2: Invalidity of U.S. Patent No. 10,083,012 based on US2007265935 (“Woycik”) in 10 pages.	
	15	Exhibit A3: Invalidity of U.S. Patent No. 9,400,640 based on US20070175992 (“Brown”) in 9 pages.	
	16	Exhibit A4: Invalidity of U.S. Patent No. 10,083,012 based on US20070175992 (“Brown”) in 11 pages.	
	17	Exhibit A5: Invalidity of U.S. Patent No. 9,400,640 based on US5920312 (“Wagner”) in 6 pages.	

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.	

T[1] - Place a check mark in this area when an English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
	First Named Inventor	Wayne Baratta
	Art Unit	3687
(Multiple sheets used when necessary)	Examiner	Masud, Rokib
SHEET 2 OF 3	Attorney Docket No.	MERZ010.001C3

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	18	Exhibit A6: Invalidity of U.S. Patent No. 10,083,012 based on US5920312 ("Wagner") in 7 pages.	
	19	Exhibit A7: Invalidity of U.S. Patent No. 9,400,640 based on US20020194074 ("Jacobs") in 6 pages.	
	20	Exhibit A8: Invalidity of U.S. Patent No. 10,083,012 based on US20020194074 ("Jacobs") in 6 pages.	
	21	Exhibit A9: Invalidity of U.S. Patent No. 9,400,640 based on US20060235755 ("Mueller") in 8 pages.	
	22	Exhibit A10: Invalidity of U.S. Patent No. 10,083,012 based on US20060235755 ("Mueller") in 8 pages.	
	23	Exhibit A11: Invalidity of U.S. Patent No. 9,400,640 based on US20050049921 ("Tengler") in 9 pages.	
	24	Exhibit A12: Invalidity of U.S. Patent No. 10,083,012 based on US20050049921 ("Tengler") in 9 pages.	
	25	Exhibit B1: Invalidity of U.S. Patent No. 9,400,640 based on US20050021409 ("Michaud") in 6 pages.	
	26	Exhibit B2: Invalidity of U.S. Patent No. 10,083,012 based on US20050021409 ("Michaud") in 6 pages.	
	27	Exhibit B3: Invalidity of U.S. Patent No. 9,400,640 based on US20040143512 ("Sturr") in 6 pages.	
	28	Exhibit B4: Invalidity of U.S. Patent No. 10,083,012 based on US20040143512 ("Sturr") in 6 pages.	
	29	Exhibit B5: Invalidity of U.S. Patent No. 9,400,640 based on EP1450324 ("Yamada") in 6 pages.	
	30	Exhibit B6: Invalidity of U.S. Patent No. 10,083,012 based on EP1450324 ("Yamada") in 7 pages.	
	31	Exhibit B7: Invalidity of U.S. Patent No. 9,400,640 based on US6384850 ("McNally") in 7 pages.	
	32	Exhibit B9: Invalidity Claims of U.S. Patent No. 9,400,640 based on ACS Back Office Options, R6.0 in 9 pages.	
	33	Exhibit B9: Invalidity of U.S. Patent No. 10,083,012 based on US6384850 ("McNally") in 7 pages.	
	34	Exhibit B10: Invalidity of U.S. Patent No. 10,083,012 based on ACS Back Office Options, R6.0 in 10 pages.	
	35	Exhibit C1: Invalidity of U.S. Patent No. 9,400,640 under 35 U.S.C. §112 in 4 pages.	
	36	Exhibit C2: Invalidity of U.S. Patent No. 10,083,012 under 35 U.S.C. §112 in 3 pages.	

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.	

T[1] - Place a check mark in this area when an English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
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	Art Unit	3687
(Multiple sheets used when necessary)	Examiner	Masud, Rokib
SHEET 3 OF 3	Attorney Docket No.	MERZ010.001C3

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	37	Exhibit D1: Claims 1-14 of the '640 Patent Are Invalid Under 35 U.S.C. §101 in 2 pages.	
	38	Exhibit D2: Claims 1-13 of the '012 Patent Are Invalid Under 35 U.S.C. §101 in 3 pages.	
	39	DynaKey 5952, DynaKey Real POS 5952 Wedge User's Guide, R1.0, NCR, 1999.	
	40	DynaKey 5953, NCR Real POS™ 5953 USB DynaKey™ User's Guide, Release 2.3, NCR, 2002.	
	41	DynaKey 5954. DynaKey Real POS 5954 Next Generation R1.2, NCR, 2006.	
	42	DynaKey 80c, NCR Real POS™ 80c Hardware User's Guide, Release 1.1, NCR, 2002.	
	43	ACS Trng 6.0, Advanced Checkout Solution Operator, Training Guide, R6.0, NCR, 2003.	
	44	ACS 6.0, Advanced Checkout Solution Back Office Options, R6.0, NCR, 2000.	
	45	ACS 6.2, Advanced Checkout Solution Back Office Options, R6.2, NCR, 2008.	
	46	ACS Brochure, NCR Advanced Checkout Solution, NCR, 2003.	
	47	ACS Buehler, NCR ACS Buehler's Success Story, NCR, 2004.	
	48	ACS Heinen, NCR ACS Heinen's Success Story, NCR, 2004.	
	49	ACS Lund, NCR ACS Lund's Success Story, NCR, 2005.	
	50	UPOS, NCR Retail Controls 3.x UPOS Users Guide, Issue H, NCR, 2007.	
	51	RSM Win, NCR Retail Platform Software for Windows, Release 4.0, NCR, 2009.	

32811768

Examiner Signature	/ROKIB MASUD/	Date Considered	11/15/2020

*__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.

T[1] - Place a check mark in this area when an English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

REPLY UNDER 37 C.F.R. §1.111

In re Application of:	:	Confirmation No.: 2925
BARATTA, Wayne *et al.*	:	Group Art Unit: 3687
Serial No.: 15/827,948	:	Examiner: MASUD, Rokib
Filed: November 30, 2017	:	
For: WEB-BASED POINT OF SALE BUILDER	:	

REPLY TO OFFICE ACTION

Mail Stop AMENDMENT
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In response to the Office Action mailed **July 9, 2020** (the "Office Action"), the shortened statutory period for which runs until **October 9, 2020**, Applicant respectfully submits the following:

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

Remarks begin on page 12 of this paper.

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listing of claims in the instant application. The claims are hereby amended in the formal documents.

1. (Canceled)

2. (Canceled)

3. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one [[web]] server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; ~~and~~

configure the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals; and

receive, from at least one of the one or more POS terminals over the network, information regarding one or more POS transactions corresponding to the one or more items;

wherein the information regarding the one or more POS transactions, the

information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information.

4. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to run on a computing device.

5. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations.

6. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

7. (Cancelled)

8. (Currently Amended) The web-based point of sale (POS) builder system of claim 1[[7]], wherein the at least one web server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions.

9. (Previously Presented) The web-based point of sale (POS) builder system of claim 8, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

10. (Currently Amended) The web-based point of sale (POS) builder system of claim 7, wherein the information regarding one or more POS transactions comprises

one or more of the employee clock information, the customer add/update information, the item add/update information, or the promotion information.

11. (Currently Amended) The web-based point of sale (POS) builder system of claim 1[[7]], wherein the information regarding one or more POS transactions are viewable via the POS builder interface.

12. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces comprise one or more buttons or keys.

13. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

14. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is accessible via a web browser.

15. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces are accessible on the POS builder interface.

16. (Currently Amended) The web-based point of sale (POS) builder system of claim 3, wherein the at least one [[web]] server is further configured to:

receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens; and

update the at least one of the one or more POS screens on the one or more POS terminals based on the second information.

17. (Currently Amended) The web-based point of sale (POS) builder system of claim 3, wherein the at least one [[web]] server is further configured to store information regarding the one or more POS screens.

18. (Currently Amended) The web-based point of sale (POS) builder system of claim 3, wherein the at least one [[web]] server is located remotely from the one or more POS terminals.

19. (Currently Amended) The web-based point of sale (POS) builder system of claim 3, wherein the at least one [[web]] server is further configured to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminals are in use performing one or more POS transactions.

20. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals use the one or more POS screens after completing a pending POS transaction.

21. (Currently Amended) The web-based point of sale (POS) builder system of claim 3, wherein the at least one [[web]] server is further configured to maintain information regarding POS screens for separate sets of POS terminals separately.

22. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein instructions to the POS builder interface for programmatic creation and modification of the POS terminals are not formatted in programming code.

23. (Currently Amended) The web-based point of sale (POS) builder system of claim 3, wherein the at least one [[web]] server is further configured to maintain information regarding the one or more POS screens.

24. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises one or more attributes of the one or more items.

25. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS terminals are configured to perform transactions independently of a connection with the network.

26. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one POS terminal configured to:

display one or more POS screens;

communicate with at least one [[web]] server over a network comprising the Internet;

receive, over the network from the at least one [[web]] server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

create or modify the one or more POS screens based on the received information; ~~and~~

perform one or more transactions with respect to the one or more items; and

transmit, from at least one of the one or more POS terminals over the network, information regarding one or more POS transactions corresponding to the one or more items;

wherein the information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information.

27. (Currently Amended) The[[A]] web-based point of sale (POS) builder system

of claim 26, wherein the at least one POS terminal comprises a plurality of POS terminals in a plurality of locations.

28. (Currently Amended) The[[A]] web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to:

capture one or more videos using one or more cameras while performing the one or more transactions; and

correlate the one or more videos with the one or more transactions.

29. (Currently Amended) The[[A]] web-based point of sale (POS) builder system of claim 28, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

30. (Currently Amended) The[[A]] web-based point of sale (POS) builder system of claim 26, wherein the one or more display interfaces comprise one or more buttons or keys.

31. (Currently Amended) The[[A]] web-based point of sale (POS) builder system of claim 26, wherein the received information comprises information indicative of at least oneof a number, shape, or arrangement of the one or more display interfaces.

32. (Currently Amended) The[[A]] web-based point of sale (POS) builder system of claim 26, wherein the at least one [[web]] server is located remotely from the at least one POS terminal.

33. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to perform the one or more transactions in real time while the one or more POS screens are created or modified.

34. (Currently Amended) The[[A]] web-based point of sale (POS) builder system of claim 33, wherein the at least one POS terminal uses the created or modified one or more POS screens after completing a pending POS transaction.

35. (Currently Amended) The[[A]] web-based point of sale (POS) builder system of claim 26, wherein the received information comprises one or more attributes of the one or more items.

36. (Currently Amended) The[[A]] web-based point of sale (POS) builder system of claim 26, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

37. (Canceled).

38. (Canceled)

39. (Currently Amended) The[[A]] web-based point of sale (POS) builder system of claim 26 [[37]], wherein the at least one POS terminal is further configured to perform the one or more transactions without a connection to the web server and transmit the information regarding the one or more transactions to the at least one web server after performing the one or more transactions and when the connection to the web server is established.

40. (Currently Amended) The[[A]] web-based point of sale (POS) builder system of claim 39, wherein the at least one POS terminal is further configured to store locally the information regarding the one or more transactions.

41. (Currently Amended) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

communicating with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured todisplay one or more POS screens;

receiving, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being

associated with one or more items; ~~and~~

provisioning the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals; and

receiving, from at least one of the one or more POS terminals over the network, information regarding one or more POS transactions corresponding to the one or more items;

wherein the information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information.

42. (Currently Amended) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

displaying one or more POS screens;

communicating with at least one [[web]] server over a network comprising the Internet;

receiving, over the network from the at least one [[web]] server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

creating or modifying the one or more POS screens based on the received information; ~~and~~

performing one or more transactions with respect to the one or more items; and

transmitting, to the at least one server, over the network, information regarding one or more transactions corresponding to the one or more items; and

wherein the information regarding the one or more transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information.

43. (Currently Amended) A web-based point of sale (POS) builder system comprising:

at least one [[web]] server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information for creating or modifying functionality of the one or more POS terminals; and

configure the one or more POS terminals with the information over the network to create of modify the functionality of the one or more POS terminals;

receive, from at least one of the one or more POS terminals over the network, information regarding one or more POS transactions corresponding to the one or more items;

wherein the information regarding the one or more POS transactions, the information used for creating or modifying the functionality of the one or more POS terminals, or a combination thereof, comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information.

44. (Canceled)

REMARKS

The Applicant respectfully requests reconsideration of the application in light of the following remarks.

STATUS OF CLAIMS

Claims 1 and 2 have been cancelled in a previous amendment.

Claims 3, 7, 8, 10, 11, 16 to 19, 21, 23, 26 to 32, 34 to 36, and 39 to 43 have been amended.

Claims 7, 37, 38, and 44 have been canceled.

Claims 3 to 36, and 39 to 43 are currently pending in the application.

INTERVIEW SUMMARY

The Applicant thanks Examiner Rokib Masud for the Interview conducted on July 16, 2020. The interview was between Examiner Masud and the applicant's attorney, Keith Lim and Canadian Representative, Alistair Forster. Pending Claims 3, 26 and 41 to 43 that were rejected or objected to in the Office Action were discussed along with U.S. Patent Nos. 6,002,395 issued to WAGNER et al., and 7,015,945 issued to SULLIVAN. In particular, the discussion focused on the following: the 103 rejections of Claims 3, 26 and 41 to 43 and the Applicant's proposed amendment regarding the incorporation into the independent claims thereof of certain subject matter, including in particular certain features of Claim 38 as suggested by the Examiner. The Applicant is providing herein the amendment that was proposed during the interview.

SUMMARY OF THE REJECTIONS

Claims 3 to 44 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Number 6,002,395 issued to WAGNER et al. (hereinafter referred to as "WAGNER") in view U.S. Patent Number 7,015,945 issued to SULLIVAN (hereinafter referred to as " SULLIVAN") and U.S. Patent Application Publication Number 2018/0109535 issued to MCCUE. (hereinafter referred to as "MCCUE"). Applicant respectfully traverses these rejections.

The Office Action stated that WAGNER discloses all the elements of independent Claims 3, 26, 41, 42 and 43, except for the features "of [the] web based builder system" and "to configure over the network," for which the Office Action relied on SULLIVAN. Applicant respectfully traverses.

The Applicant notes that SULLIVAN has previously been considered by the Office in respect of US Patent No. 9,400,640, particularly with respect to the features "of [the] web based builder system" and "to configure over the network." The Applicant directs the Examiner's attention to Appeal No. 2013-002915 where Administrative Patent Judge Moore held (emphasis added):

> "Appellants argue that the cited portions of Sullivan do not teach or suggest a "point of sale builder software which runs on said web server, wherein said local or remote workstations can be utilized to build or edit said POS terminals in real time, from anywhere in the world and over the worldwide web," as required by claim 1. Appeal Br. 7. **In particular, Appellants contend that Sullivan's description of selecting, analyzing, and reporting of financial transactions "is not equivalent to the more complex creation and changing of POS functions in real time of the instant application. *Id.* at 8. Appellants' argument is persuasive.**"

For at least the same reasons, Applicant respectfully submits that Sullivan does not disclose or suggest, in Claims 3, 26, 41, and 42, a "web-based point of sale (POS) builder system comprising at least one web server" for communicating and "information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens" and, in Claim 43, "information for creating or modifying functionality of the one or more POS terminals."

For the sake of expedited prosecution, Applicant further amends the claims. Briefly, independent Claims 3, 26, 41, 42, and 43 have been amended so as to incorporate similar features as in now canceled Claim 38 (and Claim 37 from which it depends), as well as additional features related thereto. No new matter is added by this amendment. Additionally, Claims 7, 37, 38 and 44 have been canceled.

In particular, the additional claimed features provide for additional functionality at the POS terminals, POS screens, or the associated web-server. These features include that "the information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, and inventory information," as recited by amended claim 1 (and similarly recited by amended claims 26 and 41-43). The additional claimed features provide for additional functionality at the POS terminal(s), POS screen(s), and/or the associated server not disclosed by the cited art. WAGNER does not disclose transmitting or receiving "information regarding one or more POS transactions". The remaining cited art does not cure this deficiency. The Applicant submits that none of WAGNER, SULLIVAN or MCCUE discloses the foregoing features of claimed subject matter in combination with other limitations.

Moreover, the Office Action relies on Sullivan as disclosing the subject matter of Claim 38:

> With respect to **claims 8 and 38,** Sullivan further discloses the feature, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions (column 1 lines 41 – column 2 lines 27).

However, Applicant notes that the subject matter of claim 8 and 38 are different. For example, previously pending claim 8 recites "one or more videos captured by one or more cameras," whereas previously pending claim 38 does not recite videos or cameras. Moreover, the cited portions of Sullivan do not disclose the limitations of previously pending claim 38.

The Office Action further rejects claim 38 relying on Column 3:53-5:21 of Wagner.

With respect to **claims 10 and 38**, Wagner further discloses the feature, wherein the information regarding one or more POS transactions comprises one or more of employee [redacted] information, customer add/update information, item add/update information, or promotion information (column 3 line 53 – column 5 line 21).

However, Wagner does not disclose transmitting "information regarding the one or more POS transactions," as recited in amended claim 1 (and similarly recited in the other amended independent claims), let alone transmitting one or more of "employee clock information, customer add/update information, item add/update information, promotion information."

Since none of WAGNER, SULLIVAN or MCCUE, alone or in combination discloses or suggests the above-discussed features, the Applicant respectfully submits that, for at least the reasons stated above, Independent Claims 3, 26, 41, 42 and 43 are allowable over the art of record and are in condition for allowance.

Claims 4 to 25 are dependent upon Independent Claim 3, and Claims 27 to 36 and 39 to 40 are dependent upon Independent Claim 26, and thus include each and every feature of the corresponding independent claims. Each of Claims 4 to 25, 27 to 36 and 39 to 40 are therefore allowable for the reasons given above for Claims 3 and 26. In addition, each of Claims 4 to 25, 27 to 36 and 39 to 40 introduces one or more additional features that independently renders it patentable. Therefore, it is respectfully submitted that Claims 4 to 25, 27 to 36 and 39 to 40 are allowable for the reasons given above with respect to Claims 3 and 26.

CONCLUSION

Claims 7, 37, 38 and 44 have been cancelled herein, but the Applicant retains the right to present Claims 37, 38 and 44 in one or more future applications.

The Applicant believes that all issues raised in the Office Action have been addressed and that allowance of the pending claims is appropriate.

The Examiner is respectfully requested to contact the undersigned by telephone at 949-721-6350 if it is believed that such contact would further the examination of the present application.

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: October 6, 2020

By:/Keith M Lim/_____
Keith M Lim
Registration No. 68,912
Registered Practitioner
(949) 760-0404

Electronic Acknowledgement Receipt	
EFS ID:	40768973
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Keith M Lim/Fabiola Esmerio
Filer Authorized By:	Keith M Lim
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	06-OCT-2020
Filing Date:	30-NOV-2017
Time Stamp:	15:26:45
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		2020-10-06_Amendment_MERZ010-001C3.pdf	309211 10d7e3e9ca775c1ce24fe10a01db187804c37f2b	yes	16

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	11
	Applicant Arguments/Remarks Made in an Amendment	12	16
Warnings:			
Information:			
	Total Files Size (in bytes):	309211	

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
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/827,948	Filing Date 11/30/2017	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

	(Column 1)	(Column 2)			
FOR	NUMBER FILED	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 $80 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $420 =	
☐ 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	10/06/2020	(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))	* 38	Minus	** 42	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 4	Minus	*** 4	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

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 $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ 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.	SLIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/LISA R WRIGHT/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 07/30/2020

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER
MASUD, ROKIB

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
07/30/2020	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):

efiling@knobbe.com
jayna.cartee@knobbe.com

PTOL-90A (Rev. 04/07)

Applicant-Initiated Interview Summary	**Application No.** 15/827,948	**Applicant(s)** BARATTA et al.	
	Examiner ROKIB MASUD	**Art Unit** 3687	**AIA (FITF) Status** No

All participants (applicant, applicants representative, PTO personnel):

(1) Rokib Masud.

(2) Keith M. Lim.

(3) Alistair Forster.

(4) _____.

Date of Interview: 16 July 2020.

Type: ☑ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

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

Issues Discussed ☐101 ☐112 ☐102 ☑103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 3,26 and 41-43.

Identification of prior art discussed: Wagner et al. (US 6002395) and Sullivan (US 7015945).

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Applicant discussed the rejections and proposed amendment. No agreement was reached.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiners responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicants correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,-
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicants record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiners version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, Interview Record OK on the paper recording the substance of the interview along with the date and the examiners initials.

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.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 07/09/2020

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jayna.cartee@knobbe.com

PTOL-90A (Rev. 04/07)

Office Action Summary	**Application No.** 15/827,948	**Applicant(s)** BARATTA et al.	
	Examiner ROKIB MASUD	**Art Unit** 3687	**AIA (FITF) 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 MONTHS 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 11 October 2020.

☐ 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) 3-44 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) 3-44 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 _____ 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.

Attachment(s)

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

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

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

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

This Office Action responds to the remarks filed by applicant on October 11, 2019 in response to the Office Action mailed on July 11, 2019.

Status of the Claims

- Claims 3-44 are pending.

Claim Rejections - 35 USC § 103

1. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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

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

3. Claims 3-44 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Wagner et al. (US 6002395, hereinafter Wagner), in view of Sullivan (US 7015945) McCue (US 2008/0109535).

With respect to **claims 3, 26, 41-43** Wagner discloses a point of sale (POS) builder system comprising:

software configured to run on at least one web server and cause the web server to:

communicate with one or more POS terminals, wherein the one or more POS terminals are configured to display one or more POS screens (abstract, column 1 lines 5-11);

receive, over the network from a POS builder interface, information for creating or modifying the one or more POS screens, wherein the received information comprises one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items (column 3 line 53 – column 5 line 21);

create or modify the one or more POS screens based on the received information received from the POS builder interface (column 3 line 53 – column 5 line 21).

Wagner teaches all of the limitations above but silent regarding web based builder system and to configure the system over network.

However, Sullivan teaches the feature of web based builder system and to configure the system over network (abstract, figure 1, column 1 lines 41 – column 2 lines 27).

Therefore it would have been obvious for one of ordinary skill in the art to have modified the feature of Wagner to include the feature of web based builder system and to configure the system over network, as taught by Sullivan in order to manage web based transactions.

With respect to **claim 4,** Wagner further discloses the feature, wherein the POS builder interface is configured to run on a computing device (column 3 line 53 – column 5 line 21).

With respect to **claims 5 and 27,** Wagner further discloses the feature, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations (column 3 line 53 – column 5 line 21).

With respect to **claims 6 and 36,** Wagner further discloses the feature, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs (column 3 line 53 – column 5 line 21).

With respect to **claims 7 and 37,** Sullivan further discloses the feature, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to receive, from the one or more POS terminals over the network, information regarding one or more POS transactions corresponding to the one or more items (column 1 lines 41 – column 2 lines 27).

With respect to **claims 8 and 38,** Sullivan further discloses the feature, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions (column 1 lines 41 – column 2 lines 27).

With respect to **claims 9 and 29,** Wagner further discloses the feature, wherein the one or more videos and the one or more POS transactions are indexed using a same clock (column 3 line 53 – column 5 line 21).

With respect to **claims 10 and 38,** Wagner further discloses the feature, wherein the information regarding one or more POS transactions comprises one or more of employee clock information, customer add/update information, item add/update information, or promotion information (column 3 line 53 – column 5 line 21).

With respect to **claim 11,** Wagner further discloses the feature, wherein the information regarding one or more POS transactions are viewable via the POS builder interface (column 3 line 53 – column 5 line 21).

With respect to **claims 12 and 30,** Wagner further discloses the feature, wherein the one or more display interfaces comprise one or more buttons or keys (column 3 line 53 – column 5 line 21).

With respect to **claims 13 and 31,** Wagner further discloses the feature, wherein the received information comprises at least one of a number, shape, or arrangement of the one or more display interfaces (column 3 line 53 – column 5 line 21).

With respect to **claim 14,** Sullivan further discloses the feature, wherein the POS builder interface is accessible via a web browser (column 1 lines 41 – column 2 lines 27).

With respect to **claim 15,** Wagner further discloses the feature, wherein the one or more display interfaces are accessible on the POS builder interface (column 3 line 53 – column 5 line 21).

With respect to **claim 16,** Wagner further discloses the feature to receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens; and update the at least one of the one or more POS screens on the one or more POS terminals based on the second information (column 3 line 53 – column 5 line 21).

With respect to **claim 17,** Sullivan further discloses the feature, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to store information regarding the one or more POS screens (column 1 lines 41 – column 2 lines 27).

With respect to **claim 18,** Sullivan further discloses the feature, wherein the at least one web server is located remotely from the one or more POS terminals (column 1 lines 41 – column 2 lines 27).

With respect to **claims 19 and 33,** Wagner further discloses the feature, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminal are in use performing one or more POS transactions (column 3 line 53 – column 5 line 21).

With respect to **claims 20 and 34,** Wagner further discloses the feature, wherein the one or more POS terminals use the one or more POS screens after completing a present POS transaction (column 3 line 53 – column 5 line 21).

With respect to **claim 21,** Wagner further discloses the feature, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to maintain information regarding POS screens for separate sets of POS terminals separately (column 3 line 53 – column 5 line 21).

With respect to **claim 22,** Wagner further discloses the feature, wherein instructions to the POS builder interface for programmatic creation and modification of the POS terminals are not formatted in programming code (column 3 line 53 – column 5 line 21).

With respect to **claim 23,** Wagner further discloses the feature, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to maintain information regarding the one or more POS screens (column 3 line 53 – column 5 line 21).

With respect to **claims 24 and 35,** Wagner further discloses the feature, wherein the received information comprises one or more attributes of the one or more items (column 3 line 53 – column 5 line 21).

With respect to **claims 25 and 39,** Wagner further discloses the feature, wherein the POS terminals are configured to perform transactions independently of a connection with the network (column 3 line 53 – column 5 line 21).

With respect to **claim 32,** Sullivan further discloses the feature, wherein the at least one web server is located remotely from the at least one POS terminal (column 1 lines 41 – column 2 lines 27).

With respect to **claim 40,** Wagner further discloses the feature, wherein the software configured to run on the at least one POS terminal is configured to cause the at least one POS terminal to store locally the information regarding the one or more transactions (column 3 line 53 – column 5 line 21).

Response to Arguments

Applicant's arguments with respect to the pending claims have been considered but are moot in view of new grounds of rejections.

Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROKIB MASUD whose telephone number is (571)270-5390. The examiner can normally be reached on Mon-Fri 8:00-5:00.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is

encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fahd Obeid can be reached on 571-270-3324. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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 https://ppair-my.uspto.gov/pair/PrivatePair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROKIB MASUD/
Primary Examiner, Art Unit 3687

Notice of References Cited	Application/Control No. 15/827,948	Applicant(s)/Patent Under Reexamination BARATTA et al.	
	Examiner ROKIB MASUD	Art Unit 3687	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-6002395-A	12-1999	Wagner; Samuel J.	G06F9/451	715/763
*	B	US-7015945-B1	03-2006	Sullivan; Patrick J.	G08B13/19671	348/150
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	Art Unit
	ROKIB MASUD	3687

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

CLAIMS

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

CLAIM		DATE								
Final	Original	07/03/2020								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
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	40	✓								
	41	✓								
	42	✓								
	43	✓								
	44	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	Art Unit
	ROKIB MASUD	3687

CPC - Searched*		
Symbol	Date	Examiner
G06Q 20/20; G06Q 20/202	07/04/2019	R. M.

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
705	16; 34	07/04/2019	R. M.

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST, GOOGLE PATENT, NPL, IDS	07/04/2019	R. M.

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S3	760	(wed network remote) adj ((server host database system) same(subscri$9))	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2016/03/04 20:30
S4	869	(web network remote) adj ((server host database system) same(subscri$9))	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2016/03/04 20:30
S8	1	("20050021409").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/04 20:42
S9	2	(("7015945") or ("20040181454")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/04 20:49
S10	1	("20070273763").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/10/31 00:10
S11	1	("20030041330").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/10/31 00:15
S12	3	(("20080243637") or ("20070011173") or ("8423420")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/04/05 13:58
S13	0	("20140249947").PN.	USPAT; USOCR	OR	OFF	2018/04/05 15:36
S14	1	("20140249947").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/04/05 17:31
S15	309	(inventory price cost sales) and ((web adj server) server same database) same(hardware software) same ((cash adj register) POS (point adj of adj sale)) and (subscriptS4 subscrib$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	OR	OFF	2020/07/06 08:49
S16	21	S15 @py<"2006"	US-PGPUB; USPAT; USOCR; FPRS; EPO; DERWENT; IBM_TDB	AND	OFF	2020/07/06 08:49

7/6/2020 8:51:28 AM
C:\Users\rmasud\Documents\EAST\Workspaces\Web Based Point of Sale.wsp

PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
	First Named Inventor	Wayne Baratta
	Art Unit	3687
(Multiple sheets used when necessary)	Examiner	Masud, Rokib
SHEET 1 OF 3	Attorney Docket No.	MERZ010.001C3

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number *Number - Kind Code (if known)* Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	1	5,920,312	07-06-1999	Wagner	
	2	6,384,850	05-07-2002	McNally	
	3	2002/0194074	12-19-2002	Jacobs	
	4	2003/0078849	04-24-2003	Snyder	
	5	2004/0143512	07-22-2004	Sturr	
	6	2005/0021409	01-27-2005	Michaud	
	7	2005/0049921	03-03-2005	Tengler	
	8	2006/0235755	10-19-2006	Mueller	
	9	2007/0175992	08-02-2007	Brown	
	10	2007/0265935	05-01-2007	Woycik	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document *Country Code-Number-Kind Code* Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	**T[1]**
	11	EP 1450324 A1	05-03-2017	VISUAL JAPAN KK		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	**T[1]**
	12	Defendant's Invalidity Contentions in Case No: 6:19-CV-00513-ADA, CloudofChange, LLC, v. NCR Corporation, dated February 24, 2020 in 27 pages.	
	13	Exhibit A1: Invalidity of U.S. Patent No. 9,400,640 based on US2007265935 (“Woycik”) in 10 pages.	
	14	Exhibit A2: Invalidity of U.S. Patent No. 10,083,012 based on US2007265935 (“Woycik”) in 10 pages.	
	15	Exhibit A3: Invalidity of U.S. Patent No. 9,400,640 based on US20070175992 (“Brown”) in 9 pages.	
	16	Exhibit A4: Invalidity of U.S. Patent No. 10,083,012 based on US20070175992 (“Brown”) in 11 pages.	
	17	Exhibit A5: Invalidity of U.S. Patent No. 9,400,640 based on US5920312 (“Wagner”) in 6 pages.	

Examiner Signature	Date Considered
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
	First Named Inventor	Wayne Baratta
	Art Unit	3687
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SHEET 2 OF 3	Attorney Docket No.	MERZ010.001C3

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	18	Exhibit A6: Invalidity of U.S. Patent No. 10,083,012 based on US5920312 ("Wagner") in 7 pages.	
	19	Exhibit A7: Invalidity of U.S. Patent No. 9,400,640 based on US20020194074 ("Jacobs") in 6 pages.	
	20	Exhibit A8: Invalidity of U.S. Patent No. 10,083,012 based on US20020194074 ("Jacobs") in 6 pages.	
	21	Exhibit A9: Invalidity of U.S. Patent No. 9,400,640 based on US20060235755 ("Mueller") in 8 pages.	
	22	Exhibit A10: Invalidity of U.S. Patent No. 10,083,012 based on US20060235755 ("Mueller") in 8 pages.	
	23	Exhibit A11: Invalidity of U.S. Patent No. 9,400,640 based on US20050049921 ("Tengler") in 9 pages.	
	24	Exhibit A12: Invalidity of U.S. Patent No. 10,083,012 based on US20050049921 ("Tengler") in 9 pages.	
	25	Exhibit B1: Invalidity of U.S. Patent No. 9,400,640 based on US20050021409 ("Michaud") in 6 pages.	
	26	Exhibit B2: Invalidity of U.S. Patent No. 10,083,012 based on US20050021409 ("Michaud") in 6 pages.	
	27	Exhibit B3: Invalidity of U.S. Patent No. 9,400,640 based on US20040143512 ("Sturr") in 6 pages.	
	28	Exhibit B4: Invalidity of U.S. Patent No. 10,083,012 based on US20040143512 ("Sturr") in 6 pages.	
	29	Exhibit B5: Invalidity of U.S. Patent No. 9,400,640 based on EP1450324 ("Yamada") in 6 pages.	
	30	Exhibit B6: Invalidity of U.S. Patent No. 10,083,012 based on EP1450324 ("Yamada") in 7 pages.	
	31	Exhibit B7: Invalidity of U.S. Patent No. 9,400,640 based on US6384850 ("McNally") in 7 pages.	
	32	Exhibit B9: Invalidity Claims of U.S. Patent No. 9,400,640 based on ACS Back Office Options, R6.0 in 9 pages.	
	33	Exhibit B9: Invalidity of U.S. Patent No. 10,083,012 based on US6384850 ("McNally") in 7 pages.	
	34	Exhibit B10: Invalidity of U.S. Patent No. 10,083,012 based on ACS Back Office Options, R6.0 in 10 pages.	
	35	Exhibit C1: Invalidity of U.S. Patent No. 9,400,640 under 35 U.S.C. §112 in 4 pages.	
	36	Exhibit C2: Invalidity of U.S. Patent No. 10,083,012 under 35 U.S.C. §112 in 3 pages.	

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	37	Exhibit D1: Claims 1-14 of the '640 Patent Are Invalid Under 35 U.S.C. §101 in 2 pages.	
	38	Exhibit D2: Claims 1-13 of the '012 Patent Are Invalid Under 35 U.S.C. §101 in 3 pages.	
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(54) POS SYSTEM, POS SERVER, SHOP TERMINAL, SALE MANAGING METHOD, AND RECORDED MEDIUM

(57) To provide the POS server which can respond immediately against request from local terminals, the POS server 100 according to this invention, which controls dealings of products at a plurality of stores, includes a plurality of control apparatuses 210 connecting with a plurality of local terminals 300 provided at a plurality of stores. Each of the plurality of control apparatuses 210 a dealing database 116 storing information of dealings of the products at the local terminals 300, a receiving device 152 receiving the database operating instruction for updating the dealing database 116 with the dealing of the products from the local terminal 300, and a database updating device 162 updating the dealing database 116 according to the received database operating instruction. Each receiving device 152 of the plurality of control apparatuses 210 receives the same database operating instruction which is transmitted to the control apparatuses from the local terminal 300.

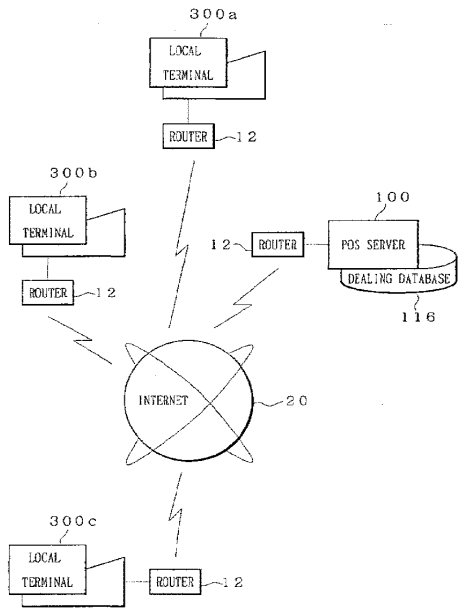


FIG. 1

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Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] This invention relates to a POS (Point-Of-Sales) server (server for managing information at point of sales), a local terminal at a store, a POS system, a method of dealing management and a recording medium. This invention relates especially to a POS server for managing deals of products at a plurality of stores, local terminals connected with the POS server, a POS system having the POS server and local terminals, a method of dealing management and a recording medium storing a program for above object.

Description of the Related Art

[0002] A POS system is usually applied for sales management in retail business area such as a convenience store and a supermarket. A local terminal connecting with the POS server through LAN (Local Area Network) is provided at a store. When there is a plurality of stores in case of chain store or the like, a single POS server may manage a plurality of local terminals provided at different stores.

[0003] When a product is sold at the store, a price attached on the product and a barcode printed or stuck on a packaging are read with a scanner and the local terminal counts sales of the product.

[0004] Regardless of the number of local terminals provided at the store, the POS server communicating with an upper server at a central office is usually installed at the store so as to build a client-server system.

[0005] It requires a large cost to build a usual POS system. If the server is installed at a local terminal side, maintenance of the local terminal is required.

[0006] To connect the POS server at the store and the upper server at the central office all day costs uneconomically. Therefore, the POS server may transmit and receive data between the upper server at several times of connection per day. Thereby, timing for transmitting and receiving information is restricted so that a new master file of products and other information cannot be transmitted and received at required timing. To build the upper server which can communicate with a lot of local terminals simultaneously by one-to-one costs a great deal.

[0007] To overcome the above drawback, one object of this invention is to provide a POS server, a local terminal, a POS system, a method of dealing management, and a recording medium. The object is reached by combining features described in independent claims in this invention. Depending claims limit more advantageous physical examples according to this invention.

SUMMARY OF THE INVENTION

[0008] According to the first embodiment of this invention, a POS server managing deals of products at a plurality of stores has a plurality of control apparatuses connecting with a plurality of local terminals provided at said plurality of stores. Each of the plurality of control apparatuses includes a dealing database for storing information of the deals of products operated at the local terminals, a receiving device for receiving a database operating instruction to update the dealing database about the deals of products, and a database updating device for updating the dealing database according to the database operating instruction to be received whenever the database operating instruction is received from the local terminals. Each of the receiving devices of the plurality of control apparatuses receives a same database operating instruction transmitted to the control apparatus from the local terminal.

[0009] The control apparatus may further comprise a holding device for holding the received database operating instruction, a matching check device for checking matching of the database operating instruction held at each of the holding devices of the plurality of control apparatuses and the database operating instruction corresponding thereto, and a recovering device for recovering said database operating instruction lost at the holding device of one of the control apparatuses by getting that from any one of the holding devices of said control apparatuses, that have the database operating instruction which is lost, other than the one of the control apparatuses. The database updating device may update the dealing database according to the recovered database operating instruction.

[0010] The matching check device may check matching of the database operating instruction held at each of the holding devices of the plurality of control apparatuses at intervals of a predetermined time.

[0011] The database updating device may update the dealing database according to the database operating instruction whenever a dealing at the local terminal is completed.

[0012] The matching check device may check matching of the database operating instruction after said database updating device updates said dealing database.

[0013] The matching check device may check matching of the database operating instruction held at each of the holding devices of the plurality of control apparatuses, and when matching of the database operating instruction is checked, the database updating device may update the dealing database according to the database operating instruction.

[0014] When matching of the database operating instruction cannot be checked, the recovering device may recover the database operating instruction, and when the recovering device recovers the database operating instruction, the database updating device updates the dealing database according to the recovered database

operating instruction.

[0015] The control apparatus may furthermore comprise a deleting device for deleting the database operating instruction, which matching is checked by the matching check device, from the database operating instructions held at each of the holding devices of the plurality of control apparatuses in a condition that the database updating device updated the database according to the database operating instruction.

[0016] The POS server may further comprise a backup device for storing same information of the deals of products as that stored in the dealing database of the control apparatus. The backup device may include a receiving device for receiving the database operating instruction transmitted toward the backup device, and a holding device for holding the database operating instruction to be received. The recovering device may recover the database operating instruction lost at the holding device of the control apparatuses by getting that from the holding device of the backup device.

[0017] The POS server may furthermore comprise the plurality of control apparatuses connecting with different local terminals and a total control apparatus for storing information of the deals of products stored in the plurality of control apparatuses. The total control apparatus may include a receiving device for receiving the database operating instruction transmitted toward the total control apparatus by the local terminal, a total dealing database for storing information of the deals of products operated at the local terminals being controlled by the POS server and a database updating device for updating the dealing database according to the received database operating instruction. The at least one receiving device of the control apparatuses and the receiving device of the total control apparatus may receive the same database operating instruction transmitted toward them from the local terminal.

[0018] The POS server may furthermore comprise the plurality of control apparatuses connecting with different local terminals and a total control apparatus for storing information of the deals of products stored in the plurality of control apparatuses. The total control apparatus may include a receiving device for receiving the database operating instruction held in the holding devices of the plurality of control apparatuses from any one of the control apparatuses, a total dealing database for storing information of the deals of products operated at the local terminals being controlled by the POS server and a database updating device for updating the database according to the received database operating instruction.

[0019] The receiving device of the total control apparatus may receive the database operating instruction from any one of the plurality of control apparatuses at intervals of a predetermined time.

[0020] The total control apparatus may further include a holding device for holding the received database operating instruction, a matching check device for checking matching of the database operating instruction received by the total control apparatus and the database operating instruction held at the control apparatuses which has to store the same database operating instruction as that being received by the total control apparatus.

[0021] The POS server may furthermore comprise a deleting device for deleting the database operating instruction from the holding devices and setting the dealing complete under an essential condition that the database updating device of the control apparatus updated the dealing database according to the database operating instruction, and the dealing databases of the total control apparatus when the matching check device of the control apparatus and the total control apparatus checked matching of the database operating instructions held in the respective holding devices of the control apparatus and the total control apparatus.

[0022] According to the second embodiment of this invention, a POS server for managing deals of products at a plurality of stores comprises a dealing database for storing information of the deals of products operated at local terminals provided in the plurality of stores, a receiving device for receiving a plurality of same database operating instructions to update the dealing database about the deals of products from the local terminals every time the deals of products with at least one customer is completed, and a database updating device for updating the dealing database according to the received database operating instruction.

[0023] According to the third embodiment of this invention, a local terminal, which is connected with a POS server having a dealing database for storing information of deals of products at a plurality of stores, comprises a dealing management unit for processing dealing management of the deals of products operated at the stores, a generating unit for generating a database operating instruction to update the dealing database of the POS server with the dealing management, a copy unit for making a copy of the database operating instruction, an addressing unit for adding a different address respectively on a plurality of the database operating instructions, and a transmitting unit for transmitting the plurality of database operating instructions added the addresses toward respective the addresses.

[0024] According to the fourth embodiment of this invention, a local terminal, which is connected with a POS server having a dealing database for storing information of deals of products at a plurality of stores, comprises a dealing management unit for processing dealing management of the deals of products operated at the stores, a generating unit for generating a database operating instruction to update the dealing database of the POS server with the dealing management, a copy unit for making a copy of the database operating instruction, an addressing unit for adding a same address respectively on a plurality of the database operating instructions, and a transmitting unit for transmitting the plurality of database operating instructions added the addresses respectively toward the same address.

[0025] The copy unit may make a copy of the generated database operating instruction whenever the dealing management unit completes dealing management.

[0026] The local terminal may be connected with the control apparatus and the backup device of the POS server. The addressing unit may add addresses of the backup device and the control apparatus of the POS server onto the plurality of database operating instructions.

[0027] The local terminal may be connected with at least one of the plurality of control apparatuses of the POS server and with the total control apparatus managing the plurality of control apparatuses. The addressing unit may add addresses of at least one of the control apparatuses connecting with the terminals and the total control apparatus onto the plurality of database operating instructions.

[0028] According to the fifth embodiment of this invention, a POS system includes a POS server with a dealing database for storing information of deals of products operated at a plurality of stores and local terminals at the plurality of stores being connected with the POS server. The local terminal comprises a dealing management unit for processing dealing management of the deals of products operated at the stores, a generating unit for generating a database operating instruction to update the dealing database of the POS server with the dealing management, a copy unit for making a copy of the database operating instruction, an addressing unit for adding a different address respectively on a plurality of the database operating instructions, and a transmitting unit for transmitting the plurality of database operating instructions being added the addresses toward respective the addresses. The POS server has a plurality of control apparatuses connecting with the plurality of local terminals provided at the plurality of stores. Each of the plurality of control apparatuses comprises a dealing database for storing information of the deals of products operated at the local terminals, a receiving device for receiving a database operating instruction to update the dealing database about the deals of products and a database updating device for updating the dealing database according to the received database operating instruction. Each of the receiving devices of the plurality of control apparatuses receives the database operating instruction transmitted to the control apparatus from the local terminal.

[0029] According to the sixth embodiment of this invention, a method of dealing management for managing deals of products at a plurality of stores, comprises steps of receiving a plurality of same database operating instructions to update a dealing database for storing information of the deals of products operated at local terminals provided in the stores about the operated deals of products from the local terminals every time the deals of products with at least one customer is completed, and updating the dealing database according to the database operating instruction to be received.

[0030] According to the seventh embodiment of this invention, a method of dealing management for managing deals of products by using a POS server having a dealing database for storing information of the deals of products at a plurality of stores, comprises steps of processing dealing management of the deals of products operated at the stores, generating a database operating instruction to update the dealing database of the POS server with the dealing management, making a copy of the database operating instruction, adding a different address respectively on a plurality of the database operating instructions, and transmitting the plurality of database operating instructions added the addresses toward respective the addresses.

[0031] According to the eighth embodiment of this invention, a method of dealing management for managing deals of products by using a POS server having a dealing database for storing information of the deals of products at a plurality of stores, comprises steps of processing dealing management of the deals of products operated at the stores, generating a database operating instruction to update the dealing database of the POS server with the dealing management, making a copy of the database operating instruction, adding a same address respectively on a plurality of the database operating instructions, and transmitting the plurality of database operating instructions added the addresses respectively toward the same address. According to the ninth embodiment of this invention, a recording medium, storing a computer program for managing deals of products at a plurality of stores, comprises a receiving module for receiving a plurality of same database operating instructions to update a dealing database for storing information of the deals of products operated at local terminals provided in the stores about the operated deals of products from the local terminals every time the deal of products with at least one customer is completed, and a database updating module for updating the dealing database according to the received database operating instruction.

[0032] According to the tenth embodiment of this invention, a recording medium, storing a computer program for local terminals at stores connected with a POS server having a dealing database for storing information of deals of products at a plurality of stores, comprises a dealing management module for processing dealing management of the deals of products operated at the stores, a generating module for generating a database operating instruction to update the dealing database of the POS server with the dealing management, a copy module for making a copy of the database operating instruction, an addressing module for adding a different address respectively on a plurality of the database operating instructions, and a transmitting module for transmitting the plurality of database operating instructions added the addresses toward respective the addresses.

[0033] According to the eleventh embodiment of this invention, a recording medium, storing a computer pro-

gram for local terminals at stores connected with a POS server having a dealing database for storing information of deals of products at a plurality of stores, comprises a dealing management module for processing dealing management of the deals of products operated at the stores, a generating module for generating a database operating instruction to update the dealing database of the POS server with the dealing management, a copy module for making a copy of the database operating instruction, an addressing module for adding a same address respectively on a plurality of the database operating instructions, and a transmitting module for transmitting the plurality of database operating instructions added the addresses respectively toward the same address.

[0034] It is not intended herein to mention all the possible embodiments of the invention so that many combinations of features and modifications can be made thereto without departing from the scope of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0035]

Fig. 1 is an illustration showing a whole of a POS system;
Fig. 2 is a block diagram showing a hardware structure of a local terminal at a store;
Fig. 3 is a functional block diagram showing functions of a processing device;
Fig. 4 is a block diagram showing a hardware structure of a POS server;
Fig. 5 is a block diagram showing a hardware structure of the first control apparatus;
Fig. 6 is a functional block diagram showing functions of a processing device for database operating instructions;
Fig. 7 is an illustration showing a structure of a dealing database of the first control apparatus;
Fig. 8 is a diagram showing a data format of a stock master file of the first control apparatus;
Fig. 9 is a diagram showing a data format of a receiving/shipping file of the first control apparatus;
Fig. 10 is a flowchart showing actions of the first local terminal when selling products to a customer;
Fig. 11 is a flowchart showing detailed actions of the first local terminal in the step of transmitting database operating instruction (S116) in Fig. 9;
Fig. 12 is a flowchart showing actions of the first control apparatus of the POS server when receiving the database operating instruction from the local terminal at the store;
Fig. 13 is a flowchart showing detailed actions of the first control apparatus of the POS server in step of checking database update (S204) in Fig. 12;
Fig. 14 is a flowchart showing detailed actions of the first control apparatus of the POS server in step of checking matching of the database operating instruction (S212) in Fig. 12;
Fig. 15 is a flowchart showing actions of the total control apparatus of the POS server when receiving the database operating instruction from the first control apparatus.

THE BEST EMBODIMENT ACCORDING TO THIS INVENTION

[0036] Embodiments according to this invention will be described hereafter. This claimed invention is not limited by following embodiments and all combinations of features described in the embodiments may not be required for solutions of this invention.

[0037] Fig. 1 shows the whole of the POS system. The POS system has the first local terminal 300a, the second local terminal 300b, (call a local terminal 300) and a POS server 100 managing a plurality of local terminals 300. The local terminals 300 are client computers. The local terminal 300 has a general-purpose commercial personal computer as a core'device and peripheral devices such as a journal printer or a bar-code reader. Thereby, the local terminal 300 processes dealing of selling or purchasing at the store. The local terminal 300 connects through a rooter 12 with the POS server 100 to get necessary information.

[0038] The POS server is a computer for a server, and has a dealing database 116 for storing information of products including selling prices and information of dealing at the local terminal 300 that is received from the local terminal 300. The POS server 100 connects through the rooter 12 with the local terminal 300. The POS server 100 receives a database operating instruction from the local terminal 300 for updating the dealing database 116 with deals of products at the local terminal 300.

[0039] Internet communication network is shown as an example for network communication line herein. When security of the system is given importance, frame-relay network may be applied. Thus, connecting system is not limited.

[0040] Fig. 2 is a block diagram showing a hardware structure of the local terminal 300 shown in Fig. 1. The local terminal 300 includes a CPU 302, a main memory 304, a BIOS-ROM 306, a display controller (LCDC) 308, a printer controller (PRTC) 310, a scanner controller 312, a keyboard controller 314, a network interface 316, a CD-ROM interface 318, a CD-ROM 330, an LCD display 332, a journal printer 334, a barcode reader 336 and a keyboard/key-mat 338.

[0041] The CPU 302 executes arithmetic and logic operation accordingly to programs stored in the main memory 304 and the BIOS-ROM 306. The CPU 302 controls various peripheral devices such as the journal printer 310 and the barcode reader 312. The main memory 304 is formed with RAMs. The BIOS-ROM 306 stores a program for BIOS (Basic Input/Output System)

for controlling connected peripheral devices. The LCDC 308 is connected with the LCD display 308 including the line display. The printer controller 310 is connected with the journal printer 334 for issuing receipts. The scanner controller 312 is connected with the barcode leader 336. The keyboard controller 314 is connected with a keyboard/keymat 338. The CD-ROM interface 318 controls the CD-ROM 330.

[0042] The network interface 316, structured by for example a modem card, is connected with the POS server 100 through a communication line network including the Internet. The local terminal 300 transmits information of dealings of products at the local terminal through the network interface 316 to the POS server 100 and receives a response for the transmitted information. An input/output bus 320 is formed with a plurality of lines for data address and control. Devices communicate data with each other through the input/output bus 320, and make respective own performances. Structure of the local terminal 300 including peripherals can be modified suitably according to feature of the store.

[0043] Fig. 3 is a function block diagram showing functions of the processing apparatus 350 to be performed by a hardware structure shown in Fig. 2. The processing apparatus 350 is a function block gathered with functions related to dealing process. A chain of actions of the processing apparatus 350 is executed mainly by the CPU 302, the main memory 304 and the program stored at the BIOS-ROM 305. Devices other than the above structure can execute the actions of the processing apparatus 350 so that design of the structure may be flexible. The processing apparatus 350 includes a input unit 352, a dealing management unit 354, a generating unit for database operating instruction 356, a holding unit for database operating instruction 358, a transmitting unit 360, a receiving unit 362, an output unit 364, a copy unit 266 and an addressing unit 368.

[0044] The input unit 352 is for inputting product codes, the number of products and product prices through the barcode reader 336 or the keyboard/keymat 338. The product codes may be barcode stuck on the products.

[0045] The dealing management unit 354 calculates accordingly to information inputted by the input unit 352. For example, the total of dealing with one customer is calculated. In case of selling products to customers, total purchasing price is calculated.

[0046] The generating unit for database operating instruction 356 generates a database operating instruction for updating the dealing database 116 of the POS server 100 with results processed by the dealing management unit 354. The database operating instruction may be an instruction to update the database of the POS server 100 with selling five pencils, or selling three erasers. When five pencils and three erasers are sold to one customer, the database operating instructions related to pencils and erasers are generated respectively. Thus, the database operating instruction is generated respectively for each product. The database operating instruction may be formed by SQL (Structured Query Language).

[0047] The copy unit 366 copies the database operating instruction received from the generating unit for database operating instruction 356. The addressing unit 368 adds the address for transmitting the each database operation instruction onto the each database operating instruction. The address may be an IP address.

[0048] The transmitting unit 360 receives the database operating instructions added the addresses by the addressing unit 368 and transmits them through the Internet 20 to each address. The transmitting unit 360 transmits requests for information of products to request the information of products including selling prices of the products to the POS server 100. The holding unit for database operating instruction 358 holds the database operating instructions generated by the generating unit for the database operating instruction 356.

[0049] The receiving unit 362 receives the information of products including the selling price through the Internet 20 from the POS server 100. The output unit 364 outputs information to make the journal printer 334 print the information and to make the LCD display 332 display the information toward the journal printer 334 and the LCD display 332. The output unit 364 also outputs information of dealings corresponding to the database operating instructions held at the holding unit for database operating instruction 358.

[0050] Fig. 4 is a block diagram showing the hardware structure of the POS server 100 shown in Fig. 1. The POS server 100 has a total control apparatus 200, a first control apparatus 210a, a second control apparatus 210b, a third control apparatus 210c, a fourth control apparatus 210d and a backup device 220. The total control apparatus 200, the first control apparatus 210a, the second control apparatus 210b, the third control apparatus 210c, the fourth control apparatus 210d and the backup device 220 can communicate through the Internet 20 with the plurality of local terminals 300 and a POS server other than the POS server 100.

[0051] The first control apparatus 210a and the second control apparatus 210b receive the database operating instruction respectively from the same local terminal 300. In other words, the first control apparatus 210a and the second control apparatus 210b receive the same database operating instruction added respectively an address of the first control apparatus 210a or the second control apparatus 210b transmitted from the first local terminal 300a. The third control apparatus 210c and the fourth control apparatus 210d receive the database operating instruction from a local terminal 300, for example a second local terminal 300b, other than the first local terminal 300a.

[0052] In short, the first control'apparatus 210a and the second control apparatus 210b receive the database operating instruction from the first local terminal 300a, and the third control apparatus 210c and the

fourth control apparatus 210d receive the database operating instruction from the second local terminal 300b.

[0053] Thus, when the plurality of local terminals 300 is controlled, the processing can be decentralized by controlling different local terminals 300 with a plurality of control apparatuses 210. Thereby, the POS server 100 can respond at real time for requests from the local terminals, even if the number of the local terminals to be controlled is large. The total control apparatus 200 receives and manages the database operating instruction, which the first control apparatus 210a and the second control apparatus 210b receive from the first local terminal 300a, from at least one of the first control apparatus 210a and the second control apparatus 210b. The total control apparatus 200 also receives and manages the database operating instruction, which the third control apparatus 210c and the fourth control apparatus 210d receive from the second local terminal 300b, from at least one of the third control apparatus 210c and the fourth control apparatus 210d. Therefore, the total control apparatus 200 manages the database operating instructions received from all local terminals controlled by the POS server 100.

[0054] Thus, the total control apparatus 200 receives the database operating instructions received from all local terminals controlled by the POS server 100 so that, when the plurality of control apparatuses 210 manage different local terminals 300 respectively, the total control apparatus 200 can manage totally all local terminals 300.

[0055] The backup device 220 receives a database operating instruction added an address of the backup device 220. The backup device receives the same database operating instruction, which the first control apparatus 210a and the second control apparatus 210b receive from the first local terminal 300a, and the same database operating instruction, which the third control apparatus 210c and the fourth control apparatus 210d receive from the second local terminal 300b, through the Internet. When the database operating instructions are not received correctly at the first control apparatus 210a, the second control apparatus 210b and the total control apparatus 200, the backup device 220 transmits the database operating instruction respectively to the first control apparatus 210a, the second control apparatus 210b and the total control apparatus 200.

[0056] Thus, the backup device 220 has all database operating instructions managed by the POS server 100, so that when the first control apparatus 210a and the second control apparatus 210b could not receive correctly the database operating instructions, the backup device 220 transmits the database operating instructions thereto for recovering the database operating instruction which is lost.

[0057] When the third control apparatus 210c and the fourth control apparatus 210d could not receive correctly the database operating instructions, the backup device 220 also transmits the database operating instructions thereto for recovering the database operating instruction which is lost.

[0058] Fig. 4 shows the POS server 100 having a plurality of control apparatuses 210 as one group. These apparatuses may not be required in a physically one group so that the plurality of control apparatuses 210, the total control apparatus 200 and the backup device 220 may be disposed respectively at different places. In this case, respective control apparatuses 210, the total control apparatus 200 and the backup device 220 can communicate with the local terminals 300 through the Internet and communicate with the other apparatuses in the POS server 100 through communication line such as a LAN. For example, the first control apparatus 210a may be installed at Tokyo, and the second control apparatus 210b may be installed at Kyushu. Thus, a plurality of control apparatuses 210 can be installed at different locations, so that when the first control apparatus 210a does not work or is in busy traffic condition, the local terminal 300 can access to the second control apparatus 210b to process the same operation.

[0059] Fig. 5 is a block diagram showing a hardware structure of the first control apparatus 210a shown in Fig. 4. The first control apparatus 210a includes a CPU 102, a main memory 104, a BIOS-ROM 106, a database updating device 108, a dealing database 116, a network interface 110, an internal connecting unit 112 and an input/output bus 114.

[0060] The CPU 102 executes arithmetic and logic operation accordingly to programs stored in the main memory 104 and the BIOS-ROM 106. The CPU 102 controls various peripheral devices. The main memory 104 is formed with RAMs. The BIOS-ROM 106 stores a program for BIOS (Basic Input/Output System) for controlling peripheral devices connected with the system. The database updating device 108 controls for formatting, reading and writing the dealing database 116. The dealing database 116 stores information of dealings at the local terminals 300.

[0061] The network interface 110 connecting through the Internet 20 with the local terminals 300 receives information of dealings at the local terminals 300. The network interface 110 transmits responses for the received information. The internal connecting unit 112 connects through a communication line, for example LAN, with the second control apparatus 210b, the total control apparatus 200 and the backup device 220. Thereby, the first control apparatus 210a, the second control apparatus 210b, the total control apparatus 200 and backup device 220 of the POS server 100 can transmit and receive information not through the Internet 20. Not showing in the diagram, the peripheral devices such as a LCD monitor and a keyboard of the control apparatus 210a connect through an exclusive input/output controller with the input/output bus 114 similarly as the local terminal 300 shown in Fig. 2.

[0062] Fig. 6 is a functional block diagram showing functions of a processing device 150 for database op-

erating instructions having features of this embodiment in functions of the first control apparatus 210a applicable according to the structure of the hardware in Fig. 5. The processing device 150 for the database operating instruction is one unit integrating functions to execute the database operating instruction. A chain of actions of the processing device 150 is executed mainly by the CPU 102, the main memory 104 and the program stored at the BIOS-ROM 106. The processing device 150 can be structured by the other elements so that design of the structure may be flexible.

[0063] The processing device 150 has a matching check device 156, a holding device 158 for database operating instruction, a deleting device 160, a database updating device 108 and a recovering device 164 for database operating instruction.

[0064] The receiving device 152 receives the database operating instruction through the Internet 20. A receiving unit between apparatuses 166 receives the database operating instruction from the other control apparatus 210, and transmits that to the matching check device 156 or the holding device 158 for database operating instruction. The receiving unit between apparatus 166 receives the request of database operating instructions for requesting to transmit the database operating instruction from the other control apparatuses 210. A timer 170 measures time.

[0065] The holding device 158 for database operating instruction holds temporarily the database operating instructions received from the receiving device 152 and the receiving unit between apparatuses 166. The holding device 158 receives the request of database operating instructions from the receiving unit between apparatus 166 and transmits the database operating instruction pointed by the request of database operating instructions to transmit a transmitting unit between apparatuses 168.

[0066] The matching check device 156 receives the same database operating instructions transmitted by the first local terminal 300a respectively from the receiving unit between apparatuses 166 and the holding device 158 for database operating instruction. The matching check device 156 checks the matching of two database operating instructions.

[0067] When the matching of the database operating instructions is confirmed, the matching check device 156 transmits information of completion to inform that confirmation of the matching is completed to a transmitting device 154 and the deleting device 160. The matching check device 156 transmits the database operating instruction, of which matching is confirmed, to the database updating device 108. When the matching of the database operating instructions is not confirmed, in other words, the holding device 158 does not hold the database operating instruction to be held, the matching check device 156 transmits recovering instruction to get the database operating instruction which is lost to a recovering device 164 for the database operating instructions.

[0068] When the deleting device 160 receives the information of completion, the deleting device 160 deletes the database operating instruction held at the holding device 158. In other words, the deleting device 160 deletes the database operating instruction held at the holding device 158 in a necessary condition that the dealing database 116 is updated.

[0069] In the other example, when the deleting device 160 receives the information of completion, the deleting device 160 may indicate that the database operating instruction is executed and make the holding device 158 maintain the database operating instruction distinguishably. When the deleting device 160 receives the information of completion, the deleting device 160 may add a flag on the database operating instruction that is executed.

[0070] When the database updating device 108 receives the database operating instruction, the database updating device 108 executes the database operating instruction and updates the dealing database 1116. When the recovering device 164 for the database operating instructions receives recovering instruction from the matching check device 156, the recovering device 164 transmits the recovering instruction through the transmitting unit between apparatuses. The transmitting device between apparatuses 168 transmits the recovering instruction and the database operating instruction to the other control apparatus 210. The transmitting device 154 transmits the information of completion to local terminals 300.

[0071] Fig. 7 shows a structure of database stored at the dealing database 116 of the first control apparatus 210a. The dealing database 116 includes a stock master file 400, a sales analysis file 402, a receiving/shipping file 404, a dealing total file 406, a daily total file 408, a customers file 410 and a receipt file 412.

[0072] The sock master file 400 stores information of products including prices and the number of stock correspondingly to information of distinguishing products to be sold at stores controlled by the POS server 100. The receiving/shipping file 404 stores information of dealings for each product of the received dealing information from the local terminals 300 controlled by the first control apparatus 210a correspondingly to date of dealing. The sales analysis file 402 stores sales correspondingly to class of products. The dealing total file 406 stores monthly total of dealings. The daily total file 408 stores daily total of sales for each store. The customers file 410 stores dealing information of each customer for customer classes correspondingly to a plurality of customer classes. The receipt file 412 stores information of dealings for each receipt.

[0073] Fig. 8 shows a data format of a stock master file 400 of the first control apparatus 210a. The stock master file 400 stores the information of products correspondingly to product codes for distinguishing products. The stock master file 400 has a product code field, a

product number field, a product name field, a selling price field and an amount of stock field. Code numbers for distinguishing products are stored in the product code field. Individual numbers of products are stored in the product number field. Names of products are stored in the product name field. Selling prices are stored in the selling price field. Current number of products in stock are stored in the amount of stock field.

[0074] According to this embodiment of the POS system, the local terminal 300 has no stock master file 400. Therefore, the local terminal 300 can be structured by a usual computer. Local terminal 300 can be installed more relatively easily.

[0075] The stock database 400 is provided in the POS server 100 so that the database can be updated easily.

[0076] Fig. 9 shows a data format of the receiving/shipping file 404 in the first control apparatus 210a. The receiving/shipping file 404 stores a store ID field, a date field, a class field, a slip number field, a product code field, a quantity field, a unit price field, a total price field and a tax field.

[0077] Information of distinguishing stores is stored in the store ID field. The store IDs are stored distinguishably correspondingly to each receiving/shipping data, so that the store where the dealing is acted can be distinguished. The date of dealing is stored in the date filed. Classes of operations are stored in the class field. For example, information, which shows whether the dealing is selling or purchasing, is stored. Serial numbers those are put on slips correspondingly to respective dealings are stored in the slip number field. Product codes of products, which were dealt, are stored in the product code field. Quantities of products, which were dealt, are stored in the quantity field. Unit prices of products, which were dealt, are stored in the unit price field. Total prices of products, which were dealt, are stored in the total price field. Taxes are stored in the tax field.

[0078] Information of dealings at the local terminals 300 controlled by the control apparatus 210 is stored in the receiving/shipping file 404 of the control apparatus 210. Therefore, when the local terminal 300 requests information of dealings to the control apparatus, the required information can be provided.

[0079] The second control apparatus 210b, the third control apparatus 210c and the fourth control apparatus 210d have the same structure and the same operations as the structure and operations of the first control apparatus 210a described with reference to Fig. 5-8 so that description about them is omitted.

[0080] The POS server 100 has the plurality of control apparatuses having the same structure and the same functions. Each control apparatus 210 can be given by a usual computer. Therefore, the POS system can be structured easily accordingly to a scale of the store.

[0081] Each control apparatus 210 can communicate through each Internet interface 114 with the local terminals 300. Case of increasing the number of communication lines, or increasing information content controlled by the POS server 100 can be solved by installing more control apparatuses 210.

[0082] Hardware structure of the total control apparatus 200 is described herein. The hardware structure of the total control apparatus 200 is almost same as that of the control apparatus 210 described with reference to Fig. 5-9. Following points are different from the first control apparatus 210a.

[0083] The first control apparatus 210a receives the database operating instruction through the Internet 20 from the local terminals 300. The total control apparatus 200 receives the database operating instruction from the control apparatuses 210. The receiving/shipping file 404 in the total control apparatus 200 stores all information stored respectively at the all receiving/shipping files 404 of the POS server 100. The stock master file 400 of the total control apparatus 200 stores all information of all products controlled by the POS server 100. The total control apparatus 200 is different on these points from the control apparatus 210.

[0084] The total control apparatus 200 receives and manages the database operating instructions from the control apparatuses 210, but does not transmit responses to the local terminals 300. Therefore, the total control apparatus 200 may not respond at the real time differently from the control apparatus 210. Thereby, the total control apparatus 200 does not require real time processing.

[0085] The POS server 100 has the total control apparatus 200 storing relatively large data and the control apparatuses 210 storing relatively small data. The total control apparatus 200 is preferably capable to store large data, but not required to communicate at real time. Oppositely, the control apparatus 210 is preferable to have the CPU 102 with processing speed capable to communicate with the local terminals 300 at real time. However, the control apparatus 210 may store relatively small data. Thereby, the POS server 100 includes the control apparatus 210 for charging mainly to communicate with the local terminals 300 and the total control apparatus 200 for charging mainly to manage the data. Thus, by decentralizing processing, real-time response and large data management can be performed.

[0086] Hardware structure of the backup device 220 is described herein. The hardware structure of the backup device 220 is almost same as that of the control apparatus 210 described with reference to Fig. 5-9. The backup device, however, may not have the stock master file 400 and any databases other than this. The backup device 220 is different on these points of inner structure from the control apparatus 210. The backup device 220 has a holding portion for database operating instructions and maintains the received database operating instructions, and transmits the database operating instructions to the first control apparatus 210a, the second control apparatus 210b and the total control apparatus 200 accordingly to the request.

[0087] For the other example, the backup device 220

may have the receiving device 152, the transmitting device 154, the receiving unit between apparatuses 166, the transmitting unit between apparatuses 168 and the holding device 158 for database operating instructions. Accordingly, the backup device 220 can receive the database operating inspections and provides the database operating instructions to the other control apparatuses 210.

[0088] Fig. 10 is a flowchart showing actions of the first local terminal 300a when selling products to a customer. Generally, an operator at the store operates the barcode reader 336 or the keyboard/keymat 338 to input the product code to the input unit 352 (S100). Then, the transmitting unit 360 transmits the inputted product code through the network interface 316 to the POS server 100 (S102). At that time, when the product was sold at a different price from the price corresponding to the product code in case of discount sale, the actual selling price is transmitted to the POS server 100.

[0089] The information of the products pointed by the product codes transmitted to the POS server 100 is received (S104). The operator of a register inputs a quantity of the product corresponding to the product code inputted in S100 (S106). The dealing management unit 354 processes the dealing according to the amount of products and the selling price (S108). The output unit 364 displays the received information of products on the LCD display 308 (S110).

[0090] Thus, the local terminal 300 receives the information of products from the POS server 100 so that the information of products may not be stored previously. Therefore, the computer structuring the local terminal 300 may have relatively small data capacity. The information of products is stored at the POS server so that updating can be done easily and at real time. Thus, the local terminal 300 can manage dealings according to the latest information of products.

[0091] When other product is traded more, processing from S100 to S110 is repeated (S112). After processing from S100 to S110 is completed for all products (S112), the generating unit 356 for database operating instructions generates the database operating instructions to update the database of the POS server 100 with information of processing executed from S100 to S110 (S114). At that time, the generating unit 356 generates executive instruction to indicate executing the database operating instruction. Then, the transmitting unit 360 transmits the database operating instruction to the POS server 100 (S116). Simultaneously, the transmitting unit 360 transmits more the executive instruction. As mentioned above, operations of the first terminal 300a on selling products are completed.

[0092] The local terminal 300 transmits the database operating instruction and the executive instruction every time the dealing with one customer is completed, so that the POS server 100 can receive the database operating instruction every time the dealing is done. Thus, the POS server 100 can update the dealing database 116 with the information of dealing done at the local terminal 300 every time the dealing at the local terminal 300 is completed. In other words, the POS server 100 can update the dealing database 116 at real time. Thereby, the dealing database 116 can store the information of the dealing that is completed anytime. Therefore, the total till the time of dealing completed can be done according to data stored at the dealing database 116.

[0093] Fig. 11 is a flowchart showing detailed actions of the first local terminal 300a in the step of transmitting the database operating instruction (S116) in Fig. 9. The copy unit 366 copies the database operating instruction generated in the step of generating the database operating instruction (S114) to generate three database operating instructions (S130). The copy unit 366 copies the database operating instruction generated at the generating unit 356 for database operating instructions every time the local terminal 300 completes the dealing with a customer.

[0094] The addressing unit 368 adds each of addresses of the first control apparatus 210a, the second control apparatus 210b and the backup device 220 respectively on the same three database operation instructions received from the copy unit 366 (S132). Thereafter, the transmitting unit 360 transmits the three database operating instructions addressed by the addressing unit 368 through the Internet 20 (S134). When transmission of the database operating instructions is completed (S136), actions of the local terminal 300 are finished.

[0095] When transmission of the database operating instructions is not completed in S136, the holding device 358 for database operating instructions holds the database operating instruction (S138). Thereafter, the output unit 364 outputs information, which inform that the information of dealing and the database operating instruction could not be transmitted, to the journal printer 334 (S140). Thus, when the database operating instructions could not be transmitted, the information for informing that the information of dealing and the database operating instruction could not be transmitted is outputted to the journal printer 334 or LCD display 332 so that the operator of the register can recognize that the database operating instruction could not be transmitted.

[0096] Thereafter, the Internet interface 316 retransmits the database operating instruction held in the holding device 358 for database operating instructions (S142). Then, processing from S136 to S142 is repeated. Thus, the Internet interface 316 can transmit the database operating instruction to access again even if the database operating instruction could not be transmitted by the first access, so that transmission to the POS server can be done securely. After the database operating instruction is transmitted in S142, the database operating instruction stored in the holding device 358 may be deleted.

[0097] Actions of the second local terminal 300b on selling products to the customer are similar as the actions of the first local terminal 300a described with ref-

erence to Fig. 10, 11. In case of the second local terminal 300b, the addressing unit 368 adds each of addresses of the third control apparatus 210c, the fourth control apparatus 210d and the backup device 220 in S132.

[0098] Fig. 12 is a flowchart showing actions of the first control apparatus 210a when the first control apparatus 210a, the second control apparatus 210b and the backup device 220 of the POS system receive the same database operating instruction addressed to each apparatuses or the device from the first local terminal 300a.

[0099] Firstly, the network interface 110 of the first control apparatus 210a receives the database operating instruction addressed to the first control apparatus 210a (S200). Then, the network interface 110 receives the information of dealing completion to inform that the dealing with one customer is completed (S202). When not receiving the information of dealing completion, the holding device 158 for database operating instructions maintains the database operating instruction until receiving the information of dealing completion and receives a plurality of database operating instructions.

[0100] When the network interface 110 receives the information of dealing completion in S202, the database updating device 162 check whether or not files stored in the dealing database 116 according to the database operating instruction can be updated (S204). When all files can be updated (S206), the all database are updated (S208). When the dealing database 116 cannot be updated in S206, the database operating instruction is received again from the first local terminal 330a (S220) , and the process returns to the step of updating database (S204).

[0101] Thereafter, information of completion to inform that updating files is completed is transmitted to the first local terminal 300a (S210). Then, the matching check device 156 confirms matching of the database operating instruction stored in the holding device 158 for database operating instructions and the database operating instruction received through the receiving unit between apparatuses 166 from the second control apparatus 210b (S212). As mentioned above, the actions of the first control apparatus 210a on receiving the database operating instruction are finished.

[0102] Fig. 13 is a flowchart showing detailed actions of the first control apparatus 210a of the POS server 100 in step of checking database update (S204) in Fig. 12.

[0103] When the database updating device 108 receives the information of completion, the database updating device 108 checks whether or not updating the stock master file 400 is allowable. When the updating is allowable (S240), the database updating device 108 checks whether or not updating the sales analysis file 402 is allowable. When the updating is allowable (S242) , the database updating device 108 checks whether or not updating the receiving/shipping file 404 is allowable. When the updating is allowable (S244), the database updating device 108 checks whether or not updating the dealing total file 406 is allowable. When the updating is allowable (S246), the database updating device 108 checks whether or not updating the daily total file 408 is allowable. When the updating is allowable (S248), the database updating device 108 checks whether or not updating the customers file 410 is allowable. When the updating is allowable (S250), the database updating device 108 checks whether or not updating the receipt file 412 is allowable. When the updating is allowable (S252), it is judged that the received database operating instruction is executable (S254).

[0104] A predetermined program for updating database is stored in the main memory 104 or BIOS-ROM 106. The program for updating database may be a stored procedure. The database updating instruction is executed according to the database operating instruction received from the local terminal 300. Then, the program is executed so as to convert the database operating instruction respectively to different instructions for each file and store them in respective files. Thus, by executing one database operating instruction, the different instructions for each file can be stored. The allowable updating includes adding a new file. For example, if there is no file for storing the database operating instruction, a new file may be generated to update the new file with information of the database operating instruction.

[0105] When updating the stock master file 400 is not allowable in S240, when updating the sales analysis file 402 is not allowable in S242, when updating the receiving/shipping file 404 is not allowable in S244, when updating the dealing total file 406 is not allowable in S246, when updating the daily total file 408 is not allowable in S248, when updating the customer file 410 is not allowable in S250, and when updating the receipt file 412 is not allowable in S252, error is judged (S260).

[0106] Fig. 14 is a flowchart showing detailed actions of the first control apparatus 210a in step of checking matching of the database operating instruction (S212) in Fig. 12.

[0107] When the predetermined time passes (S279), the matching check device 156 checks the matching of the database operating instruction stored in the holding device 158 for database operating instructions and the database operating instruction stored in the holding device 158 of the second control apparatus 210b (S272). When the matching of the database operating instructions is confirmed (S274), the actions of the first control apparatus 210a are finished. Thus, the matching is checked at intervals of the predetermined time, in other words, checking the matching is executed only at the predetermined time so that load of the CPU 102 in the first control apparatus 210a can be reduced.

[0108] When the matching of the database operating instructions is not confirmed in S274, the recovering device 164 for database operating instructions requests the transmitting unit between apparatuses 168 to transmit a request of the database operating instruction to the first control apparatus 210a. The receiving unit be-

tween apparatuses 166 receives the requested database operating instruction according to the request (S276). When the database operating instruction could be received, the step jumps to S282. When the database operating instruction could not be received in S278, the recovering device 164 requests the transmitting unit between apparatuses 168 to make the backup device 220 transmit the database operating instruction (S280). Thereby, the receiving unit between apparatuses 166 receives the database operating instruction from the backup device 220. The receiving unit between apparatuses 166 makes the holding device 158 hold the received database operating instruction. The database updating device 108 updates the dealing database 116 according to the recovered database operating instruction (S282).

[0109] Thus, the first control apparatus 210a can recover the database operating instruction, which is lost, from the second local terminal 300b, even if the database operating instruction could not be received from the first local terminal 300a.

[0110] The actions of the second control apparatus 210b on receiving the database operating instruction from the first local terminal 300a are the same as the actions of the first control apparatus 210a described with reference to Fig. 12-14, so that the description is omitted. The actions of the third control apparatus 210c and the third control apparatus 210d on receiving the database operating instruction from the second local terminal 300b are also the same as the actions of the first control apparatus 210a described with reference to Fig. 12-14.

[0111] Fig. 15 is a flowchart showing detailed actions of the total control apparatus 200 when receiving the database operating instruction from the first control apparatus 210a. When the timer 170 counts the predetermined time (S300), the receiving unit between apparatuses 166 of the total control apparatus 200 receives the database operating instruction from the first control apparatus 210a (S302). Thus, the database operating instruction is received at intervals of the predetermined time so that the CPU 102 can be used efficiently.

[0112] The matching check device 156 checks the matching of the received database operating instruction and the database operating instruction held at the first control apparatus 210a (S304). When the matching of the database operating instructions is not confirmed (S306), the recovering device 164 for database operating instructions recovers the database operating instruction, which is lost (S308). When the matching of the database operating instructions is confirmed.in S306, the step jumps to S310.

[0113] As the other example, the total control apparatus 200 may receive the database operating instruction from the second control apparatus 210b. The total control apparatus 200 may receive just the database operating instruction from the first local terminal 300a and receive the database operating instruction of any one of the first control apparatus 210a and the second control apparatus 210b.

[0114] It is checked whether or not updating the dealing database 116 is allowable (S310) . When updating the dealing database 116 is allowable, all files stored in the dealing database 116 are updated (S314) . Thereafter, the deleting device 160 deletes the database operating instruction received from the first control apparatus 210a (S316). Thus, the database operating instruction is deleted after updating the dealing database 116 is completed so that the memories in each apparatus can be used efficiently.

[0115] Detailed actions of the total control apparatus 200 in S304 is the same as the actions of the first control apparatus 210a in S212 described with Fig. 14 so that the description is omitted. Detailed actions of the total control apparatus 200 in S310 is the same as the actions of the first control apparatus 210a in S204 described with Fig. 13 so that the description is also omitted.

[0116] The POS system according to the second embodiment is described herein. The POS server 100 of the second embodiment includes the first control apparatus 210a, the second control apparatus 210b, the third control apparatus 210c, the fourth control apparatus 210d, the total control apparatus 200 and the backup device 220. According to the POS server 100 of the second embodiment, the first control apparatus and the total control apparatus 200 receive the database operating instructions added respectively addresses of the first control apparatus 210a and the total control apparatus 200 from the first local terminal 300a. The POS server 100 of the second embodiment is different at this point from the POS server 100 of the first embodiment. In this case, the addressing unit 368 of the first local terminal 300a adds each of addresses of the first control apparatus 210a, the second control apparatus 210b and the backup device 220 respectively on the three database operation instructions.

[0117] Actions of the total control apparatus 200 when the POS server 100 of this embodiment receives the database operating instruction from the first local terminal 300a is the same as the actions of the first control apparatus 210a according to the first embodiment described with Fig. 12-14. The total control apparatus 200 of this embodiment checks the matching of the database operating instruction held in the holding device 158 of the first control apparatus 210a and the database operating instruction held in the holding device 158 of the total control apparatus 200 in S212 of Fig. 12. When the matching of the database operating instructions is confirmed, the deleting device 160 of the first control apparatus 210a deletes the database operating instruction held in the holding device 158. The deleting device 160 of the total control apparatus 200 deletes the database operating instruction held in the holding device 158.

[0118] Thus, when the first control apparatus 210a, the total control apparatus 200 and the backup device 220 receive the same database operating instruction,

the database operating instructions are deleted after the matching of the database operating instructions is confirmed. Therefore, the CPU 102 can be used effectively.

[0119] According to this embodiment, the database operating instruction is transmitted directly from the first local terminal 300a to the total control apparatus 200. Thereby, the first control apparatus 210a is not required to transmit the database operating instruction to the total control apparatus 200 at intervals of the predetermined time.

[0120] As the other example, only the deleting device 160 of the first control apparatus 210a deletes the database operating instruction held in the holding device 158 of the first control apparatus 210a. And the database operating instruction held in the holding device 158 of the total control apparatus 200 may be held.

[0121] The total control apparatus 200 maintains the database operating instruction without deleting so that the total control apparatus 200 can transmit the database operating instruction held in the holding device 158 when updating the database of the other control apparatus 210. By transmitting the database operating instruction, load of communication is reduced in comparison with transmitting the data held in the dealing database 116.

[0122] Program executed by the CPU 102 of the POS server 100 may be supplied to a user by storing a recording medium such as a floppy disk or CD-ROM. Program executed by the CPU 302 of the local terminal 300 may be supplied to a user by storing a recording medium such as a floppy disk or CD-ROM. Each programs stored in the recording medium may be compressed or not. Each programs is installed from the recording medium to a hard disk drive and read into the main memory 104, 304 and executed by the CPU 102, 302.

[0123] The program performing the local terminal 300 according to the embodiment, that is installed in the hard disk drive, includes an input module, a dealing management module, a generating module for the database operating instruction, a copy module, an addressing module, a transmitting module, a receiving module and an output module. Actions of each module are the same as the actions of processing apparatus 350 described in Fig. 3 so that the description is omitted.

[0124] The program performing the first control apparatus 210a according to the embodiment, that is installed in the hard disk drive, includes a receiving module, a transmitting module, a matching check module, a recovering module, a deleting module, a database updating module, a receiving between apparatuses module, a transmitting between apparatuses module and a timer module. Actions of each module are the same as the actions of processing device 150 described in Fig. 6 so that the description is omitted.

[0125] All or a part of functions or actions of the POS server 100 and the local terminal 300 according to the embodiments described above can be stored in the floppy disk or the CD-ROM as the storing medium.

[0126] The programs may be executed by reading directly from the storing medium to the RAM or may be executed by reading to the RAM after installing to the hard disk drive firstly. The program may be stored in single recording medium or in a plurality of recording media. The encoded programs may be stored.

[0127] Instead of the floppy disk and the CD-ROM, an optical recording medium such as a DVD, a magnetic medium such as an MD, a magneto-optic recording medium such as a PD, a tape medium, a magnetic medium, and a semiconductor memory such as an IC card or a miniature card can be used. By using the storage device such as hard disk or the RAM of the server system connecting with a private communication network or the Internet 20 as the recording medium, the program may be provided through the communication network to the POS server 100 and the local terminals 300. These recording media are used only for structuring the POS server and the local terminals 300. Therefore, it is obvious that manufacturing and selling such media for above purpose infringe on the patent right according to this application.

[0128] While this invention herein is described above, technical cover area of this invention is not limited by description of the aforesaid embodiments. Various modifications or improvements can be added on the above embodiments. It is understood that various changes or improvements may be made without departing from the scope of this invention as defined by the following claims.

[0129] The POS server 100 according to this embodiment has the first control apparatus 210a controlling the first local terminal 300a and the second control apparatus 210b controlling the second local terminal 300b. As the first example of changes, the each control apparatuses 210 of the POS server 100 may control any local terminal 300. The number of the control apparatuses 210 of the POS server 100 is not limited by the embodiment.

[0130] When the number of the local terminals 300 controlled by the POS server 100 increases and data volume of the information stored in the dealing database of the POS server 100 increases, the POS server 100 may have more-than-five control apparatuses 210. For example, the POS server 100 may have the fifth control apparatus 210e additionally. The fifth control apparatus 210e can control the local terminals 300 other than the first local terminal 300a and the second local terminal 300b.

[0131] Thus, the number of the control apparatus 210 of the POS server 100 can be changed so that the number of the control apparatus 210 can be adjusted freely according to the number of the local terminal 300 controlled by the POS server 100, frequency and data volume in communication between the local terminal 300. The POS server 100 can be built according to the store size. The number of the control apparatus 210 can be changed freely so that when the load of the each con-

trol apparatus 210 is increased, the load of each control apparatus 210 can be reduced by adding the control apparatus more.

[0132] When the number of the local terminal 300 is small and frequency in communication is small, the POS server 100 may not have the second control apparatus 210b, the third control apparatus 210c, the fourth control apparatus 210d and the total control apparatus 200. Thus, the POS server 100 may have only the first control apparatus 210a and the backup device 220. When the POS server 100 controls relatively small store, the POS server 100 may have only one computer and one backup computer.

[0133] According to the embodiment, the total control apparatus 200 receives the database operating instruction to be received from the first local terminal 300a through the first control apparatus 210a as mentioned in Fig. 15. Instead of this, as the second change, the total control apparatus 200 may receive the database operating instruction both from the first control apparatus 210a and the second control apparatus 210b. In this case, the matching check device 156 of the total control apparatus 200 checks the matching of the database operating instructions received from the first control apparatus 210a and the second control apparatus 210b.

[0134] In the embodiment, when receiving the instruction of transmitting database, the database updating device 108 of the first control apparatus 210a checks the matching of the database operating instructions after updating the dealing database 116. Instead of this, as the third change, the database updating device 108 may update the dealing database 116 according to the database operating instruction after the matching check device 156 checks the matching.

[0135] As the fourth change, The POS server 100 may have only the first control apparatus 210a and the backup device 220. In this case, the first local terminal 300a receives two database operating instructions addressed with the address of the first control apparatus 210a and one database operating instruction addressed with the address of the backup device 220 from the first local terminal 300a. The first control apparatus 210a may check the matching of the two database operating instructions received from the first local terminal 300a and recovers the database operating instruction which is lost. In this case, the first local terminal 300a can transmits two database operating instructions to the POS server 100 through different path through the Internet 20. Thereby, when one of the instructions could not reach accurately to the POS server 100, recovering can be done with the other database operating instruction.

Effects of the invention

[0136] According to this invention, the POS server can respond immediately against request by local terminals. The low cost POS system can be provided.

Claims

1. A POS server for managing deals of products at a plurality of stores comprising a plurality of control apparatuses to be connected with a plurality of local terminals provided at said plurality of stores, each of said plurality of control apparatuses comprising:

   a dealing database for storing information of said deals of products operated at said local terminals;
   a receiving device for receiving a database operating instruction to update said dealing database about said deals of products; and
   a database updating device for updating said dealing database according to said database operating instruction to be received whenever said database operating instruction is received from said local terminals, whereby each of said receiving devices of said plurality of control apparatuses receives a same database operating instruction transmitted to said control apparatus from said local terminal.

2. The POS server according to claim 1, wherein said control apparatus further comprises:

   a holding device for holding said received database operating instruction;
   a matching check device for checking matching of said database operating instruction held at each of said holding devices of said plurality of control apparatuses and said database operating instruction corresponding thereto; and
   a recovering device for recovering said database operating instruction lost at said holding device of one of said control apparatuses by getting that from any one of said holding devices of said control apparatuses, that have said database operating instruction which is lost, other than said one of said control apparatuses, wherein said database updating device updates said dealing database according to said recovered database operating instruction.

3. The POS server according to claim 2, wherein said matching check device checks matching of said database operating instruction held at each of said holding devices of said plurality of control apparatuses at intervals of a predetermined time.

4. The POS server according to claim 1, 2 or 3, wherein said database updating device updates said dealing database according to said database operating instruction whenever a dealing at said local terminal is completed.

5. The POS server according to claim 2, 3 or 4, where-

in said matching check device checks matching of said database operating instruction after said database updating device updates said dealing database.

6. The POS server according to claim 2, 3 or 4, wherein said matching check device checks matching of said database operating instruction held at each of said holding devices of said plurality of control apparatuses, and when matching of said database operating instruction is checked, said database updating device updates said dealing database according to said database operating instruction.

7. The POS server according to claim 5 or 6, wherein, when matching of said database operating instruction cannot be checked, said recovering device recovers said database operating instruction, and thereby, said database updating device updates said dealing database according to said recovered database operating instruction.

8. The POS server according to any one of claims 2-7, wherein said control apparatus furthermore comprises a deleting device for deleting said database operating instruction, which matching is checked by said matching check device, from said database operating instructions held at each of said holding devices of said plurality of control apparatuses in a condition that said database updating device updated said database according to said database operating instruction.

9. The POS server according to any one of claims 2-8 further comprising a backup device for storing same information of said deals of products as that stored in said dealing database of said control apparatus, said backup device including:

a receiving device for receiving said database operating instruction transmitted toward said backup device; and
a holding device for holding said received database operating instruction, wherein said recovering device recovers said database operating instruction lost at said holding device of said control apparatuses by getting that from said holding device of said backup device.

10. The POS server according to any one of claims 1-9 furthermore comprising:

said plurality of control apparatuses connecting with different local terminals; and
a total control apparatus for storing information of said deals of products stored in said plurality of control apparatuses, said total control apparatus including:

a receiving device for receiving said database operating instruction transmitted toward said total control apparatus by said local terminal;
a total dealing database for storing information of said deals of products operated at said local terminals being controlled by said POS server; and
a database updating device for updating said dealing database according to said received database operating instruction, whereby said at least one receiving device of said control apparatuses and said receiving device of said total control apparatus receive the same database operating instruction transmitted toward them from said local terminal.

11. The POS server according to any one of claims 1-9 furthermore comprising:

said plurality of control apparatuses being connected with different local terminals; and
a total control apparatus for storing information of said deals of products stored in said plurality of control apparatuses, said total control apparatus including:

a receiving device for receiving said database operating instruction held in said holding devices of said plurality of control apparatuses from any one of said control apparatuses;
a total dealing database for storing information of said deals of products operated at said local terminals being controlled by said POS server; and
a database updating device for updating said database according to said received database operating instruction.

12. The POS server according to claim 11, wherein said receiving device of said total control apparatus receives said database operating instruction from any one of said plurality of control apparatuses at intervals of a predetermined time.

13. The POS server according to claim 10, 11 or 12, wherein said total control apparatus further includes:

a holding device for holding said received database operating instruction;
a matching check device for checking matching of said database operating instruction received by said total control apparatus and said database operating instruction held at said control apparatuses which has to store the same data-

base operating instruction as that being received by said total control apparatus.

14. The POS server according to claim 13, furthermore comprising a deleting device for deleting said database operating instruction from said holding devices and setting the dealing complete under an essential condition that said database updating device of said control apparatus updated said dealing database according to said database operating instruction, and said dealing databases of said total control apparatus when said matching check device of said control apparatus and said total control apparatus checked matching of said database operating instructions held in said respective holding devices of said control apparatus and said total control apparatus.

15. A POS server for managing deals of products at a plurality of stores comprising:

a dealing database for storing information of said deals of products operated at local terminals provided in said plurality of stores;
a receiving device for receiving a plurality of same database operating instructions to update said dealing database about said deals of products from said local terminals every time said deals of products with at least one customer is completed; and
a database updating device for updating said dealing database according to said received database operating instruction.

16. A local terminal, which is connected with a POS server having a dealing database for storing information of deals of products at a plurality of stores, comprising:

a dealing management unit for processing dealing management of said deals of products operated at said stores;
a generating unit for generating a database operating instruction to update said dealing database of said POS server with said dealing management;
a copy unit for making a copy of said database operating instruction;
an addressing unit for adding a different address respectively on a plurality of said database operating instructions; and
a transmitting unit for transmitting said plurality of database operating instructions added said addresses toward respective said addresses.

17. A local terminal, which is connected with a POS server having a dealing database for storing information of deals of products at a plurality of stores, comprising:

a dealing management unit for processing dealing management of said deals of products operated at said stores;
a generating unit for generating a database operating instruction to update said dealing database of said POS server with said dealing management;
a copy unit for making a copy of said database operating instruction;
an addressing unit for adding a same address respectively on a plurality of said database operating instructions; and
a transmitting unit for transmitting said plurality of database operating instructions added said addresses respectively toward said same address.

18. The local terminal according to claim 16 or 17, wherein said copy unit makes a copy of said generated database operating instruction whenever said dealing management unit completes dealing management.

19. The local terminal according to claim 16, 17 or 18 being connected with said control apparatus and said backup device of said POS server, wherein said addressing unit adds addresses of said backup device and said control apparatus of said POS server onto said plurality of database operating instructions.

20. The local terminal according to claim 16, 17 or 18 being connected with at least one of said plurality of control apparatuses of said POS server and with said total control apparatus managing said plurality of control apparatuses, wherein said addressing unit adds addresses of at least one of said control apparatuses connecting with said terminals and said total control apparatus onto said plurality of database operating instructions.

21. A POS system, having a POS server with a dealing database for storing information of deals of products operated at a plurality of stores and local terminals at said plurality of stores being connected with said POS server, each of said local terminals comprising:

a dealing management unit for processing dealing management of said deals of products operated at said stores;
a generating unit for generating a database operating instruction to update said dealing database of said POS server with said dealing management;
a copy unit for making a copy of said database

operating instruction;
an addressing unit for adding a different address respectively on a plurality of said database operating instructions; and
a transmitting unit for transmitting said plurality of database operating instructions being added said addresses toward respective said addresses,

said POS server having a plurality of control apparatuses connecting with said plurality of local terminals provided at said plurality of stores, each of said plurality of control apparatuses comprising:

a dealing database for storing information of said deals of products operated at said local terminals;
a receiving device for receiving a database operating instruction to update said dealing database about said deals of products; and
a database updating device for updating said dealing database according to said received database operating instruction, whereby each of said receiving devices of said plurality of control apparatuses receives said database operating instruction transmitted to said control apparatus from said local terminal.

22. A method of dealing management for managing deals of products at a plurality of stores, comprising steps of:

receiving a plurality of same database operating instructions to update a dealing database for storing information of said deals of products operated at local terminals provided in said stores about said operated deals of products from said local terminals every time said deals of products with at least one customer is completed; and
updating said dealing database according to said received database operating instruction.

23. A method of dealing management for managing deals of products by using a POS server having a dealing database for storing information of said deals of products at a plurality of stores, comprising steps of:

processing dealing management of said deals of products operated at said stores;
generating a database operating instruction to update said dealing database of said POS server with said dealing management;
making a copy of said database operating instruction;
adding a different address respectively on a plurality of said database operating instructions; and
transmitting said plurality of database operating instructions added said addresses toward respective said addresses.

24. A method of dealing management for managing deals of products by using a POS server having a dealing database for storing information of said deals of products at a plurality of stores, comprising steps of:

processing dealing management of said deals of products operated at said stores;
generating a database operating instruction to update said dealing database of said POS server with said dealing management;
making a copy of said database operating instruction;
adding a same address respectively on a plurality of said database operating instructions; and
transmitting said plurality of database operating instructions added said addresses respectively toward said same address.

25. A recording medium storing a computer program for managing deals of products at a plurality of stores comprising:

a receiving module for receiving a plurality of same database operating instructions to update a dealing database for storing information of said deals of products operated at local terminals provided in said stores about said operated deals of products from said local terminals every time said deal of products with at least one customer is completed; and
a database updating module for updating said dealing database according to said received database operating instruction.

26. A recording medium, storing a computer program for local terminals at stores connected with a POS server having a dealing database for storing information of deals of products at a plurality of stores, comprising:

a dealing management module for processing dealing management of said deals of products operated at said stores;
a generating module for generating a database operating instruction to update said dealing database of said POS server with said dealing management;
a copy module for making a copy of said database operating instruction;
an addressing module for adding a different address respectively on a plurality of said data-

base operating instructions; and
a transmitting module for transmitting said plurality of database operating instructions added said addresses toward respective said addresses.

27. A recording medium, storing a computer program for local terminals at stores connected with a POS server having a dealing database for storing information of deals of products at a plurality of stores, comprising:

a dealing management module for processing dealing management of said deals of products operated at said stores;
a generating module for generating a database operating instruction to update said dealing database of said POS server with said dealing management;
a copy module for mahing a copy of said database operating instruction;
an addressing module for adding a same address respectively on a plurality of said database operating instructions; and
a transmitting module for transmitting said plurality of database operating instructions added said addresses respectively toward said same address.

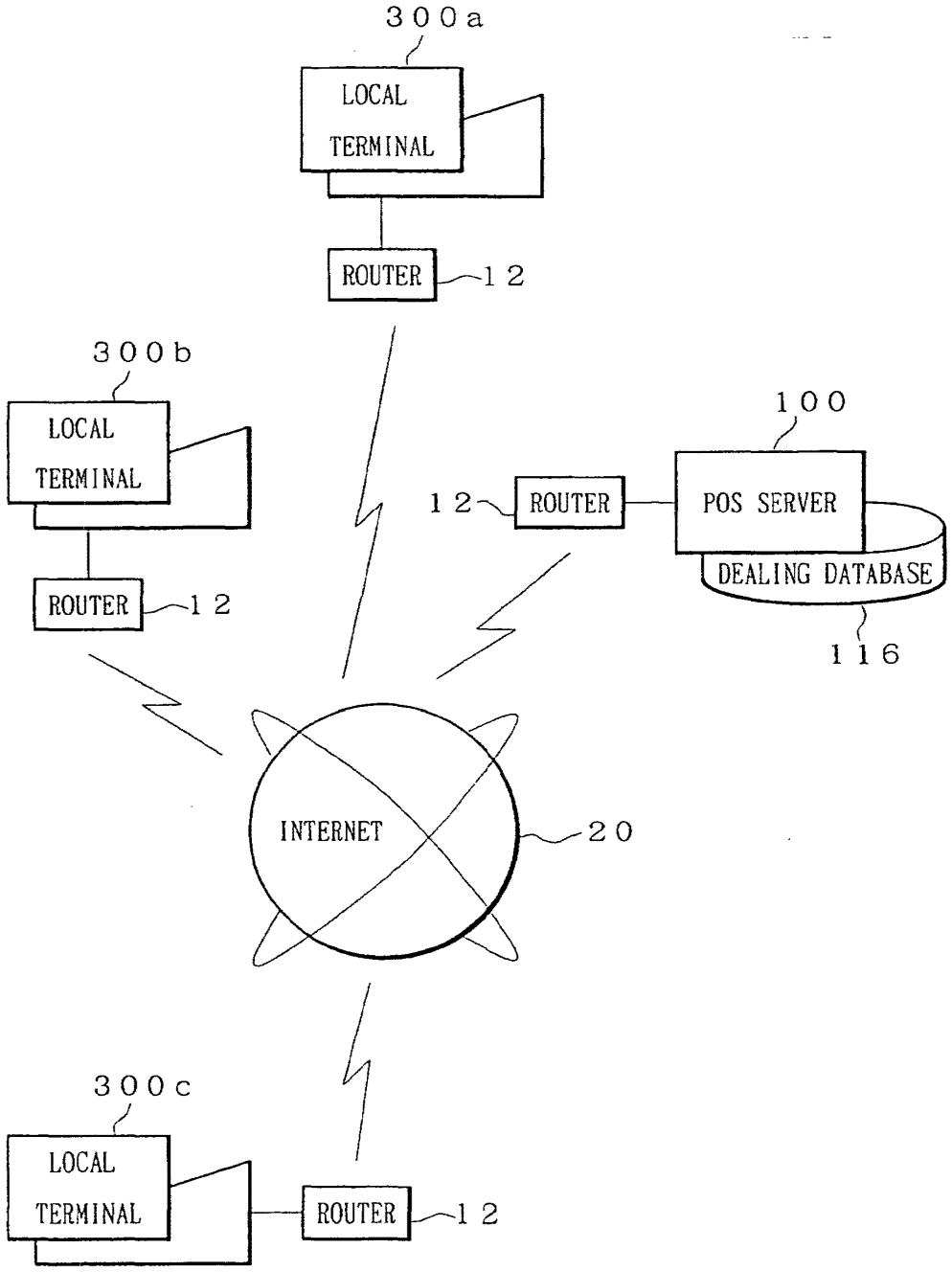

300a
LOCAL TERMINAL
ROUTER
12
300b
LOCAL TERMINAL
ROUTER
12
100
12
ROUTER
POS SERVER
DEALING DATABASE
116
INTERNET
20
300c
LOCAL TERMINAL
ROUTER
12

FIG. 1

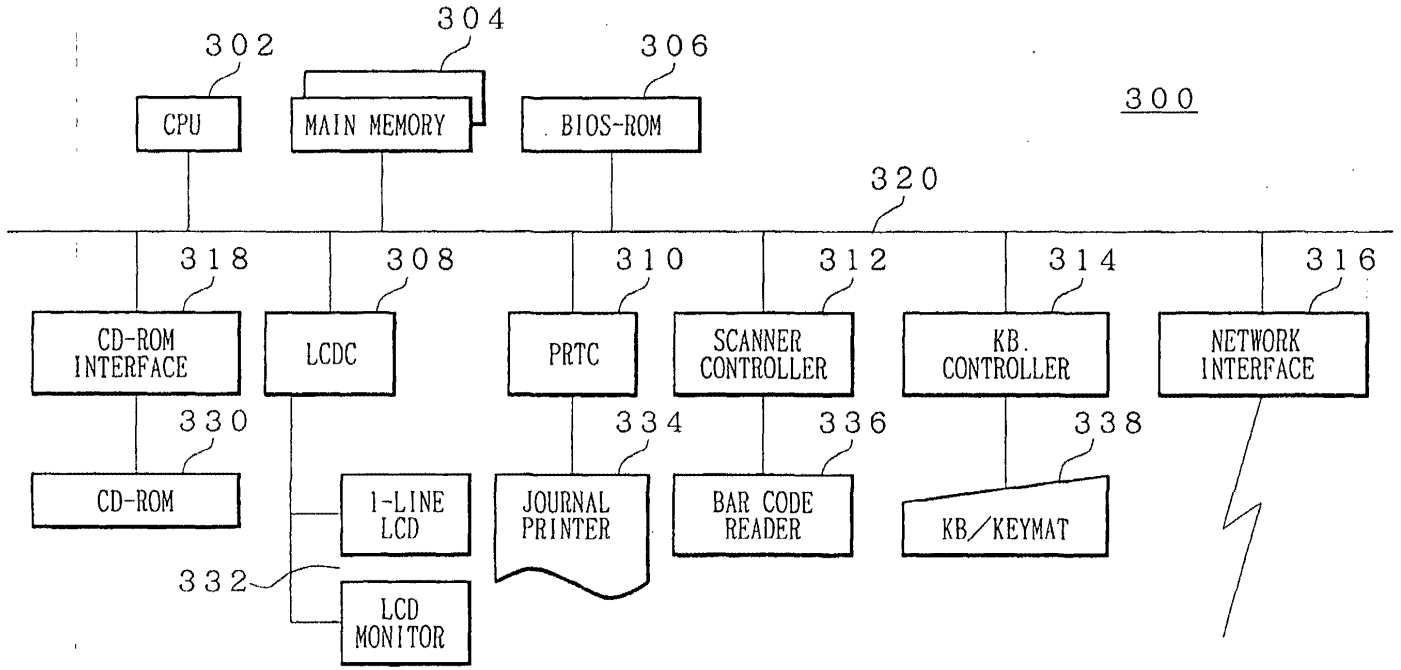

300
302
304
306
CPU
MAIN MEMORY
BIOS-ROM
320
318
308
310
312
314
316
CD-ROM INTERFACE
LCDC
PRTC
SCANNER CONTROLLER
KB. CONTROLLER
NETWORK INTERFACE
330
334
336
338
CD-ROM
1-LINE LCD
JOURNAL PRINTER
BAR CODE READER
KB/KEYMAT
332
LCD MONITOR

FIG. 2

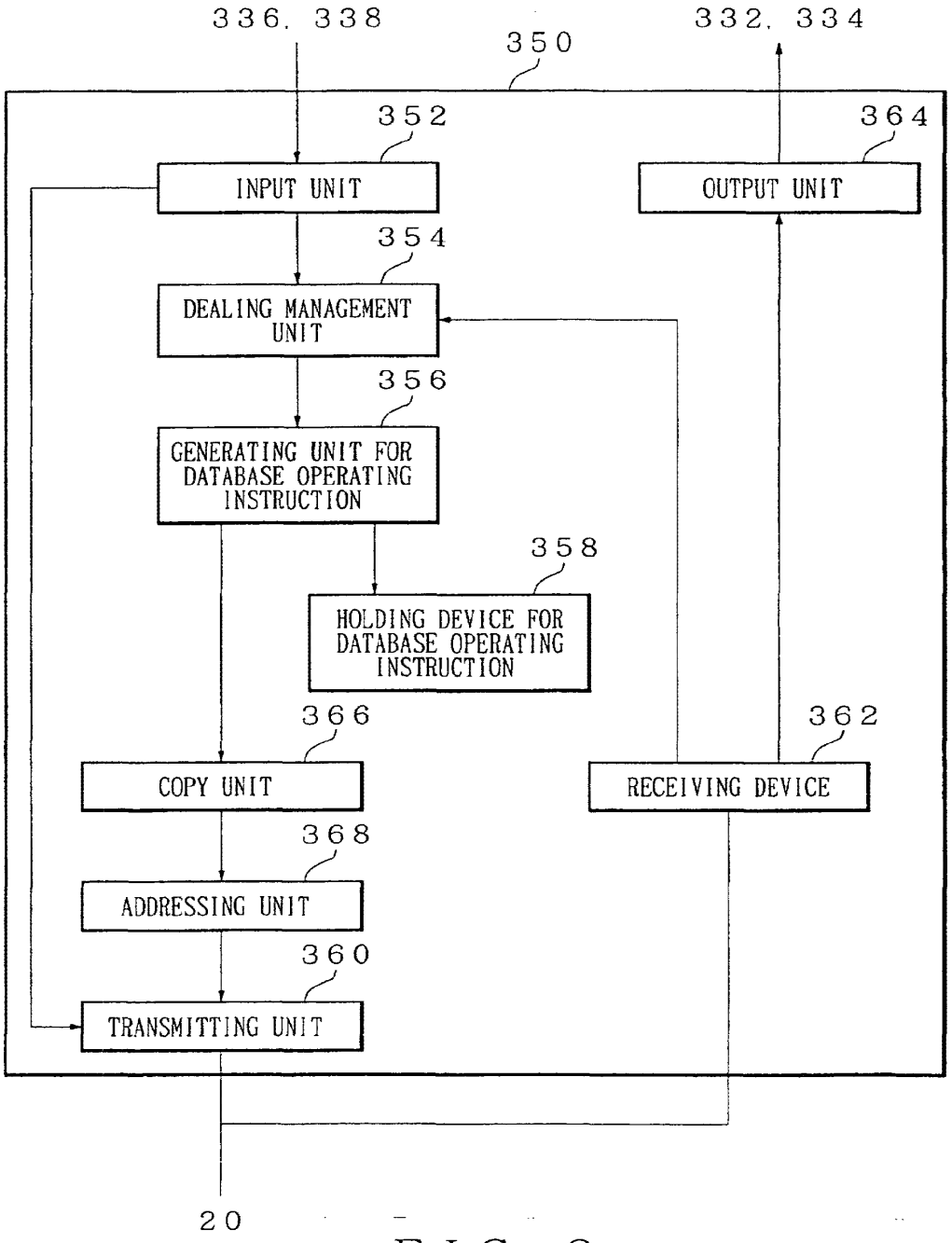

336, 338
350
332, 334
352
364
INPUT UNIT
OUTPUT UNIT
354
DEALING MANAGEMENT UNIT
356
GENERATING UNIT FOR DATABASE OPERATING INSTRUCTION
358
HOLDING DEVICE FOR DATABASE OPERATING INSTRUCTION
366
362
COPY UNIT
RECEIVING DEVICE
368
ADDRESSING UNIT
360
TRANSMITTING UNIT
20

FIG. 3

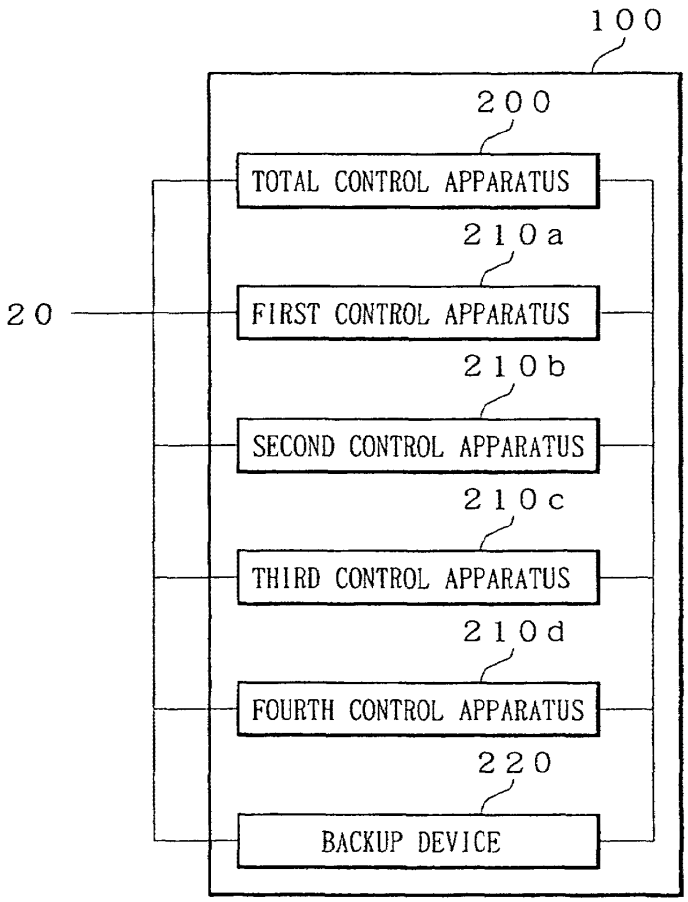

100
200
TOTAL CONTROL APPARATUS
210a
20
FIRST CONTROL APPARATUS
210b
SECOND CONTROL APPARATUS
210c
THIRD CONTROL APPARATUS
210d
FOURTH CONTROL APPARATUS
220
BACKUP DEVICE

FIG. 4

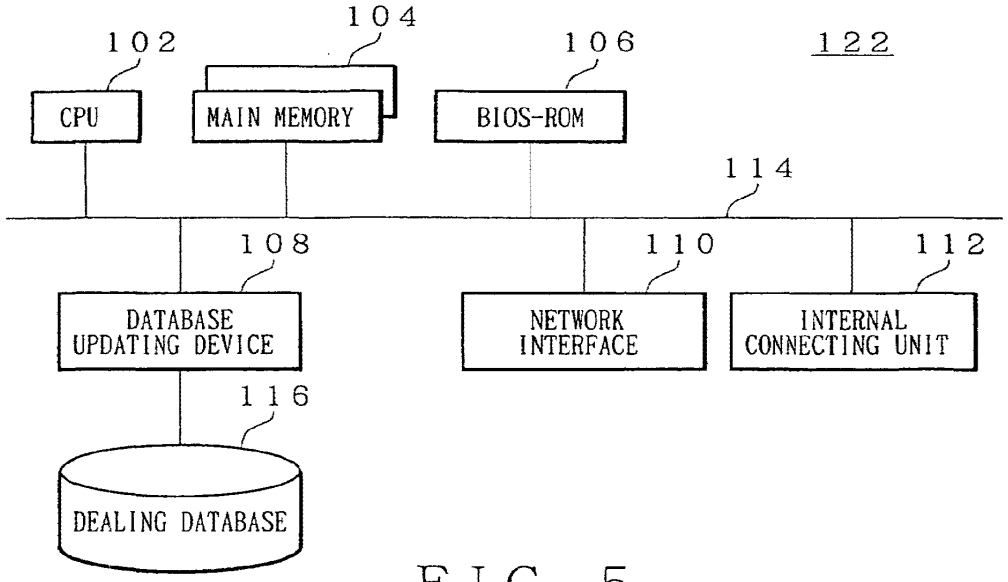

102
104
106
122
CPU
MAIN MEMORY
BIOS-ROM
114
108
110
112
DATABASE UPDATING DEVICE
NETWORK INTERFACE
INTERNAL CONNECTING UNIT
116
DEALING DATABASE

FIG. 5

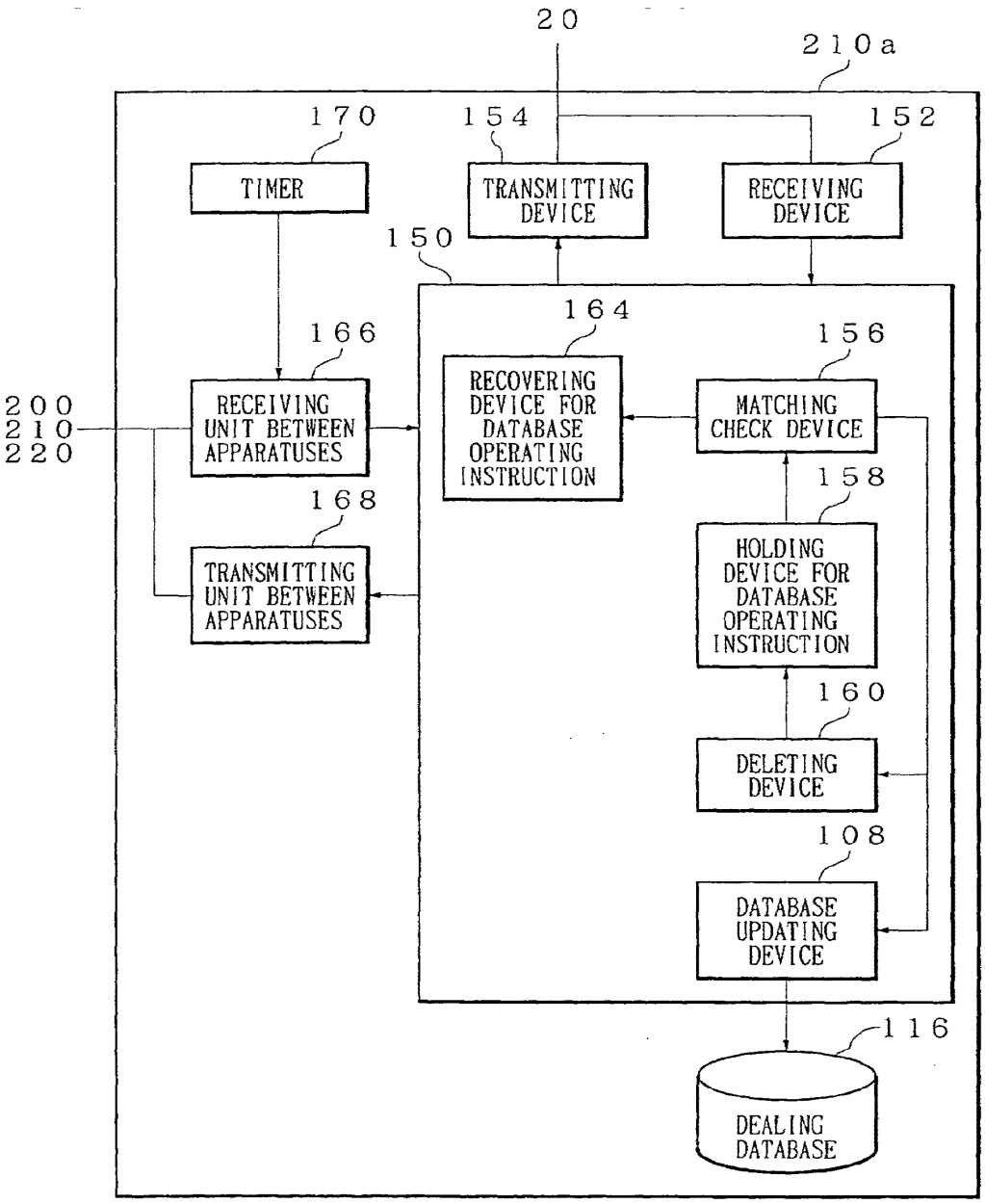

20
210a
170
154
152
TIMER
TRANSMITTING DEVICE
RECEIVING DEVICE
150
164
166
156
200
210
220
RECEIVING UNIT BETWEEN APPARATUSES
RECOVERING DEVICE FOR DATABASE OPERATING INSTRUCTION
MATCHING CHECK DEVICE
158
168
HOLDING DEVICE FOR DATABASE OPERATING INSTRUCTION
TRANSMITTING UNIT BETWEEN APPARATUSES
160
DELETING DEVICE
108
DATABASE UPDATING DEVICE
116
DEALING DATABASE

FIG. 6

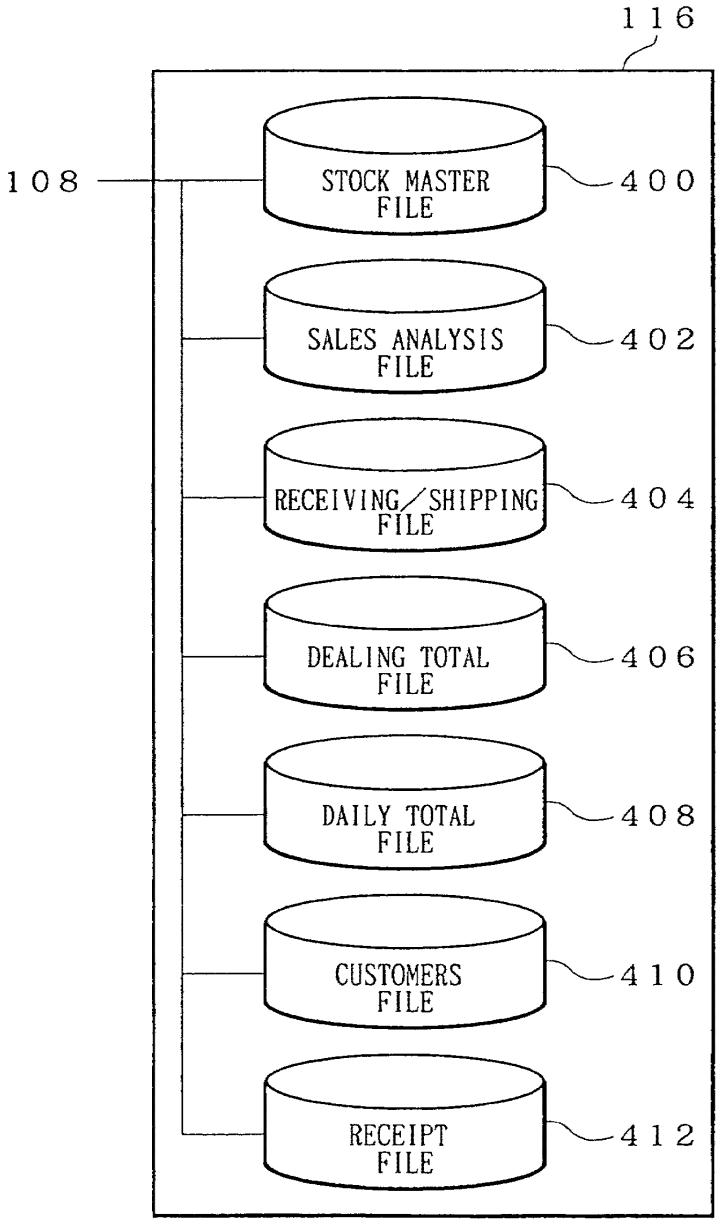

116
108
STOCK MASTER FILE
400
SALES ANALYSIS FILE
402
RECEIVING/SHIPPING FILE
404
DEALING TOTAL FILE
406
DAILY TOTAL FILE
408
CUSTOMERS FILE
410
RECEIPT FILE
412

FIG. 7

400

PRODUCT CODE	PRODUCT NUMBER	PRODUCT NAME	SELLING PRICE	AMOUNT OF STOCK

FIG. 8

404

STORE ID	DATE	CLASS	SLIP NUMBER	PRODUCT CODE	QUANTITY	UNIT PRICE	TOTAL PRICE	TAX

FIG. 9

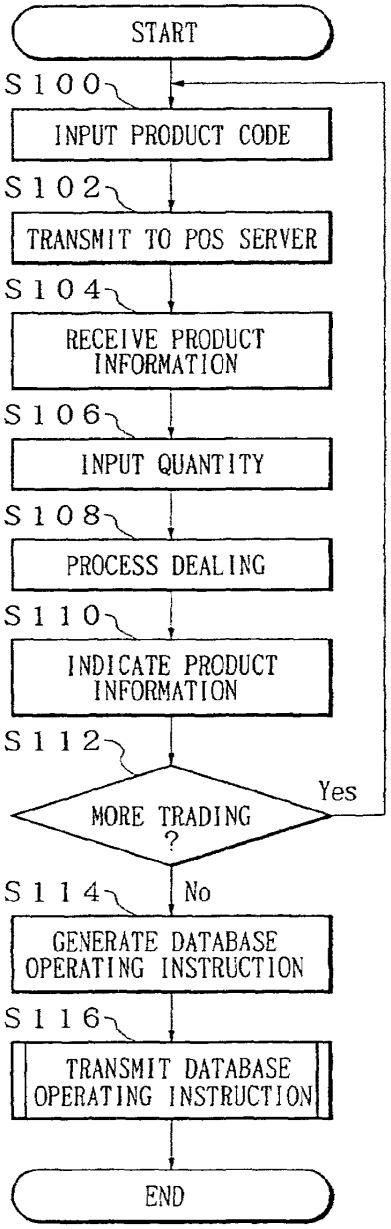

START
S100
INPUT PRODUCT CODE
S102
TRANSMIT TO POS SERVER
S104
RECEIVE PRODUCT INFORMATION
S106
INPUT QUANTITY
S108
PROCESS DEALING
S110
INDICATE PRODUCT INFORMATION
S112
MORE TRADING ?
Yes
S114
No
GENERATE DATABASE OPERATING INSTRUCTION
S116
TRANSMIT DATABASE OPERATING INSTRUCTION
END

FIG. 10

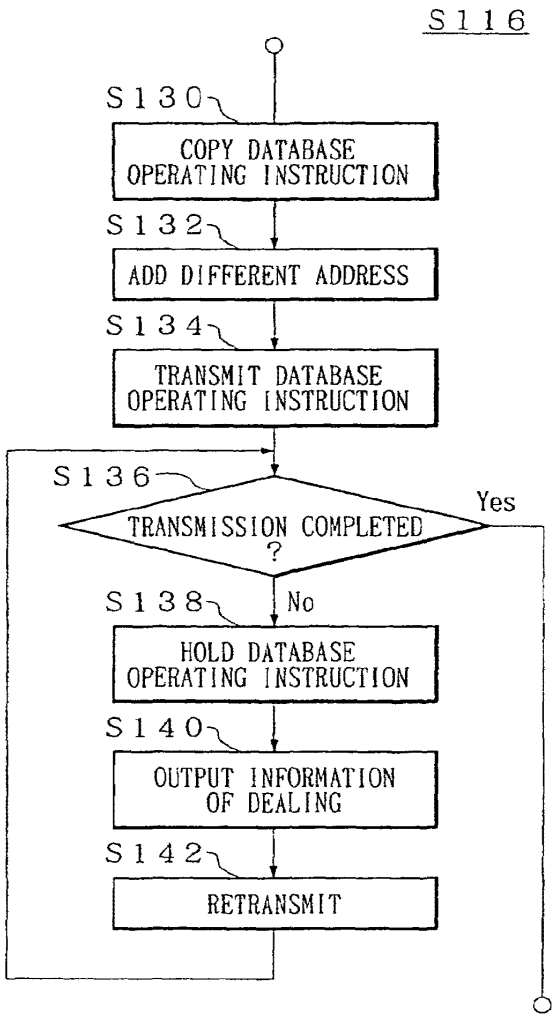

S116
S130
COPY DATABASE OPERATING INSTRUCTION
S132
ADD DIFFERENT ADDRESS
S134
TRANSMIT DATABASE OPERATING INSTRUCTION
S136
TRANSMISSION COMPLETED ?
Yes
S138
No
HOLD DATABASE OPERATING INSTRUCTION
S140
OUTPUT INFORMATION OF DEALING
S142
RETRANSMIT

FIG. 11

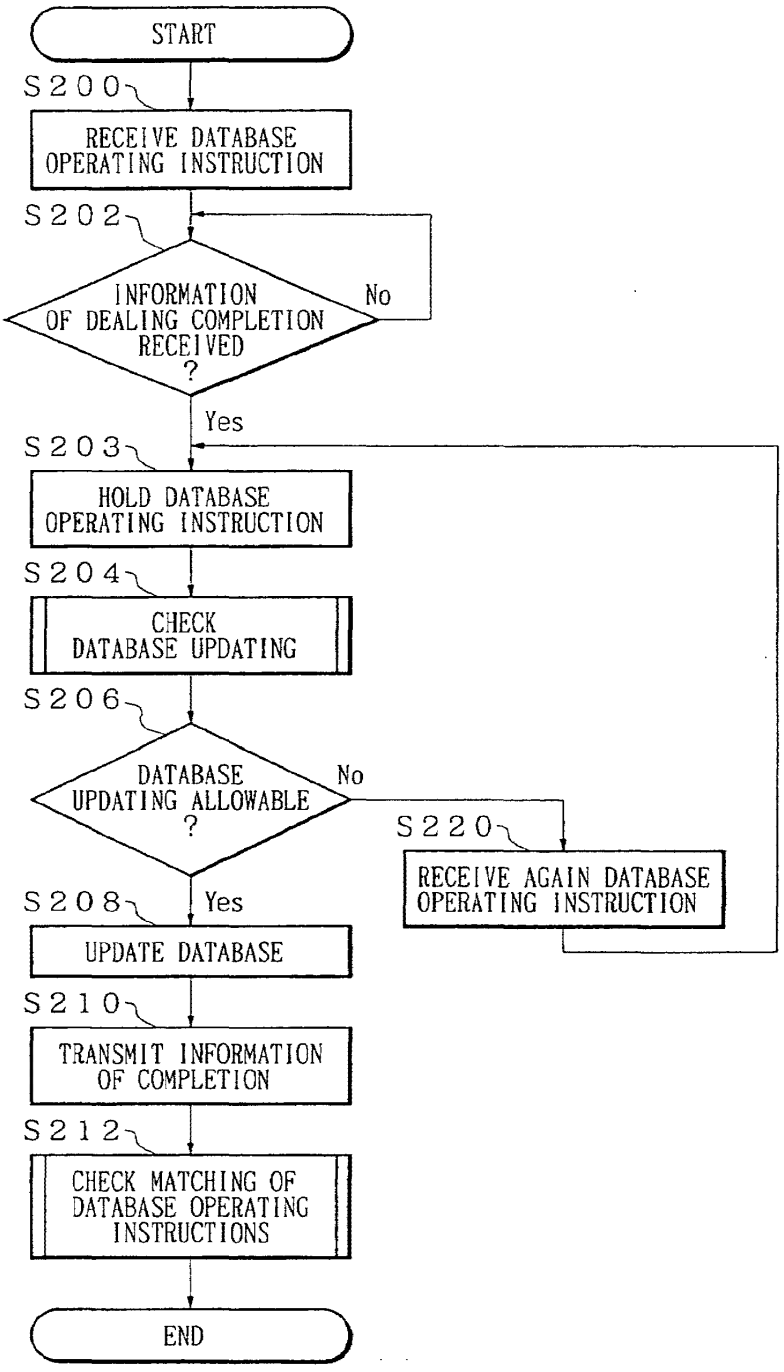

START
S200
RECEIVE DATABASE OPERATING INSTRUCTION
S202
INFORMATION OF DEALING COMPLETION RECEIVED ?
No
Yes
S203
HOLD DATABASE OPERATING INSTRUCTION
S204
CHECK DATABASE UPDATING
S206
DATABASE UPDATING ALLOWABLE ?
No
S220
RECEIVE AGAIN DATABASE OPERATING INSTRUCTION
S208
Yes
UPDATE DATABASE
S210
TRANSMIT INFORMATION OF COMPLETION
S212
CHECK MATCHING OF DATABASE OPERATING INSTRUCTIONS
END

FIG. 12

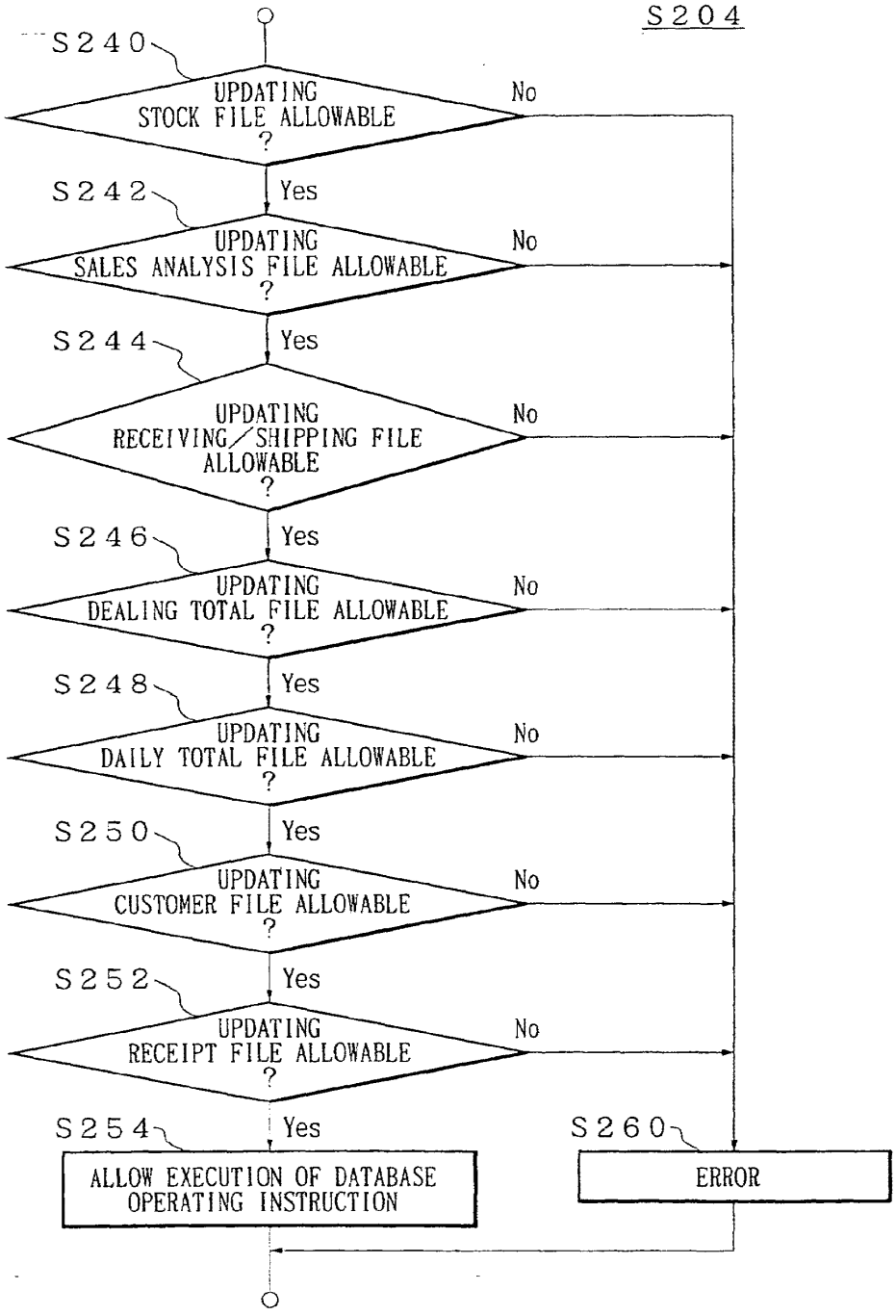

S204
S240
UPDATING STOCK FILE ALLOWABLE ?
No
Yes
S242
UPDATING SALES ANALYSIS FILE ALLOWABLE ?
No
Yes
S244
UPDATING RECEIVING/SHIPPING FILE ALLOWABLE ?
No
Yes
S246
UPDATING DEALING TOTAL FILE ALLOWABLE ?
No
Yes
S248
UPDATING DAILY TOTAL FILE ALLOWABLE ?
No
Yes
S250
UPDATING CUSTOMER FILE ALLOWABLE ?
No
Yes
S252
UPDATING RECEIPT FILE ALLOWABLE ?
No
Yes
S254
ALLOW EXECUTION OF DATABASE OPERATING INSTRUCTION
S260
ERROR

FIG. 13

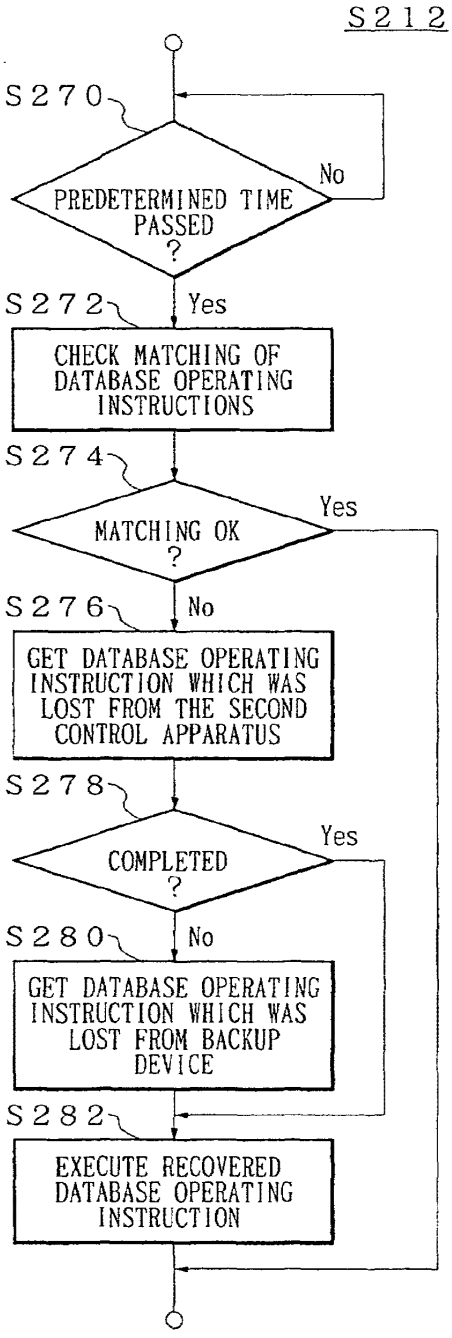

S212
S270
PREDETERMINED TIME PASSED ?
No
Yes
S272
CHECK MATCHING OF DATABASE OPERATING INSTRUCTIONS
S274
MATCHING OK ?
Yes
No
S276
GET DATABASE OPERATING INSTRUCTION WHICH WAS LOST FROM THE SECOND CONTROL APPARATUS
S278
COMPLETED ?
Yes
No
S280
GET DATABASE OPERATING INSTRUCTION WHICH WAS LOST FROM BACKUP DEVICE
S282
EXECUTE RECOVERED DATABASE OPERATING INSTRUCTION

FIG. 14

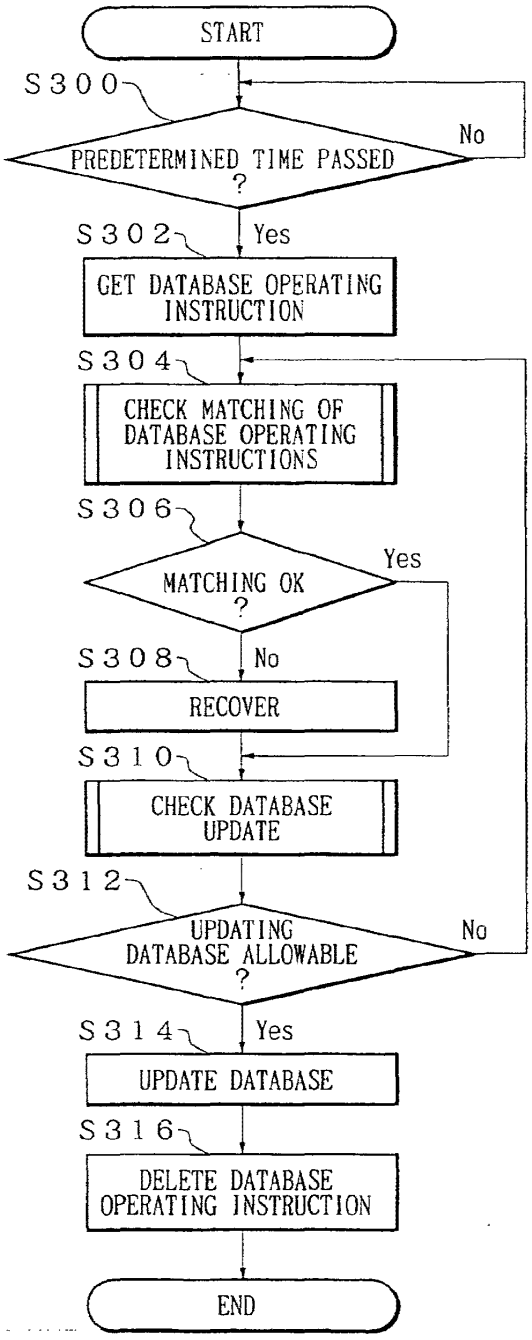

START
S300
PREDETERMINED TIME PASSED ?
No
Yes
S302
GET DATABASE OPERATING INSTRUCTION
S304
CHECK MATCHING OF DATABASE OPERATING INSTRUCTIONS
S306
MATCHING OK ?
Yes
No
S308
RECOVER
S310
CHECK DATABASE UPDATE
S312
UPDATING DATABASE ALLOWABLE ?
No
Yes
S314
UPDATE DATABASE
S316
DELETE DATABASE OPERATING INSTRUCTION
END

FIG. 15

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP01/09598

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl[7] G07G1/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl[7] G07G 1/00-5/00, G06F17/60-19/00, G06F12/00-12/06, G0613/16-13/18, G06F15/00, G06K 7/00-7/14, H04M 3/08-3-14, H04M 3/22-3/36, H04Q 1/20-1/26, G07F 5/00-9/10

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1926-1996 Jitsuyo Shinan Toroku Koho 1996-2001
Kokai Jitsuyo Shinan Koho 1971-2001 Toroku Jitsuyo Shinan Koho 1994-2001

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
esp@cenet US, PATENT AND TRADE MARK OFFICE PATENT FULL TEXT & DATA BASE, WPI, POS, server, shop, store, 'data base' database, reception, transmission, command, reflection, update, G07G, G06F

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2001-184307 A (Kabushiki Kaisha Visual Japan), 06 July, 2001 (06.07.01), Full text; all drawings (Family: none)	1,4,15,22,25
A		2,3,5-14, 16-21,23,24, 26-27
X	JP 2001-256388 A (Seiko Epson K.K.), 21 September, 2001 (21.09.01), Full text; all drawings (Family: none)	1,4,15,22,25
A		2,3,5-14, 16-21,23,24, 26-27
X	JP 2001-243277 A (Kabushiki Kaisha DeoDeo), 07 September, 2001 (07.09.01), Full text; all drawings (Family: none)	1,4,15,22,25
A		2,3,5-14, 16-21,23,24, 26-27

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
06 December, 2001 (06.12.01)	18 December, 2001 (18.12.01)
Name and mailing address of the ISA/ Japanese Patent Office	Authorized officer
Facsimile No.	Telephone No.

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP01/09598

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96/27155 A2 (Electronic Publishing Resources, Inc.), 06 September, 1996 (06.09.96), Full text; all drawings & JP 10-512074 A Full text; all drawings	1,4,15,22,25
A		2,3,5-14, 16-21,23,24, 26-27

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

Electronic Patent Application Fee Transmittal					
Application Number:	15827948				
Filing Date:	30-Nov-2017				
Title of Invention:	WEB-BASED POINT OF SALE BUILDER				
First Named Inventor/Applicant Name:	Wayne BARATTA				
Filer:	Vladislav Z. Teplitskiy/Lisa Than				
Attorney Docket Number:	MERZ010.001C3				
Filed as Large Entity					
Filing Fees for Utility under 35 USC 111(a)					
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($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	1806	1	240	240
		Total in USD ($)		**240**

Electronic Acknowledgement Receipt	
EFS ID:	39472107
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Vladislav Z. Teplitskiy/Lisa Than
Filer Authorized By:	Vladislav Z. Teplitskiy
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	18-MAY-2020
Filing Date:	30-NOV-2017
Time Stamp:	19:56:24
Application Type:	Utility under 35 USC 111(a)

Payment information:

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Payment Type	CARD
Payment was successfully received in RAM	$240
RAM confirmation Number	E20205HJ57209192
Deposit Account	111410
Authorized User	Lisa Than
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		IDS.pdf	52284 836676d2b4728ca4e4fecf86f2182ace25f57da6	yes	5
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Transmittal Letter		1	2	
	Information Disclosure Statement (IDS) Form (SB08)		3	5	
Warnings:					
Information:					
2	Foreign Reference	EP1450324A1.pdf	2621540 73180d7f74a49e352028329dddaafba2885be933	no	33
Warnings:					
Information:					
3	Non Patent Literature	NCR_Preliminary_Invalidity_Contentions-c.PDF	309750 c05470d18fdf6bc21b0e2f048d36373c6a209d1a	no	27
Warnings:					
Information:					
4	Non Patent Literature	Ex_A2-012_Chart_US20070265935_Woycik-c.pdf	797817 d7861a348a3ad86c3fa6485d52e21df7fd02d4ae	no	10
Warnings:					
Information:					
5	Non Patent Literature	Ex_A3-640_Chart_US20070175992_Brown-c.pdf	403938 4215cd2d8a12f9d6a2eb047094c0e76ff985ab01	no	9
Warnings:					
Information:					

6	Non Patent Literature	Ex_A4-012_Chart_US20070175992_Brown-c.pdf	678291 89c8d7e1a0b88762bf13e699da9fd9f8d4e8be5e	no	11
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Information:					
7	Non Patent Literature	Ex_A5-640_Chart_US5920312_Wagner-c.pdf	129216 eef880f946fb11d1bff7095255118d496eec0d10	no	6
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Information:					
8	Non Patent Literature	Ex_A6-012_Chart_US5920312_Wagner-c.pdf	130134 1b15418eb5bd8c9cec0b1c150124dd6b112d8636	no	7
Warnings:					
Information:					
9	Non Patent Literature	Ex_A7-640_Chart_US20020194074_Jacobs-c.pdf	114533 7ca08caf34a26f880d6bcf53428f3294eee74710	no	6
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10	Non Patent Literature	Ex_A8-012_Chart_US20020194074_Jacobs-c.pdf	112425 7113458ec001b8f12e9a90db1e296066d88e2526	no	6
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Information:					
11	Non Patent Literature	Ex_A9-640_Chart_US20060235755_Mueller_c.pdf	145184 258ce36931ec45b2e82bed78dbbc28a014552147	no	8
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Information:					
12	Non Patent Literature	Ex_A10-012_Chart_US20060235755_Mueller-c.pdf	141713 147e46c54eeb2601ca24f40046a1cac925a93ae8	no	8
Warnings:					
Information:					

13	Non Patent Literature	Ex_A11-640_Chart_US20050049921_Tengler-c.pdf	135413 2e3e0287d2f685a9674db9227bf32530abe5180d	no	9
Warnings:					
Information:					
14	Non Patent Literature	Ex_A12-012_Chart_US20050049921_Tengler-c.pdf	147212 869877956570f0c06d1a83c976c5f3310e724701	no	9
Warnings:					
Information:					
15	Non Patent Literature	Ex_B1-640_Chart_US20050021409_Michaud-c.pdf	105915 d4b6f1ad93b414d5dad23a96d61486ff55567a70	no	6
Warnings:					
Information:					
16	Non Patent Literature	Ex_B2-012_Chart_US20050021409_Michaud-c.pdf	105486 d3ef3b32c92cfab27c168fcebcd424ac3206ac2a	no	6
Warnings:					
Information:					
17	Non Patent Literature	Ex_B3-640_Chart_US20040143512_Sturr-c.pdf	98987 122cfd855c502cc3605c8ab9500a741163fda322	no	6
Warnings:					
Information:					
18	Non Patent Literature	Ex_B4-012_Chart_US20040143512_Sturr-c.pdf	98743 a1e27b86d758f569a05f55895d2415de6778fc46	no	6
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Information:					
19	Non Patent Literature	Ex_B5-640_Chart_EP1450324_Yamada-c.pdf	122879 62cd74726600bd3372a338baada1e574d074d3d0	no	6
Warnings:					
Information:					

20	Non Patent Literature	Ex_B6-012_Chart_EP1450324_Yamada-c.pdf	130652 63e46f422323c82c0520c3a4e777f6f393d84115	no	7
Warnings:					
Information:					
21	Non Patent Literature	Ex_B7-640_Chart_US6384850_McNally-c.pdf	119177 2130b0334ef37edb6f98719450722225a5bb61843	no	7
Warnings:					
Information:					
22	Non Patent Literature	Ex_B8-012_Chart_US6384850-McNally-c.pdf	114727 77afe5f42ee248abab29c4d89eb5f7cab2bf6284	no	7
Warnings:					
Information:					
23	Non Patent Literature	Ex_B9-640_Chart_ACS_Back_Office_6_0-c.pdf	1336916 e07fb0ea50363ba64cfe4b14f4d07e05c2908366	no	9
Warnings:					
Information:					
24	Non Patent Literature	Ex_B10-012_Chart_ACS_Back_Office_6_0-c.pdf	1342127 85deca40896bee9493721826caeec448b405055b	no	10
Warnings:					
Information:					
25	Non Patent Literature	Ex_C1-640_Chart_Sec_112_Invalidity-c.pdf	119298 5be66734a16e0091a4ebd7534b300b16a98623b1	no	4
Warnings:					
Information:					
26	Non Patent Literature	Ex_C2-012_Chart_Sec_112_Invalidity-c.pdf	77397 f7b9ce3fab35a756c296ab0dd90b77df8f0ef1dc	no	3
Warnings:					
Information:					

27	Non Patent Literature	Ex_D1-640_Patent_Sec_101_Invalidity-c.pdf	96474 be07dc14c662d2056b91d611d68a4157a5aca4a6	no	2
Warnings:					
Information:					
28	Non Patent Literature	Ex_D2-012_Patent_Sec_101_Invalidity-c.pdf	96914 b59d8aee0d1bea1552cc9ec548cd0725447febc2	no	3
Warnings:					
Information:					
29	Non Patent Literature	NCR000171.PDF	4683845 56c0f5d5c844175b97a8b42d78635ccb71a76b86	no	165
Warnings:					
Information:					
30	Non Patent Literature	NCR000336.PDF	5019443 932a413129b806887a7334554943e0b8cad13cae	no	128
Warnings:					
Information:					
31	Non Patent Literature	NCR000562.PDF	4894184 bd53ea5b0f2e75b7c82182383f2d5e53bdc9a6cd	no	135
Warnings:					
Information:					
32	Non Patent Literature	NCR000697.PDF	2058699 639dd8e238ac2672e59ebcab5afed606a5b2f5d4	no	95
Warnings:					
Information:					
33	Non Patent Literature	NCR002304.PDF	275652 5318741f29b37df813dab24e5579fb4c8ad6b784	no	2
Warnings:					
Information:					

34	Non Patent Literature	NCR002306.PDF	810036 1a1d2f1bcbd00b80af6e45bb819a36f18dac08c5	no	2
Warnings:					
Information:					
35	Non Patent Literature	NCR002308.PDF	792710 200c0fe24901baa4dfcde2f34b7538f491687bc3	no	2
Warnings:					
Information:					
36	Non Patent Literature	NCR002310.PDF	774237 da4e4a7d6db1e26cf8f8ce127f80eaafbed09224	no	2
Warnings:					
Information:					
37	Non Patent Literature	NCR002312.PDF	2706055 8c2aca962f03c458aa74f3c68d34e35802fceb66	no	144
Warnings:					
Information:					
38	Non Patent Literature	NCR002456.PDF	4895517 67496aa972a0c6de169786d3628ec9eacfe2eacf	no	164
Warnings:					
Information:					
39	Non Patent Literature	NCR002620.PDF	8391744 bf30113d3acaa5024d9da55fe524b7db5ef4620a	no	124
Warnings:					
Information:					
40	Non Patent Literature	NCR000825_1.pdf	21470832 e79aed4e6809d0a304f9d74f55a37b32eb23e958	no	220
Warnings:					
Information:					

41	Non Patent Literature	NCR000825_2.pdf	22530011 0939440b0ba56d385a356c95f019da6e0b7815e3	no	200
Warnings:					
Information:					
42	Non Patent Literature	NCR000825_3.pdf	23879695 9860af2e2f1387baed4d7ba932594fa5665c73ba	no	239
Warnings:					
Information:					
43	Non Patent Literature	NCR001484_1.pdf	20626762 7e64580a4e6d9672dd824310bc31ee2d5f5c27bd	no	275
Warnings:					
Information:					
44	Non Patent Literature	NCR001484_2.pdf	16960713 20d2d6570cf027a1d9485cedd69391e189236872	no	205
Warnings:					
Information:					
45	Non Patent Literature	NCR001484_3.pdf	12840020 b02dfc829b8b28d022a776f90ed221e75c2d2507	no	170
Warnings:					
Information:					
46	Non Patent Literature	NCR001484_4.pdf	13463941 24544b28f37d3bf676ea3ba64833c58db865a5fa	no	170
Warnings:					
Information:					
47	Non Patent Literature	Ex_A1-640_Chart_US20070265935_Woycik_c.pdf	728242 8e8c54d6c5312bf6b3d8039759bb0789eefc84ef	no	10
Warnings:					
Information:					

48	Fee Worksheet (SB06)	fee-info.pdf	30501 0346e608a95550de0280ebd726af00a4be748219	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	177717981		

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.

INFORMATION DISCLOSURE STATEMENT

First Inventor	:	Wayne Baratta
App. No.	:	15/827948
Filed	:	November 30, 2017
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Masud, Rokib
Art Unit	:	3687
Conf. No.	:	2925

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

References and Listing

Pursuant to 37 CFR 1.56, an Information Disclosure Statement listing references is provided herewith. Copies of any listed foreign and non-patent literature references are being submitted.

No Disclaimers

To the extent that anything in the Information Disclosure Statement or the listed references could be construed as a disclaimer of any subject matter supported by the present application, Applicant hereby rescinds and retracts such disclaimer.

Timing of Disclosure

This Information Disclosure Statement is being filed after receipt of a First Office Action, but before the mailing date of a Final Action and before the mailing date of a Notice of Allowance.

This Statement is accompanied by the fees set forth in 37 CFR 1.17(p). The Commissioner is hereby authorized to charge any additional fees which may be required or to credit any overpayment to Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: May 18, 2020

By:/Vladislav Z. Teplitskiy/
Vladislav Z. Teplitskiy
Registration No. 68,069
Registered Practitioner
(949) 760-0404

32837456

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor	:	Wayne Baratta
App. No.	:	15/827948
Filed	:	November 30, 2017
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Masud, Rokib
Art Unit	:	3687
Conf. No.	:	2925

RESPONSE TO NOTICE OF NONCOMPLIANT AMENDMENT

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

Dear Commissioner:

In response to the Office Action mailed July 11, 2019 and Notice of Noncompliant Amendment dated January 27, 2020, in connection with the above-identified patent application, please consider the remarks that follow.

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

Remarks begin on page 10 of this paper.

THE CLAIMS

The following is a listing of the claims. No amendments have been made.

1-2. (Canceled)

3. (Previously Presented) A web-based point of sale (POS) builder system comprising:

at least one web server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

and

configure the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals.

4. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to run on a computing device.

5. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations.

6. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

7. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one web server is further configured to receive, from the one or more POS terminals over the network, information regarding one or more POS transactions corresponding to the one or more items.

8. (Previously Presented) The web-based point of sale (POS) builder system of claim 7, wherein the at least one web server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions.

9. (Previously Presented) The web-based point of sale (POS) builder system of claim 8, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

10. (Previously Presented) The web-based point of sale (POS) builder system of claim 7, wherein the information regarding one or more POS transactions comprises one or more of employee clock information, customer add/update information, item add/update information, or promotion information.

11. (Previously Presented) The web-based point of sale (POS) builder system of claim 7, wherein the information regarding one or more POS transactions are viewable via the POS builder interface.

12. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces comprise one or more buttons or keys.

13. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

14. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is accessible via a web browser.

15. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces are accessible on the POS builder interface.

16. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one web server is further configured to:

receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens; and

update the at least one of the one or more POS screens on the one or more POS terminals based on the second information.

17. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one web server is further configured to store information regarding the one or more POS screens.

18. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one web server is located remotely from the one or more POS terminals.

19. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one web server is further configured to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminals are in use performing one or more POS transactions.

20. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals use the one or more POS screens after completing a pending POS transaction.

21. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one web server is further configured to maintain information regarding POS screens for separate sets of POS terminals separately.

22. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein instructions to the POS builder interface for programmatic creation and modification of the POS terminals are not formatted in programming code.

23. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one web server is further configured to maintain information regarding the one or more POS screens.

24. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises one or more attributes of the one or more items.

25. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS terminals are configured to perform transactions independently of a connection with the network.

26. (Previously Presented) A web-based point of sale (POS) builder system comprising:

at least one POS terminal configured to:

display one or more POS screens;

communicate with at least one web server over a network comprising the Internet;

receive, over the network from the at least one web server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

create or modify the one or more POS screens based on the received information; and

perform one or more transactions with respect to the one or more items.

27. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal comprises a plurality of POS terminals in a plurality of locations.

28. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to:

capture one or more videos using one or more cameras while performing the one or more transactions; and

correlate the one or more videos with the one or more transactions.

29. (Previously Presented) The web-based point of sale (POS) builder system of claim 28, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

30. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the one or more display interfaces comprise one or more buttons or keys.

31. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

32. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one web server is located remotely from the at least one POS terminal.

33. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to perform the one or more transactions in real time while the one or more POS screens are created or modified.

34. (Previously Presented) The web-based point of sale (POS) builder system of claim 33, wherein the at least one POS terminal uses the created or modified one or more POS screens after completing a pending POS transaction.

35. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises one or more attributes of the one or more items.

36. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

37. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal is further configured to transmit information regarding the one or more transactions to the at least one web server over the network.

38. (Previously Presented) The web-based point of sale (POS) builder system of claim 37, wherein the information regarding one or more POS transactions comprises one or more of employee clock information, customer add/update information, item add/update information, or promotion information.

39. (Previously Presented) The web-based point of sale (POS) builder system of claim 37, wherein the at least one POS terminal is further configured to perform the one or more transactions without a connection to the web server and transmit the information regarding the one or more transactions to the at least one web server after performing the one or more transactions and when the connection to the web server is established.

40. (Previously Presented) The web-based point of sale (POS) builder system of claim 39, wherein the at least one POS terminal is further configured to store locally the information regarding the one or more transactions.

41. (Previously Presented) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

communicating with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receiving, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

and

provisioning the one or more POS terminals with the information over the network to create or modify the one or more POS screens displayed on the one or more POS terminals.

42. (Previously Presented) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

displaying one or more POS screens;

communicating with at least one web server over a network comprising the Internet;

receiving, over the network from the at least one web server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

creating or modifying the one or more POS screens based on the received information; and

performing one or more transactions with respect to the one or more items.

43. (Previously Presented) A web-based point of sale (POS) builder system comprising:

at least one web server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information for creating or modifying functionality of the one or more POS terminals; and

configure the one or more POS terminals with the information over the network to create of modify the functionality of the one or more POS terminals.

44. (Previously Presented) The web-based point of sale (POS) builder system of claim 43, wherein the functionality comprises one or more of the following: one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; price of the one or more items; employee validation; and one or more promotions.

REMARKS

This paper is filed in response to the Notice of Noncompliant Amendment dated January 27, 2020 (hereinafter the "Notice"). Claims 2-44 were pending. No amendments have been made. In view of the following remarks, Applicants respectfully submit that the application is in condition for allowance.

Improper Notice

The Notice states that "Amendment does not reflect all the changes." However, Applicant did not make any amendments to the claims in the response to the Office Action filed on October 11, 2019 (hereinafter the "Response"). Accordingly, the filed response did not include a claims listing. See MPEP 714.I.C (requiring only that "[e]ach amendment document that ***includes*** a change to an existing claim, including the deletion of an existing claim, or submission of a new claim, must include a complete listing of all claims ever presented" (emphasis added)). Accordingly, Applicant respectfully requests withdrawal of the Notice.

Further, pursuant to a request from Examiner Masud, Applicant is refiling the Response with a claims listing.

Submission of Terminal Disclaimer.

The Office Action dated July 11, 2019 (hereinafter the "Office Action") rejected the claims on obviousness-type double patenting grounds over U.S. Patent No. 9,400,640 (the "'640 Patent"). In particular, the Office Action rejects Claims 2-44 rejected the claims on the ground of nonstatutory double patenting as allegedly being unpatentable over Claims 1-28 of the commonly assigned '640 Patent. Applicant respectfully traverses these rejections.

However, to expedite prosecution, Applicant previously submitted a Terminal Disclaimer over the '640 Patent. No admission is made that the present application's claims are patentably indistinct from the claims of the '640 Patent.

Conclusion

For the foregoing reasons, Applicant respectfully submits that the application is in condition for allowance. The Examiner is invited to contact the undersigned by telephone to resolve any remaining issues.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: March 27, 2020

By:/Keith M Lim/_____
Keith M Lim
Registration No. 68,912
Registered Practitioner
(949) 760-0404

32523584

Electronic Acknowledgement Receipt	
EFS ID:	38993329
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Keith M Lim/Jim Nyenhuis
Filer Authorized By:	Keith M Lim
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	27-MAR-2020
Filing Date:	30-NOV-2017
Time Stamp:	17:27:44
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		Response.pdf	53312 169305871051c6a204266bf7340b21ec7c89aa3f	yes	11

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	9
	Applicant Arguments/Remarks Made in an Amendment	10	11
Warnings:			
Information:			
	Total Files Size (in bytes):	53312	

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.

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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
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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 15/827,948	Filing Date 11/30/2017	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

	(Column 1)	(Column 2)			
FOR	NUMBER FILED	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 $80 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $420 =	
☐ 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	03/27/2020	(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))	* 42	Minus	** 42	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 4	Minus	*** 4	= 0		x $460 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

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 $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ 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.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/VENICE M WILLIAMS/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

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.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 01/27/2020
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER
MASUD, ROKIB

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
01/27/2020	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):

efiling@knobbe.com
jayna.cartee@knobbe.com

PTOL-90A (Rev. 04/07)

Notice of Non-Compliant Amendment (37 CFR 1.121)	Application No. 15/827,948	Applicant(s) BARATTA et al.	
	Examiner ROKIB MASUD	Art Unit 3687	AIA (FITF) Status No

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

The amendment document filed on 10/11/2019 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
  - ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other _____ .
- ☐ 2. Abstract:
  - ☐ A.Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B.Other _____ .
- ☐ 3. Amendments to the drawings:
  - ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet", "New Sheet", or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other _____ .
- ☑ 4. Amendments to the claims:
  - ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☑ E. Other: Amendment does not reflect all the changes .
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):

  _____

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period if the non-compliant amendment is an** after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.

2. Applicant is given **two months** from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

   Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

   Failure to timely respond to this notice will result in:
   Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or
   Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

/ROKIB MASUD/ Primary Examiner, Art Unit 3687	

Doc Code: DIST.E.FILE **Document Description: Electronic Terminal Disclaimer - Filed**	PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	15827948
Filing Date	30-Nov-2017
First Named Inventor	Wayne BARATTA
Attorney Docket Number	MERZ010.001C3
Title of Invention	WEB-BASED POINT OF SALE BUILDER

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
Cloudofchange, LLC	100%

The owner(s) with percent interest listed above 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 of prior patent number(s)

9400640

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 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.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.	
Applicant claims the following fee status: ○ Small Entity ○ Micro Entity ◉ Regular Undiscounted 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.	
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: ◉ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application Registration Number 68912 ○ A sole inventor ○ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ○ A joint inventor; all of whom are signing this request	
Signature	/Keith M Lim/
Name	Keith M Lim

*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:	15827948
Filing Date:	30-Nov-2017
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Filer:	Keith M Lim/Kealani Aguon
Attorney Docket Number:	MERZ010.001C3

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**160**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 15827948

Filing Date: 30-Nov-2017

Applicant/Patent under Reexamination: BARATTA

Electronic Terminal Disclaimer filed on October 11, 2019

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt	
EFS ID:	37431302
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Keith M Lim/Kealani Aguon
Filer Authorized By:	Keith M Lim
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	11-OCT-2019
Filing Date:	30-NOV-2017
Time Stamp:	14:46:07
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$160
RAM confirmation Number	E20190AE46045806
Deposit Account	111410
Authorized User	Kealani Aguon
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	33540 e69ea2cff2acd67c84d4078b230cd61ba88a6b79	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30557 d7c19e83c6ee43e8ff49763e5ff3b755dcbaa1a9	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	64097		

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
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New International Application Filed with the USPTO as a Receiving Office
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor	:	Wayne Baratta
App. No.	:	15/827948
Filed	:	November 30, 2017
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Masud, Rokib
Art Unit	:	3687
Conf. No.	:	2925

RESPONSE TO OFFICE ACTION

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

Dear Commissioner:

In response to the Office Action dated July 11, 2019, in connection with the above-identified patent application, please amend the application as indicated and consider the remarks that follow.

Remarks begin on page 2 of this paper.

REMARKS

This paper is filed in response to the Office Action mailed July 11, 2019 (hereinafter the "Office Action"). Claims 2-44 were pending. In view of the following remarks, Applicants respectfully submit that the application is in condition for allowance.

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reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: October 11, 2019

By:/Keith M Lim/_____
Keith M Lim
Registration No. 68,912
Registered Practitioner
Customer No. 20995
(949) 760-0404

31499449

Electronic Acknowledgement Receipt	
EFS ID:	37435398
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Keith M Lim/Chelsea Veinot
Filer Authorized By:	Keith M Lim
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	11-OCT-2019
Filing Date:	30-NOV-2017
Time Stamp:	15:10:12
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		Response.pdf	28532 eff6515b6c8684a5d198d19e68eda74b14e88752	yes	3

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Applicant Arguments/Remarks Made in an Amendment	2	3
Warnings:			
Information:			
	Total Files Size (in bytes):	28532	

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New International Application Filed with the USPTO as a Receiving Office
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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.
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3	2925

20995 7590 07/11/2019

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER
MASUD, ROKIB

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
07/11/2019	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):

efiling@knobbe.com
jayna.cartee@knobbe.com

PTOL-90A (Rev. 04/07)

Office Action Summary	**Application No.** 15/827,948	**Applicant(s)** BARATTA et al.	
	Examiner ROKIB MASUD	**Art Unit** 3687	**AIA (FITF) 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 MONTHS 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 _____.

☐ 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) 2-44 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) 2-44 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 _____ 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.

Attachment(s)

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

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date 11/30/17.

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

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Double Patenting

Claims 2-44 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-28 of U.S. Patent No. 9400640. Although the claims at issue are not identical, they are not patentably distinct from each other because.

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 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); *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 nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the

examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROKIB MASUD whose telephone number is (571)270-5390. The examiner can normally be reached on Mon-Fri 8:00-5:00.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fahd Obeid can be reached on 571-270-3324. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROKIB MASUD/
Primary Examiner, Art Unit 3687

Notice of References Cited	Application/Control No. 15/827,948	Applicant(s)/Patent Under Reexamination BARATTA et al.	
	Examiner ROKIB MASUD	Art Unit 3687	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20040181454-A1	09-2004	Manno, Michael	G06Q20/20	705/21
*	B	US-20050021409-A1	01-2005	Michaud, Gene R. JR.	G06Q20/20	705/16
*	C	US-20080077872-A1	03-2008	Zeevi; Dani	G06F3/0481	715/762
*	D	US-20040128199-A1	07-2004	Cusack, Bob	G06Q20/20	705/16
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	Art Unit
	ROKIB MASUD	3687

CPC - Searched*		
Symbol	Date	Examiner
G06Q 20/20; G06Q 20/202	07/04/2019	R. M.

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
705	16; 34	07/04/2019	R. M.

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST, GOOGLE PATENT, NPL, IDS	07/04/2019	R. M.

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/827,948	BARATTA et al.
	Examiner	**Art Unit**
	ROKIB MASUD	3687

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

CLAIMS											
☐ Claims renumbered in the same order as presented by applicant					☐ CPA		☐ T.D.		☐ R.1.47		
CLAIM		**DATE**									
Final	Original										

PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	Unknown
	Filing Date	Herewith
	First Named Inventor	Wayne Baratta, et al.
	Art Unit	Unknown
(Multiple sheets used when necessary)	Examiner	Unknown
SHEET 1 OF 2	Attorney Docket No.	MERZ010.001C3

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number *Number - Kind Code (if known)* Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	1	5,818,428	10-06-1998	Eisenbrandt, et al.	
	2	5,956,716	09-21-1999	Intervu, Inc	
	3	5,987,426	11-16-1999	Goodwin, III	
	4	6,304,886	10-16-2001	Bernardo et al.	
	5	6,629,080	09-30-2003	Kolis	
	6	6,993,498	01-31-2006	Deaton et al.	
	7	7,015,945	03-21-2006	Visilinx Inc.	
	8	7,051,091	05-23-2006	Cohen, et al.	
	9	9,317,844	04-19-2016	Richelson et al.	
	10	20010037245	11-01-2001	Ranganath et al.	
	11	2003/0041330	02-27-2003	Smith	
	12	2003/0120546	06-26-2003	Cusack et al.	
	13	2004/0128199	07-01-2004	Chicken-Out, Inc	
	14	2004/0181454	09-16-2004	Manno	
	15	2005/0021409	01-27-2005	Michaud, Jr., et al.	
	16	200/50182680	08-18-2005	Jones e tal.	
	17	20070/005685	01-04-2007	Chau et al.	
	18	2008/0077872	03-27-2008	Ycd Ltd.	
	19	2008/0208698	08-28-2008	Olson et al.	
	20	2009/0182630	07-16-2009	Otto et al.	
	21	2011/0218872	09-08-2011	Richelson et al.	
	22	2016/0253645	09-01-2016	Ciabarra et al.	
	23	2017/0300301 filed as U.S. Application No. 15/635097, including its file history (MERZ010.001C2)	10-19-2017	Baratta et al.	

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.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.M./

[1] - Place a check mark in this area when an English language Translation is attached.

PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	Unknown
	Filing Date	Herewith
	First Named Inventor	Wayne Baratta, et al.
	Art Unit	Unknown
(Multiple sheets used when necessary)	Examiner	Unknown
SHEET 2 OF 2	Attorney Docket No.	MERZ010.001C3

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document *Country Code-Number-Kind Code* Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T[1]

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	24	Co-pending US Patent TY06-001, Serial No. 11/710,722, File date: February 26, 2007, "Point of Sale System with Web-Based Back-Office," by Quentin Olson, 25 pgs.	
	25	Co-pending US Patent TY06-002, Serial No. 11/710,723, File date: February 26, 2007, "Point of sale Video Server Processing System," by Quentin Olson et al., 24 pgs.	
	26	Co-pending US Patent TY06-003, Serial No. 12/012,393, File date: February 1, 2008, "Hand-Held Web Browser Inventory Checking System," by Quentin Olson et al., 24 pgs.	
	27	Localsoft Tech, db2k e-Store Builder 3.00 details, 3 pgs, found 02/08/2008, http://www.soft32donwload.com/software/dbk-e-STore-Builder-download-details.html	
	28	IBM 4690 ASTRA – Graphical User Interface (GUI) – Specifications, 1 pg., found 02/08/2008, http://www.03.ibm.com/products/retail/products/software/gui/astra/specs.html	

26835280

Examiner Signature	/ROKIB MASUD/	Date Considered	07/08/2019

*__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. /R.M./

T[1] - Place a check mark in this area when an English language Translation is attached.

PTO/SB/08 Equivalent

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	15/827948
	Filing Date	November 30, 2017
	First Named Inventor	Wayne Baratta
	Art Unit	3687
(Multiple sheets used when necessary)	Examiner	Masud, Rokib
SHEET 1 OF 1	Attorney Docket No.	MERZ010.001C3

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number *Number - Kind Code (if known)* Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	1	US2007/0276763 A1	11-29-2007	Kleinman et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document *Country Code-Number-Kind Code* Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	**T[1]**

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	**T[1]**
	2	MICROS Simphony™, http://www.micros.com:80/Products/Simphony/, dated 2006, in 1 page.	
	3	MICROS Simphony™, http://www.micros.com:80/Products/Simphony/, dated 2006, in 1 page.	
	4	MICROS Simphony™, http://www.micros.com:80/Products/Simphony/, dated 2006, in 1 page	
	5	MICROS mymicros.net, http://www.micros.com:80/Products/Simphony/, dated 2006, in 1 page.	
	6	MICROS Restaurants, http://www.micros.com:80/Products/Simphony/, dated 2006, in 2 pages.	

28164181

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.	

T[1] - Place a check mark in this area when an English language Translation is attached.

Electronic Acknowledgement Receipt	
EFS ID:	32452733
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Keith M Lim
Filer Authorized By:	
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	26-APR-2018
Filing Date:	30-NOV-2017
Time Stamp:	17:45:14
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		IDS_C3.pdf	38325 027acf38de64b3c6edc71cc3faedc7123e86d629	yes	2

	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Transmittal Letter		1	1	
	Information Disclosure Statement (IDS) Form (SB08)		2	2	
Warnings:					
Information:					
2	Non Patent Literature	micros_simphony.pdf	98472 83e57101f8a9acea4a8530ee7299a4791f43b558	no	1
Warnings:					
Information:					
3	Non Patent Literature	micros_simphony2.pdf	98657 0ad3f6ad38b0755eaefc15c34cb28dddbd3e8ee6	no	1
Warnings:					
Information:					
4	Non Patent Literature	micros_simphony3.pdf	85538 1a28482326b4d1836d54a8dd3004841c5f9f1857	no	1
Warnings:					
Information:					
5	Non Patent Literature	micros_mymicros.pdf	77835 4aa686d1c0aaf2617d6efd2d5bced70e4b76d4a4	no	1
Warnings:					
Information:					
6	Non Patent Literature	micros_restaurants.pdf	97427 1fda53ad21a81bc24e2f01db8ee580d0ac77facc	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	496254		

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.

INFORMATION DISCLOSURE STATEMENT

First Inventor	:	Wayne Baratta
App. No.	:	15/827948
Filed	:	November 30, 2017
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Masud, Rokib
Art Unit	:	3687
Conf. No.	:	2925

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

References and Listing

Pursuant to 37 CFR 1.56, an Information Disclosure Statement listing references is provided herewith. Copies of any listed foreign and non-patent literature references are being submitted.

No Disclaimers

To the extent that anything in the Information Disclosure Statement or the listed references could be construed as a disclaimer of any subject matter supported by the present application, Applicant hereby rescinds and retracts such disclaimer.

Timing of Disclosure

This Information Disclosure Statement is being filed before the receipt of a First Office Action on the merits, and presumably no fee is required. If a First Office Action on the merits was mailed before the mailing date of this Statement, the Commissioner is authorized to charge the fee set forth in 37 CFR 1.17(p) to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: April 26, 2018

By:/Keith M. Lim/
Keith M Lim
Registration No. 68,912
Registered Practitioner
Customer No. 20995
(949) 760-0404

28164253

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
15/827,948	11/30/2017	Wayne BARATTA	MERZ010.001C3

CONFIRMATION NO. 2925

20995
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

PUBLICATION NOTICE

OC000000098410029

Title:WEB-BASED POINT OF SALE BUILDER

Publication No.US-2018-0088909-A1
Publication Date:03/29/2018

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 Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, 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 https://portal.uspto.gov/pair/PublicPair. 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

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Baratta, Wayne
	Art Unit	3687
	Examiner Name	Rokib Masud
	Attorney Docket Number	MERZ010.001C3

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					
If you wish to add additional U.S. Patent citation information please click the Add button.						

U.S.PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					
If you wish to add additional U.S. Published Application citation information please click the Add button.						

FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] ¡	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐
If you wish to add additional Foreign Patent Document citation information please click the Add button								

NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Baratta, Wayne
	Art Unit	3687
	Examiner Name	Rokib Masud
	Attorney Docket Number	MERZ010.001C3

	1	MICROS Delivers Harmony to POS Technology with Simphony(TM). The Industry's First True Enterprise POS Solution, Featuring Service Oriented Architecture, Debuts at FS/TEC, October 10, 2007, 3 pp.	☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Baratta, Wayne
	Art Unit	3687
	Examiner Name	Rokib Masud
	Attorney Docket Number	MERZ010.001C3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ 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. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Keith M. Lim/	Date (YYYY-MM-DD)	2018-02-23
Name/Print	Keith M. Lim	Registration Number	68,912

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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 record s.

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:	31868716
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Keith M Lim/Chelsea Veinot
Filer Authorized By:	Keith M Lim
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	23-FEB-2018
Filing Date:	30-NOV-2017
Time Stamp:	13:17:38
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	Information Disclosure Statement (IDS) Form (SB08)	IDS_001C3.pdf	63084 aa378d5d402d6416f417800c1408f95f49aeecfd	no	4

Warnings:

Information:					
This is not an USPTO supplied IDS fillable form					
2	Non Patent Literature	MICROS_Delivers_Harmony_to_POS_Technology_with_Simphony.pdf	133288 1f9b55946f213db4a9b1b3d388111128ab7a9e8e	no	3
Warnings:					
Information:					
			Total Files Size (in bytes):	196372	

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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor	:	Wayne Baratta
App. No.	:	15/827948
Filed	:	November 30, 2017
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Currently Unassigned
Art Unit	:	2192
Conf. No.	:	2925

PRELIMINARY AMENDMENT

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

Dear Commissioner:

Prior to examination on the merits, please amend the above-identified U.S. application as follows:

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

Remarks begin on page 10 of this paper.

AMENDMENTS TO THE CLAIMS

1-2. (Canceled).

3. (**Currently Amended**) A web-based point of sale (POS) builder system comprising:

~~software configured to run on~~ at least one web server configured ~~and cause the web server~~ to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying~~, wherein the received information comprises~~ one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

~~create or modify the one or more POS screens based on the received information received from the POS builder interface;~~ and

configure the one or more POS terminals with the information ~~one or more POS screens~~ over the network to create or modify the one or more POS screens displayed on the one or more POS terminals.

4. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to run on a computing device.

5. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations.

6. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

7. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 3, wherein ~~the software configured to run on the at least one web server is further configured to cause~~ the at least one web server is further configured to receive, from the one or more POS terminals over the network, information regarding one or more POS transactions corresponding to the one or more items.

8. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 7, wherein ~~the software configured to run on the at least one web server is further configured to cause~~ the at least one web server is further configured to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions.

9. (Previously Presented) The web-based point of sale (POS) builder system of claim 8, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

10. (Previously Presented) The web-based point of sale (POS) builder system of claim 7, wherein the information regarding one or more POS transactions comprises one or more of employee clock information, customer add/update information, item add/update information, or promotion information.

11. (Previously Presented) The web-based point of sale (POS) builder system of claim 7, wherein the information regarding one or more POS transactions are viewable via the POS builder interface.

12. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces comprise one or more buttons or keys.

13. (Currently Amended) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

14. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is accessible via a web browser.

15. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces are accessible on the POS builder interface.

16. (Currently Amended) The web-based point of sale (POS) builder system of claim 3, wherein ~~the software configured to run on the at least one web server is further configured to cause~~ the at least one web server is further configured to:

receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens; and

update the at least one of the one or more POS screens on the one or more POS terminals based on the second information.

17. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 3, wherein ~~the software configured to run on the at least one web server is further configured to cause~~ the at least one web server is further configured to store information regarding the one or more POS screens.

18. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the at least one web server is located remotely from the one or more POS terminals.

19. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 3, wherein ~~the software configured to run on the at least one web server is further configured to cause~~ the at least one web server is further configured to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminals are in use performing one or more POS transactions.

20. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals use the one or more POS screens after completing a ~~present~~ pending POS transaction.

21. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 3, wherein ~~the software configured to run on the at least one web server is further configured to cause~~ the at least one web server is further configured to maintain information regarding POS screens for separate sets of POS terminals separately.

22. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein instructions to the POS builder interface for programmatic creation and modification of the POS terminals are not formatted in programming code.

23. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 3, wherein ~~the software configured to run on the at least one web server is further configured to cause~~ the at least one web server is further configured to maintain information regarding the one or more POS screens.

24. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises one or more attributes of the one or more items.

25. (Previously Presented) The web-based point of sale (POS) builder system of claim 3, wherein the POS terminals are configured to perform transactions independently of a connection with the network.

26. (**Currently Amended**) A web-based point of sale (POS) builder system comprising:

~~software configured to run on~~ at least one POS terminal configured ~~and cause the at least one POS terminal~~ to:

display one or more POS screens;

communicate with at least one web server over a network comprising the Internet;

receive, over the network from the at least one web server, information used for creating or modifying the one or more POS screens including creating or modifying, ~~wherein the received information comprises~~ one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

create or modify the one or more POS screens based on the received information; and

perform one or more transactions with respect to the one or more items.

27. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal comprises a plurality of POS terminals in a plurality of locations.

28. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 26, wherein ~~the software configured to run on~~ the at least one POS terminal is further configured to ~~cause the at least one POS terminal to~~:

capture one or more videos using one or more cameras while performing the one or more transactions; and

correlate the one or more videos with the one or more transactions.

29. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 28, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

30. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the one or more display interfaces comprise one or more buttons or keys.

31. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.

32. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the at least one web server is located remotely from the at least one POS terminal.

33. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 26, wherein ~~the software configured to run on~~ the at least one POS terminal is further configured to ~~cause the at least one POS terminal to~~ perform the one or more transactions in real time while the one or more POS screens are created or modified.

34. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 33, wherein the at least one POS terminal uses the created or modified one or more POS screens after completing a ~~present~~ pending POS transaction.

35. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises one or more attributes of the one or more items.

36. (Previously Presented) The web-based point of sale (POS) builder system of claim 26, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

37. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 26, wherein ~~the software configured to run on~~ the at least one POS terminal is further configured to ~~cause the at least one POS terminal to~~ transmit information regarding the one or more transactions to the at least one web server over the network.

38. (Previously Presented) The web-based point of sale (POS) builder system of claim 37, wherein the information regarding one or more POS transactions comprises one or more of employee clock information, customer add/update information, item add/update information, or promotion information.

39. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 37, wherein ~~the software configured to run on~~ the at least one POS terminal is further configured to ~~cause the at least one POS terminal to~~ perform the one or more transactions without a connection to the web server and transmit the information regarding the one or more transactions to the at least one web server after performing the one or more transactions and when the connection to the web server is established.

40. (**Currently Amended**) The web-based point of sale (POS) builder system of claim 39, wherein ~~the software configured to run on~~ the at least one POS terminal is further configured to ~~cause the at least one POS terminal to~~ store locally the information regarding the one or more transactions.

41. (**Currently Amended**) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

communicating with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receiving, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying~~, wherein the received information comprises~~ one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

~~creating or modifying the one or more POS screens based on the received information received from the POS builder interface;~~ and

provisioning the one or more POS terminals with the information ~~one or more POS screens~~ over the network to create or modify the one or more POS screens displayed on the one or more POS terminals.

42. (**Currently Amended**) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

displaying one or more POS screens;

communicating with at least one web server over a network comprising the Internet;

receiving, over the network from the at least one web server, information used for creating or modifying the one or more POS screens including creating or modifying~~, wherein the received information comprises~~ one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

creating or modifying the one or more POS screens based on the received information; and

performing one or more transactions with respect to the one or more items.

43. (**New**) A web-based point of sale (POS) builder system comprising:

at least one web server configured to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information for creating or modifying functionality of the one or more POS terminals; and

configure the one or more POS terminals with the information over the network to create of modify the functionality of the one or more POS terminals.

44. (**New**) The web-based point of sale (POS) builder system of claim 43, wherein the functionality comprises one or more of the following: one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; price of the one or more items; employee validation; and one or more promotions.

REMARKS

By the foregoing amendments, Applicant has amended claims 3, 7, 8, 13, 16, 17, 19-21, 23, 26, 28-29, 31, 33, 34, 37, and 39-42, and added claims 43 and 44. No new matter has been added. Entry of these amendments is respectfully requested.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: February 2, 2018

By: /Keith Lim/_____
Keith M Lim
Registration No. 68,912
Registered Practitioner
Customer No. 20995
(949) 760-0404

27536797

Electronic Patent Application Fee Transmittal	
Application Number:	15827948
Filing Date:	30-Nov-2017
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Filer:	Keith M Lim
Attorney Docket Number:	MERZ010.001C3

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	1202	2	100	200
INDEPENDENT CLAIMS IN EXCESS OF 3	1201	1	460	460
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**660**

Electronic Acknowledgement Receipt	
EFS ID:	31693288
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Keith M Lim/Jennifer Neat
Filer Authorized By:	Keith M Lim
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	02-FEB-2018
Filing Date:	30-NOV-2017
Time Stamp:	20:56:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$660
RAM confirmation Number	020518INTEFSW20565900
Deposit Account	111410
Authorized User	Jennifer Neat
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		PAmd_MERZ010-001C3.pdf	50893 65f534d711aad4d4ff1aa996a90b66e393d17165	yes	10

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Preliminary Amendment	1	1
	Claims	2	9
	Applicant Arguments/Remarks Made in an Amendment	10	10

Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31940 6e05683cce806e46a25c896f6066098363c0cf18	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	82833		

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
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/827,948	Filing Date 11/30/2017	☐ 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 02/02/2018

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 40	Minus	** 40	= 0	X $100 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $460 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	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 D. MCBETH BROWN

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Wayne BARATTA
	Art Unit	2192
	Examiner Name	Unassigned
	Attorney Docket Number	MERZ010.001C3

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6002395	A	1999-12-14	Wagner et al.	
If you wish to add additional U.S. Patent citation information please click the Add button.						

U.S.PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					
If you wish to add additional U.S. Published Application citation information please click the Add button.						

FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] ¡	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐
If you wish to add additional Foreign Patent Document citation information please click the Add button								

NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Wayne BARATTA
	Art Unit	2192
	Examiner Name	Unassigned
	Attorney Docket Number	MERZ010.001C3

	1		☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	15827948
	Filing Date	2017-11-30
	First Named Inventor	Wayne BARATTA
	Art Unit	2192
	Examiner Name	Unassigned
	Attorney Docket Number	MERZ010.001C3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ 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. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Keith M. Lim/	Date (YYYY-MM-DD)	2017-12-19
Name/Print	Keith M. lim	Registration Number	68,912

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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 record s.

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:	31270894
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Keith M Lim
Filer Authorized By:	
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	19-DEC-2017
Filing Date:	30-NOV-2017
Time Stamp:	13:04:43
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	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	63087 00167216caf4233f4f77fd503357c765ab770c19	no	4

Warnings:

Information:	
This is not an USPTO supplied IDS fillable form	
Total Files Size (in bytes):	63087

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	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/827,948	11/30/2017		3620	MERZ010.001C3	40	4

CONFIRMATION NO. 2925

20995
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

FILING RECEIPT



Date Mailed: 12/18/2017

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)

Wayne BARATTA, Poughkeepsie, NY;
Quentin OLSON, Port Townsend, WA;

Applicant(s)

CLOUDOFCHANGE, LLC, Poughkeepsie, NY;

Power of Attorney: The patent practitioners associated with Customer Number 20995

Domestic Priority data as claimed by applicant

This application is a CON of 15/635,097 06/27/2017
which is a CON of 15/198,117 06/30/2016 PAT 9715371
which is a CON of 12/012,666 02/05/2008 PAT 9400640

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 12/14/2017

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/827,948**

Projected Publication Date: 03/29/2018

Non-Publication Request: No

Early Publication Request: No
Title

WEB-BASED POINT OF SALE BUILDER

Preliminary Class

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).

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 15/827,948

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	600
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720
TOTAL CLAIMS (37 CFR 1.16(i))	40 minus 20 =	* 20			OR	x 80 =	1600
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1				x 420 =	420
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).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	3620

APPLICATION AS AMENDED - PART II

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

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	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 found in the appropriate box in column 1.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor	:	Wayne Baratta
App. No.	:	Unknown
Filed	:	Herewith
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Unknown
Art Unit	:	Unknown
Conf. No.	:	Unknown

PRELIMINARY AMENDMENT

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

Dear Commissioner:

Prior to examination on the merits, please amend the above-identified patent application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks begin on page 10 of this paper.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:	WEB-BASED POINT OF SALE BUILDER			
First Named Inventor/Applicant Name:	Wayne BARATTA			
Filer:	Keith M Lim			
Attorney Docket Number:	MERZ010.001C3			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	**Fee Code**	**Quantity**	**Amount**	**Sub-Total in USD($)**
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	280	280
UTILITY SEARCH FEE	1111	1	600	600
UTILITY EXAMINATION FEE	1311	1	720	720
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	1202	20	80	1600
INDEPENDENT CLAIMS IN EXCESS OF 3	1201	1	420	420
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**3620**

Electronic Acknowledgement Receipt	
EFS ID:	31087863
Application Number:	15827948
International Application Number:	
Confirmation Number:	2925
Title of Invention:	WEB-BASED POINT OF SALE BUILDER
First Named Inventor/Applicant Name:	Wayne BARATTA
Customer Number:	20995
Filer:	Keith M Lim/Gustavo Lopez
Filer Authorized By:	Keith M Lim
Attorney Docket Number:	MERZ010.001C3
Receipt Date:	30-NOV-2017
Filing Date:	
Time Stamp:	17:33:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$3620
RAM confirmation Number	120117INTEFSW17351600
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	ADS.pdf	112584 c94fd85992c271576f7803933b5d0e7a84c2126d	no	9
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
2	Power of Attorney	POA.pdf	3543956 36c47a75bc1927d2710954dae190d239fb1f2c85	no	2
Warnings:					
Information:					
3	Oath or Declaration filed	Oath.pdf	855212 09c29c5348c003e549de339064c3dca89254fbd5	no	2
Warnings:					
Information:					
4	Drawings-only black and white line drawings	Drawings.pdf	413406 93f5e939ee0255e416c0cfa425ff9d2e7556647e	no	5
Warnings:					
Information:					
5		Application.pdf	6517901 89c1d00e470edf799380f8605d7ac1840b511c26	yes	16

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Abstract	16	16
	Claims	15	15

	Specification		1	14	
Warnings:					
Information:					
6		IDS.pdf	50016 531709e011e749726d627ab255d51cd0c1e8137c	yes	4
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Information Disclosure Statement (IDS) Form (SB08)		3	4	
	Transmittal Letter		1	2	
Warnings:					
Information:					
7	Miscellaneous Incoming Letter	Misc.pdf	16228 9a102da3bcc4564222acdfa7c0f2055bb386e84a	no	1
Warnings:					
Information:					
8		PreliminaryAmendment.pdf	50871 2cd3bddde1732bcd97612f300937f0d9f9ddb2cb	yes	11
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Applicant Arguments/Remarks Made in an Amendment		10	11	
	Claims		3	9	
	Specification		2	2	
	Preliminary Amendment		1	1	
Warnings:					
Information:					
9	Fee Worksheet (SB06)	fee-info.pdf	37981 31d5e6da4a110e412fc1d357d36799d220e83631	no	2

Warnings:	
Information:	
Total Files Size (in bytes):	11598155

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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	MERZ010.001C3
	Application Number	
Title of Invention	WEB-BASED POINT OF SALE BUILDER	

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
	Wayne		BARATTA	

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

City	Poughkeepsie	State/Province	NY	Country of Residence	US

Mailing Address of Inventor:

Address 1	89 S. Randolph Avenue		
Address 2			
City	Poughkeepsie	State/Province	NY
Postal Code	12601	Country	US

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Quentin		OLSON	

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

City	Port Townsend	State/Province	WA	Country of Residence	US

Mailing Address of Inventor:

Address 1	1434 Grant Street		
Address 2			
City	Port Townsend	State/Province	WA
Postal Code	98368	Country	US

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).

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	MERZ010.001C3
	Application Number	
Title of Invention	WEB-BASED POINT OF SALE BUILDER	

☐ An Address is being provided for the correspondence Information of this application.			
Customer Number	20995		
Email Address	efiling@knobbe.com	Add Email	Remove Email

Application Information:

Title of the Invention	WEB-BASED POINT OF SALE BUILDER		
Attorney Docket Number	MERZ010.001C3	**Small Entity Status Claimed**	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	5	**Suggested Figure for Publication (if any)**	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

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	20995		

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	MERZ010.001C3
	Application Number	
Title of Invention	WEB-BASED POINT OF SALE BUILDER	

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim 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.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	15/635097	2017-06-27

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/635097	Continuation of	15/198117	2016-06-30	9715371	2017-07-25

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/198117	Continuation of	12/012666	2008-02-05	9400640	2016-07-26

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 priority to a foreign application. 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. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

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

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	MERZ010.001C3
	Application Number	
Title of Invention	WEB-BASED POINT OF SALE BUILDER	

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	MERZ010.001C3
	Application Number	
Title of Invention	WEB-BASED POINT OF SALE BUILDER	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is 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 State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	MERZ010.001C3
	Application Number	
Title of Invention	WEB-BASED POINT OF SALE BUILDER	

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	CLOUDOFCHANGE, LLC		
Mailing Address Information For Applicant:			
Address 1	7 Mansion Street, Suite 215		
Address 2			
City	Poughkeepsie	**State/Province**	NY
Country	US	Postal Code	12601
Phone Number		Fax Number	
Email Address			

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

Assignee Information including Non-Applicant Assignee 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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	MERZ010.001C3
	Application Number	
Title of Invention	WEB-BASED POINT OF SALE BUILDER	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

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

Mailing Address Information For Assignee including Non-Applicant Assignee:

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

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Keith M. Lim/			Date (YYYY-MM-DD)	2017-11-30
First Name	Keith	Last Name	Lim	Registration Number	68,912

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

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	MERZ010.001C3
	Application Number	
Title of Invention	WEB-BASED POINT OF SALE BUILDER	

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 CooperationTreaty.

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.

Doc Code: PA..
Document Description: Power of Attorney

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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	Unassigned
Filing Date	Herewith
First Named Inventor	Wayne Baratta, et al.
Title	WEB-BASED POINT OF SALE BUILDER
Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	MERZ010.001C3

SIGNATURE of Applicant or Patent Practitioner

Signature	/Keith M. Lim/	Date (Optional)	2017-11-30
Name	Keith M. Lim	Registration Number	68,912
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

Doc Code: PA..
Document Description: Power of Attorney

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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 20995

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name	Wayne Baratta				
Address	7 Mansion St. Suite 215				
City	Poughkeepsie	State	New York	Zip	12601
Country	USA				
Telephone	845-797-4168	Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

CloudofChange, LLC

☐ Inventor or Joint Inventor (title not required below)

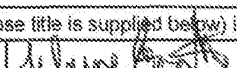
☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	
Name	Wayne Baratta		
Title	Member		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

DOCKET NO. TY06-004_CON

Title of Invention: **Web-Based Point of Sale Builder**

As a below named Inventor I hereby declare that:

This Declaration is directed to:

[x] The attached application, or

[ ] United States application, or PCT international application, number ....., Filed on .....

The above-identified application was made or authorized to be made by me.

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

I believe I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby state that I have reviewed and understand the contents of the above identified specification including the claims.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

I hereby acknowledge that any willful false statement made in this Declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WAYNE BARATTA 6/22/16

Legal name of **sole *or* first inventor** Date

Wayne Baratta

Inventor's signature

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Citizenship

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Legal name of **sole *or* first inventor** Date

Inventor's signature

Inventor Residence – street, city, state, zip, country

Citizenship

Post Office Address

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

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Legal name of **sole or first inventor** Date

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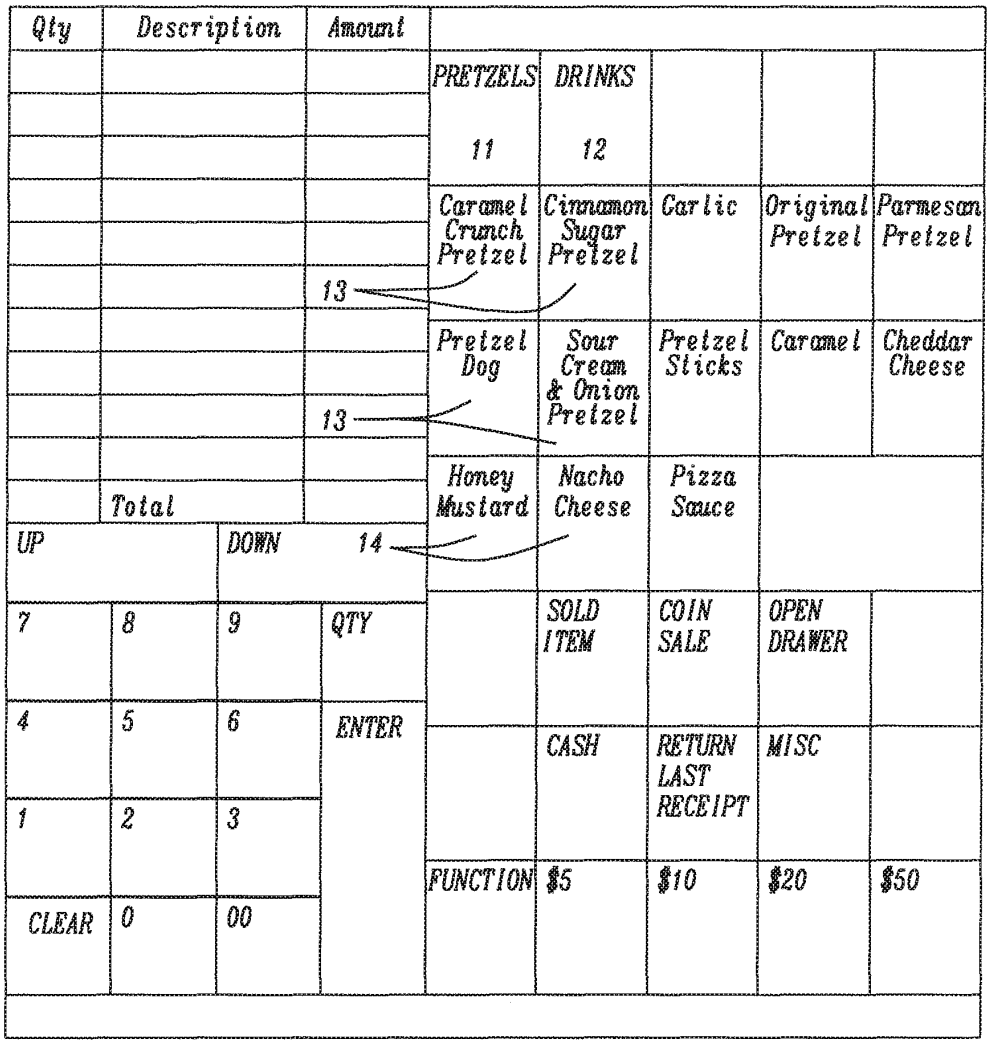

Qty
Description
Amount
Total
UP
DOWN
14
7
8
9
QTY
4
5
6
ENTER
1
2
3
CLEAR
0
00
PRETZELS
11
DRINKS
12
Caramel Crunch Pretzel
Cinnamon Sugar Pretzel
Garlic
Original Pretzel
Parmesan Pretzel
13
Pretzel Dog
Sour Cream & Onion Pretzel
Pretzel Sticks
Caramel
Cheddar Cheese
13
Honey Mustard
Nacho Cheese
Pizza Sauce
SOLD ITEM
COIN SALE
OPEN DRAWER
CASH
RETURN LAST RECEIPT
MISC
FUNCTION
$5
$10
$20
$50

FIG. 1

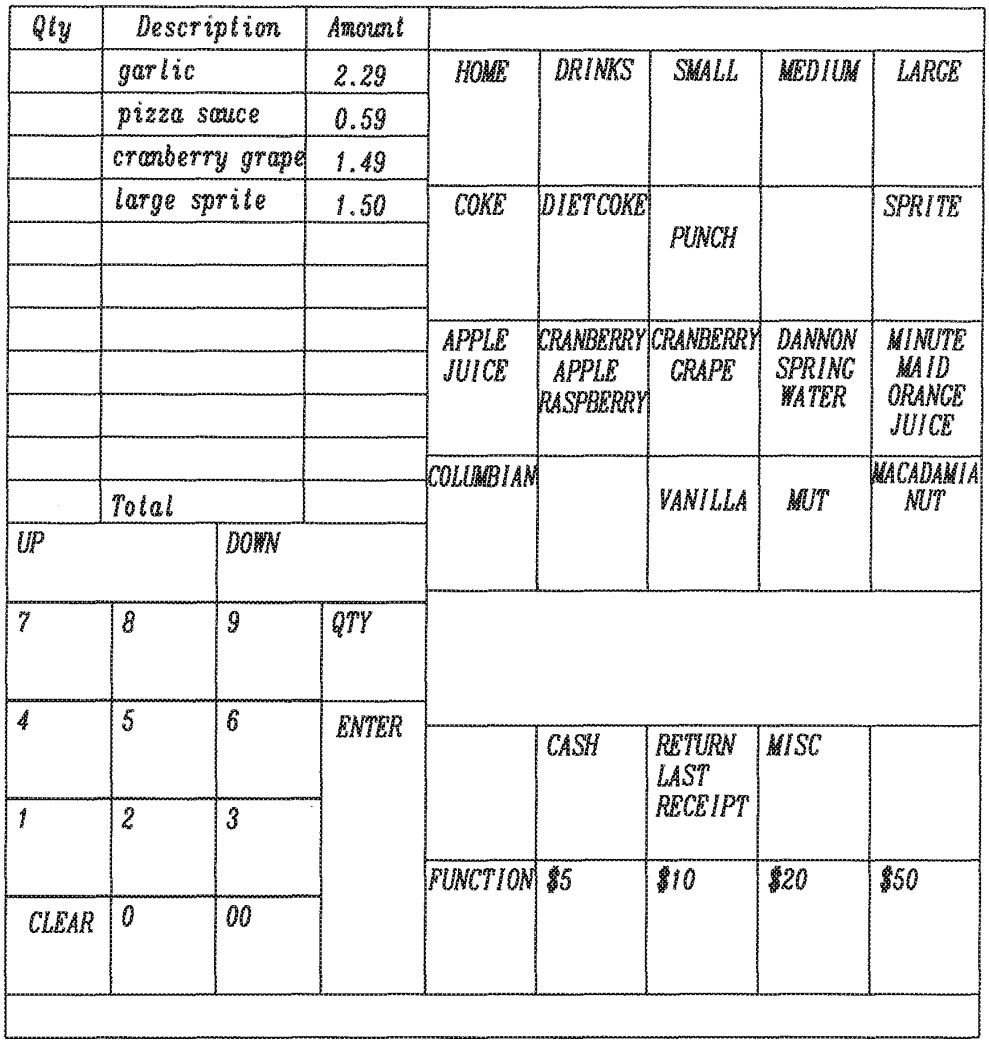

Qty
Description
Amount
garlic
2.29
pizza sauce
0.59
cranberry grape
1.49
large sprite
1.50
Total
UP
DOWN
7
8
9
QTY
4
5
6
ENTER
1
2
3
CLEAR
0
00
HOME
DRINKS
SMALL
MEDIUM
LARGE
COKE
DIETCOKE
PUNCH
SPRITE
APPLE JUICE
CRANBERRY APPLE RASPBERRY
CRANBERRY GRAPE
DANNON SPRING WATER
MINUTE MAID ORANCE JUICE
COLUMBIAN
VANILLA
MUT
MACADAMIA NUT
CASH
RETURN LAST RECEIPT
MISC
FUNCTION
$5
$10
$20
$50

FIG. 2

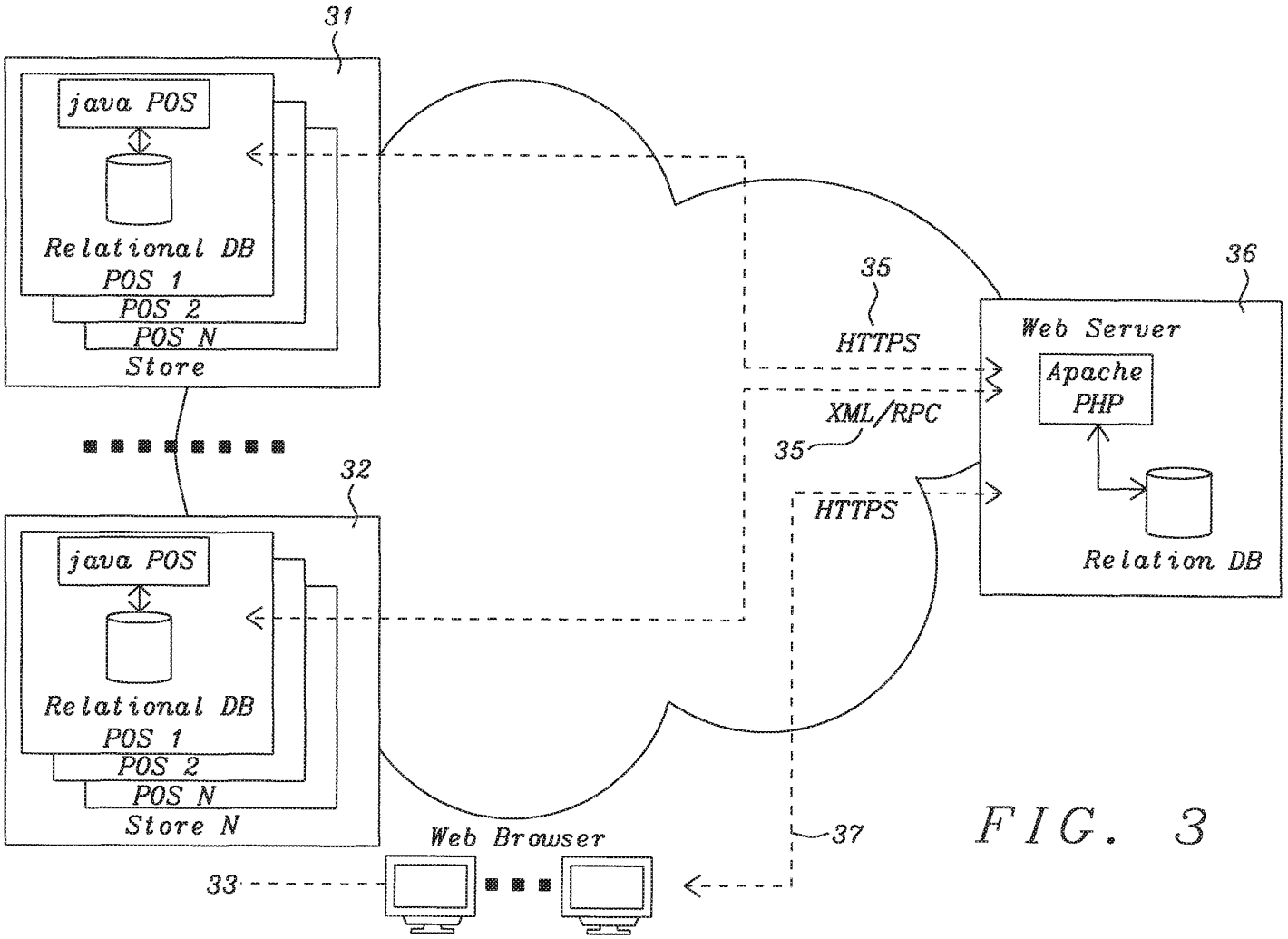

31
java POS
Relational DB
POS 1
POS 2
POS N
Store
32
java POS
Relational DB
POS 1
POS 2
POS N
Store N
35
HTTPS
XML/RPC
35
HTTPS
36
Web Server
Apache
PHP
Relation DB
Web Browser
33
37

FIG. 3

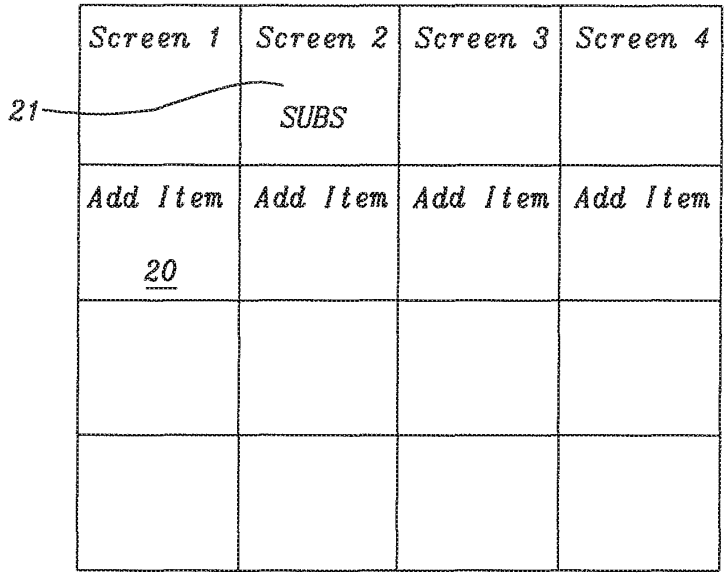

Screen 1
Screen 2
Screen 3
Screen 4
21
SUBS
Add Item
Add Item
Add Item
Add Item
20

FIG. 4a

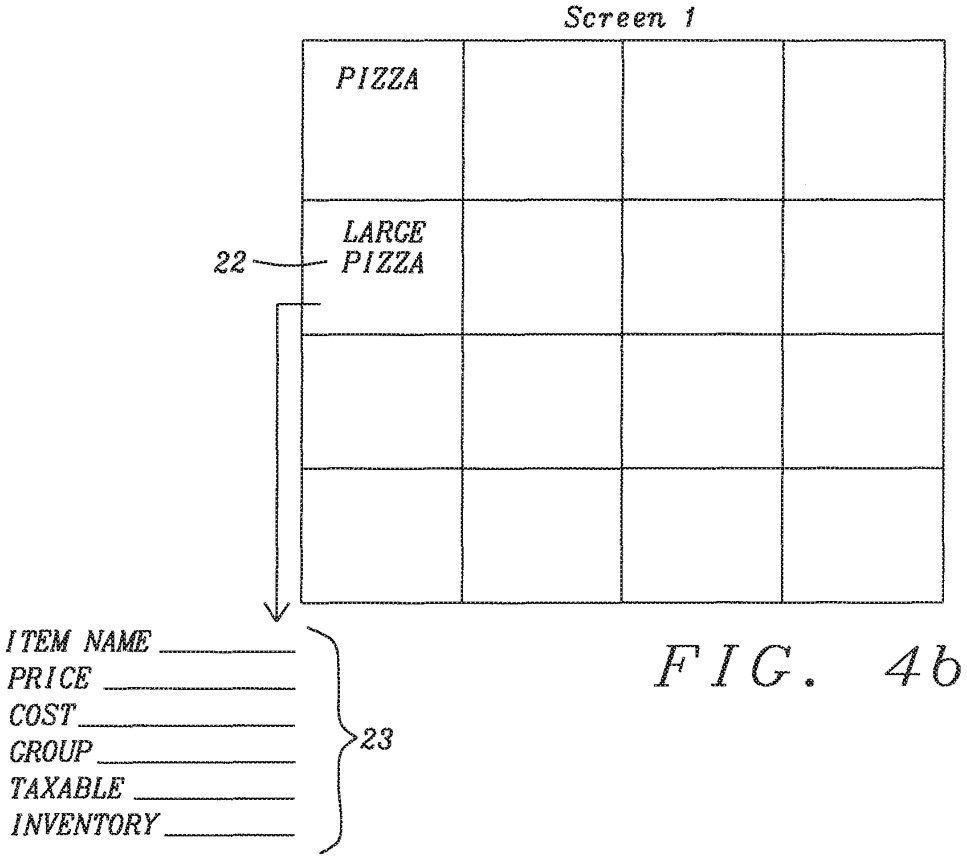

Screen 1
PIZZA
LARGE PIZZA
22
ITEM NAME
PRICE
COST
GROUP
TAXABLE
INVENTORY
23

FIG. 4b

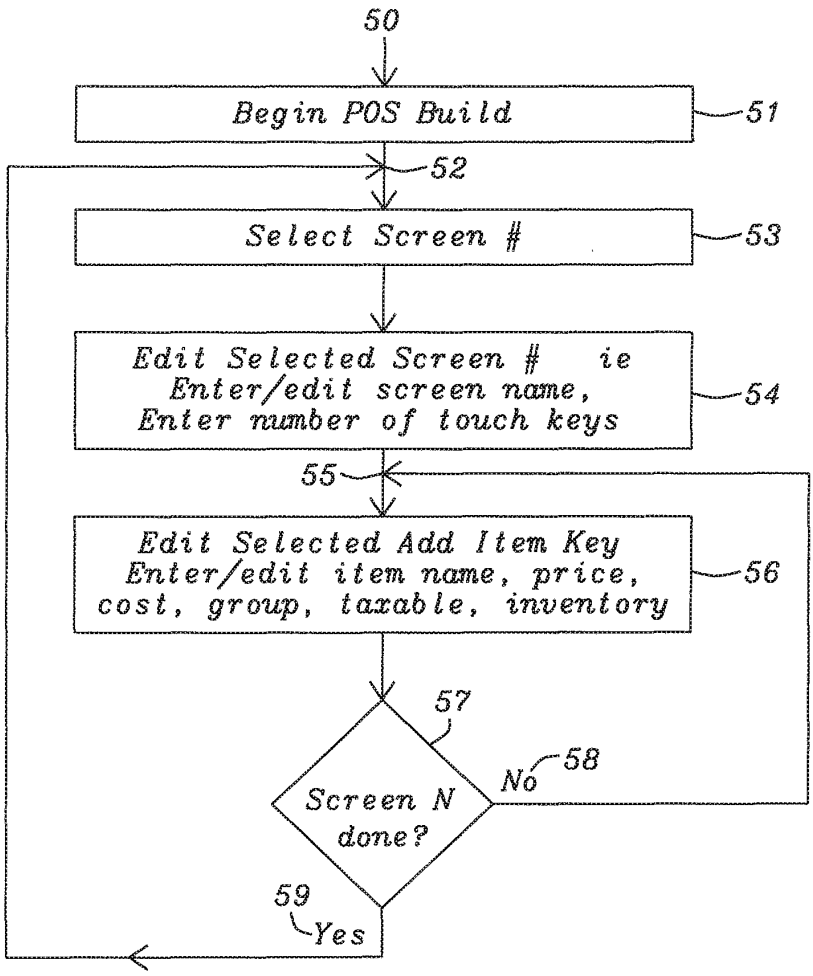

50
Begin POS Build
51
52
Select Screen #
53
Edit Selected Screen # ie
Enter/edit screen name,
Enter number of touch keys
54
55
Edit Selected Add Item Key
Enter/edit item name, price,
cost, group, taxable, inventory
56
57
Screen N
done?
No
58
59
Yes

FIG. 5

Abstract

This invention provides a system and a method for online, web-based point of sale (POS) building and configuration, which can assist non-expert business operators in building, editing and testing a point of sale system to manage their businesses. The business operations range from a single branch to a large chain of stores or branches. The key advantages of the Web-based POS builder are that it is completely built on the foundation of the Web. The POS builder is accessible anywhere in the world. It can be used by a person of any skill level. The POS builder builds, edits, and tests new POS terminals in real time.

1. A web-based point of sale (POS) builder system comprising:

one or more point of sale terminals, that display POS screens,

an internet connection from said one or more point of sale terminals to a web server,

one or more local or remote PC workstations,

point of sale builder software that runs on said web server, and

one or more cameras,

wherein said local or remote workstations are utilized to build or edit said POS terminals in real time, from anywhere in the world and over the worldwide web, wherein said web servers are provided as a vendor subscription service wherein web server software resides and is hosted on said vendor's remote servers and wherein subscriber company's POS terminal access and repeatedly interact with said web server software from said vendor's remote servers, in order to perform the subscriber's desired function, over a network, wherein the network comprises the internet, and

wherein video captured by said cameras is processed and organized by video software residing on said point of sale personal computer hardware.

2. The web-based point of sale (POS) builder system of claim 1 wherein said video that is captured is remotely viewable.

Web-Based Point of Sale Builder

This is a continuation of U.S. Patent application serial number 12/012,666, filed on 02/05/08, which is herein incorporated by reference in its entirety, and assigned to a common assignee.

Related Patent Applications

This application is related to docket number TY2006-001, filed on February 26, 2007, serial number 11,710,722 and docket number TY2006-002, filed on February 26, 2007, serial number 11,710,723, which are herein incorporated by reference in its entirety.

Background of the Invention

Field of the Invention

This invention relates to a system and a method for building a point of sale (POS) system to manage business operations. The business operations range from a single branch to a large chain of stores or branches.

More particularly this invention relates to an online, web-based point of sale builder method, which can assist non-expert business operators in assembling a point of sale system to manage their businesses.

Description of Related Art

Current practice in the field of assembling point of sale systems includes manually coding front-of- screen information. Typically, this front-of-screen information contains menu selections, page selections, and general answers to business questions. This front-of-screen menu is typically manually coded by a business expert with the help of a programmer or data expert. Also, currently the entry of this front-of-screen information requires intimate knowledge of a complex interface to a front-of-screen programming language. In summary, current practice includes the manual building of a point of sale (POS) screen. This manual process requires defining the position and operation of touch screen keys and their database correspondence. Currently, only specially trained people can build or change POS screens. This manual POS building and editing is prone to mistakes and is time-consuming. Since POS screen changes are difficult and prone to error, store owners tend to retain older, inaccurate, out-of-date POS screens in order to avoid the POS screen editing process. Also, current POS screen editing occurs off-line with the testing of the screens occurring at a later date, at a remote store location. The following references represent prior art in the field of screen configuration building.

U. S. Patent 5,818,428 (Eisenbrandt et al.) describes a control system with a user configurable interface, particularly suitable for use in connection with appliances. Users can configure display screens either at a point of sale location or at home with a personal computer.

U. S. Patent 6,629,080 B1 (Kolls) describes a universal advertising and payment system and method for networking, monitoring and advancing electronic commerce and controlling vending equipment.

U. S. Patent 7,051,091B1 (Cohen et al.) discloses a configuration builder useful in configuring software containing hardware units which are serviced by a center which services a multiplicity of similar units having a plurality of different configurations.

U. S. Patent 5,987,426 (Goodwin) describes a system and method of transferring information between a first software application and a second software application which employ an isolation layer. The system includes a client computer system provided by a first seller of computer systems, including a client software application, and a server computer system provided by a second seller of computer system.

Brief Summary of the Invention

It is the objective of this invention to provide a system and a method for building a point of sale (POS) system to manage business operations. The business operations range from a single branch to a large chain of stores or branches.

It is further an object of this invention to provide an online, web-based point of sale builder system and method, which can assist non-expert or expert business operators in assembling a point of sale system to manage their businesses. This point of sale building operation can be done in real time from anywhere in the world.

The objects of this invention are achieved by a web-based point of sale (POS) builder comprising one or more point of sale terminals, which display POS, screens, an Internet connection to a web server, one or more local or remote PC workstations, and point of sale builder software which runs on said web server. Local or remote workstations can be utilized to build or edit said POS terminals in real time, from anywhere in the world and over the world-wide web.

Brief Description of the Drawings

FIG. 1 shows a typical point of sale touch screen for a pretzel store, as an example only.

FIG. 2 shows a typical touch screen for the drinks panel of a pizza restaurant, as an example only.

FIG. 3 is a system diagram for web-based back office which supports point of sale terminals.

FIG. 4a is a sample screen builder panel before the screen building process begins.

FIG. 4b is a sample screen builder panel after the screen building process is under way.

FIG. 5 is a high level flowchart which illustrates the main embodiment of the screen building process.

Detailed Description of the Invention

Figure 1 shows a typical point of sale (POS) touch screen for, as an example only, a pretzel store. There are touch keys for pretzels 11 and for drinks 12. Selecting these keys would typically bring up secondary screens displaying specific product keys for ordering different types of pretzels and drinks respectively. In addition, the screen in figure 1 has some specific pretzel product keys 13 and specific pretzel topping keys 14. Currently in the prior art, a touch screen as shown in figure 1 is manually configured by a programmer who knows the specific proprietary point of sale system used by a store or business. The figure 1 screen design involves the specific key layout and size of keys. In addition, the figure 1 screen keys must have corresponding hooks or references to product data such as item name, price, cost, group, taxable, and inventory as shown in figure 4. In this invention, this product data and the touch key structure is stored in relational databases in the back office which is stored on the web servers 36 shown in figure 3.

As an example only, figure 2 shows a touch screen for the drinks page of a pizza restaurant. Again in the prior art, a specialized programmer had to design the layout and data for these POS touch keys. Typically, the programmer is located remotely from the store or business. He or she must learn about the store's POS requirements via phone calls, emails, and meetings with store

operators. In addition, the programmer would need to iterate several passes of the touch screen design and allow the store operator to test the screens. With this invention, the store operator will be able to build his POS screens online over the Internet. With input from the store operator, the POS builder can specify and display the number, shape and arrangement of selection keys or buttons on said POS screens. The store operator, who does not have to be technically trained, will be able to edit and test his screens until he is satisfied with the end results. The testing of said POS screens can be done iteratively by the store operator in real time while said POS terminals are simultaneously in use during store and business operation hours or after store hours. Alternatively, the testing of said POS screens can be done iteratively by a remotely located person such as a store manager or director in real time while said POS terminals are simultaneously in use during store hours or after store hours. All backoffice changes which include screen changes, price changes, employee validation changes are submitted to a batch bucket or queue. These changes have to be submitted for final posting at a scheduled time. For example, the phasing in of new screens and / or new data such as prices and employee validation can be scheduled. The time schedule for uploading or posting these screen changes and / or new data can be specified as follows. Only as examples, the changes can take place after the present transactions are completed. Alternatively, the changes can take place at the end of the business day, during the night, at the start of the next day or at the next application restart for example. Typically,

screen changes will take place at the next application start at the beginning of a business day.

This automatic online POS builder will reduce the development time for POS screens by weeks. In addition, the store operator will be able to edit the POS screens and its relational databases any time as often as desired. In addition, the store operator will be able to edit, change and test the screens within minutes in real time. The store operator can iterate these changes instantly until he gets the desired screen appearance. This real-time testing and iteration of screen designs is an important feature of this invention. This feature motivates the store operator to keep his screens up to date and accurate. Previously, the store operator would avoid updating screens, since it involved the time and expense of working with programmers off line.

Figure 3 shows a high level diagram of this invention. There are N POS terminals (POS 1, POS 2.....POS N) in "Store" 31 and in "Store N" 32. POS 31 is in Store 1 and POS 2 (32) is in Store 2. Each POS includes personal computer hardware and software. Additional POS terminals beyond those shown, as well as additional stores beyond the two shown, are within the scope of the invention. Each POS normally operates with a hardware/software connection 35 to the Internet or Web. However, if the web goes down, the POS terminal continues to operate. There is a "loose coupling" of the POS to the back office (BO): the POS

to BO connection is not required for the basic business functions of the POS. All transaction data is stored in a relational database on the hard drive in the POS.

A relational database stores all of its data inside tables. All operations on data are done on the tables themselves. Some operation produce other tables as the result. A table is a set of rows and columns. Each row is a set of columns with only one value for each. All rows from the same table have the same set of columns, although some columns may have NULL values. A NULL value is an "unknown" value. The rows from a relational table are analogous to a record, and the columns are analogous to a field. Below is an example of a relational table.

NAME	COMPANY	E_MAIL
Jane A. Doe	ABC	jad@abc.com
Bill X. Smith	XYZ	bxs@xyz.com

There are two basic operations one can perform on a relational table. The first one is retrieving a subset of its columns. The second is retrieving a subset of its rows. The field names such as company describe the content of the columns of the relational table. The rows delineate the individual records stored in the relational tables.

As transactions are created at a POS a log entry for the newest transaction is also created, this log entry is used to flag if the transaction has been uploaded to the web server. Part of the POS application, the BO interface is continuously running in the background. This component reads the log of transactions. If a transaction needs to be sent, it tries to send it. If the send fails (for example, if the connection to, or the Internet itself, is down), it goes to sleep and tries again later. Additionally, the BO interface requests update from the BO such as new items, price changes, employees, etc. The POS terminals communicate via HTTP protocol (hypertext transfer protocol) 35 with Back-office BO software, which is implemented on web servers 36, which can be located anywhere in the world. In addition, the BO software and data can be viewed from any store employee at any PC 33 who has Internet access 37 and a password.

The POS such as 31 send transaction data to the BO in the form of an HTTP post or communication. The packet 35 sent from the POS to the BO consists of transactions, employee clock, customer add/update, item add/update, promotions and more. Promotions are configured in the back office and associated with items or customers or departments. For example, a promotion may be associated with a customer to implement customer loyalty points or a promotion may be associated with a certain item for a % discount. A client who is the store manager or owner selects a promotion type, associates it with an item, department, etc, then sets the parameters that control how that promotion

works. These transaction transmissions between the POS and the BO can be encrypted to insure privacy and security. A typical encryption method is 128 bit SSL (secure sockets layer). A further element of security is that each BO client (individual POS, store or multi-store owner) gets their own instance of a database. When they log into the BO they are attached to their own relational database associated and validated via their user login and password.

Figures 4a and 4b show a typical web-based POS builder interface. Figure 4a shows a grid of boxes labeled with screen numbers 1-4. Typically, screens will have screen names such as in 21, "Subs". Under each screen box column are boxes labeled "Add Item". These boxes allow the addition of different products such as small pizza, large pizza, etc. as shown in figure 4b. Figure 4b shows the data interface which would appear when selecting the large pizza box. The store operator would be able to enter and/or modify item name, price, cost, group, taxable and inventory. The above illustrates the ease of building POS screens by store operators via the Web.

Figure 5 shows a flowchart of the point of sale builder methodology. The flow in fig. 5 also refers to fig. 4a and 4b. The Begin POS Build block 51 is entered when the Builder Program is initiated 50 from a Web page action.

When creating a new POS, Block 51 brings up a screen such as that shown in Fig. 4a. The screens in Fig. 4a need to be defined. Block 53 allows the store operator to select which screen number to define. Fig. 4b shows what

appears on the Web screen after the store operator selects screen #1 (53) to work on. In Fig. 5, Block 54 allows the store operator to enter/edit the screen name being worked on, such as pizza, as an example only, in Fig. 4b. In Fig. 5, block 54 allows the store operator to enter the number of touch keys planned for the pizza screen, as an example only.

Fig. 4b shows the screen after a few touch screen buttons have been defined. Screen 1 has been labeled Pizza. The pizza screen in Fig. 4b currently has 1 touch screen button item defined on the screen, Large pizza 22. The Large Pizza item button was entered by hitting ADD Item 20 in Fig. 4a. After hitting add item, Fig. 4b appears with the template 23 to be filled in. This step is shown in block 56 of Fig. 5. The template includes Item Name, Price, Cost, Group, Taxable, Inventory. Item Name is Large Pizza. Price is easily changeable, Cost is the cost of making materials. Group is the Pizza Group, Taxable is as yes or no selection. Inventory can be used to monitor the number of Large Pizza's makeable with the dough, cheese and sauce on hand. Other Template items can be added to the template 23 in Fig. 4b.

In Fig. 5, block 57 asks whether the screen being worked on i.e.) Pizza Screen is done. If the store operator answers yes 59, the flowchart flows to Node 52 in Fig. 5. This allows the store operator to select another screen # as shown in Fig. 4a. If the store operator answers no 58, the flowchart flows to

Node 55 in Fig. 5. This allows the store operator to select, add, or edit another item on the pizza screen.

The key advantages of the Web-based POS builder are that it is completely built on the foundation of the Web. The POS builder is accessible anywhere in the world. It can be used by a person of any skill level. The POS builder builds, edits, and tests new POS terminals in real time. In addition, all screen designs and changes are reflected real-time into the back office (BO) server's screen database. For example, all screen designs inputted from any PC in the world appear instantly in the BO screen database, which is instantly viewable anywhere in the world via web browsers. Another big advantage is that all screen design software is located and executed in the BO server. Since all screen designs and changes are immediately visible from any manager's PC at their home or at headquarters, there is always management oversight of these changes. Therefore, this screen builder allows for local in-store flexibility by the individual store operator or manager, but also provides for corporate visibility of screens instantly for control and standardization. Also, this screen builder does not require the need for any server to be located in the store. Another advantage of this system is the use of standard PC and web architecture which offers both full-scalability without degrading system performance. This results in improved performance and lower cost of implementing these business systems. There is a lower cost associated with projects developed with the technology of this invention due to the flexibility of easy design changes and well-understood

software. There is less training required for programmers and system testers. Projects can draw on the huge talent pool in the open source development community. The invention allows configurable software modules for different types of businesses and sales promotions. The invention allows remote monitoring of screen designs from anywhere via the web. There is minimal time required for the implementation and installation of the POS builder system, since the POS builder setup is as basic as a home PC setup. Another advantage is that the POS builder system can be provided as a service or deployed within a corporation. For example, Software as a Service (SAAS) is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over a network, typically the Internet. Another advantage of this invention is that the POS builder system is maintained in customer centric databases, making it impossible for customers to see other's data. Each POS builder system client gets their own instance of a database. When they log into the BO they are attached to their own relational database associated and validated via their user login and password.

While this invention has been particularly shown and described with Reference to the preferred embodiments thereof, it will be understood by those Skilled in the art that various changes in form and details may be made without Departing from the spirit and scope of this invention.

What is claimed is:

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	Unknown
	Filing Date	Herewith
	First Named Inventor	Wayne Baratta, et al.
	Art Unit	Unknown
(Multiple sheets used when necessary)	Examiner	Unknown
SHEET 1 OF 2	Attorney Docket No.	MERZ010.001C3

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number *Number - Kind Code (if known)* Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	1	5,818,428	10-06-1998	Eisenbrandt, et al.	
	2	5,956,716	09-21-1999	Intervu, Inc	
	3	5,987,426	11-16-1999	Goodwin, III	
	4	6,304,886	10-16-2001	Bernardo et al.	
	5	6,629,080	09-30-2003	Kolis	
	6	6,993,498	01-31-2006	Deaton et al.	
	7	7,015,945	03-21-2006	Visilinx Inc.	
	8	7,051,091	05-23-2006	Cohen, et al.	
	9	9,317,844	04-19-2016	Richelson et al.	
	10	20010037245	11-01-2001	Ranganath et al.	
	11	2003/0041330	02-27-2003	Smith	
	12	2003/0120546	06-26-2003	Cusack et al.	
	13	2004/0128199	07-01-2004	Chicken-Out, Inc	
	14	2004/0181454	09-16-2004	Manno	
	15	2005/0021409	01-27-2005	Michaud, Jr., et al.	
	16	200/50182680	08-18-2005	Jones e tal.	
	17	20070/005685	01-04-2007	Chau et al.	
	18	2008/0077872	03-27-2008	Ycd Ltd.	
	19	2008/0208698	08-28-2008	Olson et al.	
	20	2009/0182630	07-16-2009	Otto et al.	
	21	2011/0218872	09-08-2011	Richelson et al.	
	22	2016/0253645	09-01-2016	Ciabarra et al.	
	23	2017/0300301 filed as U.S. Application No. 15/635097, including its file history (MERZ010.001C2)	10-19-2017	Baratta et al.	

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.	

T[1] - Place a check mark in this area when an English language Translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	Unknown
	Filing Date	Herewith
	First Named Inventor	Wayne Baratta, et al.
	Art Unit	Unknown
(Multiple sheets used when necessary)	Examiner	Unknown
SHEET 2 OF 2	Attorney Docket No.	MERZ010.001C3

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document *Country Code-Number-Kind Code* Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T[1]

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[1]
	24	Co-pending US Patent TY06-001, Serial No. 11/710,722, File date: February 26, 2007, "Point of Sale System with Web-Based Back-Office," by Quentin Olson, 25 pgs.	
	25	Co-pending US Patent TY06-002, Serial No. 11/710,723, File date: February 26, 2007, "Point of sale Video Server Processing System," by Quentin Olson et al., 24 pgs.	
	26	Co-pending US Patent TY06-003, Serial No. 12/012,393, File date: February 1, 2008, "Hand-Held Web Browser Inventory Checking System," by Quentin Olson et al., 24 pgs.	
	27	Localsoft Tech, db2k e-Store Builder 3.00 details, 3 pgs, found 02/08/2008, http://www.soft32donwload.com/software/dbk-e-STore-Builder-download-details.html	
	28	IBM 4690 ASTRA – Graphical User Interface (GUI) – Specifications, 1 pg., found 02/08/2008, http://www.03.ibm.com/products/retail/products/software/gui/astra/specs.html	

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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.	

T[1] - Place a check mark in this area when an English language Translation is attached.

INFORMATION DISCLOSURE STATEMENT

First Inventor	:	Wayne Baratta, et al.
App. No.	:	Unknown
Filed	:	Herewith
For	:	WEB-BASED POINT OF SALE BUILDER
Examiner	:	Unknown
Art Unit	:	Unknown
Conf. No.	:	Unknown

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

References and Listing

Pursuant to 37 CFR 1.56, an Information Disclosure Statement listing references is provided herewith. Listed references are of record in U.S. patent application No. 15/635097, filed June 27, 2017, which is the parent of this continuation application, and is relied upon for an earlier filing date under 35 USC 120. Copies of the references are not submitted pursuant to 37 CFR 1.98(d). In addition, Applicant is submitting U.S. Publication No. 2017/0300301, listed under cite no. 23.

No Disclaimers

To the extent that anything in the Information Disclosure Statement or the listed references could be construed as a disclaimer of any subject matter supported by the present application, Applicant hereby rescinds and retracts such disclaimer.

Timing of Disclosure

This Information Disclosure Statement is being filed within three months of the filing date or date of national phase entry, with an RCE or before receipt of a First Office Action after an RCE, and no fee is believed to be required.

Application No.: **Unknown**
Filing Date: **Herewith**

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: November 30, 2017

By: /Keith M. Lim/
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RESCISSION OF ANY PRIOR DISCLAIMERS AND REQUEST TO REVISIT ART

Inventor	:	Wayne Baratta, et al.
App. No	:	Unknown
Filed	:	Herewith
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Examiner	:	Unknown
Art Unit	:	Unknown
Conf #	:	Unknown

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

Dear Commissioner:

The claims of the present application are different and possibly broader in scope than the claims pursued in the parent application(s). To the extent any prior amendments or characterizations of the scope of any claim or referenced art could be construed as a disclaimer of any subject matter supported by the present disclosure, Applicant hereby rescinds and retracts such disclaimer. Accordingly, the references previously considered in the parent application(s) may need to be re-visited.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Knobbe, Martens, Olson & Bear, LLP

Respectfully submitted,

Dated: November 30, 2017

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REMARKS

By the foregoing amendments, Applicant has amended the Specification, canceled claims 1-2 without prejudice or disclaimer, and added new claims 3-42. No new matter has been added. Entry of these amendments is respectfully requested.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Applications of Assignee

Applicant wishes to draw the Examiner's attention to the following applications of the present application's assignee.

Docket No.	Serial No.	Title	Filed
N/A	12/012,666	WEB-BASED POINT OF SALE BUILDER	02/05/08
MERZ010.001C1	15/198,117	WEB-BASED POINT OF SALE BUILDER	06/30/2016
MERZ010.001C2	15/635,097	WEB-BASED POINT OF SALE BUILDER	06/27/2017

Applicant directs the Examiner to these applications to consider whether the subject matter claimed, now or as may be amended in the future, as well as the associated prosecution histories, now or in the future, may be relevant to the patentability of the present application (e.g., for reasons of double patenting). Applicant believes that the Examiner has access to the applications and associated file histories through the Patent Office (e.g., the IFW system).

Accordingly, Applicant has not provided copies of these applications or the associated file histories. Applicant would be happy to provide copies of these materials, now or in the future, should the Examiner so request.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: November 30, 2017

By: /Keith M. Lim/
Keith M Lim
Registration No. 68,912
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Customer No. 20995
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AMENDMENTS TO THE CLAIMS

1. (**Canceled**)

2. (**Canceled**)

3. (**New**) A web-based point of sale (POS) builder system comprising:

software configured to run on at least one web server and cause the web server to:

communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receive, over the network from a POS builder interface, information for creating or modifying the one or more POS screens, wherein the received information comprises one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

create or modify the one or more POS screens based on the received information received from the POS builder interface; and

configure the one or more POS terminals with the one or more POS screens over the network.

4. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is configured to run on a computing device.

5. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations.

6. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

7. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to receive, from the one or more POS terminals over the network, information regarding one or more POS transactions corresponding to the one or more items.

8. (**New**) The web-based point of sale (POS) builder system of claim 7, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to receive from the one or more POS terminals one or more videos captured by one or more cameras, wherein the one or more videos are correlated with the one or more POS transactions.

9. (**New**) The web-based point of sale (POS) builder system of claim 8, wherein the one or more videos and the one or more POS transactions are indexed using a same clock.

10. (**New**) The web-based point of sale (POS) builder system of claim 7, wherein the information regarding one or more POS transactions comprises one or more of employee clock information, customer add/update information, item add/update information, or promotion information.

11. (**New**) The web-based point of sale (POS) builder system of claim 7, wherein the information regarding one or more POS transactions are viewable via the POS builder interface.

12. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces comprise one or more buttons or keys.

13. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises at least one of a number, shape, or arrangement of the one or more display interfaces.

14. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the POS builder interface is accessible via a web browser.

15. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the one or more display interfaces are accessible on the POS builder interface.

16. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to: receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens; and

update the at least one of the one or more POS screens on the one or more POS terminals based on the second information.

17. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to store information regarding the one or more POS screens.

18. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the at least one web server is located remotely from the one or more POS terminals.

19. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminal are in use performing one or more POS transactions.

20. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the one or more POS terminals use the one or more POS screens after completing a present POS transaction.

21. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to maintain information regarding POS screens for separate sets of POS terminals separately.

22. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein instructions to the POS builder interface for programmatic creation and modification of the POS terminals are not formatted in programming code.

23. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the software configured to run on the at least one web server is further configured to cause the at least one web server to maintain information regarding the one or more POS screens.

24. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the received information comprises one or more attributes of the one or more items.

25. (**New**) The web-based point of sale (POS) builder system of claim 3, wherein the POS terminals are configured to perform transactions independently of a connection with the network.

26. (**New**) A web-based point of sale (POS) builder system comprising:

software configured to run on at least one POS terminal and cause the at least one POS terminal to:

display one or more POS screens;

communicate with at least one web server over a network comprising the Internet;

receive, over the network from the at least one web server, information for creating or modifying the one or more POS screens, wherein the received information comprises one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

create or modify the one or more POS screens based on the received information; and

perform one or more transactions with respect to the one or more items.

27. (**New**) The web-based point of sale (POS) builder system of claim 26, wherein the at least one POS terminal comprises a plurality of POS terminals in a plurality of locations.

28. (**New**) The web-based point of sale (POS) builder system of claim 26, wherein the software configured to run on the at least one POS terminal is further configured to cause the at least one POS terminal to: capture one or more videos using one or more cameras while performing the one or more transactions; and

correlate the one or more videos with the one or more transactions.

29. (**New**) The web-based point of sale (POS) builder system of claim 28, wherein the one or more videos and the one or more transactions are indexed using a same clock.

30. (**New**) The web-based point of sale (POS) builder system of claim 26, wherein the one or more display interfaces comprise one or more buttons or keys.

31. (**New**) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises at least one of a number, shape, or arrangement of the one or more display interfaces.

32. (**New**) The web-based point of sale (POS) builder system of claim 26, wherein the at least one web server is located remotely from the at least one POS terminal.

33. (**New**) The web-based point of sale (POS) builder system of claim 26, wherein the software configured to run on the at least one POS terminal is further configured to cause the at least one POS terminal to perform the one or more transactions in real time while the one or more POS screens are created or modified.

34. (**New**) The web-based point of sale (POS) builder system of claim 33, wherein the at least one POS terminal uses the created or modified one or more POS screens after completing a present POS transaction.

35. (**New**) The web-based point of sale (POS) builder system of claim 26, wherein the received information comprises one or more attributes of the one or more items.

36. (**New**) The web-based point of sale (POS) builder system of claim 26, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

37. (**New**) The web-based point of sale (POS) builder system of claim 26, wherein the software configured to run on the at least one POS terminal is configured to cause the at least one POS terminal to transmit information regarding the one or more transactions to the at least one web server over the network.

38. (**New**) The web-based point of sale (POS) builder system of claim 37, wherein the information regarding one or more POS transactions comprises one or more of employee clock information, customer add/update information, item add/update information, or promotion information.

39. (**New**) The web-based point of sale (POS) builder system of claim 37, wherein the software configured to run on the at least one POS terminal is configured to cause the at least one POS terminal to perform the one or more transactions without a connection to the web server and transmit the information regarding the one or more transactions to the at least one web server after performing the one or more transactions and when the connection to the web server is established.

40. (**New**) The web-based point of sale (POS) builder system of claim 39, wherein the software configured to run on the at least one POS terminal is configured to cause the at least one POS terminal to store locally the information regarding the one or more transactions.

41. (**New**) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

> communicating with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens;

receiving, over the network from a POS builder interface, information for creating or modifying the one or more POS screens, wherein the received information comprises one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

creating or modifying the one or more POS screens based on the received information received from the POS builder interface; and

provisioning the one or more POS terminals with the one or more POS screens over the network.

42. (**New**) A method of implementing a web-based point of sale (POS) builder system, the method comprising:

displaying one or more POS screens;

communicating with at least one web server over a network comprising the Internet;

receiving, over the network from the at least one web server, information for creating or modifying the one or more POS screens, wherein the received information comprises one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items;

creating or modifying the one or more POS screens based on the received information; and

perform one or more transactions with respect to the one or more items.

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph on page 1, lines 4-6 of the specification as follows:

This is a continuation of U.S. Patent application serial number 15/635,097, filed 06/27/2017, which is a continuation of U.S. Patent application serial number 15/198,117, filed 06/30/2016, which is a continuation of U.S. Patent application serial number 12/012,666, filed on 02/05/08, each of which are ~~both~~ herein incorporated by reference in their entirety~~, and assigned to a common assignee~~.