

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

QUOTIENT TECHNOLOGY, LLC,
Petitioner,

v.

INTELLIGENT CLEARING NETWORK, INC.,
Patent Owner.

Case No. IPR2024-01323

U.S. Patent No. 9,070,133

Petition for *Inter Partes* Review of U.S. Patent No. 9,070,133

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PETITIONER’S EXHIBIT LIST

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1001	U.S. Patent No. 9,070,133
1002	File History for U.S. Patent No. 9,070,133
1003	Declaration of Dr. Todd C. Mowry
1004	U.S. Patent Application Publication No. US 2004/0140361 (“Paul”)
1005	U.S. Patent Application Publication No. US 2006/0074784 (“Brown”)
1006	U.S. Patent No. 5,832,458 (“Jones”)
1007	Complaint, <i>Inmar Brand Solutions, Inc. v. Quotient Technology Inc.</i> , 23-cv-00994, D. Del. (filed September 7, 2023)
1008	Scheduling Order, <i>Inmar Brand Solutions, Inc. v. Quotient Technology Inc.</i> , 23-cv-00994, D. Del. (filed June 4, 2024)
1009	District Court Trial Statistics (12-Month Period Ending June 30, 2024)
1010	E.F. Codd, “A relational model of data for large shared data banks” Communications of the ACM, Vol. 13, Issue 6, June 1970 377-387
1011	Philip A. Bernstein et al, Principles of Transaction Processing for the Systems Professional, United Kingdom: Elsevier Science, (1997)
1012	A.S. Tanenbaum et al, Distributed Systems: Principles and Paradigms, Prentice Hall (2002)
1013	David Gifford et al, “The CIRRUS banking network” Communications of the ACM, Vol. 28, Issue 8, Aug. 1985 798–807
1014	The UPC at https://www.ibm.com/history/upc
1015	Nielsen History at https://nielseniq.com/global/en/landing-page/our-history-niq-driving-force-behind-consumer-intelligence/
1016	Axel Winkelmann, Integrated Couponing: A Process-Based Framework for In-Sore Coupon Promotion Handling in Retail, Logos Verlag, (2006)
1017	Electronic ‘Coupons’: Savings but No Scissors (Apr. 21, 1990) at https://www.nytimes.com/1990/04/21/style/consumer-s-world-electronic-coupons-savings-but-no-scissors.html

Exhibit	Description
1018	U.S. Patent Application Publication No. 2004/0030598 (“Boal”)
1019	U.S. Patent Application Publication No. 2003/0024981 (“Narasimhan”)
1020	U.S. Patent No. 7,231,357 (“Shanman”)
1021	U.S. Patent No. 3,959,624 (“Kaslow”)
1022	U.S. Patent No. 8,511,553 (“McIntyre”)
1023	U.S. Patent Application Publication No. 2005/114211 (“Amjadi”)
1024	U.S. Patent Application Publication No. 2006/0047573 (“Mitchell”)

TABLE OF ABBREVIATIONS

Abbreviation	Term
'133 patent	U.S. Patent No. 9,070,133 (Ex-1001)
AIA	America Invents Act
Brown	U.S. Patent Application Publication No. 2006/0074784 (Ex-1005)
Challenged Claims	Claims 1-35 of U.S. Patent No. 9,070,133
Ex-	Exhibit
Fig.	Figure
IPR	<i>inter partes</i> review
Jones	U.S. Patent No. 5,832,458 (Ex-1006)
Patent Owner	Intelligent Clearing Network, Inc.
Paul	U.S. Patent Application Pub. No. 2004/0140361 (Ex-1004)
Petitioner	Quotient Technology, LLC
POSITA	Person[s] of ordinary skill in the art

MANDATORY NOTICES

A. Real Parties-in-Interest [37 C.F.R. § 42.8(b)(1)]

The real parties-in-interest are Petitioner Quotient Technology, LLC (“Quotient” or “Petitioner”) and its parent entity, CB Neptune Holdings, LLC. In an abundance of caution, Petitioner lists the entity that was sued for patent infringement that was named Quotient Technology Inc. and other members in the corporate family to Quotient and CB Neptune Holdings, LLC including CB Neptune Midco Holdings, LLC, CB Neptune Intermediate Holdings, LLC and Neptune Partnership, LLC. Other real parties-in-interest include Patent Owner Intelligent Clearing Network, Inc. and Exclusive Licensee Inmar Brand Solutions, Inc.

B. Related Matters [37 C.F.R. § 42.8(b)(2)]

The ’133 patent that is the subject of this IPR Petition is also the subject of a patent litigation suit brought by Exclusive Licensee (*Inmar Brand Solutions, Inc. v. Quotient Technologies Inc.*, C.A. No. 23-994 (JFM) (D. Del.)). Quotient also filed IPR petitions on U.S. Patent Nos. 10,846,729 and 9,098,855, which are related to the ’133 patent and also asserted by the Exclusive Licensee.

C. Lead and Back-Up Counsel [37 C.F.R. § 42.8(b)(3)]

Pursuant to 37 C.F.R. §§ 42.8(b)(3), 42.8(b)(4), and 42.10(a), Petitioner provides the following designation of counsel:

Lead Counsel for Petitioner	Back-up Counsel for Petitioner
Brian M. Buroker (Reg. No. 39,125) Gibson, Dunn & Crutcher LLP 1700 M Street, N.W. 7th Floor Washington, DC 20036-4504 Phone: (202) 955-8500 Fax: (202) 467-0539 Email: bburoker@gibsondunn.com	Brian Rosenthal (<i>pro hac vice</i> motion forthcoming) Gibson, Dunn & Crutcher LLP 200 Park Avenue New York, NY 10166-0193 Phone: (212) 351-2339 Email: brosenthal@gibsondunn.com Katherine Q. Dominguez (<i>pro hac vice</i> motion forthcoming) Gibson, Dunn & Crutcher LLP 200 Park Avenue New York, NY 10166-0193 Phone: (212) 351-2338 Email: kdominguez@gibsondunn.com Emily Whitcher (Reg. No. 74,839) Gibson, Dunn & Crutcher LLP 3161 Michelson Drive, Suite 1200 Irvine, CA 92612-4412 Phone: (949) 451-3876 Email: ewhitcher@gibsondunn.com Ronald Lee (Reg. No. 80,681) Gibson, Dunn & Crutcher LLP 3161 Michelson Drive, Suite 1200 Irvine, CA 92612-4412 Phone: (949) 451-4069 Email: ronaldlee@gibsondunn.com

A Power of Attorney accompanies this Petition in accordance with 37 C.F.R.
§ 42.10(b).

D. Service Information [37 C.F.R. § 42.8(b)(4)]

Service via hand delivery or postal mail may be made at the address of the lead and back-up counsel above. Petitioner hereby consents to electronic service, and service by electronic mail may be made at the following email address:

- GDCInmar-Quotient@gibsondunn.com

I. INTRODUCTION

Pursuant to 35 U.S.C. § 311, Petitioner petitions for *inter partes* review of U.S. Patent No. 9,070,133 (Ex-1001) and seeks cancellation of claims 1-35 as unpatentable under pre-AIA 35 U.S.C. § 103.

The alleged “invention” of the ’133 patent is very simple—allowing customers to collect digital coupons in a coupon account maintained in a remote, centralized database and redeem them electronically at retail stores. There was nothing novel about electronically processing digital coupons or storing them in remote, centralized databases. This concept was widely known and had been in practice well before the priority date of the ’133 patent.

II. REQUIREMENTS OF *INTER PARTES* REVIEW

A. Standing

Pursuant to 37 C.F.R. § 42.104(a), Petitioner certifies that the ’133 patent is available for IPR and Petitioner is not barred or estopped from requesting an IPR on the identified grounds.

B. Identification of Challenge and Relief Requested

Pursuant to 37 C.F.R. § 42.104(b), Petitioner requests that the Board institute IPR of claims 1-35 of the ’133 patent under pre-AIA 35 U.S.C. § 103.

The '133 patent issued from an application filed on May 23, 2006. For purposes of this Petition only, Petitioner does not dispute the May 23, 2006 priority date.

Petitioner requests that claims 1-35 be canceled based on the grounds below:

Ground	Claims	Basis for Rejection ¹
1	1-35	Obviousness (Paul)
2	1-35	Obviousness (Paul and Brown)
3	7, 22	Obviousness (Paul and Jones)
4	7, 22	Obviousness (Paul, Brown, and Jones)

These challenges are made in view of the following prior art references, which were not considered during prosecution of the '133 patent or were overlooked. A patent related to Paul (U.S. Patent No. 7,240,843) is listed on the '133 patent, but the Examiner misunderstood the '843 patent because the statement of reasons for allowance focused on sending *coupon information of a pending transaction* whereas the '133 patent claims are focused on sending a *unique account identifier* to the coupon processing server. Ex-1002, 20-22; Ex-1003, ¶39. Also, the '843 patent was not listed in the Examiner's final Notice of References Cited. Ex-1002, 24.

¹ All grounds include the knowledge of a POSITA.

1. U.S. Patent Application Publication No. US 2004/0140361

U.S. Patent Application Publication No. US 2004/0140361 (“Paul”), titled “Universal club card and real-time coupon validation,” was published on July 22, 2004. Ex-1004. Paul therefore qualifies as prior art under pre-AIA 35 U.S.C. § 102(b) because it published over a year before the ’133 patent’s filing date.

2. U.S. Patent Application Publication No. US 2006/0074784

U.S. Patent Application Publication No. US 2006/0074784 (“Brown”), titled “Stored value account for use with virtual coupons,” was published on April 6, 2006 from an application filed on September 27, 2004. Ex-1005. Brown therefore qualifies as prior art under pre-AIA 35 U.S.C. § 102(a) and 102(e) because it was filed and published before the ’133 patent’s priority date.

3. U.S. Patent No. 5,832,458

U.S. Patent No. 5,832,458 (“Jones”), titled “System and method for electronically auditing point-of-sale transactions,” issued on November 3, 1998. Ex-1006. Jones therefore qualifies as prior art under pre-AIA 35 U.S.C. § 102(b) because it issued over a year before the ’133 patent’s filing date.

C. How the Challenged Claims Are To Be Construed Under 37 C.F.R. § 42.104(b)(3)

A claim subject to IPR shall be construed using the same standard as in a civil action. 37 C.F.R. § 42.100(b). Petitioner submits that no construction is necessary

for the Board to resolve and that the Challenged Claims would have been obvious under any reasonable construction.

D. How the Challenged Claims Are Unpatentable Under 37 C.F.R. § 42.104(b)(4)

An explanation of how the Challenged Claims are unpatentable under the statutory grounds identified above, including the identification of where each claim element is found in the prior art references, is provided below. Attached to this Petition is an appendix listing the Challenged Claims broken down by limitation (“Appendix: Challenged Claim Listing”).

E. Supporting Evidence Under 37 C.F.R. §42.104(b)(5)

The supporting evidence and the relevance of the evidence to the Challenged Claims, including an identification of specific portions of the evidence that support invalidity, are provided below. A list of exhibits is also included in this Petition pursuant to 37 C.F.R. § 42.63(e). The grounds for rejection are further supported by the Declaration of Dr. Todd C. Mowry (Ex-1003).

F. Payment of Fees

Pursuant to 37 C.F.R. §§ 42.103 and 42.15(a), the required fee is being submitted herewith. The Office is authorized to charge any fee deficiency, or credit overpayment, to Deposit Account 50-1408, including additional fees due in connection with this Petition.

III. TECHNICAL BACKGROUND

A. State of the Art

The '133 patent did not contribute any novel technology to the electronic coupon processing field. The distributed computing and database management technology needed to implement the coupon processing servers and point-of-sale terminals claimed in the '133 patent was well-known and established before the priority date. Ex-1003, ¶41; *see also id.* ¶¶42-54.

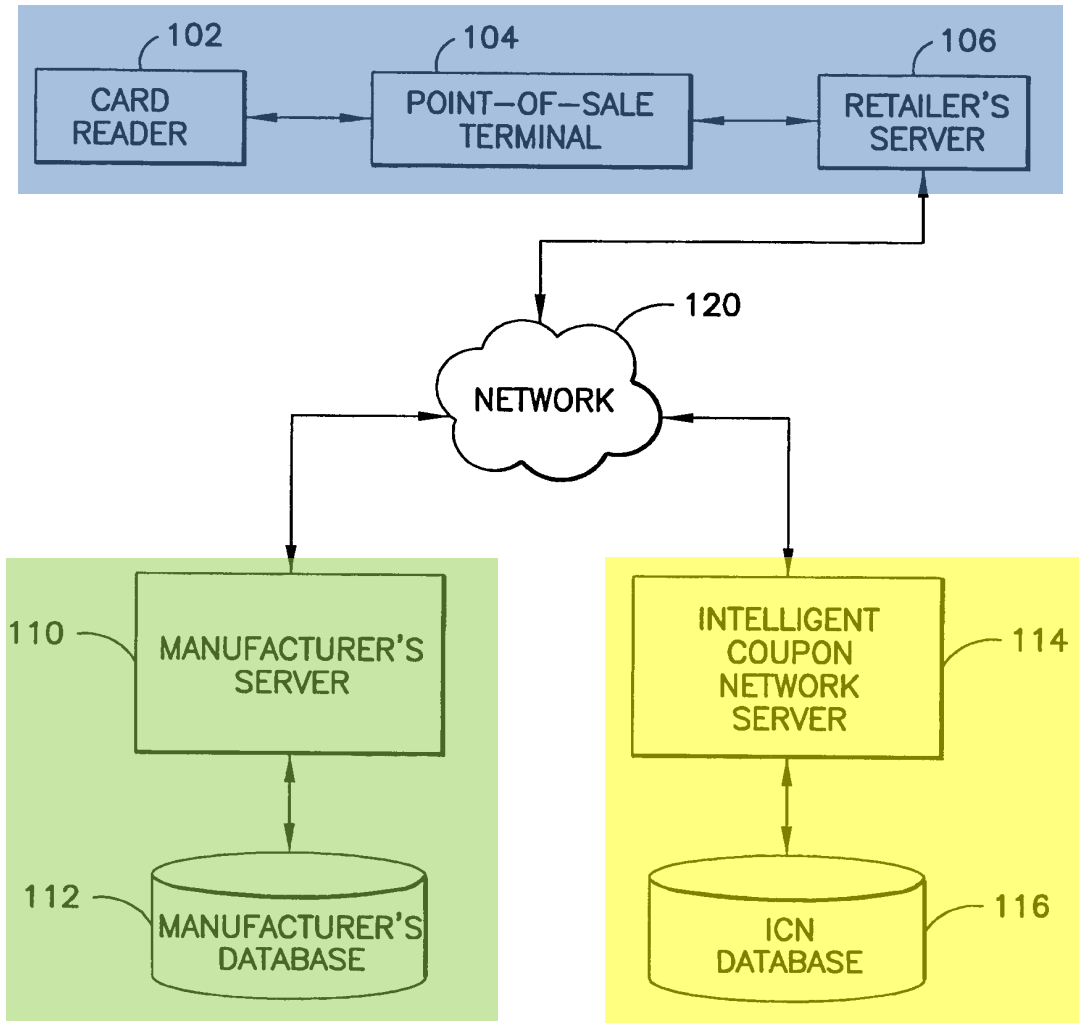
For example, distributed computing architectures, particularly the client-server model, became prevalent in the 1990s, enabling remote hosts to interact with centralized servers over a network. Ex-1003, ¶45. Distributed systems facilitated the processing of transactions across multiple locations with a distributed user base. Ex-1003, ¶45. By the early 1990s, relational database management systems (RDBMS) had become the standard for enterprise data management, particularly within banks and financial institutions. Ex-1003, ¶43. By the early 2000s, RDBMS technologies had matured, leading to the rise of distributed databases, where data could be stored and processed across multiple remote servers. Ex-1003, ¶44.

This technology was already being implemented in coupon processing systems years ahead of the priority date. Ex-1003, ¶¶49-54; Ex-1018; Ex-1019; Ex-1020; Ex-1021; Ex-1022; Ex-1023; Ex-1024.

B. Alleged Invention of the '133 Patent

The '133 patent relates to the “distribution and electronic processing of coupons and, in particular, to a network based system and method for validating and redeeming coupons.” Ex-1001, 1:5-7. The '133 patent “allows for automatic processing of coupons and provides linkage between a coupon card and coupon information stored in a centralized database.” Ex-1001, 2:60-63. The '133 patent purports to “present novel ways of bundling technologies, including existing technologies such as real time communications and large volume data processing facilities, into a functioning operational platform[.]” Ex-1001, 2:66-3:2.

The Challenged Claims are directed to a coupon processing server and a point-of-sale terminal (“POS terminal”), which operate to process coupons across a network. Figure 1 depicts the coupon processing system:



Ex-1001, FIG. 1 (highlighted). POS terminal 104 is at a retail store (blue), and Intelligent Coupon Network Server 114 (“ICN server”) is at a remote location (yellow). Ex-1001, 3:6–34. ICN server 114 is linked to ICN Database 116 that maintains customer coupon accounts. Ex-1001, 3:31–45; 4:7–61.

During a purchase transaction at a retail store, customers swipe their coupon card at the card reader 102 connected to POS terminal 104. Ex-1001, 3:20–27. POS terminal 104 sends their unique account identifiers to ICN server 114 through

retailer's server 106 and over the network 120. Ex-1001, 3:24–45; 4:15–61. ICN server 114 accesses the coupon accounts in ICN database 116 and checks for any valid coupons saved in the account. Ex-1001, 4:31–61. Valid coupons are sent to POS terminal 104, which validates whether the customer's purchase satisfies coupon requirements. Ex-1001, 4:40–61. If the customer redeems a coupon, POS terminal 104 notifies ICN server 114, and the customer's coupon account in ICN database 116 is updated to reflect that the coupon was redeemed. Ex-1001, 3:37–45; 8:50–62. POS terminal 104 can also send purchase transaction information, such as the product purchased, the time of purchase, and the location of purchase. Ex-1001, 7:10–33. Thereby, ICN server 114 can monitor the volume and traffic of redeemed coupons to identify abnormalities. Ex-1001, 10:53–61. ICN server 114 can also notify the manufacturer (green) associated with the redeemed coupon of the redemption and provide purchase transaction information. Ex-1001, 3:45–60.

C. Prosecution History

During prosecution, applicant argued that Fajkowski (US2005/0230473) is not anticipatory because it does not disclose a **remote** coupon processing server configured to communicate with a **plurality** of point-of-sale terminals for **real-time** coupon redemption. Ex-1002, 154-156. Applicant amended the claims to recite that the unique account identifier was scanned at the point-of-sale terminal at a retail

store and that the coupon processing server was **remote** from the retail store.² Ex-1002, 117-130. Then, the Examiner rejected the claims under 35 U.S.C. §101. Ex-1002, 71-72. Applicant overcame the §101 rejection by arguing that the **remote** location of the coupon processing server and its **real-time** operation improved upon prior art systems. Ex-1002, 55-56.

The Examiner allowed the claims over both the Fajkowski and §101 grounds because “the use of the **remote** location for coupon validation improves the technology by providing more efficient validation by eliminating the counting and clearing of paper for both retailers and manufacturers by clearing electronically.” Ex-1002, 20-22.

Thus, the prosecution history demonstrates that the claims of the ’133 patent were allowed only because of a **remote** coupon processing server communicating in **real-time** with a **plurality** of point-of-sale terminals. That feature was well known in the prior art in this Petition.

² The ’133 patent does not describe the claimed coupon processing server as being “remote” from the retail store, instead referring to a “centralized database.” Thus, under applicant’s reasoning, art describing a system with a centralized database or other similar language would disclose using a remote server. Ex-1003, ¶36.

D. Person of Ordinary Skill in the Art

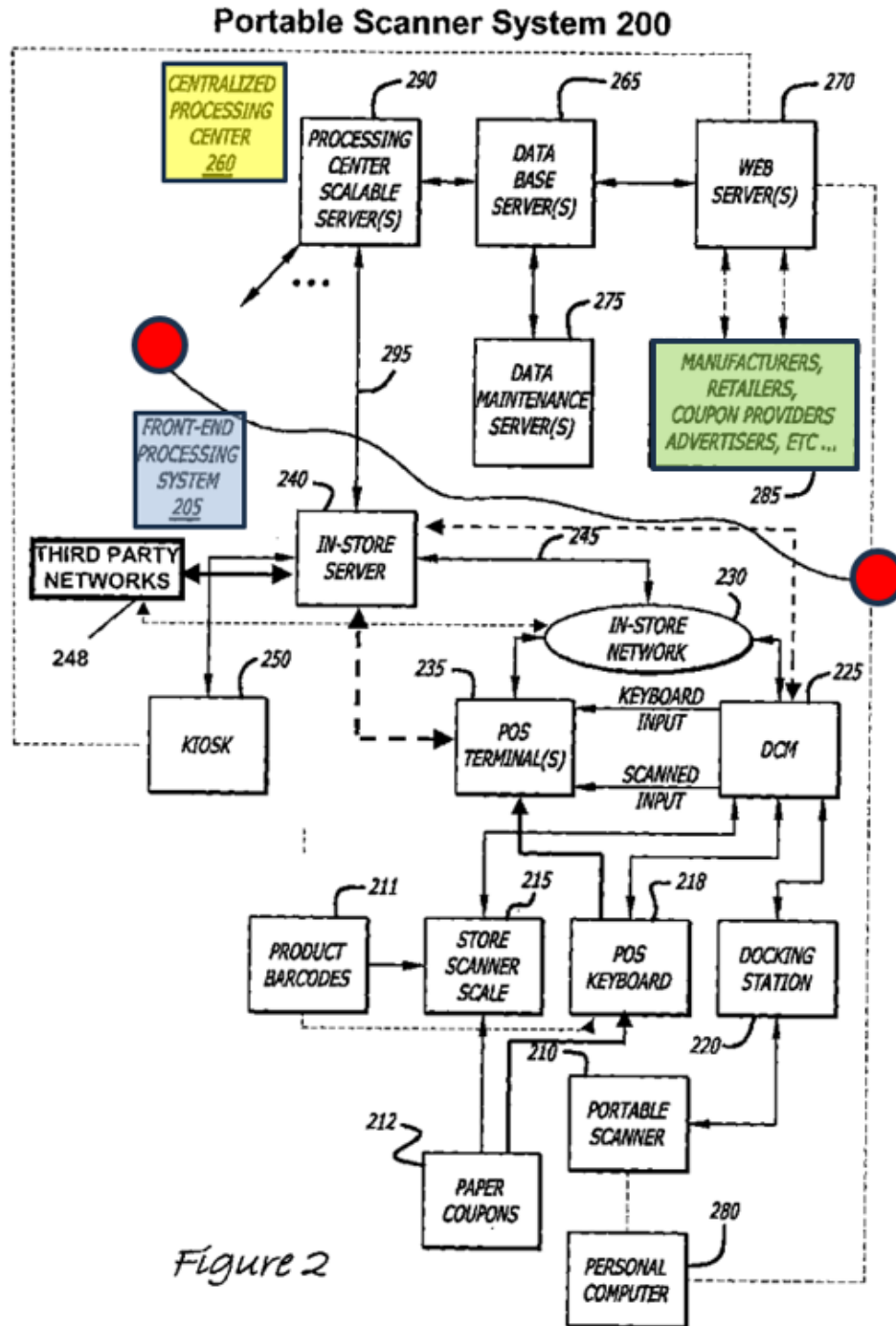
A POSITA would have had an undergraduate degree in electrical engineering, computer science, computer engineering, or similar technical field; and one to two years of experience in the analysis, design, development, and implementation of distributed applications that involve client machines communicating with remote server machines over a network to perform queries and update transactions on data stored in database management systems, with additional education substituting for less experience and vice versa. Ex-1003, ¶18.

IV. GROUNDS OF UNPATENTABILITY

A. Grounds 1 and 2: Obviousness Over Paul Alone or in Combination with Brown

1. Summary of Paul

Paul discloses using a remote server to process coupons in real-time—the very features the Examiner incorrectly found missing from the prior art. But just like the '133 patent, Paul discloses “a system and method for real-time validation and redemption of paper and electronic coupons; electronic coupon distribution; electronic clearing and reporting of paper and electronic coupon redemptions; and an ‘Universal Club Card’[.]” Ex-1004, Abstract. Figure 2 depicts Paul’s coupon processing system:



Ex-1004, ¶13, FIG. 2 (highlighted). The system comprises a front-end processing system 205 (blue) that is “deployed within a store” and “adapted for communication with a centralized processing center 260” (yellow) that is “physically located away

from the store.” Ex-1004, ¶¶32-34. The wavy line (between the red dots) reflects that centralized processing center 260 and its constituent servers (290, 265, 275) above the line are located away from the front-end processing system 205. Although physically located away from each other, the front-end processing system 205 and centralized processing center 260 communicate over a network 295 to perform real-time validation and redemption of coupons. Ex-1004, ¶¶93, 41.

The front-end processing system 205 comprises POS terminals 235 connected to a scanner/scale 215 and an in-store server 240 that communicates with POS terminals 235 and central server 290. Ex-1004, ¶¶33, 36, 41, 93, FIG. 2.

The centralized processing center 260 comprises central server 290 that communicates with at least one database server (“DBS”) 265 and in-store server 240. Ex-1004, ¶35. DBS 265 stores customer files/accounts including “all coupon offers, customer information and transaction data” at a centralized site. Ex-1004, ¶57. The customer files/accounts are organized by a unique ID number assigned to each customer. Ex-1004, ¶¶43, 63, 115.

During a purchase transaction at POS terminal 235, the customer provides a unique ID number, such as by swiping a card at the scanner 215. Ex-1004, ¶¶43, 63, 86, 115, 117. Then, central server 290 identifies the customer based on the unique ID number and accesses the customer files/account within DBS 265 at the centralized processing center 260. Ex-1004, ¶¶ 57, 86, 117. Central server 290

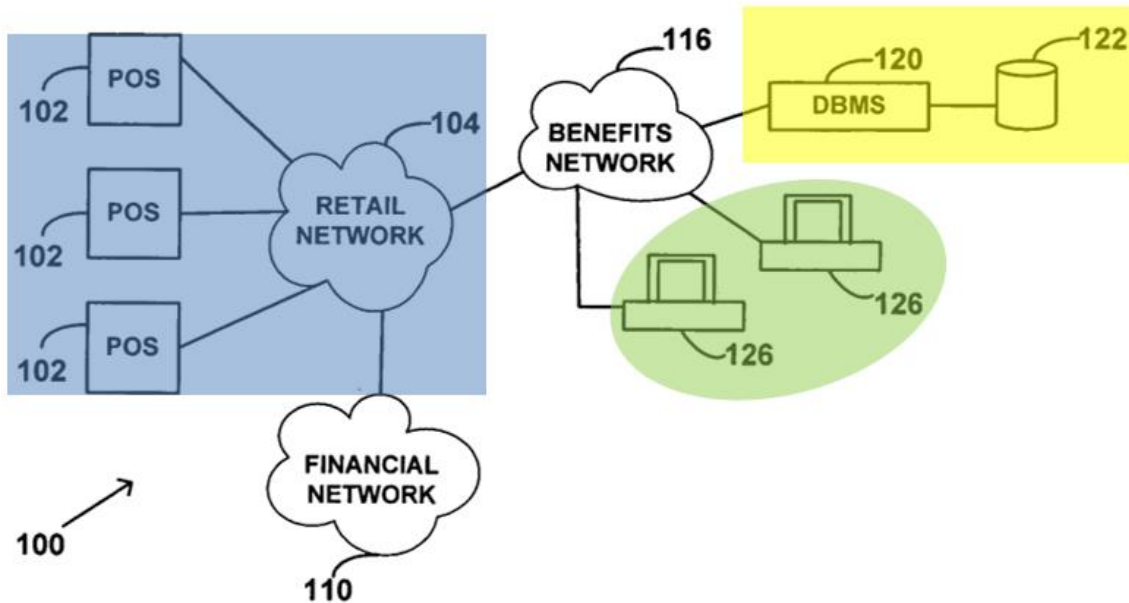
retrieves the available coupons saved in the customer account and transmits them to POS terminal 235. Ex-1004, ¶¶59, 71, 82, 86. After the customer redeems a coupon at POS terminal 235, detailed coupon redemption data is sent to central server 290 in real-time, and the customer files/account in DBS 265 are updated to reflect that the coupon was redeemed. Ex-1004, ¶¶80, 91, 107, 121, 131-32. Coupon redemption activity can be monitored to enforce redemption limits. Ex-1004, ¶81. Central server 290 can also generate reports with coupon redemption data for each manufacturer (green). Ex-1004, ¶¶69, 111-14.

While Paul's system contemplates that coupons can be stored locally on portable scanner 210, that is not required, and customers can be identified and access their coupons stored in the remote database without it. Ex-1004, ¶¶82 (noting customer can be identified through other means like swiping a loyalty card), 86 (same).

2. Summary of Brown

Like the '133 patent, Brown discloses a “system and method for the purchase of products, wherein a database account is credited with virtual coupons.” Ex-1005, Abstract. The “system includes a database for storing credits to the account, the credits representing virtual coupons.” Ex-1005, ¶6. When a “product is purchased, the associated coupon is debited from the account.” Ex-1005, ¶6. Figure 1 provides

a “diagram showing a system for facilitating the redemption of coupon units.” Ex-1005, ¶9.



Ex-1004, FIG. 1 (highlighted). The system 100 includes a plurality of point-of-sale (“POS”) terminals 102 located at retail establishments that are connected to a database management system or server (“DBMS”) 120 (yellow) through the retail network 104 and benefits network 116. Ex-1005, ¶15, 18, 35. POS terminals 102 and retail network 104 (blue) are “geographically distributed” (i.e., remote) from benefits network 116 and DBMS 120. Ex-1005, ¶22.

Customers are given benefits cards with account numbers to identify themselves at POS terminals 102. Ex-1005, ¶¶18, 24, 27. During a purchase, customers provide their benefits cards, and POS terminal 102 sends their account numbers to benefits network 116 through retail network 104. Ex-1005, ¶19.

Although Brown contemplates that product information can be transmitted to DBMS 120 with the account numbers, the “benefits information [could be] read (and displayed at screen 310) before any product information is entered at the POS terminal.” Ex-1005, ¶41.

DBMS 120 manages a database 122 of customer benefit accounts storing their virtual coupons. Ex-1005, ¶¶18, 35. DBMS 120 uses database 122 to confirm that the account is active and determines whether there are any valid coupons in the account. Ex-1005, ¶¶28, 39. If the account is active and has at least one valid coupon, the customers is informed of the valid coupon at POS terminal 102 and given the option to redeem the coupon on eligible products. Ex-1005, ¶¶28-29, 40. If the customer redeems the valid coupon, “the account is debited (the applicable coupons are redeemed).” Ex-1005, ¶¶28-29, 40. Database 122 would be updated to reflect that the coupon was redeemed. Ex-1005, ¶¶35, 37.

The government benefit program administrator (green) can receive useful information about the coupons redeemed during purchases that helps with “determining the coupon use habits of participants[.]” Ex-1005, ¶¶32-34.

While the virtual coupons in Brown are issued by the government, they could just as easily be issued by a manufacturer. Ex-1003, ¶72. In both scenarios, customers are making purchases at retail stores using the virtual coupons available in their accounts maintained in a remote centralized database. In fact, the ’133 patent

notes the similarities between the alleged invention and “Electronic Benefit Transactions (EBT)”, which are government benefit programs like in Brown. Ex-1001, 7:4-9.

3. Motivation to Combine Paul and Brown

A POSITA would have been motivated to combine Paul and Brown, and would have had a reasonable expectation of success in doing so. Ex-1003, ¶79.

Paul and Brown are extraordinarily similar. Fundamentally, they disclose the same system—a **remote** coupon processing system that operates in **real-time** to provide customers with digital coupons stored in their accounts for use at a **plurality of point-of-sale terminals** located at retail stores. Ex-1003, ¶80. The emphasized features were the only allegedly novel aspects of the ’133 patent discussed by the Examiner during prosecution. Ex-1003, ¶80. But these features were well-known in the art before the ’133 patent, including in Paul and Brown. Ex-1003, ¶80. In fact, Paul renders obvious all claims in view of the knowledge and common sense of a POSITA. Ex-1003, ¶80. Alternatively, the combination of Paul and Brown renders all claims obvious. Ex-1003, ¶80. In other words, anything missing from Paul can be found in the art, in Brown, or by common sense. Ex-1003, ¶80.

The only difference of any significance between Paul and Brown is that the coupons in Paul are issued by a manufacturer/retailer, while the coupons in Brown are issued as part of a government benefits program. Ex-1003, ¶81. A POSITA

would have viewed that difference as immaterial—even the ’133 patent discloses that EBT systems (government benefits programs) are similar in operation to the alleged invention. Ex-1001, 7:4–9; Ex-1003, ¶81. Regardless of the source of the coupons, the systems work the same way and accomplish the same goal—allowing customers to purchase products using coupons stored in their accounts at a centralized database. Ex-1003, ¶81.

Any minor differences between Paul and Brown immaterial and come down to word choice or the depth of disclosure in the specification. Ex-1003, ¶82. A POSITA would have viewed them as design choices or inherent aspects to a coupon processing system to operate as intended requiring no explicit disclosure. Ex-1003, ¶82. These differences have nothing to do with the allegedly novel aspects of the ’133 patent—they were well-known in the art and would have been obvious improvements (if an improvement at all) over each reference. Ex-1003, ¶82.

A POSITA looking to implement the coupon processing system in Paul or Brown would have looked at other similar systems to enhance the system, even if in only minor ways. Ex-1003, ¶83. These enhancements could relate to the structure of the system (the number and location of computing devices), its operation (the specific actions to perform and which computing devices should perform them), its ease of use (sending relevant information and informative messages), and its ability to address known issues in coupon processing (improper coupon redemptions and

fraud). Ex-1003, ¶83. Some of the minor potential differences between Paul and Brown that a POSITA would have appreciated and offer a motivation to combine include (Ex-1003, ¶83):

- Using a single coupon processing server for all operations per Brown.

A POSITA would have found that potentially advantageous because using a single device would be more cost effective and require less maintenance, and thus been motivated to use that aspect of Brown in the combined system. A POSITA would have expected success because it was well-known and easy to implement a server that performs multiple operations. Also, the use of a single or multiple servers is a design choice.

- Updating a database of accounts upon receiving an indication of at least one redeemed coupon per Brown. A POSITA would have found it advantageous to update the database after a coupon is redeemed to prevent a customer from redeeming a coupon more than once, and thus been motivated to use that aspect of Brown in the combined system. Also, updating a database upon receiving information about coupon redemption is inherently an aspect of coupon processing, and a POSITA would have found it necessary for the system to operate as intended. A POSITA would have expected success because updating a database is a simple step easily implemented with existing software.

- A unique account identifier that is “scanned” at the point-of-sale terminal per Brown. A POSITA would have found it advantageous to put the unique account identifiers on customer coupon cards that could be scanned using scanning equipment that was already at checkout in retail stores (barcode readers/credit card swipe machines), and thus been motivated to include that aspect of Brown in the combined system. Paul discloses using a coupon card that can be scanned, but also discloses using a portable device that requires a docking station not traditionally at checkout. Assuming Paul does not disclose using a coupon card, a POSITA would have been motivated to use the coupon card in Brown to avoid needing new equipment. A POSITA would have expected success because many systems already operated using scanned cards (credit cards, loyalty cards, coupon barcodes).

- Sending a “no coupons available” message per Brown. A POSITA would have found it advantageous to send such a message because it would communicate that the system was operational and not leave the customer/retail store wondering whether the system was down, and thus been motivated to include that aspect of Brown in the combined system. Further, sending such a message is the use of a known technique (sending messages that data is unavailable) to improve a system (coupon processing) in the same way to yield predictable results (a more informative system without unnecessary troubleshooting/downtime). Also, sending an indication that requested data is not available is an inherent aspect of any

transaction processing system involving querying databases, and a POSITA would have found it necessary for the system to operate as intended. A POSITA would have expected success because sending updates about data availability was easily implemented in systems operating across networks.

- Determining whether a coupon is valid (by checking whether it is expired, previously redeemed, or other metrics) before sending it to the point-of-sale terminal per Brown. A POSITA would have found it advantageous to only send valid coupons to reduce message sizes sent over the network to the point-of-sale terminal to conserve bandwidth. Also, it would reduce the processing required at the point-of-sale terminal, which is often a less sophisticated and slower device than a central server. Further, sending coupons that are invalid (expired, already redeemed, or otherwise) could lead to improper redemptions, which are expensive to manufacturers and retailers. Thus, a POSITA would have been motivated to implement this aspect of Brown in the combined system. A POSITA would have expected success because making a determination about coupon validity was a known operation that could have been implemented at any stage of coupon processing.

For at least these reasons, a POSITA would have been motivated to combine Paul and Brown to achieve the claimed invention and had a reasonable expectation of success. Ex-1003, ¶84. Any changes to the existing systems would be

straightforward, requiring only minor modifications, and could be implemented using routine knowledge and simple/trivial software modifications to the already existing software. Ex-1003, ¶84. In sum, a POSITA would have been motivated to combine Paul and Brown to arrive at a combination that discloses all recited limitations and renders obvious all Challenged Claims. Ex-1003, ¶84.

4. Detailed Analysis of Grounds 1 and 2

As supported by the Mowry Declaration (Ex-1003), Paul renders obvious the Challenged Claims (**Ground 1**). Alternatively, the combination of Paul and Brown renders obvious the Challenged Claims (**Ground 2**).

a) Independent Claim 1

(1) [1.pre]

(a) Ground 1

If the preamble is limiting, Paul discloses, or least renders obvious, [1.pre]. Ex-1003, ¶¶86-90.

Paul discloses a “coupon processing system [that] is scalable and capable of processing large volumes of data.” Ex-1004, ¶112.

Paul’s system offers “real-time validation and redemption of paper and electronic coupons [across a network].” Ex-1004, Abstract, ¶¶33, 41, 69, 73.

Paul’s system is implemented by processors running software (i.e., instructions executable by a processor) stored in a computer-readable medium. Ex-

1004, ¶¶26 (“The software can be stored in any type of machine readable medium and executed by a processing unit.”), 57, 83.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this limitation. Ex-1003, ¶¶91-95.

Brown discloses “a system for facilitating the redemption of coupon units” “where items may be purchased by redemption of virtual or electronic coupons maintained in an account.” Ex-1005, ¶9, 42. The “benefits network 116 [processes] information entered at the POS terminals 102 that pertains to the redemption of electronic or virtual coupons maintained in a benefits account.” Ex-1005, ¶18.

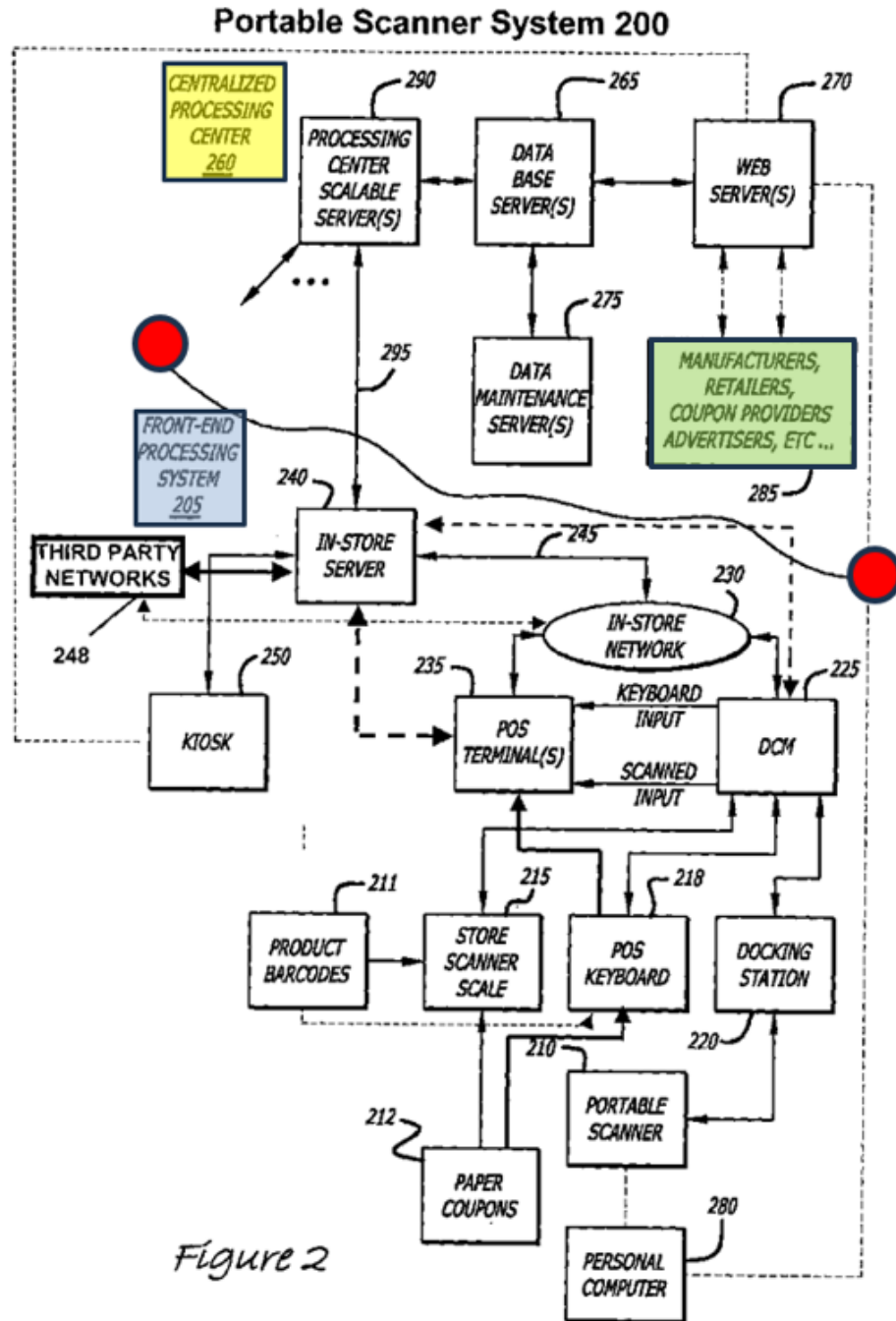
Brown discloses that coupon processing “could be carried out by application programs within the system 100.” Ex-1005, ¶41. Brown also discloses that the “functionality implementing the [invention] is largely data and applications resident at the POS terminals 102, and at the DBMS 120, depending on the configuration of the various devices with the system 100.” Ex-1005, ¶38. Brown also discloses that “DBMS 120 and database 122 may include any one of numerous forms of storage devices and storage media[.]” Ex-1005, ¶19.

(2) [1.1]

(a) Ground 1

Paul discloses, or at least renders obvious, [1.1]. Ex-1003, ¶¶96-103.

Paul discloses a “front-end processing system 205 deployed within a store and adapted for communication with a centralized processing center 260.” Ex-1004, ¶32.



Ex-1004, FIG. 2 (highlighted).

The “centralized processing center 260 comprises central server (CSS) 290 that communicates with at least one database server 265 (‘DBS’) and in-store server 240.” Ex-1004, ¶¶35, 69. A POSITA would have understood that the centralized processing center 260, central server (CSS) 290, and/or DBS 265 operate as the recited “coupon processing server.” Ex-1003, ¶98.

The front-end processing system 205 is “situated at a store” and comprises “one or more POS terminals 235” and an “in-store server 240 that communicates directly or indirectly with [the] POS terminal 235[.]” Ex-1004, ¶33.

Customers are assigned unique ID numbers (i.e., unique account identifiers) to identify themselves at POS terminal 235 while making purchases at a retail store. Ex-1004, ¶¶43, 115. After a customer provides a unique ID number during checkout at the retail store, POS terminal 235 sends it to the centralized processing center 260 and “central server 290 [] identifies the customer through the unique ID number.” Ex-1004, ¶79, 82, 117.

The POS terminal 235 and central server 290 communicate over a network via the in-store server 240. Ex-1004, ¶¶33, 41, 69 (“[C]entral server 290 features a two-way communication link with in-store server 240[.]”), 73 (“[A] communication link “may be through [] a private network.”).

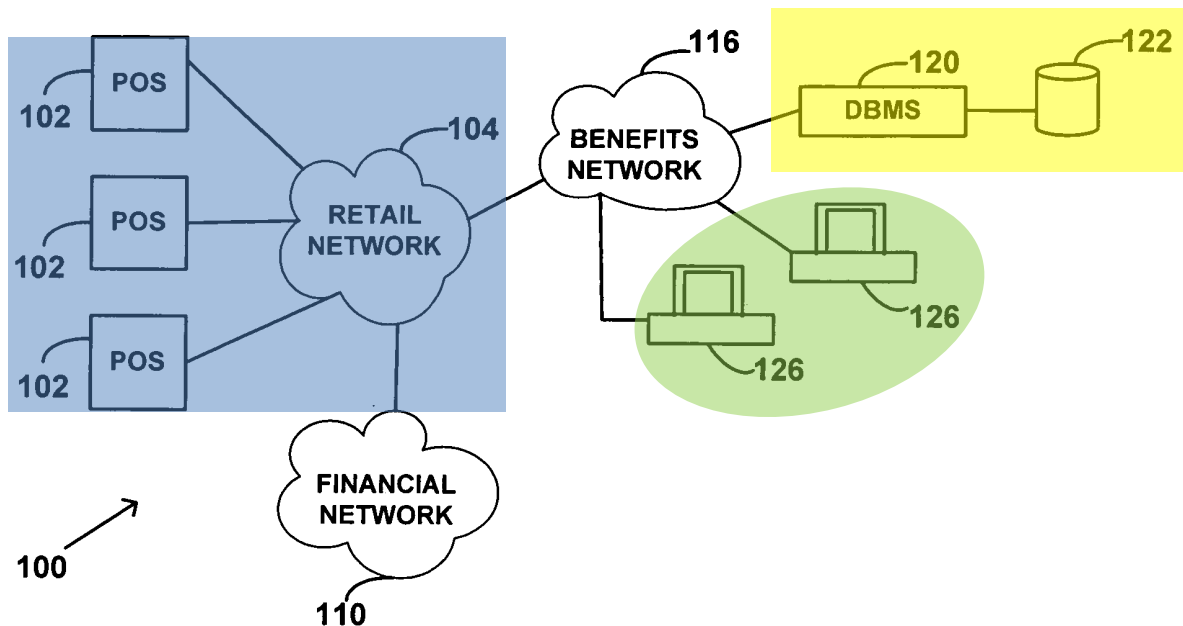
Thus, a POSITA would have understood that Paul discloses a coupon processing server (centralized processing center 260, central server (CSS) 290,

and/or DBS 265) that receives a unique account identifier (unique ID number) from a point-of sale-terminal (POS terminal 235) during checkout over a network (link 295) as recited in limitation. Ex-1003, ¶103.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this limitation. Ex-1003, ¶¶104-110.

Brown's Figure 1 portrays how POS terminals 102 are connected to DBMS 120 via the retail network 104 and benefits network 116:



Ex-1005, FIG 1. Customers use a benefit card with an account number to identify themselves at a POS terminal 102 when making a purchase at a retail store. Ex-1005, ¶¶16, 18, 24, 27. The benefit card account number read at a POS terminal 102

during checkout is transmitted to the DBMS 120 via a network. Ex-1005, ¶¶16, 19, 28, 39.

Thus, a POSITA would have understood that Brown discloses a coupon processing server (DBMS 120) that receives a unique account identifier (benefit card account number) from a point-of sale-terminal (POS terminal 102) during checkout over a network (104/116) as recited in limitation. Ex-1003, ¶¶109-110.

(3) [1.2]

(a) Ground 1

Paul discloses, or at least renders obvious, [1.2]. Ex-1003, ¶¶111-113.

Paul discloses that the front-end processing system 205 has “one or more POS terminals 235.” Ex-1004, ¶33. The “one or more POS terminals 235” are the plurality of point-of-sale terminals recited in this limitation. [1.1]³; Ex-1003, ¶¶112-113.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this limitation. Ex-1003, ¶¶114-117.

³ All references to other limitations/claims throughout this Petition should be understood to incorporate by reference all evidence/arguments provided for the referenced limitation/claim. Unless specified otherwise, such references are for the same Ground.

Brown discloses “a plurality of point-of-sale (POS) terminals 102” in communication with DBMS 120. Ex-1005, ¶15, FIG. 1. Thus, DBMS 120 (coupon processing server) is configured to communicate with a “plurality of POS terminals 102” as recited in this limitation. [1.1]; Ex-1003, ¶¶116-117.

(4) [1.3]

(a) Ground 1

Paul discloses, or at least renders obvious, [1.3]. Ex-1003, ¶¶118-126.

Paul’s front-end processing system 205 is “situated at a store” and comprises “one or more POS terminals 235.” Ex-1004, ¶33.

Customers provide their unique ID numbers at the POS terminal 235 via means including, but not limited to, swiping a loyalty card, magnetic media, or a barcode on a plastic card issued to the customer. Ex-1004, ¶¶82, 86, 117, 127, 129. Paul’s portable scanning device is not required for a customer to access their coupon account, and in any event scanning a card with the customers unique ID number would have been obvious and easy to implement. Ex-1003, ¶¶126.

Paul describes scanning as “involve[ing] detection and identification of data objects [such as] a barcode [that] may be used to identify a . . . customer.” Ex-1004, ¶29.

Thus, a POSITA would have understood that the unique ID number (unique account identifier) read via a barcode was “scanned” at a POS terminal 235 (point-

of-sale terminal) at a store (retail store) as recited in this limitation. [1.1]; Ex-1003, ¶¶122-125.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this limitation. Ex-1003, ¶¶127-130.

Brown discloses that the “POS terminals 102 may be located at one (or more) retail establishments (e.g., grocery stores).” Ex-1005, ¶15. The benefit card can encode the benefit card account number as a bar code, and the POS terminal 102 has an optical bar code reader. Ex-1005, ¶¶16, 26. The benefit card account number is “read from the [benefit] card at the POS terminal 102.” Ex-1005, ¶¶28, 23-24.

A POSITA would have understood that the benefit card account number (unique account identifier) was scanned at the POS terminal 102 (point-of-sale terminal) at a retail establishments (retail store) as recited in this limitation. [1.1]; Ex-1003, ¶¶129-130.

(5) [1.4]

(a) Ground 1

Paul discloses, or at least renders obvious, [1.4]. Ex-1003, ¶¶131-134.

Paul discloses that the centralized processing center 260 is “physically located away from the store” and that “DBS 265 is located at a centralized site.” Ex-1004, ¶¶34-35, 57, 112.

Thus, a POSITA would have understood that the coupon processing server (260/290/265) is remote from the retail store as recited in this limitation. [1.2]; [1.3]; Ex-1003, ¶¶133-134.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this limitation. Ex-1003, ¶¶135-138.

Brown discloses that “while the POS terminals 102, DBMS 120 and database 122 are illustrated as separate devices or systems ***geographically distributed*** across various networks, they (and their functionality) could all be co-located at a single location[.]” Ex-1005, ¶22 (emphasis added).

Thus, a POSITA would have understood that DBMS 120 (coupon processing server) is geographically distributed (i.e., located remotely) from the retail stores (where the POS terminals 102 are located) as recited in this limitation. [1.2]; [1.3]; Ex-1003, ¶¶137-138.

(6) [1.5]

(a) Ground 1

Paul discloses, or at least renders obvious, [1.5]. Ex-1003, ¶¶139-148.

Paul discloses a “coupon processing system [that] stores [coupons] within a database associated with the customer. The stored contents of the database are accessible by a POS system at the retailer.” Ex-1004, ¶25. Specifically, “central

server 290 possesses a detailed database and is capable of processing large volumes of data.” Ex-1004, ¶69. Also, “[a]ll coupon offers, customer information and transaction data are stored back at the centralized site on database server (DBS) 265.” Ex-1004, ¶57. A POSITA would have understood that the database of accounts could be stored within the server itself or across multiple devices. Ex-1003, ¶143; Ex-1001, 3:39-41 (“Associated with the server may be a centralized database 116 that is incorporated within the server or may be a stand alone device or storage system.”).

The ‘133 patent discloses in reference to valid coupons that a “determination may be made as to whether there are **active** coupons **available** on the coupon card 918” and that “**available** coupon codes [can be sent] to the POS terminal[.]” Ex-1001, 9:16-17, 6:29-33 (emphasis added for all); Ex. 1003, ¶144.

Paul discloses that software stored at central server CSS 290 can determine whether coupons are valid. Ex-1004, ¶83; Ex. 1003, ¶145.

Paul further discloses that once a customer has provided identification information, the central server 290 will identify the customer and access customer files. Ex-1004, ¶129. After identifying the customer, software will access the customer’s account to identify **applicable** coupons saved in their account within DBS 265. Ex-1004, ¶86. Paul further discloses that “coupon barcodes [can be retrieved] from a storage location on a server associated with a customer . . . that

have been ***non-redeemed*** to date.” Ex-1004, Claim 4 (emphasis added). A POSITA would have understood that ***applicable*** coupons saved in a customer’s account that are ***non-redeemed*** would be considered active and available (i.e., valid) as contemplated by the ’133 patent and recited in this limitation. Ex-1003, ¶145.

Paul also discloses that “POS system may receive validated CBCs from [] central server 290 for further processing.” Ex-1004, ¶59; Ex-1003, ¶145.

Thus, a POSITA would have understood that a coupon processing server (central server 290 and/or DBS 265) determines whether a valid coupon (applicable and non-redeemed) is associated with a unique ID number (unique account identifier) in customer files in central server 290 and/or DBS 265 (containing a database of accounts) after identifying a customer (receiving the unique account identifier) as recited in this limitation. [1.1]; [8]; Ex-1003, ¶147.

To the extent that Paul does not explicitly disclose this limitation, it would have been obvious to check whether there is a valid coupon before sending any coupons to the point-of-sale terminal to avoid improper coupon redemptions, and it would have been easily implemented by a POSITA. Ex-1003, ¶148.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this limitation. Ex-1003, ¶¶149-154.

Brown discloses that DBMS 120 “manages an associated data store or database 122.” Ex-1005, ¶19. As shown in Figure 4, “database table 410 within the database 122 . . . is relational, i.e., relating [the virtual coupons in the account] to each participant account (identified by account number or ID).” Ex-1005, ¶35, FIG. 4. After receiving a unique account identifier, DBMS 120 uses database 122 to “confirm that the account is present and active [] by comparing the account number against account numbers or IDs in table 410, and may determine whether there are currently valid coupons in the account[.]” Ex-1005, ¶¶39, 28.

Thus, a POSITA would have understood that DBMS 120 (coupon processing server) determines whether database 122 with database table 410 (database of accounts) has any valid coupons associated with an account number or ID (unique account identifier) after receiving it as recited in this limitation. [1.1]; [8]; Ex-1003, ¶¶153-154.

(7) [1.6]

(a) Ground 1

Paul discloses, or at least renders obvious, [1.6]. Ex-1003, ¶¶155-160.

The '133 patent states that “active coupon codes [] assigned to the card may be transmitted back to the POS for validation against purchases 922 as part of a message package.” Ex-1001, 9:19-24 (emphasis added), 6:13-24, 7:54-58. Thus, a

POSITA would have understood the claimed “indication” to be a message package or network message. Ex-1003, ¶158.

Paul discloses that in response to determining that a valid coupon is associated with a customer account in DBS 265, the “software will retrieve CBCs [i.e., coupon barcodes] saved in customer account within . . . DBS 265 and transmit the barcodes to . . . POS terminal.” Ex-1004, ¶86. Also, the POS terminal 235 may receive validated CBCs from central server 290. Ex-1004, ¶¶59, 71. These coupons are sent as network messages. Ex-1003, ¶159. Paul further discloses that, at checkout, “software will access the customer’s account for applicable coupons saved in their account . . . [and] the customer will receive these targeted coupon offers.” Ex-1004, ¶82. A POSITA would have understood that the targeted coupon offers (valid coupons) would be sent in the message packet (i.e., indication). Ex-1003, ¶159.

Thus, a POSITA would have understood that in response to determining there is a valid coupon in a customer account, central server 290 and/or DBS 265 (coupon processing server) transmits CBCs/targeted coupon offers (valid coupons) to POS terminal 235 in a message (the claimed indication) over a network. Ex-1003, ¶160.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this limitation. Ex-1003, ¶¶161-168.

Brown discloses that after DBMS 120 identifies the valid coupons in the customer's account, the "customer is then informed at the POS terminal 102 whether specific products are eligible for purchase using the [virtual coupons in their benefit] account. Ex-1005, ¶28. Brown's Figure 3 illustrates "a screen 310 that could be displayed at one of the POS terminals 102" informing the customer of eligible products for purchase with the valid coupon. Ex-1005, ¶¶29, 40.

A POSITA would have understood that DBMS 120 (coupon processing server) sends the POS terminal 102 valid coupons in a message (i.e., indication) as recited in this limitation. Ex-1003, ¶¶167-168. Further, the message (indication) must include the valid coupon so that the customer can be informed at the POS terminal 102 about the valid coupon and choose to redeem it for eligible products. Ex-1003, ¶¶167-168.

(8) [1.7]

(a) Ground 1

Paul discloses, or at least renders obvious, [1.7]. Ex-1003, ¶¶169-172.

Paul discloses that "actual [coupon] redemption activity" originates with the POS terminal 235 after validation of the coupon and completion of a customer purchase transaction. Ex-1004, ¶91. Software then generates "a detailed 'proof of purchase' for every coupon redemption transaction" and then "transmit[s] coupon redemption data along with 'proof of purchase' to central server 290 either in real

time or on a periodic basis.” Ex-1004, ¶107. That coupon redemption data and/or detailed proof of purchase qualifies as the recited indication to a POSITA. Ex-1003, ¶¶170-171.

Thus, a POSITA would have understood that central server 290 and/or DBS 265 (coupon processing server) receive coupon redemption data and/or proof of purchase (indication of at least one redeemed coupon) from the POS terminal 235 as recited in this limitation. Ex-1003, ¶172.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this limitation. Ex-1003, ¶¶173-178.

Brown discloses that a customer can redeem a virtual coupon at a POS terminal 102 during a purchase transaction. Ex-1005, ¶¶16, 28-29, 40. The “POS terminals may be operated by a retail clerk when products to be purchased are presented by a customer at a checkout line[.]” Ex-1005, ¶16. After receiving the valid coupons, there is a determination as to whether any of the products are eligible (i.e., whether the coupon should be validated at the POS terminal 102). Ex-1005, ¶39. After the customer is informed of the eligible products for the valid coupons in their account, the customer can decide whether to complete the purchase and pay for the eligible products “using the benefits account (i.e., debiting purchases against the virtual coupons maintained in the account).” Ex-1005, ¶¶28, 40. If the customer

completes the purchase transaction using the valid coupon which has been validated, “the account is debited (the applicable coupons are redeemed).” Ex-1005, ¶¶28, 40. “[D]ata related to the [purchase] transaction can also be stored in [database 122] in relation to redeemed coupons (date of purchase, other food products being purchased at the same time, the extent of discounts that participants are obtaining, etc.).” Ex-1005, ¶34, 32. A POSITA would have understood that for coupon redemption data to be stored in database 122, it must be transmitted via a message package (i.e., indication) from POS terminal 102 to DBMS 120, which “manages [] database 122.” Ex-1005, ¶19; Ex-1003, ¶¶175-177.

As another example of DBMS 120 receiving an indication of at least one redeemed coupon from POS terminal 102, Brown Claim 10 covers “a database management system [DBMS 120] for managing the database [122] and receiving data from the terminals [102]” where the “database system [DBMS 120] debits a virtual coupon from the account upon purchase of a specified product[.]” Ex-1005, Claim 10. In other words, DBMS 120 receives data (message packages or indications) from the POS terminals 102 upon a customer’s purchase of a specified product indicating that a coupon was redeemed so that DBMS 120 can debit the virtual coupon from the customer’s account. Ex-1003, ¶¶176-177.

Thus, a POSITA would have understood that when the “account is debited” and “applicable coupons are redeemed” during a purchase at a POS terminal 102,

DBMS 120 (coupon processing server) would receive a message package indicating that the coupon was redeemed (indication of at least one redeemed coupon) from POS terminal 102 as recited in this limitation. Ex-1003, ¶¶177-178.

(9) [1.7.a]

(a) Ground 1

Paul discloses, or at least renders obvious, [1.7.a]. Ex-1003, ¶¶179-185.

Paul discloses that customer files/accounts stored in databases in central server 290 can be updated to reflect account activity, such as redeeming a coupon. Ex-1004, ¶91 (“[S]oftware will update customer files in . . . central server 290 for actual redemption data and proof of purchase[.]”). Central server can access each customer’s account and update it based on account activity, including the status of redeemed and unused coupons. Ex-1004, ¶¶80, 131. Paul also discloses that DBS 265 can receive customer account activity and update customer files in its database. Ex-1004, ¶¶121, 132.

Thus, a POSITA would have understood that the database of accounts (described in [1.5] above) is updated in response to receiving an indication of at least one redeemed coupon (described in [1.7] above) as recited in this limitation. Ex-1003, ¶¶182-184. If not explicitly disclosed, it would have been obvious to do so using a routine software implementation for the system to operate as intended. Ex-1003, ¶185.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this limitation. Ex-1003, ¶¶186-191.

Brown discloses that database table 410 (within the database 122) “may be updated as needed.” Ex-1005, ¶¶35, 37. Database table 410 in database 122 links the customer’s benefits account number with available virtual coupons in the account. Ex-1005, ¶¶28, 35. A POSITA would have understood that redeeming a coupon goes hand in hand with updating the database of accounts (described in [1.5] above), and that the account information in database 122 must be updated to reflect that the coupon was redeemed and no longer available for the customer to redeem upon receiving an indication of at least one redeemed coupon (described in [1.7] above). Ex-1003, ¶¶189-191.

(10) [1.7.b]

(a) Ground 1

Paul discloses, or at least renders obvious, [1.7.b]. Ex-1003, ¶¶192-197.

Paul discloses that after a purchase where a coupon is redeemed, central server 290 can provide a “complete electronic proof of purchase” comprising detailed information about the purchase. Ex-1004, ¶70. Paul also discloses that central server 290 can generate redemption reports and/or settlement reports for each manufacturer and/or coupon provider. Ex-1004, ¶69, 111-14.

A POSITA would have understood that Paul's redemption reports and/or settlement reports are in a message package indicating that a coupon was redeemed during a purchase (indication that the at least one redeemed coupon was redeemed against a purchased transaction) that is transmitted to the manufacturer associated with the redeemed coupon as recited in this limitation. Ex-1003, ¶¶196-197. A POSITA would have further understood that the redeemed coupon is the valid coupon because Paul discloses that only valid coupons are sent to the POS terminal 235 to be redeemed. Ex-1003, ¶196.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this limitation. Ex-1003, ¶¶198-202.

Brown discloses that “data [about coupons redeemed during purchases] can also be used for many purposes useful to the program administrator and its participants, such as determining the coupon use habits of participants, encouraging participants to take advantage of discounts by permitting the discount (or a portion thereof) to be credited to the participant to use for other (eligible or non-eligible) product purchases, etc.” Ex-1005, ¶¶32-34. This useful data is transmitted from DBMS to the administrative staff at workstation terminals 126. Ex-1005, ¶19; Ex-1003, ¶200. A POSITA would have understood that the data about coupons redeemed during purchases is an indication that the at least one redeemed coupon

was redeemed against a purchased transaction as recited in this limitation. Ex-1003, ¶200. A POSITA would have further understood that the redeemed coupon is the valid coupon because Brown discloses that only valid coupons are sent to the POS terminal 235 to be redeemed. Ex-1003, ¶201.

Although Brown does not explicitly disclose transmitting anything to a manufacturer, a POSITA would have found it obvious to do so. Ex-1003, ¶¶200-201. A POSITA would have been motivated to send data about the redemption of a valid coupon to a manufacturer because, as for the program administrator in Brown, the data would be useful for a manufacturer of the products purchased using the coupon in order to track customer purchasing habits and adjust marketing practices. Ex-1003, ¶201. A POSITA would have had a reasonable expectation of success because sending data to manufacturers would be accomplished in the same way as sending it to benefit administrators. Ex-1003, ¶201.

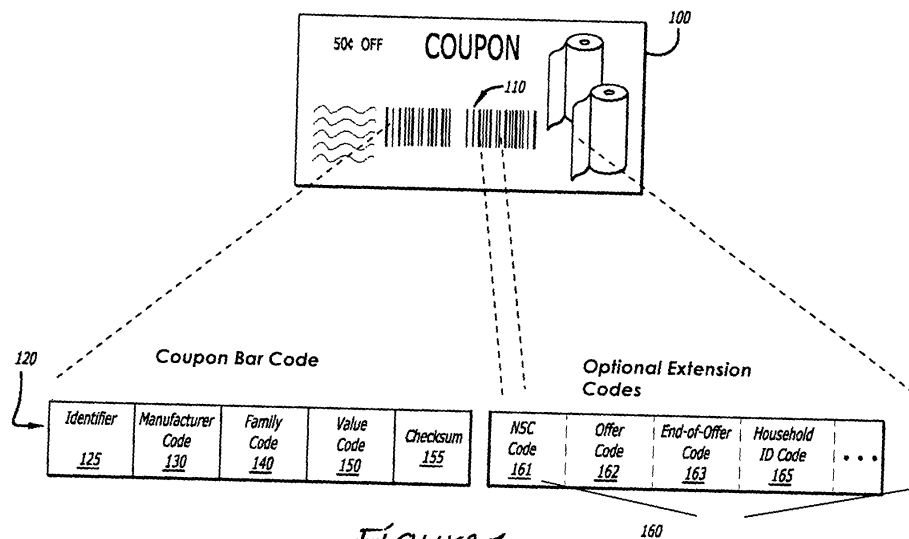
b) Claim 2⁴

(a) Ground 1

Paul discloses, or at least renders obvious, this claim. Ex-1003, ¶¶203-210.

⁴ For all dependent claims, all evidence/arguments for their associated independent and dependent claims (appearing before and after) is incorporated by reference even if not stated.

The '133 patent described a “coupon code format” with a first portion and a second “Extended Portion.” Ex-1001, 2:39, FIG. 7. Likewise, Paul’s Figure 1 portrays an “exemplary embodiment of fields collectively forming a coupon barcode” with two coupon code portions – the “Coupon Bar Code” (“CBC”) portion and the “Optional Extension Codes” portion. Ex-1004, ¶¶12, 30-31, FIG. 1.



Ex-1004, FIG. 1. Although Figure 1 depicts a paper coupon, Paul contemplates that such a coupon barcode can be stored as an electronic coupon. Ex-1004, ¶¶31, 86 (“The I/R software will retrieve CBCs saved in customer account within [] DBS 265 and transmit the barcodes to [] POS terminal 235, in-store server 240 or central server 290[.]”), 98, 111. Thus, A POSITA would have understood that the valid coupon in Paul has first and second portions as recited in this limitation. Ex-1003, ¶210.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this claim.

Ex-1003, ¶¶211-215.

Brown’s Figure 4 depicts a “simplified form the content of a database table 410 within the database 122 (connected to the benefits network 116) and used in conjunction with POS terminal 102 [] for facilitating the purchase of program eligible products” using virtual coupons. Ex-1005, ¶35.

410

ACCOUNT ID	PRODUCT ID	START DATE	END DATE	UNITS	OTHER
1234567	8475238	010105	011505	3	XXXXX
	8475239	010105	011505	1	XXXXX
	8475240	011505	013005	1	XXXXX
1234568	8475238	010105	011505	3	XXXXX
	8475250	010105	011505	2	XXXXX
	8475251	011505	013005	2	XXXXX
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.

412

Ex-1005, FIG. 4. In each account, the database 410 stores information about available coupons, including the eligible products (“Product ID”), coupon validity dates (“start date” and “end date”), and the number of times the coupon can be used (“units”). Ex-1005, ¶35. “The product ID, start and end dates, and unit information

thus represent a virtual coupon in the account.” Ex-1005, ¶35. Brown explains that “[w]hile not specifically shown, other information may also be provided in connection with each account, such as a PIN (in the event required for accessing the account), participant name, address, related accounts (the use of which will be described later), and any other personal information of the participant useful in managing the account.” Ex-1005, ¶36.

A POSITA would have understood that the “product ID, start and end dates, and unit information” are the first coupon code portion and the “other information” shown in the “Other” column in Figure 4 is the optional second coupon code portion of the valid coupon as recited in this limitation. Ex-1003, ¶214.

c) Claim 3

Paul alone and the Paul/Brown combination discloses, or at least renders obvious, this claim. Ex-1003, ¶¶216-222.

Paul discloses a valid coupon that has first and second portions (the “Coupon Bar Code” (“CBC ”) portion and the “Optional Extension Codes” portion). [2].

The ’133 patent contemplates sending the first portion to the point-of-sale terminal, and upon receiving the indication of at least one redeemed coupon, retrieving the second portion (Extended Portion) and sending it to the manufacturer as an indication that the at least one coupon was redeemed. Ex-1001, 7:60–8:65. The Extended Portion can include a household identifier. Ex-1001, FIG. 7, 10:37–

42 (“Manufacturers may track results at the individual household level by assigning unique numbers to the extended portion[.]”).

In Paul, redemption reports and/or settlement reports (an indication that the at least one coupon was redeemed) are also sent to the manufacturer. Ex-1003, ¶220. These reports include, among other things, family codes and household ID code 165. Ex-1004, FIG. 1, ¶111. Thus, like the ’133 patent, Paul discloses a valid coupon with two coupon code portions—an indication of the at least one valid coupon (CBC) and an indication that the at least one redeemed coupon was redeemed (family code/household ID code). Ex-1003, ¶220.

Alternatively, the ’133 patent contemplates that the second portion sent to the manufacturer could be “the triggering UPC code of the corresponding product purchased as well as identification of the retailer and POS terminal and time of purchase.” Ex-1001, 8:50–55; Ex-1003, ¶221. Paul discloses that the redemption reports and/or settlement reports also contain this information. Ex-1004, ¶70; Ex-1003, ¶221; [1.7.b].

Thus, a POSITA would have understood that Paul discloses a valid coupon with first and second portions as described by the ’133 patent that meet this limitation. Ex-1003, ¶222.

d) Claim 4

Paul alone and the Paul/Brown combination discloses, or at least renders obvious, this claim. Ex-1003, ¶¶223-227.

Paul discloses a valid coupon that has a first and a second coupon code portion. [2]. Paul’s coupon depicted in Figure 1 “**may be** a fixed format **such as** a 12-digit UPC or a 13-digit EAN-99”—meaning those formats are purely exemplary. Ex-1004, ¶30 (emphasis added). Paul also discloses that “commonly accepted barcode formats [include] Universal Product Code (UPC), EAN, Code 39, **Code 128**, etc.” Ex-1004, ¶29 (emphasis added); Ex-1001, 1:16–20 (“[C]oupons are universally accepted [and] follow GS1 (including [UCC]) guidelines[.]”). A POSITA would have understood that the first coupon code portion of the valid coupon in Figure 1 could be any of the “commonly accepted barcode formats,” which includes Code 128 (also known as GS1 128), as recited in this limitation. Ex-1003, ¶226.

Paul further discloses that the second coupon code portion (the “Optional Extension Codes”) includes an offer code 162, which is “used by coupon issuers or clearing houses for their own use.” Ex-1004, ¶31. A POSITA would have understood that the coupon issuers are typically manufacturers. Ex-1003, ¶227. Thus, a POSITA would have understood that Paul’s second coupon code portion,

which includes offer code 162, comprises a manufacture offer code as recited in this limitation. Ex-1003, ¶227.

e) Claim 5

(a) Ground 1

Paul discloses, or at least renders obvious, this claim. Ex-1003, ¶¶228-232.

Paul discloses that the indication of at least one redeemed coupon is the coupon redemption data and/or proof of purchase. [1.7]. The proof of purchase “may include some or all of the following: date stamp, *time stamp*, *retail store location*, POS terminal location, *product(s) purchased for every coupon redeemed*[.]” Ex-1004, ¶107 (emphasis added). Also, “coupon redemption data [includes] *date and time stamp*, store number and aisle location, *product purchased for every coupon redeemed . . . zip code, region* etc.” Ex-1004, ¶111 (emphasis added).

Thus, a POSITA would have understood that the coupon redemption data and/or proof of purchase (indication of at least one redeemed coupon) comprises purchase transaction information, including the product purchased, time of purchase, and location of purchase as recited in this claim. Ex-1003, ¶232.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this claim. Ex-1003, ¶¶233-237.

Brown discloses that virtual coupons are stored in a database 122 with a database table 410. Ex-1005, ¶¶28, 35, FIG. 4. In Figure 4, the database table 410 shows the data that is associated with each coupon, such as Product ID. A POSITA would have understood that the indication of at least one redeemed coupon must comprise purchase transaction information, including data about the product purchased, so that the virtual coupon can be debited for the correct Product ID. Ex-1005, FIG. 4; Ex-1003, ¶¶235-237. Also, Brown discloses that the indication of at least one redeemed coupon can include other data related to the transaction such as the date of purchase, which a POSITA would have understood is equivalent to a “time of the purchased transaction” as recited in this claim. Ex-1005, ¶34; Ex-1003, ¶236.

f) Claim 6

(a) Ground 1

Paul discloses, or at least renders obvious, this claim. Ex-1003, ¶¶238-242.

Paul discloses sending an indication that the at least one redeemed coupon was redeemed (redemption reports and/or settlement reports) to a manufacturer associated with the redeemed coupon. [1.7.b]. The redemption reports and/or settlement reports comprise purchase transaction information as recited in this claim. [1.7.b]; Ex-1003, ¶142.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this claim. Ex-1003, ¶¶243-244.

Brown discloses sending an indication that the at least one redeemed coupon was redeemed to benefits administrators overseeing the benefits program, and it would have been obvious to send it to a manufacturer as well. [1.7.b].

Brown further discloses that “data [about coupons redeemed during purchases] can also be used for many purposes useful to the program administrator and its participants[.]” Ex-1005, ¶¶32-34. Thus, a POSITA would have understood that the indication that the at least one redeemed coupon was redeemed included data consisting of purchase transaction information. Ex-1003, ¶244.

g) Claim 7

Paul alone and the Paul/Brown combination discloses, or at least renders obvious, this claim. Ex-1003, ¶¶245-249.

Paul discloses that the coupon redemption data and/or proof of purchase contain extensive information about purchase transactions and redeemed coupons. Ex-1004, ¶¶69-70, 107, 114; [1.7.b]; [5]. Paul further discloses “monitor[ing] coupon redemption activity by each registered customer and enforce[ing] the pre-set rules of redemption.” Ex-1004, ¶81. In other words, if a customer tries to use a coupon more than allowed, the system identifies the abnormality and stops the customer from redeeming the coupon, thereby preventing coupon fraud and/or

counterfeiting. Ex-1003, ¶248. Thus, a POSITA would have understood that Paul's monitoring coupon redemption activity to enforce redemption rules satisfies this claim limitation. Ex-1003, ¶248.

To the extent that this claim requires that specifically the coupon processing server do the monitoring, and if Paul does not disclose using the coupon processing server, a POSITA would have found it obvious to use the extensive information available about purchase transactions and redeemed coupons available at the coupon processing server to do such monitoring. Ex-1003, ¶249. Paul contemplates various configurations of the POS system and servers. Ex-1004, ¶93. Further, a POSITA would have been motivated to do so to prevent fraud and coupon counterfeiting across the entire retail network, not at a single store. Ex-1003, ¶249. A POSITA would have had a reasonable expectation of success because Paul's system already had the ability to enforce pre-set rules of redemption, which could be easily modified to more broadly monitor volume and traffic for abnormalities across many retail stores. Ex-1003, ¶249..

h) Claim 8

(a) Ground 1

Paul discloses, or at least renders obvious, this claim. Ex-1003, ¶¶250-260.

Paul discloses that in response to identifying a registered customer (i.e. receiving the unique account number), the I/R software accesses customer files and

retrieves applicable CBCs ***saved*** in his/her customer account within the DBS 265. Ex-1004, ¶¶82, 86. A POSITA would have understood that a coupon that is “saved” in a customer’s account would be a coupon that is associated with the customer’s unique account identifier (i.e. an “associated coupon”). Ex-1003, ¶253.

Paul describes a process of reviewing a database of coupon definitions to determine if an electronic coupon is valid. Ex-1004, ¶¶98-100. “Based on the coupon definition in the database, the coupon is verified to be in effect, ***not expired***, and valid for the store and/or region.” Ex-1004, ¶100 (emphasis added).

Paul also explains that DBS 265 maintains customer redemption limits during each visit (such as one coupon per customer). Ex-1004, ¶101. Further, “central server 290 will limit the customer to pre-set ***redemption limits*** per instructions received from coupon issuer.” Ex-1004, ¶103 (emphasis added). Necessarily, redemption limits are enforced by checking whether a coupon has already been redeemed. Ex-1004, ¶102; Ex-1003, ¶256.

Thus, a POSITA would have understood that Paul discloses checking whether a coupon is expired or has already been redeemed when determining whether there is at least one valid coupon as recited in this claim. Ex-1003, ¶¶255-259.

To the extent that Paul does not explicitly disclose this limitation, it would have been obvious to a POSITA to check whether a coupon was expired or had been previously redeemed at the coupon processing server when making a determination

that a coupon is valid so that expired/used coupons are not sent to the customer and the manufacturer and/or retailer are not responsible for the expense of the customer receiving the benefit of an expired coupon or using a coupon more than the redemption limit. Ex-1003, ¶260. A POSITA would have had a reasonable expectation of success because Paul already disclosed the ability to check expiration dates in coupon definition databases and enforce pre-set redemption limits. Ex-1003, ¶260. Checking expiration dates and redemptions limits at the coupon processing server before sending a coupon to a customer would have been a trivial modification of the location and/or order of software operations. Ex-1003, ¶260.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this claim. Ex-1003, ¶¶261-264.

Brown discloses that after “benefits information is entered at the POS terminal[,] transaction data [] is sent through benefits network 116 to the DBMS 120, so that the database 122 may confirm that the account is present and active [] and may determine whether there are currently valid coupons in the account (e.g., the transaction date matches the redemption dates for any coupons)[.]” Ex-1005, ¶39. As shown in Brown Figure 4, for each coupon, the database provides a start date and end date (i.e., an expiration date) and the number of units available (i.e., a redemption limit). Ex-1005, FIG. 4. If the transaction date is after the end date, the

coupon is expired. Ex-1003, ¶263. If the number of units available is zero, then the coupon must have been previously redeemed. Ex-1003, ¶263. Thus, a POSITA would have understood that a coupon is determined to be valid as recited in this claim when the transaction date is before the end date (the coupon is not expired) and the number of units is not zero (it has not been previously redeemed). Ex-1003, ¶264.

i) Claim 9

(a) Ground 1

Paul discloses, or at least renders obvious, this claim. Ex-1003, ¶¶265-271.

Paul discloses that, in response to receiving the indication of at least one redeemed coupon, the “I/R software will **update** customer files in . . . central server 290 for **actual redemption data** and proof of purchase[.]” Ex-1004, ¶91 (emphasis added); [1.7]; [1.7.a], [8]. Paul also discloses determining whether a coupon is valid in part by determining whether it has previously been redeemed by monitoring customer redemption information to enforce pre-set redemption limits. [8]. When a customer has met the pre-set redemption limits, the coupon is no longer considered valid and will not be sent to the customer at the point-of-sale terminal. Ex-1004, Claim 4 (“coupon barcodes [can be retrieved] from a storage location on a server associated with a customer . . . that have been **non-redeemed** to date”) (emphasis added).

A POSITA would have understood such a coupon to be “deactivated” as recited in this limitation because it will no longer be sent by the coupon processing server to the point-of-sale terminal for the customer to use. Ex-1003, ¶¶269-271.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this claim. Ex-1003, ¶¶272-275.

Brown discloses that if the customer decides to purchase eligible products using a valid coupon, “the account is debited (the applicable coupons are redeemed).” Ex-1005, ¶¶28-29, 40. The database 122 would be updated to reflect that the coupon was redeemed by the customer. Ex-1005, ¶¶35, 37. As shown in Brown Figure 4, the number of units available would be decreased when a coupon is debited. Ex-1005, FIG. 4. Thus, the coupon has been deactivated because a customer can no longer use it. Ex-1003, ¶¶274-275.

j) Claim 10

(a) Ground 1

Paul discloses, or at least renders obvious, this claim. Ex-1003, ¶¶276-282.

Paul discloses that valid coupons are transmitted from the coupon processing server to the point-of-sale terminal for redemption. [1.5]; [1.6]. If there are no valid coupons, the customer would not receive any coupons at the point-of-sale terminal. Although Paul does not explicitly say that a message indicating that there are no

coupons available is sent to the POS terminal 235, a POSITA would have found it obvious to send such a message. Ex-1003, ¶¶280-282. Sending messages indicating that requested data is not available was well-known in the art, such as in Brown described below for Claim 10 (**Ground 2**). Ex-1003, ¶280. Also, Paul discloses other instances where an “event to notify customer” of downloaded data or connection problems is performed or a “customer is prompted” to take action after failed attempts to connect. Ex-1004, FIG. 8. Also, in instances where “product purchases do [not] meet coupon definitions, terms, and conditions of coupon offer,” a coupon is rejected and the reason for rejection and/or abbreviated messages are transmitted to POS terminal 235 to display to the customer. Ex-1004, ¶¶92, 104, FIG. 10.

Thus, like the notifications, customer prompts, reasons for rejection, and/or abbreviated messages being sent to the POS terminal 235, a POSITA would have found it obvious to likewise send a “no coupons available” message when no valid coupons are available. Ex-1003, ¶282. A POSITA would have been motivated to send such a message because otherwise the POS terminal 235 might assume that there was a network connection error upon receiving no valid coupons in response. Ex-1003, ¶282. Sending a “no coupons available” message would prevent unnecessary attempts to troubleshoot the POS terminal 235 and/or network connection. Ex-1003, ¶282. A POSITA would have had a reasonable expectation

of success because sending such a message would be a trivial modification to the coupon processing server and it was disclosed in the art, such as in Brown. Ex-1003, ¶282.

(b) Ground 2

The Paul/Brown combination discloses, or at least renders obvious, this claim. Ex-1003, ¶¶283-286.

Brown discloses that valid coupons are transmitted from the coupon processing server to the point-of-sale terminal for redemption. [1.5]; [1.6]. Brown further discloses that “[i]f the [customer’s] account is not active or there are no currently valid coupons, information to that effect is displayed at the terminal 102[.]” Ex-1005, ¶39. Upon finding no valid coupons in the account, a POSITA would have understood that the coupons processing server (DBS 265) sends a “no coupons available” message (“information to that effect”) to the POS terminal 102 for display to the customer as recited in this limitation. Ex-1003, ¶286.

k) Independent Claim 11

(1) [11.pre]

To the extent the preamble is limiting, Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.pre]; Ex-1003, ¶¶288-289.

(2) [11.1]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.3]; Ex-1003, ¶¶290-291.

(3) [11.2]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.1]; Ex-1003, ¶¶292-293.

Specifically, this limitation and [1.1] are describing reciprocal actions. If the coupon processor *receives* the unique account identifier from the point-of-sale terminal, then accordingly the point-of-sale terminal *transmits* the unique account identifier to the coupon processing server. Ex-1003, ¶¶292-293.

(4) [11.3]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.2]; Ex-1003, ¶¶294–295.

(5) [11.4]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.4]; Ex-1003, ¶¶296–297.

(6) [11.5]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.5]/[1.6]; Ex-1003, ¶¶298–301.

Specifically, this limitation and limitations [1.5]/[1.6] are describing reciprocal actions taken by the coupon processing server and point-of-sale terminal as explained in [11.2]. Ex-1003, ¶¶298, 300.

Further, a POSITA would have understood that the “indication of the at least one valid coupon” in [1.6] satisfies the “indication of whether at least one valid coupon is associated with the unique account identifier” limitation in this claim because they both inform the point-of-sale terminal that a customer has a valid coupon in their account. Ex-1003, ¶¶299, 301.

(7) [11.6]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7]; Ex-1003, ¶¶302–303.

(8) [11.7]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7]; Ex-1003, ¶¶304–305.

Specifically, this limitation and [1.7] are describing reciprocal actions taken by the coupon processing server and the point-of-sale terminal as explained in [11.2]. Ex-1003, ¶¶304–305.

l) Claim 12

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [2]; Ex-1003, ¶¶306–308.

m) Claim 13

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [3]; Ex-1003, ¶¶309–311.

n) Claim 14

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [4]; Ex-1003, ¶¶312–314.

o) Claim 15

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [1.6], [11.5]; Ex-1003, ¶¶315–319.

Specifically, the recited indications are essentially nested layers of linked messages, with the top layer informing the point-of-sale terminal that a valid coupon exists in the database (“indication of whether at least one valid coupon is associated with the unique account identifier”), and the second layer informing the point-of-sale terminal that a valid coupon has been provided (“indication of the at least one valid coupon”), and the bottom layer is the “valid coupon” itself. Ex-1003, ¶¶317, 319. Thus, Paul’s and Brown’s indications (messages) in [1.6]/[11.5] both inform the point-of-sale terminal that a valid coupon exists in the customer account and that a valid coupon has been provided by providing the valid coupon itself, and would thus satisfy the recited limitation. Ex-1003, ¶¶317, 319.

p) Claim 16

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [5]; Ex-1003, ¶¶320–322.

q) Independent Claim 17

(1) [17.pre]

To the extent the preamble is limiting, Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.pre]; Ex-1003, ¶¶323–325.

Specifically, a POSITA would understand that the claimed apparatus is a coupon processing server. Ex-1003, ¶¶323–325.

(2) [17.1]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.1]; Ex-1003, ¶¶326–327.

(3) [17.2]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.2]; Ex-1003, ¶¶328–329.

(4) [17.3]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.3]; Ex-1003, ¶¶330–331.

(5) [17.4]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.4]; Ex-1003, ¶¶332–333.

(6) [17.5]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.5]; Ex-1003, ¶¶334–335.

(7) [17.6]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.6]; Ex-1003, ¶¶336–337.

(8) [17.7]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7]; Ex-1003, ¶¶338–339.

(9) [17.7.a]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7.a]; Ex-1003, ¶¶340–341.

(10) [17.7.b]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7.b]; Ex-1003, ¶¶342–343.

r) Claim 18

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [2]; Ex-1003, ¶¶344–346.

s) Claim 19

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [3]; Ex-1003, ¶¶347–349.

t) Claim 20

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [5]; Ex-1003, ¶¶350–352.

u) Claim 21

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [6]; Ex-1003, ¶¶353–355.

v) Claim 22

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [7]; Ex-1003, ¶¶356–358.

w) Claim 23

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [8]; Ex-1003, ¶¶359–360.

x) Claim 24

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [9]; Ex-1003, ¶¶361–363.

y) Independent Claim 25

(1) [25.pre]

To the extent the preamble is limiting, Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.pre/11.pre]; Ex-1003, ¶¶364–366.

Further, a POSITA would have understood that the recited apparatus is a point-of-sale terminal. Ex-1003, ¶¶365–366.

(2) [25.1]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.3]/[11.1]; Ex-1003, ¶¶367–368.

(3) [25.2]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.1]/[11.2]; Ex-1003, ¶¶369–370.

(4) [25.3]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.2]/[11.3]; Ex-1003, ¶¶371–372.

(5) [25.4]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.3]/[1.4]/[11.1]/[11.4]; Ex-1003, ¶¶373–374.

(6) [25.5]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.5]/[1.6]/[11.5]; Ex-1003, ¶¶375–376.

(7) [25.6]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7]/[11.6]; Ex-1003, ¶¶377–378.

(8) [25.7]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7]/[11.7]; Ex-1003, ¶¶379–380.

z) Claim 26

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [2]/[12]; Ex-1003, ¶¶381–383.

aa) Claim 27

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [3]/[13]; Ex-1003, ¶¶384–386.

bb) Claim 28

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [11.5]/[15]; Ex-1003, ¶¶387–389.

cc) Claim 29

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [5]/[16]; Ex-1003, ¶¶390–392.

dd) Independent Claim 30

(1) [30.pre]

To the extent the preamble is limiting, Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.pre]; Ex-1003, ¶¶393–395.

Further, a POSITA would understand that the claimed apparatus is a coupon processing server. Ex-1003, ¶¶394–395.

(2) [30.1]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.1]; Ex-1003, ¶¶396–397.

Further, Paul and Brown both disclose that the coupon processing server has an input interface as recited in this limitation. Ex-1003, ¶¶396–397. In order to communicate data between devices and/or over a network to process coupons, a POSITA would understand that the devices must have both input and output interfaces that can send and receive data. Ex-1003, ¶¶396–397.

(3) [30.2]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.2]; Ex-1003, ¶¶398–399.

(4) [30.3]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.3]; Ex-1003, ¶¶400–401.

(5) [30.4]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.4]; Ex-1003, ¶¶402–403.

(6) [30.5]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.5]; Ex-1003, ¶¶404–405.

Further, Paul and Brown both disclose that the coupon processing server has a processor making the determination recited in the limitation. Ex-1003, ¶¶404–405. A POSITA would understand that all servers/devices have software run on processors that enable them to process data, make determinations, and communicate with other devices. Ex-1003, ¶¶404–405.

(7) [30.6]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.6]; Ex-1003, ¶¶406–407.

Further, Paul and Brown both disclose that the coupon processing server has an output interface as recited in the limitation. Ex-1003, ¶¶406–407. In order to communicate data between devices and/or over a network to process coupons, a POSITA would understand that the devices must have both input and output interfaces that can send and receive data. Without those interfaces, the system would not be operational. Ex-1003, ¶¶406–407.

(8) [30.7]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7]/[1.7.a]; Ex-1003, ¶¶408–409.

Further, the recited server is the coupon processing server in both Paul and Brown. Ex-1003, ¶¶408–409.

(9) [30.8]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7]/[1.7.b]; Ex-1003, ¶¶410–411.

Further, the recited internet connection is the network recited in [1.1] in both Paul and Brown. Ex-1003, ¶¶410–411. Alternatively, in Paul, it is the web server 270 shown in Figure 2. Ex-1004, ¶35, FIG. 2; Ex-1003, ¶¶410–411.

ee) Claim 31

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [2]; Ex-1003, ¶¶412–414.

ff) Claim 32

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [3]; Ex-1003, ¶¶415–417.

gg) Independent Claim 33

(1) [33.pre]

To the extent the preamble is limiting, Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.pre]/[11.pre]/[25.pre]; Ex-1003, ¶¶418–420.

(2) [33.1]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.3]/[11.1]/[25.1]; Ex-1003, ¶¶421–422.

Further, the POS terminal in both Paul and Brown has an input interface as recited in this limitation. Ex-1003, ¶¶421–422. Further, a POSITA would understand that all data gathering devices must have input interfaces to receive information. Ex-1003, ¶¶421–422.

(3) [33.2]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.1]/[11.2]/[25.2]; Ex-1003, ¶¶423–424.

Further, the POS terminal in both Paul and Brown has an output interface as recited in this limitation. Ex-1003, ¶¶423–424. In order to communicate data between devices and/or over a network to process coupons, a POSITA would understand that the devices must have both input and output interfaces that can send and receive data. Without those interfaces, the system would not be operational. Ex-1003, ¶¶423–424.

(4) [33.3]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.2]/[11.3]/[25.3]; Ex-1003, ¶¶425–426.

(5) [33.4]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.3]/[1.4]/[11.1]/[11.4]/[25.4]; Ex-1003, ¶¶427–428.

(6) [33.5]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.5]/[1.6]/[11.5]/[25.5]; Ex-1003, ¶¶429–430.

(7) [33.6]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7]/[11.6]/[25.6]; Ex-1003, ¶¶431–432.

(8) [33.7]

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this limitation obvious. *See supra* [1.7]/[11.7]/[25.7]; Ex-1003, ¶¶433–434.

Further, the POS terminal in both Paul and Brown has the recited output interface as disclosed for [33.2]. Ex-1003, ¶¶433–434.

hh) Claim 34

Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [2]/[12]/[26]; Ex-1003, ¶¶435–437.

ii) Claim 35.

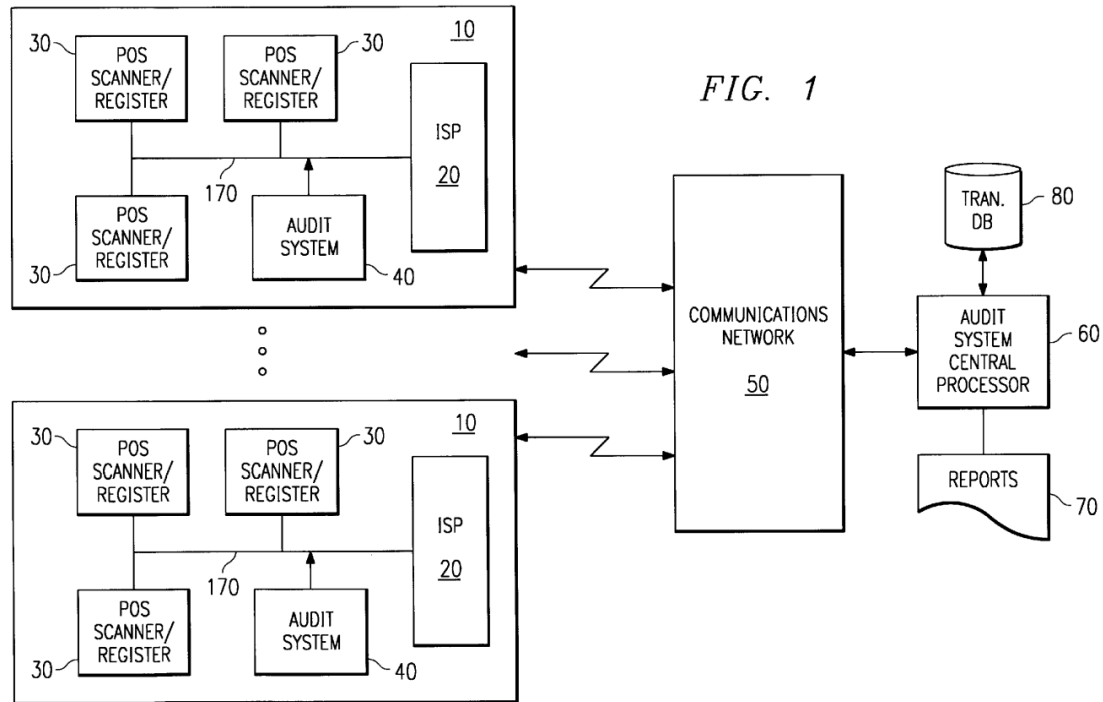
Paul (**Ground 1**) and the Paul/Brown combination (**Ground 2**) render this claim obvious. *See supra* [3]/[13]/[27]; Ex-1003, ¶¶438–440.

B. Grounds 3 and 4: Obviousness Over Paul and Jones and Obviousness Over Paul, Brown, and Jones

1. Summary of Jones

Jones describes a “system and method for conducting an electronic audit with respect to sales transactions, including those involving coupon redemption, based on

the transaction data recorded by a POS terminal[.]” Ex-1006, 3:37-43. Figure 1 shows a “an electronic audit system and method for a point-of-sale system.” Ex-1006, 5:7-10.



Each retail store 10 has an in-store audit system 40 that collects, processes, and stores retail sales transaction data, including coupon redemption. Ex-1006, 5:36-42. Periodically, audit system 40 transmits the data to audit system central processor 60 for further processing and use by manufacturers and retailers. Ex-1006, 5:47-51. Audit system central processor 60 can analyze the data and prepare reports, such as a summary of coupon redeemed with statistically high exceptions flagged or a “[c]omparison of flagged stores with cashier habits, extremely high coupon activity, extremely fast total transaction times (sometimes indicative of fraudulent

misredemptions), non-normal variations in UPC distributions, and high frequency of manual overrides.” Ex-1006, 10:31-58. “By identifying possible variances in coupon activity, according to the system and method of the present invention, [and] quickly calling to the attention of the retailer or manufacturer agent these variations ... attempts at deceiving the manufacturer can be identified before they compound into larger dollar issues and complicate settlement between the parties.” Ex-1006, 11:12-20.

2. Motivation to Combine Paul and Jones

A POSITA would have been motivated to combine Paul and the coupon audit system of Jones because monitoring coupon redemption activity for abnormalities and fraud would have been beneficial for retailers and manufacturers to avoid the negative financial impact of improperly redeemed coupons. Ex-1003, ¶442. Specifically, Paul acknowledges that “retailers and manufacturers incur substantial annual costs due to fraud and redemption errors.” Ex-1004, ¶9. Thus, a POSITA seeking to implement a coupon processing system as taught by Paul would have been motivated to look for available coupon auditing systems, like in Jones, to find a way to further combat fraud. Ex-1003, ¶442. Jones provides a way to monitor widescale coupon redemption activity by various useful metrics involving irregularities in coupon activity, transaction times, UPC distributions, and frequency of manual overrides. Ex-1006, 10:31-58. Monitoring such metrics would enhance

Paul's system and quickly alert retailers and manufactures of potential fraud. Ex-1003, ¶442. A POSITA would have had a reasonable expectation of success because Paul's system already monitored coupon redemption activity to enforce pre-set redemption limits, and modifying the system in Paul to monitor additional coupon redemption activity would have been routine and straightforward. Ex-1003, ¶442.

3. Motivation to Combine Paul, Brown, and Jones

As explained in Section IV.A.3, a POSITA would have been motivated to combine Paul and Brown. A POSITA would have been motivated to combine Paul and Brown with Jones for the same reasons described for combining Paul and Jones. Ex-1003, ¶443.

4. Detailed Analysis of Grounds 3 and 4

As supported by the Mowry Declaration (Ex-1003), the combination of Paul and Jones renders obvious claims 7 and 22 of the '133 patent (**Ground 3**). Alternatively, the combination of Paul, Brown, and Jones renders obvious claims 7 and 22 of the '133 patent (**Ground 4**).

a) Claims 7 and 22

(a) Ground 3

If Paul does not disclose/render obvious claims 7 and 22 (**Ground 1**), Jones discloses it, and the combination of Paul and Jones renders them obvious. Ex-1003, ¶¶444-45.

Jones discloses an “automated system and method for electronically auditing point-of-sale transactions” at a retail store “on a real-time basis” that are transmitted to a remote “audit system processor.” Ex-1006, Abstract, 5:36–50. The audit system central processor 60 collects and analyzes data from each electronic audit system 40 located at retail stores and reports “statistically high exceptions” in the number of coupons redeemed, “extremely high coupon activity,” and “extremely fast total transaction times (sometimes indicative of fraudulent misredemptions).” Ex-1006, 10:31-58. Thus, a POSITA would have understood that the volume and traffic of redeemed coupons are monitored to identify abnormalities and to prevent coupon counterfeiting as recited in these claims. Ex-1003, ¶¶444-448.

(b) Ground 4

To the extent the combination of Paul and Brown does not render obvious claims 7 and 22 (**Ground 2**), the combination of Paul, Brown, and Jones renders them obvious for the same reasons described for (**Ground 3**). Ex-1003, ¶449.

V. ENABLEMENT AND SECONDARY CONSIDERATIONS

The prior art references relied upon in this Petition are all enabled. Ex-1003, ¶¶65, 73, 77. There are also no secondary considerations of non-obviousness tied to the Challenged Claims. Ex-1003, ¶454.

VI. PTAB DISCRETION SHOULD NOT PRECLUDE INSTITUTION

A. Discretionary Denial Under § 314(a) Is Not Warranted

Although there is currently a district court case in which the '133 patent is asserted, the six-factor test set forth in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5–6 (P.T.A.B. Mar. 20, 2020) (precedential), favors institution. Ultimately, given the compelling evidence of unpatentability described above, the *Fintiv* factors should not lead the Board to discretionarily deny institution.

Factor 1. Petitioner has not yet moved to stay the Current Litigation pending IPR, therefore this factor is neutral. *Google LLC v. Parus Holdings, Inc.*, IPR2020-00847, Paper 9 at 12 (P.T.A.B. Oct. 21, 2020).

Factor 2. Jury selection in the Current Litigation is not scheduled but would be no earlier than January 2026. Ex-1008, 10–11. The current average time to trial for the Delaware district court is 32.9 months. Ex-1009. This factor weighs against institution because a final written decision will likely occur before trial.

Factor 3. The Current Litigation is still in its early stages: discovery has just begun, and expert discovery remains far on the horizon. Ex-1008, 2–3. In fact, the parties have not exchanged infringement or invalidity contentions yet. This factor weighs against the Board exercising its discretion to deny the Petition.

Factor 4. The parties in the Current Litigation have not exchanged infringement or invalidity contentions. Ex-1008. And in the Complaint, only one

claim from the '133 patent was identified. Ex-1007, ¶75. Meanwhile, Petitioner is challenging all claims. This factor weighs against denying institution or is neutral.

Factor 5. While Petitioner is the defendant in the Current Litigation, it is likely that the Board will reach a decision before the district court proceeding. Therefore, this factor weighs slightly against discretionary denial. *Bruker Spatial Biology, Inc. v. President & Fellows of Harvard Coll. & 10x Genomics*, No. IPR2024-00526, 2024 WL 3914591, at *22 (P.T.A.B. Aug. 23, 2024).

Factor 6. The prior art presented in this Petition renders the Challenged Claims unpatentable as obvious. The merits of Petitioner's arguments are compelling because they lead to a strong conclusion that one or more claims are unpatentable by a preponderance of the evidence. This factor therefore weighs against discretionary denial. As such, the *Fintiv* factors are either neutral or weigh against discretionary denial.

In totality, the *Fintiv* factors weigh strongly in favor of institution. The factors set forth in *General Plastic* do not apply here because Petitioner has not previously submitted any IPR petitions on the '133 patent—i.e., this is not a “follow-on petition.” *General Plastic Indus. Co., Ltd. v. Kaisha*, IPR2016-01357, Paper 19 at 8–9 (P.T.A.B. Sept. 6, 2017) (precedential) (summarizing factors for exercising discretion to deny “follow-on petitions”).

The Board should therefore not exercise its discretion to deny institution.

B. Discretionary Denial Under § 325(d) Is Not Warranted

In determining whether to institute an IPR, the Board may consider whether “the same or substantially the same prior art or arguments previously were presented to the Office.” §325(d); *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6, 7 (PTAB Feb. 13, 2020). While a patent related to Paul was “previously presented to the Office” during the prosecution of the ’133 patent, Brown and Jones were not before the Office. Further, as explained above in Section II.B, the Examiner did not mention the related patent in any office actions and presumably overlooked it based on a misunderstanding of the claims. Thus, the arguments in this Petition are different from those before the Examiner. *See Abs Glob., Inc. v. Cytonome/st, LLC*, No. IPR2017-02162, 2018 WL 1891686, at *9 (P.T.A.B. Apr. 10, 2018). In addition, the Board will have the benefit for Dr. Mowry’s expert declaration, which the Examiner did not have. Therefore, substantially the same prior art or arguments were not presented to the Office. *See Thorne Research, Inc. v. Trustees of Dartmouth College*, IPR2021-00491, Paper 18 at 7-9 (PTAB Aug. 12, 2021).

VII. CONCLUSION

Petitioner has established a reasonable likelihood that the Challenged Claims are unpatentable. Petitioner therefore respectfully requests that IPR be instituted.

DATED: September 6, 2024

Respectfully Submitted,

/Brian M. Buroker/

Brian M. Buroker (Reg. No. 39,125)
GIBSON, DUNN & CRUTCHER LLP
1700 M Street, N.W.
7th Floor
Washington, DC 20036-4504
Phone: (202) 955-8500
Fax: (202) 467-0539
Email: bburoker@gibsondunn.com

*Attorney for Petitioner Quotient
Technology, LLC*

CERTIFICATION UNDER 37 C.F.R. § 42.24(d)

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned attorney hereby certifies that the word count for Sections I–VII of the foregoing Petition for *Inter Partes* Review is 13,996, according to the word count tool in Microsoft Word.

DATED: September 6, 2024

By: /Brian M. Buroker/

Brian M. Buroker (Reg. No. 39,125)
GIBSON, DUNN & CRUTCHER LLP
1700 M Street, N.W.
7th Floor
Washington, DC 20036-4504
Phone: (202) 955-8500
Fax: (202) 467-0539
Email: bburoker@gibsondunn.com

*Attorney for Petitioner Quotient
Technology, LLC*

CERTIFICATE OF SERVICE

The undersigned certifies service pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(a), (b) on the Patent Owner via FedEx overnight mail of a copy of this Petition for *Inter Partes* Review, all exhibits, and a Power of Attorney at the Patent Owner's correspondence address of record for the '133 patent:

27975 - ADD+G - 27975
Attn: Christopher Regan
1135 East State Road 434, Suite 3001
Winter Springs, FL 32708
UNITED STATES

In addition, the Petition, all exhibits, and Power of Attorney were served through an electronic mail message with a link to counsel of record for Patent Owner and litigation counsel for the Exclusive Licensee at the following email addresses:

For Patent Owner: Christopher Regan - cregan@allendyer.com

For Exclusive Licensee: BDIP_Inmar_ICN@bdiplaw.com

DATED: September 6, 2024

By: /Brian M. Buroker/

Brian M. Buroker (Reg. No. 39,125)
GIBSON, DUNN & CRUTCHER LLP
1700 M Street, N.W.
7th Floor
Washington, DC 20036-4504
Phone: (202) 955-8500
Fax: (202) 467-0539

*Petition for Inter Partes Review
of U.S. Patent No. 9,070,133*

Email: bburoker@gibsondunn.com

*Attorney for Petitioner Quotient
Technology, LLC*

APPENDIX: CHALLENGED CLAIM LISTING

No.	Claim/Limitation
[1.pre]	A computer-readable medium storing instructions executable by a processor to perform operations for processing coupons across a network, the operations comprising:
[1.1]	receiving, at a coupon processing server, a unique account identifier from a first point of sale terminal via a network,
[1.2]	where the coupon processing server is configured to communicate with a plurality of point of sale terminals,
[1.3]	where the unique account identifier was scanned at the first point-of-sale terminal which is located at a retail store and
[1.4]	where the coupon processing server is at a location that is remote from the retail store;
[1.5]	in response to receiving the unique account identifier, determining whether at least one valid coupon is associated with the unique account identifier in a database of accounts;
[1.6]	in response to determining that at least one valid coupon is associated with the unique account identifier in the database of accounts, transmitting, from the coupon processing server, an indication of the at least one valid coupon to the first point of sale terminal via the network, wherein the indication includes the at least one valid coupon;
[1.7]	in response to receiving, at the coupon processing server from the first point of sale terminal, an indication of at least one redeemed coupon,
[1.7.a]	updating the database of accounts and
[1.7.b]	transmitting, from the coupon processing server to a manufacturer associated with the at least one redeemed coupon, an indication that the at least one redeemed coupon was redeemed against a purchased transaction, where the at least one redeemed coupon is at least one of the at least one valid coupon.
[2]	The computer-readable medium of claim 1, where a valid coupon comprises a first coupon code portion and a second coupon code portion.

No.	Claim/Limitation
[3]	The computer-readable medium of claim 2, where the indication of the at least one valid coupon comprises the first coupon code portion but not the second coupon code portion and the indication that the at least one redeemed coupon was redeemed comprises the second coupon code portion.
[4]	The computer-readable medium of claim 2, where the first coupon code portion comprises one of: a GS1 EAN/UPC Type 5 barcode, a GS1 128 barcode, and a GS1 Databar barcode and where the second coupon code portion comprises a manufacture offer code.
[5]	The computer-readable medium of claim 1, where the indication of at least one redeemed coupon further comprises purchase transaction information, where the purchase transaction information comprises at least one of an identification of a product purchased, a time of the purchase transaction and a location of the purchase transaction.
[6]	The computer-readable medium of claim 5, where the indication that the at least one redeemed coupon was redeemed further comprises the purchase transaction information.
[7]	The computer-readable medium of claim 1, where the operations further comprise monitoring at least volume and traffic of redeemed coupons to identify abnormalities and to prevent coupon counterfeiting.
[8]	The computer-readable medium of claim 1, where determining whether at least one valid coupon is associated with the unique account identifier in the database of accounts comprises: determining whether at least one associated coupon is associated with the unique account identifier in the database of accounts, and for each associated coupon of the at least one associated coupon, determining whether the associated coupon has been previously redeemed and determining whether the associated coupon has expired, where the associated coupon is determined to be a valid coupon in response to both determining that the associated coupon has not been previously redeemed and determining that the associated coupon has not expired.
[9]	The computer-readable medium of claim 1, where updating the database of accounts comprises deactivating the at least one redeemed coupon.

No.	Claim/Limitation
[10]	The computer-readable medium of claim 1, where the operations further comprise, in response to determining that no valid coupons are associated with the unique account identifier in the database of accounts, transmitting, from the coupon processing server, a “no coupons available” message to the first point of sale terminal via the network.
[11.pre]	A computer-readable medium storing instructions executable by a processor to perform operations for processing coupons across a network, the operations comprising:
[11.1]	scanning, at a point-of-sale terminal located at a retail store, a unique account identifier;
[11.2]	during a purchase transaction, transmitting, from the point of sale terminal, the unique account identifier to a coupon processing server via a network,
[11.3]	where the coupon processing server is configured to communicate with a plurality of point of sale terminals and
[11.4]	where the coupon processing server is at a location that is remote from the retail store;
[11.5]	in response to transmitting the unique account identifier, receiving, at the point of sale terminal, an indication of whether at least one valid coupon is associated with the unique account identifier from the coupon processing server via the network, where a valid coupon is a coupon that has been validated by the coupon processing server and the indication includes the at least one valid coupon;
[11.6]	in response to receiving the indication that the at least one valid coupon is associated with the unique account identifier, the point of sale terminal completing the purchase transaction by validation of the at least one valid coupon against the purchased transaction; and
[11.7]	in response to the purchase transaction comprising a redemption of at least one of the at least one valid coupon, transmitting, from the point of sale terminal to the coupon processing server, an indication of the at least one redeemed coupon.

No.	Claim/Limitation
[12]	The computer-readable medium of claim 11, where a valid coupon comprises a first coupon code portion and a second coupon code portion.
[13]	The computer-readable medium of claim 12, where an indication of the at least one valid coupon comprises the first coupon code portion but not the second coupon code portion.
[14]	The computer-readable medium of claim 12, where the first coupon code portion comprises one of: a GS1 EAN/UPC Type 5 barcode, a GS1 128 barcode, and a GS1 Databar barcode and where the second coupon code portion comprises a manufacture offer code.
[15]	The computer-readable medium of claim 11, where, when at least one valid coupon is associated with the unique account identifier, the indication of whether at least one valid coupon is associated with the unique account identifier comprises an indication of the at least one valid coupon.
[16]	The computer-readable medium of claim 11, where the indication of at least one redeemed coupon further comprises purchase transaction information, where the purchase transaction information comprises at least one of: an identification of a product purchased, a time of the purchase transaction and a location of the purchase transaction.
[17.pre]	An apparatus, comprising a processor and a memory storing software, the processor is configured to, when executing the software, cause the apparatus to perform operations, the operations comprising:
[17.1]	to receive a unique account identifier from a first point of sale terminal via a network,
[17.2]	where the apparatus is configured to communicate with a plurality of point of sale terminals,
[17.3]	where the unique account identifier was scanned at the first point-of-sale terminal which is located at a retail store and
[17.4]	where the apparatus is at a location that is remote from the retail store;
[17.5]	in response to receiving the unique account identifier, to determine whether at least one valid coupon is associated with the unique account identifier in a database of accounts;

No.	Claim/Limitation
[17.6]	in response to determining that at least one valid coupon is associated with the unique account identifier in the database of accounts, to transmit an indication of the at least one valid coupon to the first point of sale terminal via the network, wherein the indication includes the at least one valid coupon;
[17.7]	in response to receiving, from the first point of sale terminal, an indication of at least one redeemed coupon,
[17.7.a]	to update the database of accounts and
[17.7.b]	to transmit, to a manufacturer associated with the at least one redeemed coupon, an indication that the at least one redeemed coupon was redeemed against a purchased transaction, where the at least one redeemed coupon is at least one of the at least one valid coupon.
[18]	The apparatus of claim 17, where a valid coupon comprises a first coupon code portion and a second coupon code portion.
[19]	The apparatus of claim 18, where the indication of the at least one valid coupon comprises the first coupon code portion but not the second coupon code portion and the indication that the at least one redeemed coupon was redeemed comprises the second coupon code portion.
[20]	The apparatus of claim 17, where the indication of at least one redeemed coupon further comprises purchase transaction information, where the purchase transaction information comprises at least one of an identification of a product purchased, a time of the purchase transaction and a location of the purchase transaction.
[21]	The apparatus of claim 20, where the indication that the at least one redeemed coupon was redeemed further comprises the purchase transaction information.
[22]	The apparatus of claim 17, where the operations further comprise to monitor at least volume and traffic of redeemed coupons to identify abnormalities and to prevent coupon counterfeiting.

No.	Claim/Limitation
[23]	The apparatus of claim 17, where, when determining whether at least one valid coupon is associated with the unique account identifier in the database of accounts, the operations further comprise: to determine whether at least one associated coupon is associated with the unique account identifier in the database of accounts, and for each associated coupon of the at least one associated coupon, to determine whether the associated coupon has been previously redeemed and to determine whether the associated coupon has expired, where the associated coupon is determined to be a valid coupon in response to both determining that the associated coupon has not been previously redeemed and determining that the associated coupon has not expired.
[24]	The apparatus of claim 17, where, when updating database of accounts, the operations further comprise to deactivate the at least one redeemed coupon.
[25.pre]	An apparatus, comprising a processor and a memory storing software, the processor is configured to, when executing the software, cause the apparatus to perform operations, the operations comprising:
[25.1]	to scan a unique account identifier;
[25.2]	during a purchase transaction, to transmit the unique account identifier to a coupon processing server via a network,
[25.3]	where the coupon processing server is configured to communicate with a plurality of point of sale terminals,
[25.4]	where the apparatus is located at a retail store and where the coupon processing server is at a location that is remote from the retail store;
[25.5]	in response to transmitting the unique account identifier, to receive an indication of whether at least one valid coupon is associated with the unique account identifier from the coupon processing server via the network, where a valid coupon is a coupon that has been validated by the coupon processing server and the indication includes the at least one valid coupon;

No.	Claim/Limitation
[25.6]	in response to receiving at least one valid coupon at the point of sale terminal as an indication that at least one valid coupon is associated with the unique account identifier from the coupon processing server via the network, to complete the purchase transaction using the at least one valid coupon against the purchase transaction; and
[25.7]	in response to the purchase transaction comprising a redemption of at least one of the at least one valid coupon, to transmit, to the coupon processing server, an indication of the at least one redeemed coupon.
[26]	The apparatus of claim 25, where a valid coupon comprises a first coupon code portion and a second coupon code portion.
[27]	The apparatus of claim 26, where an indication of the at least one valid coupon comprises the first coupon code portion but not the second coupon code portion.
[28]	The apparatus of claim 25, where, when at least one valid coupon is associated with the unique account identifier, the indication of whether at least one valid coupon is associated with the unique account identifier comprises an indication of the at least one valid coupon.
[29]	The apparatus of claim 25, where the indication of at least one redeemed coupon further comprises purchase transaction information, where the purchase transaction information comprises at least one of: an identification of a product purchased, a time of the purchase transaction and a location of the purchase transaction.
[30.pre]	An apparatus, comprising:
[30.1]	an input interface configured for receiving a unique account identifier from a first point of sale terminal via a network,
[30.2]	where the apparatus is configured to communicate with a plurality of point of sale terminals,
[30.3]	where the unique account identifier was scanned at the first point-of-sale terminal which is located at a retail store and
[30.4]	where the apparatus is at a location that is remote from the retail store;
[30.5]	a processor configured for determining whether at least one valid coupon is associated with the unique account identifier in a database of accounts in response to receiving the unique account identifier;

No.	Claim/Limitation
[30.6]	an output interface configured for transmitting an indication of the at least one valid coupon to the first point of sale terminal via the network in response to determining that at least one valid coupon is associated with the unique account identifier in the database of accounts, wherein the indication includes the at least one valid coupon;
[30.7]	a server configured for updating the database of accounts and
[30.8]	an internet connection for transmitting, to a manufacturer associated with the at least one redeemed coupon, an indication that the at least one redeemed coupon was redeemed, in response to receiving, from the first point of sale terminal, an indication of at least one redeemed coupon against a purchased transaction, where the at least one redeemed coupon is at least one of the at least one valid coupon.
[31]	The apparatus of claim 30, where a valid coupon comprises a first coupon code portion and a second coupon code portion.
[32]	The apparatus of claim 31, where the indication of the at least one valid coupon comprises the first coupon code portion but not the second coupon code portion and the indication that the at least one redeemed coupon was redeemed comprises the second coupon code portion.
[33.pre]	An apparatus, comprising:
[33.1]	a first input interface configured for scanning a unique account identifier;
[33.2]	an output interface configured for transmitting, during a purchase transaction, the unique account identifier to a coupon processing server via a network,
[33.3]	where the coupon processing server is configured to communicate with a plurality of point of sale terminals,
[33.4]	where the apparatus is located at a retail store and where the coupon processing server is at a location that is remote from the retail store;

No.	Claim/Limitation
[33.5]	a point of sale terminal configured for receiving an indication of whether at least one valid coupon is associated with the unique account identifier from the coupon processing server via the network in response to transmitting the unique account identifier, where a valid coupon is a coupon that has been validated by the coupon processing server and the indication includes the at least one valid coupon;
[33.6]	the point of sale terminal configured for completing the purchase transaction using the at least one valid coupon against the purchase transaction in response to receiving the indication that at least one valid coupon is associated with the unique account identifier from the coupon processing server via the network; and
[33.7]	the output interface configured for transmitting, to the coupon processing server, an indication of the at least one redeemed coupon in response to the purchase transaction comprising a redemption of at least one of the at least one valid coupon.
[34]	The apparatus of claim 33, where a valid coupon comprises a first coupon code portion and a second coupon code portion.
[35]	The apparatus of claim 34, where an indication of the at least one valid coupon comprises the first coupon code portion but not the second coupon code portion.