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Fisher**

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(54) **REMOTE TRANSACTION PROCESSING OF  
AT A TRANSACTION SERVER**

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This patent is subject to a terminal disclaimer.

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(51) **Int. Cl.**

**G06Q 20/20** (2012.01)

**H04W 4/21** (2018.01)

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(52) **U.S. Cl.**

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G06Q 20/32; G06Q 20/3223; G06Q 30/00-02; G06Q 20/3276; G06Q 40/00; G06Q 20/20; G06Q 30/0609; G06Q 20/04; G06Q 20/12; G06F 17/30; G06F 17/00; G06F 17/16; G06F 21/00; G06F 21/41; H04L 29/06; H04L 63/0428; H04N 7/14

(Continued)

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,687 A \* 7/1844 Hoe ..... G06Q 20/32 235/375  
5,852,775 A \* 12/1998 Hidary ..... H04L 12/1859 455/412.1

(Continued)

**FOREIGN PATENT DOCUMENTS**

WO WO 2006095212 A1 \* 9/2006 ..... H04M 11/00  
WO WO 2006095212 A1 9/2006

**OTHER PUBLICATIONS**

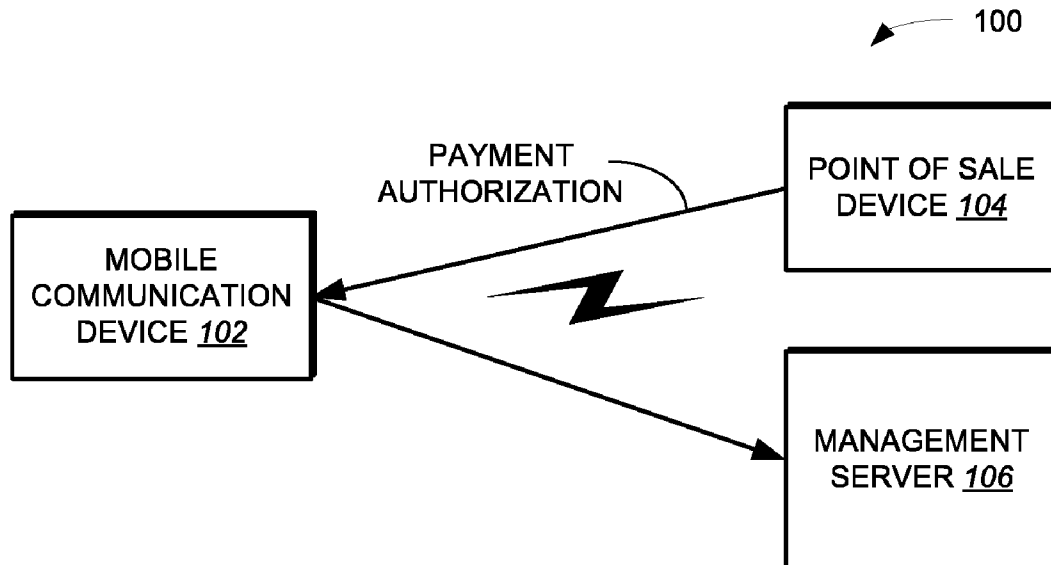
U.S. Appl. No. 11/933,337, Office Action dated May 27, 2010, 9 p. (Continued)

*Primary Examiner* — Olusegun Goyea

(57) **ABSTRACT**

A method and system for receiving digital artifacts from a management server. The method includes sending a request for a digital artifact from a mobile application to the management server for display within a specific mobile application generated screen, receiving the digital artifact from the management server, and displaying the digital artifact with the specific mobile application generated screen.

**36 Claims, 4 Drawing Sheets**



Related U.S. Application Data	(56)	References Cited
continuation of application No. 11/948,903, filed on Nov. 30, 2007, now Pat. No. 8,352,323.		
(51) <b>Int. Cl.</b> <i>G06Q 20/32</i> (2012.01) <i>G06Q 30/02</i> (2012.01) <i>G06Q 30/06</i> (2012.01) <i>G06Q 20/38</i> (2012.01) <i>G06Q 20/40</i> (2012.01) <i>G06Q 20/36</i> (2012.01) <i>G06Q 20/16</i> (2012.01) <i>G06Q 20/00</i> (2012.01) <i>G06Q 20/10</i> (2012.01) <i>H04W 8/20</i> (2009.01) <i>H04M 1/725</i> (2006.01) <i>H04W 4/18</i> (2009.01) <i>H04B 5/00</i> (2006.01) <i>G06Q 40/00</i> (2012.01) <i>H04W 4/80</i> (2018.01) <i>H04W 4/029</i> (2018.01) <i>H04N 21/81</i> (2011.01) <i>G07F 7/10</i> (2006.01) <i>H04W 88/02</i> (2009.01) <i>H04W 4/02</i> (2018.01)	(52) <b>U.S. Cl.</b> CPC ..... <i>G06Q 20/202</i> (2013.01); <i>G06Q 20/204</i> (2013.01); <i>G06Q 20/206</i> (2013.01); <i>G06Q</i> <i>20/32</i> (2013.01); <i>G06Q 20/322</i> (2013.01); <i>G06Q 20/325</i> (2013.01); <i>G06Q 20/3223</i> (2013.01); <i>G06Q 20/3226</i> (2013.01); <i>G06Q</i> <i>20/3227</i> (2013.01); <i>G06Q 20/3255</i> (2013.01); <i>G06Q 20/3278</i> (2013.01); <i>G06Q 20/3674</i> (2013.01); <i>G06Q 20/382</i> (2013.01); <i>G06Q</i> <i>20/3821</i> (2013.01); <i>G06Q 20/40</i> (2013.01); <i>G06Q 20/409</i> (2013.01); <i>G06Q 20/4012</i> (2013.01); <i>G06Q 20/4014</i> (2013.01); <i>G06Q</i> <i>30/02</i> (2013.01); <i>G06Q 30/0222</i> (2013.01); <i>G06Q 30/0238</i> (2013.01); <i>G06Q 30/0251</i> (2013.01); <i>G06Q 30/0253</i> (2013.01); <i>G06Q</i> <i>30/0255</i> (2013.01); <i>G06Q 30/0267</i> (2013.01); <i>G06Q 30/0268</i> (2013.01); <i>G06Q 30/06</i> (2013.01); <i>G06Q 30/0613</i> (2013.01); <i>G06Q</i> <i>30/0635</i> (2013.01); <i>G06Q 40/10</i> (2013.01); <i>G06Q 40/12</i> (2013.12); <i>H04B 5/0025</i> (2013.01); <i>H04M 1/72561</i> (2013.01); <i>H04W</i> <i>4/18</i> (2013.01); <i>H04W 4/21</i> (2018.02); <i>H04W</i> <i>8/205</i> (2013.01); <i>G06Q 20/10</i> (2013.01); <i>G06Q 20/105</i> (2013.01); <i>G06Q 40/00</i> (2013.01); <i>G07F 7/1008</i> (2013.01); <i>H04N</i> <i>21/812</i> (2013.01); <i>H04W 4/02</i> (2013.01); <i>H04W 4/029</i> (2018.02); <i>H04W 4/80</i> (2018.02); <i>H04W 88/02</i> (2013.01)	U.S. PATENT DOCUMENTS 5,887,266 A * 3/1999 Heinonen ..... G06Q 20/04 455/406 5,915,243 A * 6/1999 Smolen ..... G06Q 30/02 379/92.01 6,036,086 A * 3/2000 Sizer, II ..... G06Q 20/32 235/375 6,038,367 A 3/2000 Abecassis 6,075,971 A * 6/2000 Williams ..... H04N 21/25891 348/E7.063 6,101,483 A * 8/2000 Petrovich ..... G06Q 20/202 705/21 6,115,601 A * 9/2000 Ferreira ..... H04M 15/47 455/406 6,123,259 A * 9/2000 Ogasawara ..... G06K 17/0022 235/380 6,128,655 A 10/2000 Fields 6,141,666 A 10/2000 Tobin 6,199,082 B1 3/2001 Ferrel 6,250,557 B1 * 6/2001 Forslund ..... G06Q 20/3572 235/492 6,334,109 B1 * 12/2001 Kanevsky ..... G06Q 30/02 705/14.67 6,394,341 B1 * 5/2002 Makipaa ..... G06Q 20/02 235/379 6,415,156 B1 7/2002 Stadelmann 6,450,407 B1 * 9/2002 Freeman ..... G06K 19/0723 235/376 6,487,540 B1 * 11/2002 Smith ..... G06Q 20/209 705/21 6,535,132 B2 * 3/2003 Waters ..... G09F 3/00 235/383 6,587,835 B1 * 7/2003 Treyz ..... G06Q 20/12 705/14.64 6,605,120 B1 8/2003 Fields 6,647,257 B2 * 11/2003 Owensby ..... H04M 3/42348 455/414.1 6,771,981 B1 8/2004 Zalewski 6,772,396 B1 8/2004 Cronin 6,775,539 B2 * 8/2004 Deshpande ..... G06Q 30/02 455/414.4 6,886,017 B1 4/2005 Jackson 6,950,939 B2 9/2005 Tobin 6,975,856 B2 * 12/2005 Ogasawara ..... G06Q 20/108 455/411 7,031,945 B1 4/2006 Donner 7,069,248 B2 6/2006 Huber 7,072,861 B1 * 7/2006 Yamanaka ..... G06Q 20/04 705/17 7,092,905 B2 * 8/2006 Behrenbrinker ..... G06Q 20/04 705/35 7,096,003 B2 8/2006 Joao 7,110,744 B2 9/2006 Freeny 7,110,792 B2 * 9/2006 Rosenberg ..... G06Q 20/341 455/558 7,127,236 B2 10/2006 Khan 7,200,578 B2 * 4/2007 Paltenghe ..... G06F 21/6209 705/1.1 7,289,810 B2 10/2007 Jagadeesan 7,308,254 B1 12/2007 Rissanen 7,357,312 B2 4/2008 Gangi 7,379,920 B2 5/2008 Leung 7,383,226 B2 * 6/2008 Kight ..... G06Q 20/04 705/40 7,472,829 B2 1/2009 Brown 7,482,925 B2 1/2009 Hammad 7,487,912 B2 * 2/2009 Seifert ..... G06Q 20/10 235/380 7,512,567 B2 * 3/2009 Bommel ..... H04L 9/32 705/67 7,522,905 B2 4/2009 Hammad 7,555,284 B2 * 6/2009 Yan ..... G06Q 20/045 455/411
(58) <b>Field of Classification Search</b> USPC ..... 705/7, 16, 18, 26.1, 30–34, 39–44, 70, 705/1.1, 14.67, 14.72, 24, 28, 35, 26.62, 705/65, 14.23, 26.8, 27.1, 26.81, 51, 46; 455/406, 407, 414.1, 411; 707/737, 754, 707/621, 622, 999.103, 999.107; 235/462.46; 380/201; 348/14.03; 713/153		

See application file for complete search history.





(56)

References Cited

U.S. PATENT DOCUMENTS

2007/0210155	A1 *	9/2007	Swartz	.....	G06Q 20/32	235/383	2008/0172285	A1 *	7/2008	Hurowitz	.....	G06Q 30/0261	455/414.1
2007/0235519	A1	10/2007	Jang				2008/0172291	A1 *	7/2008	Hurowitz	.....	G06Q 30/02	705/14.1
2007/0235539	A1 *	10/2007	Sevanto	.....	G06K 7/10237	235/451	2008/0172292	A1 *	7/2008	Hurowitz	.....	H04N 21/25841	705/14.14
2007/0255662	A1	11/2007	Tumminaro				2008/0177668	A1	7/2008	Delean			
2007/0270166	A1 *	11/2007	Hampel	.....	H04L 51/20	455/456.3	2008/0207234	A1 *	8/2008	Arthur	.....	G06Q 30/02	455/466
2007/0288966	A1 *	12/2007	Javid	.....	H04N 21/4755	725/46	2008/0208681	A1	8/2008	Hammad			
2007/0293155	A1 *	12/2007	Liao	.....	G06Q 20/3229	455/41.2	2008/0208743	A1 *	8/2008	Arthur	.....	G06Q 20/105	705/41
2008/0004952	A1 *	1/2008	Koli	.....	G06Q 30/0277	705/14.55	2008/0208744	A1 *	8/2008	Arthur	.....	G06Q 20/105	705/41
2008/0006685	A1 *	1/2008	Rackley, III	.....	G06Q 40/00	235/379	2008/0208762	A1 *	8/2008	Arthur	.....	G06Q 20/20	705/79
2008/0010190	A1 *	1/2008	Rackley, III	.....	G06Q 20/042	705/39	2008/0221997	A1 *	9/2008	Wolfe	.....	G06Q 30/0261	705/14.26
2008/0010191	A1 *	1/2008	Rackley, III	.....	G06Q 20/10	705/39	2008/0242274	A1 *	10/2008	Swanburg	.....	G06Q 30/00	455/414.1
2008/0010192	A1 *	1/2008	Rackley, III	.....	G06Q 20/3223	705/39	2008/0249938	A1 *	10/2008	Drake-Stoker	...	H04W 12/1006	705/44
2008/0010193	A1 *	1/2008	Rackley, III	.....	G06Q 20/3221	705/39	2008/0255947	A1 *	10/2008	Friedman	.....	G06Q 20/32	705/35
2008/0010196	A1 *	1/2008	Rackley, III	.....	G06Q 20/102	705/40	2008/0262928	A1 *	10/2008	Michaelis	.....	G06Q 30/0225	705/14.26
2008/0010204	A1 *	1/2008	Rackley, III	.....	G06Q 20/042	705/45	2008/0274794	A1 *	11/2008	Mathieson	.....	G06Q 30/02	463/25
2008/0010215	A1 *	1/2008	Rackley, III	.....	G06Q 20/385	705/70	2008/0275779	A1 *	11/2008	Lakshminarayanan	.....	G06Q 20/3227	705/39
2008/0011825	A1 *	1/2008	Giordano	.....	G06Q 20/04	235/380	2008/0305774	A1	12/2008	Ramakrishna			
2008/0017704	A1 *	1/2008	VanDeburg	.....	G06Q 20/32	235/380	2008/0319915	A1 *	12/2008	Russell	.....	G06Q 30/0633	705/76
2008/0027795	A1 *	1/2008	Medlin	.....	G06Q 30/0212	705/14.14	2009/0018913	A1 *	1/2009	Sarukkai	.....	G06Q 30/0267	705/14.56
2008/0294556	A1	1/2008	Anderson				2009/0061884	A1 *	3/2009	Rajan	.....	G06Q 30/02	455/445
2008/0040265	A1 *	2/2008	Rackley, III	.....	G06Q 20/32	705/40	2009/0063312	A1 *	3/2009	Hurst	.....	G06Q 20/206	705/30
2008/0045172	A1 *	2/2008	Narayanawami	...	G06Q 30/02	455/187.1	2009/0076912	A1 *	3/2009	Rajan	.....	G06Q 30/0273	705/14.64
2008/0046366	A1 *	2/2008	Bemmel	.....	G06Q 20/20	705/44	2009/0098825	A1	4/2009	Huomo			
2008/0048022	A1 *	2/2008	Vawter	.....	G06Q 20/388	235/380	2009/0106112	A1 *	4/2009	Dalmia	.....	G06Q 20/04	705/14.17
2008/0051059	A1 *	2/2008	Fisher	.....	H04M 1/7253	455/410	2009/0112747	A1 *	4/2009	Mullen	.....	G06Q 20/04	705/35
2008/0051142	A1 *	2/2008	Calvet	.....	H04W 88/02	455/558	2009/0124234	A1 *	5/2009	Fisher	.....	G06Q 20/04	455/406
2008/0052192	A1 *	2/2008	Fisher	.....	G06Q 20/32	705/5	2009/0132362	A1 *	5/2009	Fisher	.....	G06Q 20/20	705/14.47
2008/0052233	A1 *	2/2008	Fisher	.....	G06Q 20/102	705/40	2009/0143104	A1 *	6/2009	Loh	.....	G06Q 20/352	455/558
2008/0059329	A1 *	3/2008	Luchene	.....	G06Q 30/0609	705/26.35	2009/0144161	A1 *	6/2009	Fisher	.....	G06Q 20/3227	705/16
2008/0126145	A1 *	5/2008	Rackley, III	.....	G06Q 20/102	455/406	2009/0177587	A1 *	7/2009	Siegal	.....	G06Q 30/06	705/67
2008/0133336	A1 *	6/2008	Altman	.....	H04L 51/32	455/456.1	2009/0227281	A1 *	9/2009	Hammad	.....	G06K 19/07309	455/550.1
2008/0139155	A1	6/2008	Boireau				2010/0057619	A1 *	3/2010	Weller	.....	G06Q 20/382	705/67
2008/0140520	A1 *	6/2008	Hyder	.....	G06Q 30/0207	705/14.1	2010/0063895	A1 *	3/2010	Dominguez	.....	G06Q 20/425	705/26.1
2008/0148040	A1 *	6/2008	Machani	.....	H04L 9/3226	713/150	2010/0082491	A1 *	4/2010	Rosenblatt	.....	G06Q 10/02	705/65
2008/0167017	A1 *	7/2008	Wentker	.....	H04L 12/66	455/414.1	2010/0145835	A1 *	6/2010	Davis	.....	G06Q 20/10	705/30
2008/0167961	A1 *	7/2008	Wentker	.....	G06Q 20/10	705/14.25	2010/0312694	A1 *	12/2010	Homeier-Beals	.....	G06Q 20/10	705/39
2008/0167988	A1 *	7/2008	Sun	.....	G06Q 20/26	705/39	2011/0055038	A1 *	3/2011	Mengerink	.....	G06Q 20/085	705/26.1
2008/0172274	A1 *	7/2008	Hurowitz	.....	G06Q 30/0267	455/433	2011/0320316	A1 *	12/2011	Randazza	.....	G06Q 20/02	705/26.43
							2012/0030044	A1 *	2/2012	Hurst	.....	G06Q 20/206	705/18

(56)

**References Cited**

U.S. PATENT DOCUMENTS

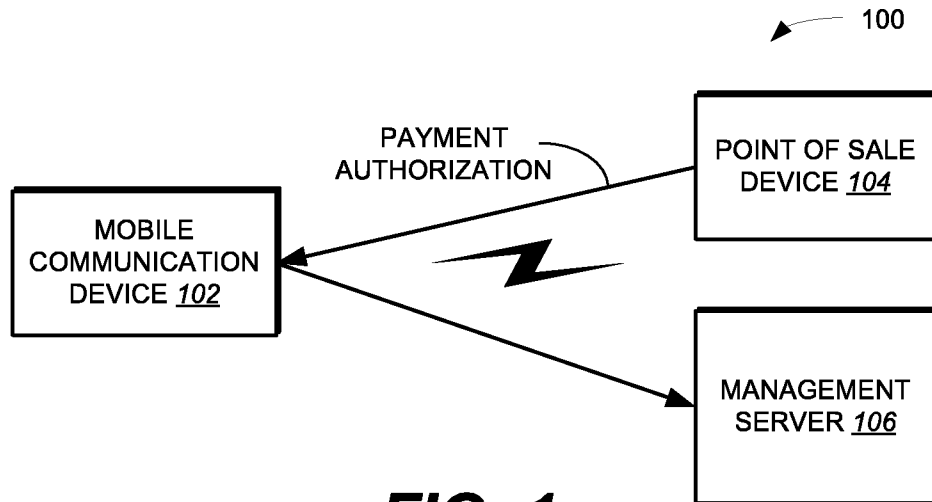
2012/0150744 A1\* 6/2012 Carlson ..... G06Q 20/12  
705/44  
2012/0215573 A1\* 8/2012 Sussman ..... G06F 9/50  
705/5  
2012/0220314 A1\* 8/2012 Altman ..... G06Q 30/0207  
455/456.3  
2012/0265677 A1\* 10/2012 Rackley, III ..... G06Q 20/10  
705/41  
2013/0013501 A1\* 1/2013 Rackley, III ..... G06Q 20/32  
705/41  
2013/0054470 A1\* 2/2013 Campos ..... G06Q 20/40  
705/67  
2013/0212016 A1\* 8/2013 Davis ..... G06Q 20/3223  
705/42

OTHER PUBLICATIONS

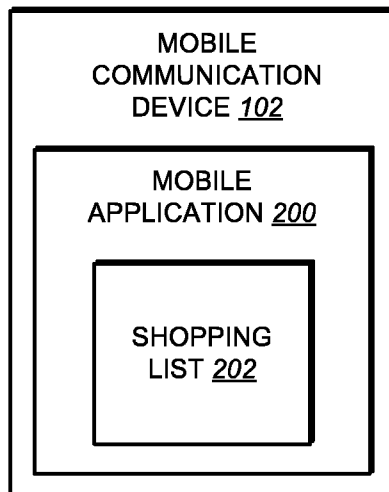
U.S. Appl. No. 11/933,351, Office Action dated Oct. 3, 2008, 5 p.

U.S. Appl. No. 11/933,367, Office Action dated May 27, 2010, 8 p.  
U.S. Appl. No. 11/467,441, Office Action dated May 27, 2009, 17 p.  
U.S. Appl. No. 12/592,581, Office Action dated Jun. 4, 2010, 20 p.  
U.S. Appl. No. 11/933,351, Office Action dated Jul. 8, 2009, 7 p.  
U.S. Appl. No. 11/939,821, Office Action dated Aug. 17, 2010, 11 p.  
U.S. Appl. No. 11/933,351, Office Action dated Aug. 18, 2010, 16 p.  
U.S. Appl. No. 11/933,321, Office Action dated May 27, 2010, 11 p.  
Deena, M. Amato, "Mobile Rewards." Chain Store Age 82.5 (2006): 160, 161, 163. Hoover's Company Profiles; ProQuest Central. Web. Oct. 5, 2012.  
"ViVOtech to Demonstrate Industry's First End-to-End Near Field Communication (NFC) Solution at the NRF Show." Business Wire: 1 Jan. 16, 2006. Business Dateline; Hoover's Company Profiles; ProQuest Central. Web. Oct. 5, 2012.

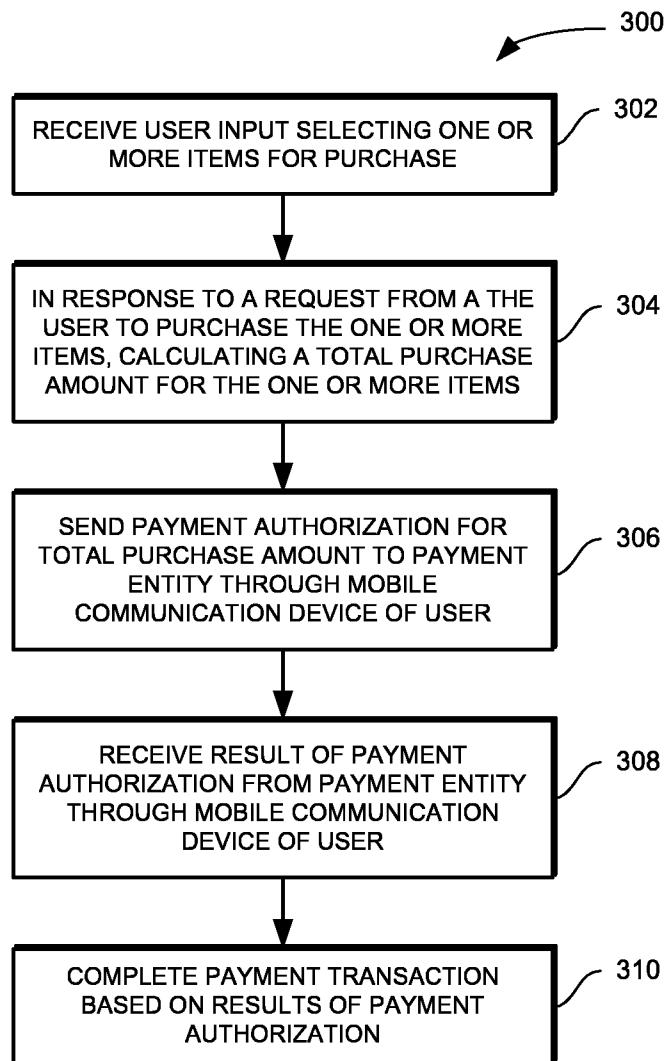
\* cited by examiner



**FIG. 1**



**FIG. 2**



**FIG. 3**



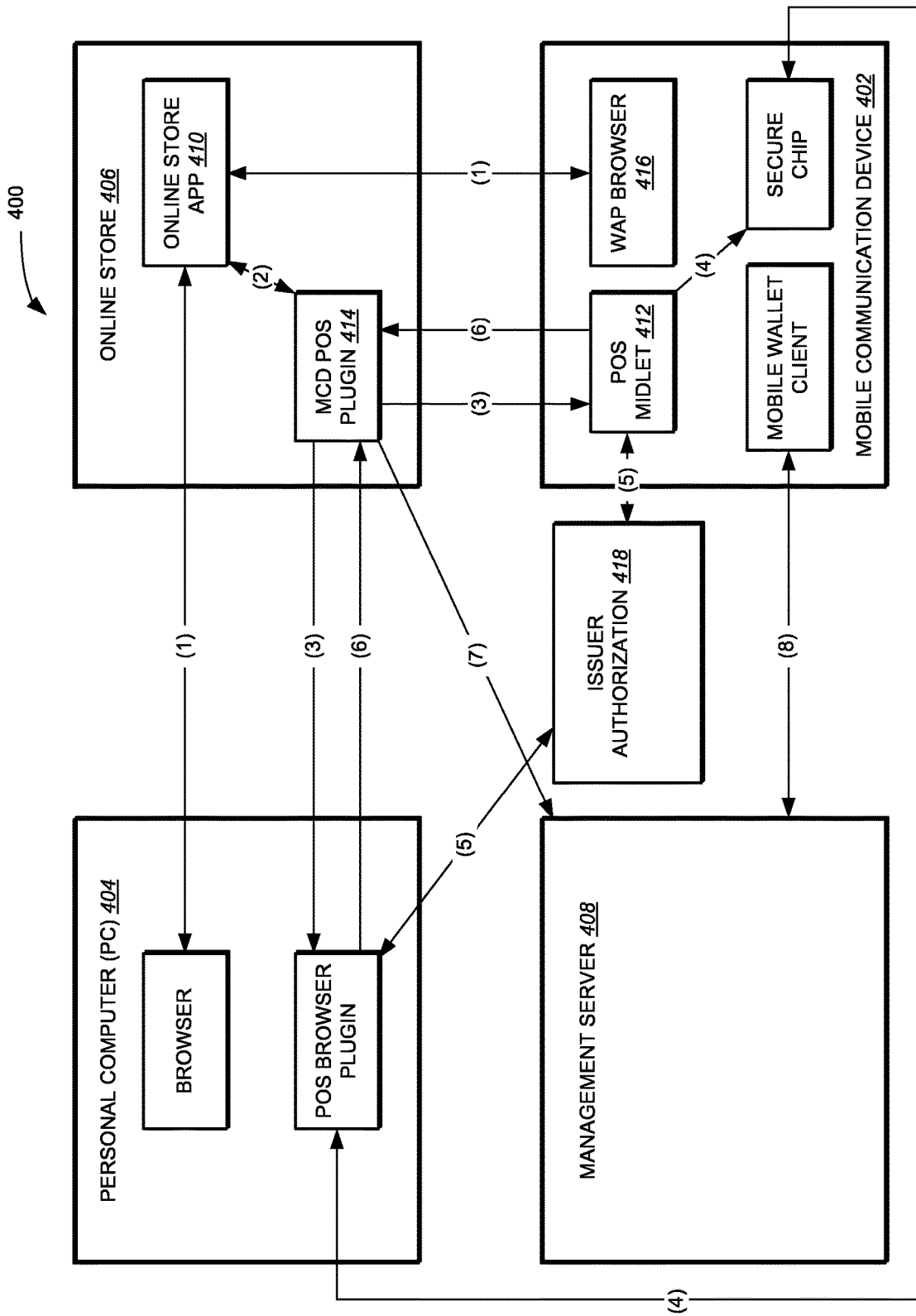
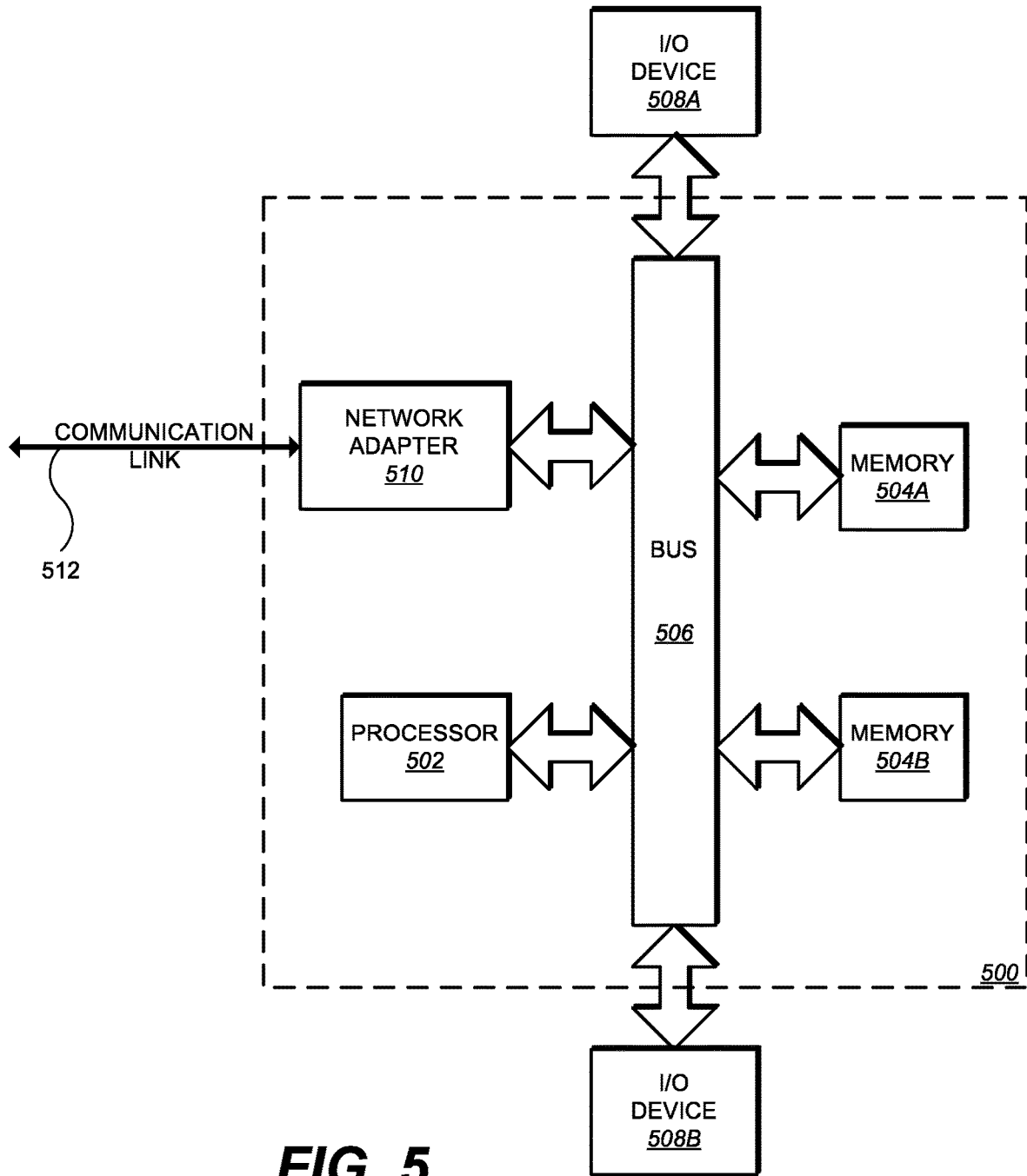


FIG. 4



**FIG. 5**

## REMOTE TRANSACTION PROCESSING OF AT A TRANSACTION SERVER

### CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of application Ser. No. 13/736,056, filed Jan. 7, 2013, titled "REMOTE TRANSACTION PROCESSING USING A DEFAULT PAYMENT METHOD" which is a continuation and claims priority to application Ser. No. 11/948,903, filed Nov. 30, 2007, titled "METHOD AND SYSTEM FOR CONDUCTING AN ONLINE PAYMENT TRANSACTION USING A MOBILE COMMUNICATION DEVICE", now U.S. Pat. No. 8,352,323 issued on Jan. 8, 2011 both of which are incorporated by reference herein in their entirety.

### FIELD OF INVENTION

The present invention relates to data communications and wireless devices.

### BACKGROUND OF THE INVENTION

Mobile communication devices—e.g., cellular phones, personal digital assistants, and the like—are increasingly being used to conduct payment transactions as described in U.S. patent application Ser. No. 11/933,351, entitled "Method and System For Scheduling A Banking Transaction Through A Mobile Communication Device", and U.S. patent application Ser. No. 11/467,441, entitled "Method and Apparatus For Completing A Transaction Using A Wireless Mobile Communication Channel and Another Communication Channel, both of which are incorporated herein by reference. Such payment transactions can include, for example, purchasing goods and/or services, bill payments, and transferring funds between bank accounts.

### BRIEF SUMMARY OF THE INVENTION

In general, this specification describes a method and system for conducting an online payment transaction through a point of sale device. The method includes receiving input from a user selecting an item for purchase through the point of sale device; calculating a total purchase amount for the item in response to a request from the user to purchase the item; and sending payment authorization for the total purchase amount from the point of sale device to a payment entity, in which the payment authorization is sent to the payment entity via a mobile communication device of the user. The method further includes receiving a result of the payment authorization from the payment entity through the mobile communication device; and completing the payment transaction based on the result of the payment authorization.

Particular implementations can include one or more of the following features. The point of sale device can be a desktop computer, a laptop computer, or a terminal. The mobile communication device can be a cellular phone, a wireless personal digital assistant (PDA), or a laptop computer. The cellular phone can be an NFC-enabled phone. Sending payment authorization for the total purchase amount from the point of sale device to a payment entity can include sending the payment authorization securely to the payment entity. The payment entity can be a person, a computer system, or a bank. The method can further include maintaining a shopping list on the mobile communication device

of the user, in which the shopping list includes a listing of one or more items to be purchased by the user. The payment authorization can be an authorization for payment with a credit card, a debit card, or a prepaid card.

The details of one or more implementations are set forth in the accompanying drawings and the description below. Other features and advantages will be apparent from the description and drawings, and from the claims.

### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a block diagram of a communication system including a wireless mobile communication device and a management server in accordance with one implementation.

FIG. 2 illustrates one implementation of the wireless mobile communication device of FIG. 1.

FIG. 3 is a method for conducting a payment transaction using a point of sale device in accordance with one implementation.

FIG. 4 illustrates a block diagram of a communication system including a wireless mobile communication device and an online store in accordance with one implementation.

FIG. 5 is a block diagram of a data processing system suitable for storing and/or executing program code in accordance with one implementation.

Like reference symbols in the various drawings indicate like elements.

### DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 illustrates one implementation of a communication system 100. The communication system 100 includes a hand-held, wireless mobile communication device 102 a point-of-sale device 104 and a management server 106. In one implementation, the mobile communication device 102 includes a mobile application (discussed in greater detail below) that permits a user of the mobile communication device 102 to conduct payment transactions. Payment transactions can include, for example, using contactless payment technology at a retail merchant point of sale (e.g., through point of sale device 104), using mobile/internet commerce (e.g., purchase tickets and products, etc.), storage of payment information and other digital artifacts (e.g., receipts, tickets, coupons, etc.), storage of banking information (payment account numbers, security codes, PIN's, etc.), and accessing banking service (account balance, payment history, bill pay, fund transfer, etc.), and so on. The mobile communication device 102 can be a cellular phone, a wireless personal digital assistant (PDA), a laptop computer, or other wireless communication device. The point of sale device 104 can be a desktop computer, laptop computer, terminal, or other device that is configured to receive user input selecting items for purchase or other transaction.

In one implementation, authorizations for payment transactions that are made through the point of sale device 104 are sent from the point of sale device 104 to an issuer authorization (e.g., management server 106) through the mobile communication device 102 (as shown in FIG. 1). In one implementation, an issuer authorization, is a payment entity that either approves or disapproves a payment transaction. An issuer authorization can be, e.g., a person, computer system, bank (or other third party). One potential benefit of having payment authorizations flow through the mobile communication device 102 is that sensitive user information (e.g. account numbers, pin numbers, and/or

identity information) need only be sent from the mobile communication device **102** directly to an issuer authorization. Such operation reduces the potential for identity theft and/or fraudulent purchases made through a point of sale device. For example, (in one implementation) payment authorizations cannot be sent to an issuer authorization if the mobile communication device **102** is turned off.

FIG. 2 illustrates one implementation of the mobile communication device **102**. The mobile communication device **102** includes a mobile application **200** that (in one implementation) is provided to the mobile communication device **102** through a remote server (e.g., management server **106**). In one implementation, the mobile application is a Mobile Wallet application available from Mobile Candy Dish, Inc., of Alameda, Calif. In one implementation, the mobile application is a hosted service, as described in U.S. patent application Ser. No. 11/939,821, entitled "Method and System For Securing Transactions Made Through a Mobile Communication Device", which is incorporated herein by reference. In one implementation, the mobile application **200** is configured to send requests to the management server for artifacts based on user input, e.g., received through a keypad (not shown) of the mobile communication device **102**. Requests to the management server **106** can also be automated, via proximity-based services, e.g., consumer tapping (or in close proximity) an LBS/contactless/RFID enabled phone against a smart poster (RFID/Bluetooth/LBS enabled, etc.), kiosk, or other device.

In one implementation, the mobile application **200** running on the mobile communication device **102** is configured to receive artifacts (e.g., advertisements, receipts, tickets, coupons, media, content, and so on) from the management server **106**. In one implementation, the management server **106** sends artifacts to the mobile application based on user profile information and/or a transaction history (or payment trends) associated with a user of the mobile communication device **102** as described in U.S. patent application Ser. No. 11/944,267, entitled "Method and System For Delivering Information To a Mobile Communication Device Based On Consumer Transactions", which is incorporated herein by reference.

In one implementation, the mobile communication device **102** is an NFC-enabled phone. The mobile communication device **102** can be NFC-enabled, for example, through an embedded chip or a sticker that is affixed to the cellular phone, as described in U.S. application Ser. No. 11/933,321, entitled "Method and System For Adapting a Wireless Mobile Communication Device For Wireless Transactions", which is incorporated herein by reference. In one implementation, the NFC chip (or sticker) on the cellular phone can be used in conjunction with a merchant's point of sale device as described in greater detail below.

For example, with reference to FIG. 4, in one implementation, the NFC chip (or sticker) on the cellular phone can communicate with NFC chips that are installed on the front of PC's (TV's, Kiosks, or any other device) and serve as scanners/readers. In this implementation a mobile candy dish applet (e.g., MCD POS plugin **414**) is installed on the consumer's computer (e.g., PC **404**) which interfaces with the NFC chip on the PC. When a consumer (or user) is logging online and they are ready to pay for their products, the consumer opens his mobile wallet and selects one of the payment methods (e.g., credit card, debit card, prepaid card, etc.) from their mobile wallet. If a default card has been selected already, this step is not necessary. The consumer then waves their phone over the NFC reader present on the PC **404**. The consumer's payment credentials are transferred

from the phone to the merchant website (e.g., online store application **410**) using a communication protocol between the chip in the phone and the chip in the PC, which can be radio frequency for example. If the consumer has coupons in their mobile wallet the consumer can either elect to manually apply the coupon, save the coupon for a future use (against a larger purchase for example), or have the coupon automatically applied during the transaction and the transaction amount is updated. After the consumer enters any necessary validation information (e.g., pin) to provide a multi-factor authentication and confirms the transaction, the online purchase is processed as normal by the merchant's online processor. The mobile wallet can retrieve transaction data, account balance from the management server **408**.

In one implementation, the mobile communication device **102** is a non NFC-enabled phone. In this implementation, the consumer connects his phone to the PC **404** via some non radio frequency method (e.g., IR, Bluetooth, USB cable, etc.). When a consumer is shopping online and they are ready to pay for their products, the consumer opens his mobile wallet and selects one of the payment methods (e.g., credit card, debit card, prepaid card, etc.) from their mobile wallet. If a default card has been selected already, this step is not necessary. The consumer then pushes, e.g., a "Buy now" button and the consumer's payment credentials are transferred from the phone to the merchant website (e.g., online store application **410**) using the protocol between the phone and the PC **404** which can be radio frequency, for example. If the consumer has coupons in their mobile wallet the consumer can either elect to manually apply the coupon, save the coupon for a future use, or have the coupon automatically applied during the transaction and the transaction amount is updated. After the consumer enters any necessary validation information (e.g., pin) to provide multi-factor authentication and confirms the transaction, the online purchase is processed as normal by the merchant's online processor. The mobile wallet can retrieve transaction data and account balance from the management server **408**.

In one implementation, the management server **408** and merchant portal (e.g., online store **408**) are maintained by trusted parties and use an encrypted tunnel to transfer financial data. When the consumer is ready to pay for their online product, they enter their cell phone number on the merchant portal. The merchant portal (which has an MCD applet (e.g., MCD POS plugin **414**) installed on its server) securely connects to the management server **408** (that in one implementation is maintained by Mobile Candy Dish (MCD)). In one implementation, the management server **408** identifies the consumer through their cell phone number, and verifies the consumer's authenticity by sending a unique transaction code to the consumer mobile wallet on their cell phone. The consumer then enters this unique transaction code onto the merchant's web portal. The merchant portal sends this transaction number to the management server **408** for authentication. Upon authentication, the consumer's virtual wallet and payment methods (e.g., credit card, debit card, prepaid card, etc.) are securely retrieved, from the management server **408** and are displayed to the consumer in a window on a website associated with the merchant portal. The consumer selects one of these payment methods to pay for their transaction. If a default card has been selected already, this step is not necessary. If the consumer has coupons in their mobile wallet the consumer can either elect to manually apply the coupon, save the coupon for a future use, or have the coupon automatically applied during the transaction and the transaction amount is updated. After the consumer enters any necessary validation information to

provide a multi-factor authentication and confirms the transaction, the online purchase is processed as normal by the merchant's online processor. The mobile wallet can retrieve transaction data, account balance from the management server **408**.

Referring to FIG. 2, in one implementation, the mobile application **200** maintains a shopping list **202** for a consumer. Accordingly, consumers have the ability to store their shopping list in their mobile wallet and add, delete, or change items on their shopping list either in offline or online mode. In one implementation, consumers are sent coupons based on items on their shopping list, preferences, previous shopping history, proximity to the physical retail store, or a combination of these parameters, as discussed in application Ser. No. 11/944,267, which is incorporated by reference above. If the consumer has coupons in their mobile wallet the consumer can either elect to manually apply the coupon, save the coupon for a future use, or have the coupon automatically applied during the transaction and the transaction amount is updated. When a consumer wants to order the items on their shopping list via an online merchant (in contrast to a physical retail store), the consumer can logon to the merchant portal and electronically transmit their shopping list to the merchant portal either by waving their phone over NFC enabled PC's or some other connection such as IR, bluetooth, USB, or the like.

FIG. 3 illustrates a method **300** for conducting a payment transaction using a point of sale device (e.g., point of sale device **104**). User input is received selecting one or more items for purchase (e.g., at the point of sale device) (step **302**). In general, the transaction being made at the point of sale device can be any type of transaction that involves the exchange or transfer of fluids—e.g., the transaction can be a payment transaction, a fund transfer, or other type of transaction. In response to a request from the user to purchase the one or more items, a total purchase amount for the one or more items is calculated (e.g., by the point of sale device) (step **304**). If the user has coupons in their mobile wallet the user can either manually apply the coupon or have the coupon automatically applied during the transaction and the transaction amount is updated. The user request to purchase an item can be received, e.g., by a user clicking on a "buy now" icon that is displayed on a graphical user interface of the point of sale device. Payment authorization for the total purchase amount is sent to a payment entity through a mobile communication device of the user (step **306**). A result of the payment authorization is received at the point of sale device from the payment entity via the mobile communication device (step **308**). The payment transaction is completed based on the result of the payment authorization (step **310**). If the payment transaction was authorized by the payment entity, then the sale of the items through the point of sale device is completed. Otherwise, if the payment transaction was not authorized by the payment entity, then the point of sale device terminates the payment transaction.

FIG. 4 illustrates an example payment transaction being made in a communication system **400** in accordance with one implementation. The communication system **400** includes a mobile communication device **402**, a personal computer (PC) **404**, an online store **406**, and a core (or datastore) **408**. As indicated by interaction (1), a user (or customer), using a phone (e.g., mobile communication device **402** or personal computer **404**), browses an online store website (online store application **410**) and finds an item that the customer wishes to purchase. This could also be a purchase made through a midlet application (POS midlet **412**) residing on the mobile communication device **402**. The

user then goes to, e.g., a checkout of the online store **406** make a purchase. If the user has coupons in their mobile wallet the user can either manually apply the coupon or have the coupon automatically applied during the transaction and the transaction amount is updated. When it comes time to authorize the purchase, (in one implementation) the user is given an option to purchase with the mobile communication device **402**. In one implementation, the mobile communication device **402** is an NFC-equipped phone (or NFC phone).

In interaction (2), when the user chooses to purchase with the mobile communication device **402**, the online store application **410** sends the transaction information for authorization to the POS vendor plugin (e.g., MCD POS plugin **414**). In one implementation, the POS vendor plugin is installed in the merchant's online store and enables the merchant to accept MCD Blaze payments as an alternative form of payment, similar to accepting credit cards for payment. As shown by interaction (3), the POS vendor plugin formats, encrypts, and cryptographically signs the purchase authorization request which is sent via a secure SSL link (e.g., HTTPS, Bluetooth, IR, USB, or other suitable protocol) established by the browser/web application **416** back to the mobile communication device **402**. As with the first scenario, all communications is over secure channels. (It may be required that the mobile wallet application be opened prior to beginning a phone online purchase.) The POS midlet **412** is a component of the mobile wallet application that executes PayPass or other payment authorization protocol between itself and the SE payment applications on the mobile communication device **402** (interaction (4)). The results of the request are sent back to the POS vendor plugin.

As shown by interaction (5), the POS midlet **412** then forwards the properly formatted authorization request to a payment entity (e.g., issuer authorization **418**) for authorization. The results of the request are then sent back to the POS component of the mobile wallet. Through interaction (6), the POS midlet **412** then forwards the results back to the MCD POS plugin **414** to complete the purchase. The MCD POS plugin **414** then forwards the purchase transaction information to the management server **408** for later customer viewing (interaction (7)). As indicated by interaction (8), users (or customers) will then be able to query the management server **408** and immediately obtain purchase information, either by phone or PC.

One or more of method steps described above can be performed by one or more programmable processors executing a computer program to perform functions by operating on input data and generating output. Generally, the invention can take the form of an entirely hardware embodiment, an entirely software embodiment or an embodiment containing both hardware and software elements. In one implementation, the invention is implemented in software, which includes but is not limited to firmware, resident software, microcode, etc. Furthermore, the invention can take the form of a computer program product accessible from a computer-usable or computer-readable medium providing program code for use by or in connection with a computer or any instruction execution system. For the purposes of this description, a computer-usable or computer readable medium can be any apparatus that can contain, store, communicate, propagate, or transport the program for use by or in connection with the instruction execution system, apparatus, or device. The medium can be an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system (or apparatus or device) or a propagation medium. Examples

of a computer-readable medium include a semiconductor or solid state memory, magnetic tape, a removable computer diskette, a random access memory (RAM), a read-only memory (ROM), a rigid magnetic disk and an optical disk. Current examples of optical disks include compact disk read only memory (CD-ROM), compact disk read/write (CD-R/W) and DVD.

FIG. 5 illustrates a data processing system 500 suitable for storing and/or executing program code. Data processing system 500 includes a processor 502 coupled to memory elements 504A-B through a system bus 506. In other implementations, data processing system 500 may include more than one processor and each processor may be coupled directly or indirectly to one or more memory elements through a system bus. Memory elements 504A-B can include local memory employed during actual execution of the program code, bulk storage, and cache memories that provide temporary storage of at least some program code in order to reduce the number of times the code must be retrieved from bulk storage during execution. As shown, input/output or I/O devices 508A-B (including, but not limited to, keyboards, displays, pointing devices, etc.) are coupled to data processing system 500. I/O devices 508A-B may be coupled to data processing system 500 directly or indirectly through intervening I/O controllers (not shown).

In one implementation, a network adapter 510 is coupled to data processing system 500 to enable data processing system 500 to become coupled to other data processing systems or remote printers or storage devices through communication link 512. Communication link 512 can be a private or public network. Modems, cable modems, and Ethernet cards are just a few of the currently available types of network adapters.

Although the present invention has been particularly described with reference to implementations discussed above, various changes, modifications and substitutes are can be made. Accordingly, it will be appreciated that in numerous instances some features of the invention can be employed without a corresponding use of other features. Further, variations can be made in the number and arrangement of components illustrated in the figures discussed above.

What is claimed is:

1. A method for processing a transaction, comprising:

receiving, at a transaction server, a payment method that corresponds to an identification code associated with a user from a remote management server, wherein prior to receiving the payment method that corresponds to the identification code associated with the user from the remote management server, the remote management server

sends a list of products to a non-browser based application generated screen generated by a non-browser based application with a graphical user interface that is downloaded and installed on a mobile device for display with a mobile device display of the mobile device, wherein the non-browser based application only generates a non-browser based application generated screen, the non-browser based application generated screen corresponding to a specific screen or area of the non-browser based application, the mobile device including the mobile device display, a mobile device processor, a mobile device wireless radio transceiver configured to support voice and data interactions through a first wireless communication channel, and a mobile device wireless fidelity (Wi-Fi) transceiver,

receives, at the non-browser based application generated screen, an identification of one or more products selected from the list of products from the non-browser based application generated screen, wherein the non-browser based application generated screen receives the identification of the one or more products selected from the list of products through user input via the mobile device display;

receives a transaction purchase request from a user from the non-browser based application generated screen, wherein the non-browser based application generated screen receives the transaction purchase request via the mobile device display of the mobile device

receives user input login information including an identification code associated with the user from the non-browser based application generated screen, wherein the non-browser based application generated screen stored on the mobile device receives the user input login information via a mobile device display of the mobile device;

upon receipt of the user input login information, authenticating, at the remote management server, the user associated with the user input login information; and

transmits the payment method that corresponds to the identification code associated with the user to the transaction server;

processing, at the transaction server, the transaction using the payment method; and

sending, from the transaction server, a transaction verification to the remote management server, wherein the transaction verification indicates that the transaction has processed and further wherein after receiving the transaction verification, the remote management server downloads the one or more products to the mobile device.

2. A transaction server for processing a transaction, comprising:

a transaction server interface configured to:

receive a payment method that corresponds to an identification code associated with a user from a remote management server, wherein

prior to receiving the payment method that corresponds to the identification code associated with the user from the remote management server, the remote management server

sends a list of products to a non-browser based application generated screen generated by a non-browser based application with a graphical user interface that is downloaded and installed on a mobile device for display with a mobile device display of the mobile device, wherein the non-browser based application only generates a non-browser based application generated screen, the non-browser based application generated screen corresponding to a specific screen or area of the non-browser based application, the mobile device including the mobile device display, a mobile device processor, a mobile device wireless radio transceiver configured to support voice and data interactions through a first wireless communication channel, and a mobile device wireless fidelity (Wi-Fi) transceiver;

receives, at the non-browser based application generated screen, an identification of one or more products selected from the list of products from the non-browser based application generated screen, wherein the non-browser based application generated screen receives

the identification of the one or more products selected from the list of products through user input via the mobile device display;

receives a transaction purchase request including information relating to the identification of the one or more products from the non-browser based application generated screen, wherein the non-browser based application generated screen receives the transaction purchase request from the user via the mobile device display of the mobile device;

receives user input login information including an identification code associated with a user from the non-browser based application generated screen, wherein the non-browser based application generated screen receives the user input login information via a mobile device display of the mobile device;

upon receipt of the user input login information, authenticating, at the remote management server, a user associated with the user input login information;

transmits the payment method that corresponds to the identification code associated with the user to the transaction server; and

send a transaction verification to the remote management server, wherein the transaction verification indicates that the transaction has processed and further wherein after receiving the transaction verification, the remote management server downloads the one or more products to the mobile device;

a transaction server processor that processes the transaction using the payment method.

3. A non-transitory computer readable medium for processing a transaction, comprising:

computer code for receiving, at a transaction server, a payment method that corresponds to an identification code associated with a user from a remote management server from a remote management server, wherein prior to receiving the payment method that corresponds to the identification code associated with the user from the remote management server, the remote management server

sends a list of products to a non-browser based application generated screen generated by a non-browser based application with a graphical user interface that is downloaded and installed on a mobile device for display with a mobile device display of the mobile device, wherein the non-browser based application only generates a non-browser based application generated screen corresponding to a specific screen or area of the non-browser based application, the mobile device including the mobile device display, a mobile device processor, a mobile device wireless radio transceiver configured to support voice and data interactions through a first wireless communication channel, and a mobile device wireless fidelity (Wi-Fi) transceiver,

receives, at the non-browser based application generated screen, an identification of one or more products selected from the list of products from the non-browser based application generated screen, wherein the non-browser based application generated screen receives the identification of the one or more products selected from the list of products through user input via the mobile device display;

receives a transaction purchase request including information relating to the identification of the one or more products from the non-browser based applica-

tion generated screen, wherein the non-browser based application generated screen receives the transaction purchase request from a the user via the mobile device display of the mobile device;

receives user input login information including an identification code associated with the user from the non-browser based application generated screen, wherein the non-browser based application generated screen stored on the mobile device receives the user input login information via a mobile device display of the mobile device;

upon receipt of the user input login information, authenticating, at the remote management server, a user associated with the user input login information; and

transmits the payment method that corresponds to the identification code associated with the user to the transaction server;

computer code for processing, at the transaction server, the transaction using the payment method; and

computer code for sending, from the transaction server, a transaction verification to the remote management server, wherein the transaction verification indicates that the transaction has processed and further wherein after receiving the transaction verification, the remote management server downloads the one or more products to the mobile device.

4. The method of claim 1, wherein the payment method is a default payment method.

5. The method of claim 1, wherein the payment method is a user selected payment method.

6. The transaction server of claim 2, where the payment method includes credit card information.

7. The transaction server of claim 2, wherein the payment method is a default payment method.

8. The transaction server of claim 2, wherein the payment method is a user selected payment method.

9. The transaction server of claim 2, where the payment method includes credit card information.

10. The method of claim 1, further wherein the non-browser based application can be used when the mobile device is not connected to a wireless network.

11. The method of claim 10, further wherein the non-browser based application monitors for access to the wireless network and automatically reconnects to the wireless network when the wireless network is available.

12. The method of claim 1, further wherein no sensitive data is stored on the mobile device.

13. The method of claim 12, wherein the sensitive data comprises at least one of information related to the payment method, information related to the user input login information, information related to identification information, and information related to an expiration dates associated with the payment method.

14. The transaction server of claim 2, further wherein the non-browser based application can be used when the mobile device is not connected to a wireless network.

15. The transaction server of claim 14, further wherein the non-browser based application monitors for access to the wireless network and automatically reconnects to the wireless network when the wireless network is available.

16. The transaction server of claim 2, further wherein no sensitive data is stored on the mobile device.

17. The transaction server of claim 16, wherein the sensitive data comprises at least one of information related to the payment method information related to the user input login information, information related to identification infor-

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mation, and information related to an expiration dates associated with the payment method.

18. The method of claim 1, further wherein after the transaction has processed, the remote management server sends a digital artifact to the mobile device.

19. The method of claim 18, further wherein the digital artifact is cached on the mobile device and accessible by the non-browser based application when there is no network connection.

20. The method of claim 18, further wherein the, non-browser based application generates an alert if it has not received the digital artifact from the remote management server within a certain period of time.

21. The method of claim 18, wherein the remote management server sends the digital artifact to the non-browser based application generated screen based on the geographical location of the mobile device.

22. The method of claim 1, further wherein the non-browser based application generated screen receives input to zoom into an image associated with a product to be purchased which results in an updated image of the product to be purchased being displayed, wherein the non-browser based application receives the input to zoom into the image associated with the product to be purchased via the mobile device display of the mobile device.

23. The method of claim 1, further wherein the graphical user interface enables the interaction between the non-browser based application and the mobile device through a graphical icon, wherein the non-browser based application receives the interaction via the mobile device display of the mobile device.

24. The method of claim 18, further wherein the non-browser based application is configured to use a structured format and further wherein the structured format means the non-browser based application can store and display a digital artifact in an organized and easily retrievable fashion.

25. The transaction server of claim 2, further wherein after the transaction has processed, the remote management server sends a digital artifact to the mobile device.

26. The transaction server of claim 25, further wherein the digital artifact is cached on the mobile device and accessible by the non-browser based application when there is no network connection.

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27. The transaction server of claim 25, further wherein the, non-browser based application generates an alert if it has not received the digital artifact from the remote management server within a certain period of time.

28. The transaction server of claim 25, wherein the remote management server sends the digital artifact to the non-browser based application generated screen based on the geographical location of the mobile device.

29. The transaction server of claim 2, further wherein the non-browser based application generated screen receives input to zoom into an image associated with a product to be purchased which results in an updated image of the product to be purchased being displayed, wherein the non-browser based application receives the input to zoom into the image associated with the product to be purchased via the mobile device display of the mobile device.

30. The transaction server of claim 2, further wherein the graphical user interface enables the interaction between the non-browser based application and the mobile device through a graphical icon, wherein the non-browser based application receives the interaction via the mobile device display of the mobile device.

31. The transaction server of claim 25, further wherein the non-browser based application is configured to use a structured format and further wherein the structured format means the non-browser based application can store and display a digital artifact in an organized and easily retrievable fashion.

32. The method of claim 18, wherein the digital artifact is media, content, ticket, a receipt, advertisement or coupon.

33. The method of claim 32, wherein the advertisement or coupon is based on one or more targeting parameters.

34. The method of claim 33, wherein the one or more targeting parameters comprise personal information and transaction related information.

35. The transaction server of claim 25, wherein the digital artifact is media, content, ticket, a receipt, an advertisement or coupon.

36. The transaction server of claim 35, wherein the advertisement or coupon is based on one or more targeting parameters.

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