Apple Inc.,

v.

Universal Secure Registry, LLC,

Petitioner Apple Inc.'s Demonstrative Slides U.S. Patent No. 8,856,539

Case No. IPR2018-00812
United States Patent and Trademark Office
August 27, 2019

Roadmap

- The Claims Are Invalid
- Responses To USR’s Sur-reply
- USR’s Substitute Claims Are Not Patentable
- USR’s CMTA Should Be Denied
- USR’s Motion To Strike Should Be Denied

Roadmap

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- USR’s Substitute Claims Are Not Patentable
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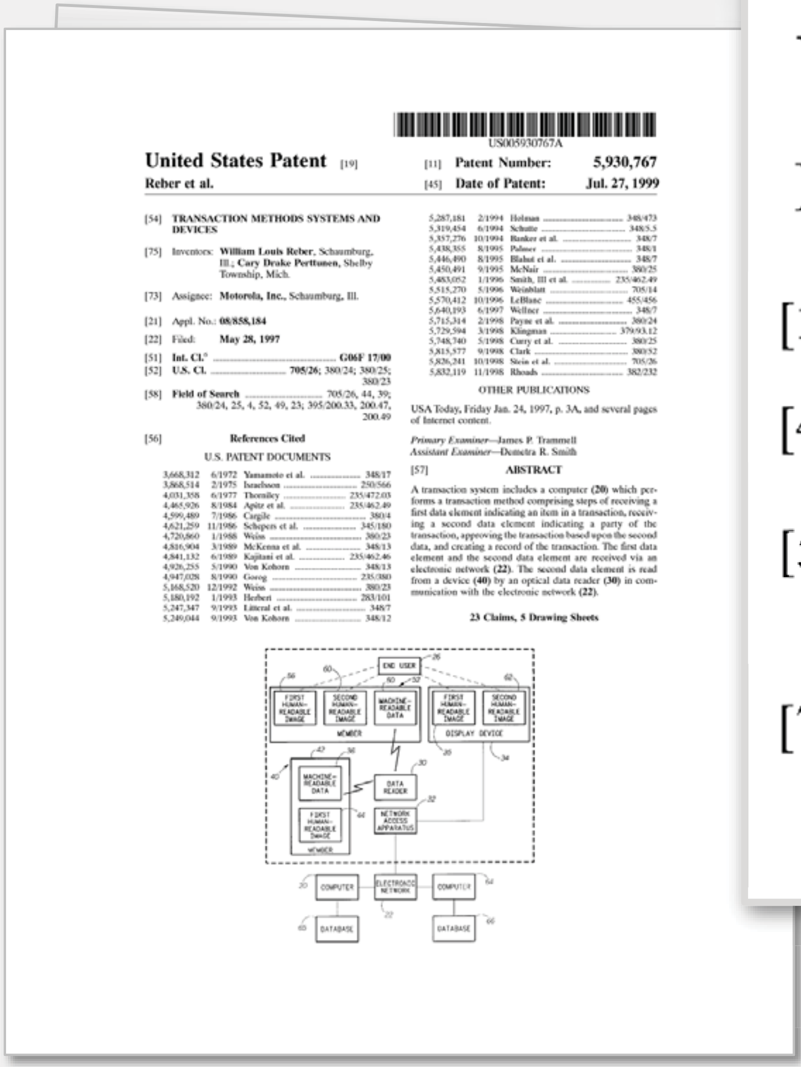
- USR’s Motion To Strike Should Be Denied

The Claims Are Invalid

- Claims 1-3, 5-8, 16-24, 26-30, and 37-38 are invalid over Reber and Franklin.

The Prior Art: The Reber ’767 Reference



US005930767A

United States Patent [19]

Reber et al.

[11] **Patent Number:** **5,930,767**

[45] **Date of Patent:** **Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**^{6} **G06F 17/00**

[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

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5,570,412	10/1996	LeBlanc	455/456
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5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

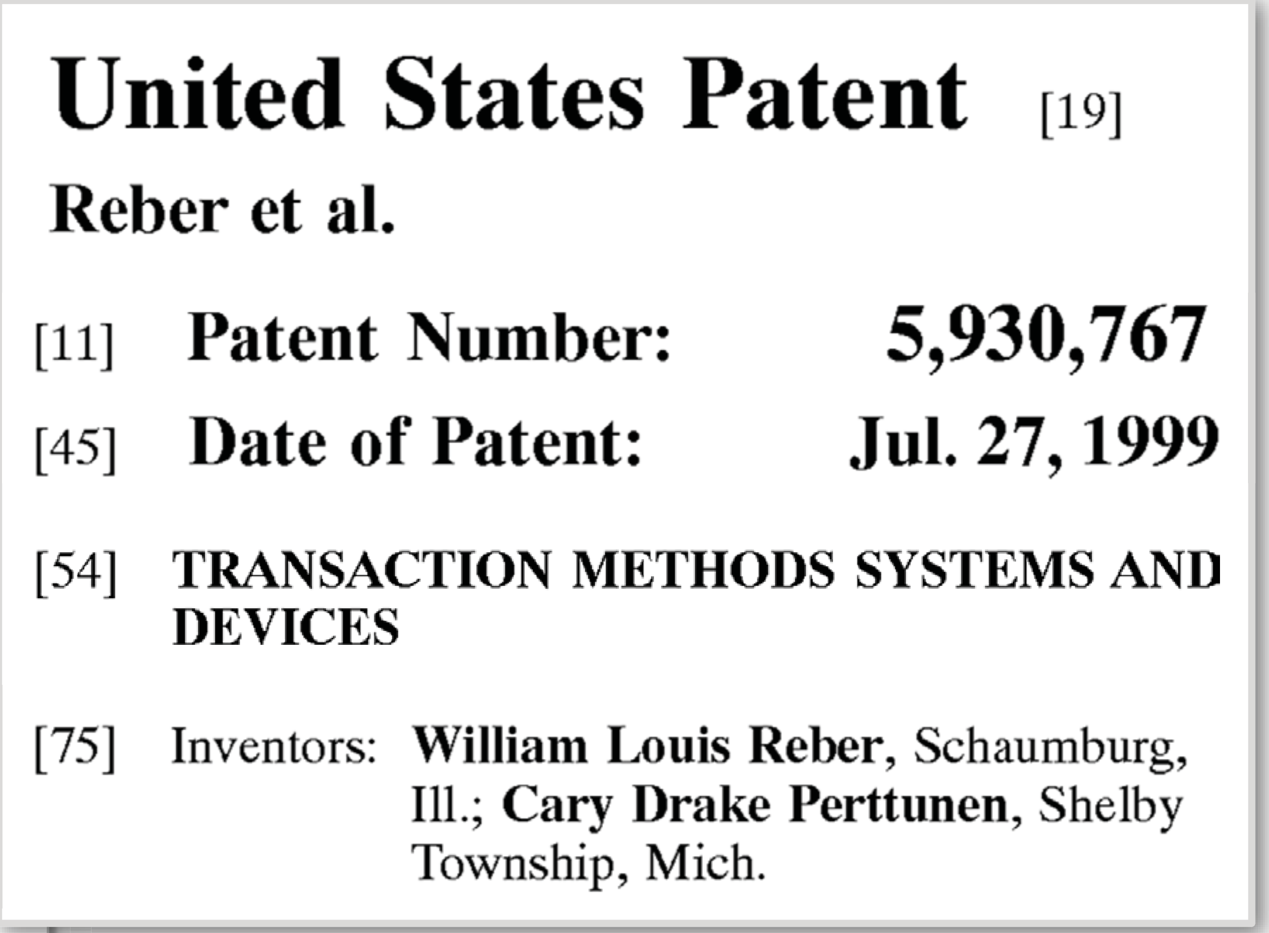
USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

23 Claims, 5 Drawing Sheets



United States Patent [19]

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[11] **Patent Number:** **5,930,767**

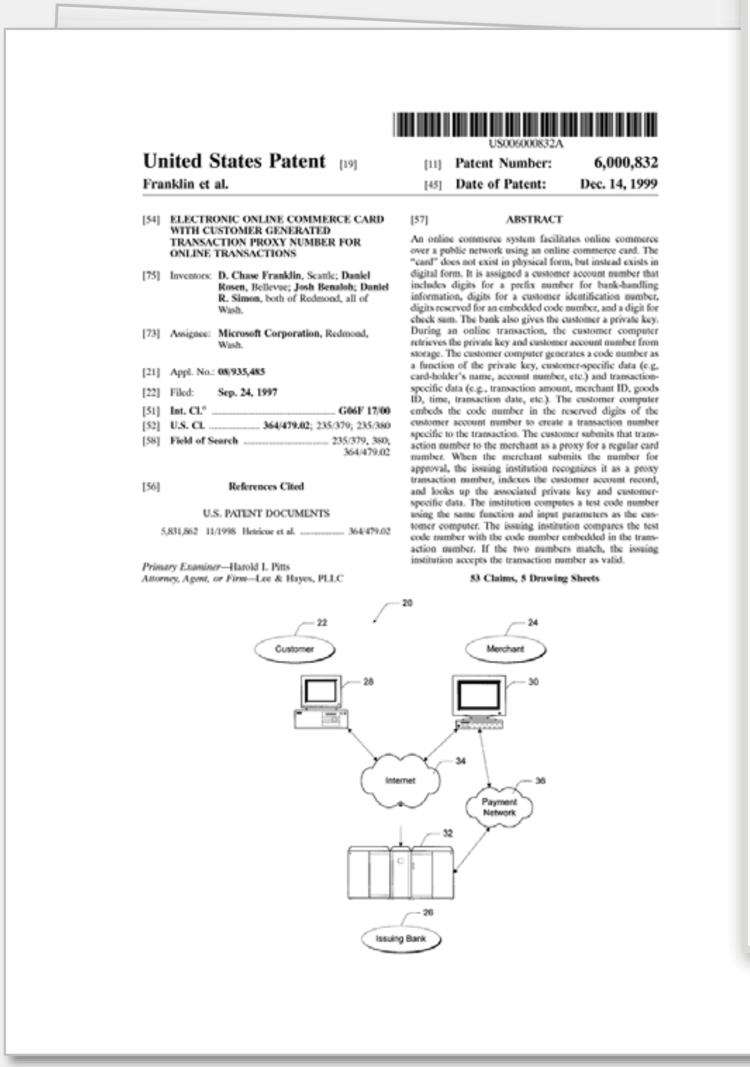
[45] **Date of Patent:** **Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

Ex. 1131 [Reber], Cover

The Prior Art: The Franklin ’832 Reference



US006000832A

United States Patent [19]

Franklin et al.

[11] **Patent Number: 6,000,832**

[45] **Date of Patent: Dec. 14, 1999**

[54] **ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS**

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

[22] Filed: **Sep. 24, 1997**

[51] **Int. Cl.**^{6} **G06F 17/00**

[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380

[58] **Field of Search** 235/379, 380, 364/479.02

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,831,862 11/1998 Hetricue et al. 364/479.02

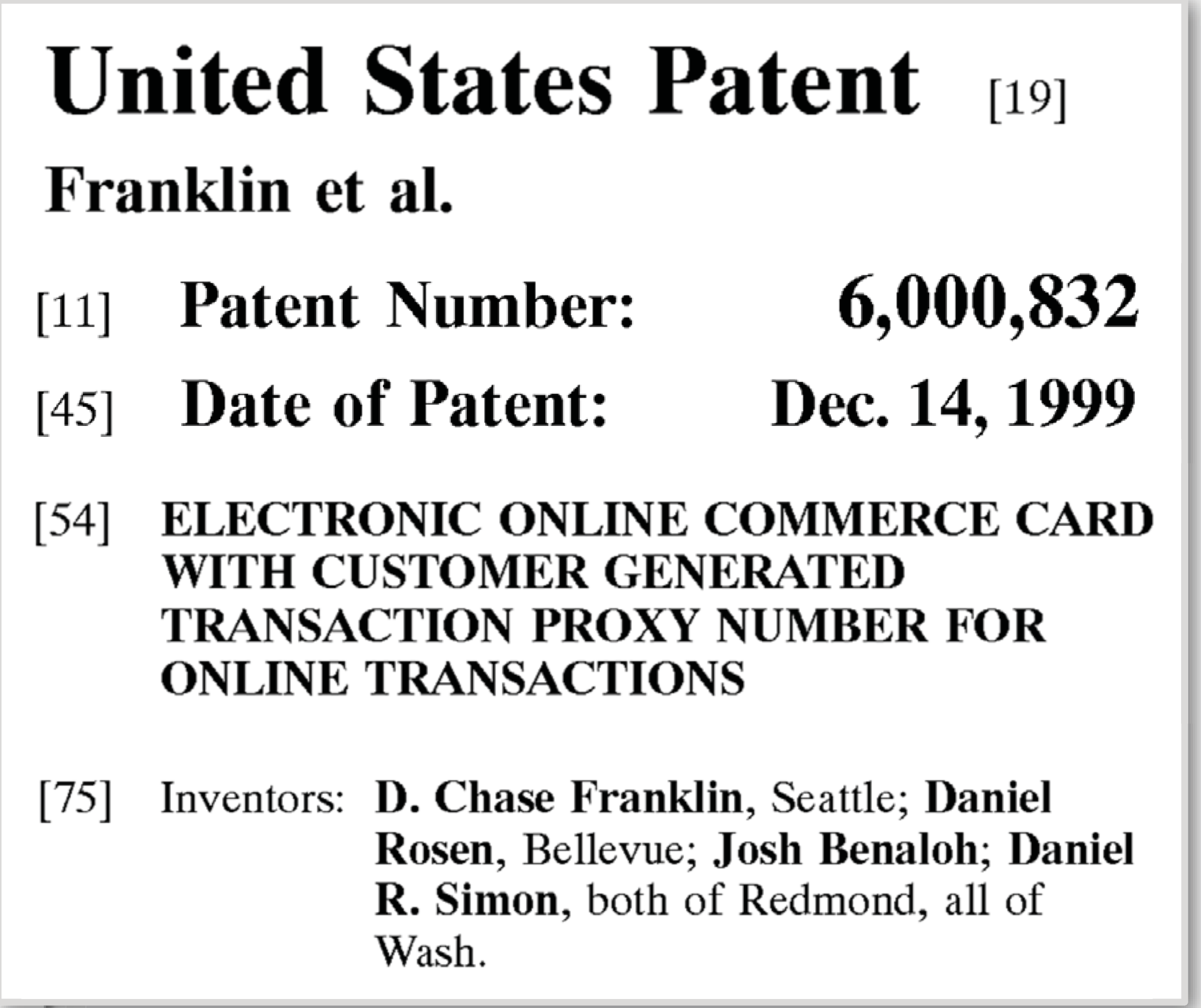
Primary Examiner—Harold I. Pitts
Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] **ABSTRACT**

An online commerce system facilitates online commerce over a public network using an online commerce card. The “card” does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as a function of the private key, customer-specific data (e.g. card-holder’s name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the reserved digits of the customer account number to create a transaction number specific to the transaction. The customer submits that transaction number to the merchant as a proxy for a regular card number. When the merchant submits the number for approval, the issuing institution recognizes it as a proxy transaction number, indexes the customer account record, and looks up the associated private key and customer-specific data. The institution computes a test code number using the same function and input parameters as the customer computer. The issuing institution compares the test code number with the code number embedded in the transaction number. If the two numbers match, the issuing institution accepts the transaction number as valid.

53 Claims, 5 Drawing Sheets

20
22
Customer
24
Merchant
28
30
34
Internet
36
Payment Network
32
26
Issuing Bank



United States Patent [19]

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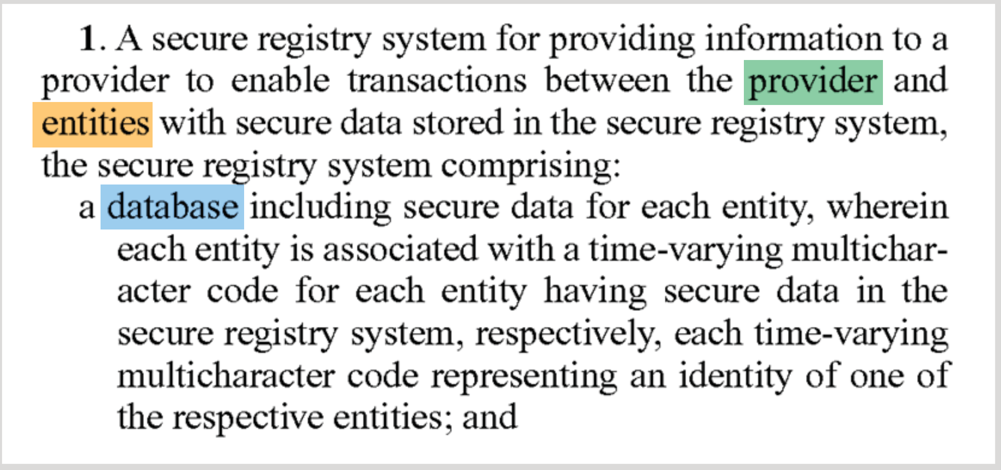
[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

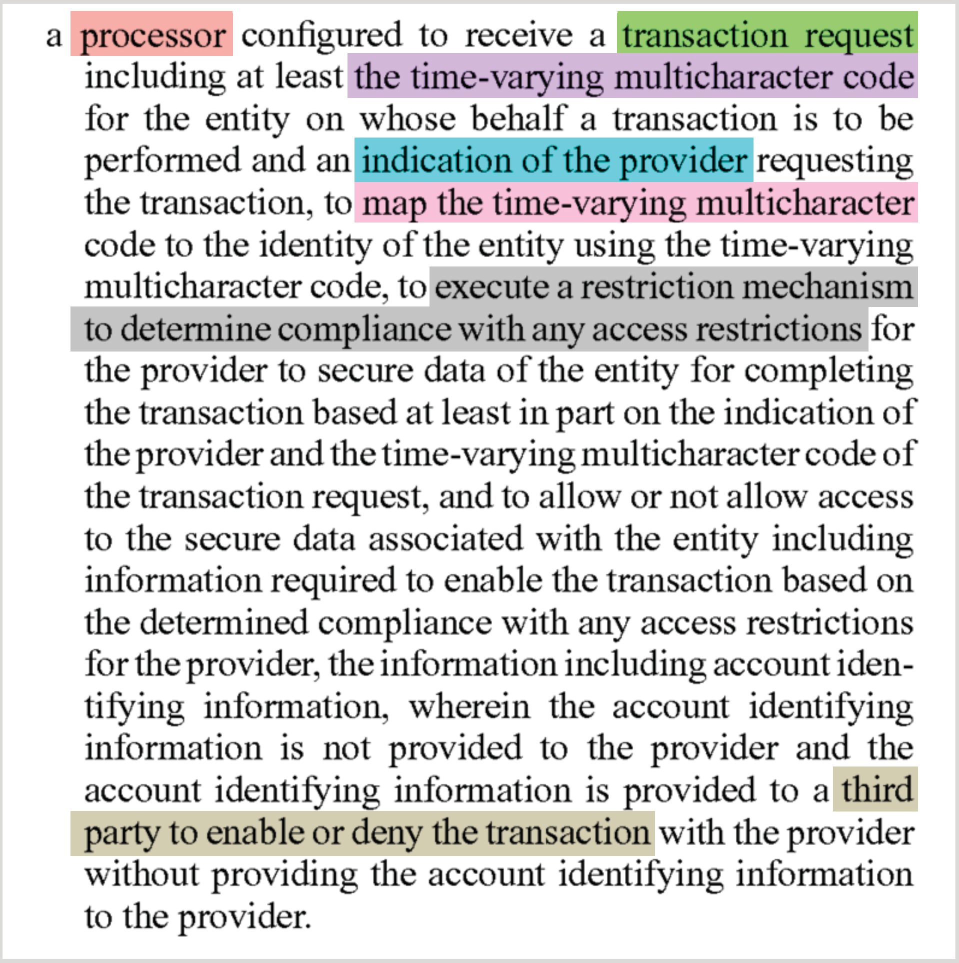
Ex. 1132 [Franklin], Cover

ʹ539 Patent Claims a System Directed to Verifying an Identity in a Transaction Using a Time-Varying Multicharacter Code



1. A secure registry system for providing information to a provider to enable transactions between the provider and entities with secure data stored in the secure registry system, the secure registry system comprising:

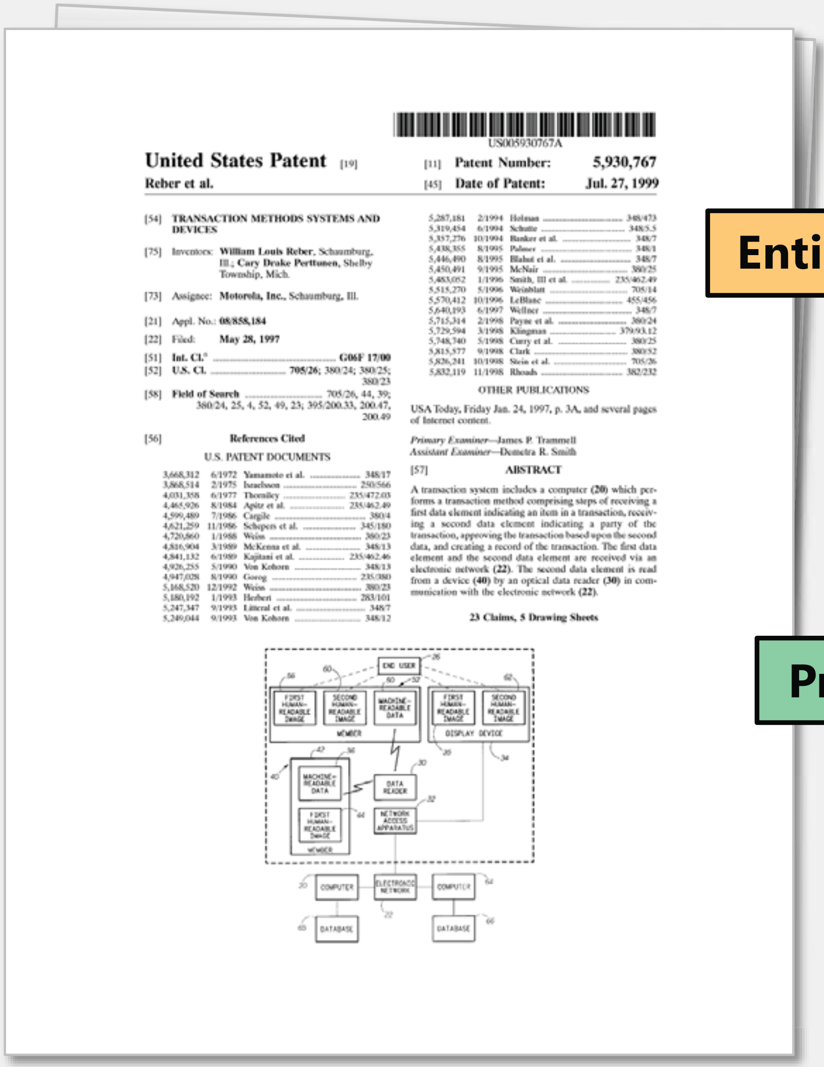
a database including secure data for each entity, wherein each entity is associated with a time-varying multicharacter code for each entity having secure data in the secure registry system, respectively, each time-varying multicharacter code representing an identity of one of the respective entities; and



a processor configured to receive a transaction request including at least the time-varying multicharacter code for the entity on whose behalf a transaction is to be performed and an indication of the provider requesting the transaction, to map the time-varying multicharacter code to the identity of the entity using the time-varying multicharacter code, to execute a restriction mechanism to determine compliance with any access restrictions for the provider to secure data of the entity for completing the transaction based at least in part on the indication of the provider and the time-varying multicharacter code of the transaction request, and to allow or not allow access to the secure data associated with the entity including information required to enable the transaction based on the determined compliance with any access restrictions for the provider, the information including account identifying information, wherein the account identifying information is not provided to the provider and the account identifying information is provided to a third party to enable or deny the transaction with the provider without providing the account identifying information to the provider.

Ex. 1101 [ʹ539 Patent], Claim 1

Reber Discloses a “Processor” and “Database” for Conducting Transactions Between an “Entity” and a “Provider”



US005930767A

United States Patent [19]

Reber et al.

[11] **Patent Number: 5,930,767**

[45] **Date of Patent: Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**⁶ **G06F 17/00**

[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,668,312	6/1972	Yamamoto et al.	348/17
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4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
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5,249,044	9/1993	Von Kohorn	348/12
5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
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5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
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5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
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OTHER PUBLICATIONS

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Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

23 Claims, 5 Drawing Sheets

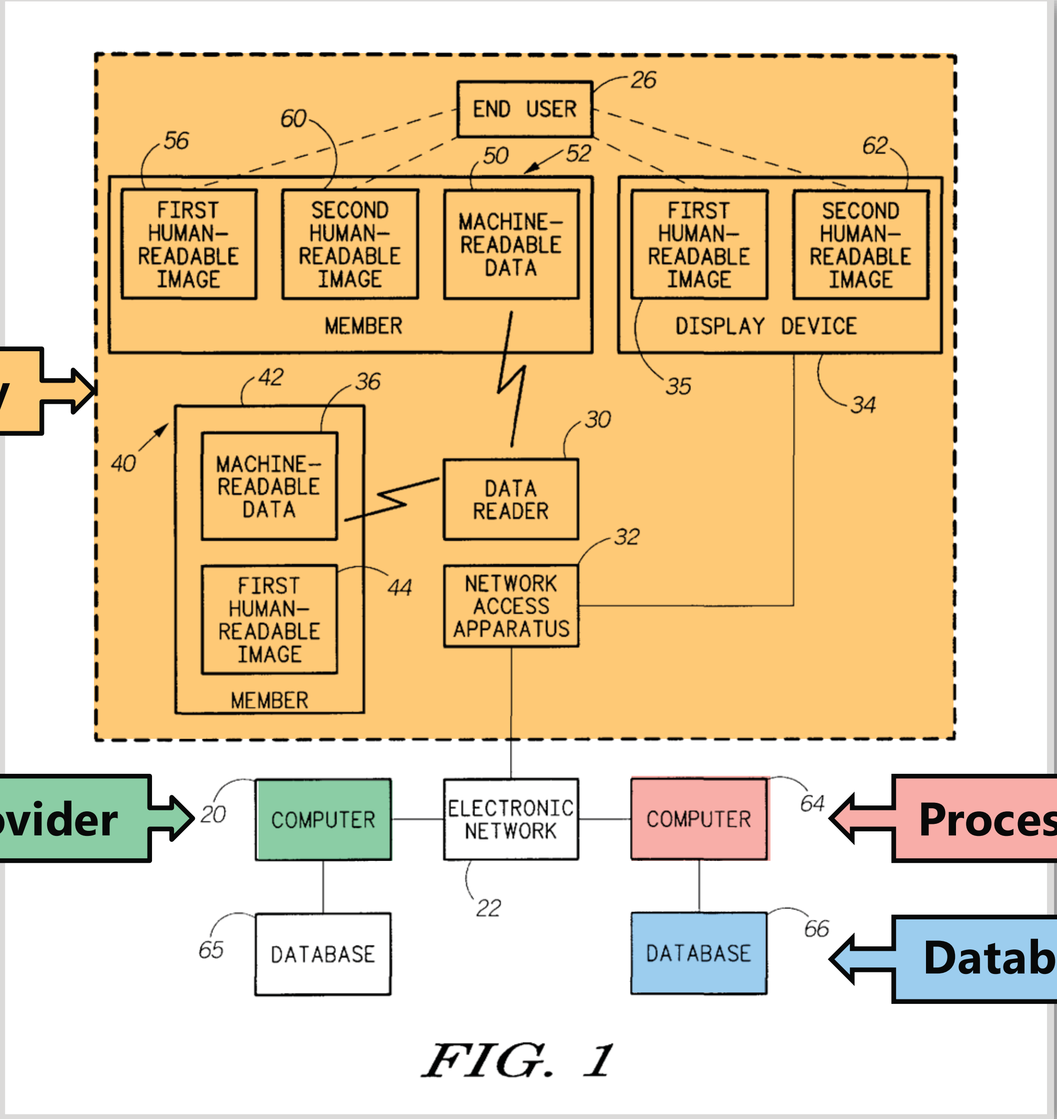


FIG. 1

Entity

Provider

Processor

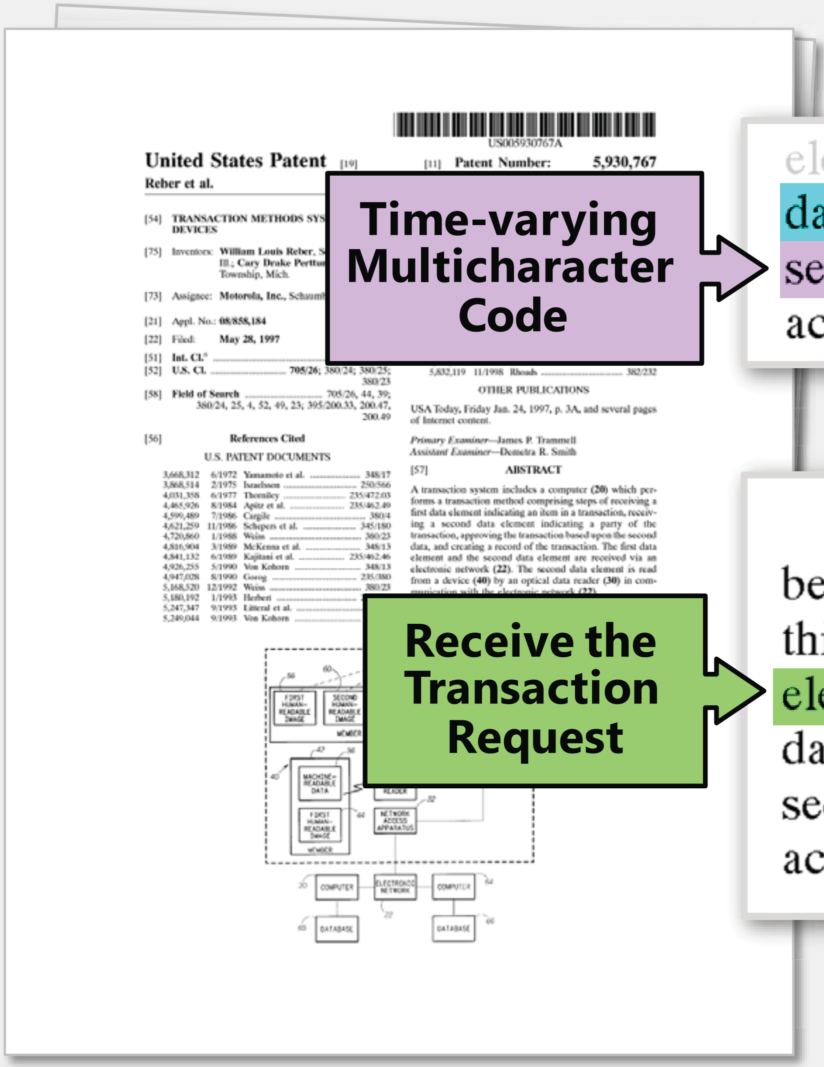
Database

Ex. 1131 [Reber], Fig. 1

Petition at 19-25.

Reber Discloses a "Transaction Request" Including Two "Data Elements"

Indication of the Provider



US005930767A

United States Patent [19]

Reber et al.

[11] Patent Number: 5,930,767

[54] TRANSACTION METHODS SYS DEVICES

[75] Inventors: William Louis Reber, S Ill.; Cary Drake Perttu Township, Mich.

[73] Assignee: Motorola, Inc., Schaumb

[21] Appl. No.: 08/858,184

[22] Filed: May 28, 1997

[51] Int. Cl.⁶ ....

[52] U.S. Cl. 705/26; 380/24; 380/25; 380/23

[58] Field of Search 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

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Primary Examiner—James P. Trammell
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Time-varying Multicharacter Code

Receive the Transaction Request

electronic network 22. The transaction data includes a first data element indicating a first party of a transaction and a second data element indicating a second party of the transaction. The first party includes a creditor, a seller, a

Ex. 1131 [Reber], 5:48-51

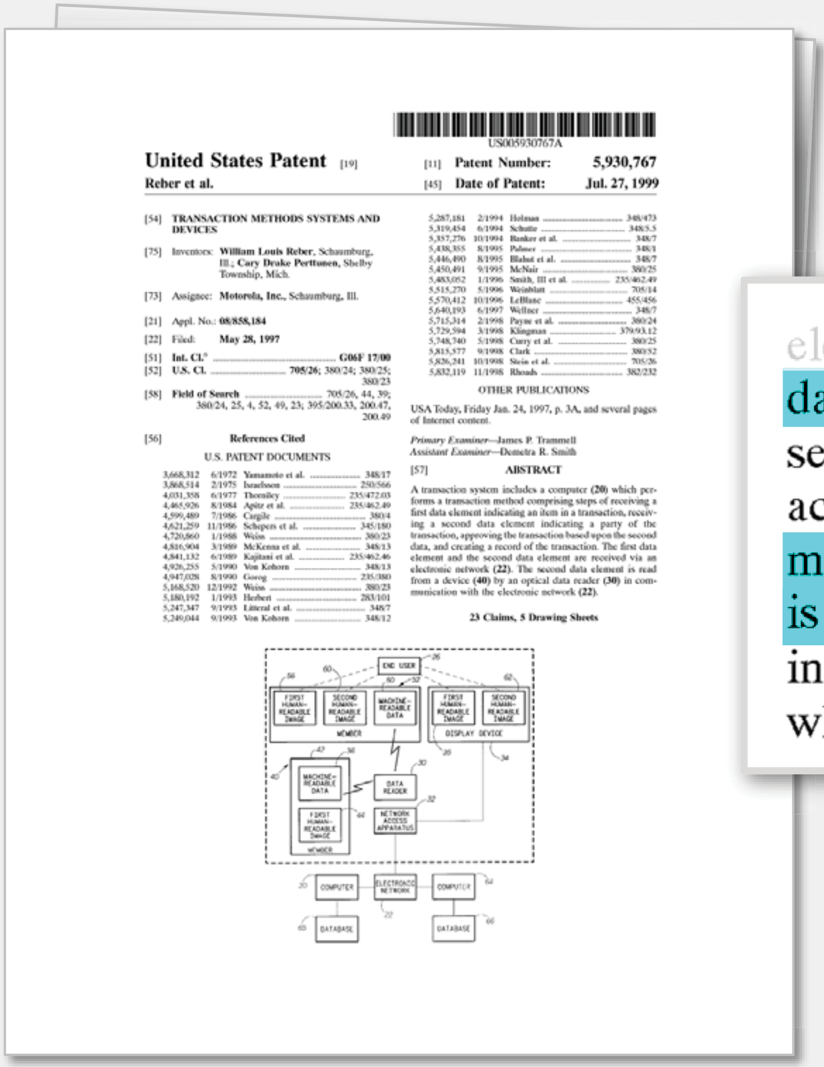
Additionally, the herein-described transaction system can be used to perform a second preferred transaction method. In this case, the computer 64 receives transaction data via the electronic network 22. The transaction data includes a first data element indicating a first party of a transaction and a second data element indicating a second party of the transaction. The first party includes a creditor, a seller, a

Ex. 1131 [Reber], 5:45-51

Petition at 33-35.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Reber Discloses Including an “Indication of the Provider” in the Transaction Request



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United States Patent [19]

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23 Claims, 5 Drawing Sheets

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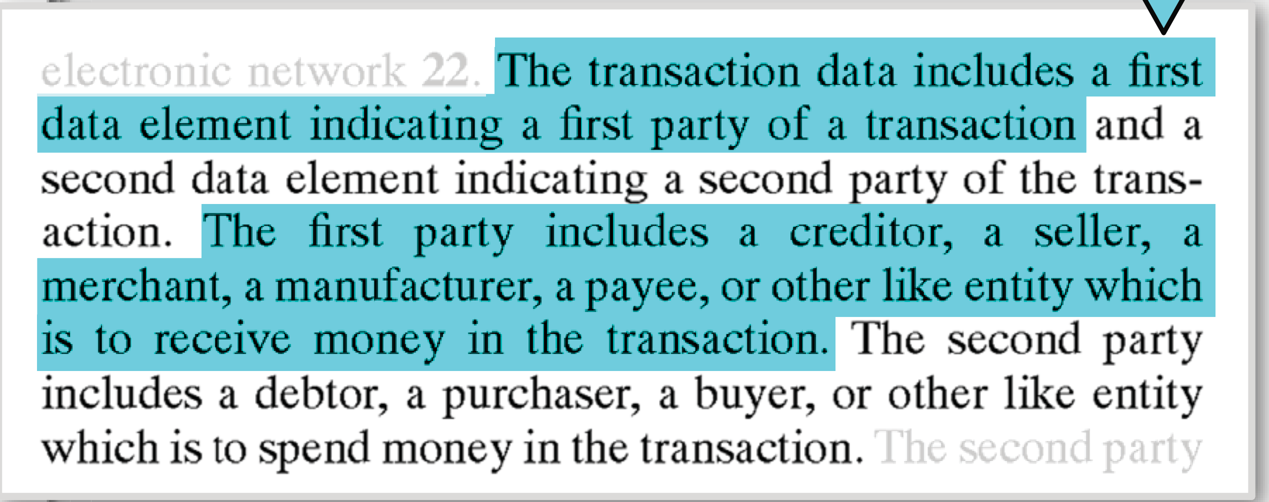


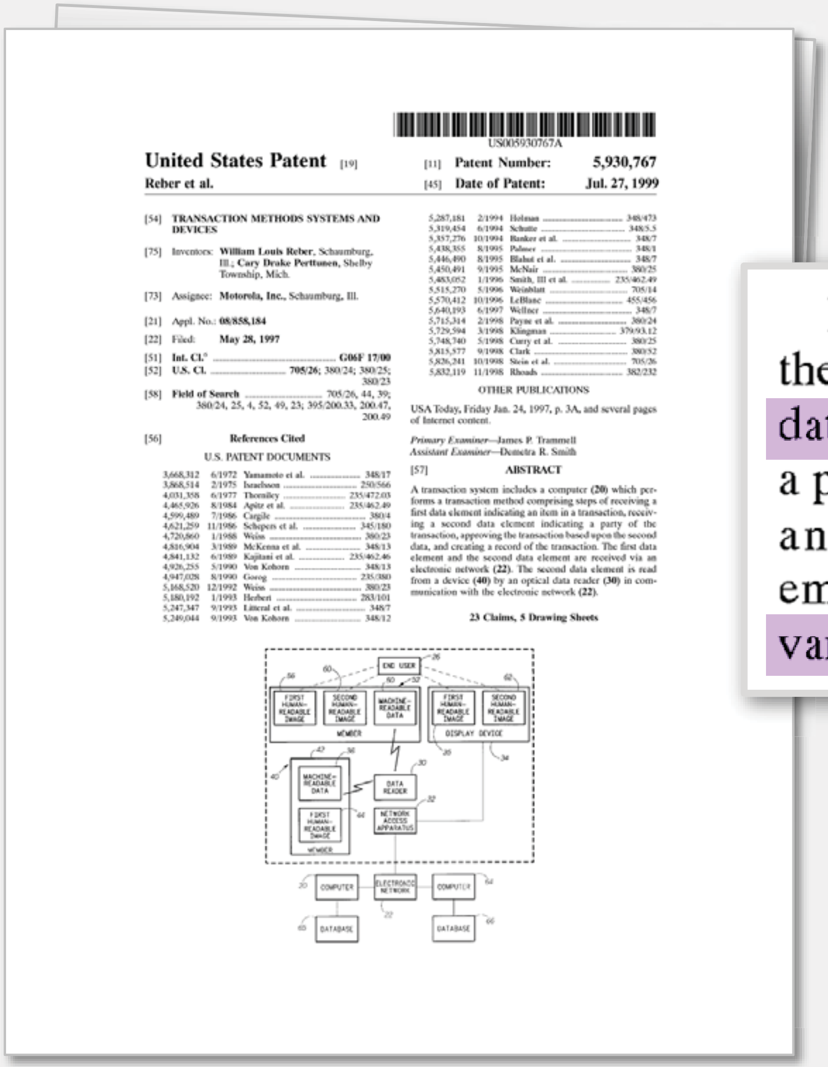
electronic network 22. The transaction data includes a first data element indicating a first party of a transaction and a second data element indicating a second party of the transaction. The first party includes a creditor, a seller, a merchant, a manufacturer, a payee, or other like entity which is to receive money in the transaction. The second party includes a debtor, a purchaser, a buyer, or other like entity which is to spend money in the transaction. The second party

Ex. 1131 [Reber], 5:48-55

Petition at 33-34.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Reber Discloses Including a "Time-varying Multicharacter Code" in the Transaction Request



US005930767A

United States Patent [19]

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[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

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5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

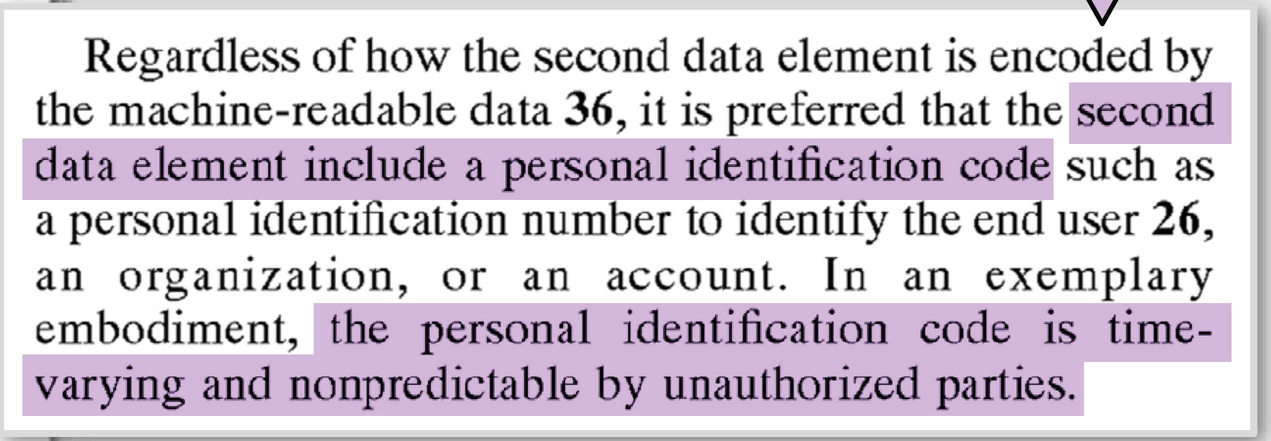
Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

23 Claims, 5 Drawing Sheets

Time-varying Multicharacter Code



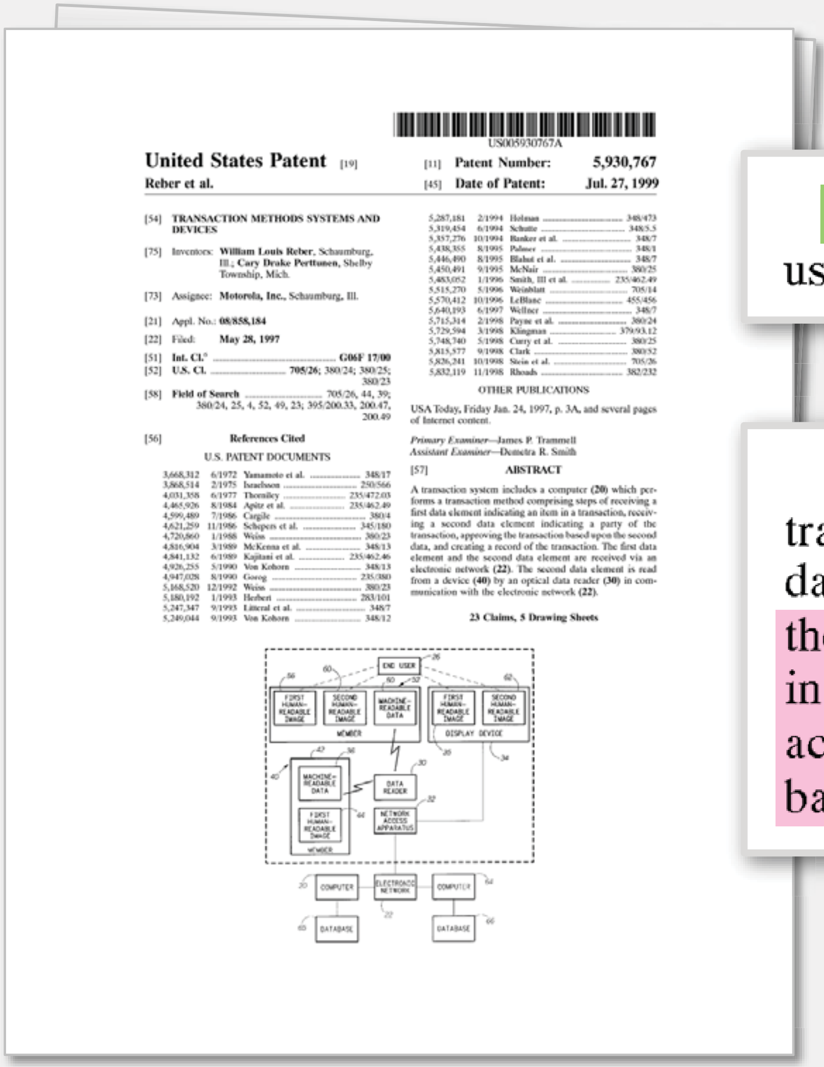
Regardless of how the second data element is encoded by the machine-readable data **36**, it is preferred that the second data element include a personal identification code such as a personal identification number to identify the end user **26**, an organization, or an account. In an exemplary embodiment, the personal identification code is time-varying and nonpredictable by unauthorized parties.

Ex. 1131 [Reber], 4:14-18

Petition at 32-33.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Reber Discloses "Map[ping] the Time-Varying Multicharacter Code to the Identity of the Entity"



US005930767A

United States Patent [19]

Reber et al.

[11] **Patent Number: 5,930,767**

[45] **Date of Patent: Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.⁶** **G06F 17/00**

[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,668,312	6/1972	Yamamoto et al.	348/17
3,868,514	2/1975	Israelsson	250/566
4,031,358	6/1977	Thorniley	235/472.03
4,465,926	8/1984	Apitz et al.	235/462.49
4,599,489	7/1986	Cargile	380/4
4,621,259	11/1986	Schepers et al.	345/180
4,720,860	1/1988	Weiss	380/23
4,816,904	3/1989	McKenna et al.	348/13
4,841,132	6/1989	Kajitani et al.	235/462.46
4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
5,168,520	12/1992	Weiss	380/23
5,180,192	1/1993	Herbert	283/101
5,247,347	9/1993	Litteral et al.	348/7
5,249,044	9/1993	Von Kohorn	348/12
5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
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USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

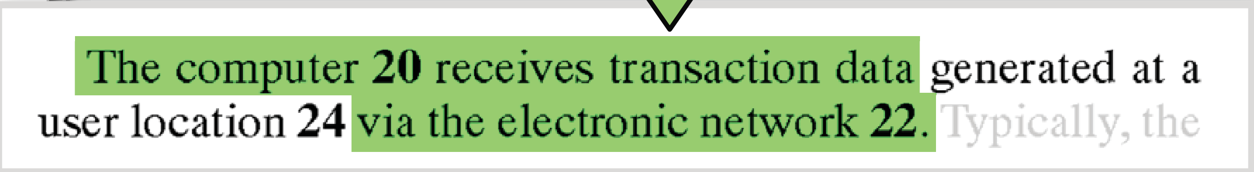
Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

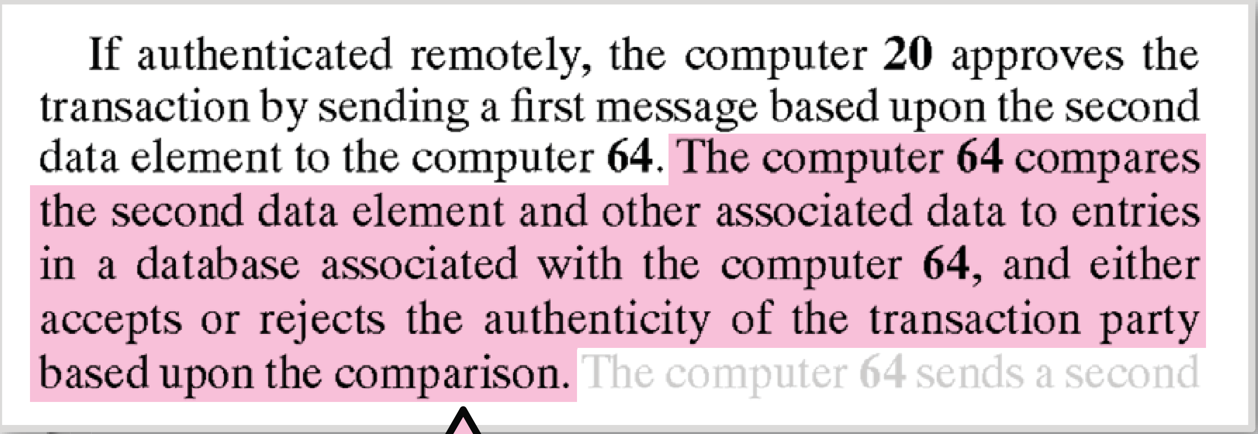
23 Claims, 5 Drawing Sheets

Transaction Request



The computer **20** receives transaction data generated at a user location **24** via the electronic network **22**. Typically, the

Ex. 1131 [Reber], 2:52-53



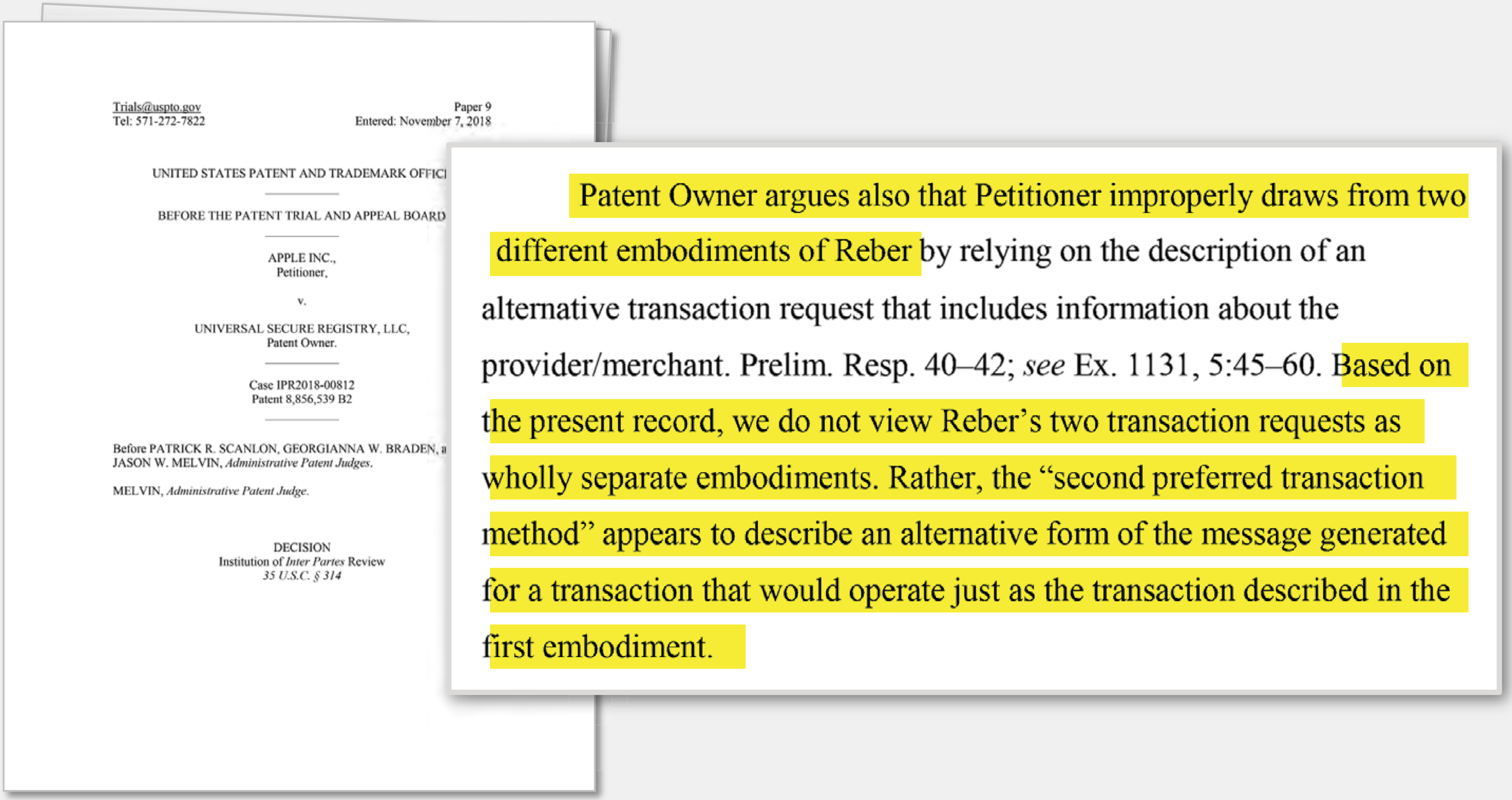
If authenticated remotely, the computer **20** approves the transaction by sending a first message based upon the second data element to the computer **64**. The computer **64** compares the second data element and other associated data to entries in a database associated with the computer **64**, and either accepts or rejects the authenticity of the transaction party based upon the comparison. The computer **64** sends a second

Ex. 1131 [Reber], 5:16-22

Map the time-varying multicharacter code

Petition at 35.

In The ID, The Board Found that Reber's "Transaction Methods" Are Compatible



Trials@uspto.gov
Tel: 571-272-7822

Paper 9
Entered: November 7, 2018

UNITED STATES PATENT AND TRADEMARK OFFICI

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

UNIVERSAL SECURE REGISTRY, LLC,
Patent Owner.

Case IPR2018-00812
Patent 8,856,539 B2

Before PATRICK R. SCANLON, GEORGIANNA W. BRADEN, a
JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314

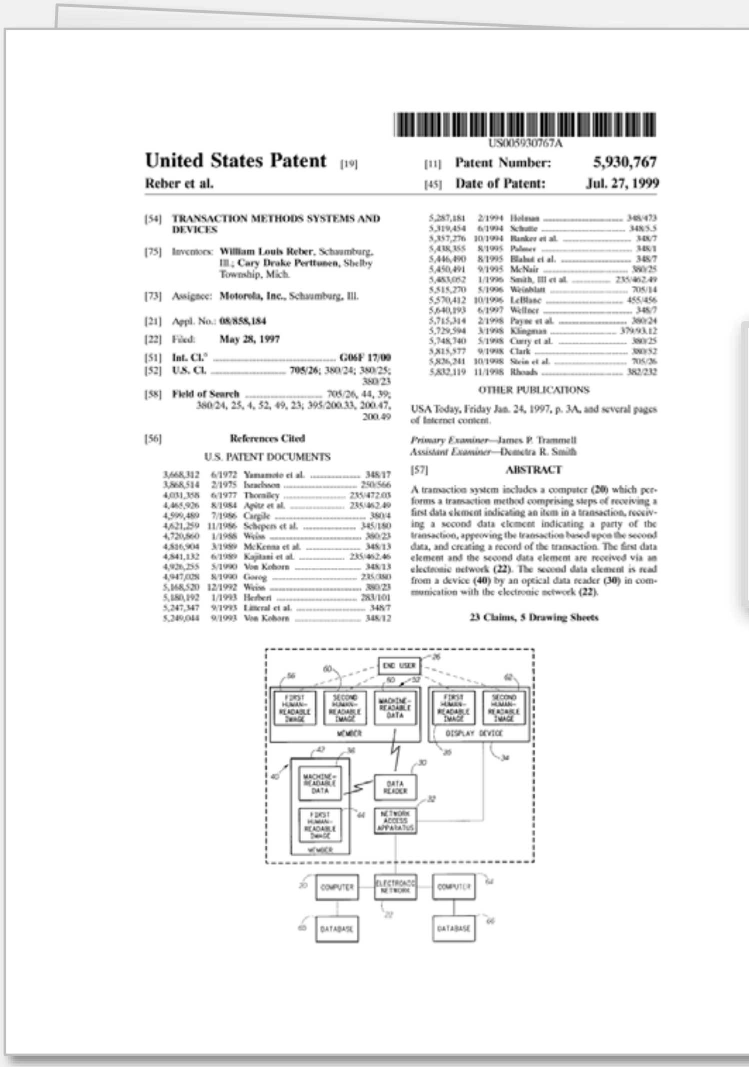
Patent Owner argues also that Petitioner improperly draws from two different embodiments of Reber by relying on the description of an alternative transaction request that includes information about the provider/merchant. Prelim. Resp. 40–42; *see* Ex. 1131, 5:45–60. Based on the present record, we do not view Reber's two transaction requests as wholly separate embodiments. Rather, the "second preferred transaction method" appears to describe an alternative form of the message generated for a transaction that would operate just as the transaction described in the first embodiment.

Institution Decision at 12-13.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Even If They Are Separate Embodiments, Reber's Transaction Methods Would Have Been Obvious to Combine in View of Reber Alone

Reber explains that its transaction methods can be combined and modified



US005930767A

United States Patent [19]

Reber et al.

[11] **Patent Number:** **5,930,767**

[45] **Date of Patent:** **Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.⁶** **G06F 17/00**

[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

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4,465,926	8/1984	Apitz et al.	235/462.49
4,599,489	7/1986	Cargile	380/4
4,621,259	11/1986	Schepers et al.	345/180
4,720,860	1/1988	Weiss	380/23
4,816,904	3/1989	McKenna et al.	348/13
4,841,132	6/1989	Kajitani et al.	235/462.46
4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
5,168,520	12/1992	Weiss	380/23
5,180,192	1/1993	Herbert	283/101
5,247,347	9/1993	Litteral et al.	348/7
5,249,044	9/1993	Von Kohorn	348/12
5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
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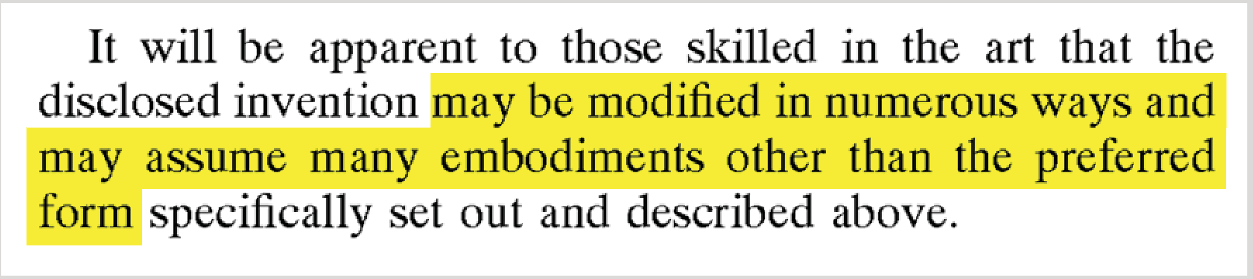
Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

23 Claims, 5 Drawing Sheets

END USER
26
56
60
60
52
62
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
MACHINE-READABLE DATA
MEMBER
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
DISPLAY DEVICE
42
36
35
34
40
30
MACHINE-READABLE DATA
DATA READER
32
FIRST HUMAN-READABLE IMAGE
44
NETWORK ACCESS APPARATUS
MEMBER
20
COMPUTER
ELECTRONIC NETWORK
COMPUTER
64
22
65
DATABASE
DATABASE
66

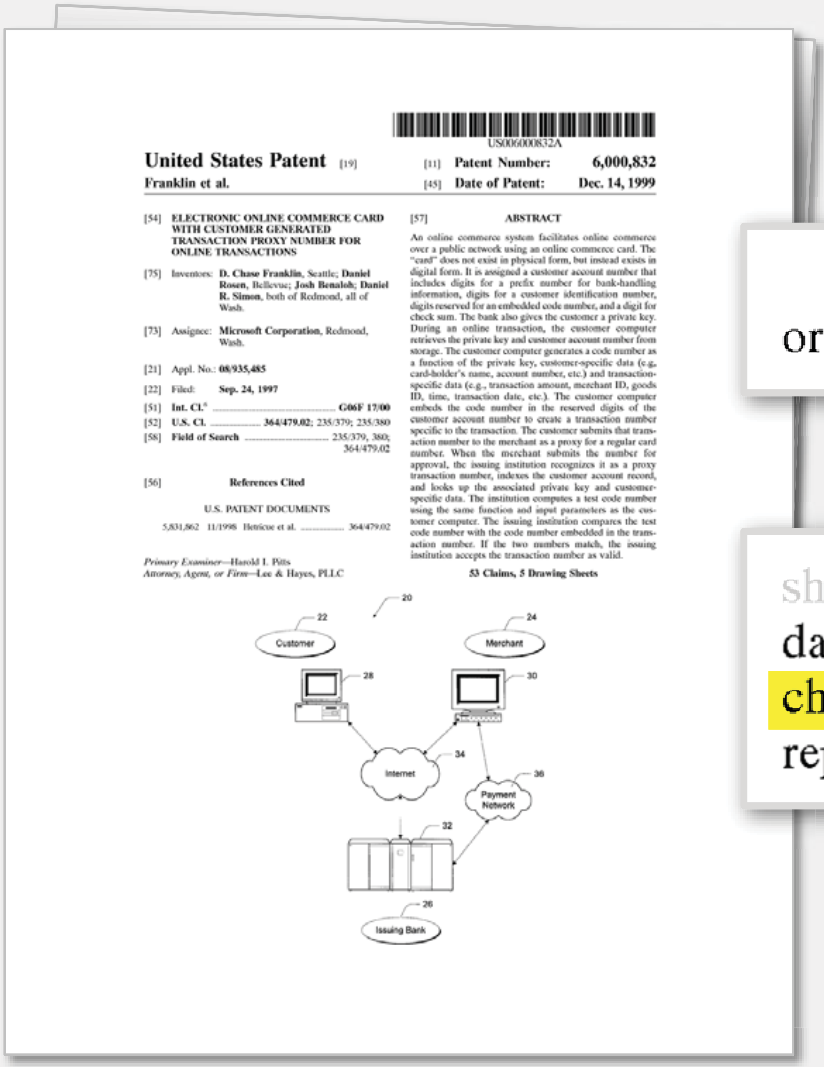


It will be apparent to those skilled in the art that the disclosed invention may be modified in numerous ways and may assume many embodiments other than the preferred form specifically set out and described above.

Ex. 1131 [Reber], 11:33-36

Reply to POR at 22-23.

Even If They Are Separate Embodiments, Reber’s Transaction Methods Would Also Have Been Obvious to Combine in View of Franklin’s Merchant Validation



US006000832A

United States Patent [19]

Franklin et al.

[11] **Patent Number: 6,000,832**

[45] **Date of Patent: Dec. 14, 1999**

[54] **ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS**

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

[22] Filed: **Sep. 24, 1997**

[51] **Int. Cl.**^{6} **G06F 17/00**

[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380

[58] **Field of Search** 235/379, 380; 364/479.02

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,831,862 11/1998 Hetricue et al. 364/479.02

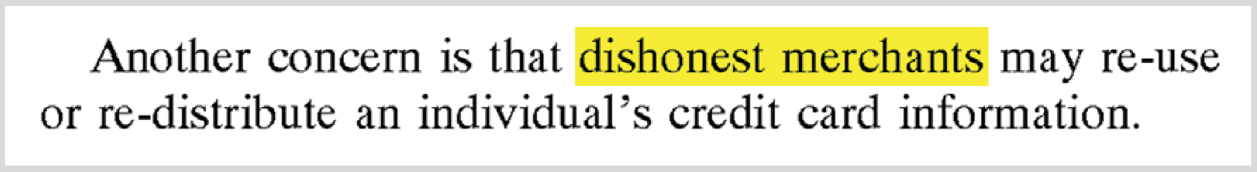
Primary Examiner—Harold I. Pitts
Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] **ABSTRACT**

An online commerce system facilitates online commerce over a public network using an online commerce card. The "card" does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as a function of the private key, customer-specific data (e.g., card-holder's name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the reserved digits of the customer account number to create a transaction number specific to the transaction. The customer submits that transaction number to the merchant as a proxy for a regular card number. When the merchant submits the number for approval, the issuing institution recognizes it as a proxy transaction number, indexes the customer account record, and looks up the associated private key and customer-specific data. The institution computes a test code number using the same function and input parameters as the customer computer. The issuing institution compares the test code number with the code number embedded in the transaction number. If the two numbers match, the issuing institution accepts the transaction number as valid.

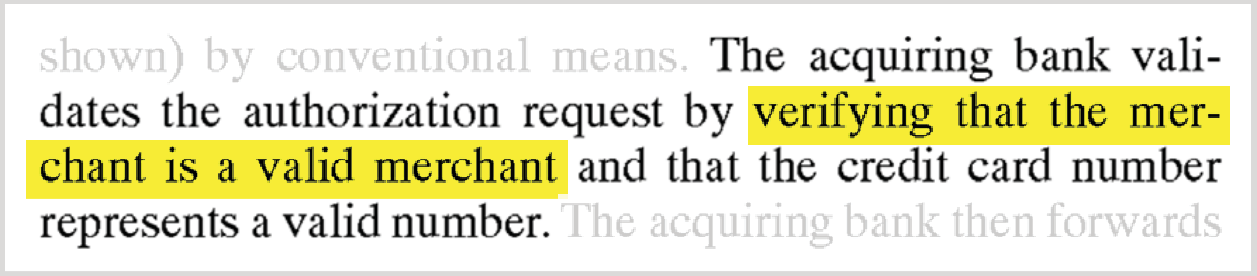
53 Claims, 5 Drawing Sheets

20
22
Customer
24
Merchant
28
30
34
Internet
36
Payment Network
32
26
Issuing Bank



Another concern is that dishonest merchants may re-use or re-distribute an individual’s credit card information.

Ex. 1132 [Franklin], 1:48-49



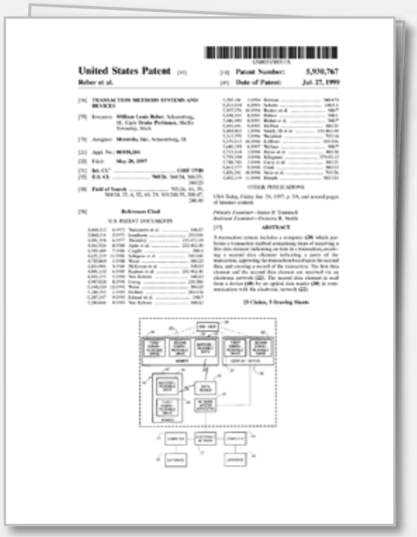
shown) by conventional means. The acquiring bank validates the authorization request by verifying that the merchant is a valid merchant and that the credit card number represents a valid number. The acquiring bank then forwards

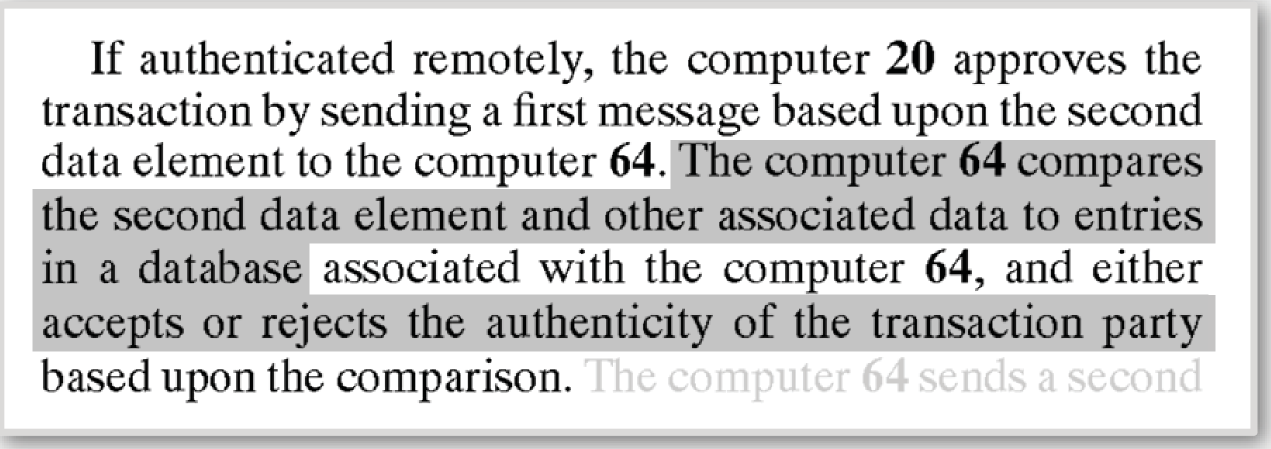
Ex. 1132 [Franklin], 11:43-45

Reply to POR at 22-24.

Reber and Franklin Render Obvious the "Restriction Mechanism" and "Access Restrictions"

It would have been obvious to perform merchant validation alongside authentication of the second data element


United States Patent [19] Reber et al.
[11] Patent Number: 5,930,767
[45] Date of Patent: Jul. 27, 1999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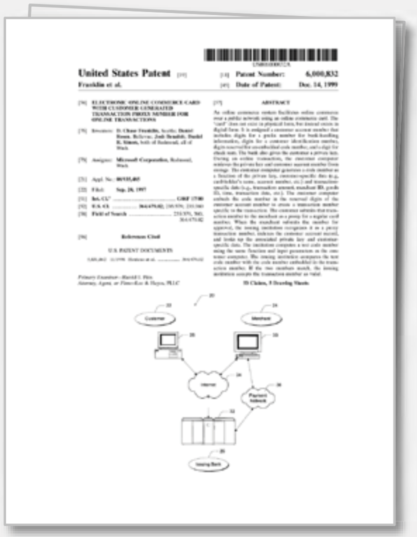
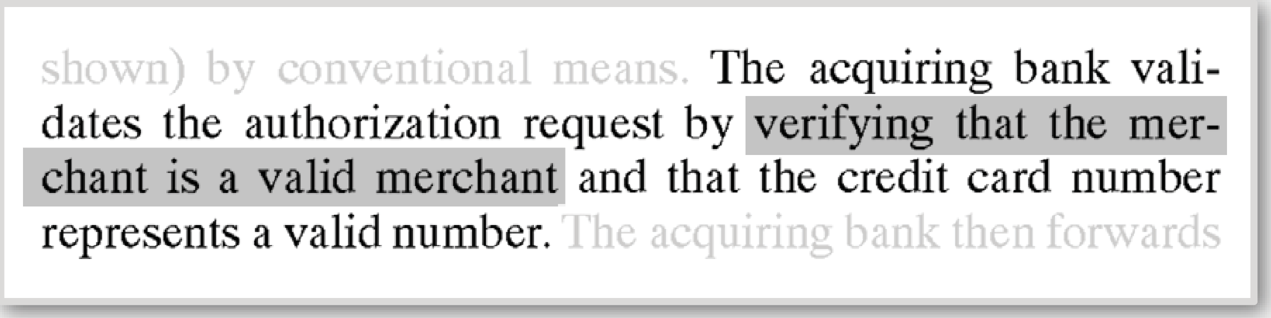
Ex. 1131 [Reber], 5:16-22

+


United States Patent [19] Franklin et al.
[11] Patent Number: 6,000,832
[45] Date of Patent: Dec. 14, 1999

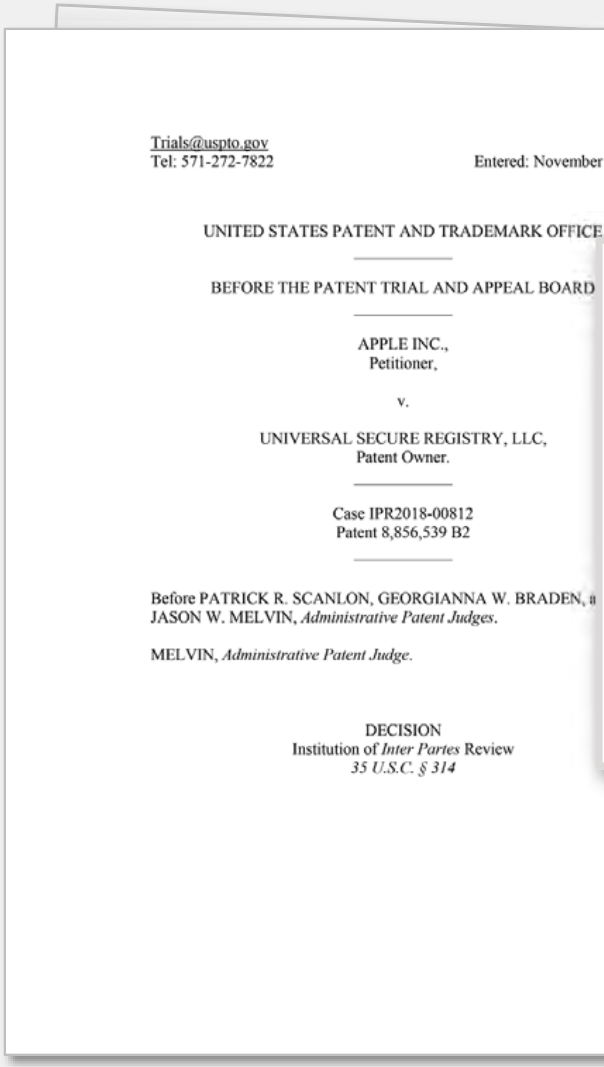

shown) by conventional means. The acquiring bank validates the authorization request by verifying that the merchant is a valid merchant and that the credit card number represents a valid number. The acquiring bank then forwards

Ex. 1132 [Franklin], 11:43-45

Petition at 36-39; Reply to POR at 10-14.

Reber and Franklin Render Obvious the "Restriction Mechanism" and "Access Restrictions"

In the ID, the Board rejected USR's limiting construction of "access restrictions"



Trials@uspto.gov
Tel: 571-272-7822

Paper 9
Entered: November 7, 2018

UNITED STATES PATENT AND TRADEMARK OFFICE

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Patent Owner.

Case IPR2018-00812
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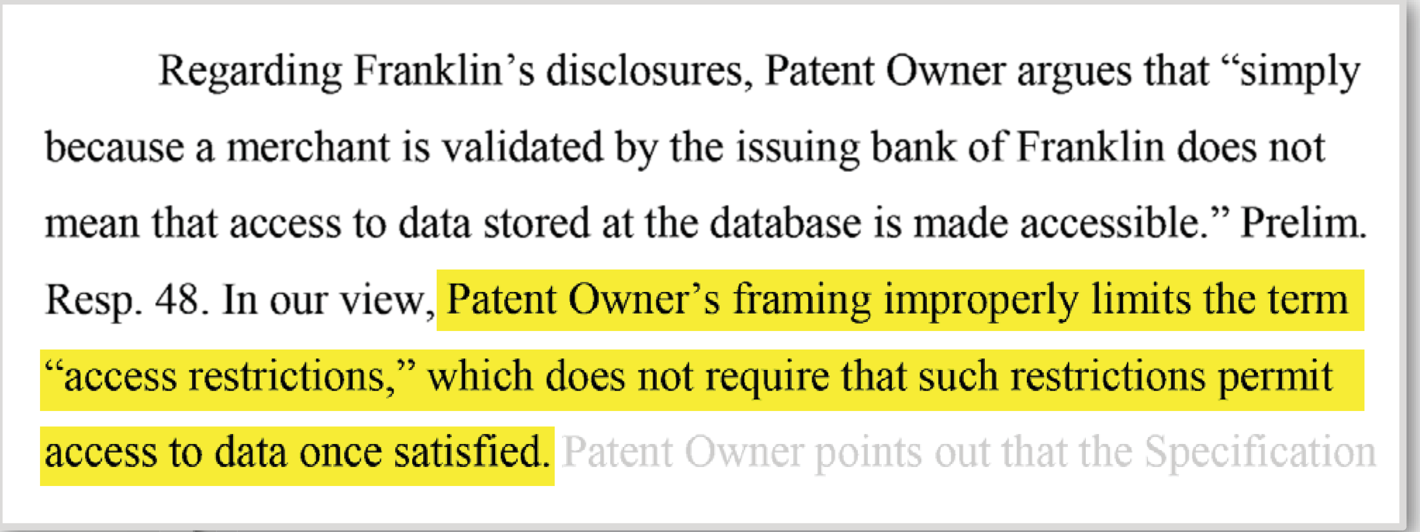
Before PATRICK R. SCANLON, GEORGIANNA W. BRADEN, a
JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314

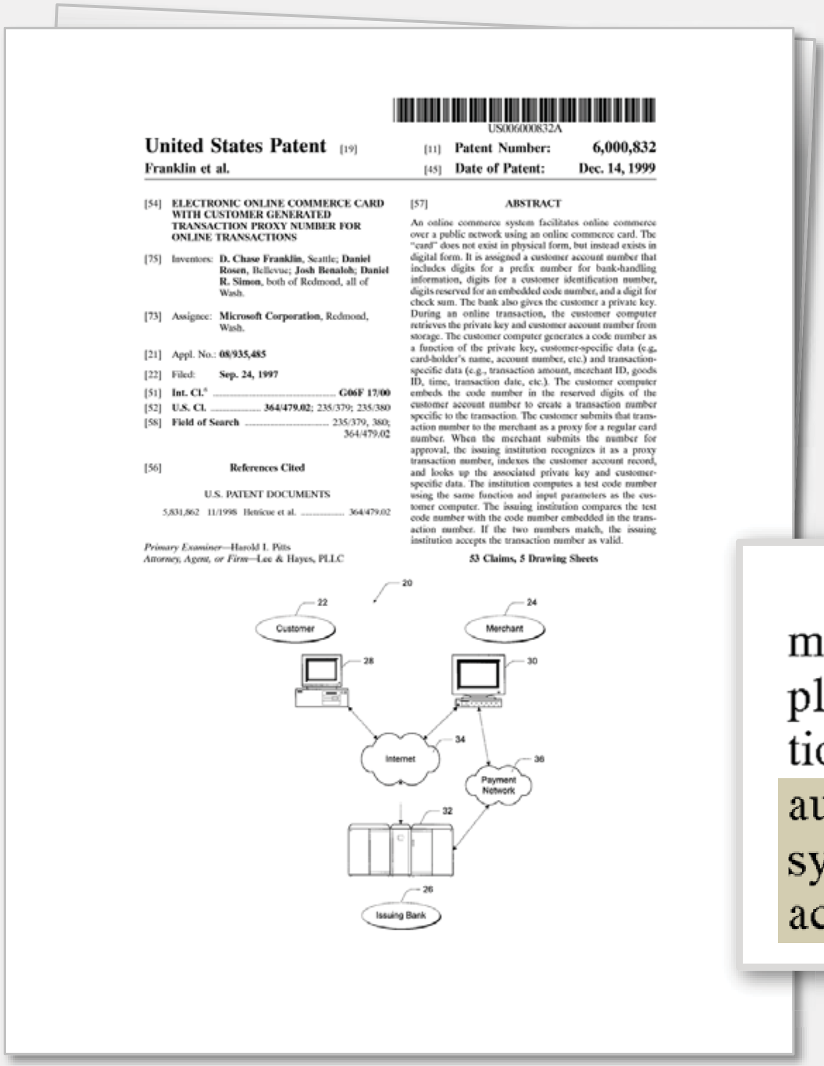


Regarding Franklin's disclosures, Patent Owner argues that "simply because a merchant is validated by the issuing bank of Franklin does not mean that access to data stored at the database is made accessible." Prelim. Resp. 48. In our view, Patent Owner's framing improperly limits the term "access restrictions," which does not require that such restrictions permit access to data once satisfied. Patent Owner points out that the Specification

Institution Decision at 14

Reber and Franklin Teach Providing Account Identifying Information to a Third Party to Enable a Transaction

Franklin's bank computing center has separate computing elements that perform the function of the database and third party



United States Patent [19]
Franklin et al.

US006000832A

[11] Patent Number: 6,000,832
[45] Date of Patent: Dec. 14, 1999

[54] ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

[22] Filed: **Sep. 24, 1997**

[51] **Int. Cl.**^{6} **G06F 17/00**
[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380
[58] **Field of Search** 235/379, 380; 364/479.02

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U.S. PATENT DOCUMENTS

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Primary Examiner—Harold I. Pitts
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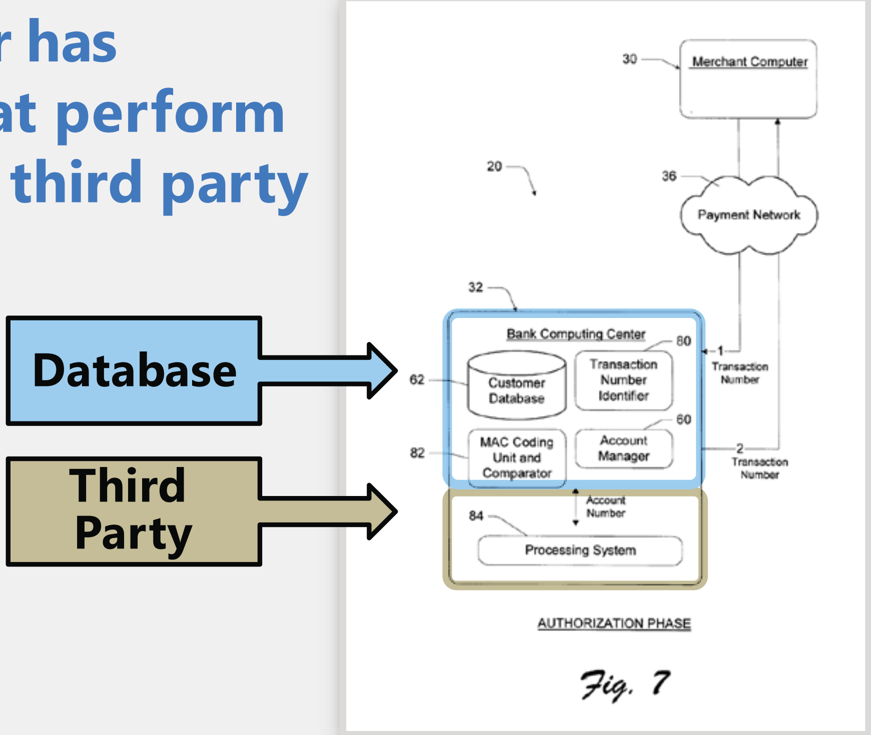
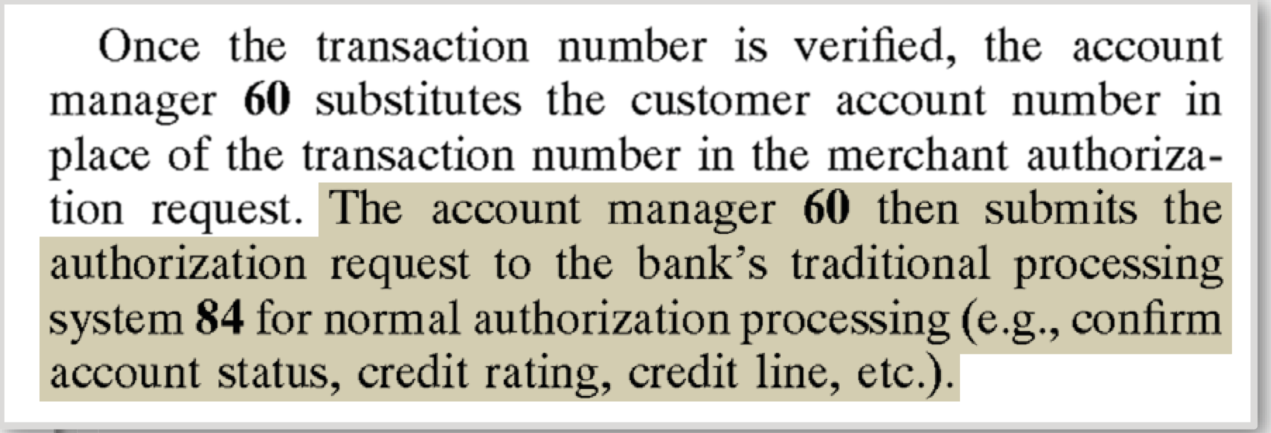
53 Claims, 5 Drawing Sheets



Database

Third Party

Ex. 1132 [Franklin], Fig. 7 (annotated)



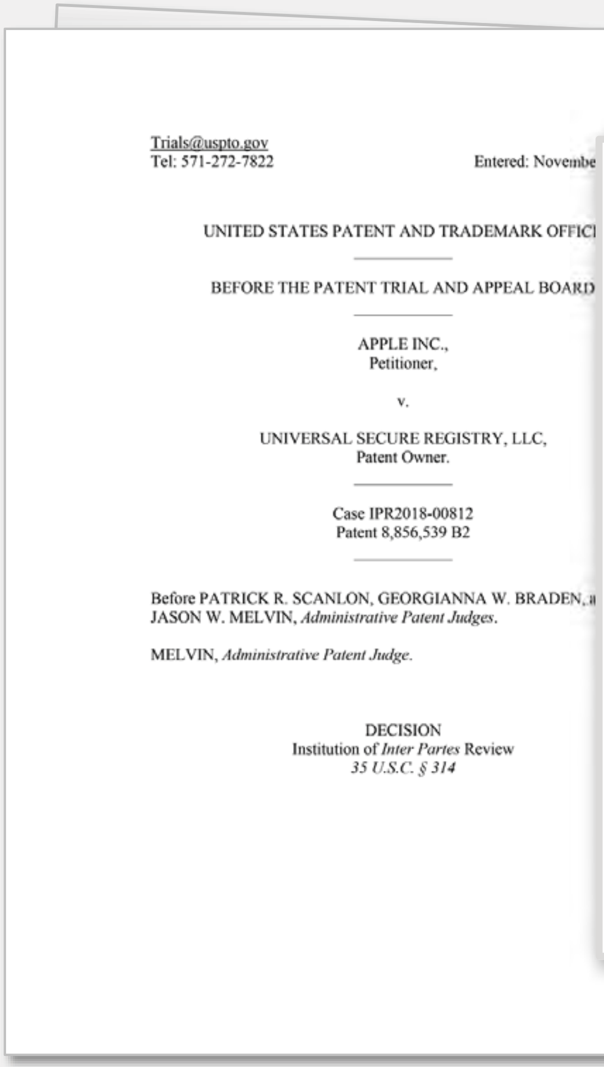
Once the transaction number is verified, the account manager **60** substitutes the customer account number in place of the transaction number in the merchant authorization request. The account manager **60** then submits the authorization request to the bank's traditional processing system **84** for normal authorization processing (e.g., confirm account status, credit rating, credit line, etc.).

Ex. 1132 [Franklin], 12:27-33

Petition at 39-42; Reply to POR at 4-6.

Reber and Franklin Teach Providing Account Identifying Information to a Third Party to Enable a Transaction

In the ID, the Board determined that Franklin's "processing system 84" could be a third party



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Tel: 571-272-7822

Entered: Novembe

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JASON W. MELVIN, *Administrative Patent Judges.*

MELVIN, *Administrative Patent Judge.*

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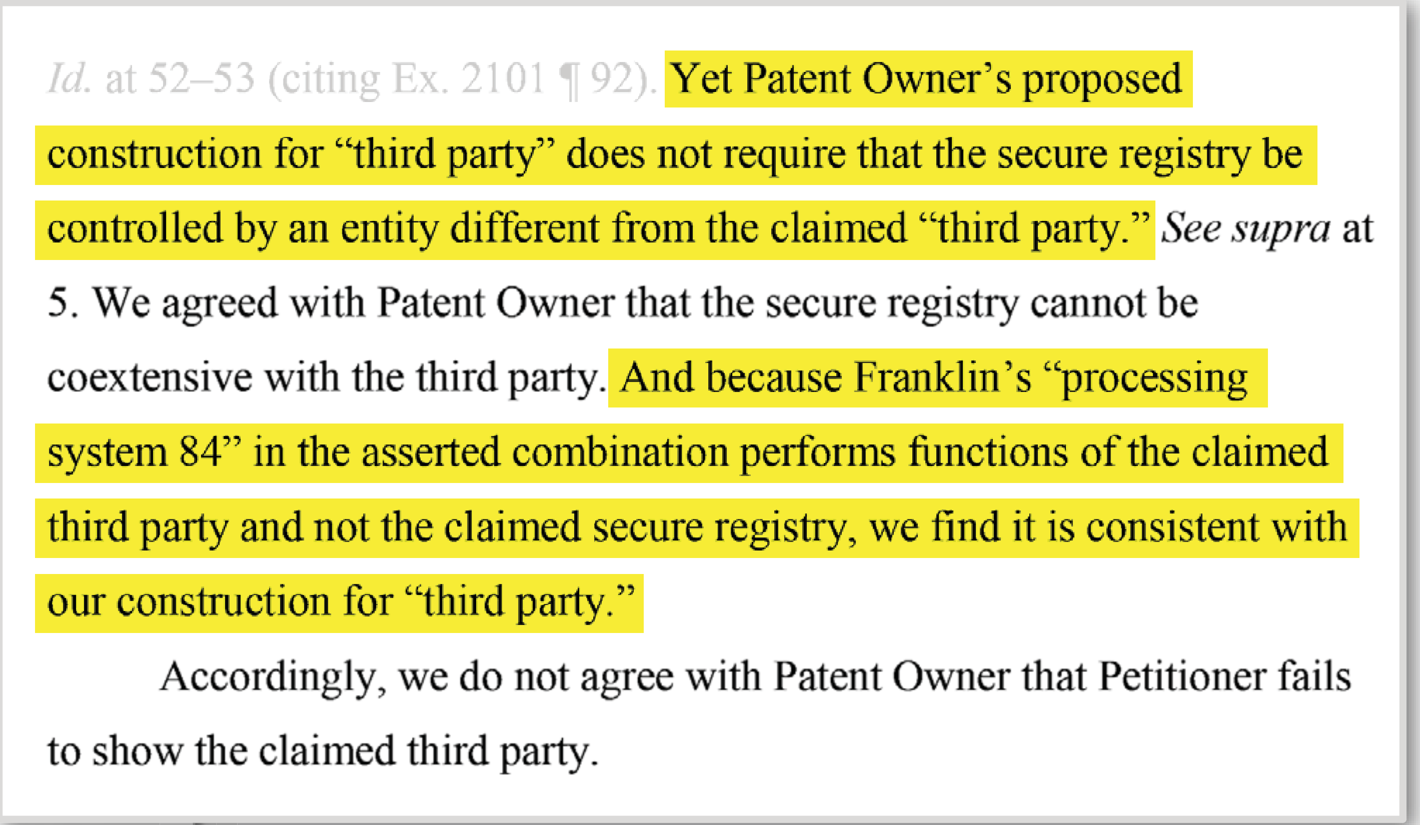
Institution of *Inter Partes* Review
35 U.S.C. § 314



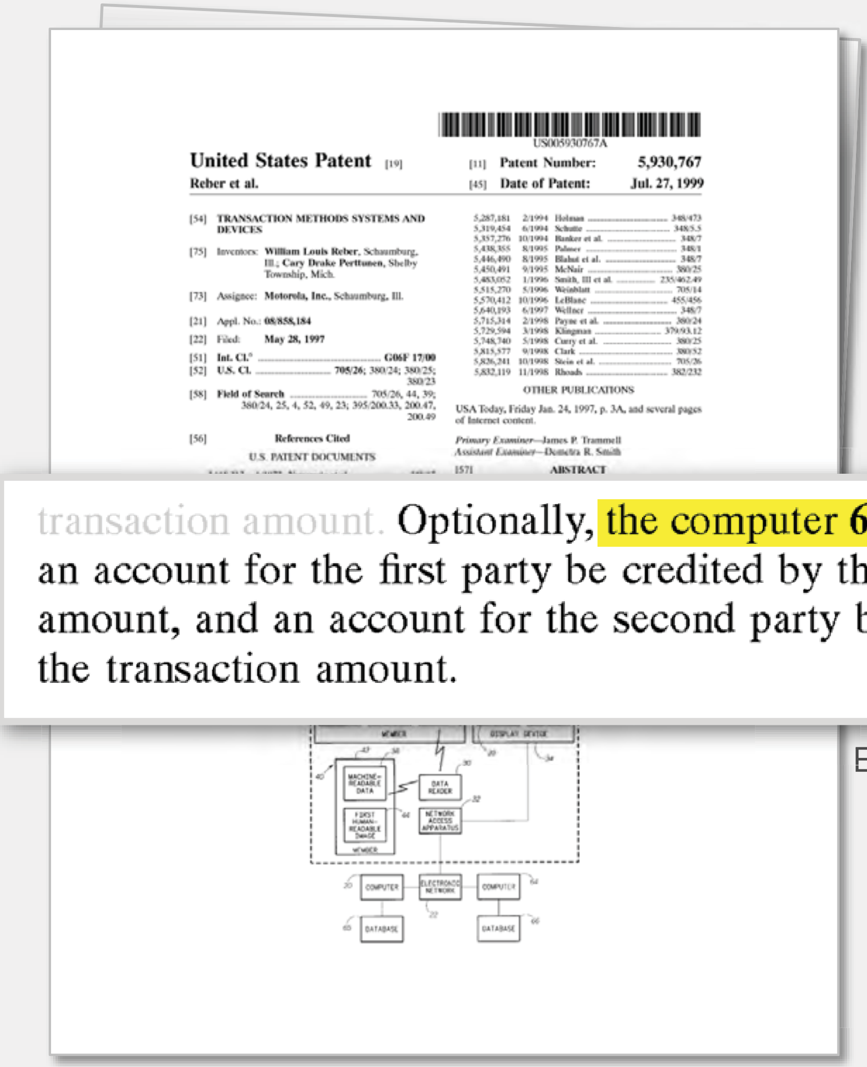
Id. at 52–53 (citing Ex. 2101 ¶ 92). Yet Patent Owner's proposed construction for "third party" does not require that the secure registry be controlled by an entity different from the claimed "third party." *See supra* at 5. We agreed with Patent Owner that the secure registry cannot be coextensive with the third party. And because Franklin's "processing system 84" in the asserted combination performs functions of the claimed third party and not the claimed secure registry, we find it is consistent with our construction for "third party."

Accordingly, we do not agree with Patent Owner that Petitioner fails to show the claimed third party.

Institution Decision at 18.

A POSITA Would Have Been Motivated to Combine Reber and Franklin

Reber discloses "directing" a third party to credit and debit financial accounts



US005930767A

United States Patent [19]

Reber et al.

[11] **Patent Number: 5,930,767**

[45] **Date of Patent: Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**6 .... **G06F 17/00**

[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

transaction amount. Optionally, the computer 64 directs that an account for the first party be credited by the transaction amount, and an account for the second party be debited by the transaction amount.

Ex. 1131 [Reber], 6:26-29

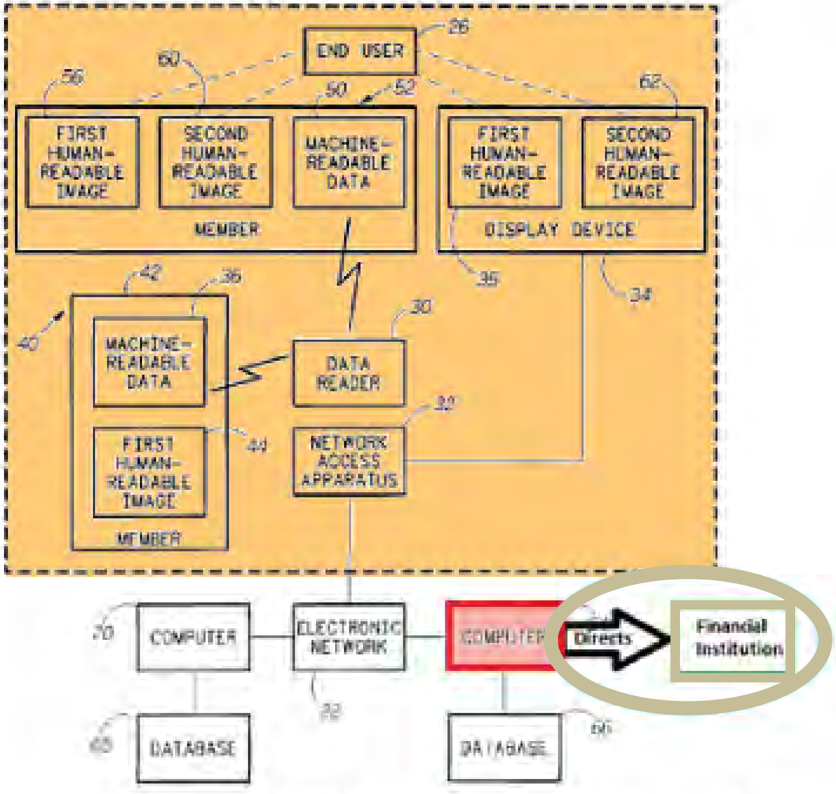


FIG. 1 **(Annotations Added)**

Ex-1131, Reber, Fig. 1 (annotated per Reber, 6:26-29.)

Ex. 1131 [Reber], Fig. 1 (annotated)

Reply to POR at 14-17; Ex-1135 [Shoup POR Reply Decl.], ¶¶ 38-41.

Reasons to Combine

Reber and Franklin disclose similar and technologically-compatible transaction methods designed for similar purposes.

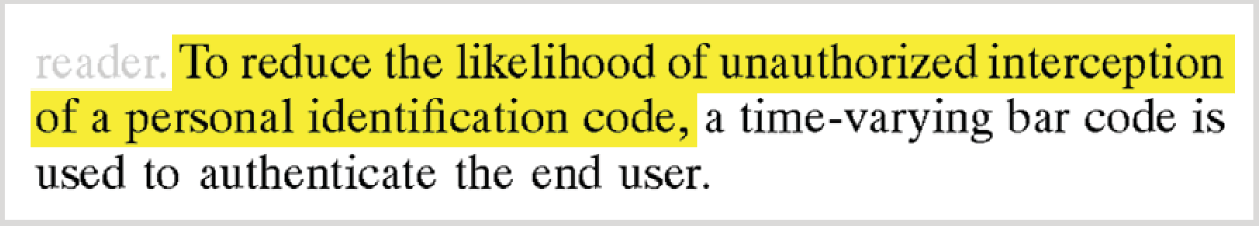
- Both teach protecting sensitive data from unauthorized interception and misappropriation
- Both operate using a similar four-party structure (entity, provider, secure registry, third party)
- Both transmit a time-varying multicharacter code to an issuing institution
- Both use encryption to ensure that secure data is not compromised.

Petition at 23-31; Reply to POR at 5, 13-14, 16-19.

Reasons to Combine

Both references teach protecting sensitive data from unauthorized interception and misappropriation

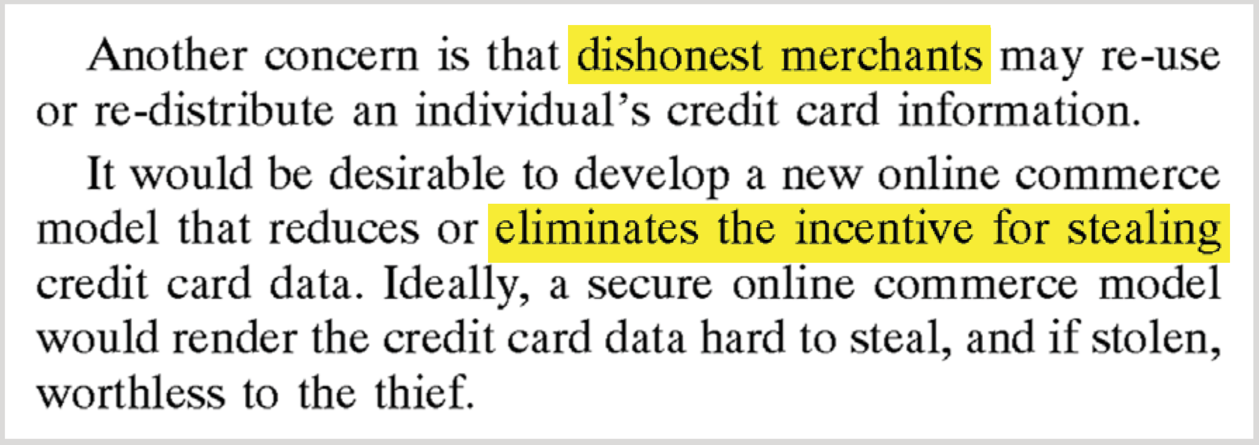
Reber '767



reader. To reduce the likelihood of unauthorized interception of a personal identification code, a time-varying bar code is used to authenticate the end user.

Ex. 1131 [Reber], 2:29-31

Franklin '832



Another concern is that dishonest merchants may re-use or re-distribute an individual's credit card information.

It would be desirable to develop a new online commerce model that reduces or eliminates the incentive for stealing credit card data. Ideally, a secure online commerce model would render the credit card data hard to steal, and if stolen, worthless to the thief.

Ex. [Franklin], 1:48-54

Petition at 23-25; Reply to POR at 4-6.

Reasons to Combine

Both references operate using a similar four party structure

Orange – Entity

Yellow – Network

Green – Provider

Red – Secure Registry

Reber '767

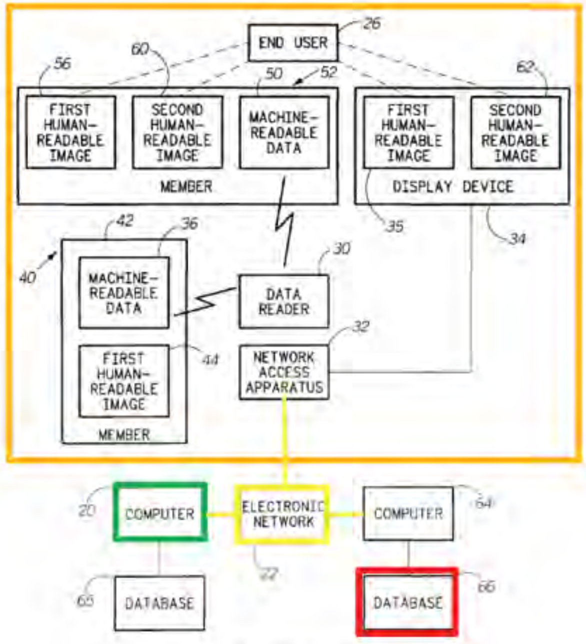


FIG. 1

Petition at 25

Franklin '832

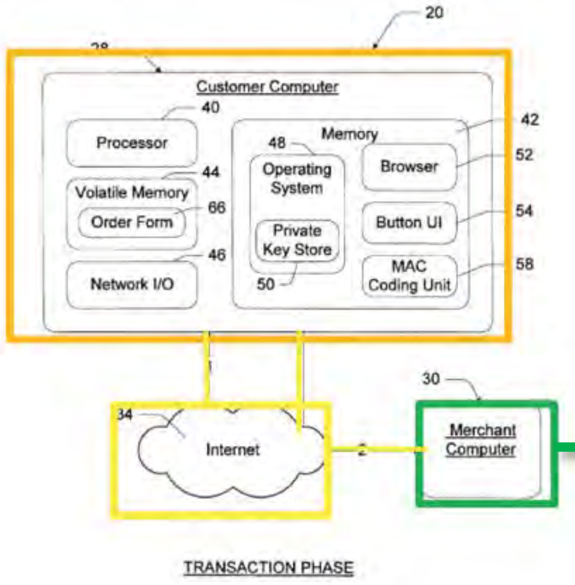


Fig. 3

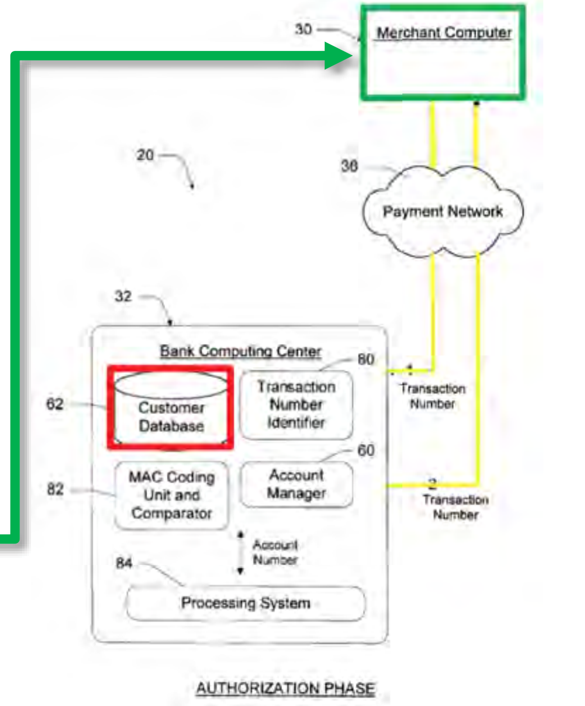


Fig. 7

Petition at 26

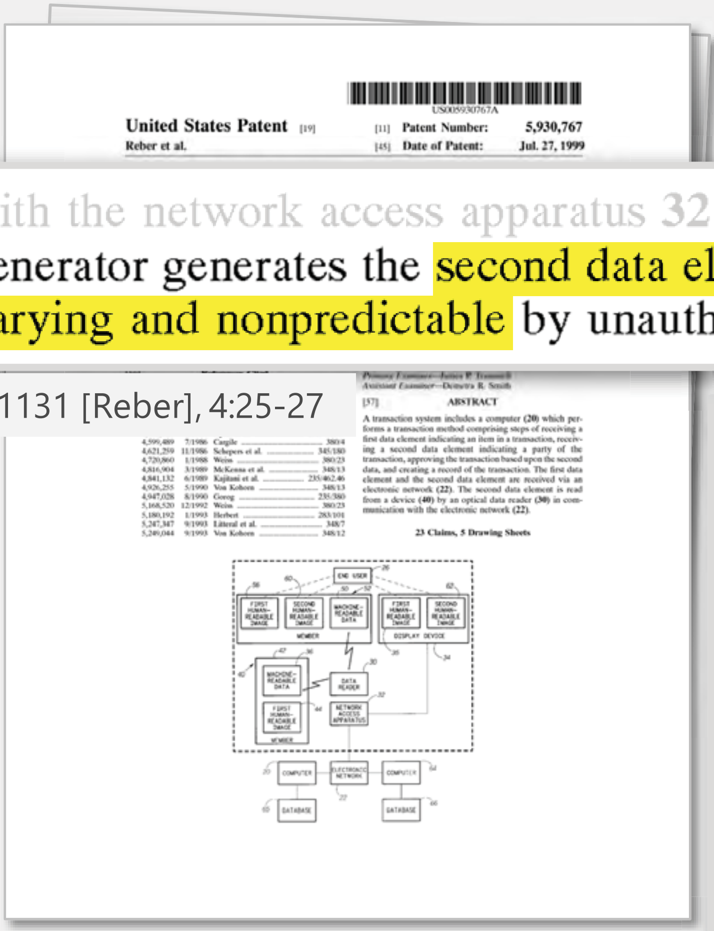
Petition at 27

Pet. at 24-28; Reply to POR at 14-19.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Reasons to Combine

Both references teach transmitting a time-varying multicharacter code to a database for verification



US005930767A

United States Patent [19]
Reber et al.

[11] Patent Number: 5,930,767
[45] Date of Patent: Jul. 27, 1999

4,599,489	7/1986	Cargile	380/4
4,621,259	11/1986	Schepers et al.	345/180
4,720,860	1/1988	Weiss	380/23
4,816,904	3/1989	McKenna et al.	348/13
4,841,132	6/1989	Kajitani et al.	235/462.46
4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
5,168,520	12/1992	Weiss	380/23
5,180,192	1/1993	Herbert	283/101
5,247,347	9/1993	Litteral et al.	348/7
5,249,044	9/1993	Von Kohorn	348/12

Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

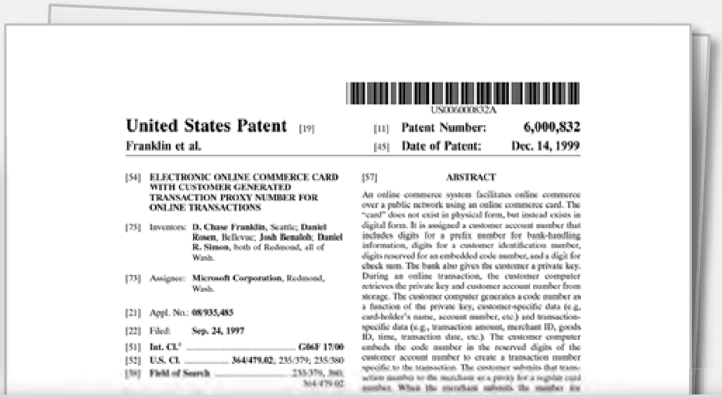
[57] ABSTRACT

A transaction system includes a computer (20) which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network (22). The second data element is read from a device (40) by an optical data reader (30) in communication with the electronic network (22).

23 Claims, 5 Drawing Sheets

with the network access apparatus 32. Preferably, the code generator generates the second data element which is time-varying and nonpredictable by unauthorized parties.

Ex. 1131 [Reber], 4:25-27



US006000832A

United States Patent [19]
Franklin et al.

[11] Patent Number: 6,000,832
[45] Date of Patent: Dec. 14, 1999

[54] ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

[22] Filed: **Sep. 24, 1997**

[51] **Int. Cl.**^{6} **G06F 17/00**
[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380
[58] **Field of Search** 235/379, 380; 364/479.02

[57] ABSTRACT

An online commerce system facilitates online commerce over a public network using an online commerce card. The "card" does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as a function of the private key, customer-specific data (e.g., card-holder's name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the reserved digits of the customer account number to create a transaction number specific to the transaction. The customer submits that transaction number to the merchant as a proxy for a regular card number. When the merchant submits the number for

private key and customer account number from storage. The customer computer then generates a code number as a function of the private key, customer-specific data (e.g., card-holder's name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the digits reserved in the customer account number to effectively create a temporary transaction number that is specific to one transaction. The customer submits that transaction number to the merchant as a proxy for the customer account number during the transaction.

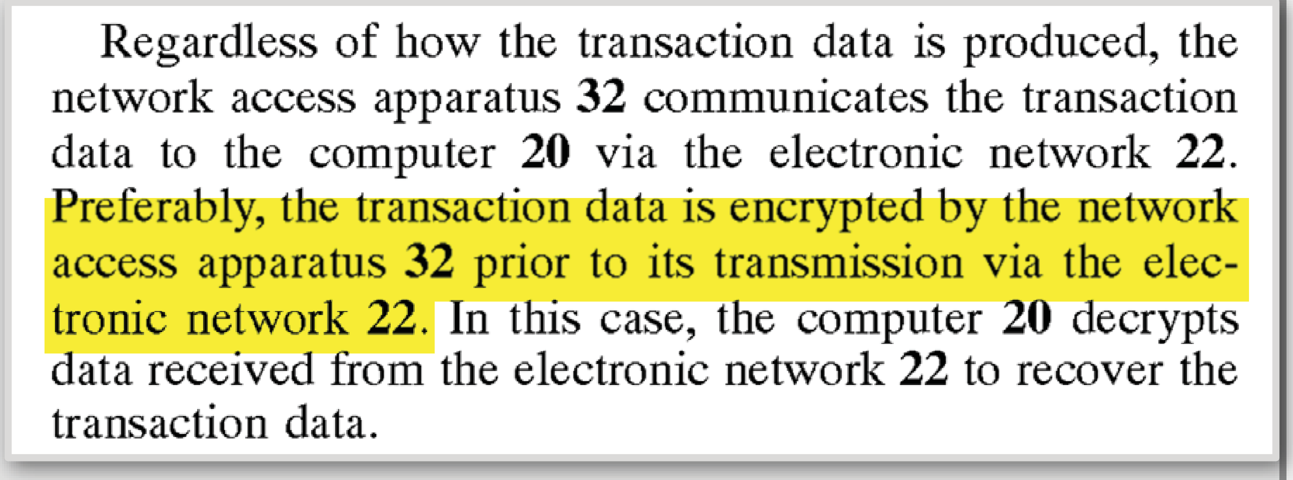
Ex. 1132 [Franklin], 2:26-38

See Petition at 28-30; Reply to POR at 4-5.

Reasons to Combine

Both references teach using encryption to prevent interception of secure data (claims 3 and 24)

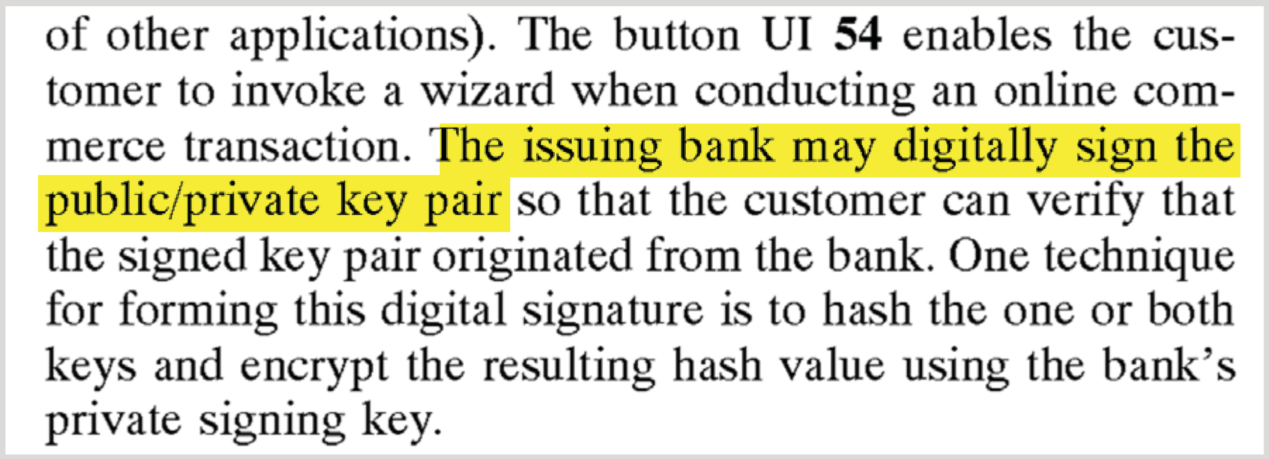
Reber '767



Regardless of how the transaction data is produced, the network access apparatus **32** communicates the transaction data to the computer **20** via the electronic network **22**. Preferably, the transaction data is encrypted by the network access apparatus **32** prior to its transmission via the electronic network **22**. In this case, the computer **20** decrypts data received from the electronic network **22** to recover the transaction data.

Ex. 1131 [Reber], 4:63-5:3

Franklin '832



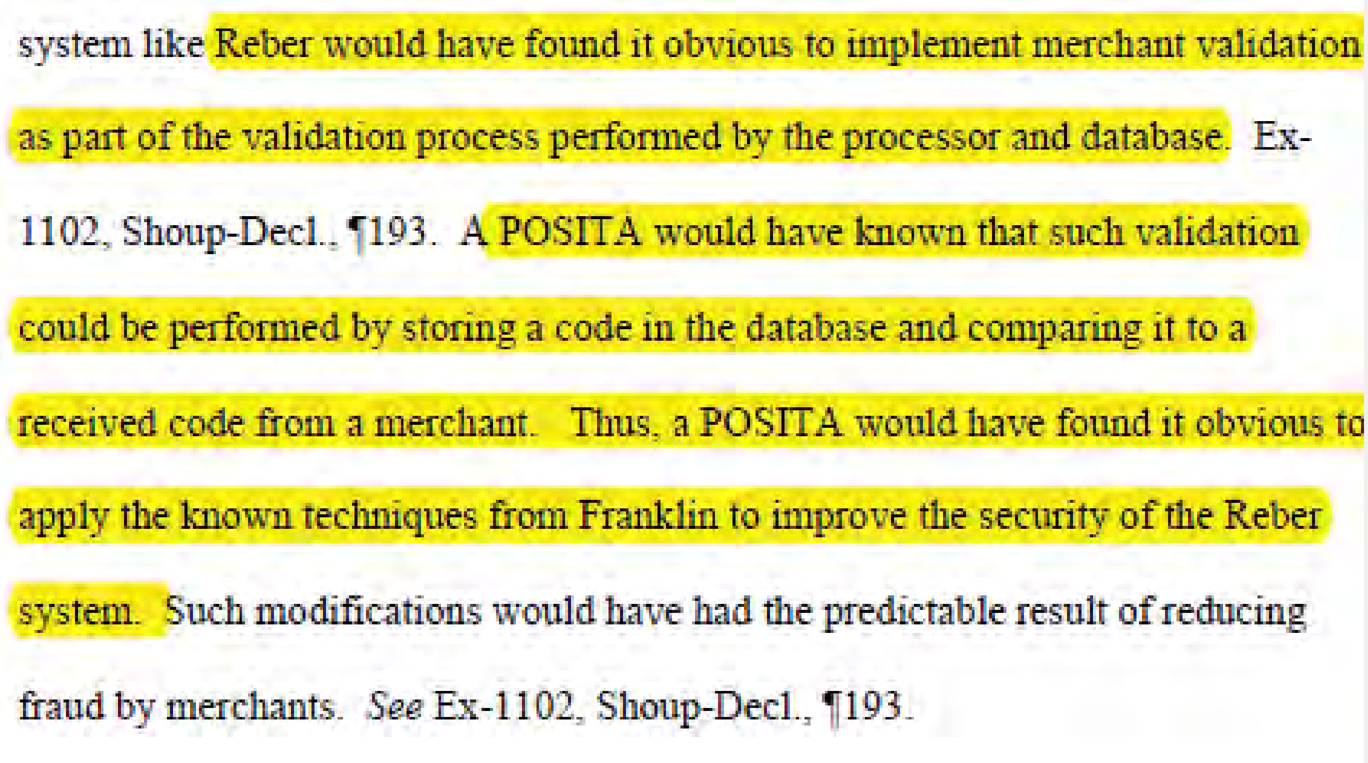
of other applications). The button UI **54** enables the customer to invoke a wizard when conducting an online commerce transaction. The issuing bank may digitally sign the public/private key pair so that the customer can verify that the signed key pair originated from the bank. One technique for forming this digital signature is to hash the one or both keys and encrypt the resulting hash value using the bank's private signing key.

Ex. 1132 [Franklin], 8:35-42

Petition at 43-44, 60-61; Reply to POR at 24-26.

Reasons to Combine

Claim 37 would have been an obvious modification to the structure of the database to improve security.



system like Reber would have found it obvious to implement merchant validation as part of the validation process performed by the processor and database. Ex-1102, Shoup-Decl., ¶193. A POSITA would have known that such validation could be performed by storing a code in the database and comparing it to a received code from a merchant. Thus, a POSITA would have found it obvious to apply the known techniques from Franklin to improve the security of the Reber system. Such modifications would have had the predictable result of reducing fraud by merchants. *See* Ex-1102, Shoup-Decl., ¶193.

Petition at 68.

Level of Ordinary Skill in the Art

- Bachelor's Degree
- Two to three years of experience in secure transactions and encryption

Petition at 10.

Roadmap

- The Claims Are Invalid
- **Responses To USR’s Sur-reply**
- USR’s Substitute Claims Are Not Patentable
- USR’s CMTA Should Be Denied
- USR’s Motion To Strike Should Be Denied

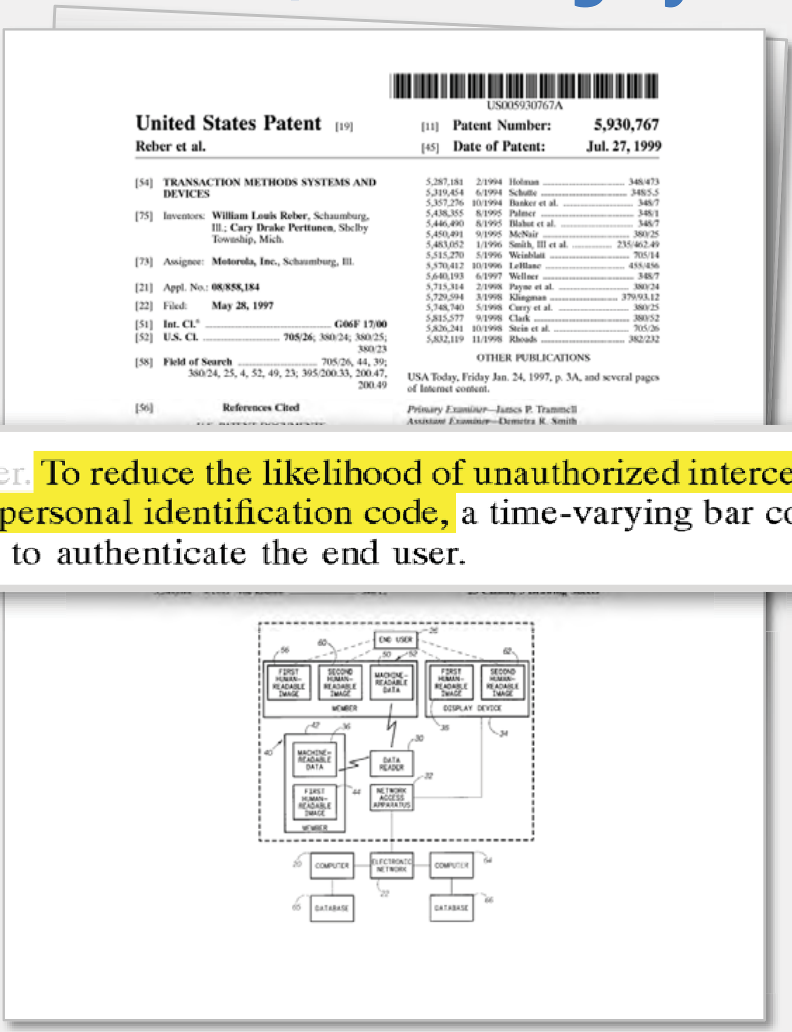
Responses to USR's Surreply

Response to Sur-reply	Addressed in Briefing
1. Reber and Franklin disclose protecting "account identifying information"	Petition at 19-23, 39-42; Reply at 1-6
2. Reber and Franklin disclose compliance with "access restrictions"	Petition at 36-39; Reply at 6-14
3. Reber and Franklin disclose providing account identifying information to a third party	Petition at 39-42; Reply at 14-19
4. Reber and Franklin disclose "receiving a transaction request"	Petition at 34-35; Reply at 19-24
5. Reber and Franklin disclose encrypting the time-varying multicharacter code	Petition at 43-44; Reply at 24-26

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

1. Reber and Franklin Teach Protecting “Account Identifying Information”

Reber and Franklin teach protecting sensitive information from fraud, including by merchants.



US005930767A

United States Patent [19]
Reber et al.

[11] **Patent Number:** **5,930,767**
[45] **Date of Patent:** **Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**^{6} **G06F 17/00**
[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23
[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

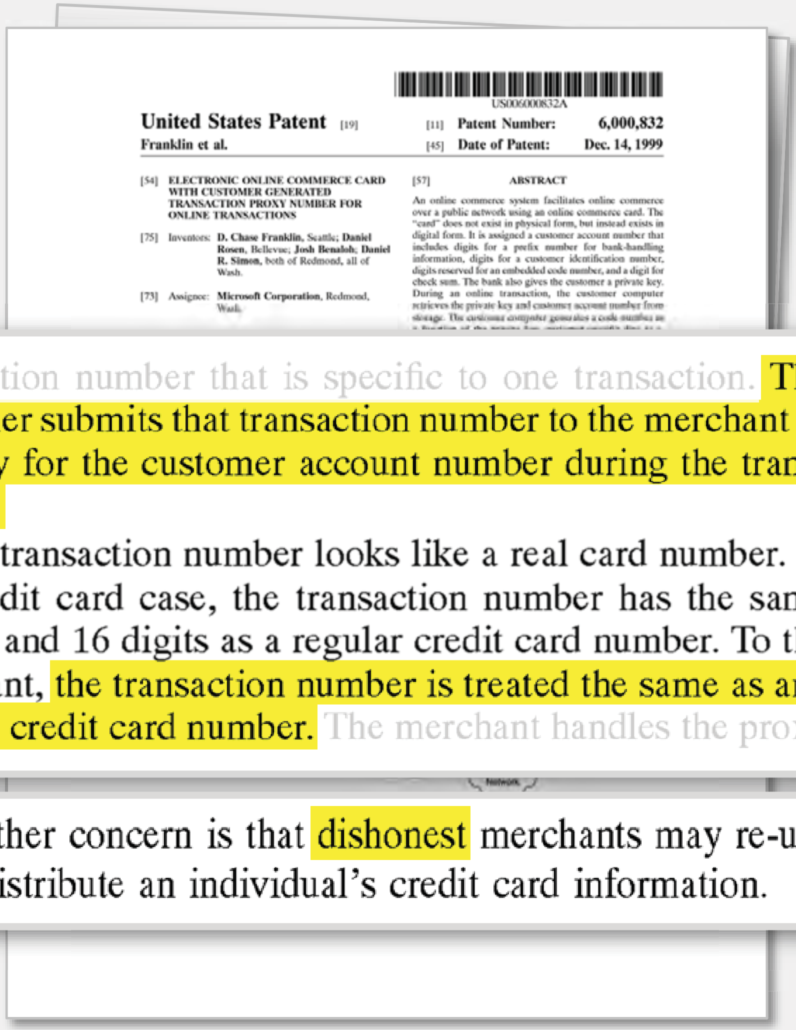
OTHER PUBLICATIONS

USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

reader. To reduce the likelihood of unauthorized interception of a personal identification code, a time-varying bar code is used to authenticate the end user.

Ex. 1131 [Reber], 2:29-31



US006000832A

United States Patent [19]
Franklin et al.

[11] **Patent Number:** **6,000,832**
[45] **Date of Patent:** **Dec. 14, 1999**

[54] **ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS**

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[57] **ABSTRACT**

An online commerce system facilitates online commerce over a public network using an online commerce card. The "card" does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as

transaction number that is specific to one transaction. The customer submits that transaction number to the merchant as a proxy for the customer account number during the transaction.

The transaction number looks like a real card number. In the credit card case, the transaction number has the same format and 16 digits as a regular credit card number. To the merchant, the transaction number is treated the same as any regular credit card number. The merchant handles the proxy

Another concern is that dishonest merchants may re-use or re-distribute an individual’s credit card information.

Ex. 1132 [Franklin], 2:35-43; 1:48-49

Petition at 36-37; Reply to POR at 4-6.

1. Reber and Franklin Teach Protecting "Account Identifying Information"

Both references disclose storing sensitive information in a remote database that can be accessed with a time-varying code

Reber '767

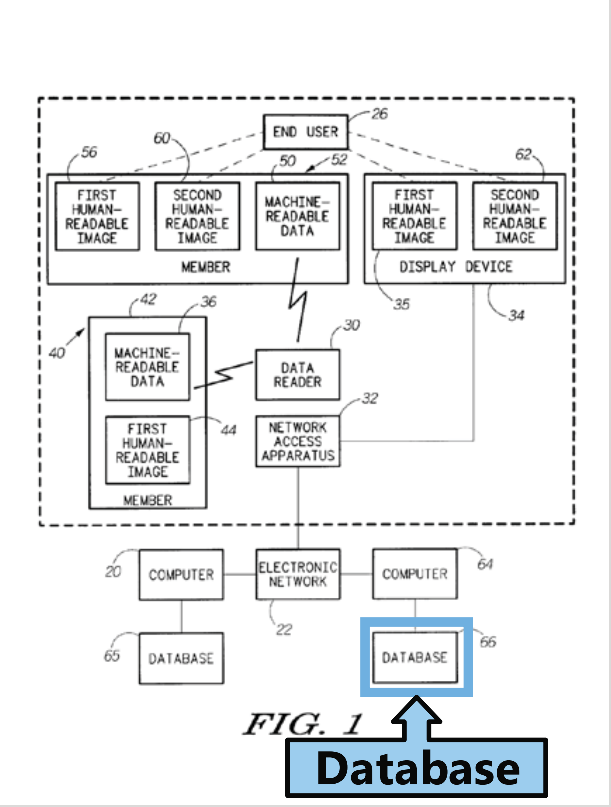


FIG. 1

Database

Petition at 25

Franklin '832

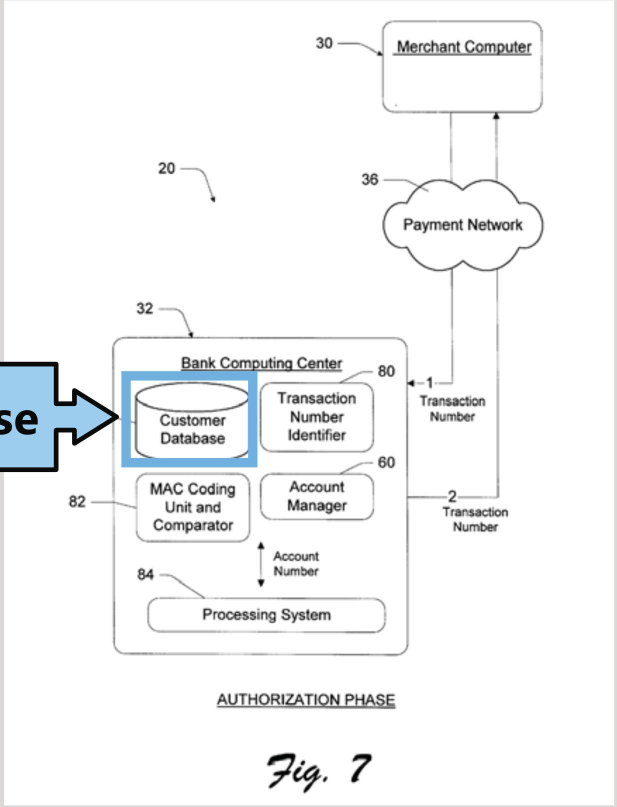


Fig. 7

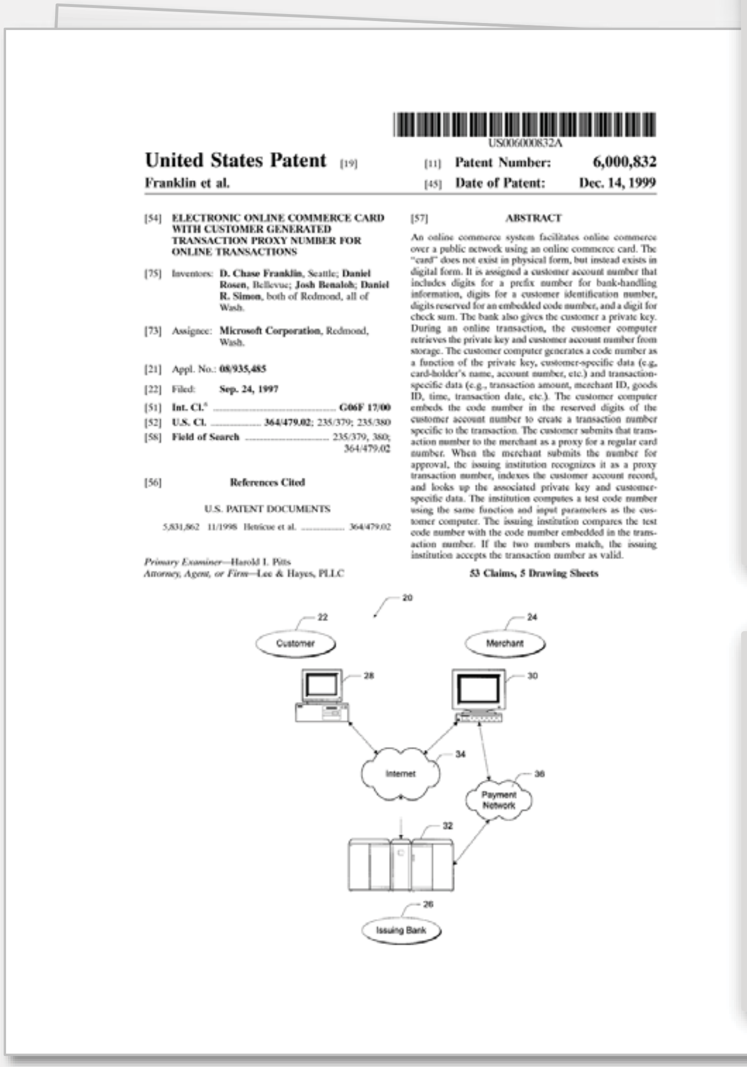
Database

Petition at 27

Petition at 28-30; Reply to POR at 4-6.

1. Reber and Franklin Teach Protecting "Account Identifying Information"

Franklin teaches providing customer-specific information to the merchant is optional



US006000832A

United States Patent [19]

Franklin et al.

[11] **Patent Number:** **6,000,832**

[45] **Date of Patent:** **Dec. 14, 1999**

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[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

[22] Filed: **Sep. 24, 1997**

[51] **Int. Cl.**[6] **G06F 17/00**

[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380

[58] **Field of Search** 235/379, 380; 364/479.02

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,831,862 11/1998 Hetricue et al. 364/479.02

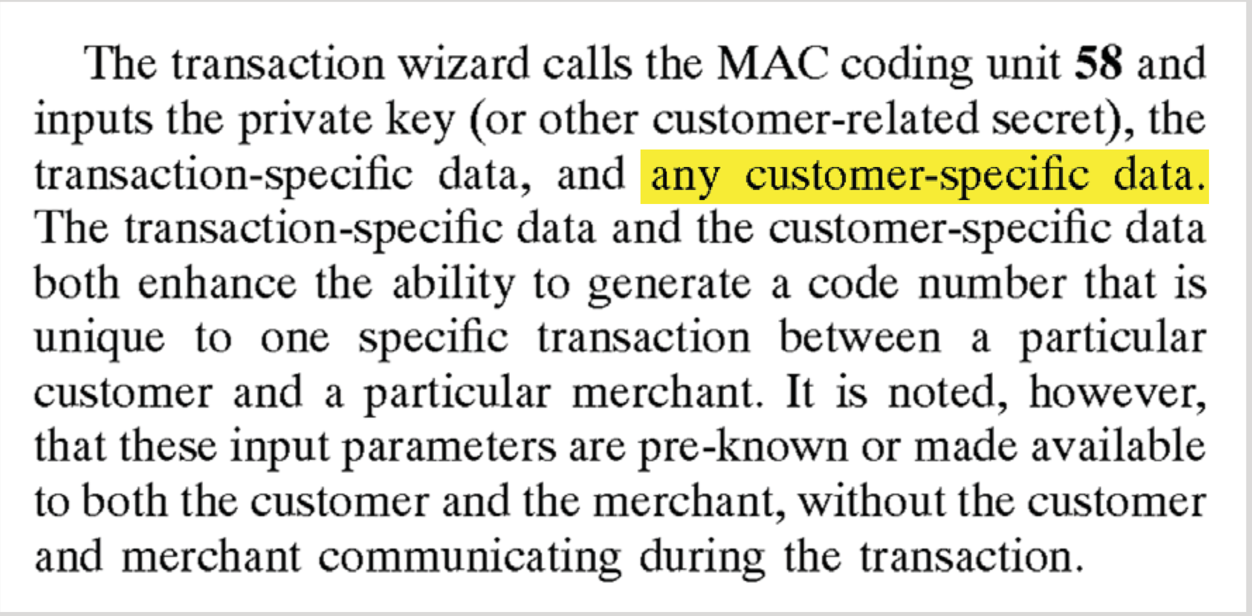
Primary Examiner—Harold I. Pitts
Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] **ABSTRACT**

An online commerce system facilitates online commerce over a public network using an online commerce card. The "card" does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as a function of the private key, customer-specific data (e.g., card-holder's name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the reserved digits of the customer account number to create a transaction number specific to the transaction. The customer submits that transaction number to the merchant as a proxy for a regular card number. When the merchant submits the number for approval, the issuing institution recognizes it as a proxy transaction number, indexes the customer account record, and looks up the associated private key and customer-specific data. The institution computes a test code number using the same function and input parameters as the customer computer. The issuing institution compares the test code number with the code number embedded in the transaction number. If the two numbers match, the issuing institution accepts the transaction number as valid.

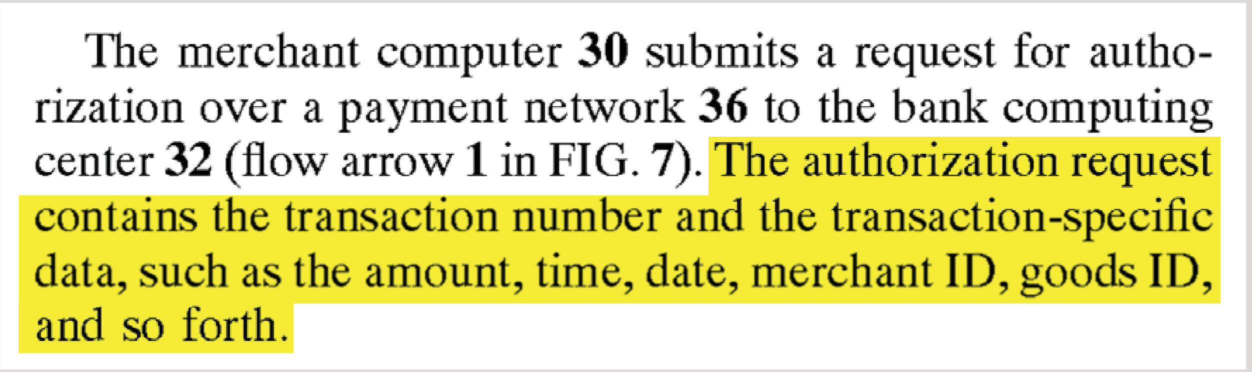
53 Claims, 5 Drawing Sheets

20
22
Customer
24
Merchant
28
30
34
Internet
36
Payment Network
32
26
Issuing Bank



The transaction wizard calls the MAC coding unit **58** and inputs the private key (or other customer-related secret), the transaction-specific data, and any customer-specific data. The transaction-specific data and the customer-specific data both enhance the ability to generate a code number that is unique to one specific transaction between a particular customer and a particular merchant. It is noted, however, that these input parameters are pre-known or made available to both the customer and the merchant, without the customer and merchant communicating during the transaction.

Ex. 1132 [Franklin], 9:49-58



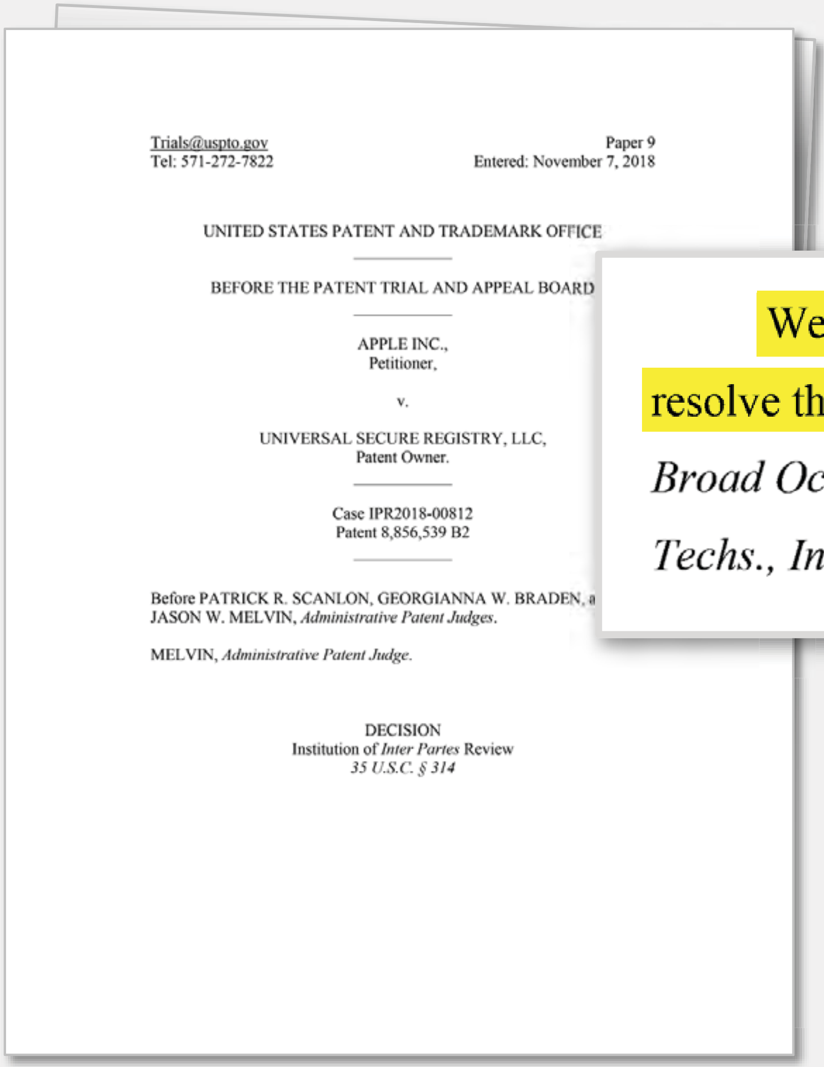
The merchant computer **30** submits a request for authorization over a payment network **36** to the bank computing center **32** (flow arrow **1** in FIG. **7**). The authorization request contains the transaction number and the transaction-specific data, such as the amount, time, date, merchant ID, goods ID, and so forth.

Ex. 1132 [Franklin], 11:33-38

Reply to POR at 4-6.

1. Reber and Franklin Teach Protecting "Account Identifying Information"

The Board did not construe the term "account identifying information"



Trials@uspto.gov
Tel: 571-272-7822

Paper 9
Entered: November 7, 2018

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

UNIVERSAL SECURE REGISTRY, LLC,
Patent Owner.

Case IPR2018-00812
Patent 8,856,539 B2

Before PATRICK R. SCANLON, GEORGIANNA W. BRADEN, a
JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314

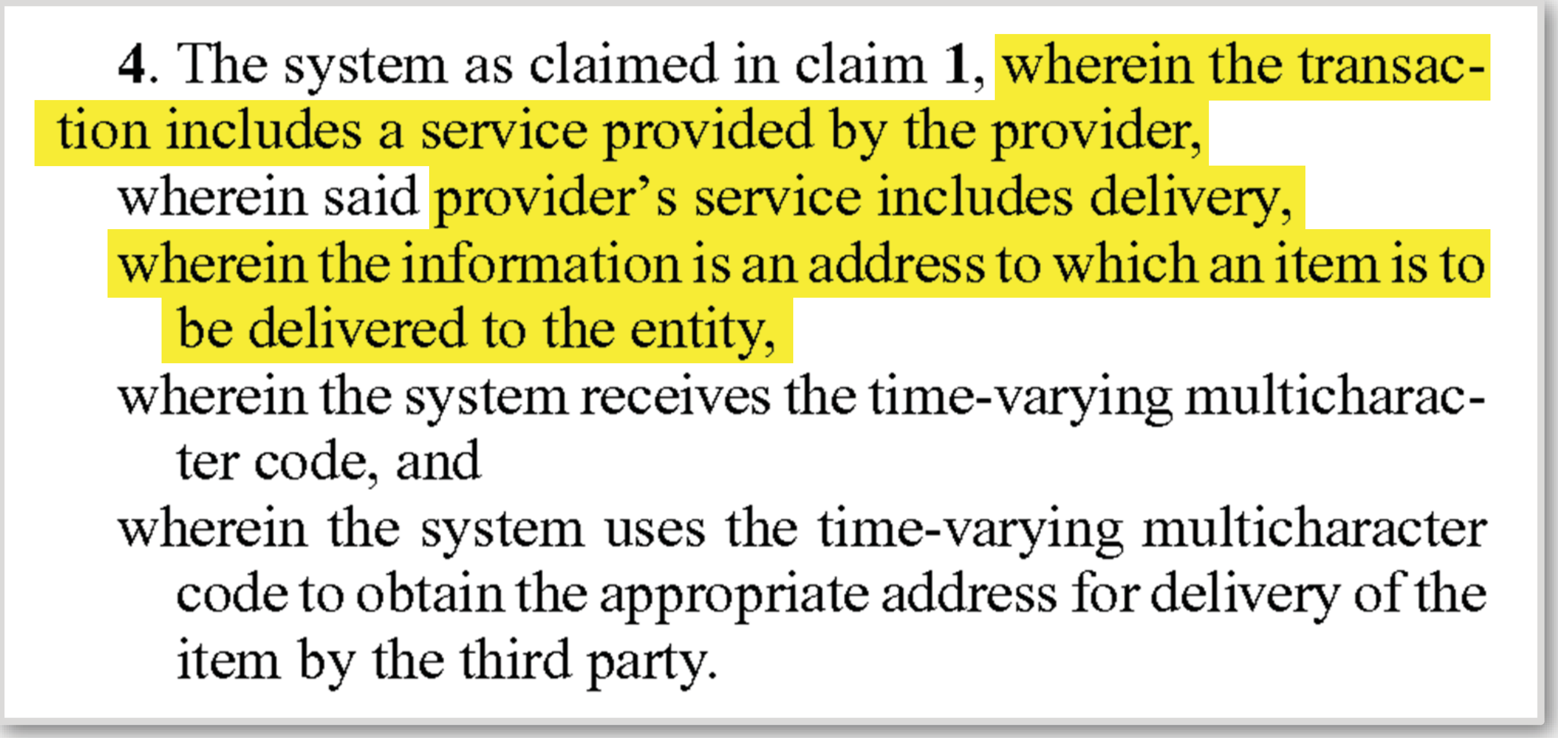
We conclude that there is no need to construe any other term to resolve the issues in this decision. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Institution Decision at 7

Compare Surreply at 1-3 *with* Institution Decision at 7; *see also* Reply to POR at 1-3.

1. Reber and Franklin Teach Protecting "Account Identifying Information"

USR's argument is inconsistent with claim 4 of the '539 patent, which requires the provider to provide "delivery" to the entity as a "service"



4. The system as claimed in claim **1**, wherein the transaction includes a service provided by the provider,

wherein said provider's service includes delivery,

wherein the information is an address to which an item is to be delivered to the entity,

wherein the system receives the time-varying multicharacter code, and

wherein the system uses the time-varying multicharacter code to obtain the appropriate address for delivery of the item by the third party.

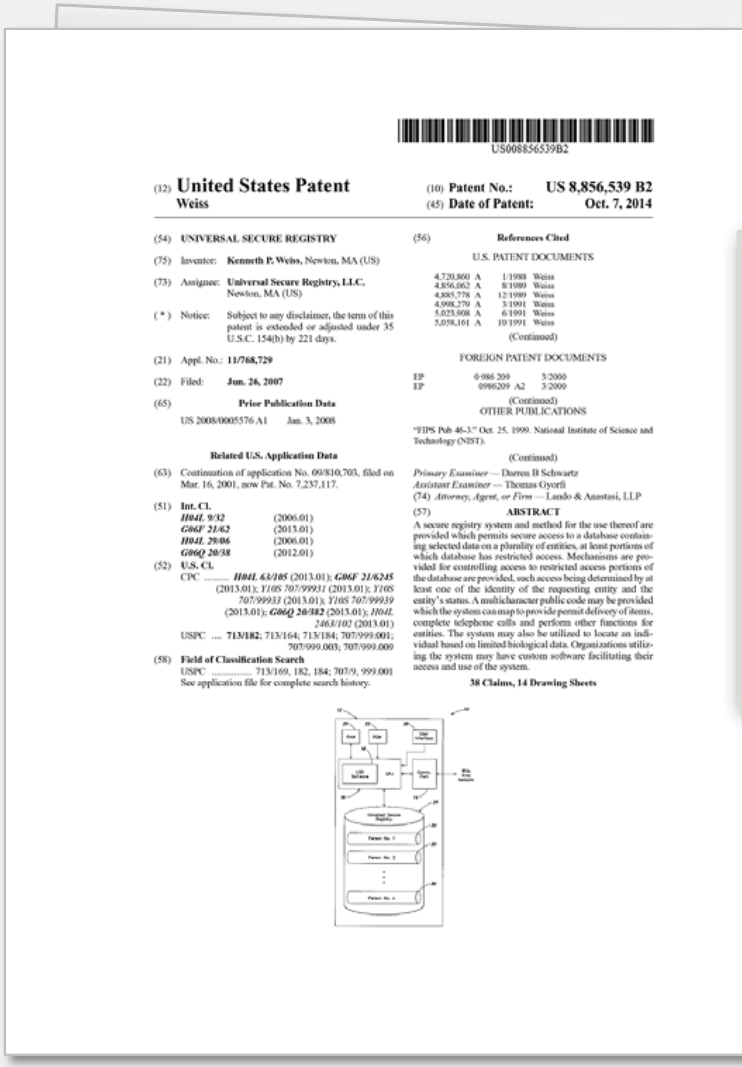
Ex. 1101 ['539 Patent], Claim 4

Reply to POR at 2.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

1. Reber and Franklin Teach Protecting "Account Identifying Information"

The '539 patent describes providing name and address information to merchants to enable delivery



US008856539B2

(12) **United States Patent**
Weiss

(10) **Patent No.: US 8,856,539 B2**
(45) **Date of Patent: Oct. 7, 2014**

(54) **UNIVERSAL SECURE REGISTRY**

(75) Inventor: **Kenneth P. Weiss**, Newton, MA (US)

(73) Assignee: **Universal Secure Registry, LLC**, Newton, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 221 days.

(21) Appl. No.: **11/768,729**

(22) Filed: **Jun. 26, 2007**

(65) **Prior Publication Data**

US 2008/0005576 A1 Jan. 3, 2008

Related U.S. Application Data

(63) Continuation of application No. 09/810,703, filed on Mar. 16, 2001, now Pat. No. 7,237,117.

(51) **Int. Cl.**

H04L 9/32	(2006.01)
G06F 21/62	(2013.01)
H04L 29/06	(2006.01)
G06Q 20/38	(2012.01)

(52) **U.S. Cl.**
CPC ***H04L 63/105*** (2013.01); ***G06F 21/6245*** (2013.01); *Y10S 707/99931* (2013.01); *Y10S 707/99933* (2013.01); *Y10S 707/99939* (2013.01); ***G06Q 20/382*** (2013.01); *H04L 2463/102* (2013.01)
USPC **713/182**; 713/164; 713/184; 707/999.001; 707/999.003; 707/999.009

(58) **Field of Classification Search**
USPC 713/169, 182, 184; 707/9, 999.001
See application file for complete search history.

(56) **References Cited**

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4,885,778	A	12/1989	Weiss
4,998,279	A	3/1991	Weiss
5,023,908	A	6/1991	Weiss
5,058,161	A	10/1991	Weiss

(Continued)

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EP	0986209 A2	3/2000

(Continued)

OTHER PUBLICATIONS

"FIPS Pub 46-3." Oct. 25, 1999. National Institute of Science and Technology (NIST).

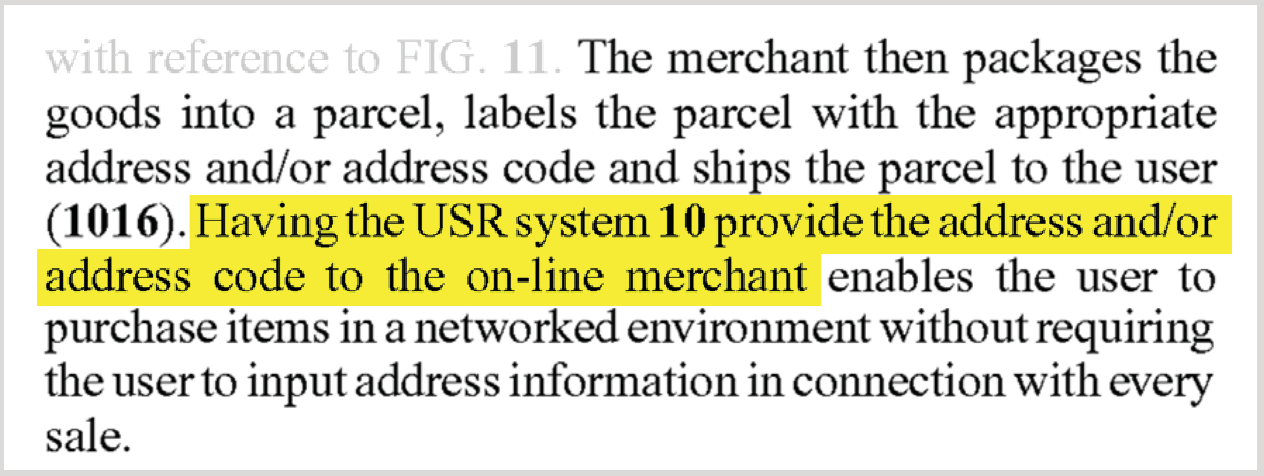
(Continued)

Primary Examiner — Darren B Schwartz
Assistant Examiner — Thomas Gyorfi
(74) *Attorney, Agent, or Firm* — Lando & Anastasi, LLP

(57) **ABSTRACT**

A secure registry system and method for the use thereof are provided which permits secure access to a database containing selected data on a plurality of entities, at least portions of which database has restricted access. Mechanisms are provided for controlling access to restricted access portions of the database are provided, such access being determined by at least one of the identity of the requesting entity and the entity's status. A multicharacter public code may be provided which the system can map to provide permit delivery of items, complete telephone calls and perform other functions for entities. The system may also be utilized to locate an individual based on limited biological data. Organizations utilizing the system may have custom software facilitating their access and use of the system.

38 Claims, 14 Drawing Sheets



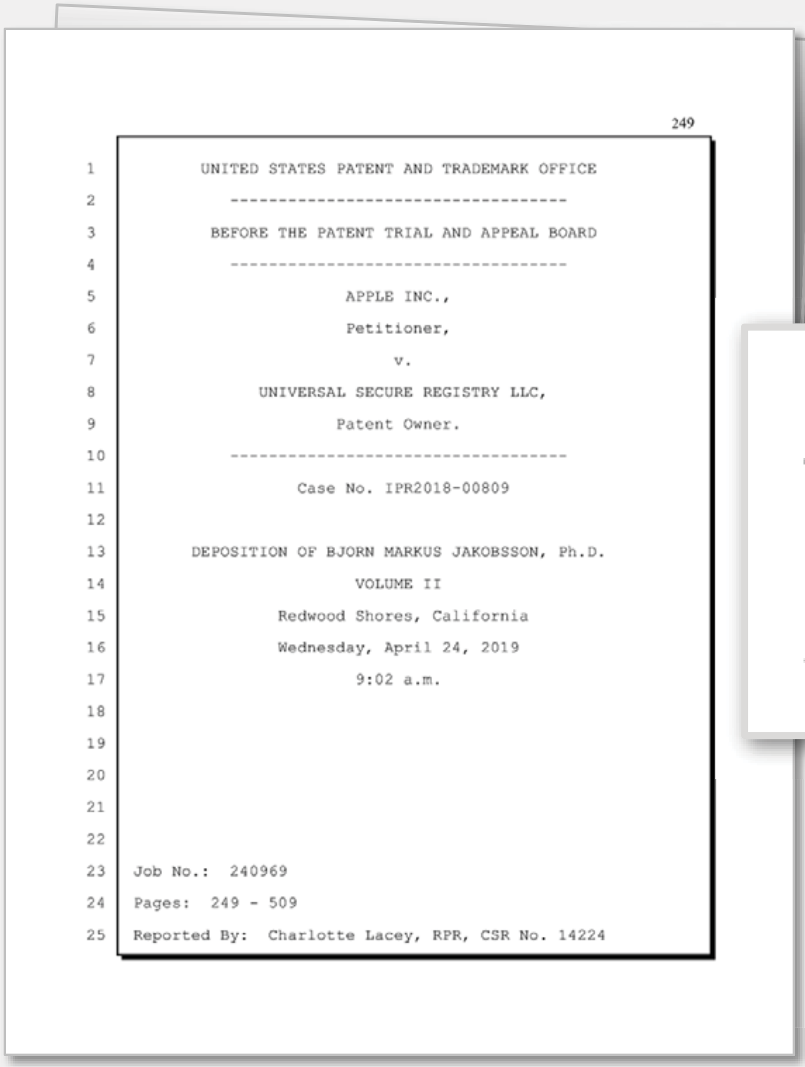
with reference to FIG. 11. The merchant then packages the goods into a parcel, labels the parcel with the appropriate address and/or address code and ships the parcel to the user (**1016**). Having the USR system **10** provide the address and/or address code to the on-line merchant enables the user to purchase items in a networked environment without requiring the user to input address information in connection with every sale.

Ex. 1101 ['539 Patent], 13:63-14:3; *see also id.* at 12:57-62, 17:34-38, Figs. 7-10

Reply to POR at 2-3, 5-6.

1. Reber and Franklin Teach Protecting "Account Identifying Information"

Dr. Jakobsson did not offer any opinion that the claims of the '539 patent require anonymity



249

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC,

Patent Owner.

Case No. IPR2018-00809

DEPOSITION OF BJORN MARKUS JAKOBSSON, Ph.D.

VOLUME II

Redwood Shores, California

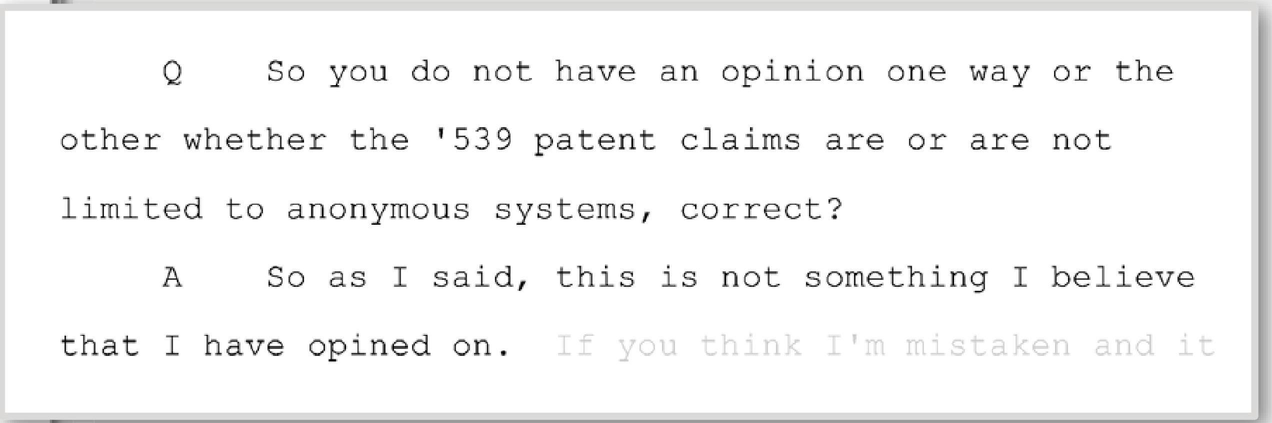
Wednesday, April 24, 2019

9:02 a.m.

Job No.: 240969

Pages: 249 - 509

Reported By: Charlotte Lacey, RPR, CSR No. 14224



Q So you do not have an opinion one way or the other whether the '539 patent claims are or are not limited to anonymous systems, correct?

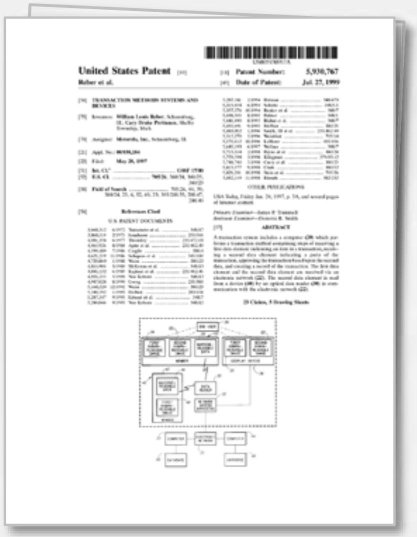
A So as I said, this is not something I believe that I have opined on. If you think I'm mistaken and it

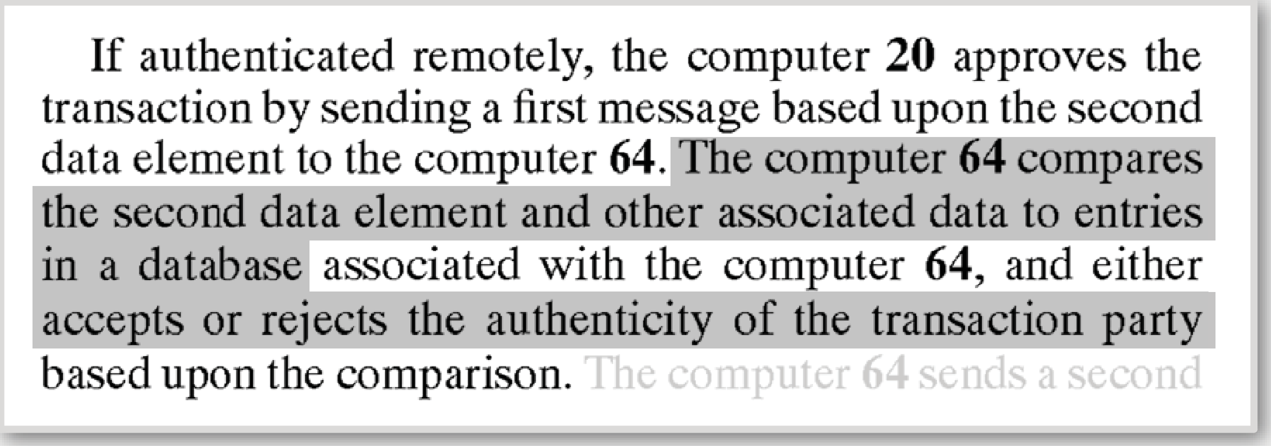
Ex. 1137 [Jakobsson Dep. Tr.], 343:8-12

Reply to POR at 2.

2. Reber and Franklin Teach Compliance with Access Restrictions

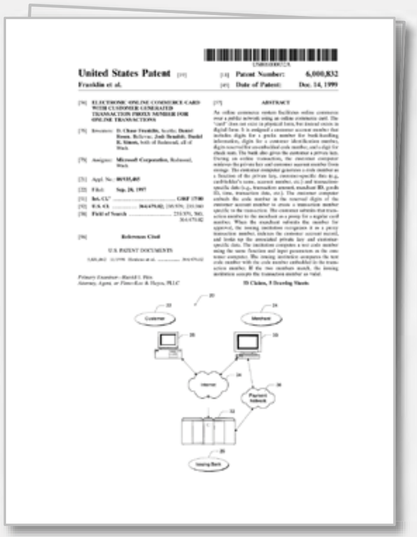
Franklin teaches performing merchant validation in addition to confirming the authenticity of a received time-varying code

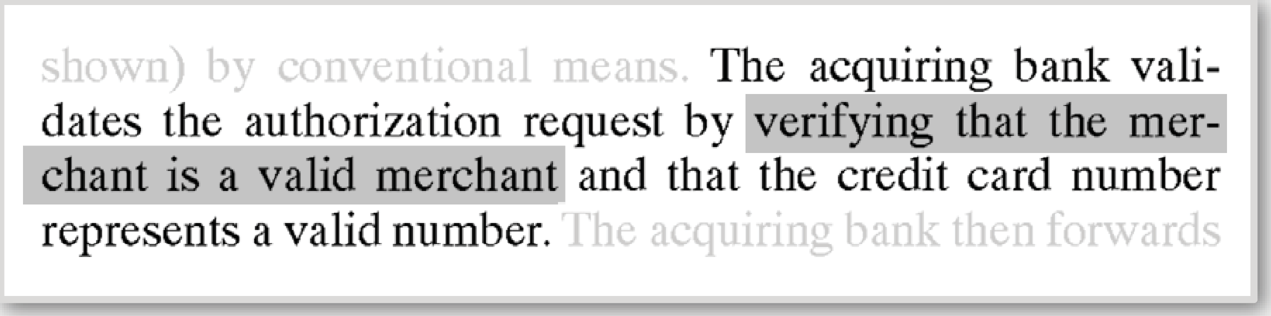




If authenticated remotely, the computer **20** approves the transaction by sending a first message based upon the second data element to the computer **64**. The computer **64** compares the second data element and other associated data to entries in a database associated with the computer **64**, and either accepts or rejects the authenticity of the transaction party based upon the comparison. The computer **64** sends a second

Ex. 1131 [Reber], 5:16-22





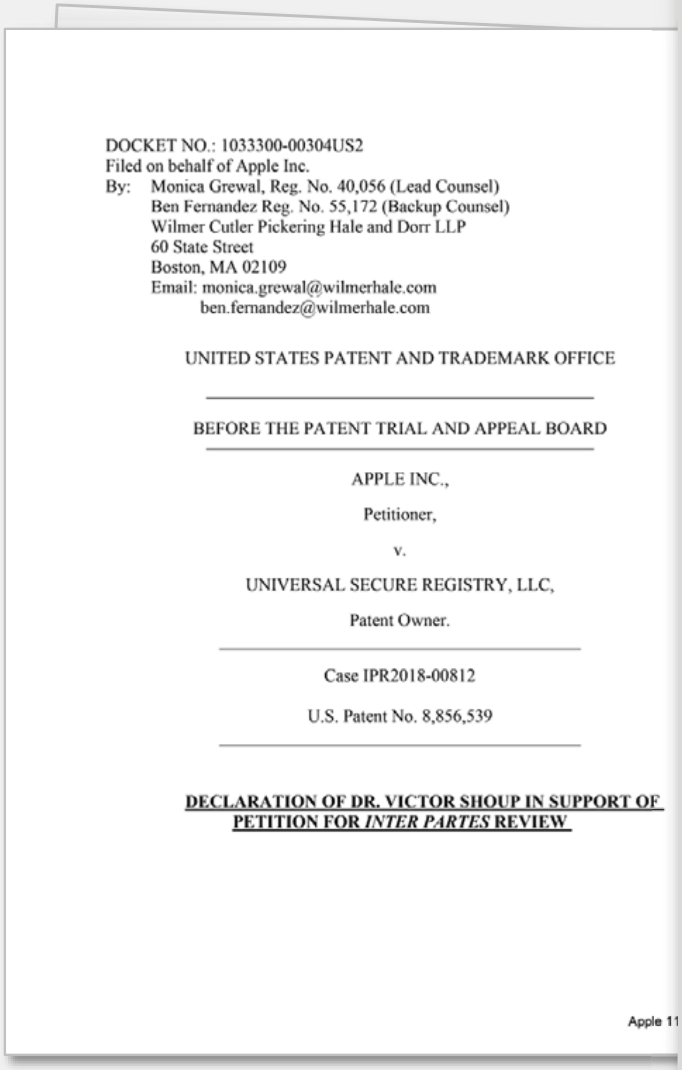
shown) by conventional means. The acquiring bank validates the authorization request by verifying that the merchant is a valid merchant and that the credit card number represents a valid number. The acquiring bank then forwards

Ex. 1132 [Franklin], 11:43-45

Petition at 36-39; Reply to POR at 10-14.

2. Reber and Franklin Teach Compliance with Access Restrictions

A POSITA would have combined Reber and Franklin in order to reduce fraud (including by merchants)



DOCKET NO.: 1033300-00304US2
Filed on behalf of Apple Inc.
By: Monica Grewal, Reg. No. 40,056 (Lead Counsel)
Ben Fernandez Reg. No. 55,172 (Backup Counsel)
Wilmer Cutler Pickering Hale and Dorr LLP
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Boston, MA 02109
Email: monica.grewal@wilmerhale.com
ben.fernandez@wilmerhale.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner,

v.

UNIVERSAL SECURE REGISTRY, LLC,

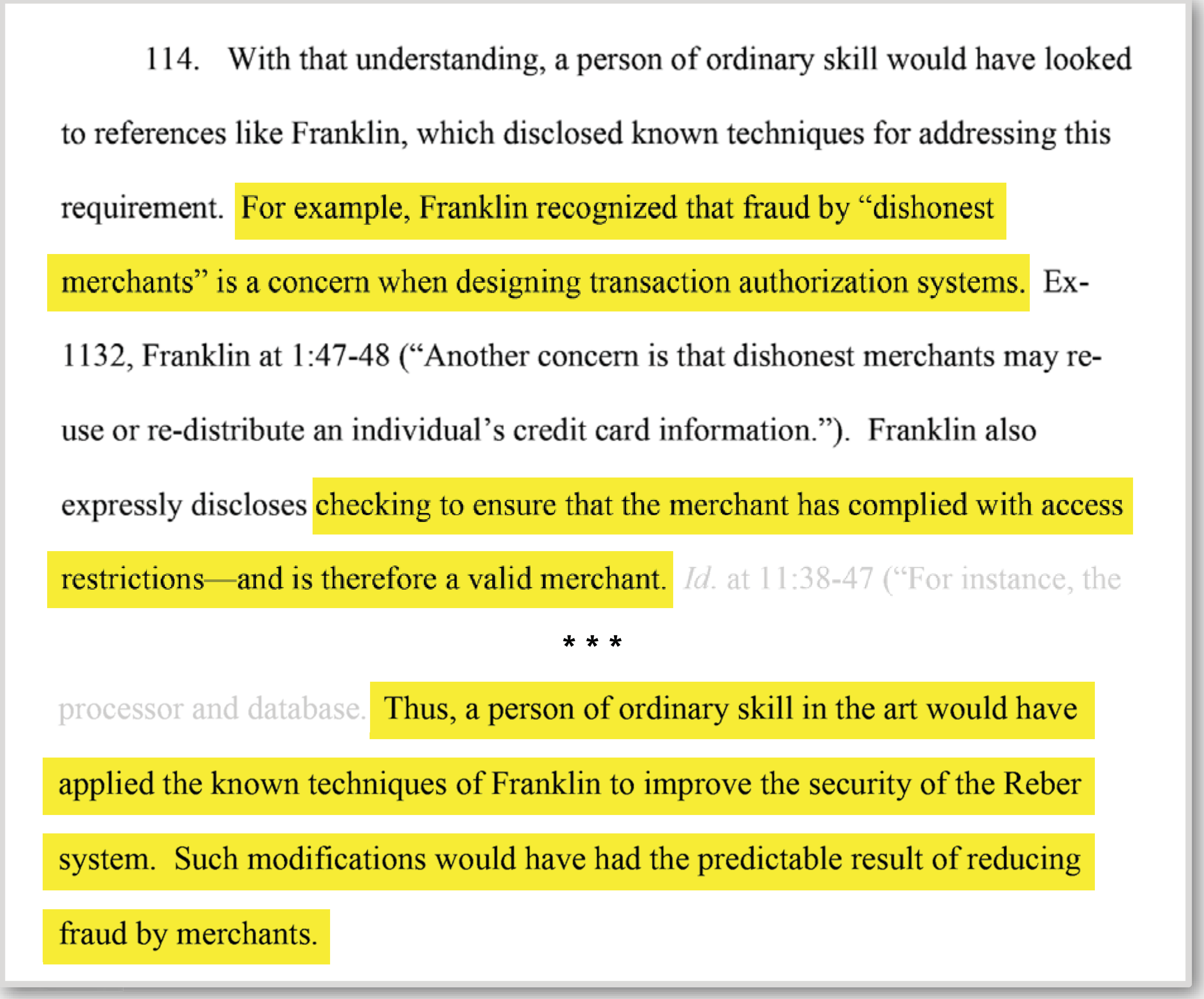
Patent Owner.

Case IPR2018-00812

U.S. Patent No. 8,856,539

DECLARATION OF DR. VICTOR SHOUP IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW

Apple 11



114. With that understanding, a person of ordinary skill would have looked to references like Franklin, which disclosed known techniques for addressing this requirement. For example, Franklin recognized that fraud by "dishonest merchants" is a concern when designing transaction authorization systems. Ex-1132, Franklin at 1:47-48 ("Another concern is that dishonest merchants may re-use or re-distribute an individual's credit card information."). Franklin also expressly discloses checking to ensure that the merchant has complied with access restrictions—and is therefore a valid merchant. *Id.* at 11:38-47 ("For instance, the

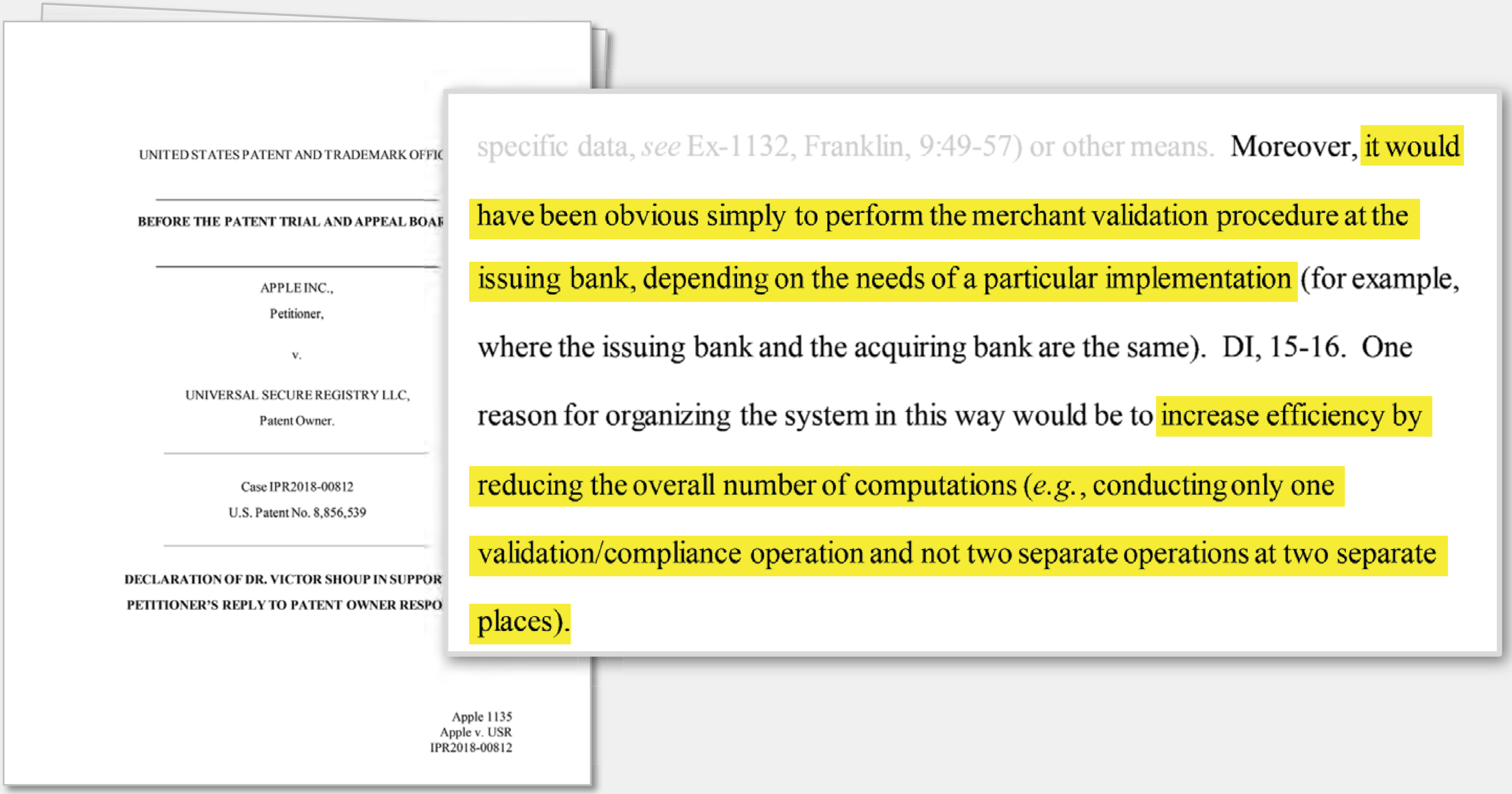
* * *

processor and database. Thus, a person of ordinary skill in the art would have applied the known techniques of Franklin to improve the security of the Reber system. Such modifications would have had the predictable result of reducing fraud by merchants.

Ex-1102 [Shoup Dec. Petition], ¶114.

2. Reber and Franklin Teach Compliance with Access Restrictions

Franklin's teaching about merchant validation is not limited to the acquiring bank



UNITED STATES PATENT AND TRADEMARK OFFIC

BEFORE THE PATENT TRIAL AND APPEAL BOAR

APPLE INC.,
Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC,
Patent Owner.

Case IPR2018-00812
U.S. Patent No. 8,856,539

DECLARATION OF DR. VICTOR SHOUP IN SUPPOR
PETITIONER'S REPLY TO PATENT OWNER RESPO

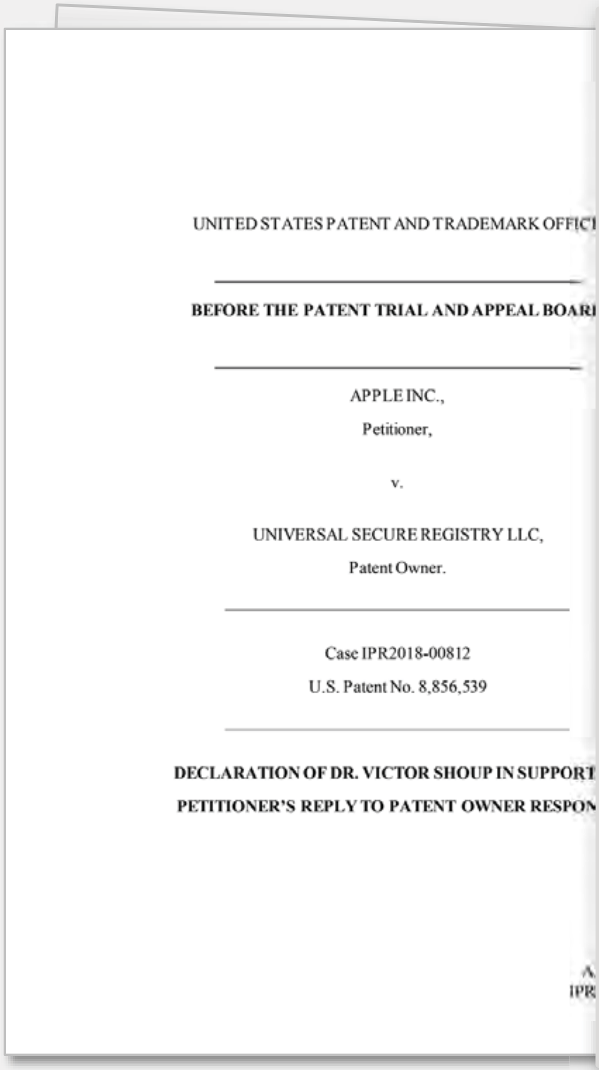
Apple 1135
Apple v. USR
IPR2018-00812

specific data, *see* Ex-1132, Franklin, 9:49-57) or other means. Moreover, it would have been obvious simply to perform the merchant validation procedure at the issuing bank, depending on the needs of a particular implementation (for example, where the issuing bank and the acquiring bank are the same). DI, 15-16. One reason for organizing the system in this way would be to increase efficiency by reducing the overall number of computations (*e.g.*, conducting only one validation/compliance operation and not two separate operations at two separate places).

Reply to POR at 12-13; Ex-1135 [Shoup POR Reply Decl.], ¶35.

2. Reber and Franklin Teach Compliance with Access Restrictions

The Institution Decision correctly decided that merchant validation could occur at the secure registry



UNITED STATES PATENT AND TRADEMARK OFFICI

BEFORE THE PATENT TRIAL AND APPEAL BOAR

APPLE INC.,
Petitioner,

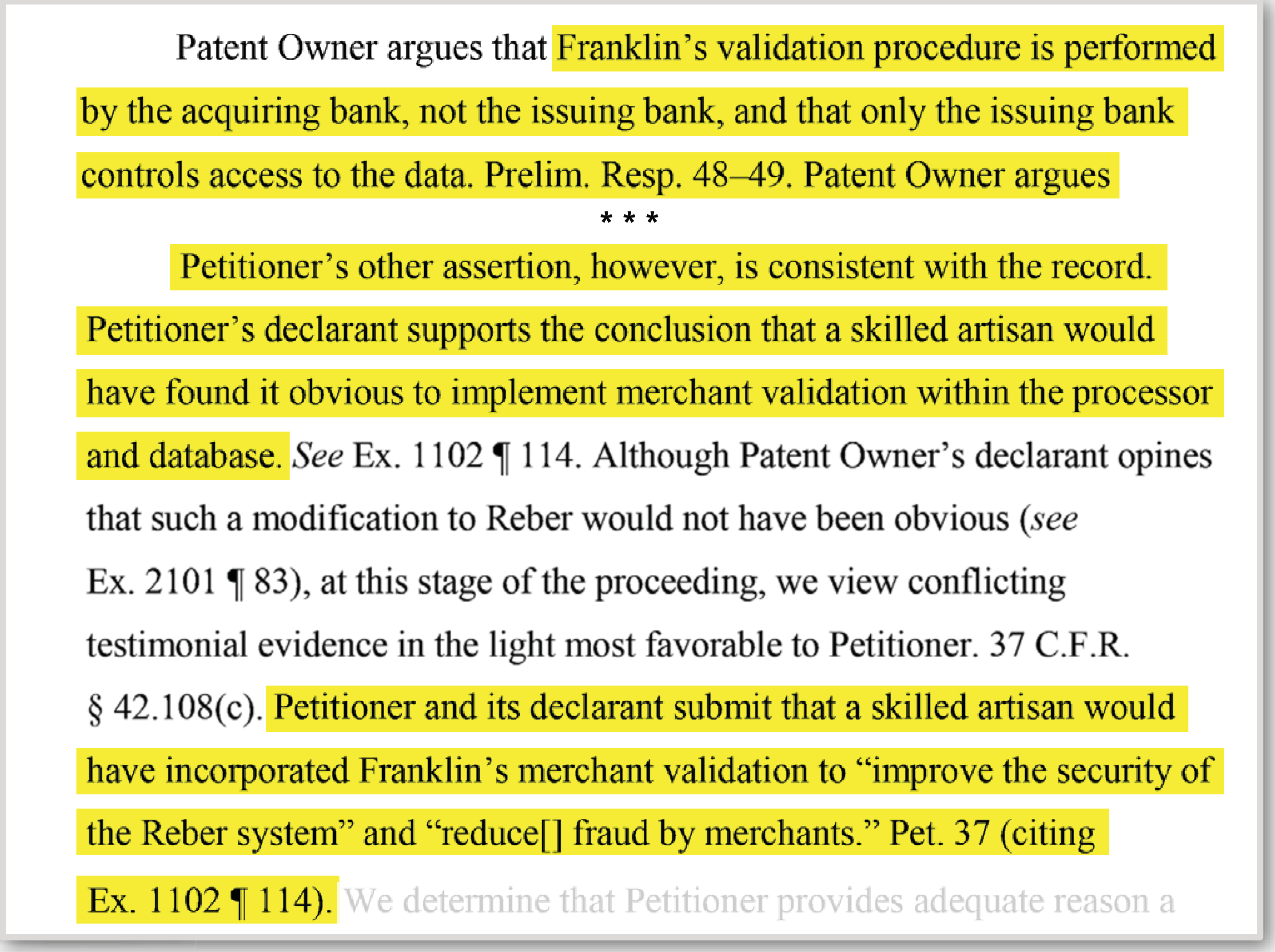
v.

UNIVERSAL SECURE REGISTRY LLC,
Patent Owner.

Case IPR2018-00812
U.S. Patent No. 8,856,539

DECLARATION OF DR. VICTOR SHOUP IN SUPPORT
PETITIONER'S REPLY TO PATENT OWNER RESPON

A
IPR



Patent Owner argues that Franklin's validation procedure is performed by the acquiring bank, not the issuing bank, and that only the issuing bank controls access to the data. Prelim. Resp. 48–49. Patent Owner argues

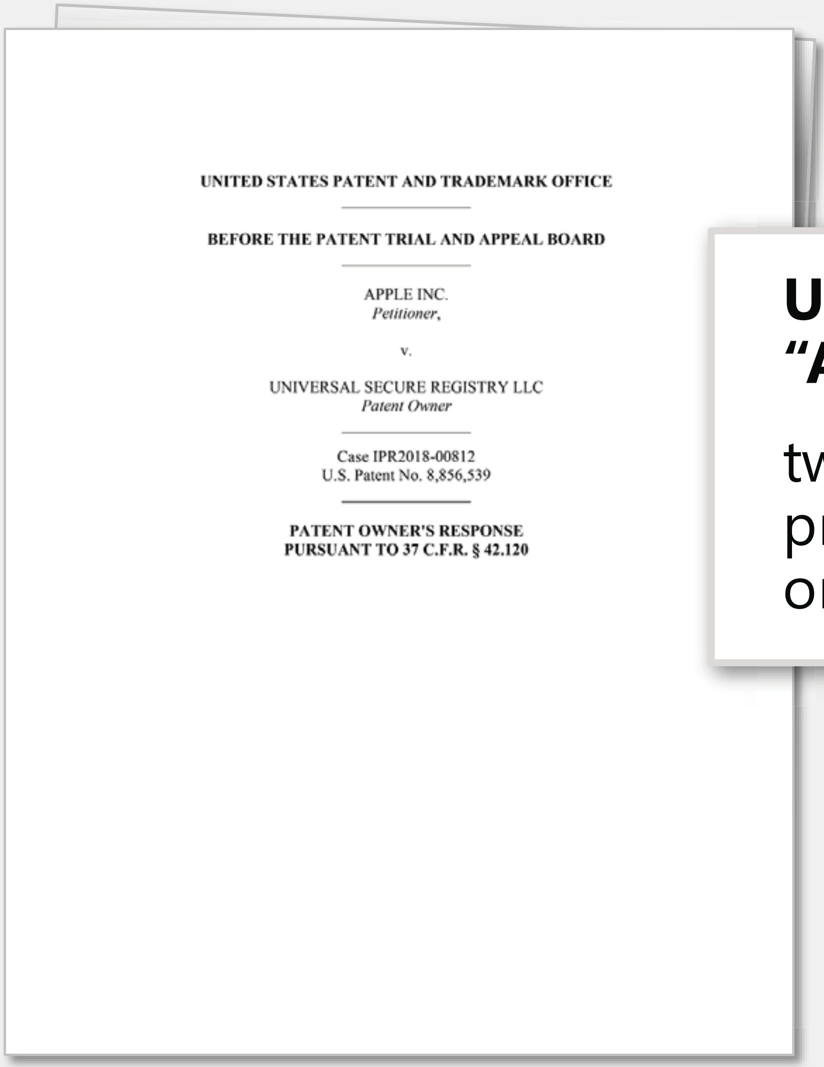
* * *

Petitioner's other assertion, however, is consistent with the record. Petitioner's declarant supports the conclusion that a skilled artisan would have found it obvious to implement merchant validation within the processor and database. *See* Ex. 1102 ¶ 114. Although Patent Owner's declarant opines that such a modification to Reber would not have been obvious (*see* Ex. 2101 ¶ 83), at this stage of the proceeding, we view conflicting testimonial evidence in the light most favorable to Petitioner. 37 C.F.R. § 42.108(c). Petitioner and its declarant submit that a skilled artisan would have incorporated Franklin's merchant validation to "improve the security of the Reber system" and "reduce[] fraud by merchants." Pet. 37 (citing Ex. 1102 ¶ 114). We determine that Petitioner provides adequate reason a

Compare Surreply at 13-15 *with* Institution Decision at 15.

2. Reber and Franklin Teach Compliance with Access Restrictions

USR's proposed construction should be rejected



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.
Petitioner,

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UNIVERSAL SECURE REGISTRY LLC
Patent Owner

Case IPR2018-00812
U.S. Patent No. 8,856,539

PATENT OWNER'S RESPONSE
PURSUANT TO 37 C.F.R. § 42.120

USR's Proposed Construction of "Access Restrictions":

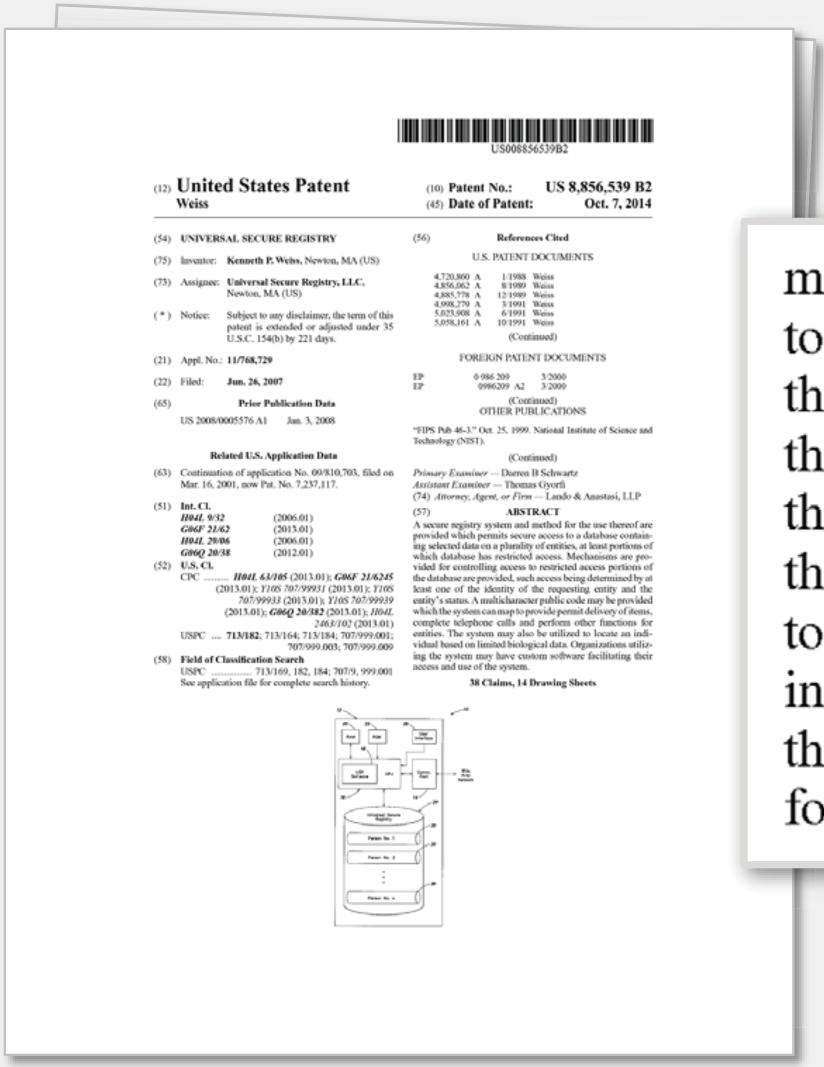
two or more restrictions specific to the provider that indicate what secure data may or may not be accessed.

cite

Compare Surreply at 5-10 *with* Reply to POR at 7-10.

2. Reber and Franklin Teach Compliance with Access Restrictions

USR's construction is inconsistent with the claim language



US008856539B2

(12) **United States Patent**
Weiss

(10) **Patent No.:** **US 8,856,539 B2**
(45) **Date of Patent:** **Oct. 7, 2014**

(54) **UNIVERSAL SECURE REGISTRY**

(75) Inventor: **Kenneth P. Weiss**, Newton, MA (US)

(73) Assignee: **Universal Secure Registry, LLC**, Newton, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 221 days.

(21) Appl. No.: **11/768,729**

(22) Filed: **Jun. 26, 2007**

(65) **Prior Publication Data**

US 2008/0005576 A1 Jan. 3, 2008

Related U.S. Application Data

(63) Continuation of application No. 09/810,703, filed on Mar. 16, 2001, now Pat. No. 7,237,117.

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H04L 9/32	(2006.01)
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H04L 29/06	(2006.01)
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(52) **U.S. Cl.**
CPC ***H04L 63/105*** (2013.01); ***G06F 21/6245*** (2013.01); *Y10S 707/99931* (2013.01); *Y10S 707/99933* (2013.01); *Y10S 707/99939* (2013.01); ***G06Q 20/382*** (2013.01); *H04L 2463/102* (2013.01)
USPC **713/182**; 713/164; 713/184; 707/999.001; 707/999.003; 707/999.009

(58) **Field of Classification Search**
USPC 713/169, 182, 184; 707/9, 999.001
See application file for complete search history.

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(Continued)

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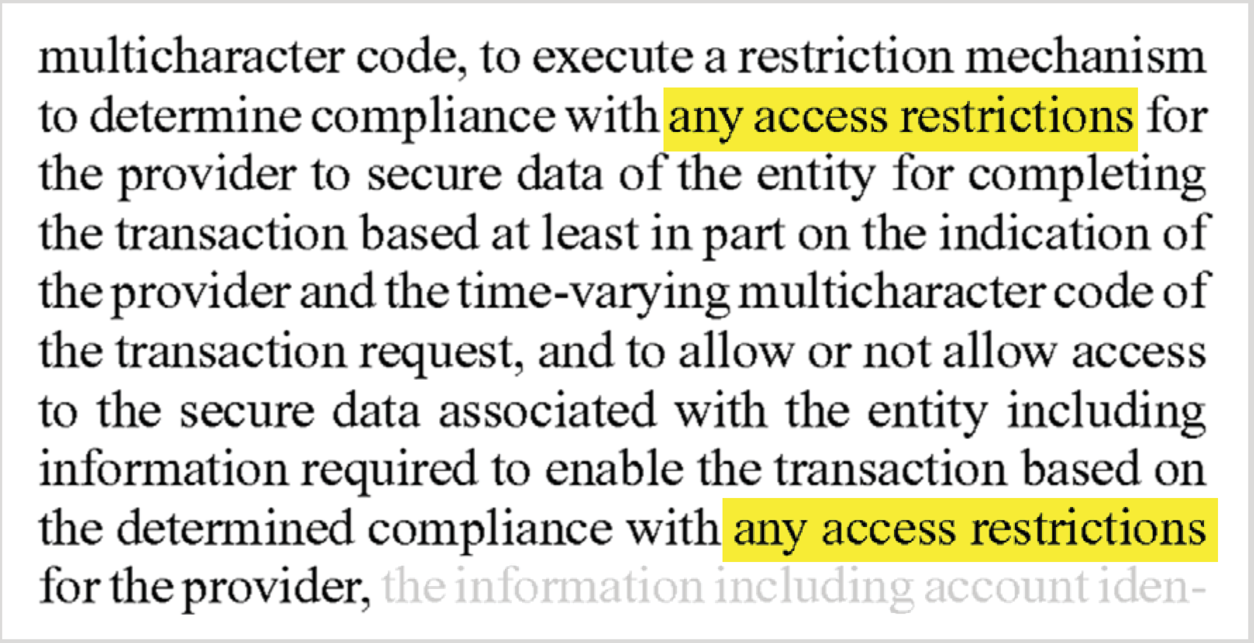
(Continued)

Primary Examiner — Darren B Schwartz
Assistant Examiner — Thomas Gyorfi
(74) *Attorney, Agent, or Firm* — Lando & Anastasi, LLP

(57) **ABSTRACT**

A secure registry system and method for the use thereof are provided which permits secure access to a database containing selected data on a plurality of entities, at least portions of which database has restricted access. Mechanisms are provided for controlling access to restricted access portions of the database are provided, such access being determined by at least one of the identity of the requesting entity and the entity's status. A multicharacter public code may be provided which the system can map to provide permit delivery of items, complete telephone calls and perform other functions for entities. The system may also be utilized to locate an individual based on limited biological data. Organizations utilizing the system may have custom software facilitating their access and use of the system.

38 Claims, 14 Drawing Sheets



multicharacter code, to execute a restriction mechanism to determine compliance with any access restrictions for the provider to secure data of the entity for completing the transaction based at least in part on the indication of the provider and the time-varying multicharacter code of the transaction request, and to allow or not allow access to the secure data associated with the entity including information required to enable the transaction based on the determined compliance with any access restrictions for the provider, the information including account iden-

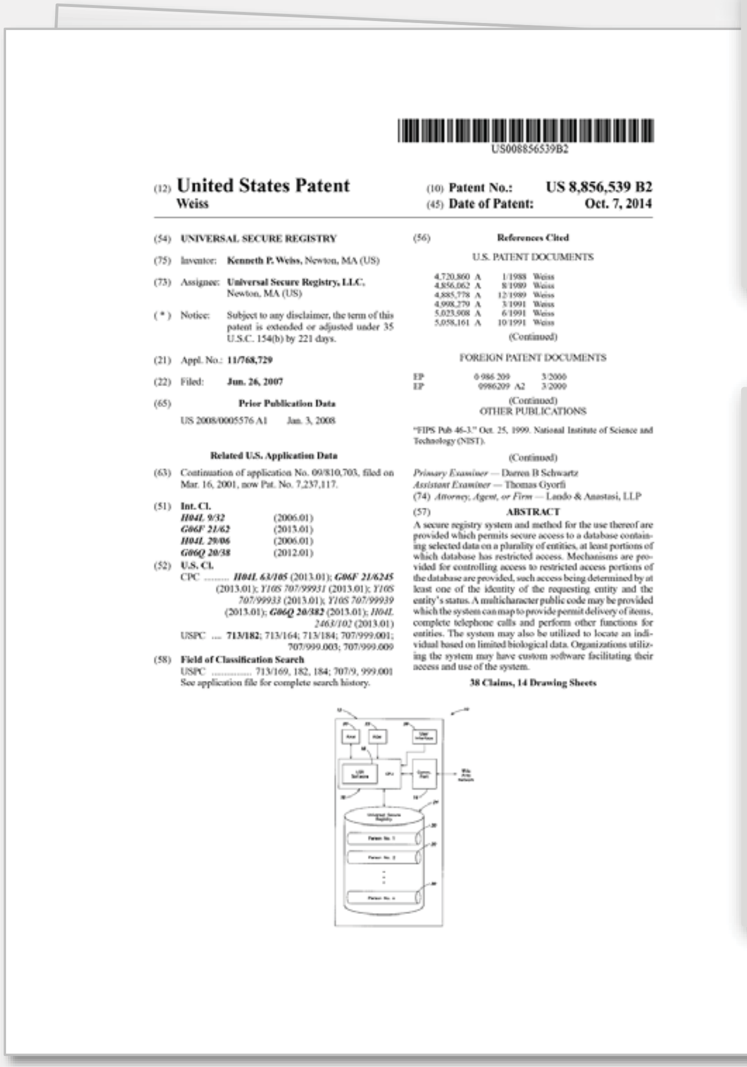
Ex. 1101 ['539 Patent], Claim 1 at 18:45-54

Reply to POR at 9-10.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

2. Reber and Franklin Teach Compliance with Access Restrictions

Nothing in the patent specification requires "two or more" access restrictions



US008856539B2

(12) **United States Patent**
Weiss

(10) **Patent No.:** **US 8,856,539 B2**
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(Continued)

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EP	0986209 A2	3/2000

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OTHER PUBLICATIONS

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(Continued)

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(74) *Attorney, Agent, or Firm* — Lando & Anastasi, LLP

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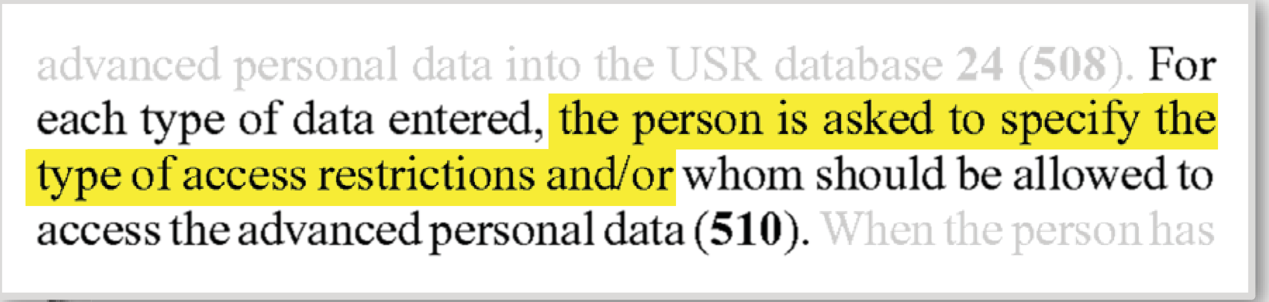
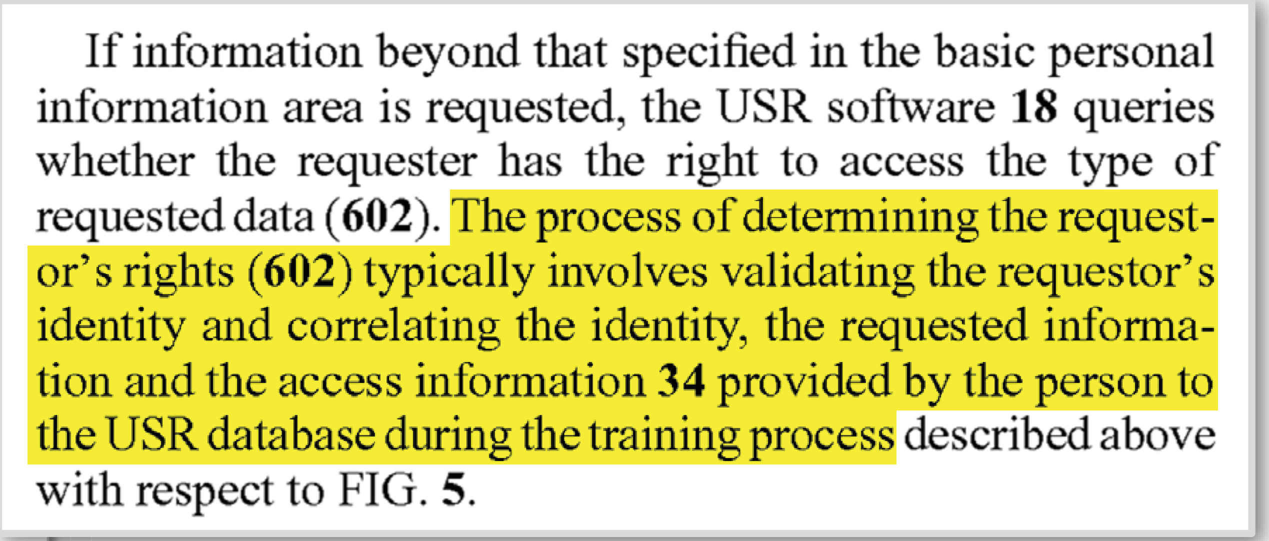


advanced personal data into the USR database **24** (**508**). For each type of data entered, the person is asked to specify the type of access restrictions and/or whom should be allowed to access the advanced personal data (**510**). When the person has

Ex. 1101 ['539 Patent], 10:22-25



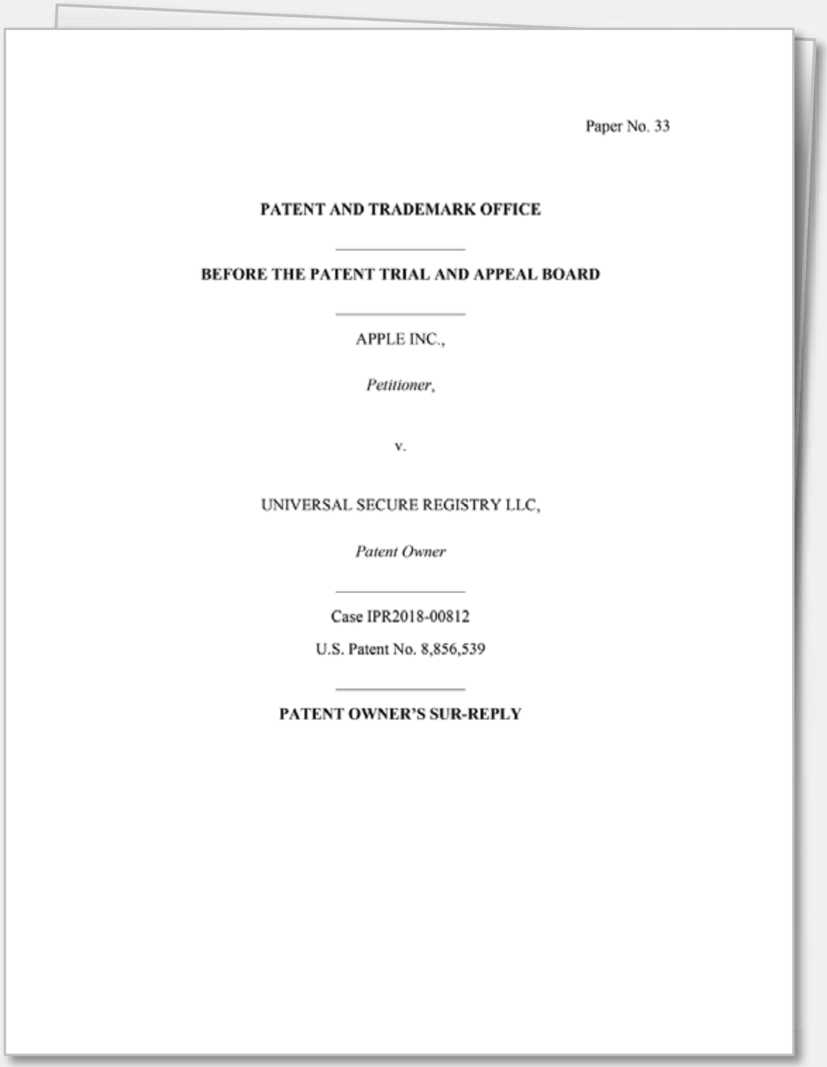
If information beyond that specified in the basic personal information area is requested, the USR software **18** queries whether the requester has the right to access the type of requested data (**602**). The process of determining the requestor's rights (**602**) typically involves validating the requestor's identity and correlating the identity, the requested information and the access information **34** provided by the person to the USR database during the training process described above with respect to FIG. **5**.

Ex. 1101 ['539 Patent], 10:40-48

Compare Surreply at 8-10 *with* Reply to POR at 9-10.

2. Reber and Franklin Teach Compliance with Access Restrictions

The examples Dr. Jakobsson offered in his example do not appear in the ’539 patent and are inconsistent with the specification



Paper No. 33

PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner,

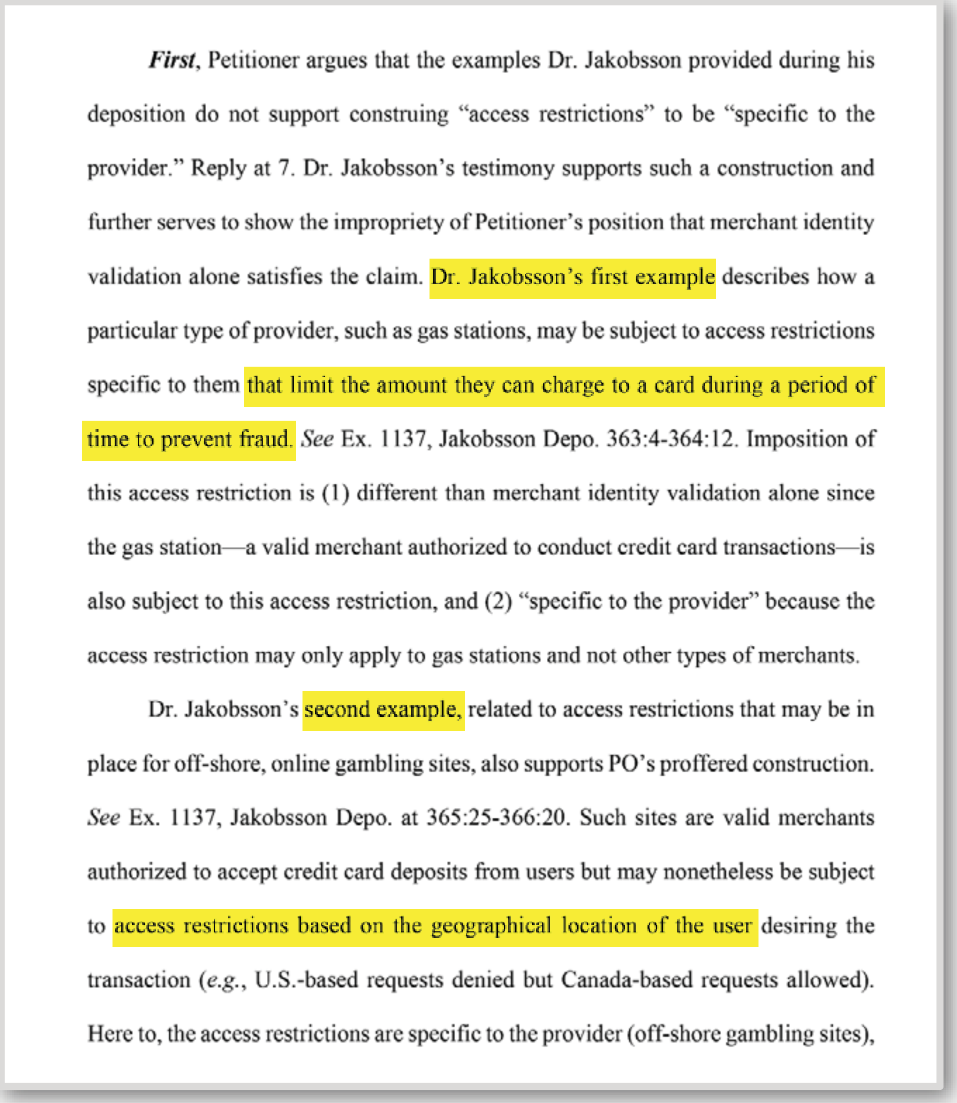
v.

UNIVERSAL SECURE REGISTRY LLC,

Patent Owner

Case IPR2018-00812
U.S. Patent No. 8,856,539

PATENT OWNER’S SUR-REPLY



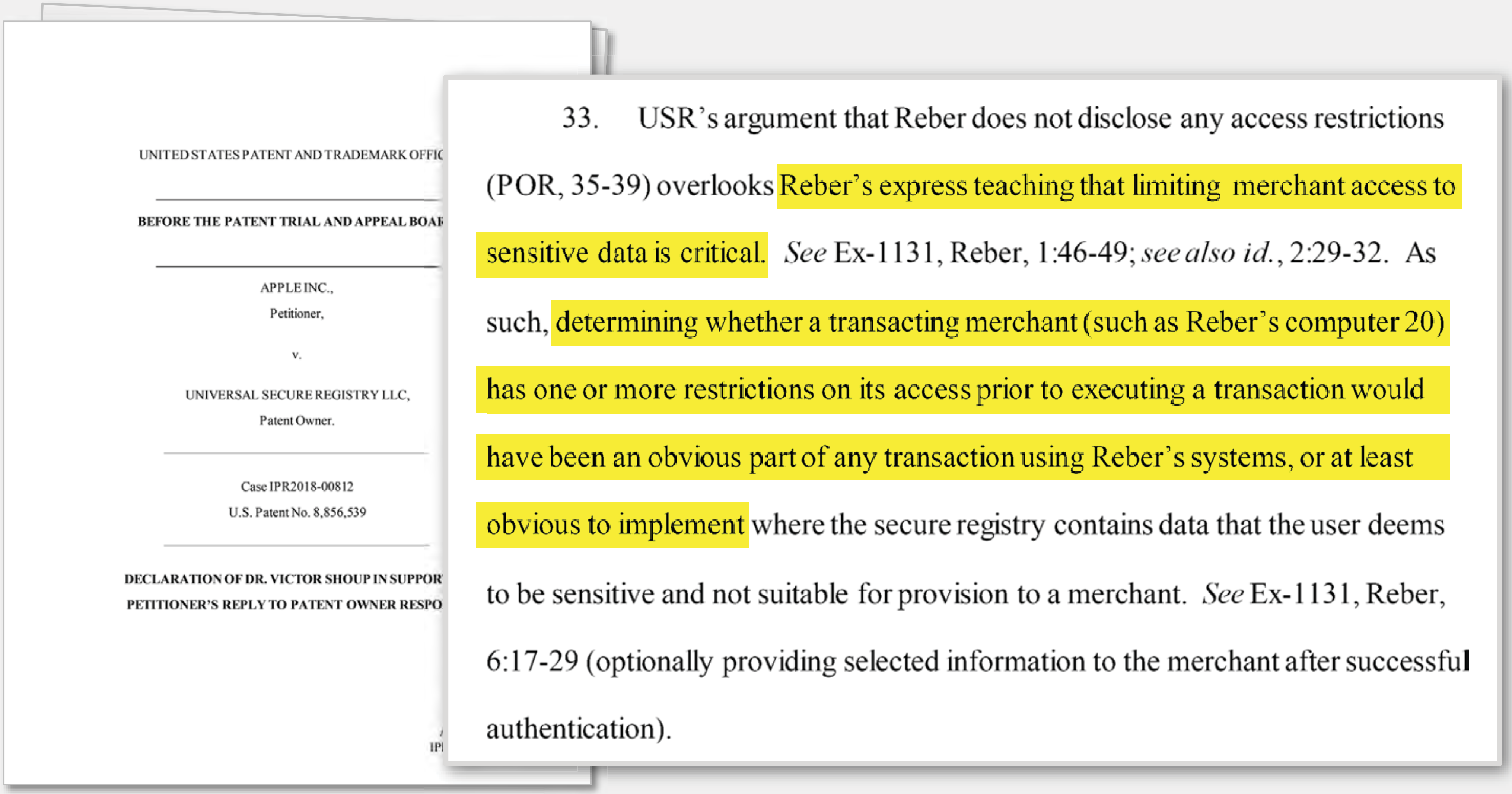
First, Petitioner argues that the examples Dr. Jakobsson provided during his deposition do not support construing “access restrictions” to be “specific to the provider.” Reply at 7. Dr. Jakobsson’s testimony supports such a construction and further serves to show the impropriety of Petitioner’s position that merchant identity validation alone satisfies the claim. Dr. Jakobsson’s first example describes how a particular type of provider, such as gas stations, may be subject to access restrictions specific to them that limit the amount they can charge to a card during a period of time to prevent fraud. *See* Ex. 1137, Jakobsson Depo. 363:4-364:12. Imposition of this access restriction is (1) different than merchant identity validation alone since the gas station—a valid merchant authorized to conduct credit card transactions—is also subject to this access restriction, and (2) “specific to the provider” because the access restriction may only apply to gas stations and not other types of merchants.

Dr. Jakobsson’s second example, related to access restrictions that may be in place for off-shore, online gambling sites, also supports PO’s proffered construction. *See* Ex. 1137, Jakobsson Depo. at 365:25-366:20. Such sites are valid merchants authorized to accept credit card deposits from users but may nonetheless be subject to access restrictions based on the geographical location of the user desiring the transaction (*e.g.*, U.S.-based requests denied but Canada-based requests allowed). Here to, the access restrictions are specific to the provider (off-shore gambling sites),

Surreply at 6.

2. Reber and Franklin Teach Compliance with Access Restrictions

Even under USR's construction, a POSITA would have found it obvious to implement access restrictions into Reber and Franklin



UNITED STATES PATENT AND TRADEMARK OFFIC

BEFORE THE PATENT TRIAL AND APPEAL BOAI

APPLE INC.,
Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC,
Patent Owner.

Case IPR2018-00812
U.S. Patent No. 8,856,539

DECLARATION OF DR. VICTOR SHOUP IN SUPPOR
PETITIONER'S REPLY TO PATENT OWNER RESPO

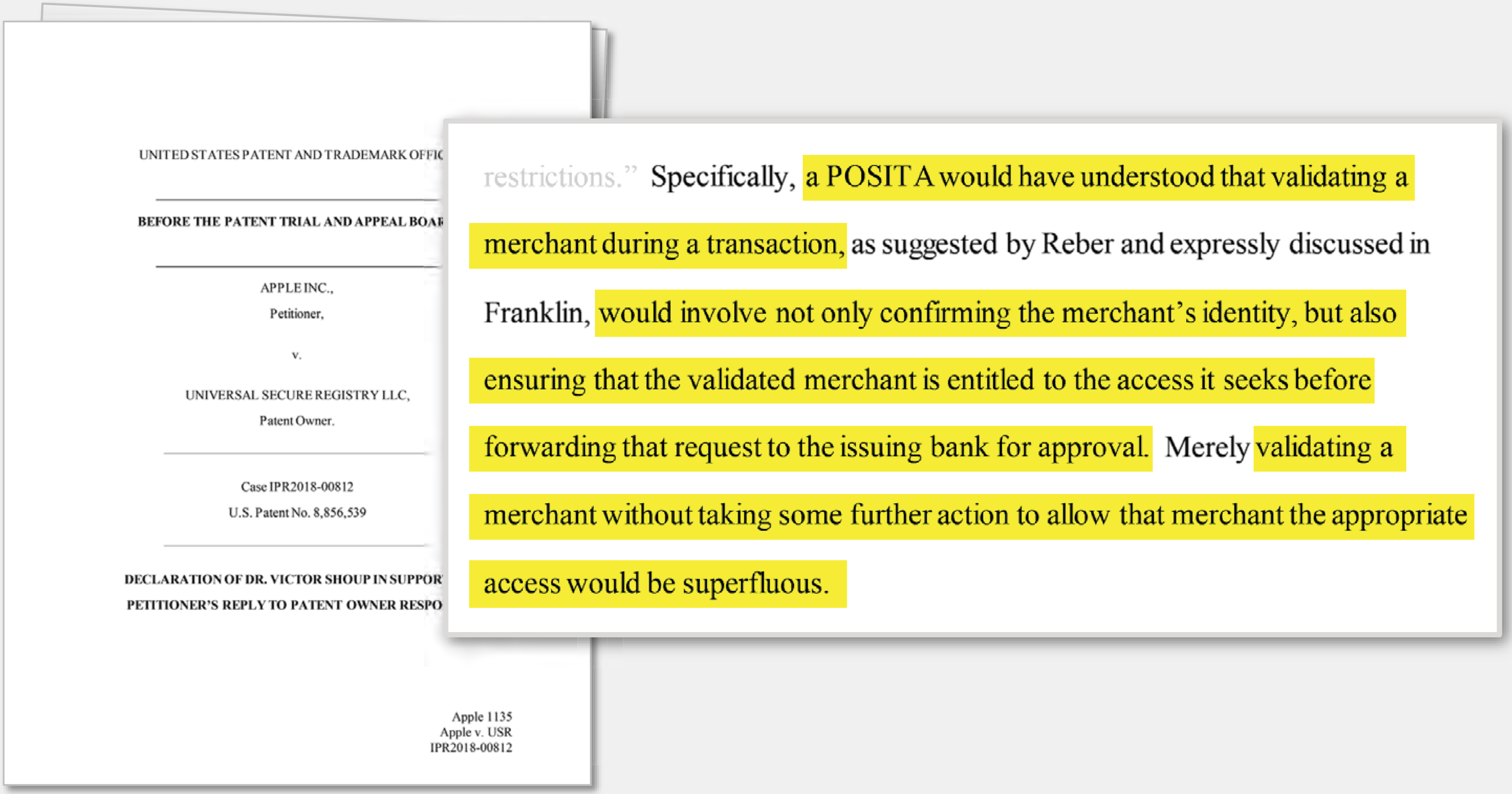
IPI

33. USR's argument that Reber does not disclose any access restrictions (POR, 35-39) overlooks Reber's express teaching that limiting merchant access to sensitive data is critical. *See* Ex-1131, Reber, 1:46-49; *see also id.*, 2:29-32. As such, determining whether a transacting merchant (such as Reber's computer 20) has one or more restrictions on its access prior to executing a transaction would have been an obvious part of any transaction using Reber's systems, or at least obvious to implement where the secure registry contains data that the user deems to be sensitive and not suitable for provision to a merchant. *See* Ex-1131, Reber, 6:17-29 (optionally providing selected information to the merchant after successful authentication).

Reply to POR at 11-12; Ex. 1135 [Shoup POR Reply Decl.], ¶33.

2. Reber and Franklin Teach Compliance with Access Restrictions

Even under USR’s construction, a POSITA would have found it obvious to implement access restrictions into Reber and Franklin



UNITED STATES PATENT AND TRADEMARK OFFIC

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PETITIONER’S REPLY TO PATENT OWNER RESPO

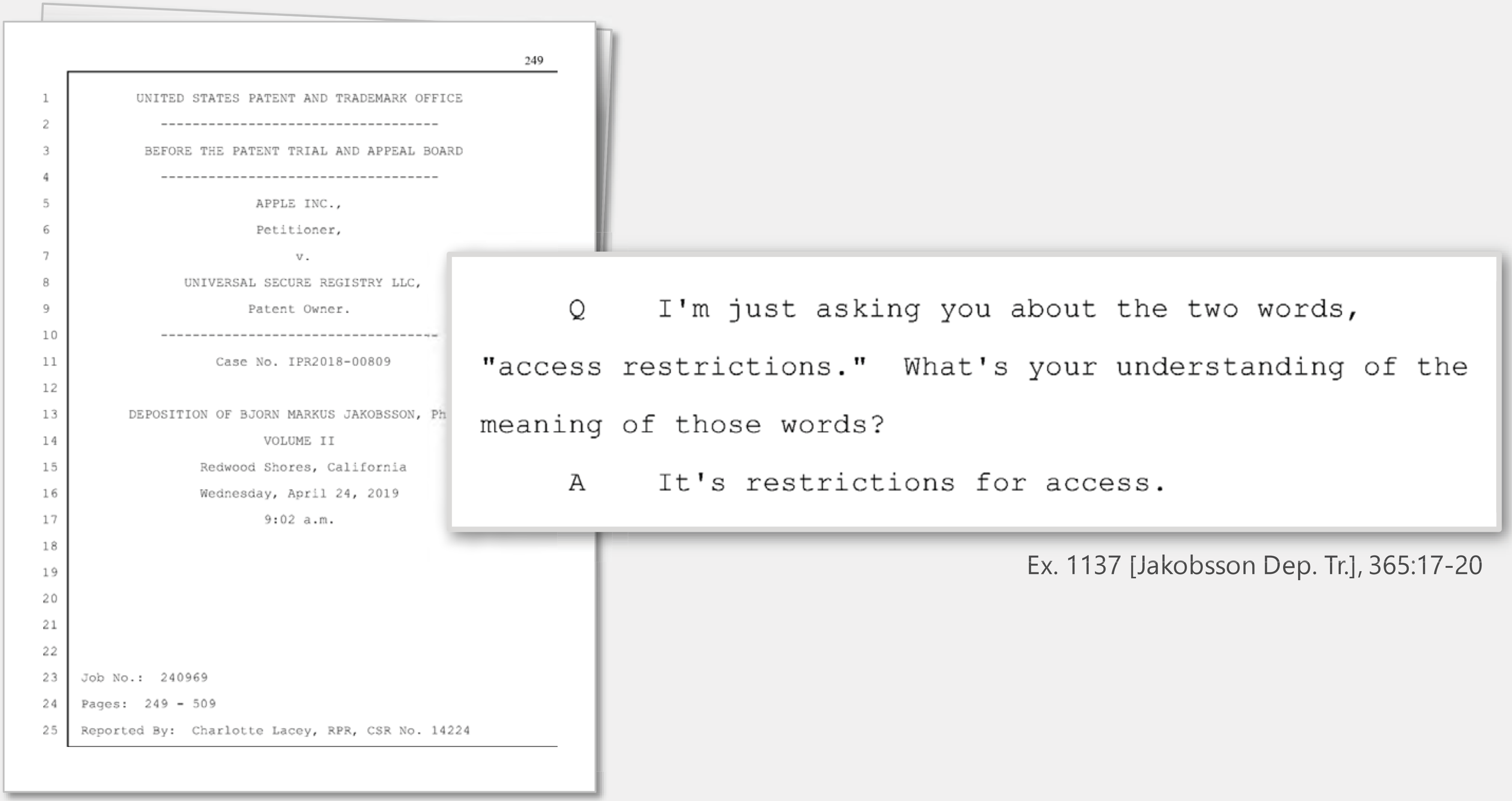
Apple 1135
Apple v. USR
IPR2018-00812

restrictions.” Specifically, a POSITA would have understood that validating a merchant during a transaction, as suggested by Reber and expressly discussed in Franklin, would involve not only confirming the merchant’s identity, but also ensuring that the validated merchant is entitled to the access it seeks before forwarding that request to the issuing bank for approval. Merely validating a merchant without taking some further action to allow that merchant the appropriate access would be superfluous.

Reply to POR at 11-12; Ex. 1135 [Shoup POR Reply Decl.], ¶34.

2. Reber and Franklin Teach Compliance with Access Restrictions

Dr. Jakobsson did not apply USR's claim construction



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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC,

Patent Owner.

Case No. IPR2018-00809

DEPOSITION OF BJORN MARKUS JAKOBSSON, Ph

VOLUME II

Redwood Shores, California

Wednesday, April 24, 2019

9:02 a.m.

Job No.: 240969

Pages: 249 - 509

Reported By: Charlotte Lacey, RPR, CSR No. 14224

Q I'm just asking you about the two words, "access restrictions." What's your understanding of the meaning of those words?

A It's restrictions for access.

Ex. 1137 [Jakobsson Dep. Tr.], 365:17-20

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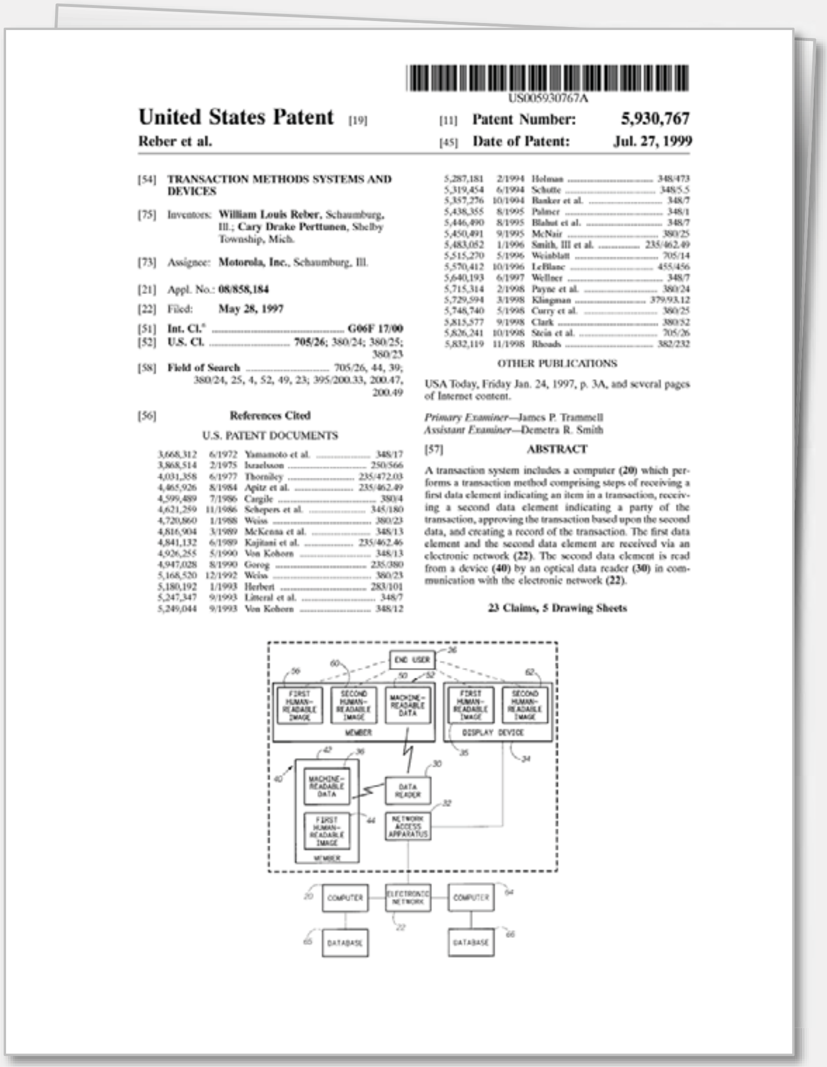
3. Reber and Franklin Teach the “Third Party” Limitation

Reber discloses a transaction between two parties and involving a secure registry that “directs” financial transactions



US005930767A

United States Patent [19]

Reber et al.

[11] **Patent Number:** **5,930,767**

[45] **Date of Patent:** **Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**[6] **G06F 17/00**

[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,668,312	6/1972	Yamamoto et al.	348/17
3,868,514	2/1975	Israelsson	250/566
4,031,358	6/1977	Thorniley	235/472.03
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4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
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5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
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5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
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5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

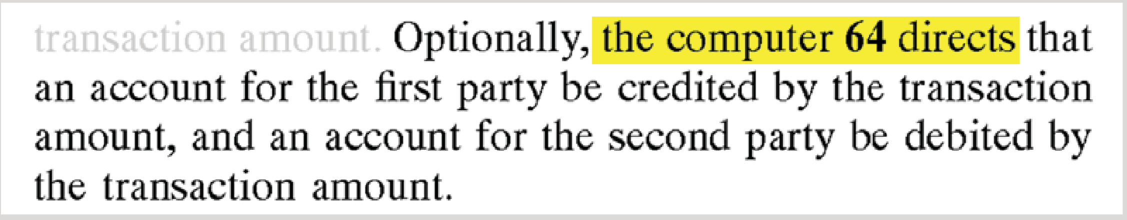
USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

23 Claims, 5 Drawing Sheets



transaction amount. Optionally, the computer **64** directs that an account for the first party be credited by the transaction amount, and an account for the second party be debited by the transaction amount.

Ex. 1131 [Reber], 6:26-29

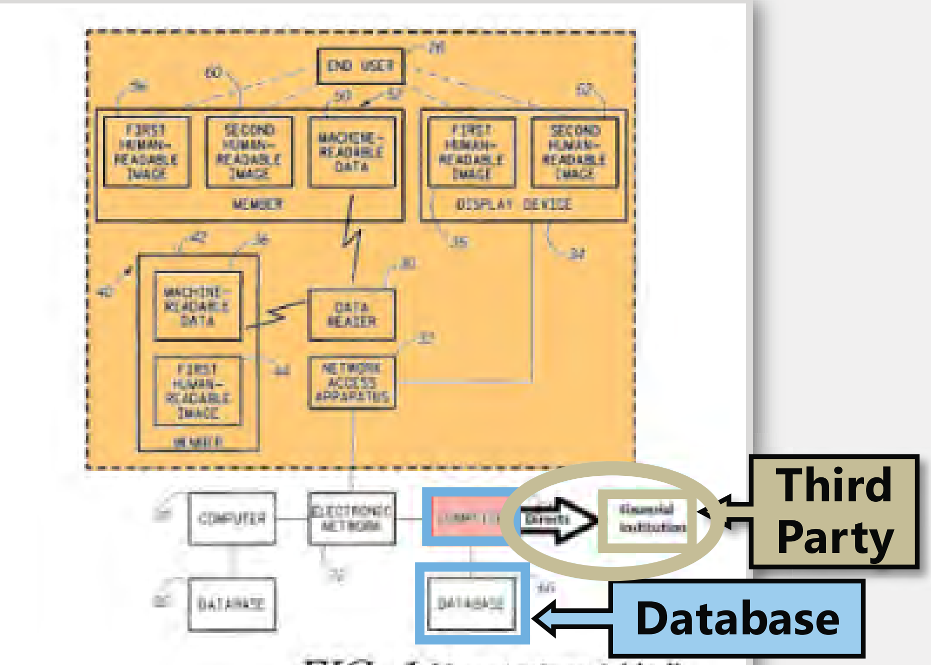


FIG. 1 (Annotations Added)

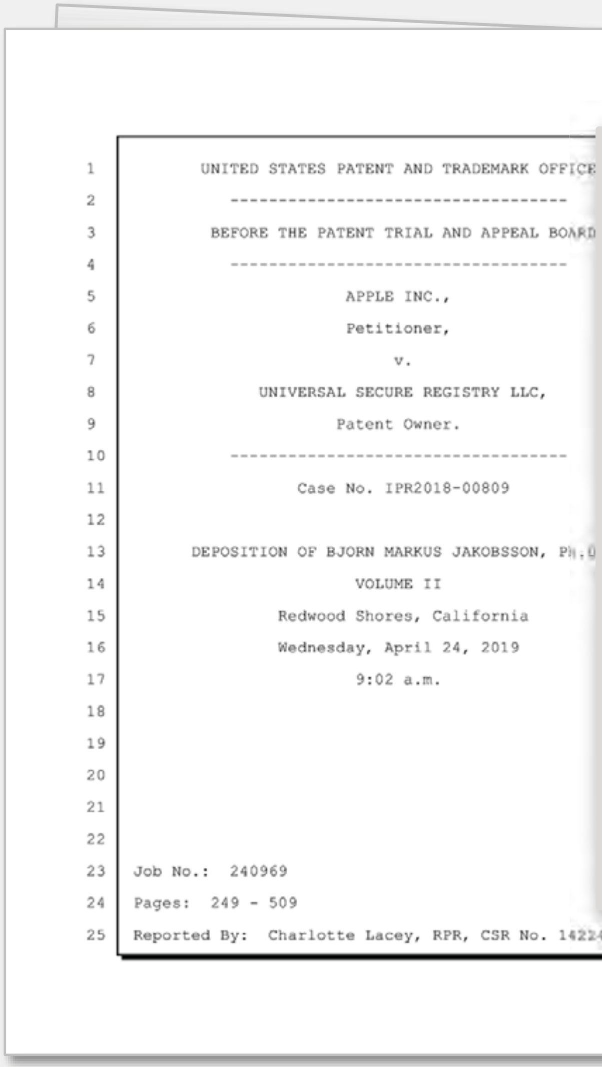
Ex-1131, Reber, Fig. 1 (annotated per Reber, 6:26-29.)

Compare Surreply at 17-18 *with* Reply to POR at 14-19; *see also* Ex-1135, Shoup Decl. ¶38.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

3. Reber and Franklin Teach the "Third Party" Limitation

Dr. Jakobsson acknowledged that Reber's "directs" language could refer to a third party



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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

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UNIVERSAL SECURE REGISTRY LLC,

Patent Owner.

Case No. IPR2018-00809

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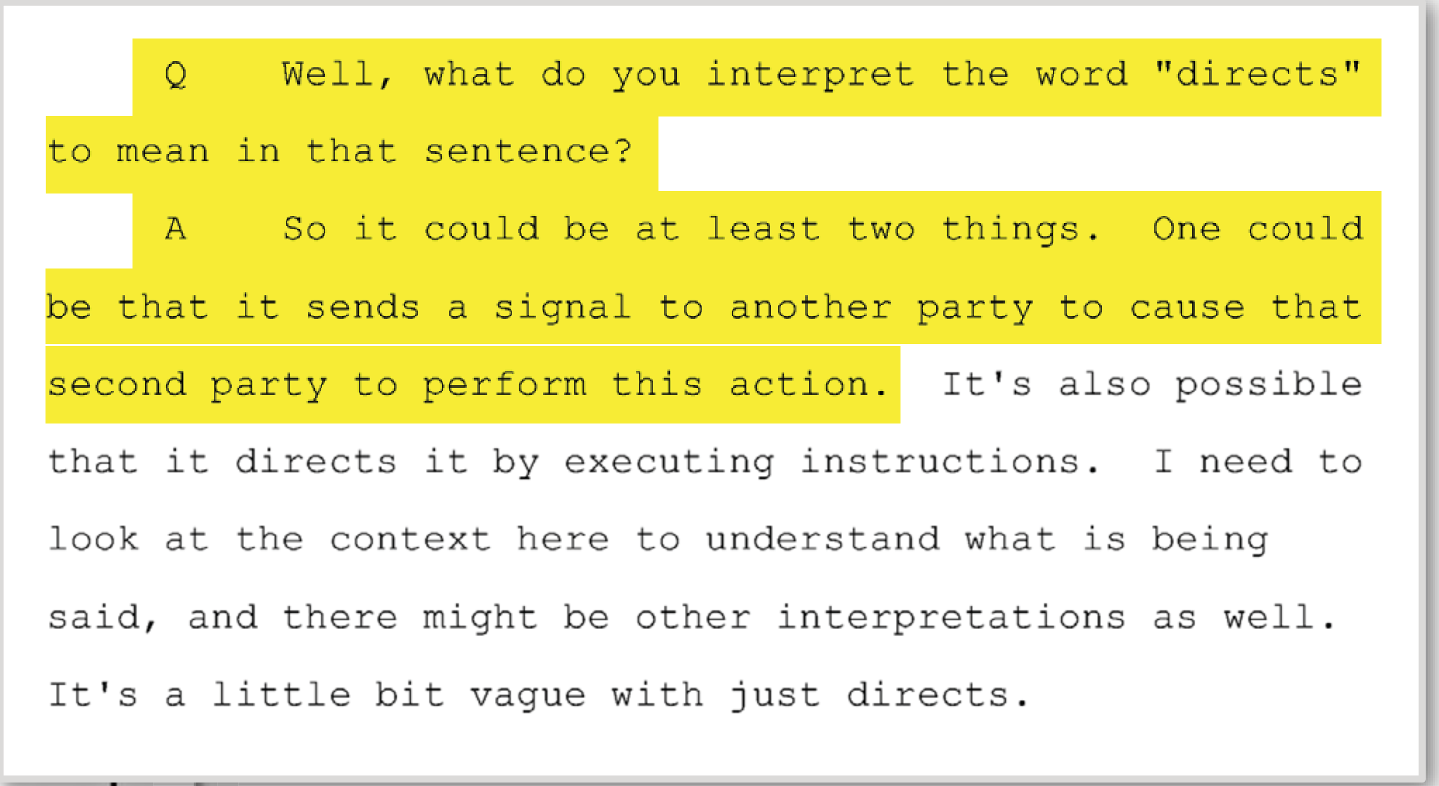


Q Well, what do you interpret the word "directs" to mean in that sentence?

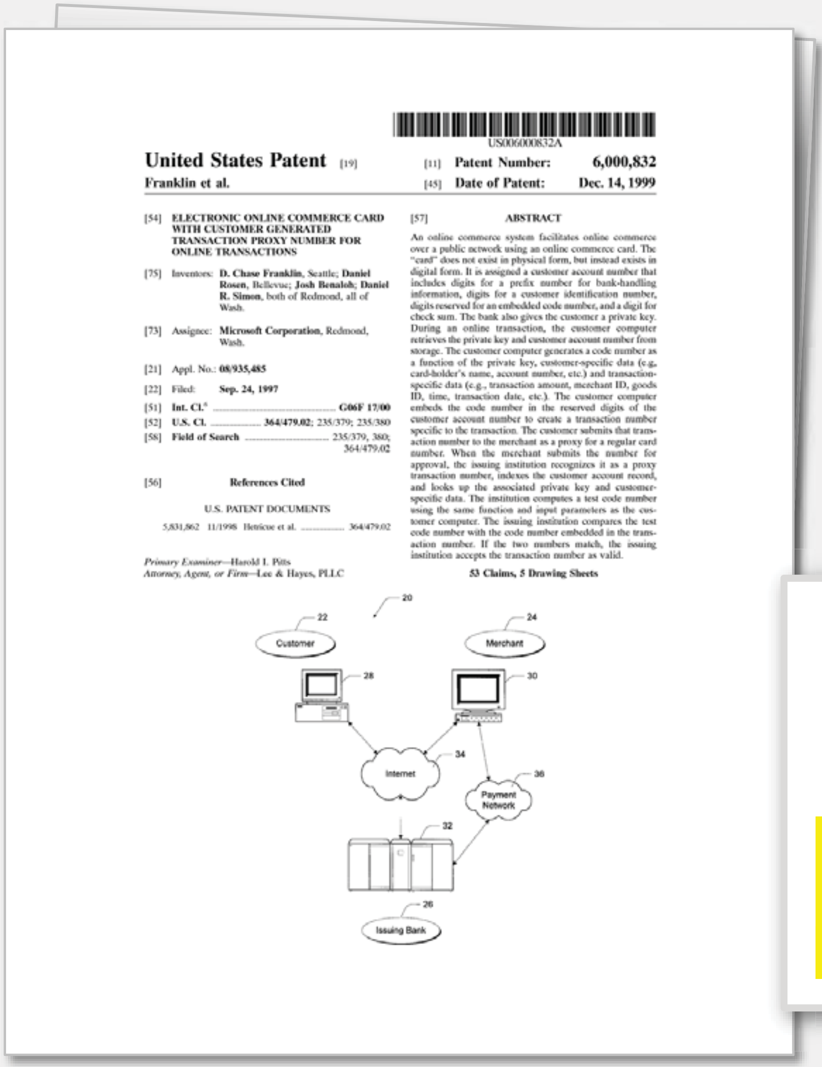
A So it could be at least two things. One could be that it sends a signal to another party to cause that second party to perform this action. It's also possible that it directs it by executing instructions. I need to look at the context here to understand what is being said, and there might be other interpretations as well. It's a little bit vague with just directs.

Ex. 1137 [Jakobsson Dep. Tr.], 432:11-19

Reply to POR at 14-15.

3. Reber and Franklin Teach the “Third Party” Limitation

Franklin’s processing system 84 is a third party



US006000832A

United States Patent [19]
Franklin et al.

[11] Patent Number: 6,000,832
[45] Date of Patent: Dec. 14, 1999

[54] ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

[22] Filed: **Sep. 24, 1997**

[51] **Int. Cl.**[6] **G06F 17/00**

[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380

[58] **Field of Search** 235/379, 380; 364/479.02

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,831,862 11/1998 Hetricue et al. 364/479.02

Primary Examiner—Harold I. Pitts
Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] **ABSTRACT**

An online commerce system facilitates online commerce over a public network using an online commerce card. The "card" does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as a function of the private key, customer-specific data (e.g., card-holder's name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the reserved digits of the customer account number to create a transaction number specific to the transaction. The customer submits that transaction number to the merchant as a proxy for a regular card number. When the merchant submits the number for approval, the issuing institution recognizes it as a proxy transaction number, indexes the customer account record, and looks up the associated private key and customer-specific data. The institution computes a test code number using the same function and input parameters as the customer computer. The issuing institution compares the test code number with the code number embedded in the transaction number. If the two numbers match, the issuing institution accepts the transaction number as valid.

53 Claims, 5 Drawing Sheets

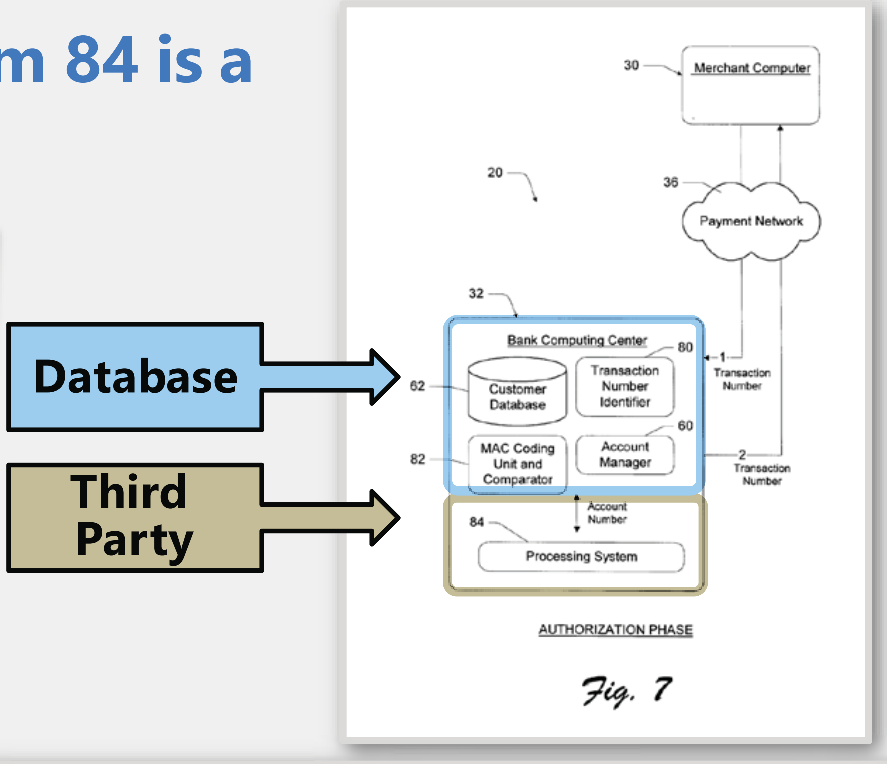
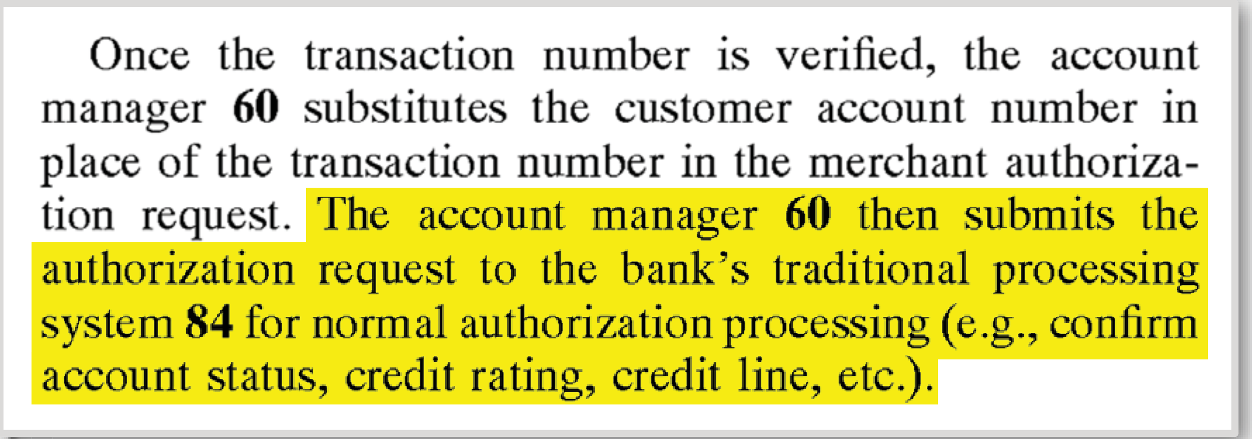


Fig. 7

Reply to POR at 18



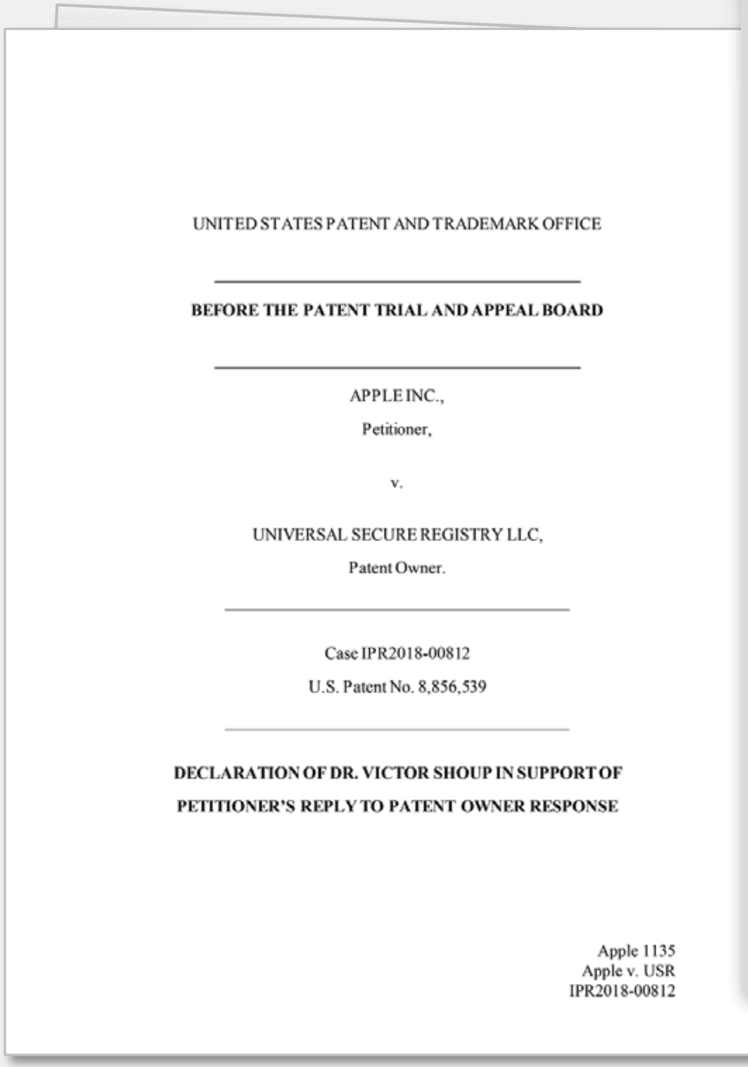
Once the transaction number is verified, the account manager **60** substitutes the customer account number in place of the transaction number in the merchant authorization request. The account manager **60** then submits the authorization request to the bank’s traditional processing system **84** for normal authorization processing (e.g., confirm account status, credit rating, credit line, etc.).

Ex. 1132 [Franklin], 12:27-33

Compare Surreply at 21-23 *with* Reply to POR at 16-19.

3. Reber and Franklin Teach the "Third Party" Limitation

A POSITA would have been motivated to minimize changes to backend software.



UNITED STATES PATENT AND TRADEMARK OFFICE

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Petitioner,

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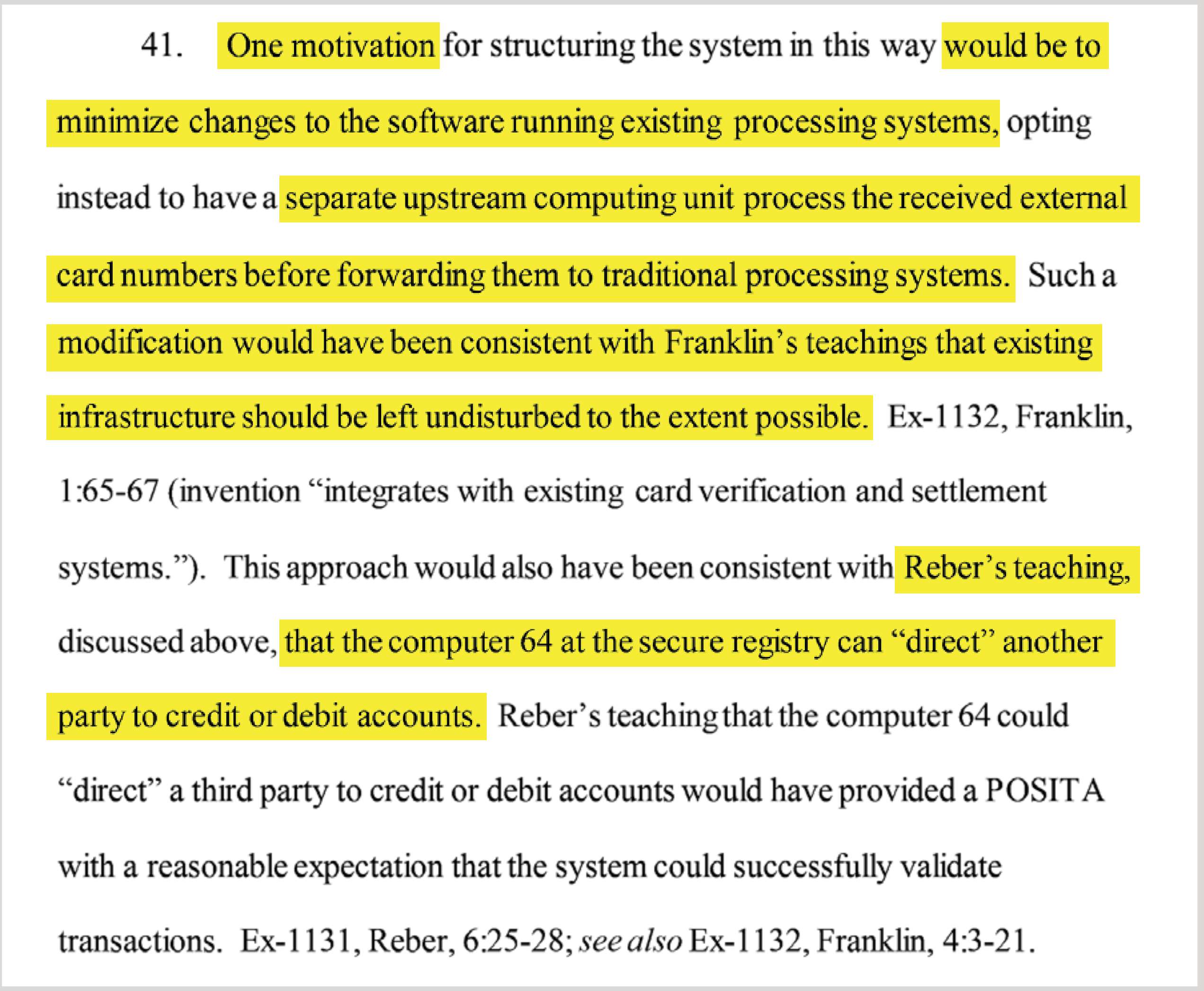
UNIVERSAL SECURE REGISTRY LLC,
Patent Owner.

Case IPR2018-00812
U.S. Patent No. 8,856,539

DECLARATION OF DR. VICTOR SHOUP IN SUPPORT OF PETITIONER'S REPLY TO PATENT OWNER RESPONSE

Apple 1135
Apple v. USR
IPR2018-00812

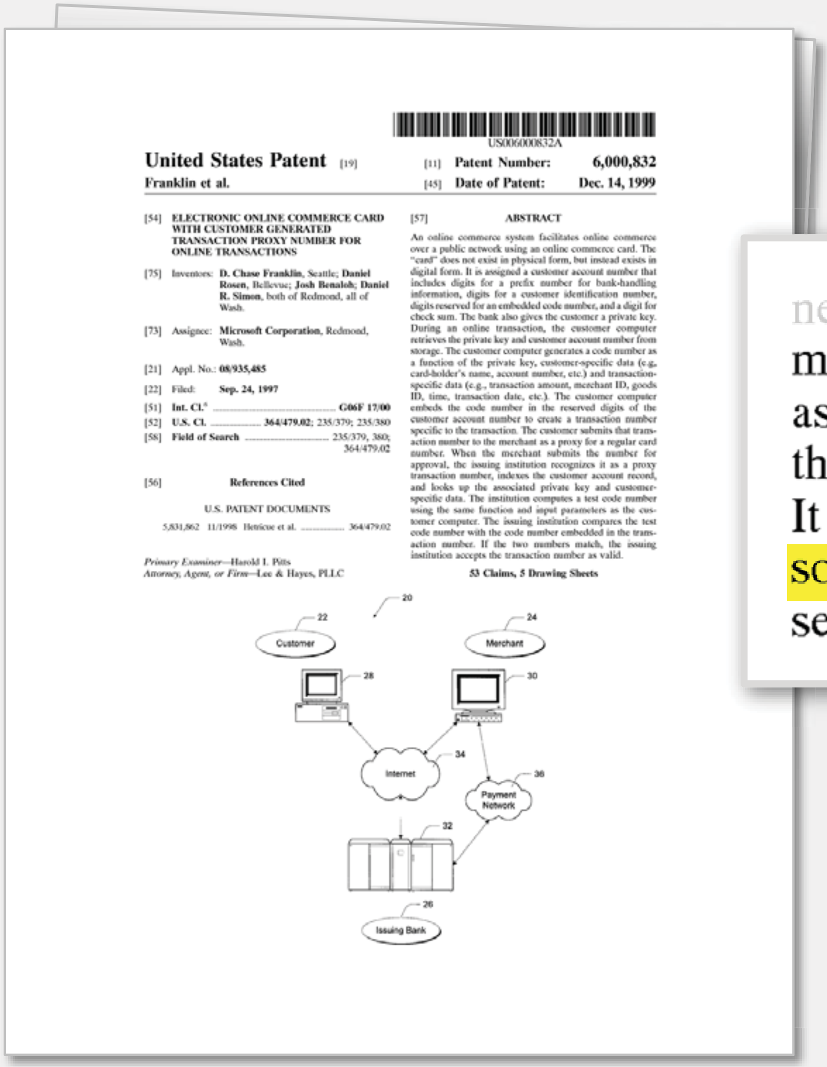


41. One motivation for structuring the system in this way would be to minimize changes to the software running existing processing systems, opting instead to have a separate upstream computing unit process the received external card numbers before forwarding them to traditional processing systems. Such a modification would have been consistent with Franklin's teachings that existing infrastructure should be left undisturbed to the extent possible. Ex-1132, Franklin, 1:65-67 (invention "integrates with existing card verification and settlement systems."). This approach would also have been consistent with Reber's teaching, discussed above, that the computer 64 at the secure registry can "direct" another party to credit or debit accounts. Reber's teaching that the computer 64 could "direct" a third party to credit or debit accounts would have provided a POSITA with a reasonable expectation that the system could successfully validate transactions. Ex-1131, Reber, 6:25-28; *see also* Ex-1132, Franklin, 4:3-21.

Ex. 1135 [Shoup POR Reply Decl.], ¶41.

3. Reber and Franklin Teach the "Third Party" Limitation

Franklin's processing system 84 satisfies the third party limitation



US006000832A

United States Patent [19]
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[11] Patent Number: 6,000,832
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[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380
[58] **Field of Search** 235/379, 380; 364/479.02

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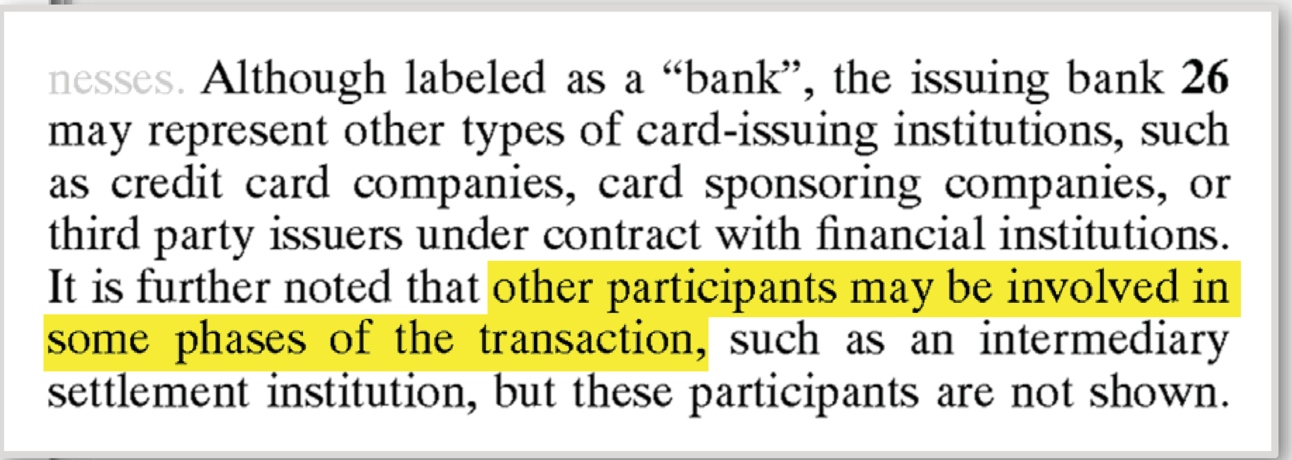
53 Claims, 5 Drawing Sheets

20
22
Customer
24
Merchant
28
30
34
Internet
36
Payment Network
32
26
Issuing Bank



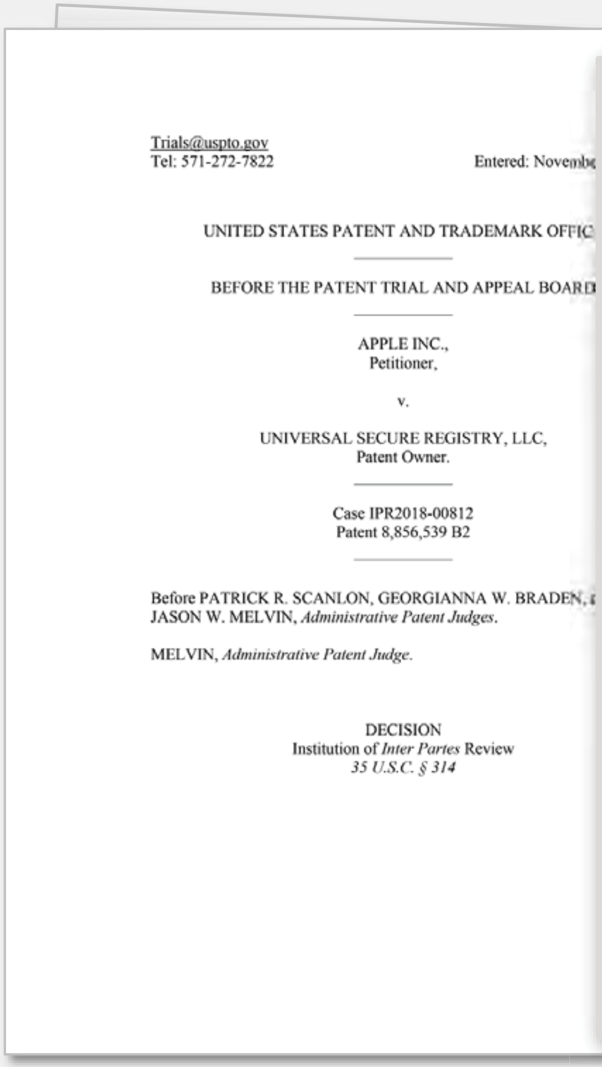
nesses. Although labeled as a "bank", the issuing bank **26** may represent other types of card-issuing institutions, such as credit card companies, card sponsoring companies, or third party issuers under contract with financial institutions. It is further noted that other participants may be involved in some phases of the transaction, such as an intermediary settlement institution, but these participants are not shown.

Ex. 1132 [Franklin], 4:3-9

Compare Surreply at 21-23 *with* Reply to POR at 15-19.

3. Reber and Franklin Teach the "Third Party" Limitation

In the ID, the Board agreed that "processing system 84" can be a "third party"



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Tel: 571-272-7822

Entered: Novemb

UNITED STATES PATENT AND TRADEMARK OFFIC

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

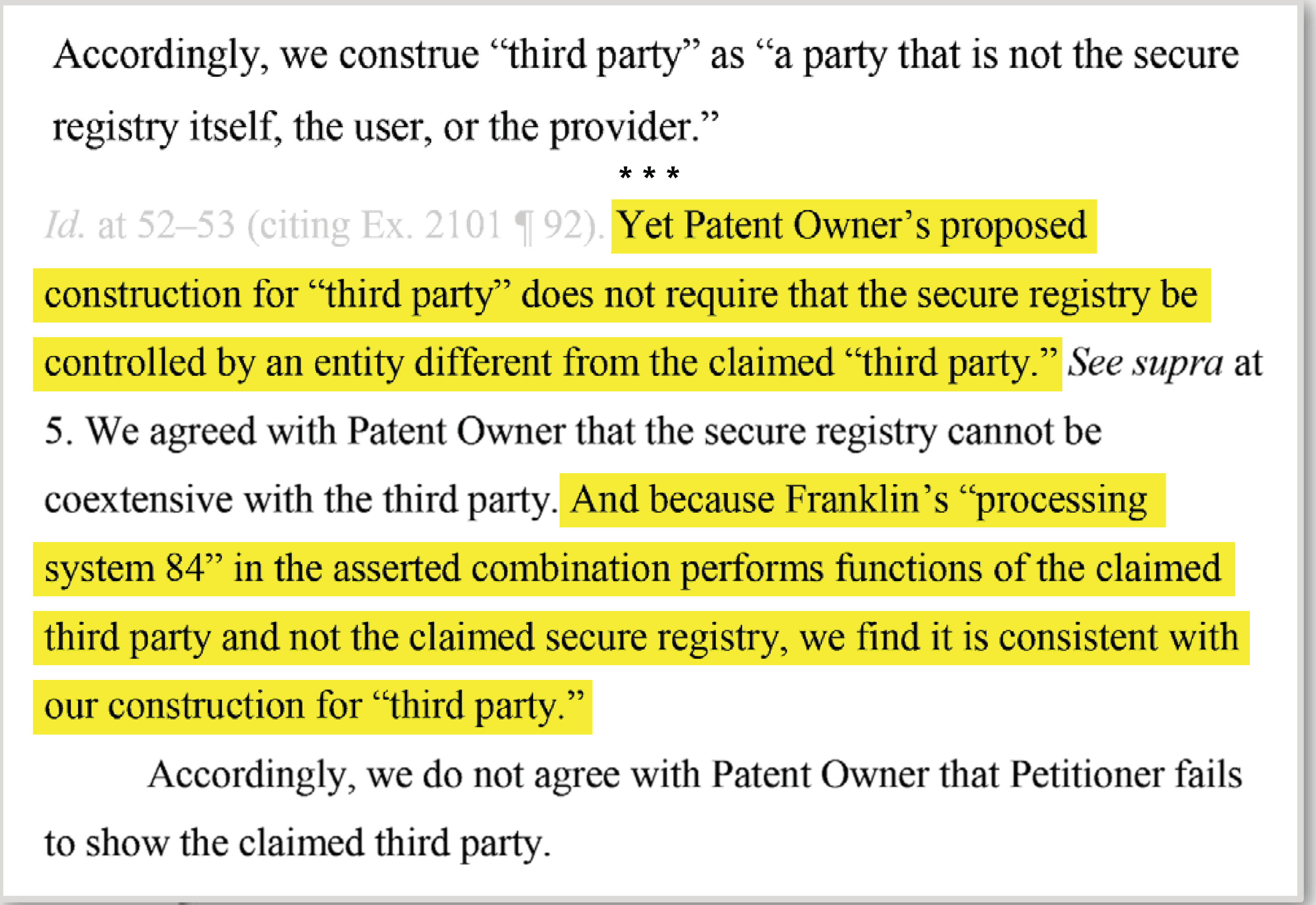
UNIVERSAL SECURE REGISTRY, LLC,
Patent Owner.

Case IPR2018-00812
Patent 8,856,539 B2

Before PATRICK R. SCANLON, GEORGIANNA W. BRADEN, a
JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314



Accordingly, we construe "third party" as "a party that is not the secure registry itself, the user, or the provider."

* * *

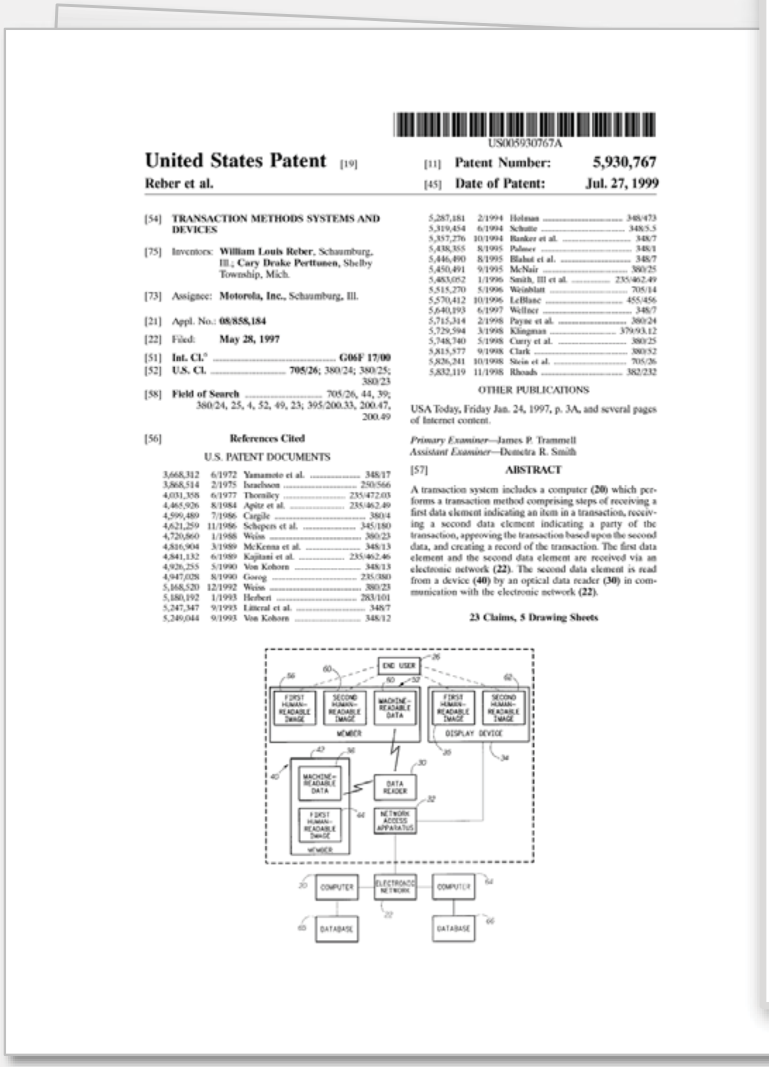
Id. at 52–53 (citing Ex. 2101 ¶ 92). Yet Patent Owner's proposed construction for "third party" does not require that the secure registry be controlled by an entity different from the claimed "third party." *See supra* at 5. We agreed with Patent Owner that the secure registry cannot be coextensive with the third party. And because Franklin's "processing system 84" in the asserted combination performs functions of the claimed third party and not the claimed secure registry, we find it is consistent with our construction for "third party."

Accordingly, we do not agree with Patent Owner that Petitioner fails to show the claimed third party.

Institution Decision at 7 and 18.

4. Reber and Franklin Teach "Receiving a Transaction Request"

Reber discloses receiving the transaction request from the provider



US005930767A

United States Patent [19]

Reber et al.

[11] **Patent Number: 5,930,767**

[45] **Date of Patent: Jul. 27, 1999**

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[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**[6] **G06F 17/00**

[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

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4,621,259	11/1986	Schepers et al.	345/180
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4,816,904	3/1989	McKenna et al.	348/13
4,841,132	6/1989	Kajitani et al.	235/462.46
4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
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5,287,181	2/1994	Holman	348/473
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5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
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Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

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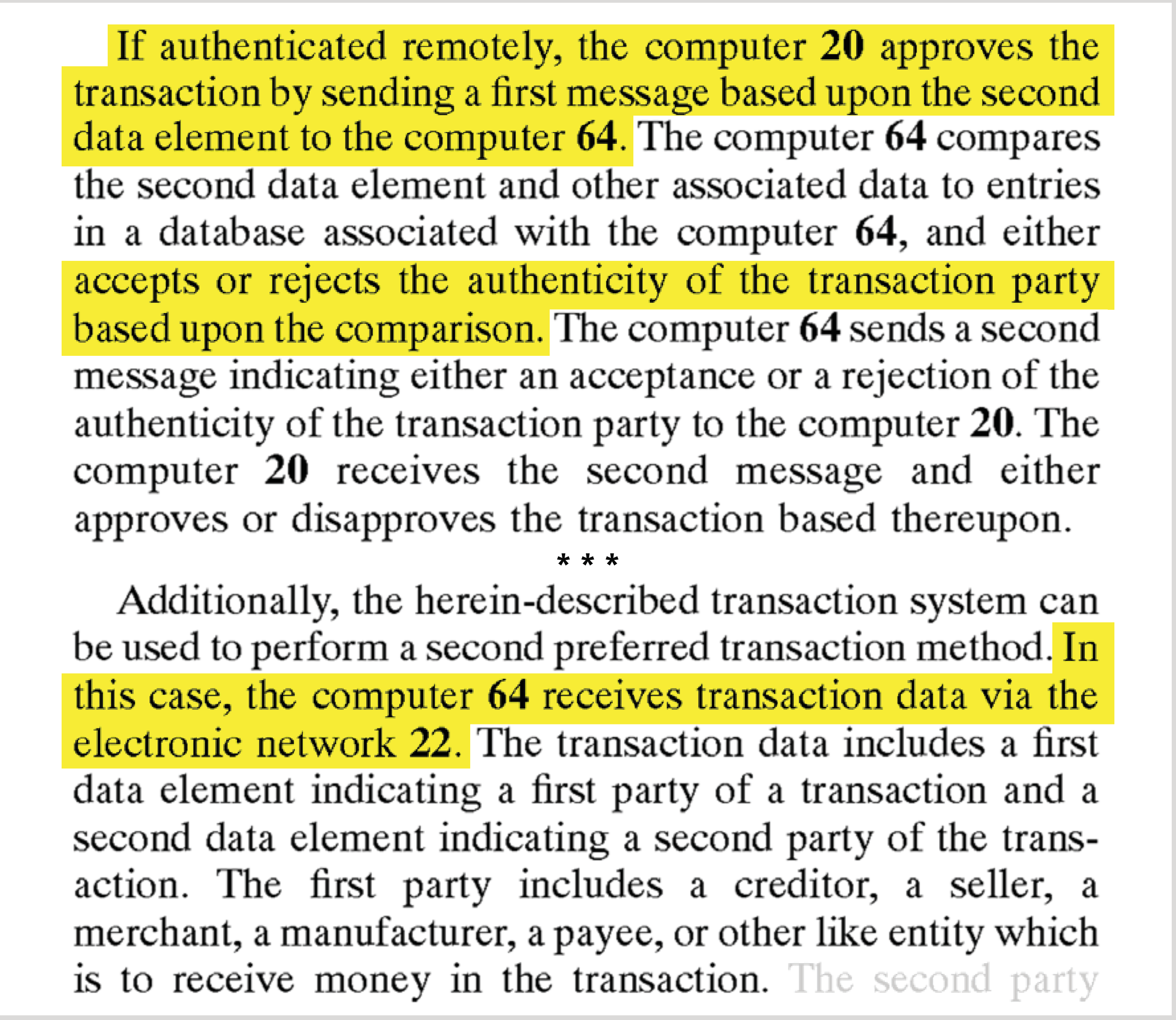
23 Claims, 5 Drawing Sheets

END USER
26
56
60
60
52
62
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
MACHINE-READABLE DATA
MEMBER
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
DISPLAY DEVICE
36
34
42
38
40
MACHINE-READABLE DATA
DATA READER
30
FIRST HUMAN-READABLE IMAGE
44
NETWORK ACCESS APPARATUS
32
MEMBER
20
COMPUTER
ELECTRONIC NETWORK
COMPUTER
64
22
65
DATABASE
DATABASE
66



If authenticated remotely, the computer **20** approves the transaction by sending a first message based upon the second data element to the computer **64**. The computer **64** compares the second data element and other associated data to entries in a database associated with the computer **64**, and either accepts or rejects the authenticity of the transaction party based upon the comparison. The computer **64** sends a second message indicating either an acceptance or a rejection of the authenticity of the transaction party to the computer **20**. The computer **20** receives the second message and either approves or disapproves the transaction based thereupon.

* * *

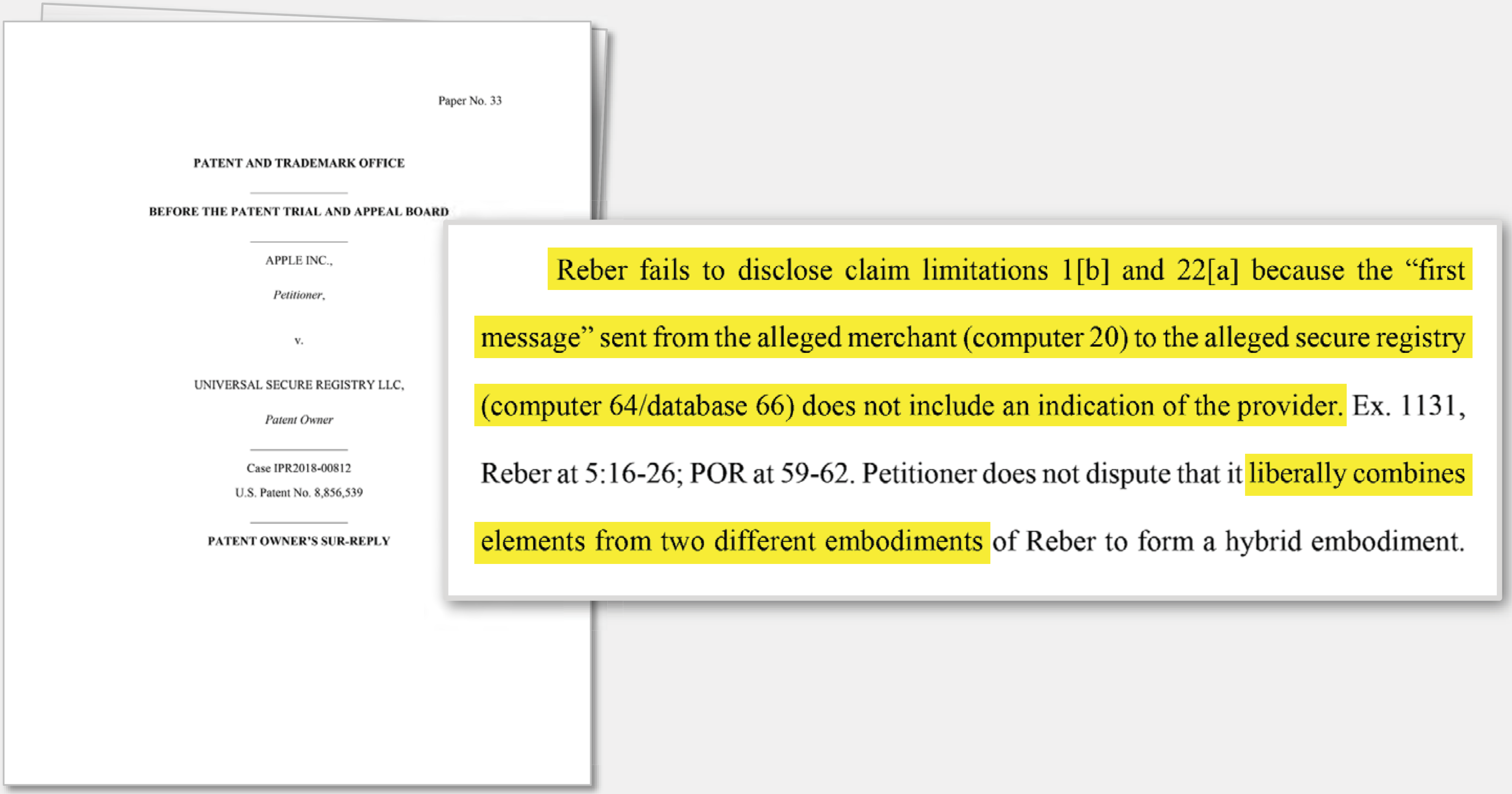
Additionally, the herein-described transaction system can be used to perform a second preferred transaction method. In this case, the computer **64** receives transaction data via the electronic network **22**. The transaction data includes a first data element indicating a first party of a transaction and a second data element indicating a second party of the transaction. The first party includes a creditor, a seller, a merchant, a manufacturer, a payee, or other like entity which is to receive money in the transaction. The second party

Ex. 1131 [Reber], 5:16-26, 45-53

Reply to POR at 22-24.

4. Reber and Franklin Teach "Receiving a Transaction Request"

USR argues that Reber's first message from the merchant to the secure registry does not include an indication of the provider



Paper No. 33

PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC,

Patent Owner

Case IPR2018-00812
U.S. Patent No. 8,856,539

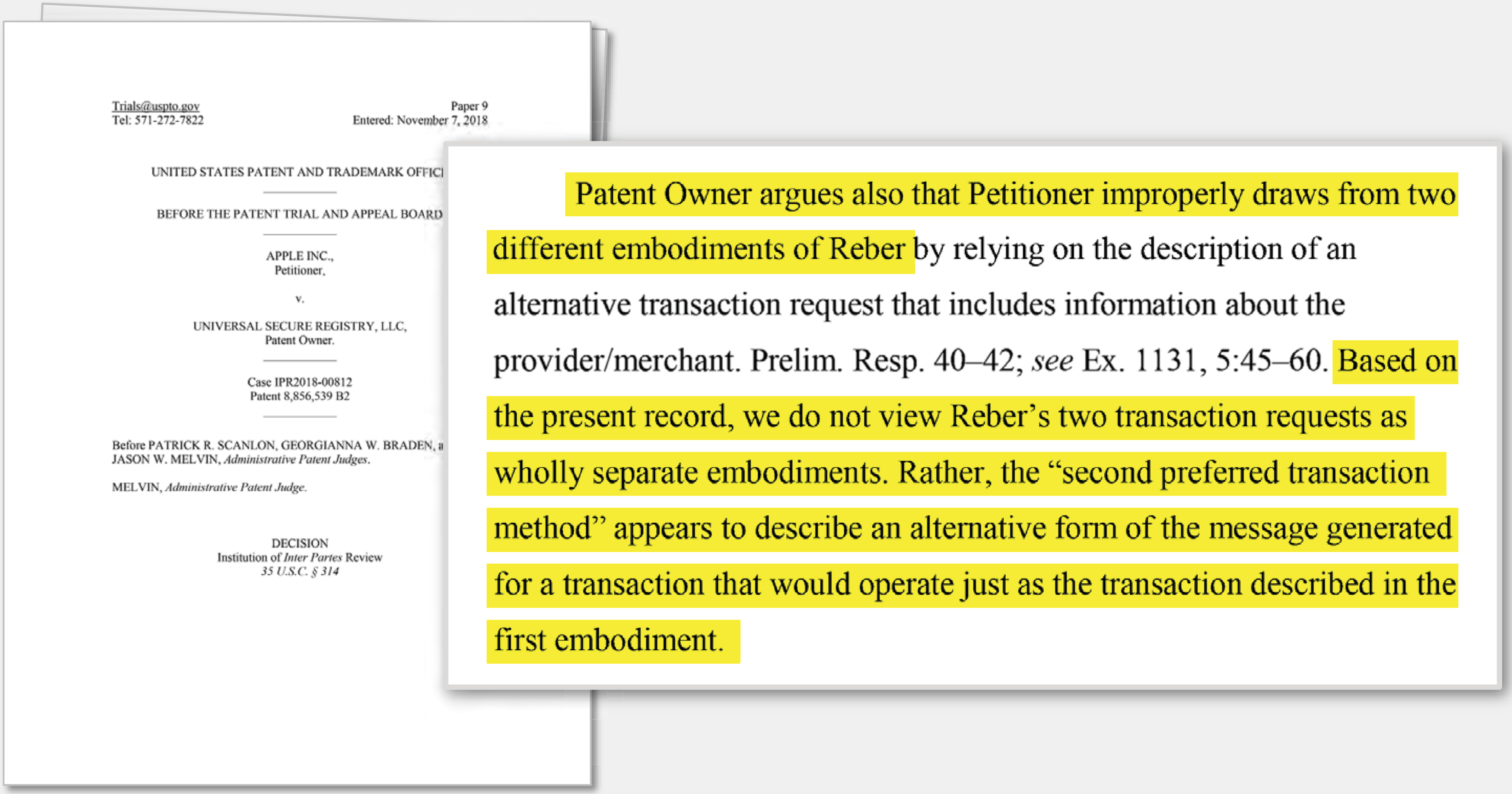
PATENT OWNER'S SUR-REPLY

Reber fails to disclose claim limitations 1[b] and 22[a] because the "first message" sent from the alleged merchant (computer 20) to the alleged secure registry (computer 64/database 66) does not include an indication of the provider. Ex. 1131, Reber at 5:16-26; POR at 59-62. Petitioner does not dispute that it liberally combines elements from two different embodiments of Reber to form a hybrid embodiment.

CMTA Surreply at 25.

4. Reber and Franklin Teach “Receiving a Transaction Request”

In the ID, the Board found that Reber’s “transaction methods” are compatible



Trials@uspto.gov
Tel: 571-272-7822

Paper 9
Entered: November 7, 2018

UNITED STATES PATENT AND TRADEMARK OFFIC

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

UNIVERSAL SECURE REGISTRY, LLC,
Patent Owner.

Case IPR2018-00812
Patent 8,856,539 B2

Before PATRICK R. SCANLON, GEORGIANNA W. BRADEN, a
JASON W. MELVIN, *Administrative Patent Judges.*

MELVIN, *Administrative Patent Judge.*

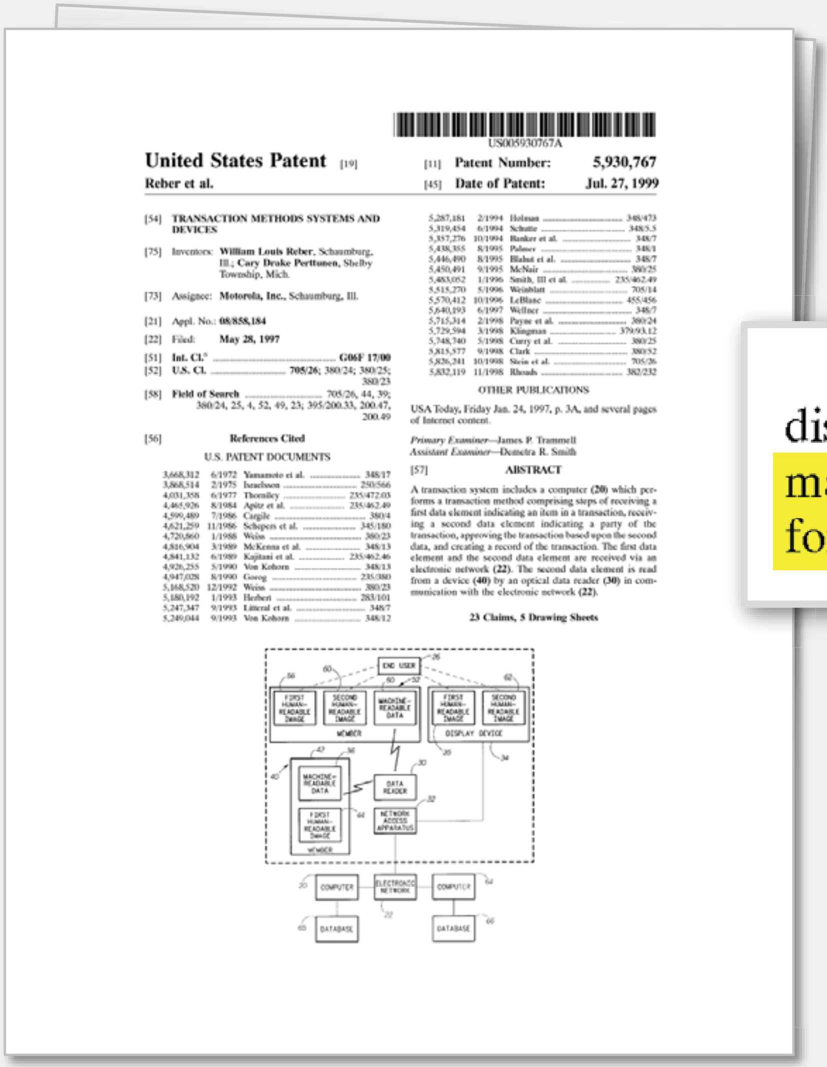
DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314

Patent Owner argues also that Petitioner improperly draws from two different embodiments of Reber by relying on the description of an alternative transaction request that includes information about the provider/merchant. Prelim. Resp. 40–42; *see* Ex. 1131, 5:45–60. Based on the present record, we do not view Reber’s two transaction requests as wholly separate embodiments. Rather, the “second preferred transaction method” appears to describe an alternative form of the message generated for a transaction that would operate just as the transaction described in the first embodiment.

Institution Decision at 12-13.

4. Reber and Franklin Teach "Receiving a Transaction Request"

Reber explains that its transaction methods can be combined and modified



US005930767A

United States Patent [19]

Reber et al.

[11] Patent Number: 5,930,767

[45] Date of Patent: Jul. 27, 1999

[54] TRANSACTION METHODS SYSTEMS AND DEVICES

[75] Inventors: William Louis Reber, Schaumburg, Ill.; Cary Drake Perttunen, Shelby Township, Mich.

[73] Assignee: Motorola, Inc., Schaumburg, Ill.

[21] Appl. No.: 08/858,184

[22] Filed: May 28, 1997

[51] Int. Cl.^{6} G06F 17/00

[52] U.S. Cl. 705/26; 380/24; 380/25; 380/23

[58] Field of Search 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] References Cited

U.S. PATENT DOCUMENTS

3,668,312	6/1972	Yamamoto et al.	348/17
3,868,514	2/1975	Israelsson	250/566
4,031,358	6/1977	Thorniley	235/472.03
4,465,926	8/1984	Apitz et al.	235/462.49
4,599,489	7/1986	Cargile	380/4
4,621,259	11/1986	Schepers et al.	345/180
4,720,860	1/1988	Weiss	380/23
4,816,904	3/1989	McKenna et al.	348/13
4,841,132	6/1989	Kajitani et al.	235/462.46
4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
5,168,520	12/1992	Weiss	380/23
5,180,192	1/1993	Herbert	283/101
5,247,347	9/1993	Litteral et al.	348/7
5,249,044	9/1993	Von Kohorn	348/12
5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] ABSTRACT

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

23 Claims, 5 Drawing Sheets

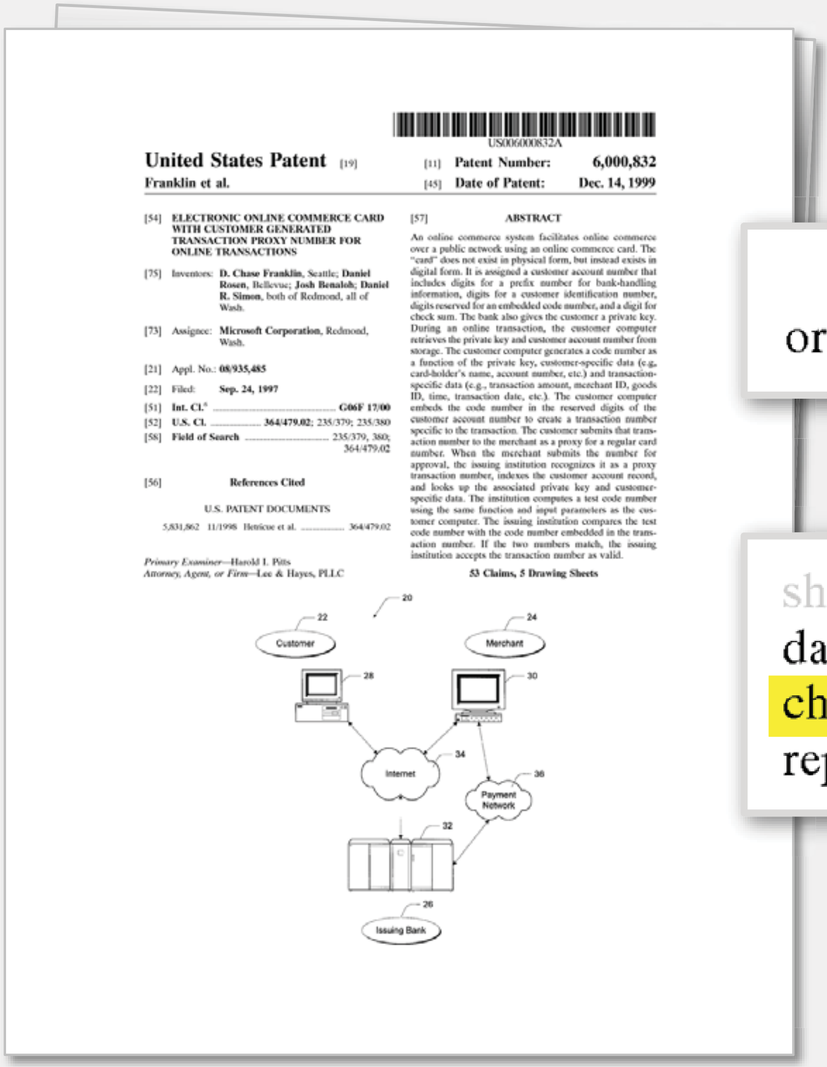
> It will be apparent to those skilled in the art that the disclosed invention may be modified in numerous ways and may assume many embodiments other than the preferred form specifically set out and described above.

Ex. 1131 [Reber], 11:33-36

Reply to POR at 22-23.

4. Reber and Franklin Teach "Receiving a Transaction Request"

Franklin's merchant validation provides motivation to combine the two transaction methods



US006000832A

United States Patent [19]

Franklin et al.

[11] **Patent Number:** **6,000,832**

[45] **Date of Patent:** **Dec. 14, 1999**

[54] **ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS**

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

[22] Filed: **Sep. 24, 1997**

[51] **Int. Cl.**^{6} **G06F 17/00**

[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380

[58] **Field of Search** 235/379, 380; 364/479.02

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,831,862 11/1998 Hetricue et al. 364/479.02

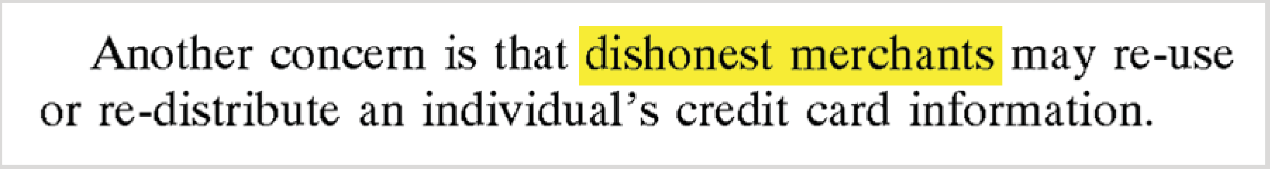
Primary Examiner—Harold I. Pitts
Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] **ABSTRACT**

An online commerce system facilitates online commerce over a public network using an online commerce card. The "card" does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as a function of the private key, customer-specific data (e.g. card-holder's name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the reserved digits of the customer account number to create a transaction number specific to the transaction. The customer submits that transaction number to the merchant as a proxy for a regular card number. When the merchant submits the number for approval, the issuing institution recognizes it as a proxy transaction number, indexes the customer account record, and looks up the associated private key and customer-specific data. The institution computes a test code number using the same function and input parameters as the customer computer. The issuing institution compares the test code number with the code number embedded in the transaction number. If the two numbers match, the issuing institution accepts the transaction number as valid.

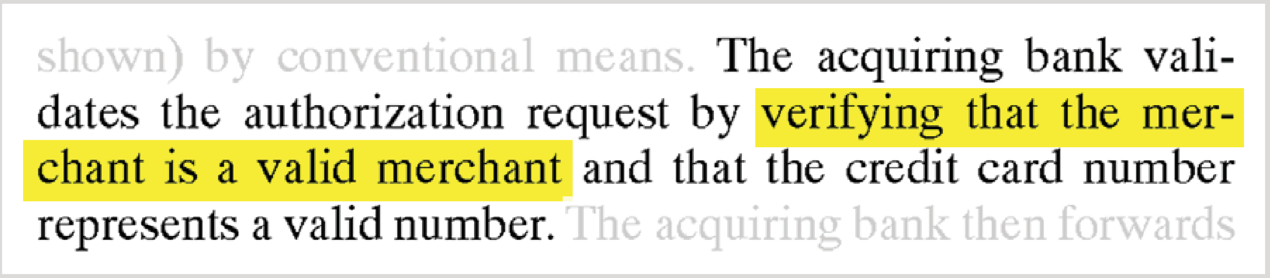
53 Claims, 5 Drawing Sheets

20
22
Customer
24
Merchant
28
30
34
Internet
36
Payment Network
32
26
Issuing Bank



Another concern is that dishonest merchants may re-use or re-distribute an individual's credit card information.

Ex. 1132 [Franklin], 1:48-49



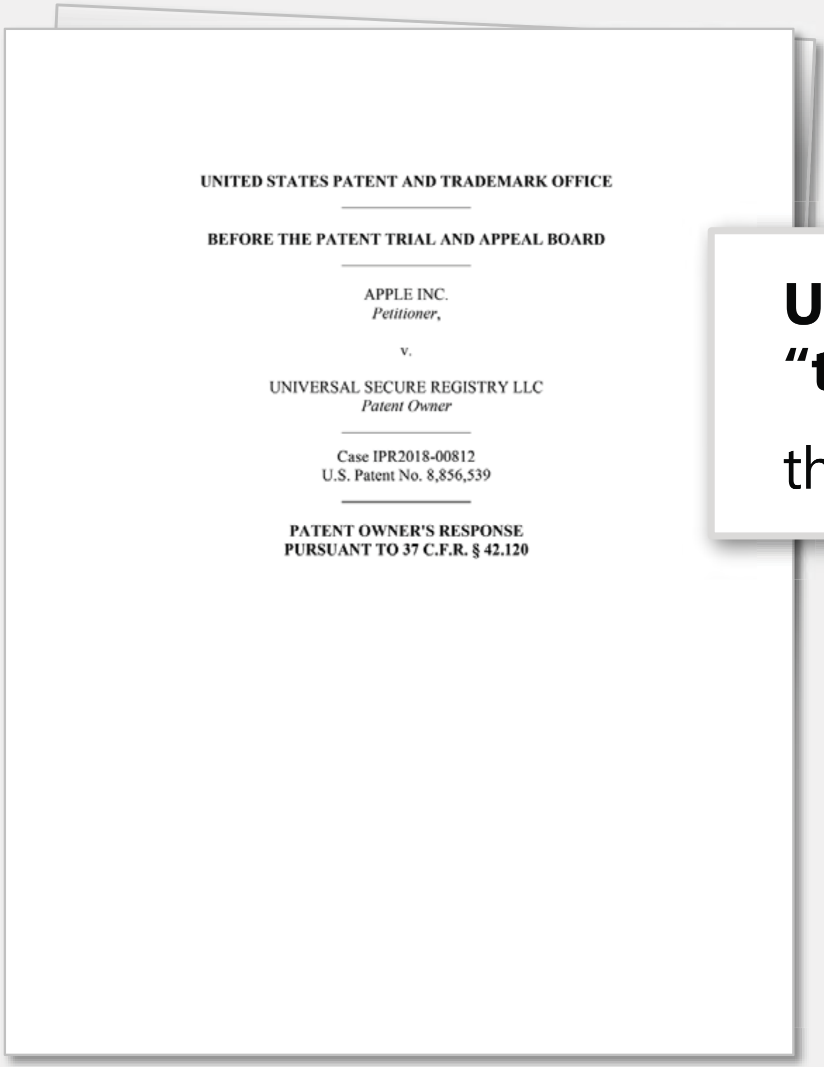
shown) by conventional means. The acquiring bank validates the authorization request by verifying that the merchant is a valid merchant and that the credit card number represents a valid number. The acquiring bank then forwards

Ex. 1132 [Franklin], 11:43-45

Compare Surreply 25-28 *with* Reply to POR at 21-24.

4. Reber and Franklin Teach "Receiving a Transaction Request"

USR's proposed construction is inconsistent with the intrinsic evidence



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.
Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC
Patent Owner

Case IPR2018-00812
U.S. Patent No. 8,856,539

PATENT OWNER'S RESPONSE
PURSUANT TO 37 C.F.R. § 42.120

USR's Proposed Construction of "the provider requesting the transaction":

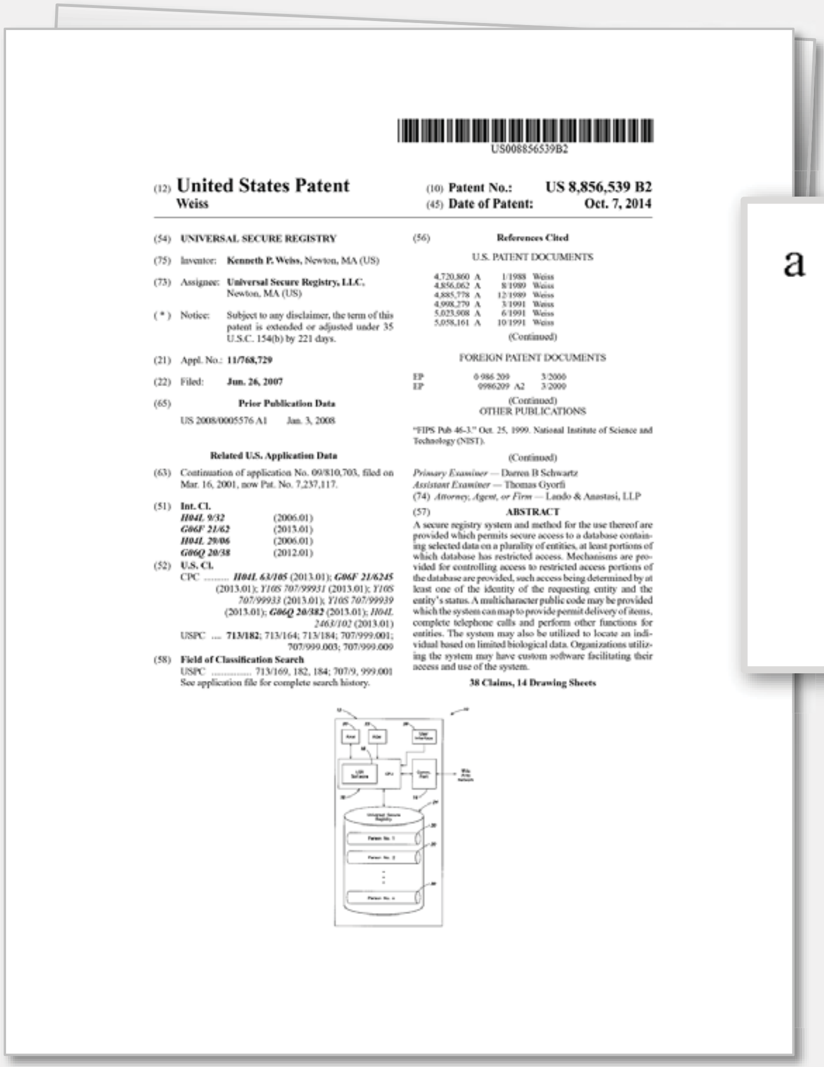
the provider that sent the transaction request

POR at 5.

Reply to POR at 19-20.

4. Reber and Franklin Teach "Receiving a Transaction Request"

Nothing in the '539 claims requires the transaction request to originate with the provider



US008856539B2

(12) **United States Patent**
Weiss

(10) **Patent No.:** **US 8,856,539 B2**
(45) **Date of Patent:** **Oct. 7, 2014**

(54) **UNIVERSAL SECURE REGISTRY**

(75) Inventor: **Kenneth P. Weiss**, Newton, MA (US)

(73) Assignee: **Universal Secure Registry, LLC**, Newton, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 221 days.

(21) Appl. No.: **11/768,729**

(22) Filed: **Jun. 26, 2007**

(65) **Prior Publication Data**

US 2008/0005576 A1 Jan. 3, 2008

Related U.S. Application Data

(63) Continuation of application No. 09/810,703, filed on Mar. 16, 2001, now Pat. No. 7,237,117.

(51) **Int. Cl.**

H04L 9/32	(2006.01)
G06F 21/62	(2013.01)
H04L 29/06	(2006.01)
G06Q 20/38	(2012.01)

(52) **U.S. Cl.**
CPC ***H04L 63/105*** (2013.01); ***G06F 21/6245*** (2013.01); *Y10S 707/99931* (2013.01); *Y10S 707/99933* (2013.01); *Y10S 707/99939* (2013.01); ***G06Q 20/382*** (2013.01); *H04L 2463/102* (2013.01)
USPC **713/182**; 713/164; 713/184; 707/999.001; 707/999.003; 707/999.009

(58) **Field of Classification Search**
USPC 713/169, 182, 184; 707/9, 999.001
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,720,860	A	1/1988	Weiss
4,856,062	A	8/1989	Weiss
4,885,778	A	12/1989	Weiss
4,998,279	A	3/1991	Weiss
5,023,908	A	6/1991	Weiss
5,058,161	A	10/1991	Weiss

(Continued)

FOREIGN PATENT DOCUMENTS

EP	0 986 209	3/2000
EP	0986209 A2	3/2000

(Continued)

OTHER PUBLICATIONS

"FIPS Pub 46-3." Oct. 25, 1999. National Institute of Science and Technology (NIST).

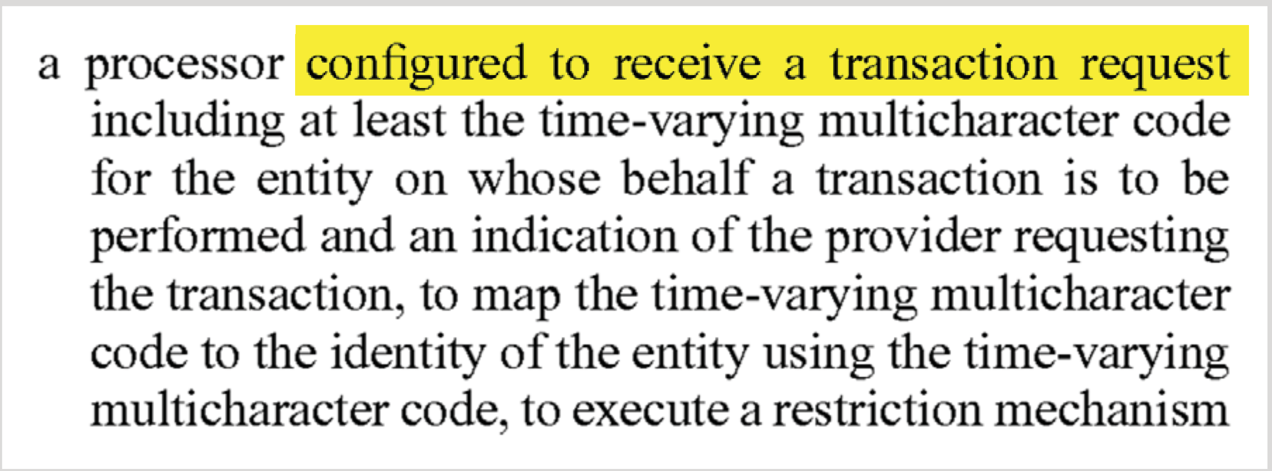
(Continued)

Primary Examiner — Darren B Schwartz
Assistant Examiner — Thomas Gyorfi
(74) *Attorney, Agent, or Firm* — Lando & Anastasi, LLP

(57) **ABSTRACT**

A secure registry system and method for the use thereof are provided which permits secure access to a database containing selected data on a plurality of entities, at least portions of which database has restricted access. Mechanisms are provided for controlling access to restricted access portions of the database are provided, such access being determined by at least one of the identity of the requesting entity and the entity's status. A multicharacter public code may be provided which the system can map to provide permit delivery of items, complete telephone calls and perform other functions for entities. The system may also be utilized to locate an individual based on limited biological data. Organizations utilizing the system may have custom software facilitating their access and use of the system.

38 Claims, 14 Drawing Sheets



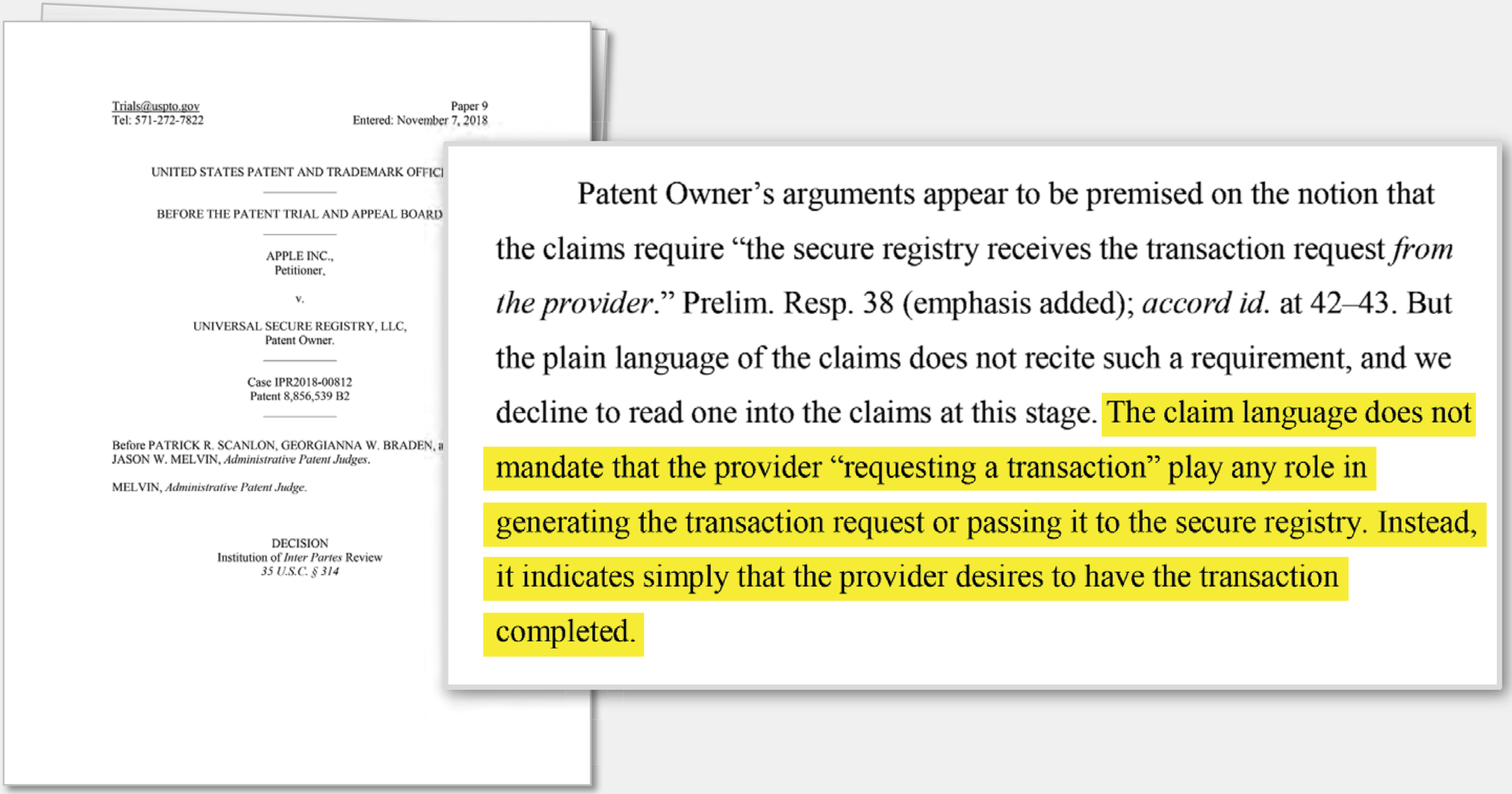
a processor configured to receive a transaction request including at least the time-varying multicharacter code for the entity on whose behalf a transaction is to be performed and an indication of the provider requesting the transaction, to map the time-varying multicharacter code to the identity of the entity using the time-varying multicharacter code, to execute a restriction mechanism

Ex. 1101 ['539 Patent], Claim 1

Reply to POR at 20-21.

4. Reber and Franklin Teach "Receiving a Transaction Request"

The Board rejected USR's claim construction argument in the Institution Decision



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Paper 9
Entered: November 7, 2018

UNITED STATES PATENT AND TRADEMARK OFFICI

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Patent Owner.

Case IPR2018-00812
Patent 8,856,539 B2

Before PATRICK R. SCANLON, GEORGIANNA W. BRADEN, a
JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge*.

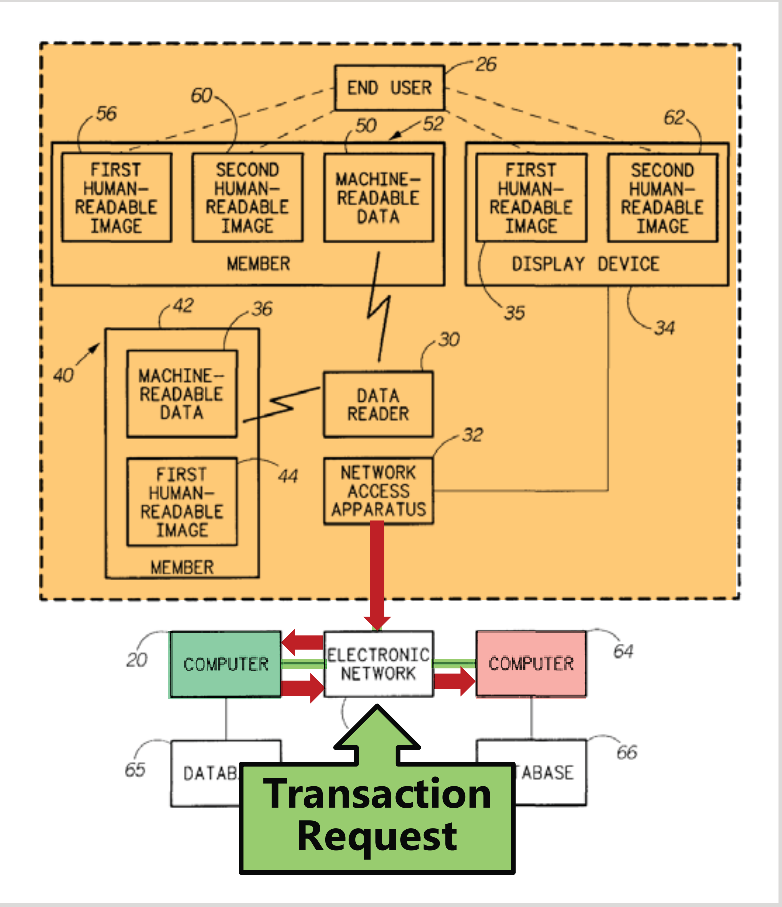
DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314

Patent Owner's arguments appear to be premised on the notion that the claims require "the secure registry receives the transaction request *from the provider*." Prelim. Resp. 38 (emphasis added); *accord id.* at 42–43. But the plain language of the claims does not recite such a requirement, and we decline to read one into the claims at this stage. The claim language does not mandate that the provider "requesting a transaction" play any role in generating the transaction request or passing it to the secure registry. Instead, it indicates simply that the provider desires to have the transaction completed.

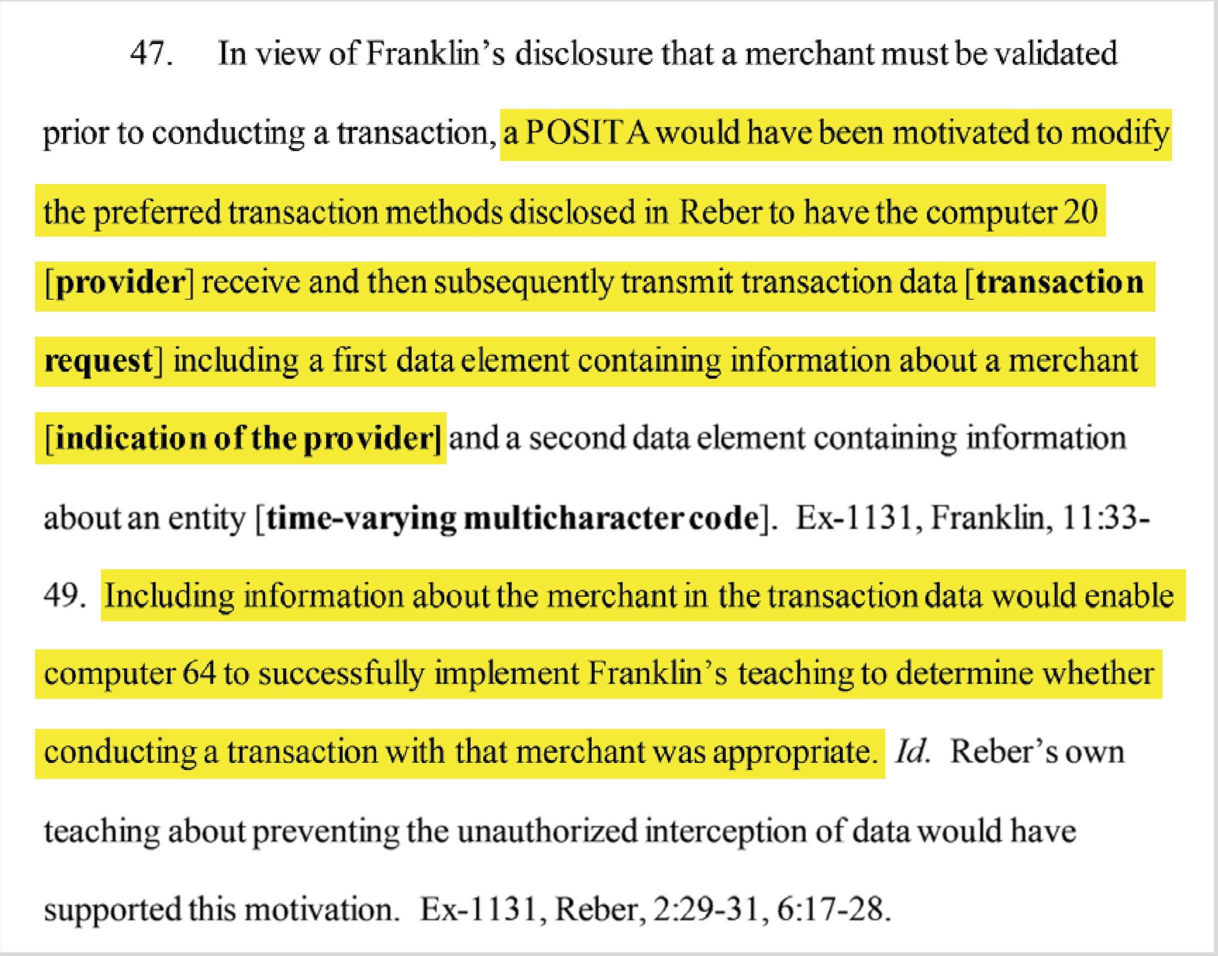
Institution Decision at 11; *see also* Reply to POR at 20.

4. Reber and Franklin Teach "Receiving a Transaction Request"

Performing merchant validation at the secure registry was obvious



Ex. 1131 [Reber], Fig. 1



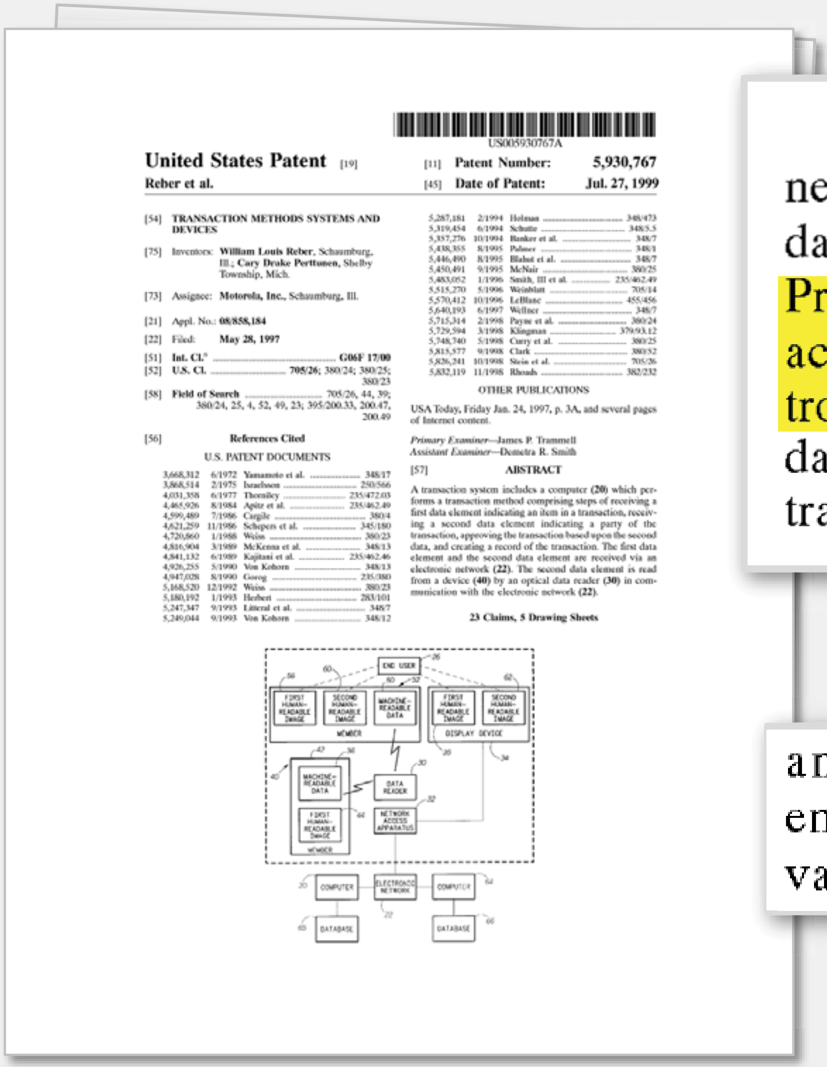
47. In view of Franklin's disclosure that a merchant must be validated prior to conducting a transaction, a POSITA would have been motivated to modify the preferred transaction methods disclosed in Reber to have the computer 20 [**provider**] receive and then subsequently transmit transaction data [**transaction request**] including a first data element containing information about a merchant [**indication of the provider**] and a second data element containing information about an entity [**time-varying multicharacter code**]. Ex-1131, Franklin, 11:33-49. Including information about the merchant in the transaction data would enable computer 64 to successfully implement Franklin's teaching to determine whether conducting a transaction with that merchant was appropriate. *Id.* Reber's own teaching about preventing the unauthorized interception of data would have supported this motivation. Ex-1131, Reber, 2:29-31, 6:17-28.

Ex. 1135 [Shoup POR Reply Decl.], ¶47

Compare Surreply at 13-15, 26-28 *with* Reply to POR at 22-24.

5. Reber and Franklin Teach Encrypting the Time-varying Multicharacter Code (Claims 3 and 24)

Reber teaches encrypting transmissions over the electronic network 22 to prevent unauthorized interception



US005930767A

United States Patent [19]

Reber et al.

[11] **Patent Number:** **5,930,767**

[45] **Date of Patent:** **Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**⁶ **G06F 17/00**

[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,668,312	6/1972	Yamamoto et al.	348/17
3,868,514	2/1975	Israelsson	250/566
4,031,358	6/1977	Thornley	235/472.03
4,465,926	8/1984	Apitz et al.	235/462.49
4,599,489	7/1986	Cargile	380/4
4,621,259	11/1986	Schepers et al.	345/180
4,720,860	1/1988	Weiss	380/23
4,816,904	3/1989	McKenna et al.	348/13
4,841,132	6/1989	Kajitani et al.	235/462.46
4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
5,168,520	12/1992	Weiss	380/23
5,180,192	1/1993	Herbert	283/101
5,247,347	9/1993	Litteral et al.	348/7
5,249,044	9/1993	Von Kohorn	348/12
5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

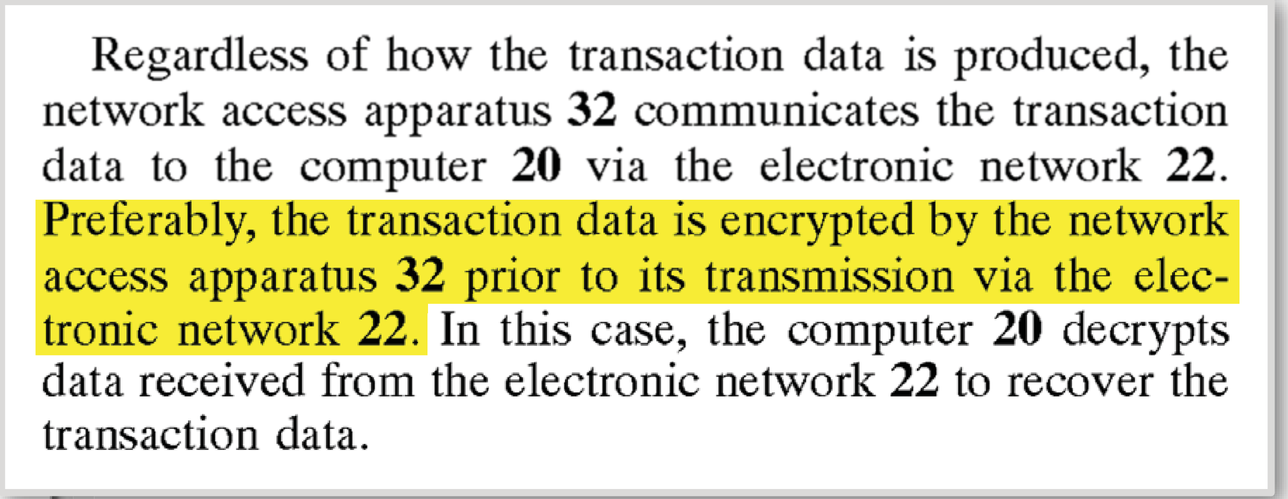
Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

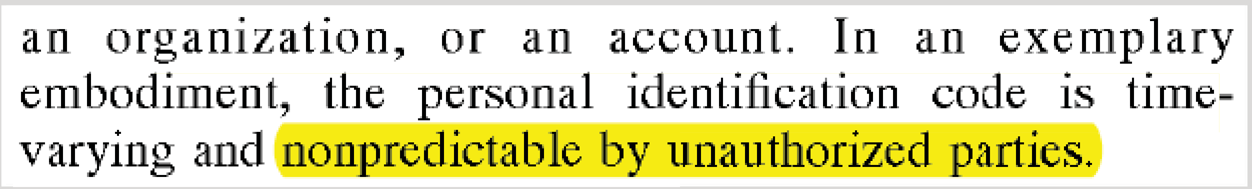
23 Claims, 5 Drawing Sheets

END USER
26
60
56
50
52
62
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
MACHINE-READABLE DATA
MEMBER
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
DISPLAY DEVICE
42
36
40
30
36
34
MACHINE-READABLE DATA
DATA READER
32
FIRST HUMAN-READABLE IMAGE
44
NETWORK ACCESS APPARATUS
MEMBER
20
COMPUTER
ELECTRONIC NETWORK
COMPUTER
64
22
65
DATABASE
DATABASE
66



Regardless of how the transaction data is produced, the network access apparatus **32** communicates the transaction data to the computer **20** via the electronic network **22**. Preferably, the transaction data is encrypted by the network access apparatus **32** prior to its transmission via the electronic network **22**. In this case, the computer **20** decrypts data received from the electronic network **22** to recover the transaction data.

Ex. 1131 [Reber], 4:63-5:3



an organization, or an account. In an exemplary embodiment, the personal identification code is time-varying and nonpredictable by unauthorized parties.

Ex. 1131 [Reber], 4:18-20

Compare Surreply at 28-29 *with* Reply to POR at 24-26.

5. Reber and Franklin Teach Encrypting the Time-varying Multicharacter Code (Claims 3 and 24)

Electronic network 22 connects to both the provider and secure registry

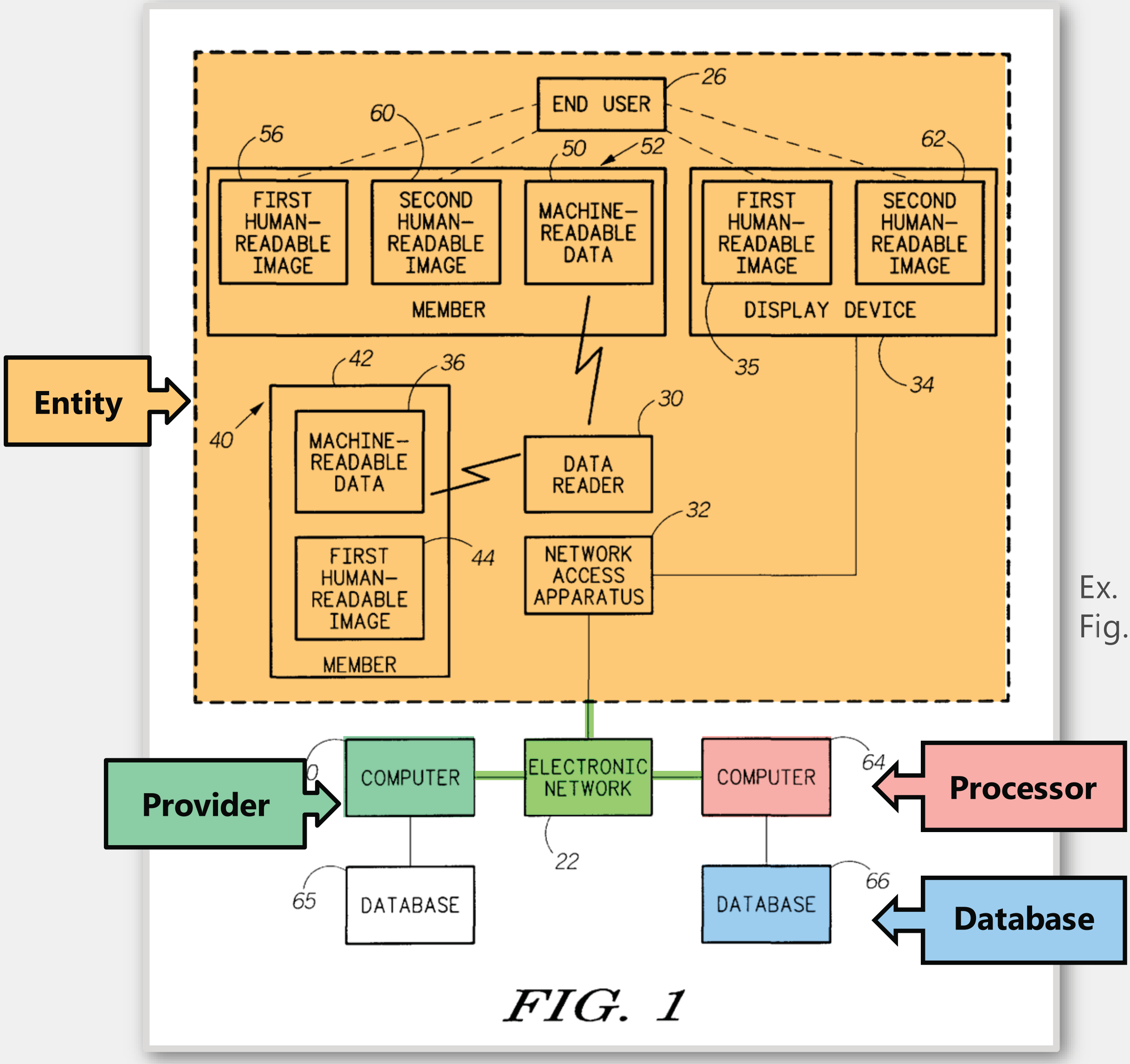


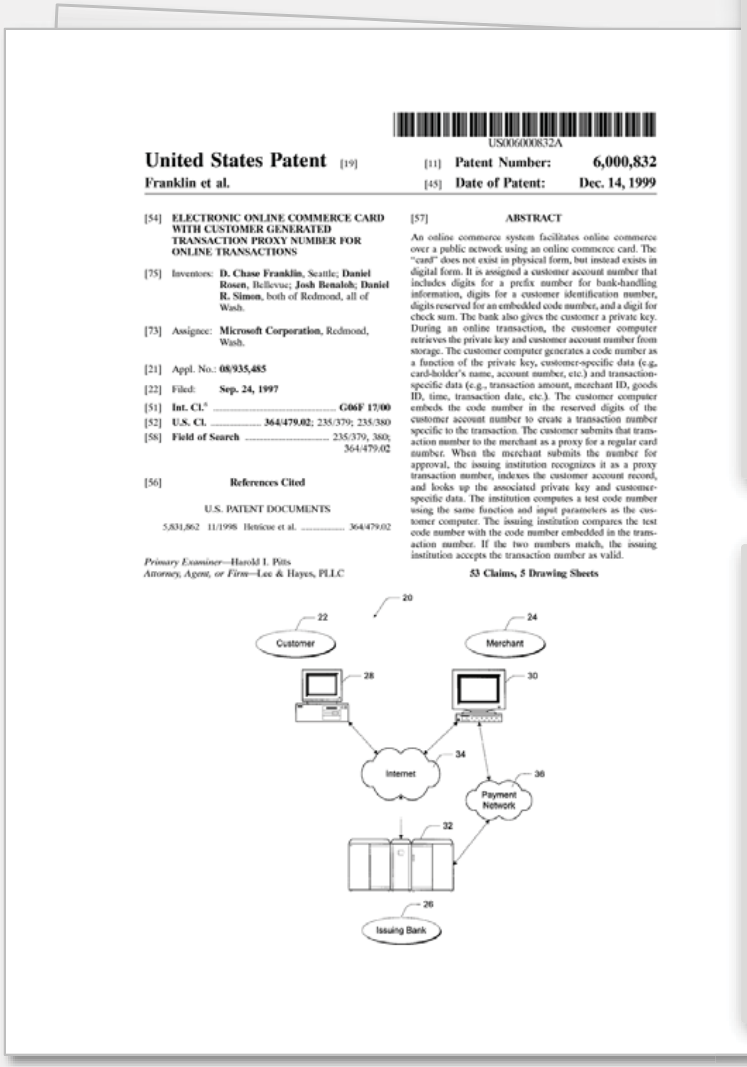
FIG. 1

Ex. 1131 [Reber], Fig. 1

Compare Surreply at 28-29 *with* Reply to POR at 24-26.

5. Reber and Franklin Teach Encrypting the Time-varying Multicharacter Code (Claims 3 and 24)

Franklin teaches the use of public-key encryption for transmissions over public networks



US006000832A

United States Patent [19]

Franklin et al.

[11] Patent Number: 6,000,832

[45] Date of Patent: Dec. 14, 1999

[54] ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

[22] Filed: **Sep. 24, 1997**

[51] **Int. Cl.**⁶ **G06F 17/00**

[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380

[58] **Field of Search** 235/379, 380; 364/479.02

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,831,862 11/1998 Hetricue et al. 364/479.02

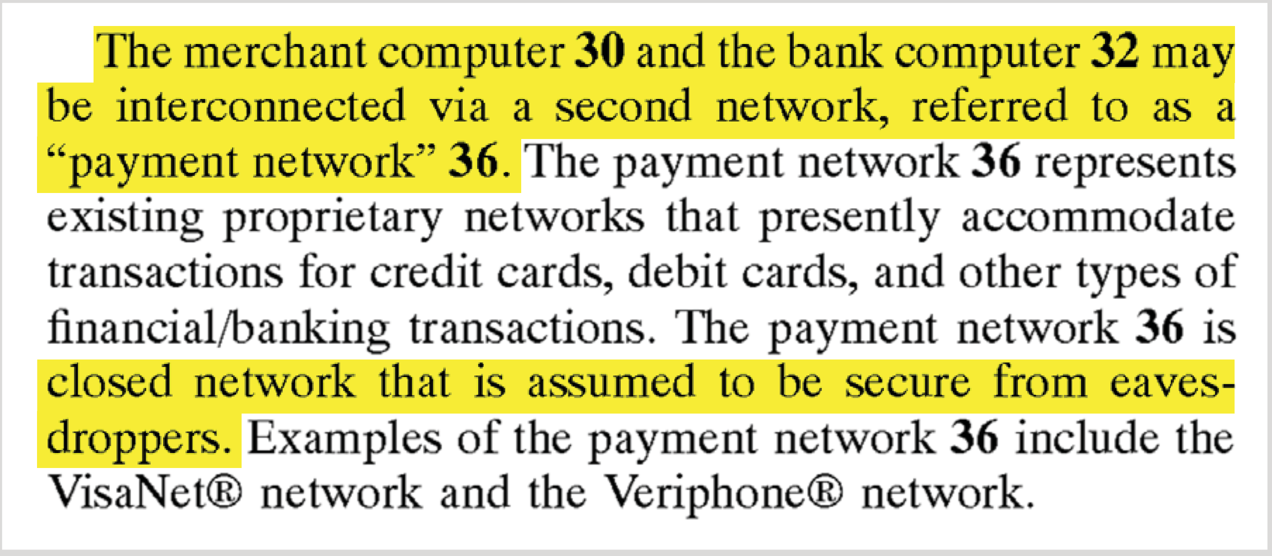
Primary Examiner—Harold I. Pitts
Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] **ABSTRACT**

An online commerce system facilitates online commerce over a public network using an online commerce card. The "card" does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as a function of the private key, customer-specific data (e.g., card-holder's name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the reserved digits of the customer account number to create a transaction number specific to the transaction. The customer submits that transaction number to the merchant as a proxy for a regular card number. When the merchant submits the number for approval, the issuing institution recognizes it as a proxy transaction number, indexes the customer account record, and looks up the associated private key and customer-specific data. The institution computes a test code number using the same function and input parameters as the customer computer. The issuing institution compares the test code number with the code number embedded in the transaction number. If the two numbers match, the issuing institution accepts the transaction number as valid.

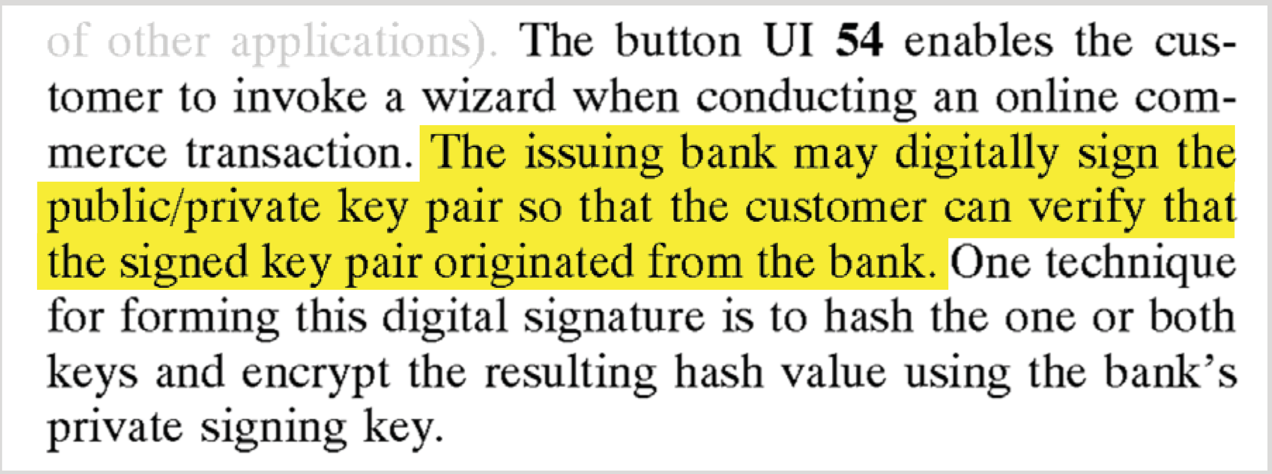
53 Claims, 5 Drawing Sheets

20
22
Customer
24
Merchant
28
30
34
Internet
36
Payment Network
32
26
Issuing Bank



The merchant computer **30** and the bank computer **32** may be interconnected via a second network, referred to as a "payment network" **36**. The payment network **36** represents existing proprietary networks that presently accommodate transactions for credit cards, debit cards, and other types of financial/banking transactions. The payment network **36** is closed network that is assumed to be secure from eavesdroppers. Examples of the payment network **36** include the VisaNet® network and the Veriphone® network.

Ex. 1132 [Franklin], 4:35-43



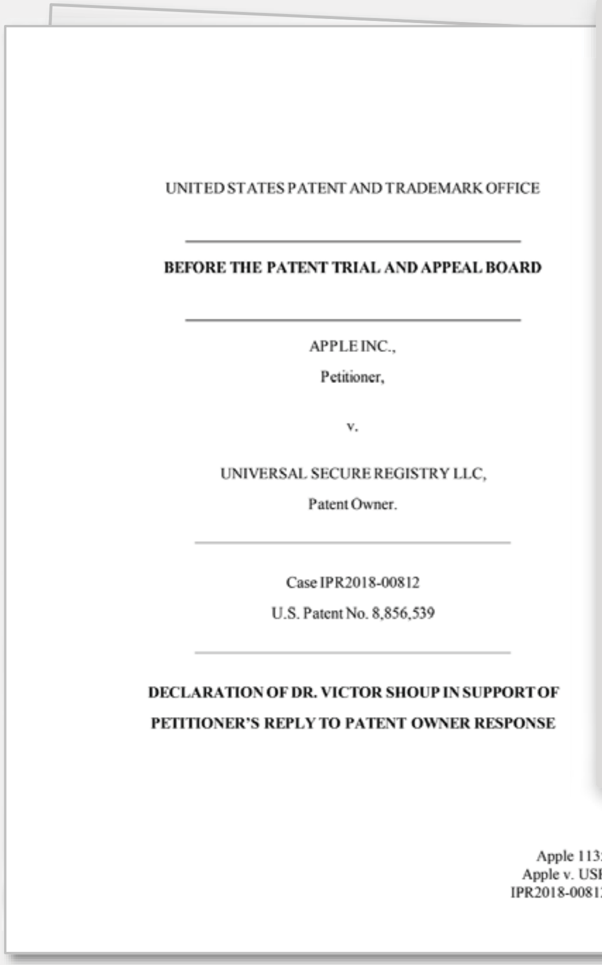
of other applications). The button UI **54** enables the customer to invoke a wizard when conducting an online commerce transaction. The issuing bank may digitally sign the public/private key pair so that the customer can verify that the signed key pair originated from the bank. One technique for forming this digital signature is to hash the one or both keys and encrypt the resulting hash value using the bank's private signing key.

Ex. 1132 [Franklin], 8:35-42

Compare Surreply at 28-29 *with* Reply to POR at 24-26.

5. Reber and Franklin Teach Encrypting the Time-varying Multicharacter Code (Claims 3 and 24)

A POSITA would have been motivated to apply these encryption techniques to transmissions between the merchant and the secure registry over electronic network 22



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

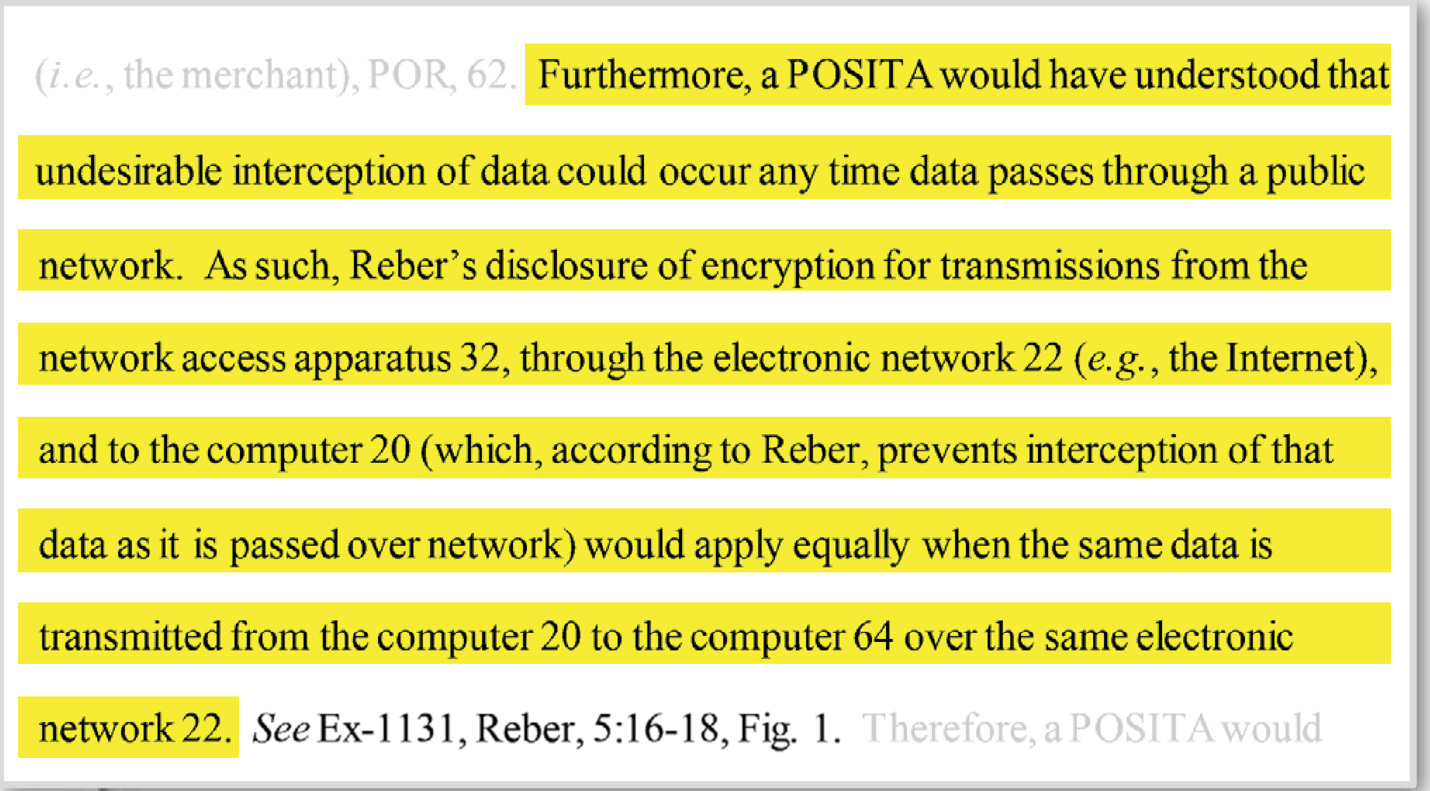
v.

UNIVERSAL SECURE REGISTRY LLC,
Patent Owner.

Case IPR2018-00812
U.S. Patent No. 8,856,539

DECLARATION OF DR. VICTOR SHOUP IN SUPPORT OF PETITIONER'S REPLY TO PATENT OWNER RESPONSE

Apple 1135
Apple v. USR
IPR2018-00812



(*i.e.*, the merchant), POR, 62. Furthermore, a POSITA would have understood that undesirable interception of data could occur any time data passes through a public network. As such, Reber's disclosure of encryption for transmissions from the network access apparatus 32, through the electronic network 22 (*e.g.*, the Internet), and to the computer 20 (which, according to Reber, prevents interception of that data as it is passed over network) would apply equally when the same data is transmitted from the computer 20 to the computer 64 over the same electronic network 22. *See* Ex-1131, Reber, 5:16-18, Fig. 1. Therefore, a POSITA would

Ex. 1135 [Shoup POR Reply Decl.], ¶50

Compare Surreply at 28-29 *with* Reply to POR at 24-26.

Roadmap

The Claims Are Invalid

Responses To USR's Sur-reply

USR's Substitute Claims Are Not Patentable

USR's CMTA Should Be Denied

USR's Motion To Strike Should Be Denied

USR’s Substitute Claims Are Not Patentable

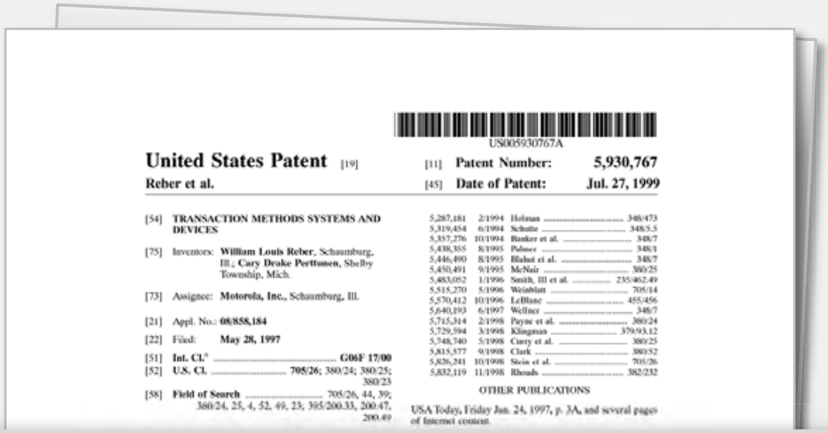
Limitation	Claims	Section 101	Section 103	Section 112
“transaction request…from the provider”	39, 40, 41, 42, 43, 44, 45, 46, 47	❌	❌	
“extracting” a “time value representative of when the time-varying multicharacter code was generated”	39, 40, 41, 42, 43, 46	❌	❌	
“Validate an identity of the provider and then execute a restriction mechanism”	39, 40, 41, 42, 43, 44, 45	❌	❌	
“wherein the identity of the entity is verified using a biometric”	39, 40, 41, 42, 43, 44, 45, 47	❌	❌	❌
“the third party being a different entity from the secure registry”	44, 45, 47	❌	❌	
“Public ID Code”	47	❌	❌	

USR’s Substitute Claims Are Not Patentable

Grounds for Invalidity	Issue Addressed in Briefing
1. Reber/Franklin render obvious a “transaction request…from the provider”	CMTA Opp. at 4-6; CMTA Sur-Reply at 1-4
2. Reber/Franklin render obvious “extracting” a “ time value representative of when the time-varying multicharacter code was generated”	CMTA Opp. at 6-8; CMTA Sur-Reply at 4-6
3. Reber/Franklin render obvious “validat[ing] an identity of the provider and then execut[ing] a restriction mechanism	CMTA Opp. at 8-9; CMTA Sur-Reply at 6-7
4. Schutzer renders obvious “wherein the identity of the entity is verified using a biometric”	CMTA Opp. at 9-12; CMTA Sur-Reply at 7-9
5. Reber/Franklin render obvious “the third party being a different entity from the secure registry”	CMTA Opp. at 12-15
6. Schutzer renders obvious a “public ID code”	CMTA Opp. at 15-18; CMTA Sur-Reply at 9
7. The substitute claims do not satisfy § 112	CMTA Opp. at 25; CMTA Sur-Reply at 9
8. The substitute claims are drawn to ineligible subject matter	CMTA Opp. at 18-25; CMTA Sur-Reply at 10

1. Reber and Franklin Render Obvious “A Transaction Request…from the Provider”

Reber contemplates receiving the transaction request from the provider



US005930767A

United States Patent [19]

Reber et al.

[11] **Patent Number:** **5,930,767**

[45] **Date of Patent:** **Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**⁶ **G06F 17/00**

[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

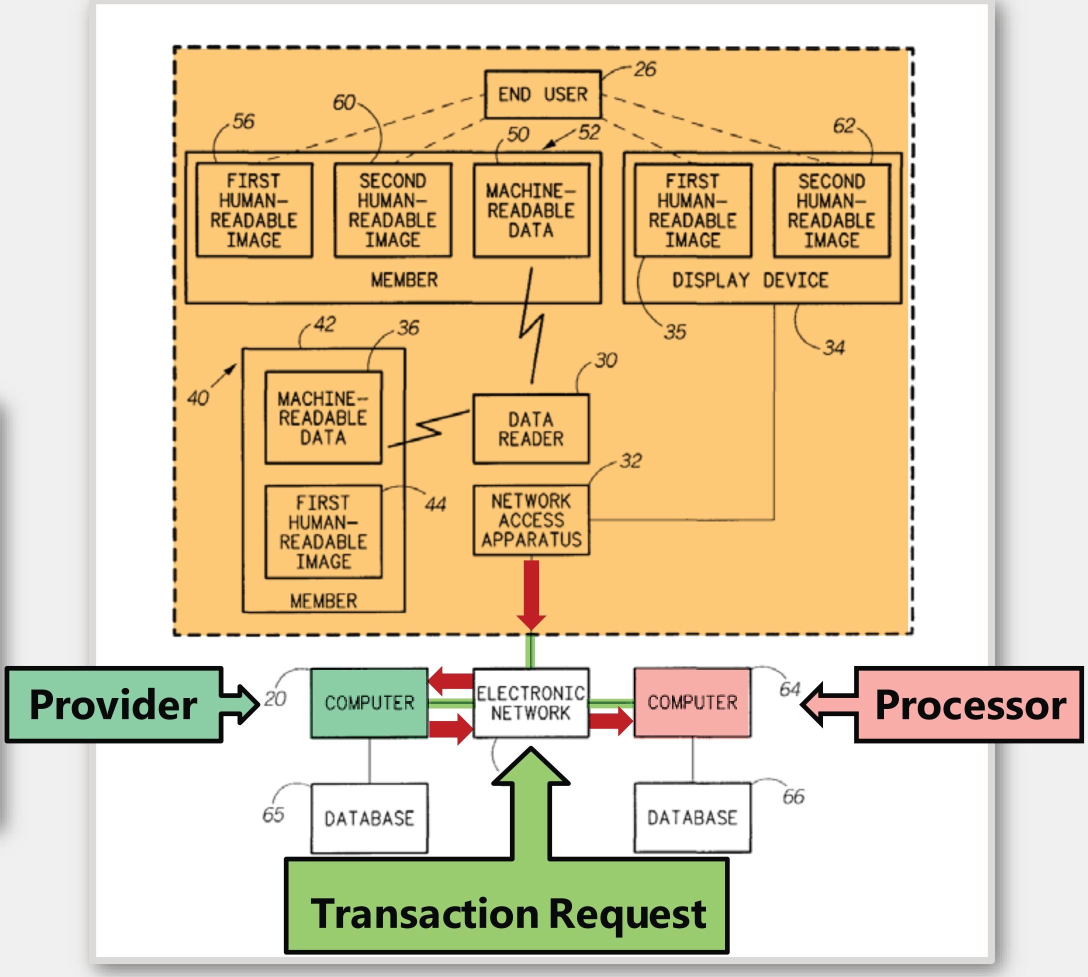
5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

Additionally, the herein-described transaction system can be used to perform a second preferred transaction method. In this case, the computer 64 receives transaction data via the electronic network 22. The transaction data includes a first data element indicating a first party of a transaction and a second data element indicating a second party of the transaction. The first party includes a creditor, a seller, a merchant, a manufacturer, a payee, or other like entity which is to receive money in the transaction. The second party

Ex. 1131 [Reber], 5:45-53

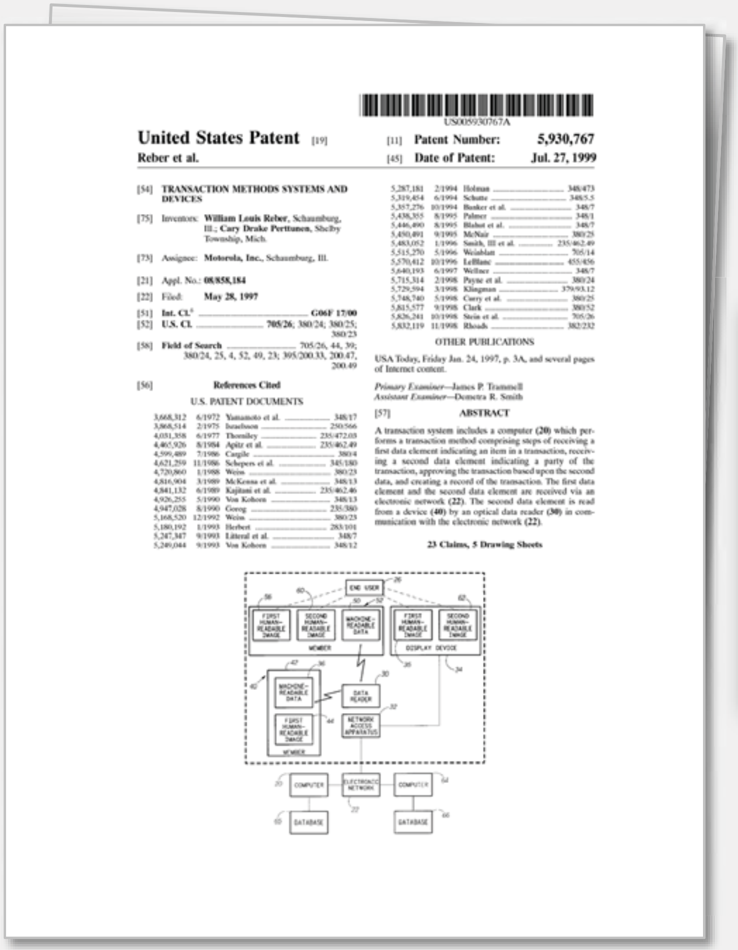


Ex. 1131 [Reber], Figure 1

CMTA Surreply at 1-4; Reply to POR at 21-24.

2. Reber and Franklin Render Obvious “Extracting” a “Time Value Representative of When the Time-varying Multicharacter Code Was Generated”

Reber discloses generating a “transaction record” from time information extracted from the transaction request



US005930767A

United States Patent [19]
Reber et al.

[11] **Patent Number:** **5,930,767**
[45] **Date of Patent:** **Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**[6] **G06F 17/00**
[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,668,312	6/1972	Yamamoto et al.	348/17
3,868,514	2/1975	Israelsson	250/566
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4,465,926	8/1984	Apitz et al.	235/462.49
4,599,489	7/1986	Cargile	380/4
4,621,259	11/1986	Schepers et al.	345/180
4,720,860	1/1988	Weiss	380/23
4,816,904	3/1989	McKenna et al.	348/13
4,841,132	6/1989	Kajitani et al.	235/462.46
4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
5,168,520	12/1992	Weiss	380/23
5,180,192	1/1993	Herbert	283/101
5,247,347	9/1993	Litteral et al.	348/7
5,249,044	9/1993	Von Kohorn	348/12
5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
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5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

23 Claims, 5 Drawing Sheets

END USER
26
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60
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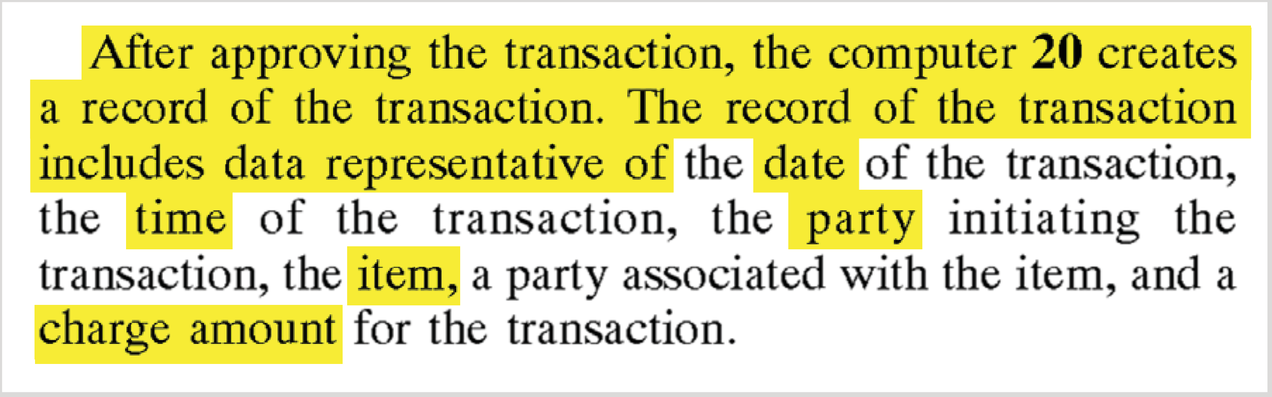
62
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
MACHINE-READABLE DATA
MEMBER
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
DISPLAY DEVICE
36
34
42
36
40
30
MACHINE-READABLE DATA
DATA READER
FIRST HUMAN-READABLE IMAGE
44
32
NETWORK ACCESS APPARATUS
MEMBER
20
COMPUTER
ELECTRONIC NETWORK
COMPUTER
64
22
65
DATABASE
DATABASE
66



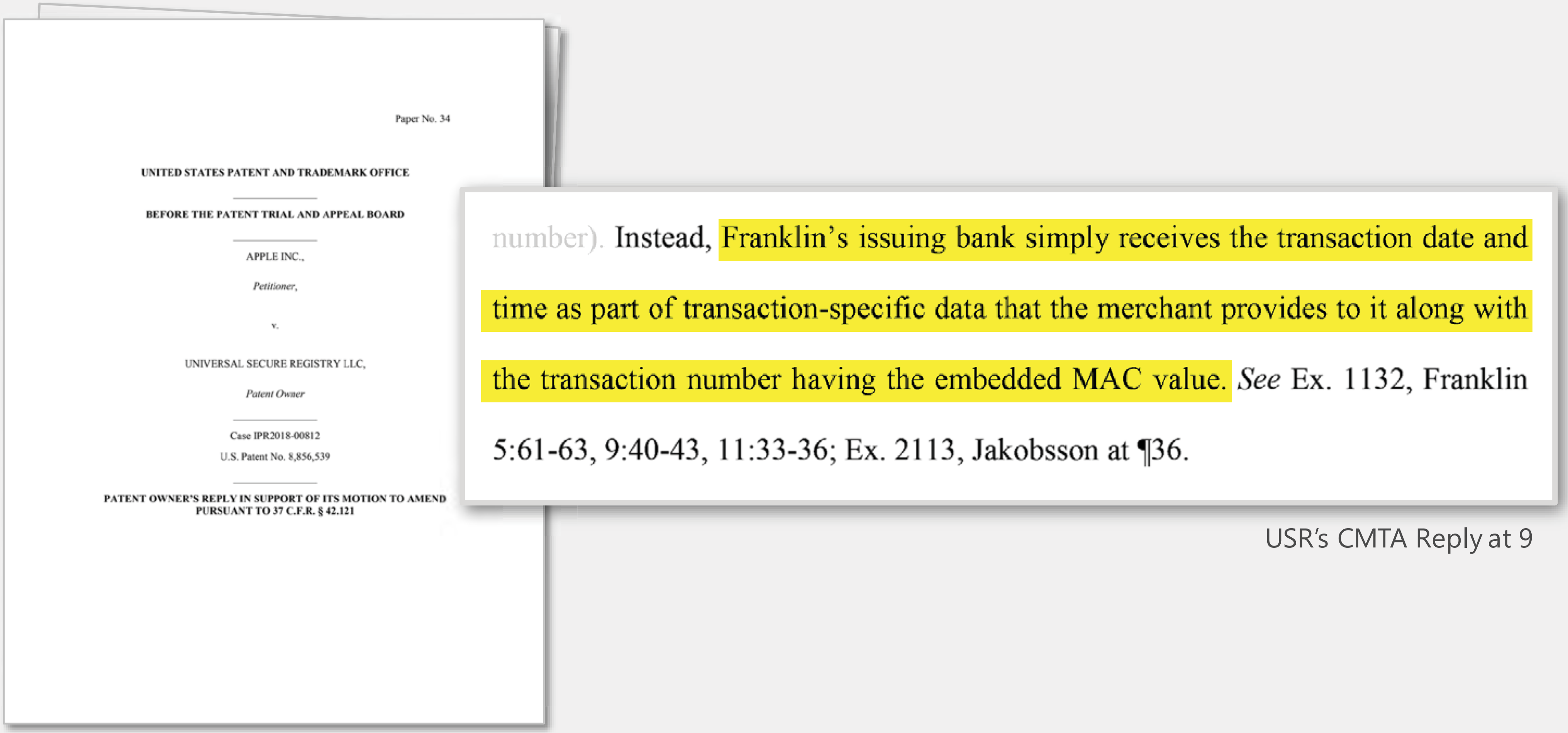
After approving the transaction, the computer **20** creates a record of the transaction. The record of the transaction includes data representative of the date of the transaction, the time of the transaction, the party initiating the transaction, the item, a party associated with the item, and a charge amount for the transaction.

Ex. 1131 [Reber], 5:33-38

CMTA Opp. at 6-7; CMTA Sur-Reply at 4-6.

2. Reber and Franklin Render Obvious "Extracting" a "Time Value Representative of When the Time-varying Multicharacter Code Was Generated"

USR admits that Franklin's transaction data includes the claimed "time value"



Paper No. 34

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC,

Patent Owner

Case IPR2018-00812
U.S. Patent No. 8,856,539

PATENT OWNER'S REPLY IN SUPPORT OF ITS MOTION TO AMEND PURSUANT TO 37 C.F.R. § 42.121

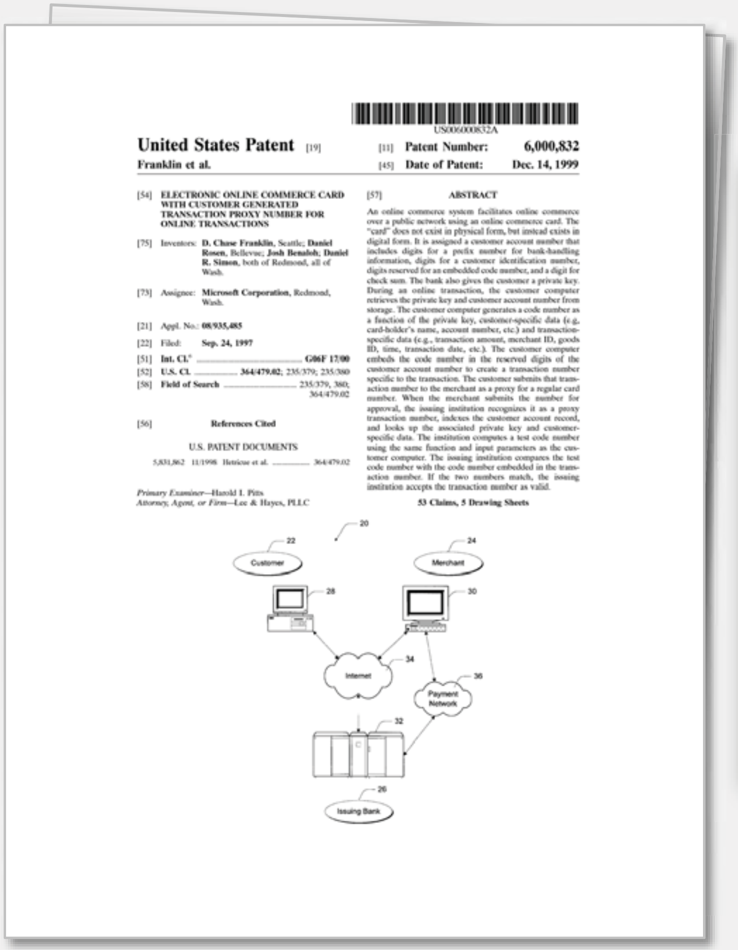
number). Instead, Franklin's issuing bank simply receives the transaction date and time as part of transaction-specific data that the merchant provides to it along with the transaction number having the embedded MAC value. *See* Ex. 1132, Franklin 5:61-63, 9:40-43, 11:33-36; Ex. 2113, Jakobsson at ¶36.

USR's CMTA Reply at 9

See CMTA Surreply at 5.

2. Reber and Franklin Render Obvious "Extracting" a "Time Value Representative of When the Time-varying Multicharacter Code Was Generated"

Franklin describes extracting time information from a transaction request to generate a Test MAC (*i.e.*, a time-varying code) for comparison



US006000832A

United States Patent [19]

Franklin et al.

[11] **Patent Number:** **6,000,832**

[45] **Date of Patent:** **Dec. 14, 1999**

[54] **ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS**

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

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Primary Examiner—Harold I. Pitts
Attorney, Agent, or Firm—Lee & Hayes, PLLC

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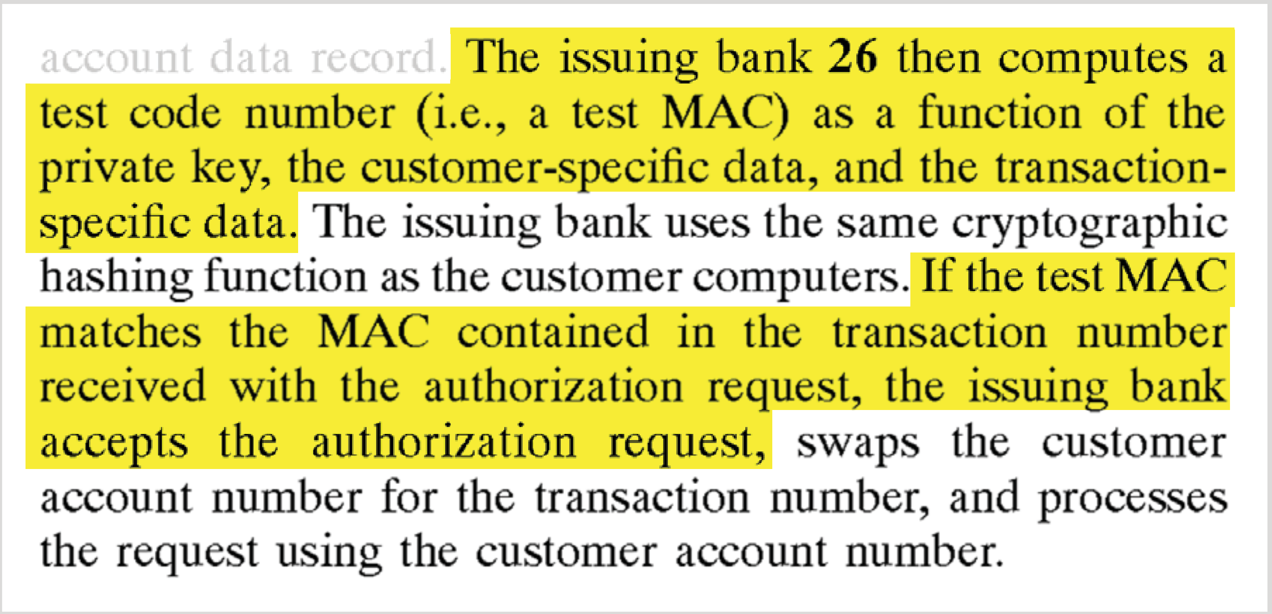


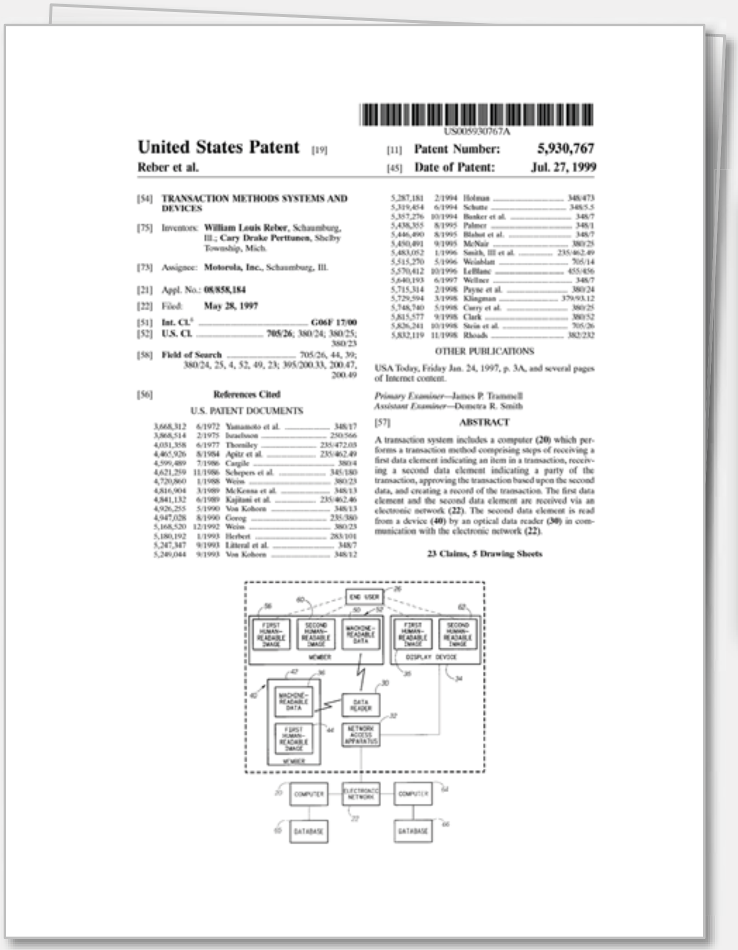
account data record. The issuing bank **26** then computes a test code number (i.e., a test MAC) as a function of the private key, the customer-specific data, and the transaction-specific data. The issuing bank uses the same cryptographic hashing function as the customer computers. If the test MAC matches the MAC contained in the transaction number received with the authorization request, the issuing bank accepts the authorization request, swaps the customer account number for the transaction number, and processes the request using the customer account number.

Ex. 1132 [Franklin], 6:3-12

CMTA Opp. at 7-8; CMTA Surreply at 5.

2. Reber and Franklin Render Obvious “Extracting” a “Time Value Representative of When the Time-varying Multicharacter Code Was Generated”

Reber discloses a similar comparison between a received value and a database value



US005930767A

United States Patent [19]
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[11] **Patent Number:** **5,930,767**
[45] **Date of Patent:** **Jul. 27, 1999**

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[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

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Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

23 Claims, 5 Drawing Sheets

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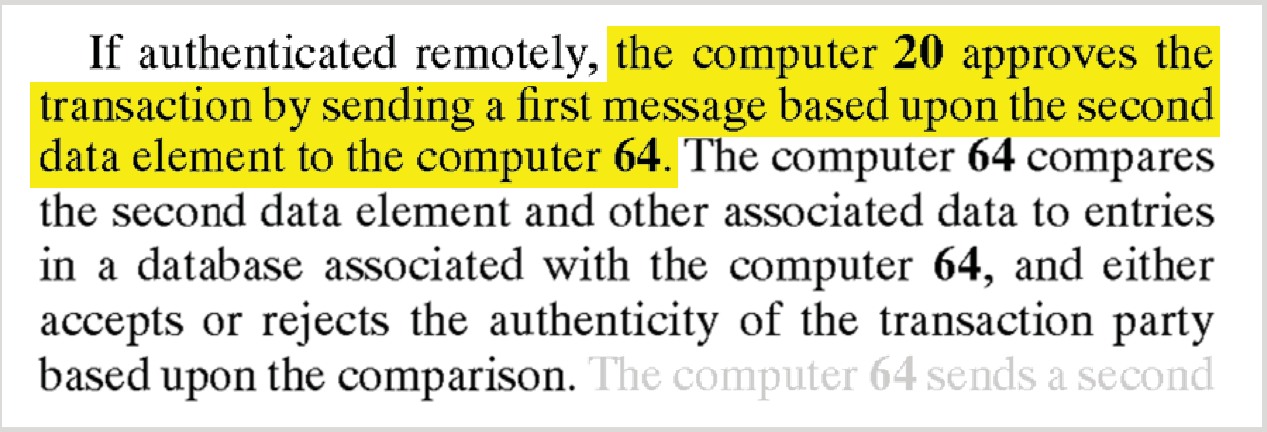
SECOND HUMAN-READABLE IMAGE
MACHINE-READABLE DATA
MEMBER
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
DISPLAY DEVICE
36
34
42
46
40
MACHINE-READABLE DATA
DATA READER
30
FIRST HUMAN-READABLE IMAGE
44
NETWORK ACCESS APPARATUS
32
MEMBER
20
COMPUTER
ELECTRONIC NETWORK
22
COMPUTER
64
60
DATABASE
DATABASE
66



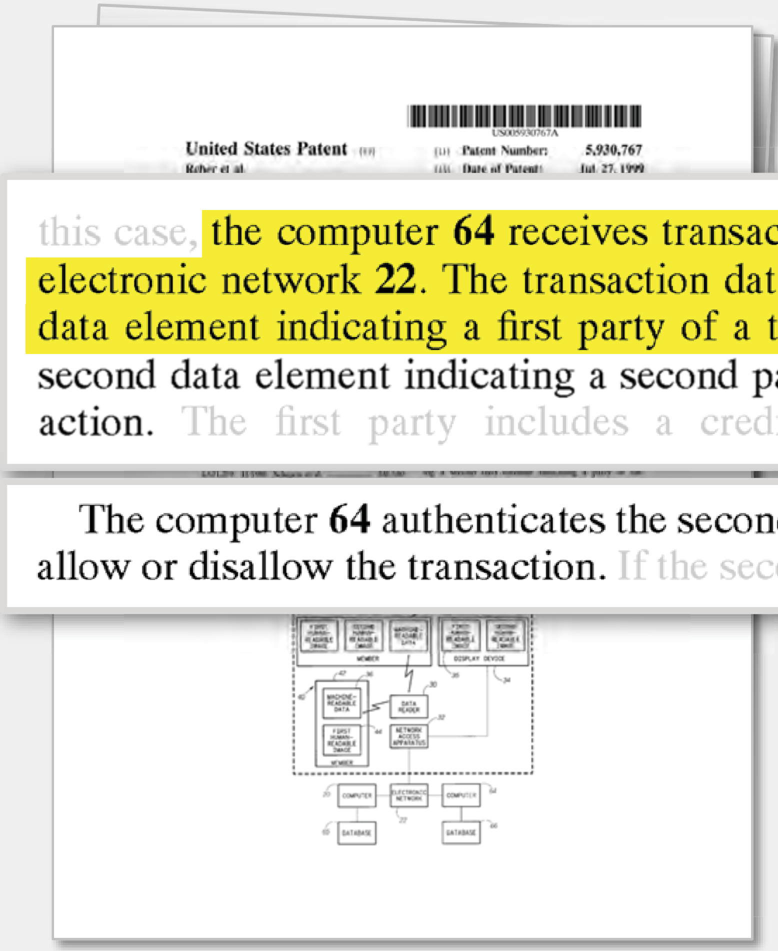
If authenticated remotely, the computer **20** approves the transaction by sending a first message based upon the second data element to the computer **64**. The computer **64** compares the second data element and other associated data to entries in a database associated with the computer **64**, and either accepts or rejects the authenticity of the transaction party based upon the comparison. The computer **64** sends a second

Ex. 1131 [Reber], 5:16-22

CMTA Opp. at 6-8; CMTA Surreply at 5.

3. Reber and Franklin Render Obvious “Validat[ing] an Identity of the Provider and then Execut[ing] a Restriction Mechanism”

Reber and Franklin disclose sending a transaction request that contains information needed to conduct a financial transaction



United States Patent [19]
Reber et al.

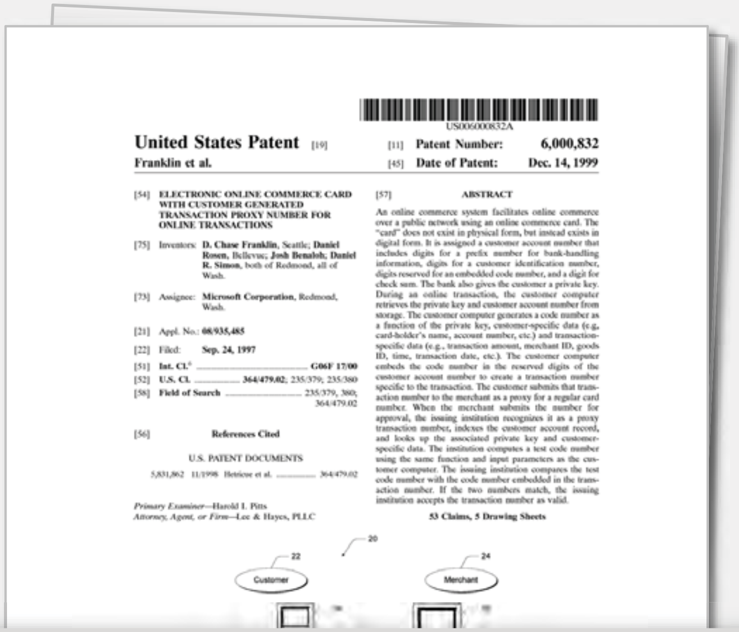
US005930767A

[11] Patent Number: 5,930,767
[45] Date of Patent: Jul. 27, 1999

this case, the computer **64** receives transaction data via the electronic network **22**. The transaction data includes a first data element indicating a first party of a transaction and a second data element indicating a second party of the transaction. The first party includes a creditor, a seller, a

The computer **64** authenticates the second data element to allow or disallow the transaction. If the second data element

Ex. 1131 [Reber], 5:47-51; 6:17-18



United States Patent [19]
Franklin et al.

US006000832A

[11] Patent Number: 6,000,832
[45] Date of Patent: Dec. 14, 1999

[54] ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS

[75] Inventors: D. Chase Franklin, Seattle; Daniel Rosen, Bellevue; Josh Benaloh; Daniel R. Simon, both of Redmond, all of Wash.

[73] Assignee: Microsoft Corporation, Redmond, Wash.

[21] Appl. No.: 08/935,485

[22] Filed: Sep. 24, 1997

[51] Int. Cl.[6] G06F 17/00
[52] U.S. Cl. 364/479.02; 235/379; 235/380
[58] Field of Search 235/379, 380; 364/479.02

[56] References Cited

U.S. PATENT DOCUMENTS

5,831,862 11/1998 Hetrione et al. 364/479.02

Primary Examiner—Harold I. Pitts
Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] ABSTRACT

An online commerce system facilitates online commerce over a public network using an online commerce card. The "card" does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as a function of the private key, customer-specific data (e.g. card-holder's name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the reserved digits of the customer account number to create a transaction number specific to the transaction. The customer submits that transaction number to the merchant as a proxy for a regular card number. When the merchant submits the number for approval, the issuing institution recognizes it as a proxy transaction number, indexes the customer account record, and looks up the associated private key and customer-specific data. The institution computes a test code number using the same function and input parameters as the customer computer. The issuing institution compares the test code number with the code number embedded in the transaction number. If the two numbers match, the issuing institution accepts the transaction number as valid.

53 Claims, 5 Drawing Sheets

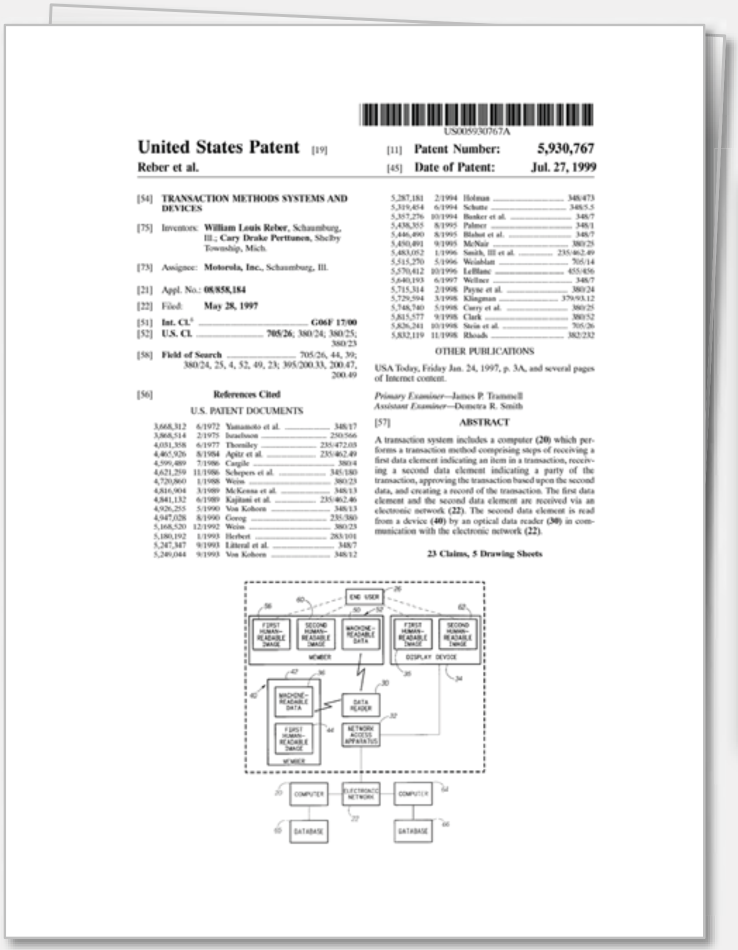
For instance, the merchant computer **30** typically submits the request for authorization to its acquiring bank (not shown) by conventional means. The acquiring bank validates the authorization request by verifying that the merchant is a valid merchant and that the credit card number represents a valid number. The acquiring bank then forwards

Ex. 1132 [Franklin], 11:41-46

See CMTA Surreply at 6-7.

3. Reber and Franklin Render Obvious "Validat[ing] an Identity of the Provider and then Execut[ing] a Restriction Mechanism"

Reber compares the received information to stored information to confirm the authenticity of the transacting parties



US005930767A

United States Patent [19]
Reber et al.

[11] Patent Number: 5,930,767
[45] Date of Patent: Jul. 27, 1999

[54] TRANSACTION METHODS SYSTEMS AND DEVICES

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**^{6} **G06F 17/00**
[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23
[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,668,312	6/1972	Yamamoto et al.	348/17
3,868,514	2/1975	Israelsson	250/566
4,031,358	6/1977	Thornilley	235/472.03
4,465,926	8/1984	Apitz et al.	235/462.49
4,599,489	7/1986	Cargile	380/4
4,621,259	11/1986	Schepers et al.	345/180
4,720,860	1/1988	Weiss	380/23
4,816,904	3/1989	McKenna et al.	348/13
4,841,132	6/1989	Kajitani et al.	235/462.46
4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
5,168,520	12/1992	Weiss	380/23
5,180,192	1/1993	Herbert	283/101
5,247,347	9/1993	Litteral et al.	348/7
5,249,044	9/1993	Von Kohorn	348/12
5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

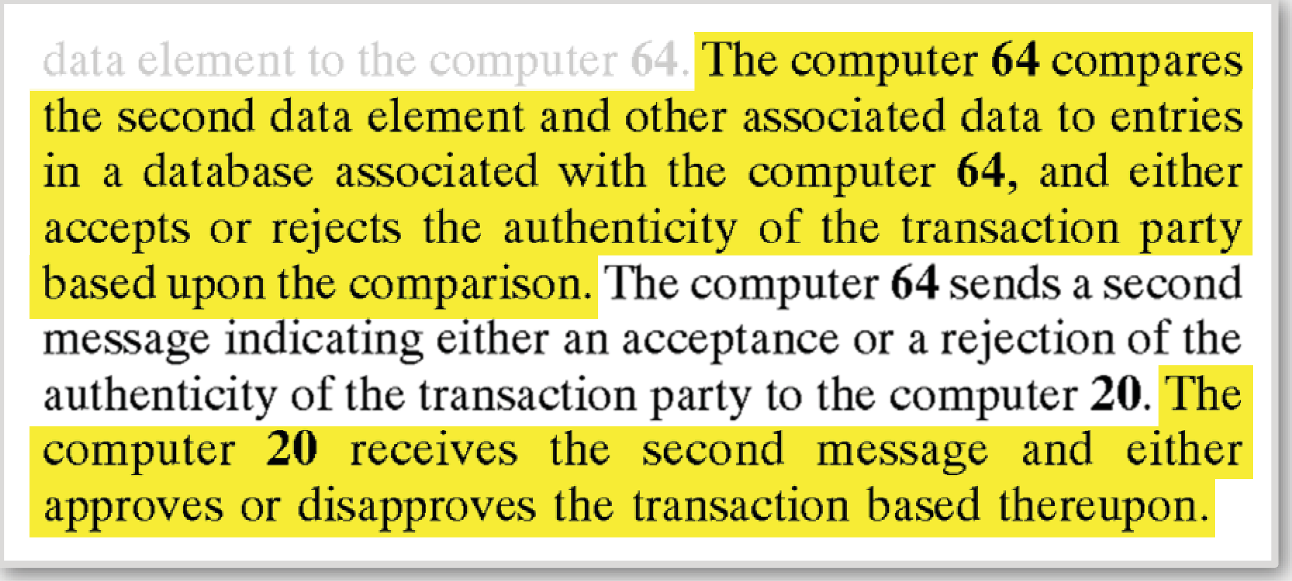
Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

23 Claims, 5 Drawing Sheets

END USER
26
58
60
50
52
62
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
MACHINE-READABLE DATA
MEMBER
FIRST HUMAN-READABLE IMAGE
SECOND HUMAN-READABLE IMAGE
DISPLAY DEVICE
36
34
42
36
40
30
MACHINE-READABLE DATA
DATA READER
32
FIRST HUMAN-READABLE IMAGE
44
NETWORK ACCESS APPARATUS
MEMBER
20
COMPUTER
ELECTRONIC NETWORK
COMPUTER
64
22
60
DATABASE
DATABASE
66



data element to the computer **64**. The computer **64** compares the second data element and other associated data to entries in a database associated with the computer **64**, and either accepts or rejects the authenticity of the transaction party based upon the comparison. The computer **64** sends a second message indicating either an acceptance or a rejection of the authenticity of the transaction party to the computer **20**. The computer **20** receives the second message and either approves or disapproves the transaction based thereupon.

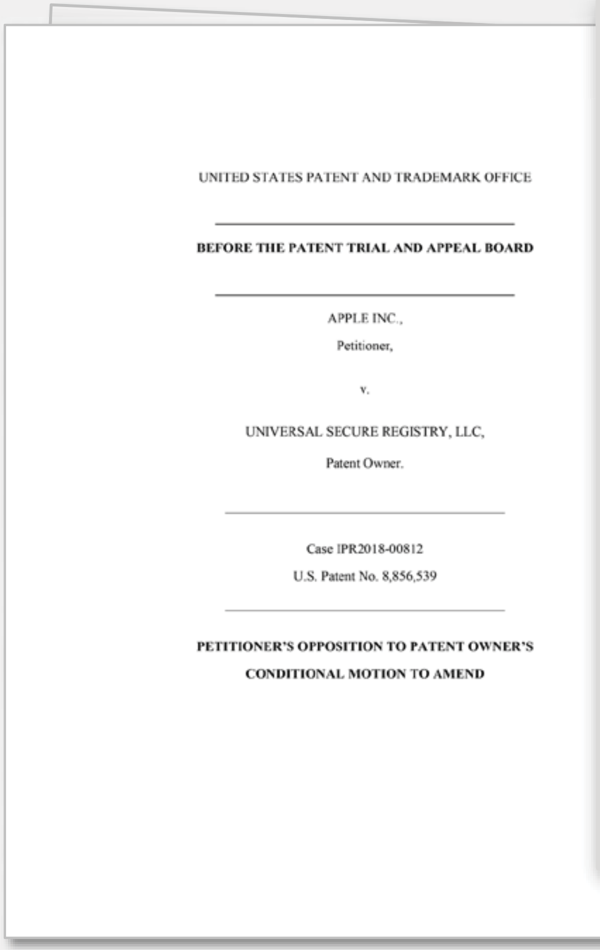
Ex. 1131 [Reber], 5:18-26

CMTA Opp. at 8-10; CMTA Surreply at 6-7.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

3. Reber and Franklin Render Obvious "Validat[ing] an Identity of the Provider and then Execut[ing] a Restriction Mechanism"

As Dr. Shoup explained, the transaction could not go forward unless the merchant had complied with "any access restrictions"



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

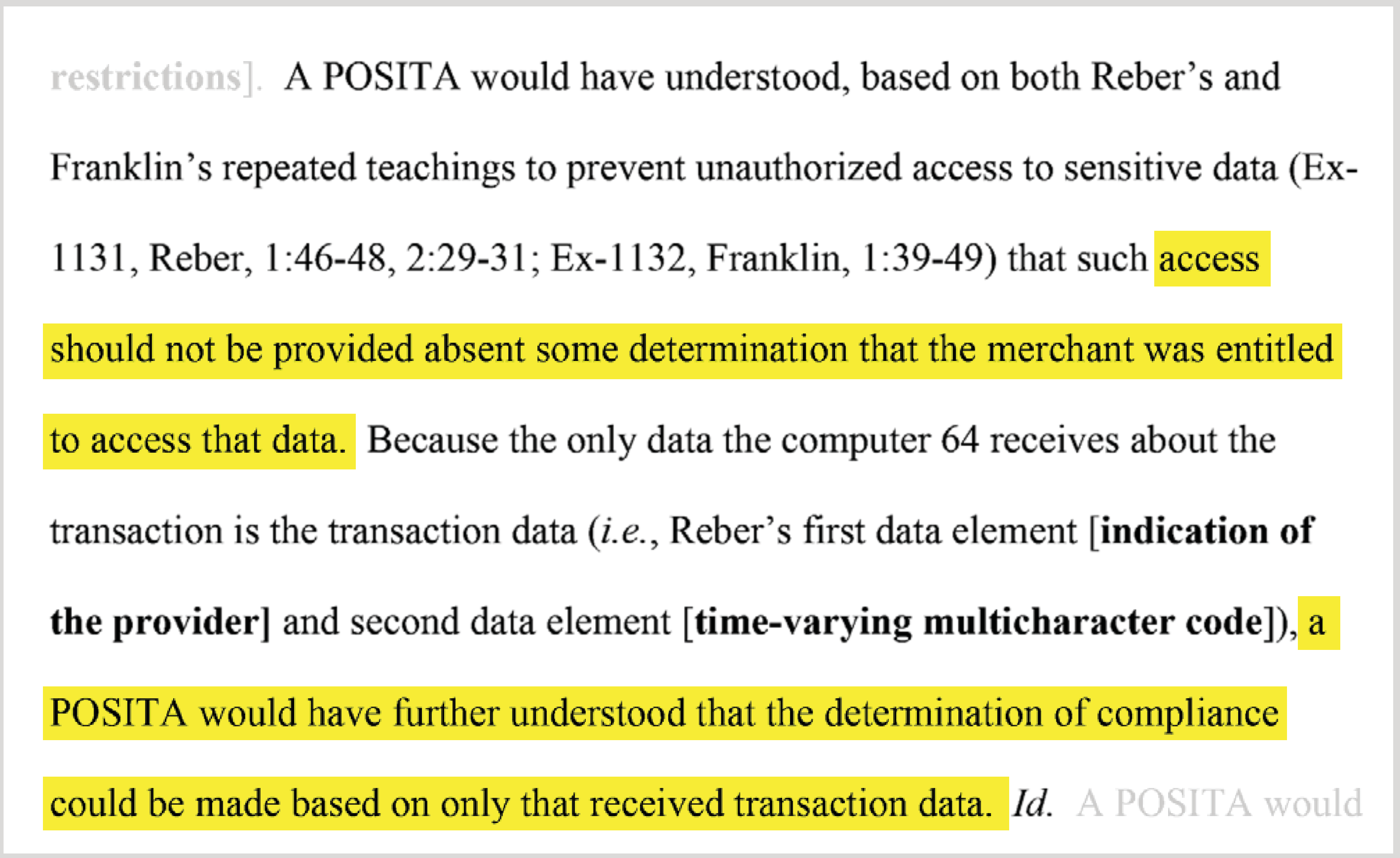
APPLE INC.,
Petitioner,

v.

UNIVERSAL SECURE REGISTRY, LLC,
Patent Owner.

Case IPR2018-00812
U.S. Patent No. 8,856,539

PETITIONER'S OPPOSITION TO PATENT OWNER'S CONDITIONAL MOTION TO AMEND



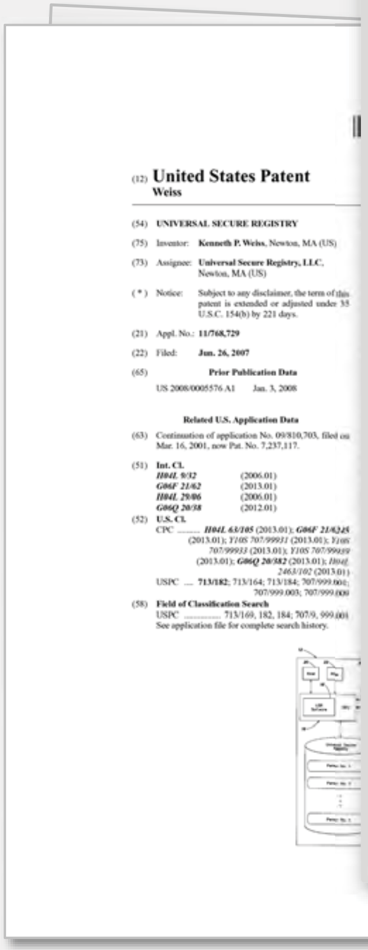
restrictions]. A POSITA would have understood, based on both Reber's and Franklin's repeated teachings to prevent unauthorized access to sensitive data (Ex-1131, Reber, 1:46-48, 2:29-31; Ex-1132, Franklin, 1:39-49) that such access should not be provided absent some determination that the merchant was entitled to access that data. Because the only data the computer 64 receives about the transaction is the transaction data (*i.e.*, Reber's first data element [**indication of the provider**] and second data element [**time-varying multicharacter code**]), a POSITA would have further understood that the determination of compliance could be made based on only that received transaction data. *Id.* A POSITA would

Petitioner's Opp. to Patent Owner's CMTA at 9

See also CMTA Surreply at 6-7.

3. Reber and Franklin Render Obvious "Validat[ing] an Identity of the Provider and then Execut[ing] a Restriction Mechanism"

The '539 patent enables financial transactions in precisely the same way as Reber and Franklin



(12) **United States Patent**
Weiss

(54) **UNIVERSAL SECURE REGISTRY**

(75) Inventor: **Kenneth P. Weiss**, Newton, MA (US)

(73) Assignee: **Universal Secure Registry, LLC**, Newton, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 221 days.

(21) Appl. No.: **11/768,729**

(22) Filed: **Jun. 26, 2007**

(65) **Prior Publication Data**

US 2008/0005576 A1 Jan. 3, 2008

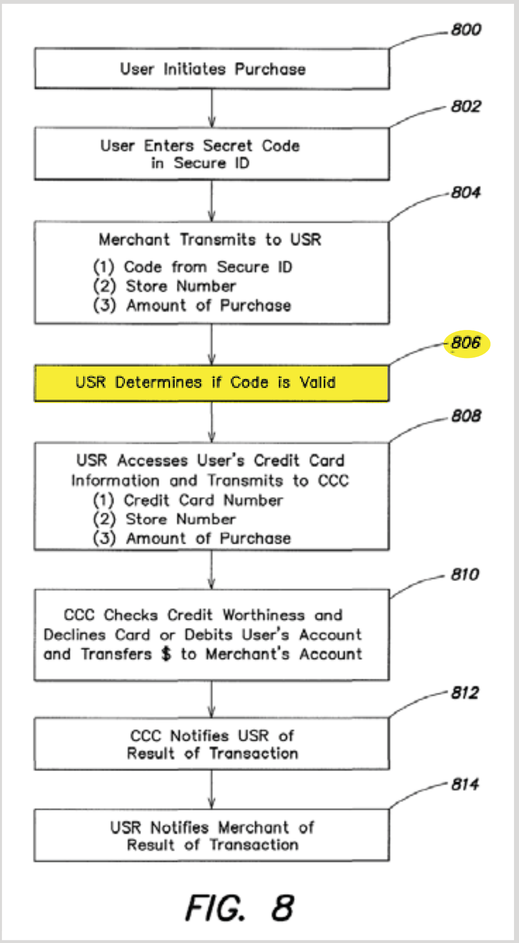
Related U.S. Application Data

(63) Continuation of application No. 09/810,703, filed on Mar. 16, 2001, now Pat. No. 7,237,117.

(51) **Int. Cl.**
H04L 9/32 (2006.01)
G06F 21/62 (2013.01)
H04L 29/06 (2006.01)
G06Q 20/38 (2012.01)

(52) **U.S. Cl.**
CPC ***H04L 63/105*** (2013.01); ***G06F 21/6245*** (2013.01); *Y10S 707/99931* (2013.01); *Y10S 707/99933* (2013.01); *Y10S 707/99939* (2013.01); ***G06Q 20/382*** (2013.01); *H04L 2463/102* (2013.01)
USPC **713/182**; 713/164; 713/184; 707/999.001; 707/999.003; 707/999.009

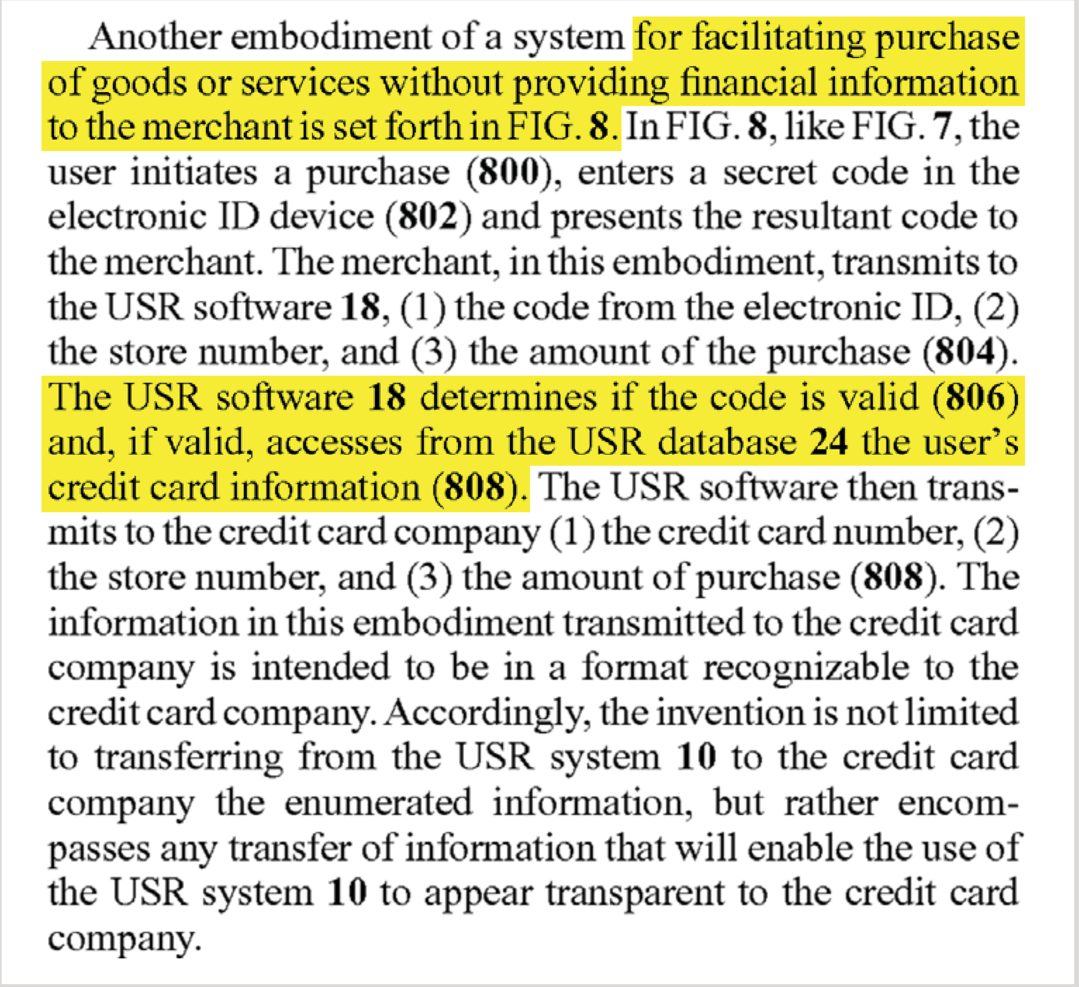
(58) **Field of Classification Search**
USPC 713/169, 182, 184; 707/9, 999.001
See application file for complete search history.



800
User Initiates Purchase
802
User Enters Secret Code in Secure ID
804
Merchant Transmits to USR
(1) Code from Secure ID
(2) Store Number
(3) Amount of Purchase
806
USR Determines if Code is Valid
808
USR Accesses User's Credit Card Information and Transmits to CCC
(1) Credit Card Number
(2) Store Number
(3) Amount of Purchase
810
CCC Checks Credit Worthiness and Declines Card or Debits User's Account and Transfers $ to Merchant's Account
812
CCC Notifies USR of Result of Transaction
814
USR Notifies Merchant of Result of Transaction

FIG. 8

Ex. 1101 ['539 Patent], Fig. 8



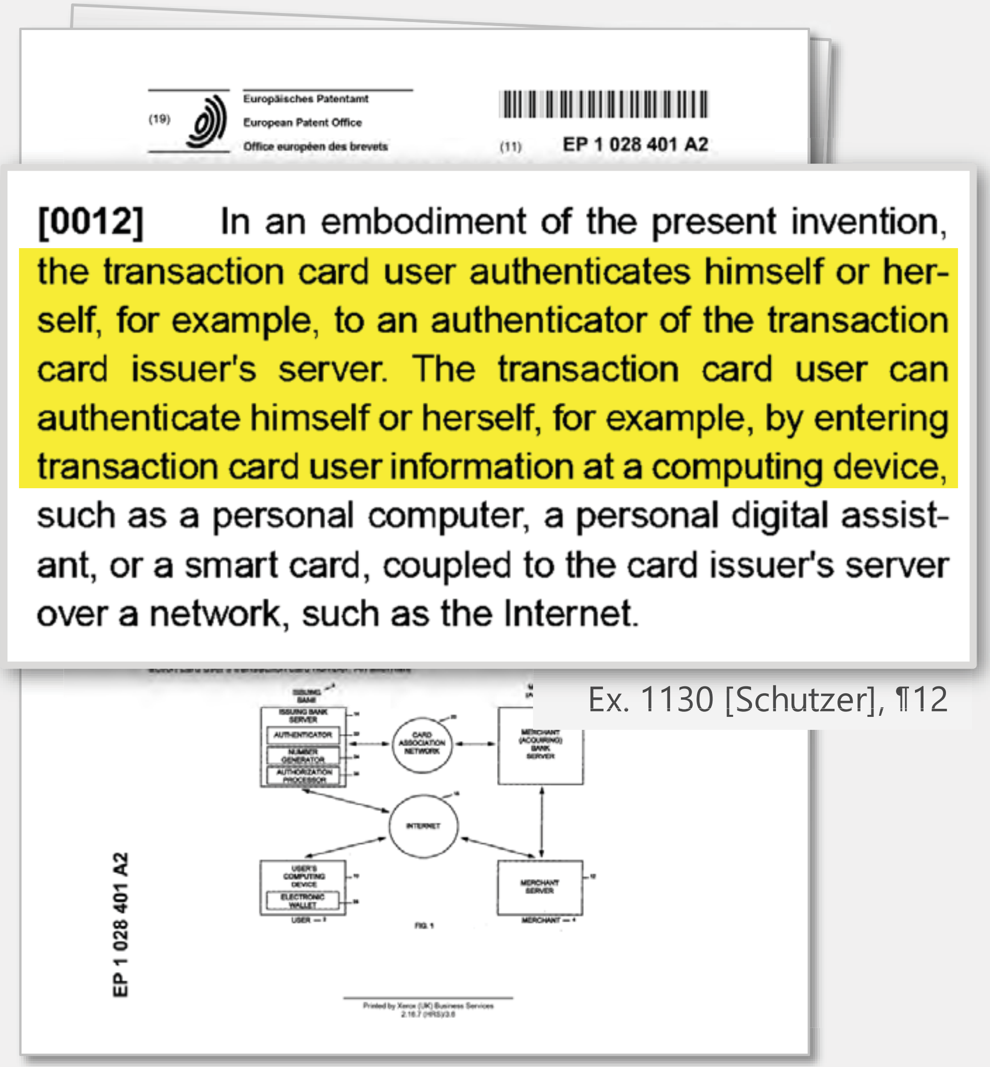
Another embodiment of a system for facilitating purchase of goods or services without providing financial information to the merchant is set forth in FIG. **8**. In FIG. **8**, like FIG. **7**, the user initiates a purchase (**800**), enters a secret code in the electronic ID device (**802**) and presents the resultant code to the merchant. The merchant, in this embodiment, transmits to the USR software **18**, (1) the code from the electronic ID, (2) the store number, and (3) the amount of the purchase (**804**). The USR software **18** determines if the code is valid (**806**) and, if valid, accesses from the USR database **24** the user's credit card information (**808**). The USR software then transmits to the credit card company (1) the credit card number, (2) the store number, and (3) the amount of purchase (**808**). The information in this embodiment transmitted to the credit card company is intended to be in a format recognizable to the credit card company. Accordingly, the invention is not limited to transferring from the USR system **10** to the credit card company the enumerated information, but rather encompasses any transfer of information that will enable the use of the USR system **10** to appear transparent to the credit card company.

Ex. 1101 ['539 Patent], 12:19-39

CMTA Surreply at 7; Ex-1135 [Shoup POR Reply Decl.], ¶29.

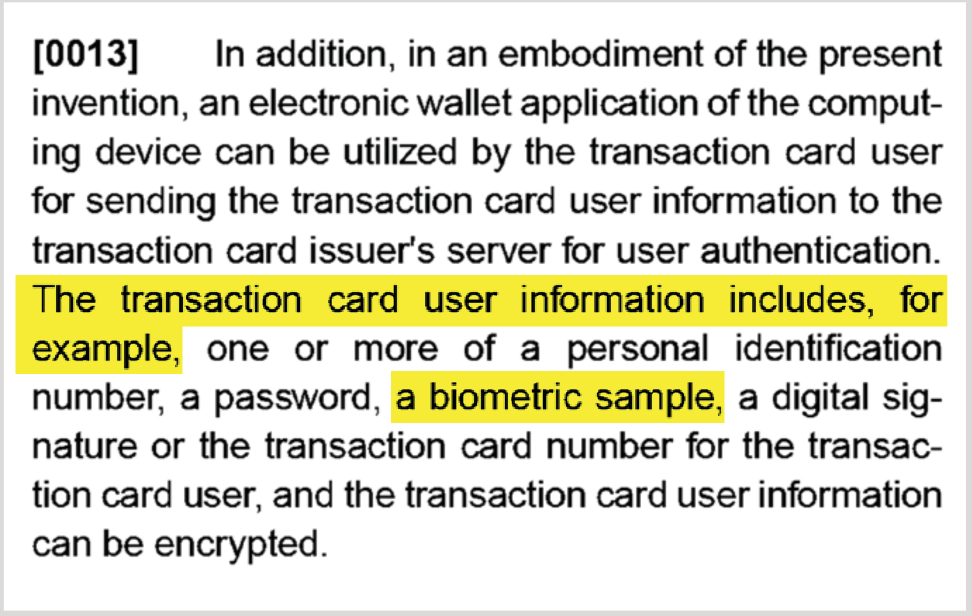
4. Schutzer Renders Obvious "Wherein the Identity of the Entity Is Verified Using a Biometric"

USR does not dispute that Reber, Franklin, and Schutzer disclose biometric authentication prior to initiating a transaction


(19)
Europäisches Patentamt
European Patent Office
Office européen des brevets
(11) EP 1 028 401 A2
ISSUING BANK
ISSUING BANK SERVER
AUTHENTICATOR
NUMBER GENERATOR
AUTHORIZATION PROCESSOR
CARD ASSOCIATION NETWORK
MERCHANT (ACQUIRING) BANK SERVER
INTERNET
USER'S COMPUTING DEVICE
ELECTRONIC WALLET
USER
MERCHANT SERVER
MERCHANT
FIG. 1
EP 1 028 401 A2
Printed by Xerox (UK) Business Services

[0012] In an embodiment of the present invention, the transaction card user authenticates himself or herself, for example, to an authenticator of the transaction card issuer's server. The transaction card user can authenticate himself or herself, for example, by entering transaction card user information at a computing device, such as a personal computer, a personal digital assistant, or a smart card, coupled to the card issuer's server over a network, such as the Internet.

Ex. 1130 [Schutzer], ¶12



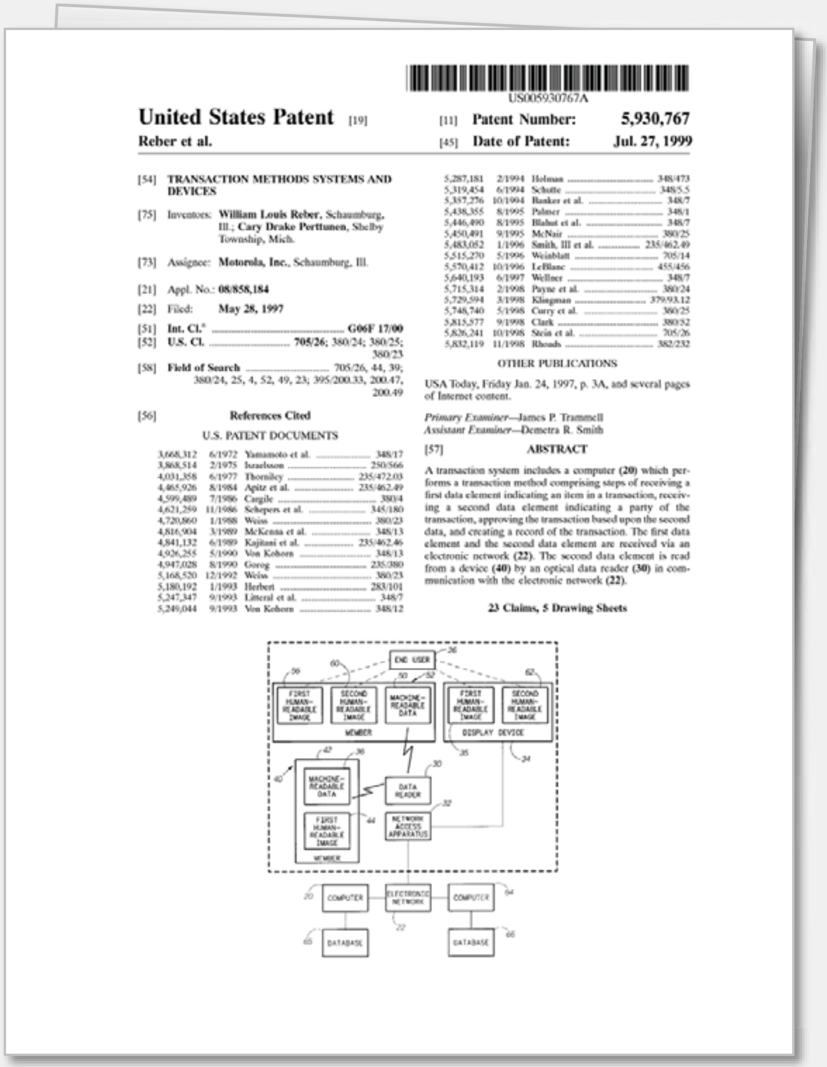
[0013] In addition, in an embodiment of the present invention, an electronic wallet application of the computing device can be utilized by the transaction card user for sending the transaction card user information to the transaction card issuer's server for user authentication. The transaction card user information includes, for example, one or more of a personal identification number, a password, a biometric sample, a digital signature or the transaction card number for the transaction card user, and the transaction card user information can be encrypted.

Ex. 1130 [Schutzer], ¶13

CMTA Opp. at 9-12.

5. Reber and Franklin Render Obvious "the Third Party Being a Different Entity from the Secure Registry"

Reber describes "directing" a third party separate from the secure registry to conduct a transaction



United States Patent [19]

Reber et al.

US005930767A

[11] Patent Number: 5,930,767

[45] Date of Patent: Jul. 27, 1999

[54] TRANSACTION METHODS SYSTEMS AND DEVICES

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.⁶** **G06F 17/00**

[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,668,312	6/1972	Yamamoto et al.	348/17
3,868,514	2/1975	Israelsson	250/566
4,031,358	6/1977	Thornley	235/472.03
4,465,926	8/1984	Apitz et al.	235/462.49
4,599,489	7/1986	Cargile	380/4
4,621,259	11/1986	Schepers et al.	345/180
4,720,860	1/1988	Weiss	380/23
4,816,904	3/1989	McKenna et al.	348/13
4,841,132	6/1989	Kajitani et al.	235/462.46
4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
5,168,520	12/1992	Weiss	380/23
5,180,192	1/1993	Herbert	283/101
5,247,347	9/1993	Litteral et al.	348/7
5,249,044	9/1993	Von Kohorn	348/12
5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] ABSTRACT

A transaction system includes a computer **(20)** which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network **(22)**. The second data element is read from a device **(40)** by an optical data reader **(30)** in communication with the electronic network **(22)**.

23 Claims, 5 Drawing Sheets

transaction amount. Optionally, the computer **64** directs that an account for the first party be credited by the transaction amount, and an account for the second party be debited by the transaction amount.

Ex. 1131 [Reber], 6:25-28

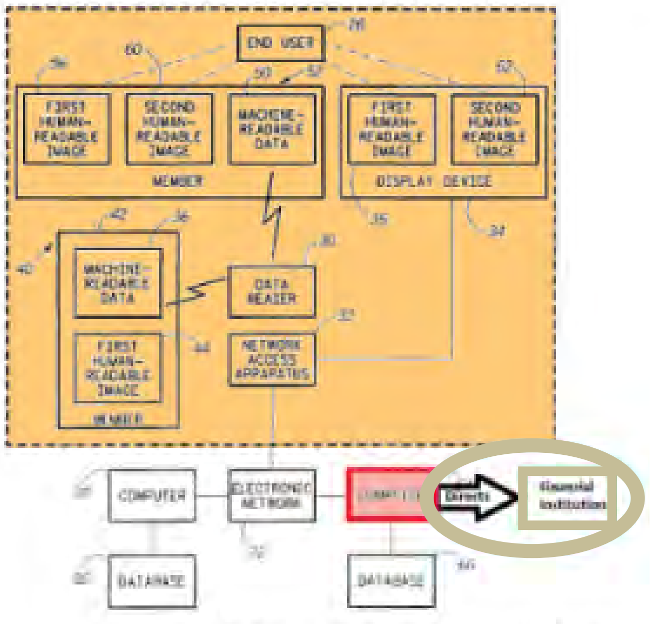


FIG. 1 (Annotations Added)

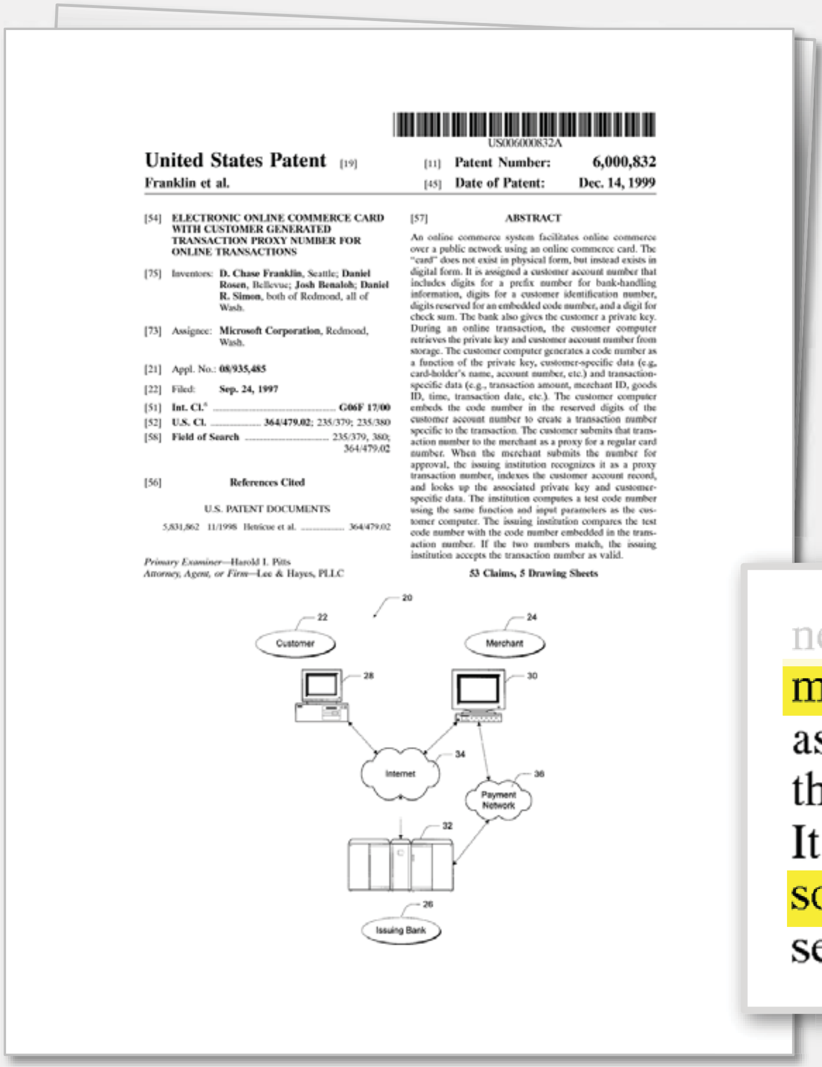
Ex-1131, Reber, Fig. 1 (annotated per Reber, 6:26-29.)

Ex. 1131 [Reber], Fig 1 (Annotated)

CMTA Opp. at 15; *see also* Reply to POR at 14-19

5. Reber and Franklin Render Obvious "the Third Party Being a Different Entity from the Secure Registry"

Franklin describes a third party that is separate from the secure registry



US006000832A

United States Patent [19]

Franklin et al.

[11] Patent Number: 6,000,832

[45] Date of Patent: Dec. 14, 1999

[54] **ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS**

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

[22] Filed: **Sep. 24, 1997**

[51] **Int. Cl.⁶** **G06F 17/00**

[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380

[58] **Field of Search** 235/379, 380; 364/479.02

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,831,862 11/1998 Hetricue et al. 364/479.02

Primary Examiner—Harold I. Pitts

Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] **ABSTRACT**

An online commerce system facilitates online commerce over a public network using an online commerce card. The "card" does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as a function of the private key, customer-specific data (e.g., card-holder's name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the reserved digits of the customer account number to create a transaction number specific to the transaction. The customer submits that transaction number to the merchant as a proxy for a regular card number. When the merchant submits the number for approval, the issuing institution recognizes it as a proxy transaction number, indexes the customer account record, and looks up the associated private key and customer-specific data. The institution computes a test code number using the same function and input parameters as the customer computer. The issuing institution compares the test code number with the code number embedded in the transaction number. If the two numbers match, the issuing institution accepts the transaction number as valid.

53 Claims, 5 Drawing Sheets

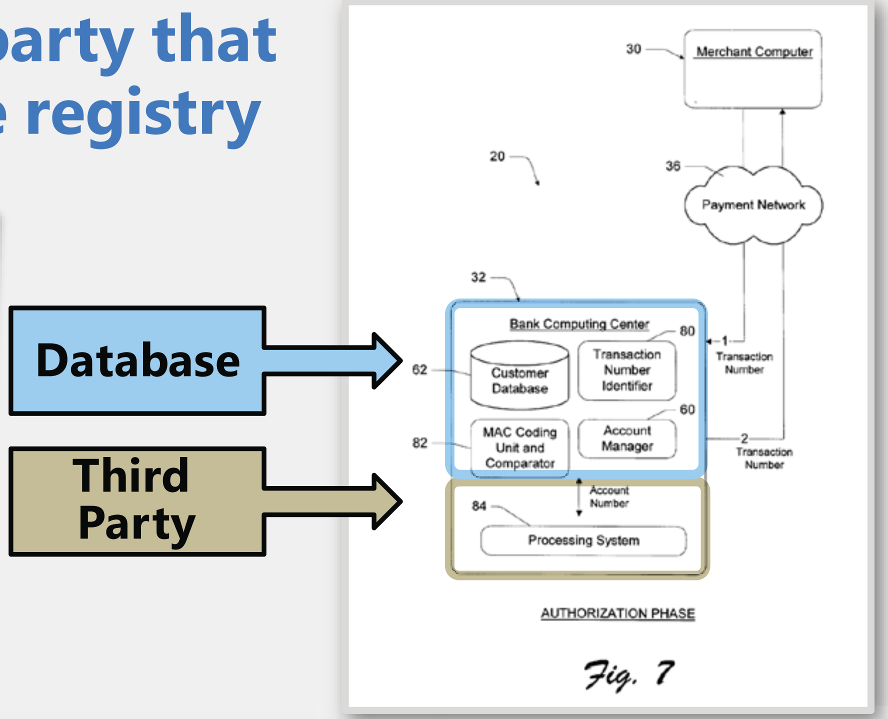


Fig. 7

Reply to POR at 18

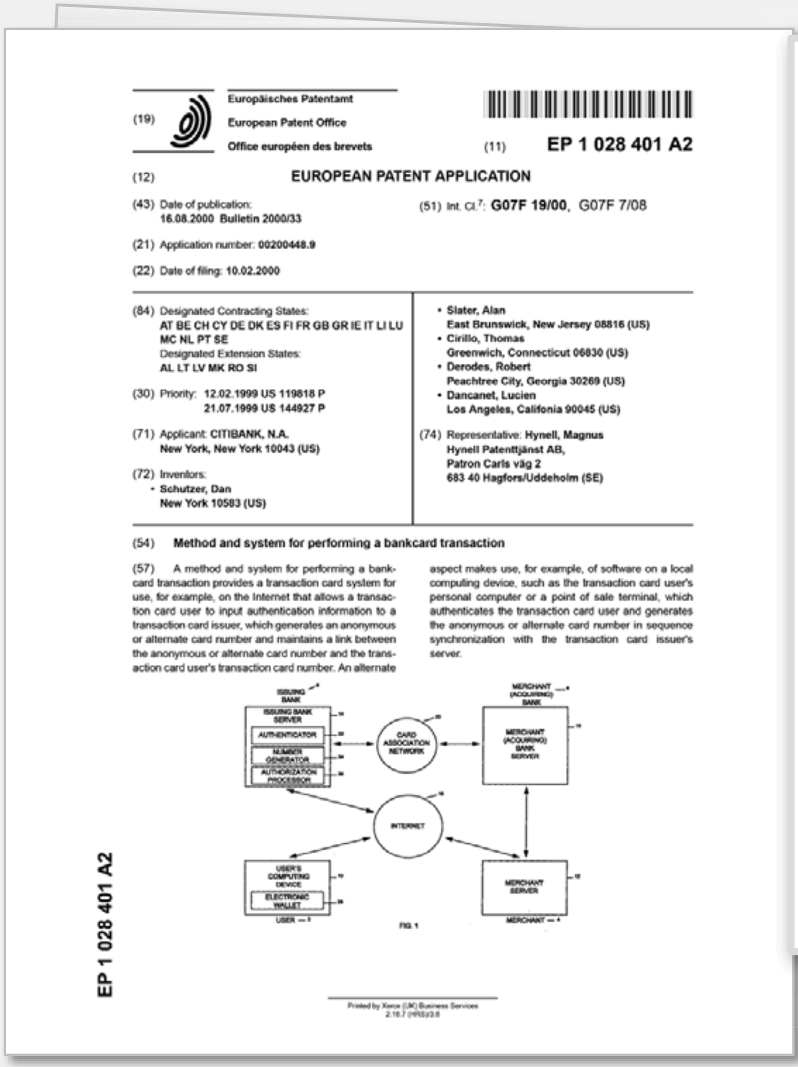
nesses. Although labeled as a "bank", the issuing bank 26 may represent other types of card-issuing institutions, such as credit card companies, card sponsoring companies, or third party issuers under contract with financial institutions. It is further noted that other participants may be involved in some phases of the transaction, such as an intermediary settlement institution, but these participants are not shown.

Ex. 1132 [Franklin], 4:3-9

CMTA Opp. at 14; Reply to POR at 14-19.

6. Reber, Franklin, and Schutzer Render Obvious a "Public ID Code"

Schutzer teaches using a public ID code when transmitting sensitive data over any network



(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 028 401 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
16.08.2000 Bulletin 2000/33

(51) Int. Cl.^{7}: G07F 19/00, G07F 7/08

(21) Application number: 00200448.9

(22) Date of filing: 10.02.2000

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: 12.02.1999 US 119818 P
21.07.1999 US 144927 P

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Patron Carls väg 2
683 40 Hagfors/Uddeholm (SE)

(54) Method and system for performing a bankcard transaction

(57) A method and system for performing a bankcard transaction provides a transaction card system for use, for example, on the Internet that allows a transaction card user to input authentication information to a transaction card issuer, which generates an anonymous or alternate card number and maintains a link between the anonymous or alternate card number and the transaction card user's transaction card number. An alternate aspect makes use, for example, of software on a local computing device, such as the transaction card user's personal computer or a point of sale terminal, which authenticates the transaction card user and generates the anonymous or alternate card number in sequence synchronization with the transaction card issuer's server.

FIG. 1

EP 1 028 401 A2

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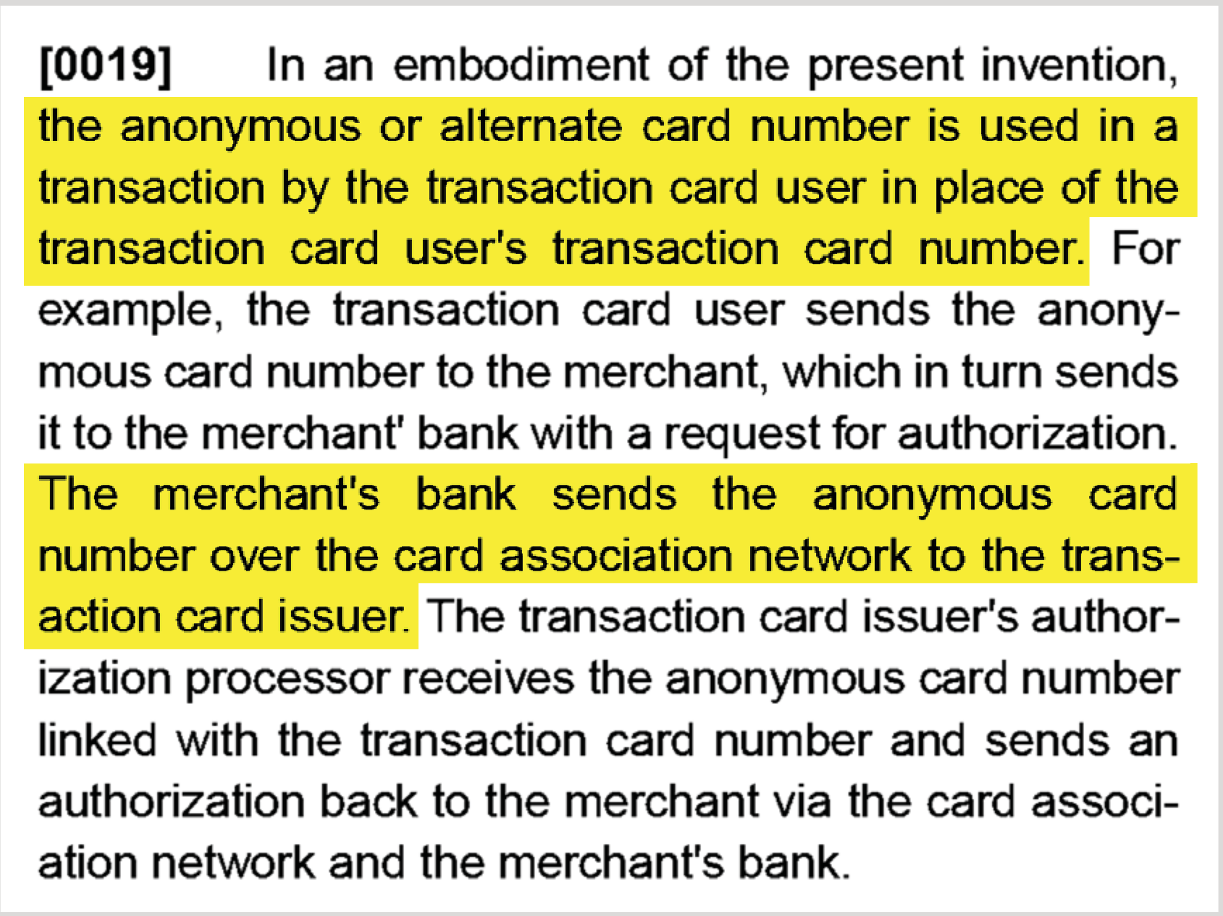
2.16.7 (HRS)/3.6



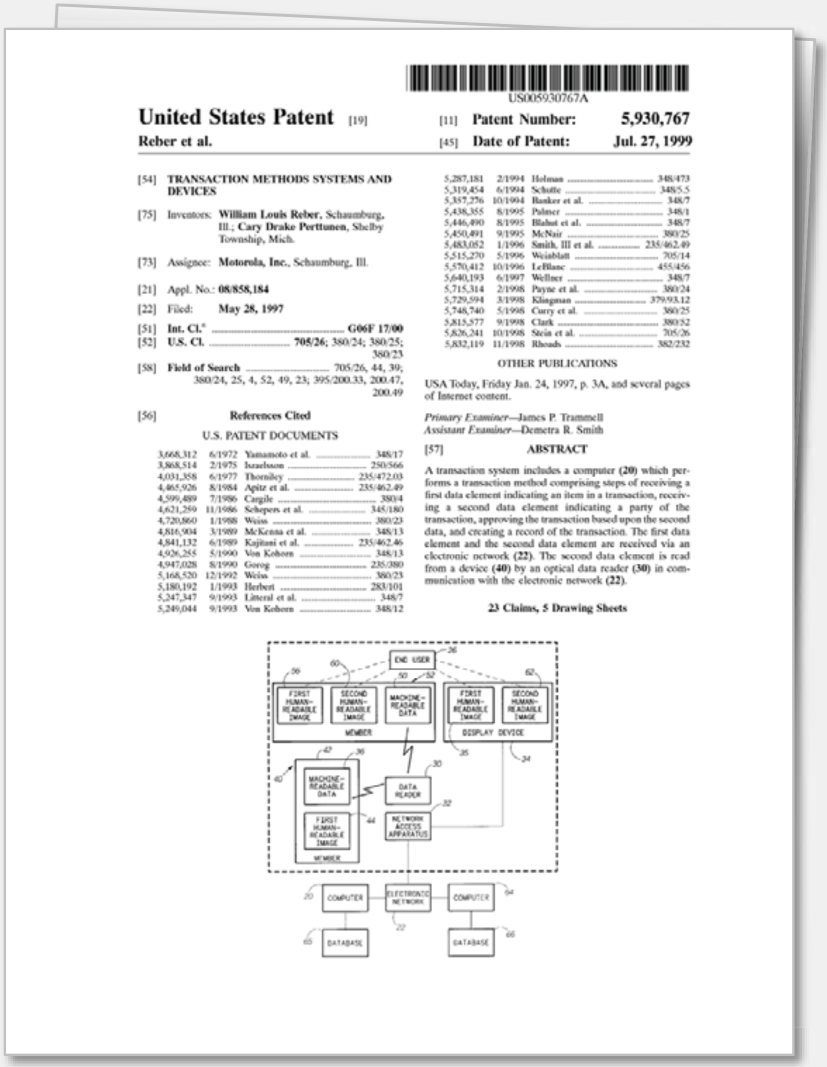
[0019] In an embodiment of the present invention, the anonymous or alternate card number is used in a transaction by the transaction card user in place of the transaction card user's transaction card number. For example, the transaction card user sends the anonymous card number to the merchant, which in turn sends it to the merchant' bank with a request for authorization. The merchant's bank sends the anonymous card number over the card association network to the transaction card issuer. The transaction card issuer's authorization processor receives the anonymous card number linked with the transaction card number and sends an authorization back to the merchant via the card association network and the merchant's bank.

Ex. 1130 [Schutzer], ¶19

CMTA Opp at 15-18; CMTA Surreply at 7-9.

6. Reber, Franklin, and Schutzer Render Obvious a "Public ID Code"

A POSITA would have applied Schutzer's teachings to Reber's "directing" a third party



US005930767A

United States Patent [19]
Reber et al.

[11] **Patent Number:** **5,930,767**
[45] **Date of Patent:** **Jul. 27, 1999**

[54] **TRANSACTION METHODS SYSTEMS AND DEVICES**

[75] Inventors: **William Louis Reber**, Schaumburg, Ill.; **Cary Drake Perttunen**, Shelby Township, Mich.

[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **08/858,184**

[22] Filed: **May 28, 1997**

[51] **Int. Cl.**^{6} **G06F 17/00**
[52] **U.S. Cl.** **705/26**; 380/24; 380/25; 380/23

[58] **Field of Search** 705/26, 44, 39; 380/24, 25, 4, 52, 49, 23; 395/200.33, 200.47, 200.49

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,668,312	6/1972	Yamamoto et al.	348/17
3,868,514	2/1975	Israelsson	250/566
4,031,358	6/1977	Thorniley	235/472.03
4,465,926	8/1984	Apitz et al.	235/462.49
4,599,489	7/1986	Cargile	380/4
4,621,259	11/1986	Schepers et al.	345/180
4,720,860	1/1988	Weiss	380/23
4,816,904	3/1989	McKenna et al.	348/13
4,841,132	6/1989	Kajitani et al.	235/462.46
4,926,255	5/1990	Von Kohorn	348/13
4,947,028	8/1990	Gorog	235/380
5,168,520	12/1992	Weiss	380/23
5,180,192	1/1993	Herbert	283/101
5,247,347	9/1993	Litteral et al.	348/7
5,249,044	9/1993	Von Kohorn	348/12
5,287,181	2/1994	Holman	348/473
5,319,454	6/1994	Schutte	348/5.5
5,357,276	10/1994	Banker et al.	348/7
5,438,355	8/1995	Palmer	348/1
5,446,490	8/1995	Blahut et al.	348/7
5,450,491	9/1995	McNair	380/25
5,483,052	1/1996	Smith, III et al.	235/462.49
5,515,270	5/1996	Weinblatt	705/14
5,570,412	10/1996	LeBlanc	455/456
5,640,193	6/1997	Wellner	348/7
5,715,314	2/1998	Payne et al.	380/24
5,729,594	3/1998	Klingman	379/93.12
5,748,740	5/1998	Curry et al.	380/25
5,815,577	9/1998	Clark	380/52
5,826,241	10/1998	Stein et al.	705/26
5,832,119	11/1998	Rhoads	382/232

OTHER PUBLICATIONS

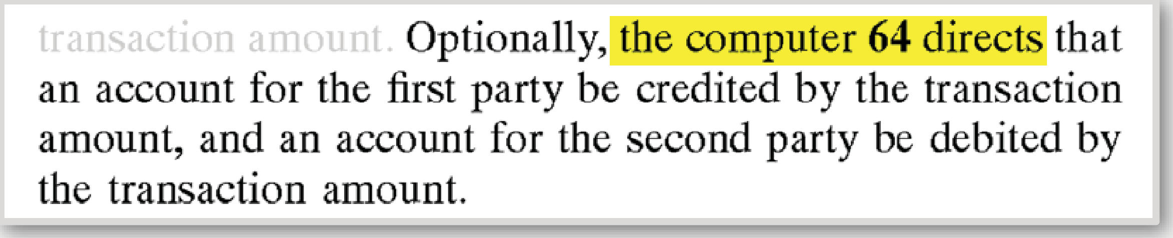
USA Today, Friday Jan. 24, 1997, p. 3A, and several pages of Internet content.

Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith

[57] **ABSTRACT**

A transaction system includes a computer (**20**) which performs a transaction method comprising steps of receiving a first data element indicating an item in a transaction, receiving a second data element indicating a party of the transaction, approving the transaction based upon the second data, and creating a record of the transaction. The first data element and the second data element are received via an electronic network (**22**). The second data element is read from a device (**40**) by an optical data reader (**30**) in communication with the electronic network (**22**).

23 Claims, 5 Drawing Sheets



transaction amount. Optionally, the computer **64** directs that an account for the first party be credited by the transaction amount, and an account for the second party be debited by the transaction amount.

Ex. 1131 [Reber], 6:25-28

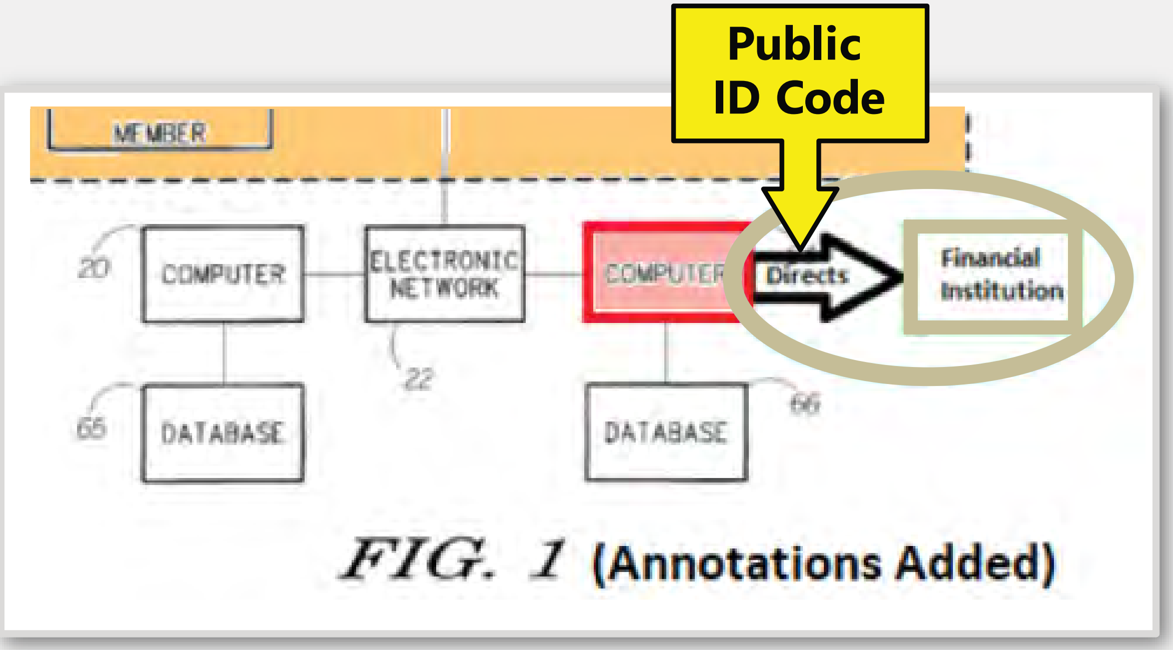


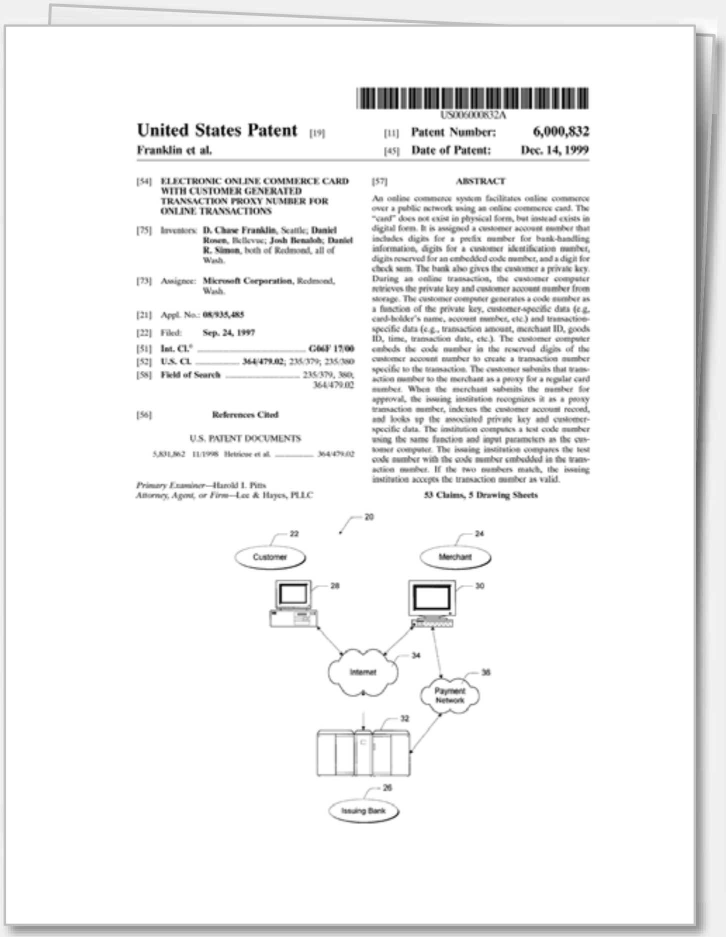
FIG. 1 (Annotations Added)

Reply to POR Brief at 17

CMTA Opp at 15-18; CMTA Surreply at 7-9.

6. Reber, Franklin, and Schutzer Render Obvious a “Public ID Code”

A POSITA would also have applied Schutzer to Franklin’s transmission to the bank’s traditional processing system



US006000832A

United States Patent [19]
Franklin et al.

[11] Patent Number: 6,000,832
[45] Date of Patent: Dec. 14, 1999

[54] ELECTRONIC ONLINE COMMERCE CARD WITH CUSTOMER GENERATED TRANSACTION PROXY NUMBER FOR ONLINE TRANSACTIONS

[75] Inventors: **D. Chase Franklin**, Seattle; **Daniel Rosen**, Bellevue; **Josh Benaloh**; **Daniel R. Simon**, both of Redmond, all of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[21] Appl. No.: **08/935,485**

[22] Filed: **Sep. 24, 1997**

[51] **Int. Cl.**[6] **G06F 17/00**

[52] **U.S. Cl.** **364/479.02**; 235/379; 235/380

[58] **Field of Search** 235/379, 380, 364/479.02

[56] **References Cited**

U.S. PATENT DOCUMENTS

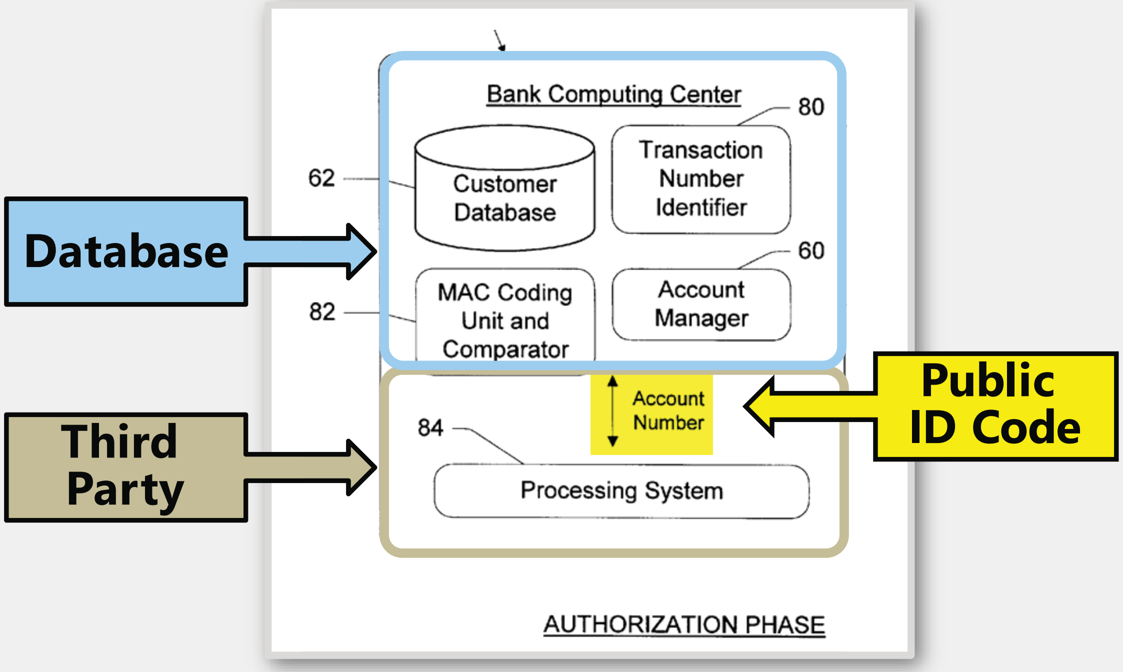
5,831,862 11/1998 Hetricse et al. 364/479.02

Primary Examiner—Harold I. Pitts
Attorney, Agent, or Firm—Lee & Hayes, PLLC

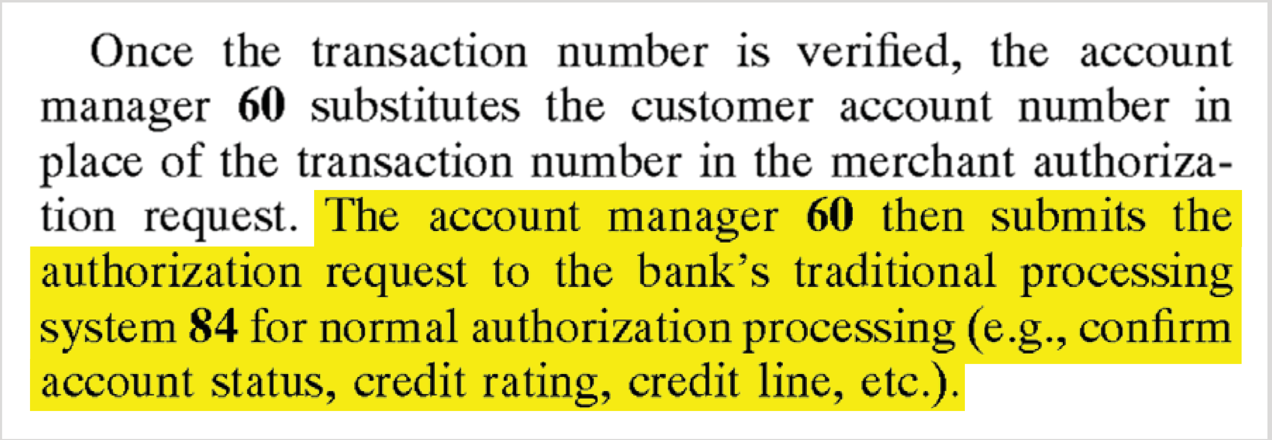
[57] **ABSTRACT**

An online commerce system facilitates online commerce over a public network using an online commerce card. The “card” does not exist in physical form, but instead exists in digital form. It is assigned a customer account number that includes digits for a prefix number for bank-handling information, digits for a customer identification number, digits reserved for an embedded code number, and a digit for check sum. The bank also gives the customer a private key. During an online transaction, the customer computer retrieves the private key and customer account number from storage. The customer computer generates a code number as a function of the private key, customer-specific data (e.g. card-holder’s name, account number, etc.) and transaction-specific data (e.g., transaction amount, merchant ID, goods ID, time, transaction date, etc.). The customer computer embeds the code number in the reserved digits of the customer account number to create a transaction number specific to the transaction. The customer submits that transaction number to the merchant as a proxy for a regular card number. When the merchant submits the number for approval, the issuing institution recognizes it as a proxy transaction number, indexes the customer account record, and looks up the associated private key and customer-specific data. The institution computes a test code number using the same function and input parameters as the customer computer. The issuing institution compares the test code number with the code number embedded in the transaction number. If the two numbers match, the issuing institution accepts the transaction number as valid.

53 Claims, 5 Drawing Sheets



Reply to POR Brief at 18



Once the transaction number is verified, the account manager **60** substitutes the customer account number in place of the transaction number in the merchant authorization request. The account manager **60** then submits the authorization request to the bank’s traditional processing system **84** for normal authorization processing (e.g., confirm account status, credit rating, credit line, etc.).

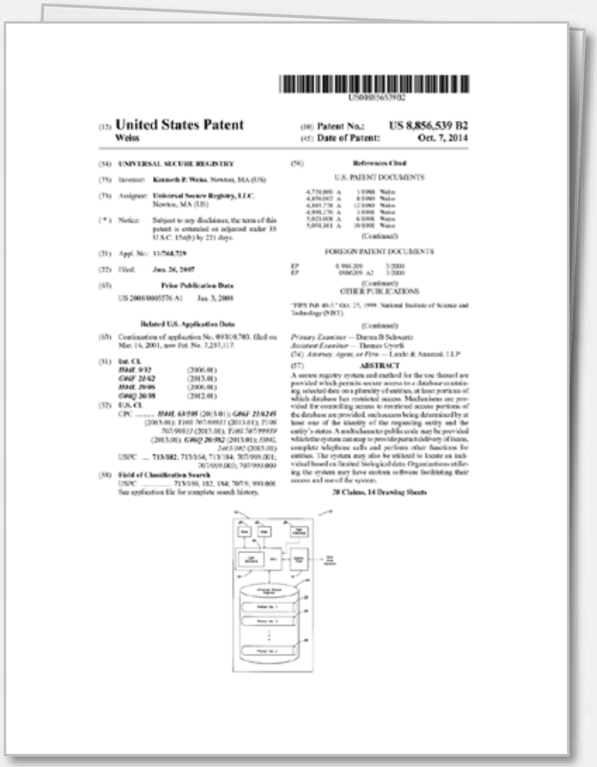
Ex. 1132 [Franklin], 12:27-33

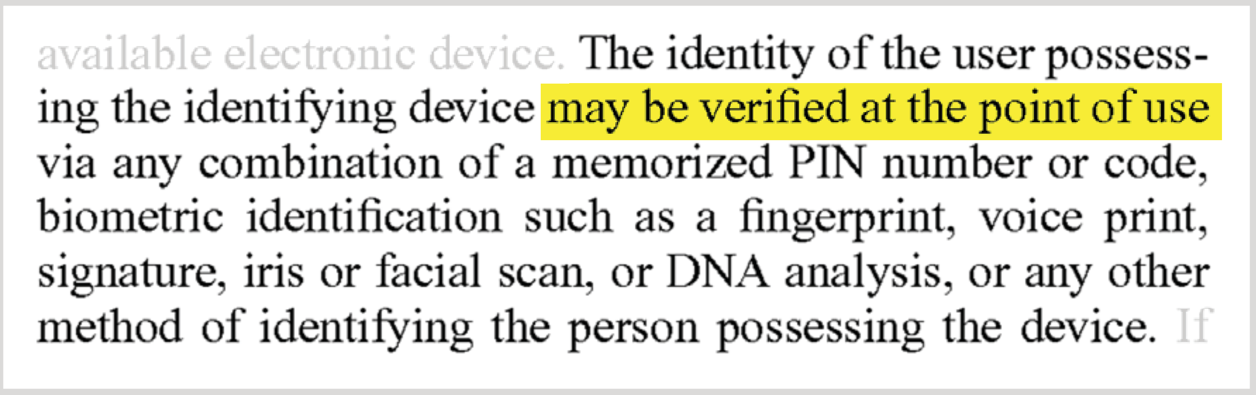
CMTA Opp at 15-18; CMTA Surreply at 7-9.

7. The Substitute Claims Do Not Satisfy § 112

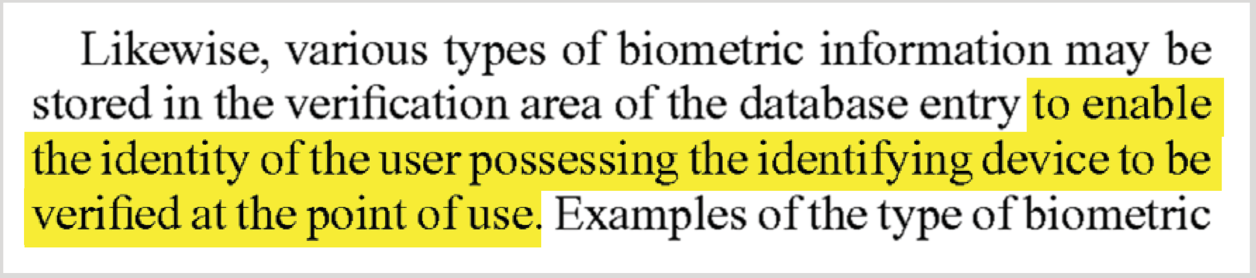
"Wherein the identity of the entity is verified using a biometric" is indefinite because a POSITA would not have understood where or how the validation is to be performed.

USR's proposed interpretation is unsupported by the written description, which only describes verification at the "point of use."


United States Patent
Weiss
Patent No.: US 8,856,539 B2
Date of Patent: Oct. 7, 2014
UNIVERSAL SECURE REGISTRY


available electronic device. The identity of the user possessing the identifying device may be verified at the point of use via any combination of a memorized PIN number or code, biometric identification such as a fingerprint, voice print, signature, iris or facial scan, or DNA analysis, or any other method of identifying the person possessing the device. If

Ex. 1101 ['539 Patent], 4:4-9

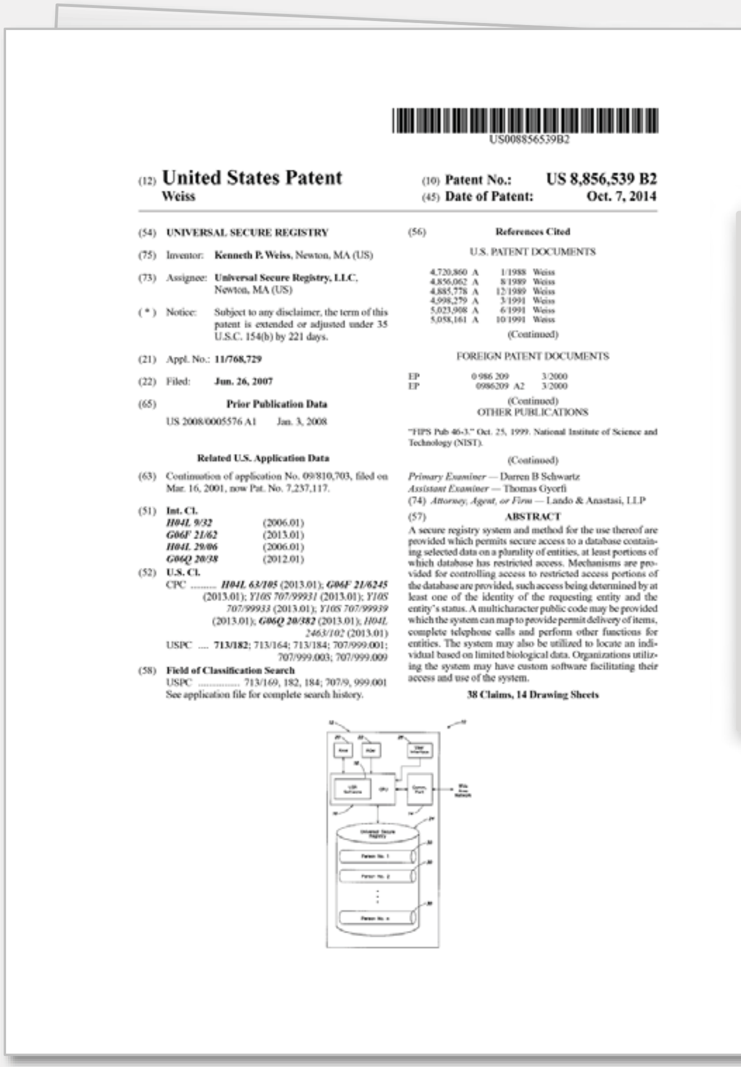

Likewise, various types of biometric information may be stored in the verification area of the database entry to enable the identity of the user possessing the identifying device to be verified at the point of use. Examples of the type of biometric

Ex. 1101 ['539 Patent], 8:48-51

CMTA Opp. at 25; CMTA Sur-Reply at 9.

8. The Substitute Claims Are Ineligible Under § 101

The substitute claims are drawn to the abstract idea of "verifying an account holder's identity based on codes and/or information related to the account holder before enabling a transaction"



US008856539B2

(12) **United States Patent**
Weiss

(10) **Patent No.:** **US 8,856,539 B2**
(45) **Date of Patent:** **Oct. 7, 2014**

(54) **UNIVERSAL SECURE REGISTRY**

(75) Inventor: **Kenneth P. Weiss**, Newton, MA (US)

(73) Assignee: **Universal Secure Registry, LLC**, Newton, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 221 days.

(21) Appl. No.: **11/768,729**

(22) Filed: **Jun. 26, 2007**

(65) **Prior Publication Data**

US 2008/0005576 A1 Jan. 3, 2008

Related U.S. Application Data

(63) Continuation of application No. 09/810,703, filed on Mar. 16, 2001, now Pat. No. 7,237,117.

(51) **Int. Cl.**

H04L 9/32	(2006.01)
G06F 21/62	(2013.01)
H04L 29/06	(2006.01)
G06Q 20/38	(2012.01)

(52) **U.S. Cl.**
CPC ***H04L 63/105*** (2013.01); ***G06F 21/6245*** (2013.01); *Y10S 707/99931* (2013.01); *Y10S 707/99933* (2013.01); *Y10S 707/99939* (2013.01); ***G06Q 20/382*** (2013.01); *H04L 2463/102* (2013.01)
USPC **713/182**; 713/164; 713/184; 707/999.001; 707/999.003; 707/999.009

(58) **Field of Classification Search**
USPC 713/169, 182, 184; 707/9, 999.001
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,720,860	A	1/1988	Weiss
4,856,062	A	8/1989	Weiss
4,885,778	A	12/1989	Weiss
4,998,279	A	3/1991	Weiss
5,023,908	A	6/1991	Weiss
5,058,161	A	10/1991	Weiss

(Continued)

FOREIGN PATENT DOCUMENTS

EP	0 986 209	3/2000
EP	0986209 A2	3/2000

(Continued)

OTHER PUBLICATIONS

"FIPS Pub 46-3." Oct. 25, 1999. National Institute of Science and Technology (NIST).

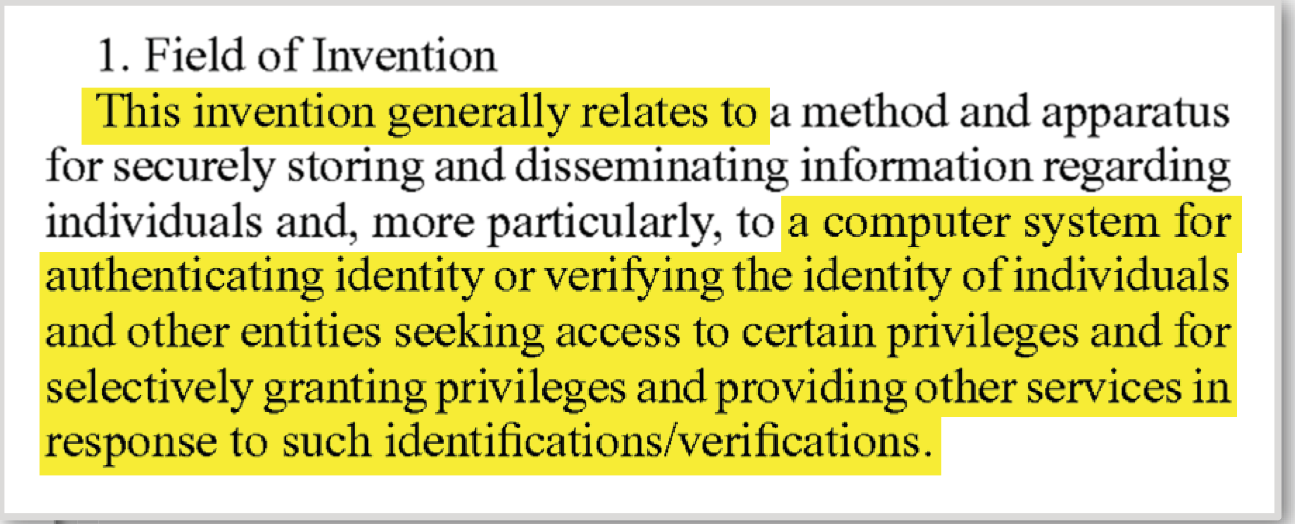
(Continued)

Primary Examiner — Darren B Schwartz
Assistant Examiner — Thomas Gyorfi
(74) *Attorney, Agent, or Firm* — Lando & Anastasi, LLP

(57) **ABSTRACT**

A secure registry system and method for the use thereof are provided which permits secure access to a database containing selected data on a plurality of entities, at least portions of which database has restricted access. Mechanisms are provided for controlling access to restricted access portions of the database are provided, such access being determined by at least one of the identity of the requesting entity and the entity's status. A multicharacter public code may be provided which the system can map to provide permit delivery of items, complete telephone calls and perform other functions for entities. The system may also be utilized to locate an individual based on limited biological data. Organizations utilizing the system may have custom software facilitating their access and use of the system.

38 Claims, 14 Drawing Sheets



1. Field of Invention

This invention generally relates to a method and apparatus for securely storing and disseminating information regarding individuals and, more particularly, to a computer system for authenticating identity or verifying the identity of individuals and other entities seeking access to certain privileges and for selectively granting privileges and providing other services in response to such identifications/verifications.

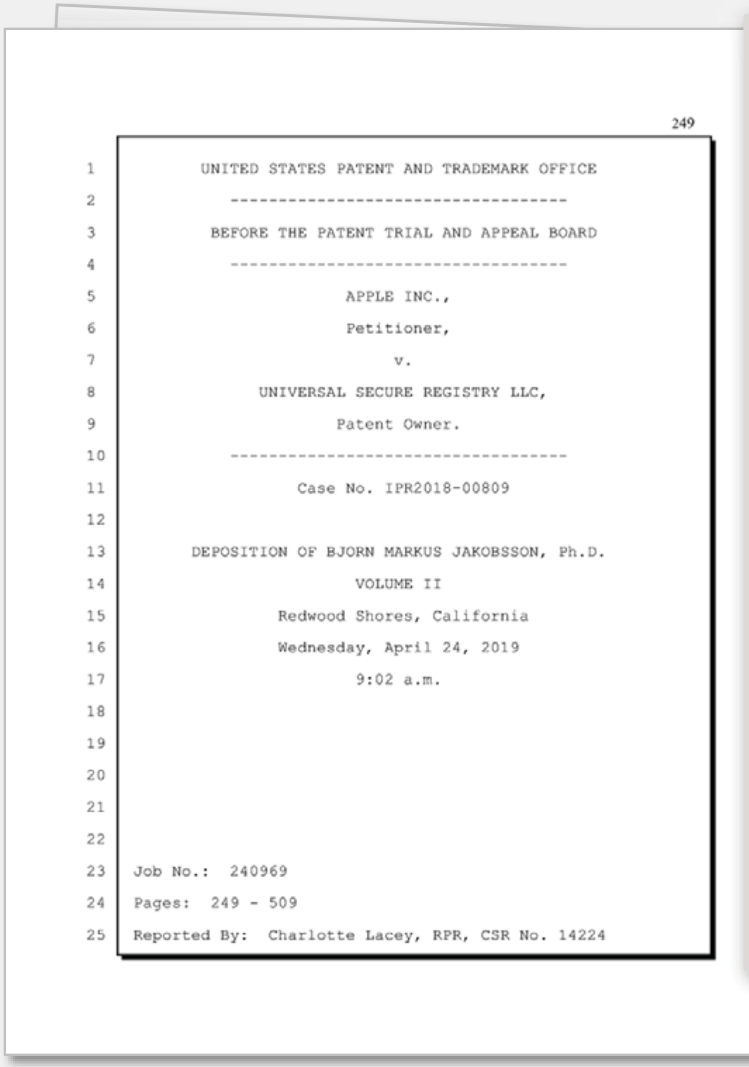
Ex. 1101 ['539 Patent], 1:13-19

CMTA Opp. at 18-25; CMTA Sur-Reply at 10.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

8. The Substitute Claims Are Ineligible Under § 101

Dr. Jakobsson agrees that the ’539 patent is directed to authenticating a user to determine whether a transaction is to be performed



249

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC,

Patent Owner.

Case No. IPR2018-00809

DEPOSITION OF BJORN MARKUS JAKOBSSON, Ph.D.

VOLUME II

Redwood Shores, California

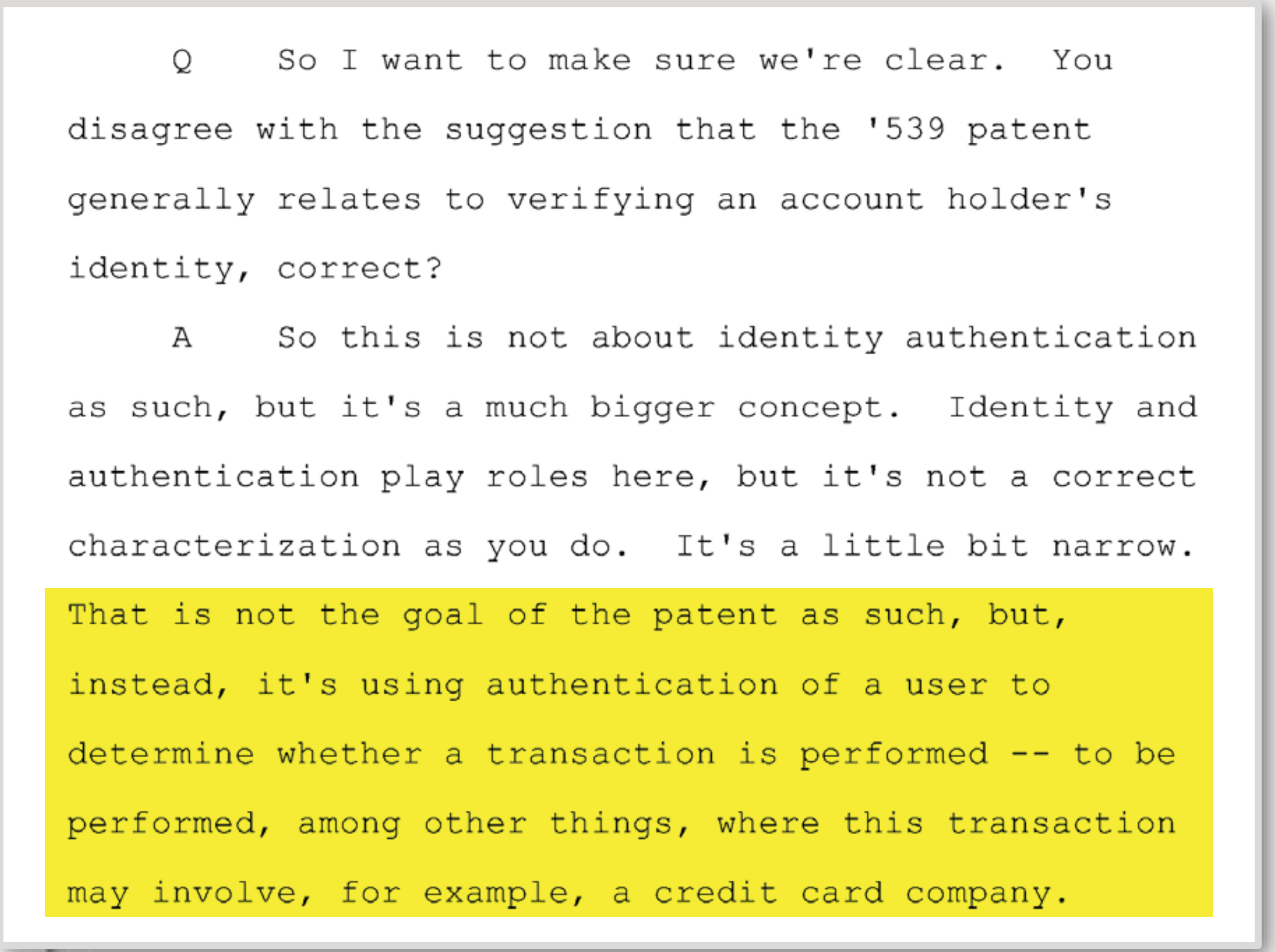
Wednesday, April 24, 2019

9:02 a.m.

Job No.: 240969

Pages: 249 - 509

Reported By: Charlotte Lacey, RPR, CSR No. 14224



Q So I want to make sure we're clear. You disagree with the suggestion that the '539 patent generally relates to verifying an account holder's identity, correct?

A So this is not about identity authentication as such, but it's a much bigger concept. Identity and authentication play roles here, but it's not a correct characterization as you do. It's a little bit narrow. That is not the goal of the patent as such, but, instead, it's using authentication of a user to determine whether a transaction is performed -- to be performed, among other things, where this transaction may involve, for example, a credit card company.

Ex. 1137 [Jakobsson Dep. Tr.], 284:12-24

CMTA Opp. at 18-25; CMTA Sur-Reply at 10.

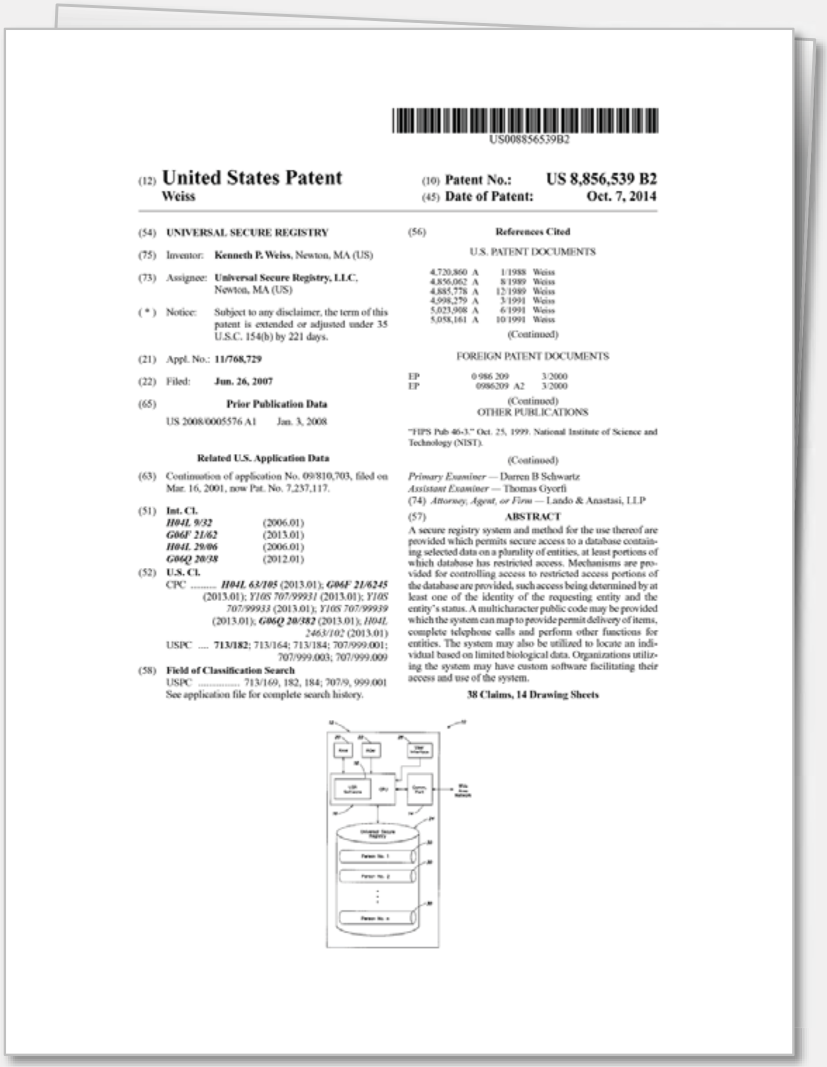
8. The Substitute Claims Are Ineligible Under § 101

The Federal Circuit has found similar inventions to be abstract ideas

Federal Circuit Authority	Unpatentable Abstract Idea
Secured Mail Sols. LLC v. Universal Wilde, Inc., 873 F.3d 905 (Fed. Cir. 2017)	"using a marking affixed to the outside of a mail object to communicate information about the mail object, i.e., the sender, recipient, and contents of the mail object"
Smart Sys. Innovations, LLC v. Chicago Transit Auth., 873 F.3d 1364 (Fed. Cir. 2017)	"collecting financial data using generic computer components"
Alice Corp Pty. V. CLS Bank Int'l, 573 U.S. 208 (2014).	"intermediated settlement" of financial transactions
Bilski v. Kappos, 561 U.S. 593 (2010)	"hedging against the financial risk of price fluctuations"

8. The Substitute Claims Are Ineligible Under § 101

The verification system is implemented using only conventional computer components



US008856539B2

(12) United States Patent
Weiss

(10) Patent No.: US 8,856,539 B2
(45) Date of Patent: Oct. 7, 2014

(54) UNIVERSAL SECURE REGISTRY

(75) Inventor: **Kenneth P. Weiss**, Newton, MA (US)

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H04L 29/06	(2006.01)
G06Q 20/38	(2012.01)

(52) **U.S. Cl.**
CPC ***H04L 63/105*** (2013.01); ***G06F 21/6245*** (2013.01); *Y10S 707/99931* (2013.01); *Y10S 707/99933* (2013.01); *Y10S 707/99939* (2013.01); ***G06Q 20/382*** (2013.01); *H04L 2463/102* (2013.01)
USPC **713/182**; 713/164; 713/184; 707/999.001; 707/999.003; 707/999.009

(58) **Field of Classification Search**
USPC 713/169, 182, 184; 707/9, 999.001
See application file for complete search history.

(56) **References Cited**

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4,885,778	A	12/1989	Weiss
4,998,279	A	3/1991	Weiss
5,023,908	A	6/1991	Weiss
5,058,161	A	10/1991	Weiss

(Continued)

FOREIGN PATENT DOCUMENTS

EP	0 986 209	3/2000
EP	0986209 A2	3/2000

(Continued)

OTHER PUBLICATIONS

"FIPS Pub 46-3." Oct. 25, 1999. National Institute of Science and Technology (NIST).

(Continued)

Primary Examiner — Darren B Schwartz
Assistant Examiner — Thomas Gyorfi
(74) *Attorney, Agent, or Firm* — Lando & Anastasi, LLP

(57) **ABSTRACT**

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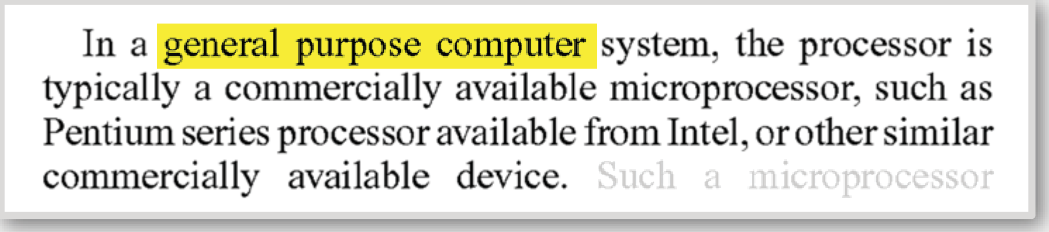
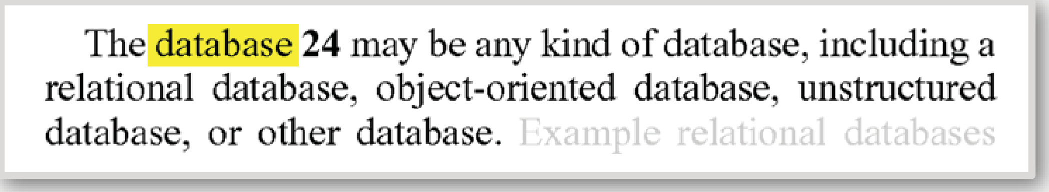
38 Claims, 14 Drawing Sheets



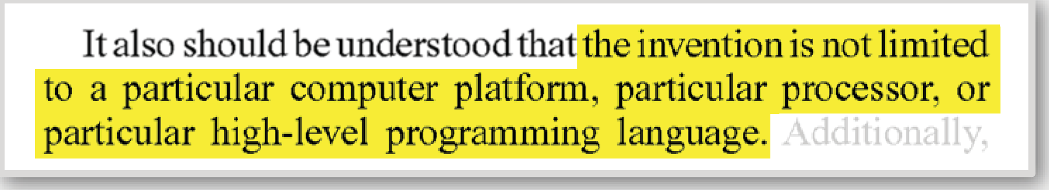
In a general purpose computer system, the processor is typically a commercially available microprocessor, such as Pentium series processor available from Intel, or other similar commercially available device. Such a microprocessor

Ex. 1101 ['539 Patent], 6:4-7



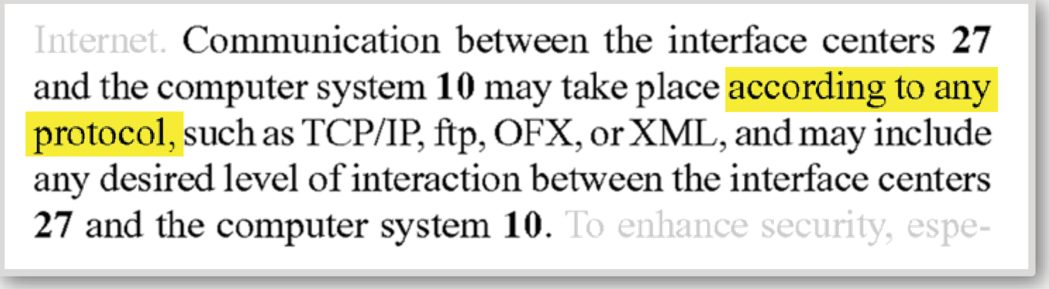
The database **24** may be any kind of database, including a relational database, object-oriented database, unstructured database, or other database. Example relational databases

Ex. 1101 ['539 Patent], 6:18-20



It also should be understood that the invention is not limited to a particular computer platform, particular processor, or particular high-level programming language. Additionally,

Ex. 1101 ['539 Patent], 6:51-53



Internet. Communication between the interface centers **27** and the computer system **10** may take place according to any protocol, such as TCP/IP, ftp, OFX, or XML, and may include any desired level of interaction between the interface centers **27** and the computer system **10**. To enhance security, espe-

Ex. 1101 ['539 Patent], 7:18-22

CMTA Opp. at 18-25; CMTA Sur-Reply at 10.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The ’813 Patent Qualifies as a CBM Patent

Dr. Jakobsson admitted at deposition all features were well-known

Biometric sensors	Point-of-sale terminals
User interface	Multifactor authentication (with biometrics)
Processors	Authentication using time-varying token
Communication interface	Limiting functionality after failed authentication
Databases	PIN & biometric authentication
Encryption	Local authentication
Authentication with biometric information	Local & remote authentication
Temporary disablement of device	

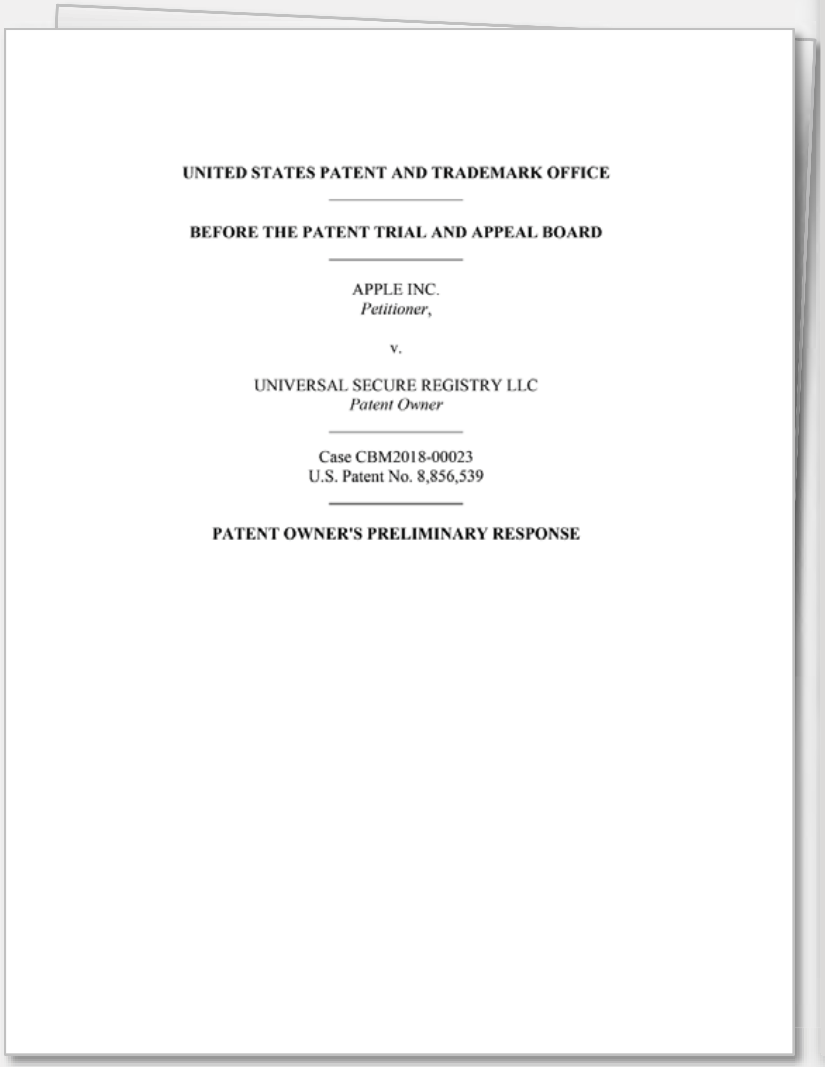
Ex. 1127 [Jakobsson Dep. Tr.], 307:11-17, 308:19-21, 309:16-18, 311:3-5, 312:3-5, 312:21-25, 313:21- 314:17, 315:10-14, 319:10-12, 322:5-13, 323:17-22, 330:10-15, 355:22-356:2, 357:9-11, 460:20-461:2; *see also* Reply at 1-2; Institution Decision at 8-13

USR's CMTA Is Also Deficient

USR's CMTA Deficiency	Issue Addressed in Briefing
USR is estopped from reintroducing the disclaimed financial subject matter	CMTA Opp. at 1-4; CMTA Sur-Reply at 11-12
USR violated its duty of candor	CMTA Opp. at 1-3; CMTA Sur-Reply at 10-11

1. USR Is Estopped from Reintroducing Disclaimed Financial Subject Matter

USR first argued that the ’539 patent did not include claims related to “finance-related activities”…



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

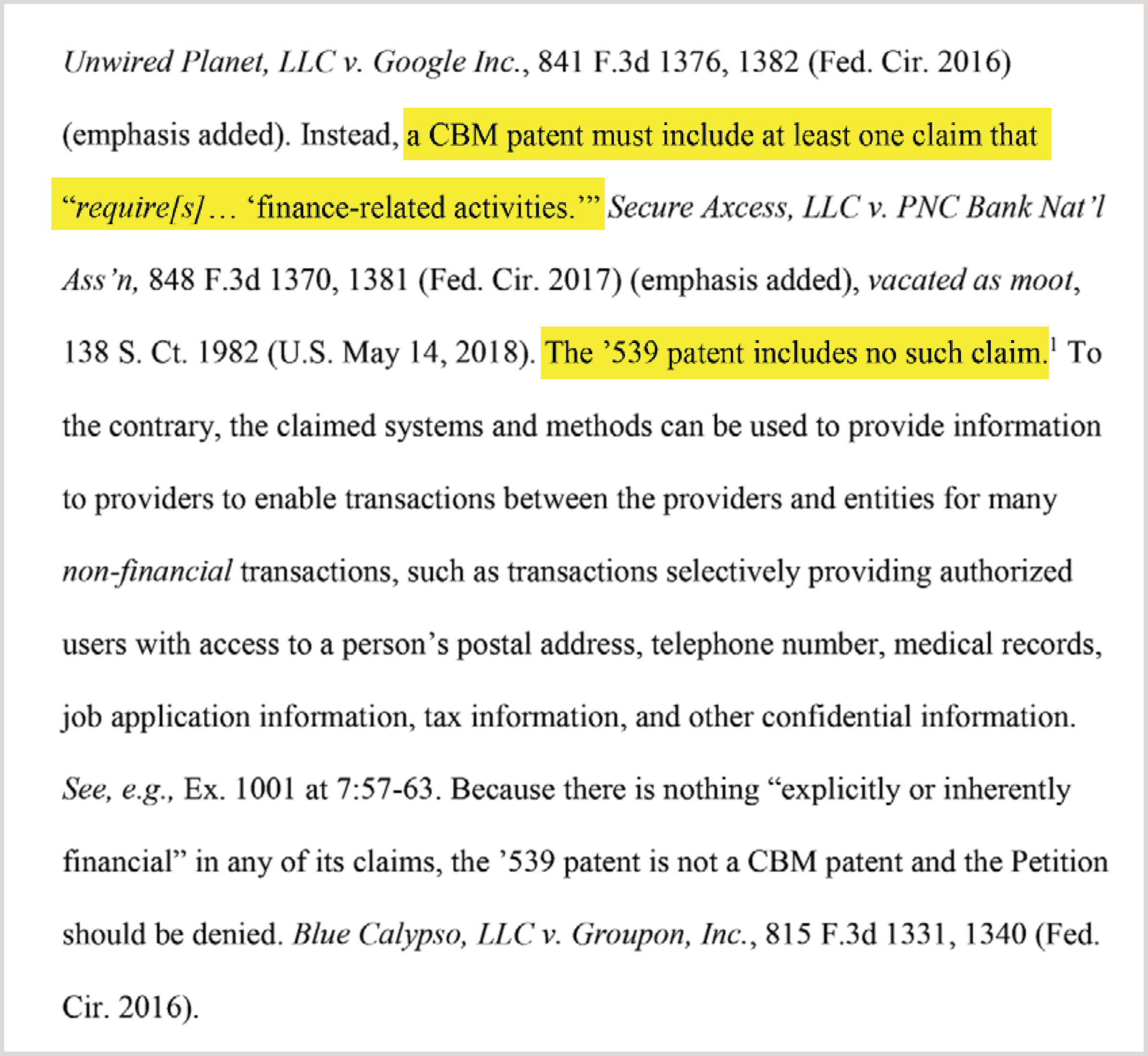
APPLE INC.
Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC
Patent Owner

Case CBM2018-00023
U.S. Patent No. 8,856,539

PATENT OWNER'S PRELIMINARY RESPONSE



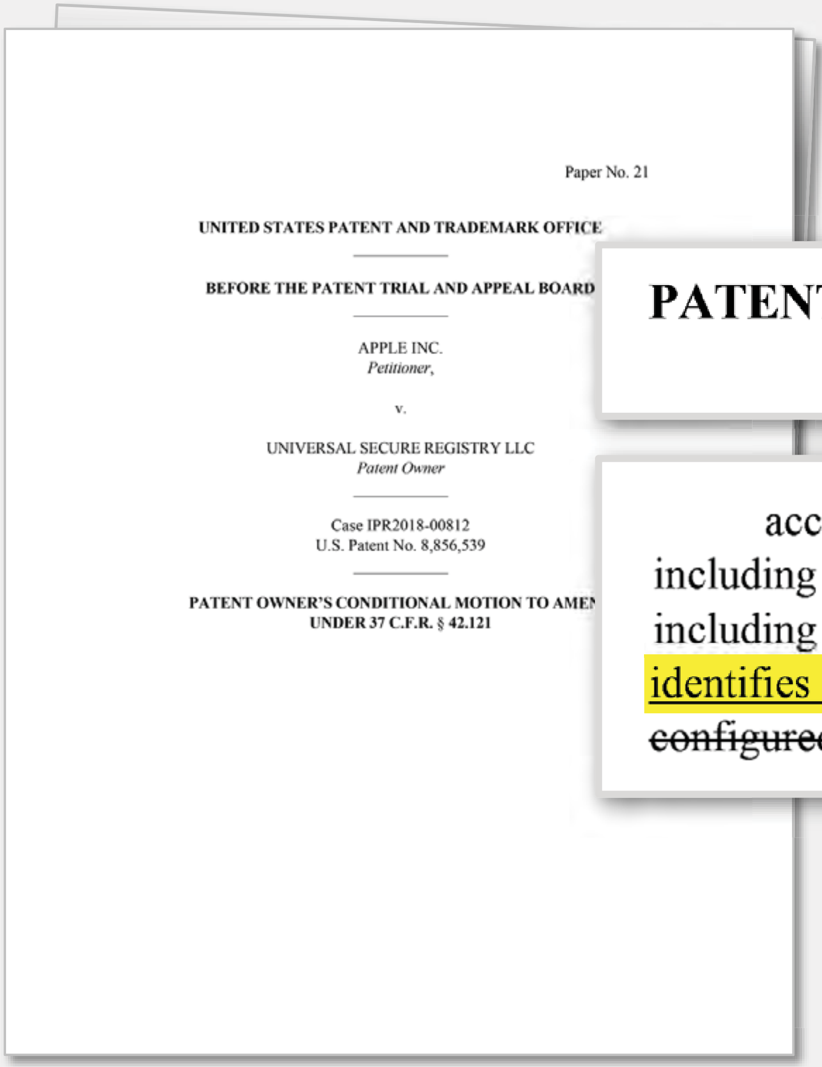
Unwired Planet, LLC v. Google Inc., 841 F.3d 1376, 1382 (Fed. Cir. 2016) (emphasis added). Instead, a CBM patent must include at least one claim that “*require[s]* … ‘finance-related activities.’” *Secure Axcess, LLC v. PNC Bank Nat’l Ass’n,* 848 F.3d 1370, 1381 (Fed. Cir. 2017) (emphasis added), *vacated as moot*, 138 S. Ct. 1982 (U.S. May 14, 2018). The ’539 patent includes no such claim.[1] To the contrary, the claimed systems and methods can be used to provide information to providers to enable transactions between the providers and entities for many *non-financial* transactions, such as transactions selectively providing authorized users with access to a person’s postal address, telephone number, medical records, job application information, tax information, and other confidential information. *See, e.g.*, Ex. 1001 at 7:57-63. Because there is nothing “explicitly or inherently financial” in any of its claims, the ’539 patent is not a CBM patent and the Petition should be denied. *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1340 (Fed. Cir. 2016).

Apple Inc. v. Universal Secure Registry, LLC, Case CBM2018-00023 (Paper 9) at 2.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

1. USR Is Estopped from Reintroducing Disclaimed Financial Subject Matter

Now USR seeks to add an amendment that is explicitly financial in nature



Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.
Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC
Patent Owner

Case IPR2018-00812
U.S. Patent No. 8,856,539

PATENT OWNER'S CONDITIONAL MOTION TO AMEN
UNDER 37 C.F.R. § 42.121

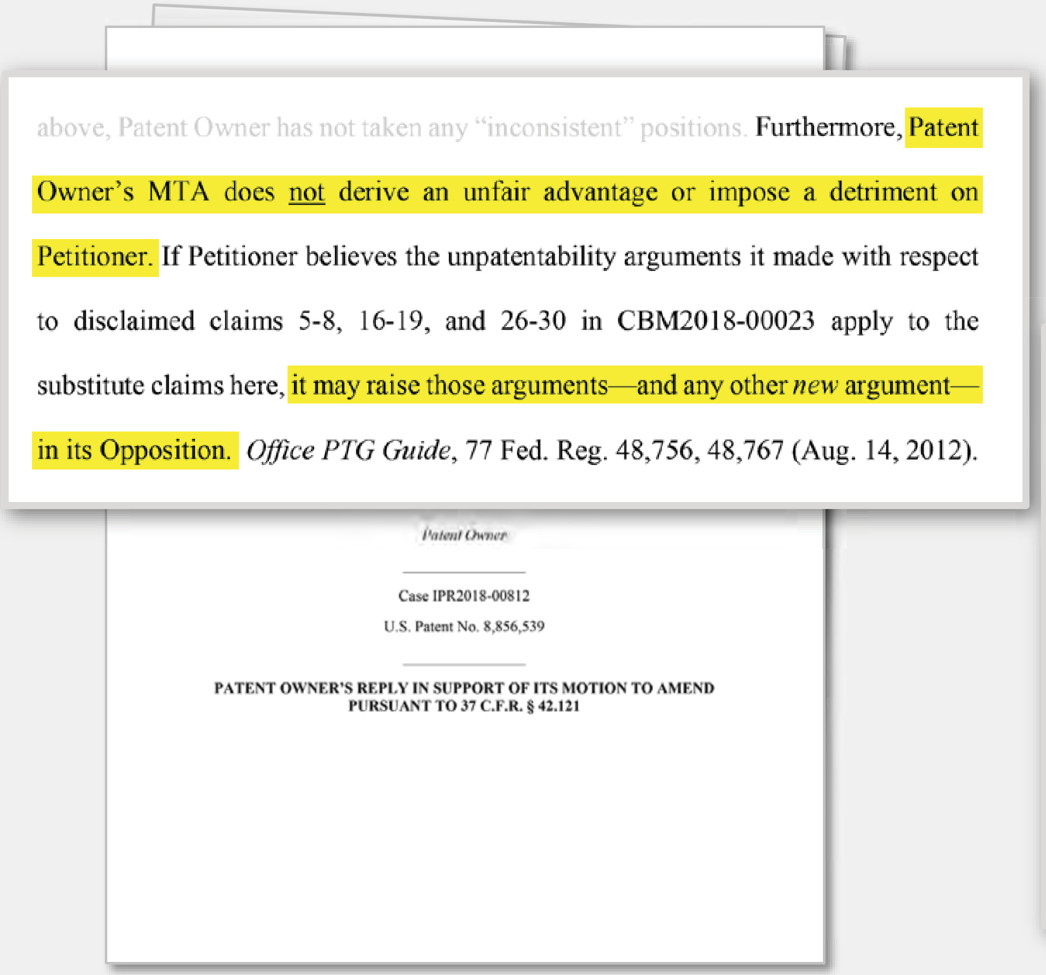
PATENT OWNER'S CONDITIONAL MOTION TO AMEND UNDER 37 C.F.R. § 42.121

access from the database secure data associated with the entity including information required to enable the transaction, the information including account identifying information that includes a public ID code that identifies a financial account number associated with the entity; and~~, and~~ ~~configured to~~

CMTA, Appendix A at A3-A4.

1. USR Is Estopped from Reintroducing Disclaimed Financial Subject Matter

USR also ignores the resulting prejudice and unfair advantage



above, Patent Owner has not taken any "inconsistent" positions. Furthermore, Patent Owner's MTA does not derive an unfair advantage or impose a detriment on Petitioner. If Petitioner believes the unpatentability arguments it made with respect to disclaimed claims 5-8, 16-19, and 26-30 in CBM2018-00023 apply to the substitute claims here, it may raise those arguments—and any other *new* argument—in its Opposition. *Office PTG Guide*, 77 Fed. Reg. 48,756, 48,767 (Aug. 14, 2012).

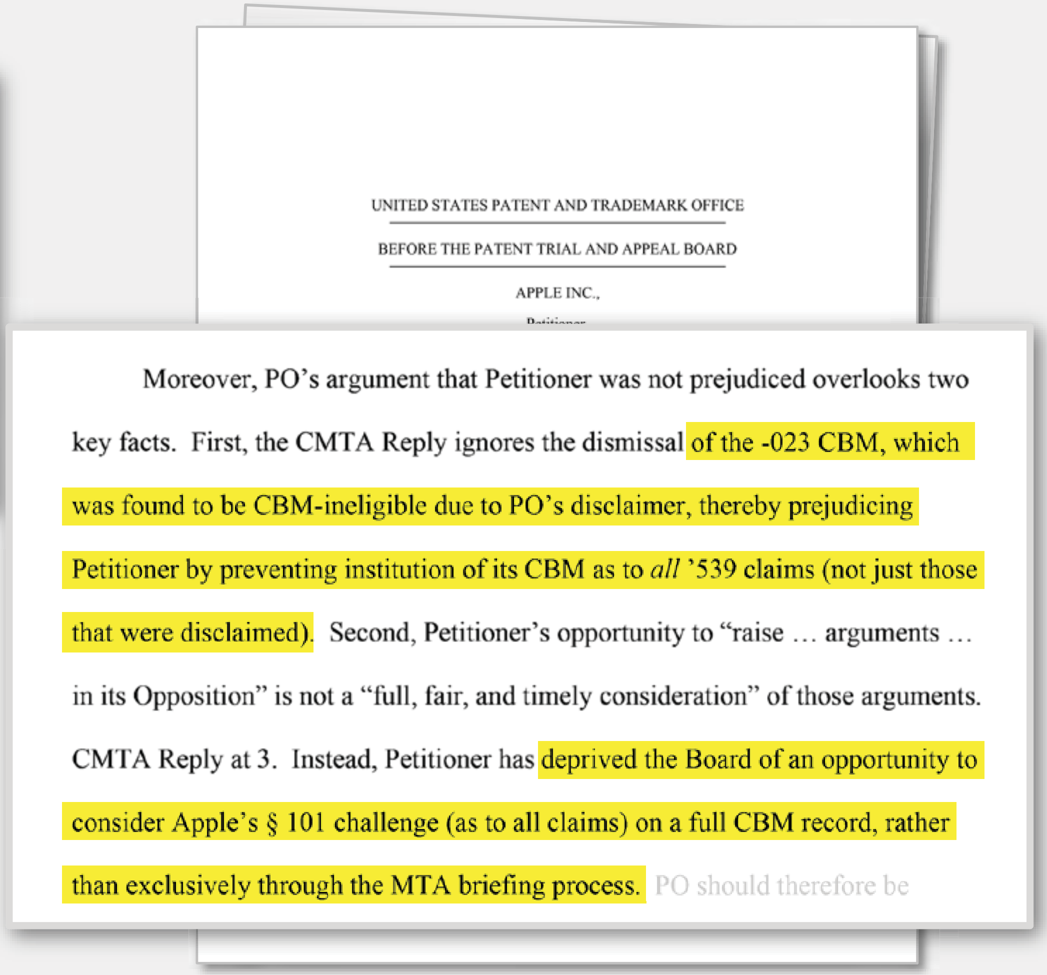
Patent Owner

Case IPR2018-00812

U.S. Patent No. 8,856,539

PATENT OWNER'S REPLY IN SUPPORT OF ITS MOTION TO AMEND PURSUANT TO 37 C.F.R. § 42.121

CMTA Reply at 3



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

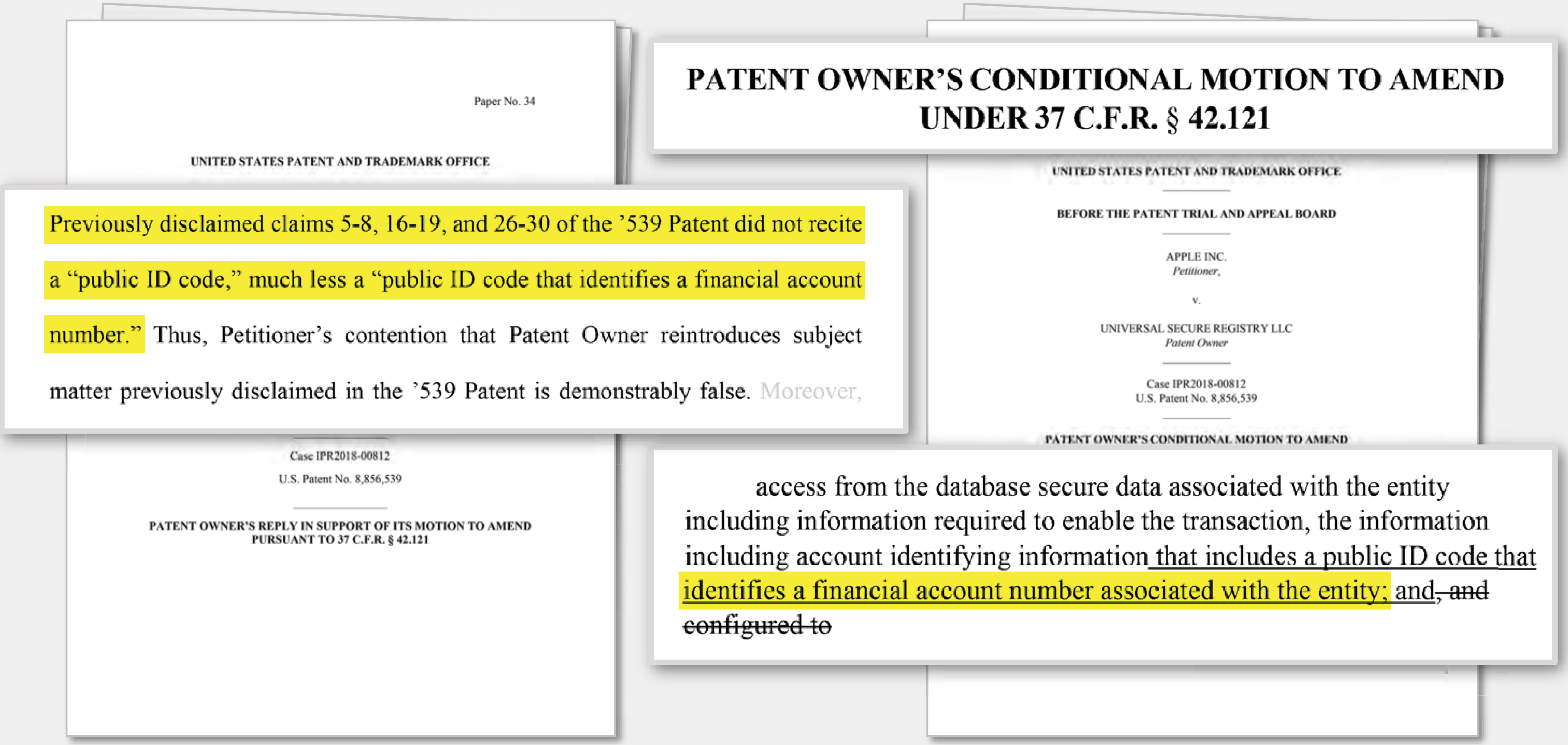
Petitioner,

Moreover, PO's argument that Petitioner was not prejudiced overlooks two key facts. First, the CMTA Reply ignores the dismissal of the -023 CBM, which was found to be CBM-ineligible due to PO's disclaimer, thereby prejudicing Petitioner by preventing institution of its CBM as to *all* '539 claims (not just those that were disclaimed). Second, Petitioner's opportunity to "raise … arguments … in its Opposition" is not a "full, fair, and timely consideration" of those arguments. CMTA Reply at 3. Instead, Petitioner has deprived the Board of an opportunity to consider Apple's § 101 challenge (as to all claims) on a full CBM record, rather than exclusively through the MTA briefing process. PO should therefore be

CMTA Sur-reply at 12

2. USR Violated Its Duty of Candor

USR's argument ignores the financial nature of the "public ID code"



Paper No. 34

UNITED STATES PATENT AND TRADEMARK OFFICE

Previously disclaimed claims 5-8, 16-19, and 26-30 of the '539 Patent did not recite a "public ID code," much less a "public ID code that identifies a financial account number." Thus, Petitioner's contention that Patent Owner reintroduces subject matter previously disclaimed in the '539 Patent is demonstrably false. Moreover,

Case IPR2018-00812
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PATENT OWNER'S REPLY IN SUPPORT OF ITS MOTION TO AMEND PURSUANT TO 37 C.F.R. § 42.121

CMTA Reply at 2

PATENT OWNER'S CONDITIONAL MOTION TO AMEND UNDER 37 C.F.R. § 42.121

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.
Petitioner,

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UNIVERSAL SECURE REGISTRY LLC
Patent Owner

Case IPR2018-00812
U.S. Patent No. 8,856,539

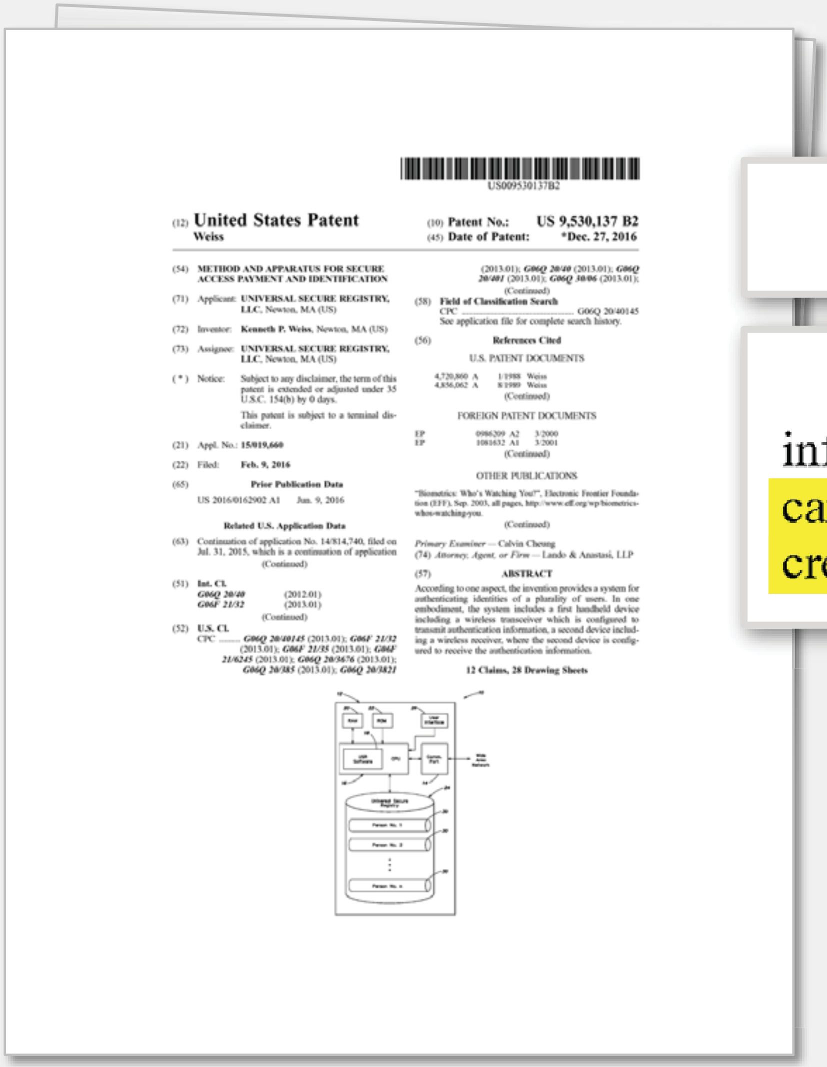
PATENT OWNER'S CONDITIONAL MOTION TO AMEND

access from the database secure data associated with the entity including information required to enable the transaction, the information including account identifying information that includes a public ID code that identifies a financial account number associated with the entity; and~~, and configured to~~

CMTA, Appendix A at A3-A4

2. USR Violated Its Duty of Candor

The claimed "public ID code" limitation was disclaimed from the '137 patent and added to the '539 patent



US009530137B2

(12) **United States Patent**
Weiss

(10) **Patent No.: US 9,530,137 B2**
(45) **Date of Patent: *Dec. 27, 2016**

(54) METHOD AND APPARATUS FOR SECURE ACCESS PAYMENT AND IDENTIFICATION

(71) Applicant: **UNIVERSAL SECURE REGISTRY, LLC**, Newton, MA (US)

(72) Inventor: **Kenneth P. Weiss**, Newton, MA (US)

(73) Assignee: **UNIVERSAL SECURE REGISTRY, LLC**, Newton, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **15/019,660**

(22) Filed: **Feb. 9, 2016**

(65) **Prior Publication Data**

US 2016/0162902 A1 Jun. 9, 2016

Related U.S. Application Data

(63) Continuation of application No. 14/814,740, filed on Jul. 31, 2015, which is a continuation of application

(Continued)

(51) **Int. Cl.**

G06Q 20/40	(2012.01)
G06F 21/32	(2013.01)

(Continued)

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

CPC ***G06Q 20/40145*** (2013.01); ***G06F 21/32*** (2013.01); ***G06F 21/35*** (2013.01); ***G06F 21/6245*** (2013.01); ***G06Q 20/3676*** (2013.01); ***G06Q 20/385*** (2013.01); ***G06Q 20/3821*** (2013.01); ***G06Q 20/40*** (2013.01); ***G06Q 20/401*** (2013.01); ***G06Q 30/06*** (2013.01);

(Continued)

(58) **Field of Classification Search**

CPC G06Q 20/40145

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,720,860	A	1/1988	Weiss
4,856,062	A	8/1989	Weiss

(Continued)

FOREIGN PATENT DOCUMENTS

EP	0986209	A2	3/2000
EP	1081632	A1	3/2001

(Continued)

OTHER PUBLICATIONS

"Biometrics: Who's Watching You?", Electronic Frontier Foundation (EFF), Sep. 2003, all pages, http://www.eff.org/wp/biometrics-whos-watching-you.

(Continued)

Primary Examiner — Calvin Cheung
(74) *Attorney, Agent, or Firm* — Lando & Anastasi, LLP

(57) **ABSTRACT**

According to one aspect, the invention provides a system for authenticating identities of a plurality of users. In one embodiment, the system includes a first handheld device including a wireless transceiver which is configured to transmit authentication information, a second device including a wireless receiver, where the second device is configured to receive the authentication information.

12 Claims, 28 Drawing Sheets

Patent No.: US 9,530,137 B2

8. The system of claim **1**, wherein the first authentication information includes a multidigit public ID code for a credit card account, which a credit card issuer can map to a usable credit card number.

Ex. __ ['137 Patent], 46:34-37

CMTA Opp. at 1-3; CMTA Sur-Reply at 10-11.

Roadmap

- The Claims Are Invalid
- Responses To USR's Sur-reply
- USR's Substitute Claims Are Not Patentable
- USR's CMTA Should Be Denied
- **USR's Motion To Strike Should Be Denied**

USR's Motion to Strike Should be Denied

Challenged Argument	Reasons USR's Motion Should Be Denied
Franklin's teaching of merchant validation provides a motivation to modify Reber to send the claimed "transaction request" to the provider.	• Previously Discussed in Ex-1135 (Shoup Decl.), ¶47 • Responsive to USR's POR at 56, CMTA Reply at 4-6. • Addressed in USR Surreply at 26-27.
Motivation to combine Reber and Franklin to "extract" a time value from the transaction request.	• Previously Discussed in Ex-1136 (Shoup Decl.), ¶25 • Directly responsive to USR's admission that transaction data includes "the transaction date and time."
Franklin's disclosure of validation using a "test MAC" supports argument that "merchant validation" teaches "compliance with access restrictions"	• Previously discussed in CMTA Opp. at 9, Reply to POR at 12. • Addressed in USR Surreply at 14.
Similarity between Reber/Franklin and '539 Patent at Figures 7-10 supports obviousness.	• Previously discussed at Ex-1135 (Shoup Decl.), ¶29. • Responsive to CMTA Reply at 13-14

USR Recycles Arguments That the D.I. Already Rejected

Claim Limitation	PPOR Argument	Board Found	USR’s Position Today
“Account Identifying Information”	No construction needed. (POPR at 19.)	“Account Identifying Information” did not need to be construed. (Institution Decision at 6-7.)	The claims are not obvious under **Apple’s proposed construction.** (POR Surreply at 1-3.)
“Access Restrictions”	Compliance with access restrictions “is not the same thing” as “merchant validation.” (POPR at 48).	“Patent Owner’s framing improperly limits the term ‘access restrictions…’” (Institution Decision at 14-15.)	Access restrictions should be **construed** as “two or more restrictions specific to the provider that indicate what secure data may or may not be accessed.” (POR Surreply at 5-10)
“Third Party”	Franklin does not disclose a “third party.” (POPR 50-53.)	“[B]ecause Franklin’s processing system 84 in the asserted combination performs functions of the claimed third party and not the claimed secure registry, we find it is consistent with our construction for ‘third party’” (Institution Decision at 18.)	“…Franklin’s Processing System 84…is coextensive with all other components 60, 62, 80, 82 of the bank computing center 32.” (POR Surreply at 48.)
“Transaction Request”	The plain language of these limitations specify that a provider requests a transaction on behalf of the entity and the secure registry receives the transaction request from the provider. (POPR at 38.)	“The claim language does not mandate that the provider “requesting a transaction” play any role in generating the transaction request or passing it to the secure registry. Instead, it indicates simply that the provider desires to have the transaction completed. ” (Institution Decision at 11.)	“[T]he provider requesting the transaction” should be **construed** as: “the provider that sent the transaction request.” (POR at 19.)

CERTIFICATE OF SERVICE

I hereby certify that on August 22, 2019 I caused a true and correct copy of Petitioner Apple Inc.'s Demonstrative Exhibits to be served via electronic mail on the following correspondents of record as listed in Patent Owners' Mandatory Notices:

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Respectfully Submitted,

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