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Dickelman

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(54) **CONTROL SYSTEM ARRANGEMENTS AND METHODS FOR DISPARATE NETWORK SYSTEMS**

(56) **References Cited**

U.S. PATENT DOCUMENTS

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1259 days.

5,465,206	A	11/1995	Hilt et al.
5,596,642	A	1/1997	Davis et al.
5,596,643	A	1/1997	Davis et al.
5,649,117	A	7/1997	Landry
5,649,118	A	7/1997	Carlisle et al.
5,650,604	A	7/1997	Marcous et al.
5,717,989	A	2/1998	Tozzoli et al.
6,070,150	A	5/2000	Remington et al.
6,292,789	B1	9/2001	Schutzer
6,298,335	B1	10/2001	Bernstein
6,529,187	B1	3/2003	Dickelman
6,847,953	B2*	1/2005	Kuo 705/75
7,092,913	B2	8/2006	Cannon, Jr.
7,174,302	B2	2/2007	Patricelli et al.
7,280,981	B2	10/2007	Huang et al.
7,464,859	B1	12/2008	Hawkins
7,584,151	B2	9/2009	Wells et al.
7,590,557	B2	9/2009	Harrison et al.
7,627,523	B1	12/2009	Symonds et al.

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G06Q 30/06 (2012.01)

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

CPC **G06Q 20/20** (2013.01); **G06Q 20/10** (2013.01); **G06Q 20/202** (2013.01); **G06Q 40/00** (2013.01)

(58) **Field of Classification Search**

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 See application file for complete search history.

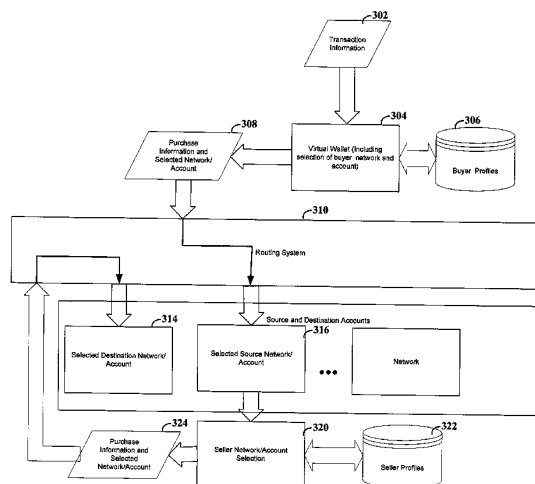
(Continued)

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(57) **ABSTRACT**

Electronic transaction data sets are processed for a multitude of disparate transactions using a plurality of autonomous payment networks. A software-programmed computer type system receives and processes point-of-sale transaction data to select one of the payment networks associated with a participant ID (e.g., for a buyer or seller) in the transaction data. The system includes a plurality of network-specific interface modules, each associated with a specific payment network for interfacing therewith. For point-of-sale transaction data, the interface module corresponding to the selected payment network communicates payment data to the selected payment network to effect electronic payment for the point-of-sale transaction data.

20 Claims, 6 Drawing Sheets



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(56)

References Cited

U.S. PATENT DOCUMENTS

7,661,586	B2	2/2010	Robbins, Jr. et al.	2004/0024703	A1	2/2004	Roskind	
7,664,690	B2	2/2010	Dirnberger et al.	2004/0030657	A1	2/2004	Holm-Blagg et al.	
7,680,679	B1	3/2010	Patricelli et al.	2004/0044621	A1	3/2004	Huang et al.	
7,693,783	B2 *	4/2010	Balasubramanian et al. ...	2004/0080691	A1	4/2004	Mi et al.	705/38
7,702,530	B2	4/2010	Pearson	2004/0093302	A1	5/2004	Baker et al.	
7,702,553	B1	4/2010	Dickelman	2005/0060579	A1	3/2005	Dickelman et al.	
7,702,577	B1	4/2010	Dickelman	2005/0077350	A1	4/2005	Courtion et al.	
7,711,621	B2	5/2010	Huang et al.	2005/0222961	A1	10/2005	Staib et al.	
2001/0014878	A1	8/2001	Mitra et al.	2005/0267840	A1	12/2005	Holm-Blagg et al.	
2002/0002495	A1	1/2002	Ullman	2006/0089906	A1	4/2006	Rowley	
2002/0111886	A1	8/2002	Chenevich et al.	2006/0116957	A1	6/2006	May et al.	
2002/0111915	A1	8/2002	Clemens et al.	2006/0178986	A1 *	8/2006	Giordano et al.	705/40
2002/0111916	A1 *	8/2002	Coronna et al.	2007/0038577	A1	2/2007	Werner et al.	
2002/0145051	A1	10/2002	Charrin	2007/0282743	A1	12/2007	Lovelett et al.	
2002/0184147	A1	12/2002	Boulger	2008/0046358	A1	2/2008	Holm-Blagg et al.	
2003/0004867	A1 *	1/2003	Kight et al.	2008/0091596	A1 *	4/2008	Labaton	705/40
2003/0009382	A1 *	1/2003	D'Arbeloff et al.	2008/0103985	A1	5/2008	Huang et al.	
2003/0061147	A1	3/2003	Fluhr et al.	2008/0275748	A1	11/2008	John	
2003/0061157	A1	3/2003	Hirka et al.	2008/0306838	A1	12/2008	Fleet et al.	
				2008/0307034	A1	12/2008	Fleet et al.	
				2009/0030848	A1	1/2009	Wendel	

* cited by examiner

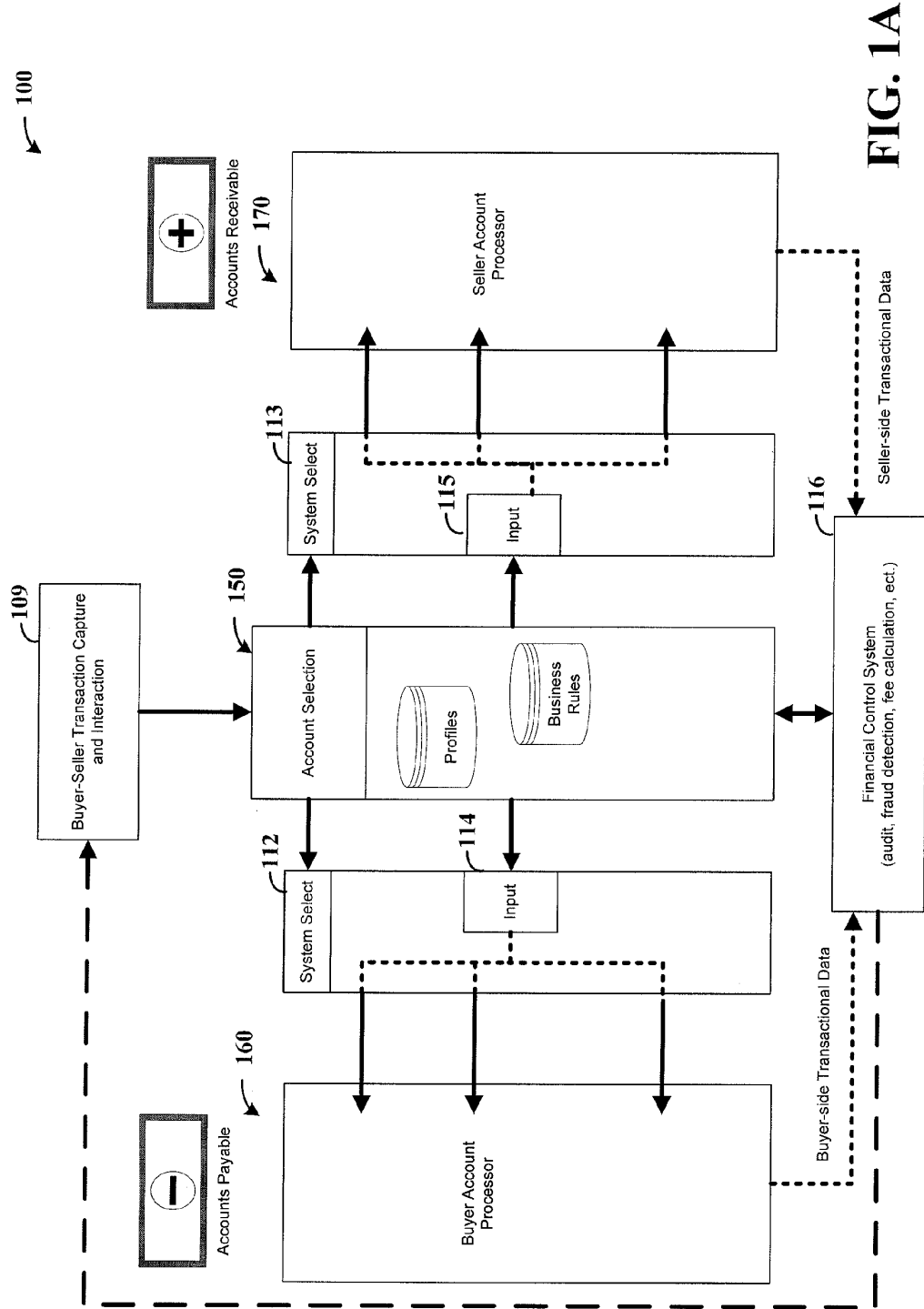
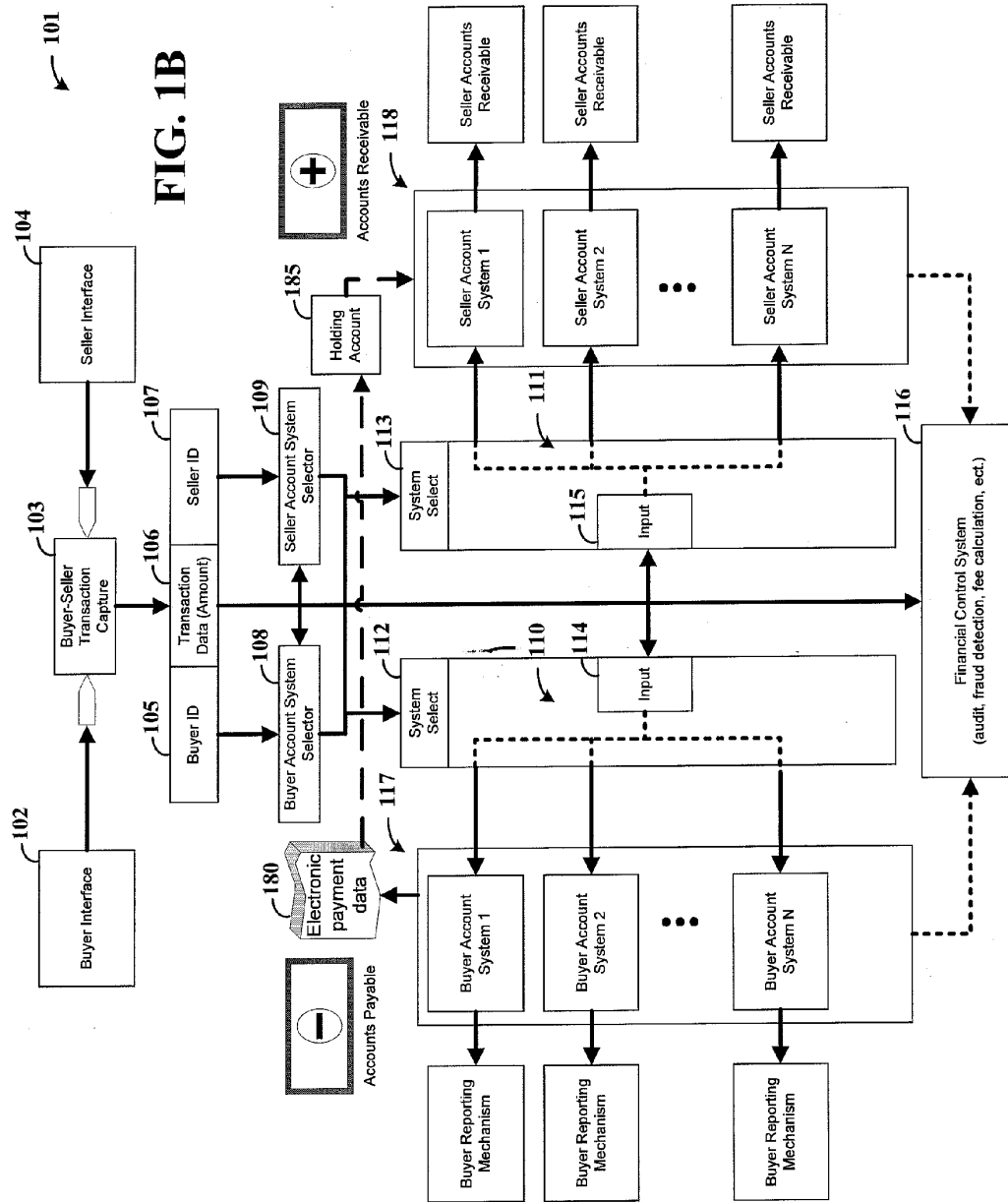


FIG. 1A



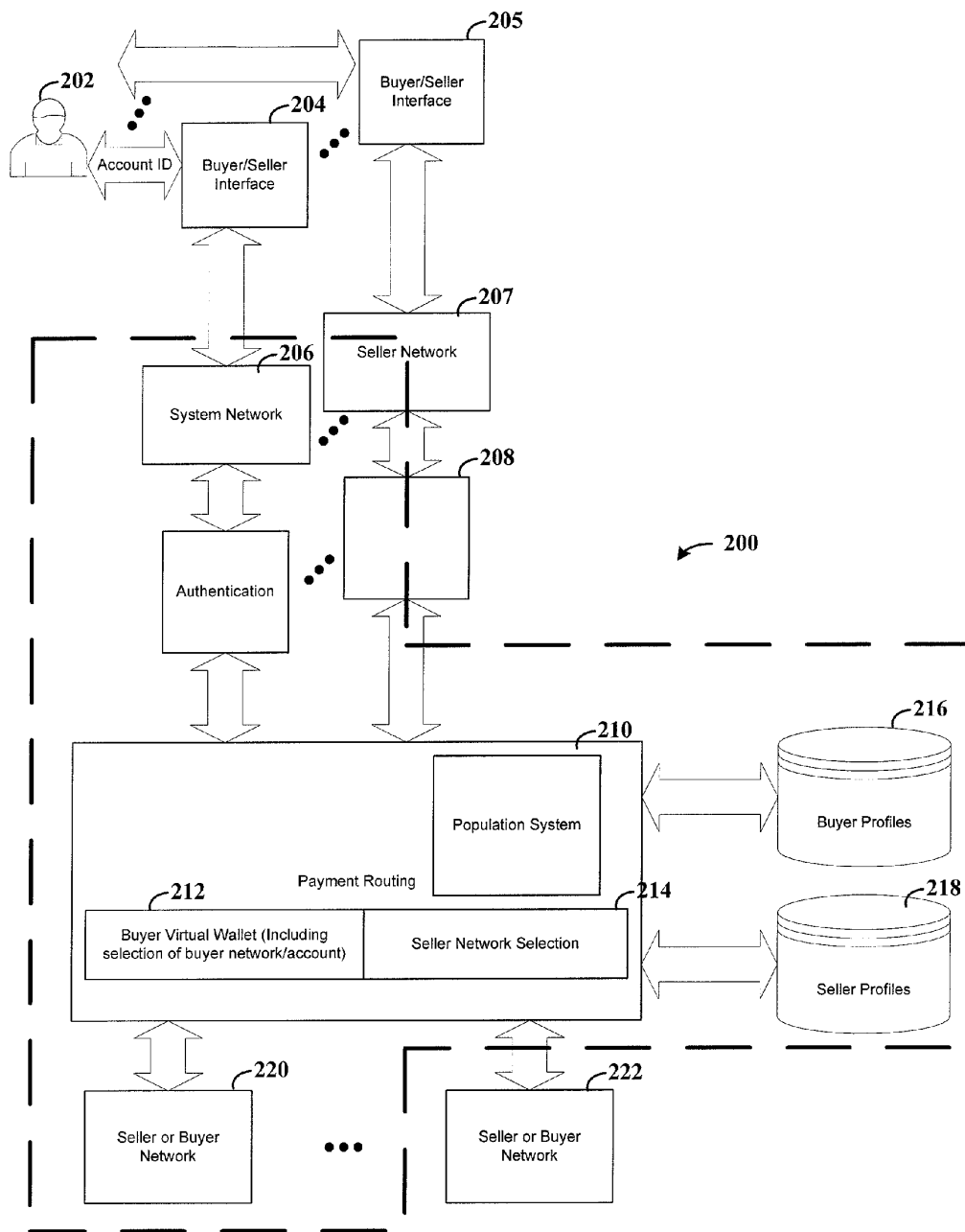


FIG. 2

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