(12) **United States Patent**　　　　　　(10) **Patent No.:**　　**US 6,934,858 B2**

Woodhill　　　　　　　　　　　　　　　　(45) **Date of Patent:**　　**Aug. 23, 2005**

(54) **SYSTEM AND METHOD OF USING THE PUBLIC SWITCHED TELEPHONE NETWORK IN PROVIDING AUTHENTICATION OR AUTHORIZATION FOR ONLINE TRANSACTIONS**

(75) Inventor: **James R. Woodhill**, Houston, TX (US)

(73) Assignee: **Authentify, Inc.**, Chicago, IL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 914 days.

(21) Appl. No.: **09/737,254**

(22) Filed: **Dec. 13, 2000**

(65) **Prior Publication Data**

US 2002/0004831 A1 Jan. 10, 2002

Related U.S. Application Data

(60) Provisional application No. 60/170,808, filed on Dec. 15, 1999.

(51) **Int. Cl.**^{7} **H04L 9/32**
(52) **U.S. Cl.** **713/201**
(58) **Field of Search** 713/200–202, 713/186; 379/88.01, 88.02; 340/5.84

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,995,606 A	*	11/1999	Civanlar et al.	.... 379/207.13
6,012,144 A	*	1/2000	Pickett	.... 713/201
6,044,471 A		3/2000	Colvin	
6,088,683 A		7/2000	Jalili	
6,167,518 A		12/2000	Padgett et al.	.... 713/186
6,175,626 B1		1/2001	Aucsmith et al.	.... 380/30

6,574,599 B1	*	6/2003	Lim et al.	.... 704/270

OTHER PUBLICATIONS

Copy of the International Search Report mailed Mar. 23, 2001 for the PCT counterpart application of the above–identified application.

* cited by examiner

Primary Examiner—Matthew Smithers
(74) *Attorney, Agent, or Firm*—Welsh & Katz, Ltd.

(57)　　　　　**ABSTRACT**

An authentication or authorization system to facilitate electronic transactions uses simultaneous or substantially simultaneous communications on two different networks to verify a user's identity. When a user logs onto a site, via the internet, a telephone number, either pre-stored or obtained in real time from the visitor, where the visitor can be called essentially immediately is used to set up, via the switched telephone network another communication link. Where the user has multiple communication links available, the telephone call is automatically placed via the authentication or authorization software simultaneously while the user is on-line. In the event that the user has only a single communication link, that individual will have to log off temporarily for purposes of receiving the telephone call. Confirmatory information is provided via the internet to the user. The automatically placed telephone call requests that the user feed back this confirmatory information for verification purposes. The telephone number which is being called is adjacent to the user's internet terminal. The user's response, via the telephone network, can be compared to the originally transmitted confirmatory information to determine whether the authentication or authorization process should go forward.

59 Claims, 18 Drawing Sheets

FIG. 1

SYSTEM

10

26

SERVICE
PROVIDER

20

ELECTRONIC
NETWORK

34

22

SITE
VISITOR

DISPLAY

COMPUTER

TAR
SI

V

12

14

16

36

SITE V
REC

TELEPHONE

46

AUTHENTICATION/
AUTHORZATION
SERVICE

38

PSTN

44

PUBLIC SWITCHED
TELEPHONE NETWORK

EXECUTABLE
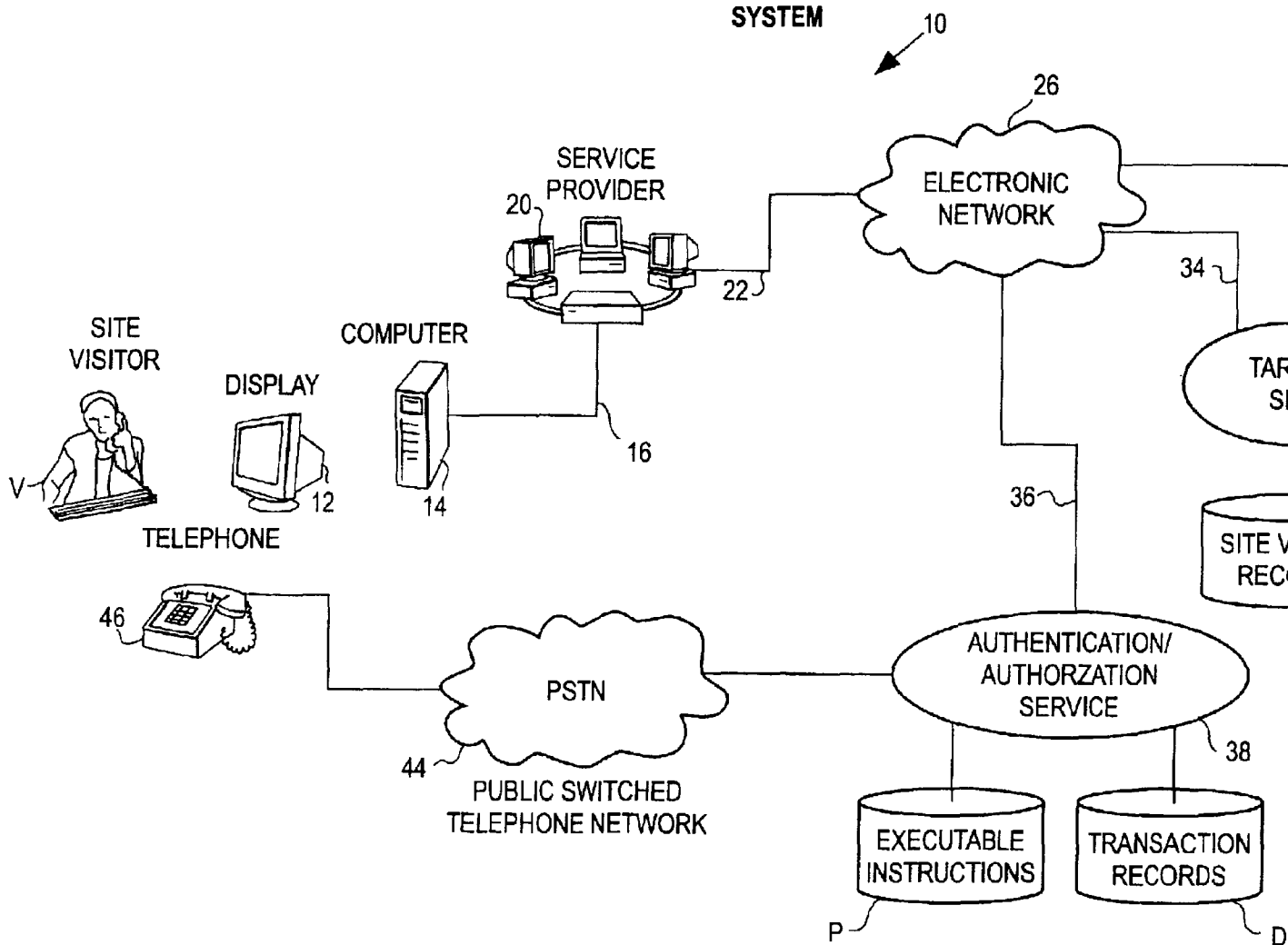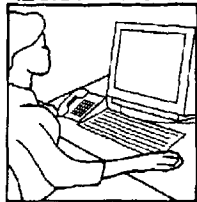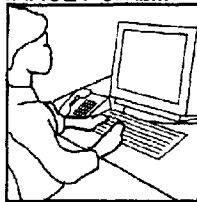INSTRUCTIONS

TRANSACTION
RECORDS

P

D
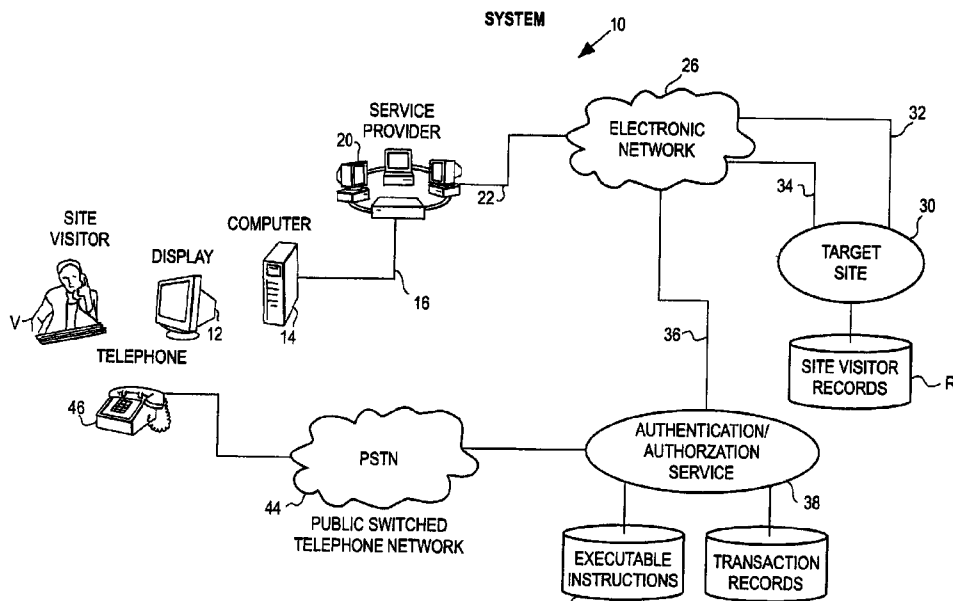
AN OVERVIEW OF THE PROCESS   100
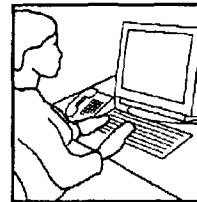
THE SITE VISITOR BEGINS THE
REGISTRATION PROCESS AT THE TARGET SITE...


102
THE SITE VISITOR
ENTERS THE TARGET
SITE.

104
THE VISITOR REGISTERS
ON THE TARGET SITE'S
EXISTING REGISTRATION
PAGE.

FIG. 2

FIG. 2A	FIG. 2B

FIG. 2A

...IS TEMPORARILY TRANSPORTED
WHICH PLACES AN AUTOMATED F

106
THE TARGET SITE
CONFIRMS A PHONE
NUMBER FOR THE
VISITOR:

▪ THE TARGET SITE
MIGHT ASK THE VISITOR
IF A PHONE NUMBER
STORED IN ITS SITE
VISITOR RECORDS IS
CORRECT; OR

▪ ASK THE VISITOR TO
TYPE IN A PHONE
NUMBER.
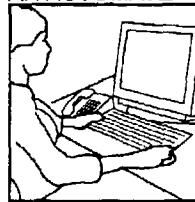
108
THE AUTHENTICATION/ AUTHORIZ
SERVER (HEREAFTER, "THE SERV
ASSUMES CONTROL OF THE VISIT
AND ASKS THE VISITOR IF A CAL
TO THE PHONE NUMBER WHILE T
IS ONLINE.

▪ IF THE VISITOR ANSWERS "YES,
ONLINE SESSION CONTINUES. T
SERVER DISPLAYS A CONFIRMA
NUMBER ONSCREEN.

▪ IF THE VISITOR ANSWERS "NO,"

▪ DISPLAYS A CONFIRMATION
ONSCREEN, AS WELL AS THE URL
"FINISH REGISTRATION" WEB PAG

▪ TELLS THE VISITOR TO TAKE
THE CONFIRMATION NUMBER ANI

▪ INSTRUCTS THE VISITOR TO
THE INTERNET
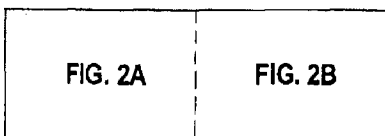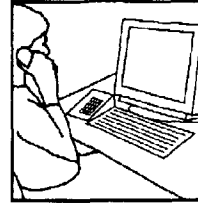
FIG. 2B

...AND RETURNS TO THE
TO COMPLETE THE PR(
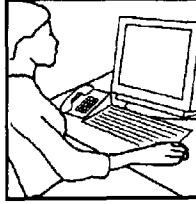
110
THE SERVER CALLS THE VISITOR ON THE PHONE:

- AN AUTOMATED CALL FIRST **CONFIRMS** THAT THE CALL RECIPIENT IS THE VISITOR AND IS EXPECTING THE CALL.

- AN AUTOMATED CALL THEN **ASKS** THE VISITOR TO TYPE THE CONFIRMATION NUMBER DISPLAYED IN THE ONLINE SESSION.

112
OPTIONALLY, AN AUTOMATED CALL CAN **TELL** THE VISITOR TO SPEAK INTO THE PHONE, SO THAT THE SERVER CAN MAKE ONE OR MORE DIGITAL VOICE RECORDINGS. IN A STANDARD IMPLEMENTATION, THE AUTOMATED CALL MIGHT REQUEST UP TO TWO DISTINCT VOICE RECORDINGS, SUCH AS THE VISITOR RECITING HIS OR HER NAME, AND THEN RECITING AN AGREEMENT TO TERMS.

- VISITORS WHO REMAINED ONLINE DURING THE CALL CAN THEN **HANG UP** THE PHONE.

- VISITORS WHO HAD TO DISCONNECT FROM THE INTERNET ARE **REMINDED** TO RETURN TO THE "FINISH REGISTRATION" WEB PAGE AFTER HANGING UP.
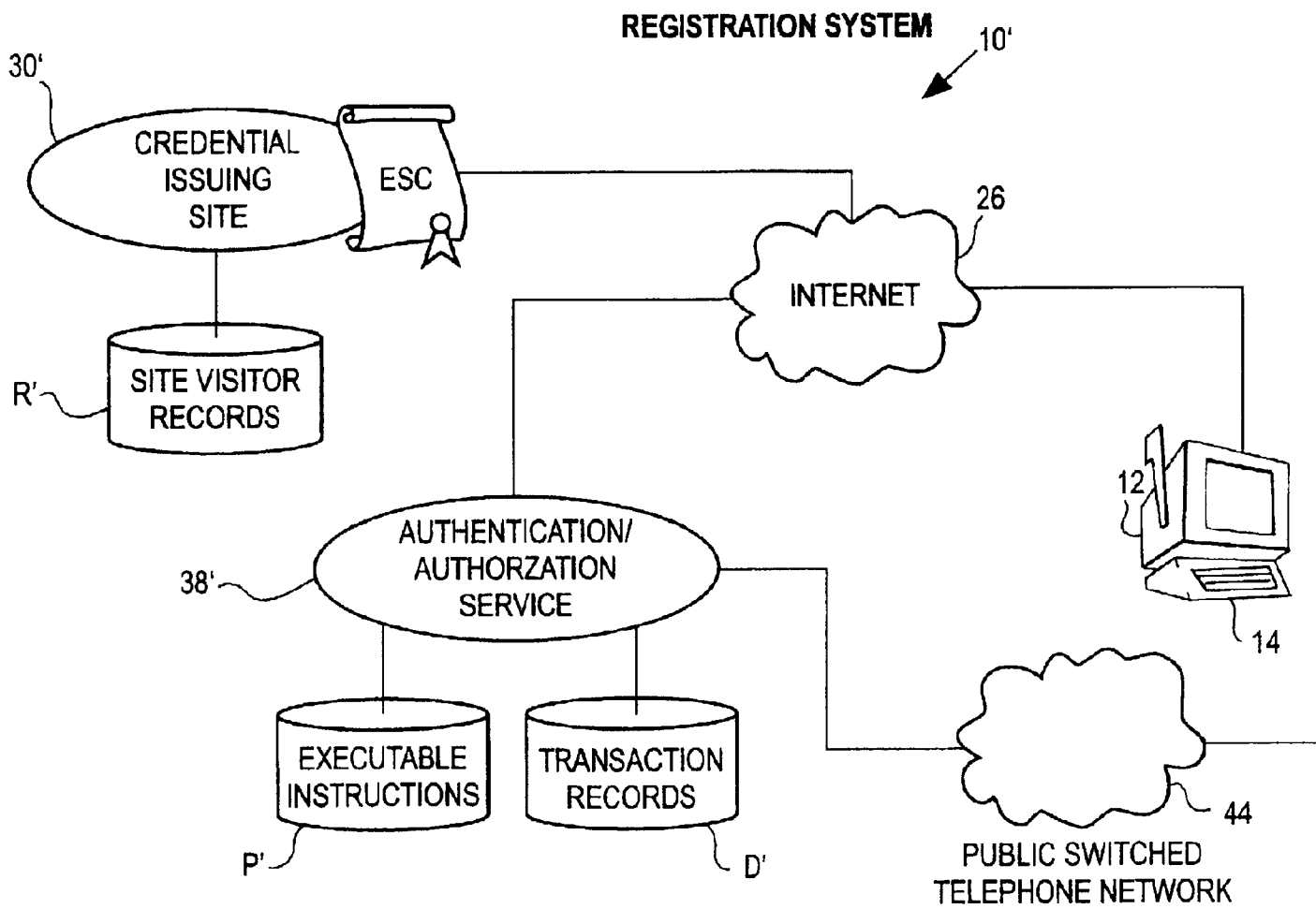
114
THE TARGET SITE **REGAINS** (
VISITOR'S BROWSER AND REC
FROM THE SERVER DESCRIBIN
TELEPHONE SESSION.

BASED ON THE SUCCESS OR F
THE SERVER RESPONSE, THE
WHETHER THE VISITOR HAS S/
REQUIREMENTS FOR REGISTR/

FIG. 3

REGISTRATION SYSTEM 10'

30'

CREDENTIAL
ISSUING
SITE

ESC

26

INTERNET

R'

SITE VISITOR
RECORDS

12

14

38'

AUTHENTICATION/
AUTHORZATION
SERVICE

EXECUTABLE
INSTRUCTIONS

TRANSACTION
RECORDS

44

P'

D'

PUBLIC SWITCHED
TELEPHONE NETWORK

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.