EXHIBIT 3

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/997,348	12/23/97	HUANG	P 0501

LM02/0811

BAKER & BOTTS
2001 ROSS AVENUE
DALLAS TX 75201-2980

EXAMINER	
ART UNIT	PAPER NUMBER
2756	4

DATE MAILED: 08/

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

PTO-90C (Rev. 2/95) 1- File Copy

Office Action Summary	Application No. 08/997,348	Applicant(s) Peter Seung-An Hwang et al.
	Examiner Gecker	Group Art Unit 2756

---The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address---

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 (three) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☒ Responsive to communication(s) filed on 12/23/97.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-30 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-30 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____.

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☒ Notice of References Cited, PTO-892

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

U. S. Patent and Trademark Office
PTO-326 (Rev. 3-97)

*U.S. GPO: 1997-417-381/62710

Part of Paper No. 4

1. Claims 1-30 are presented for examination.

2. The abstract of the disclosure is objected to because it is not on a single page. Correction is required. See MPEP § 608.01(b).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Branton, Jr. et al in view of Koved.

6. Branton, Jr. et al (5,870,558) taught the invention substantially as claimed including a graphical user interface for enabling one or more users to access a sonet telecommunications switching system, comprising:

a) a remote computer having a browser (col 4-6);

b) a web server (284) accessible by the browser (col 4 line 4 et seq) and having an interface application program which enables the remote computer to communicate with the telecommunications network switching management system (col 4 line 5 et seq); and

c) a network management system or system manager building block (271-273) in communications with the remote computer running the browser application program, the system manager building block (271-273) also being in communication with the sonet (56,260) telecommunications switching system (cols 4-6), the system manager building block containing information related to authorized users (col 4 line 26 et seq and col 7 lines 1-8.)

7. Branton Jr. et al due to the scope of his teachings did not go into details of determining whether to permit the users to access the telecommunications switching system, instead they only stated that authorized users associated with the service provider organization could access to the telecommunications switching system. It would have been obvious to one of ordinary skill in the Internet art at the time of the invention that users who has an account with a service provider are authorized to access the web services after passing an authentication scheme, e.g., filling the

information requested by the service provider, e.g. submitting user ID at the login prompt and also submitting the password. These are provided by the security manager software running on the service provider computer. These are all well known features of web accessing. For example, Koved (5,915,085) taught such a security manager, e.g., see figure 7. It would have been obvious to one of ordinary skill in the Internet art at the time of the invention to combine the teachings of Branton Jr. et al and Koved because Koved just provided the well known details of the security manager which is used to authorize users taught by Branton Jr. et al. Koved also suggested that one skilled in the art would realize that loadable content could be adapted to other environments, such as active X, or OMG's CORBA and IIOP, where the loadable content is executable (col 4 lines 62-66.) Other claimed features are all obvious variations of the well known features of using graphical interfaces to access remote devices via the www features. It would have been obvious to one of ordinary skill in the Internet art at the time of the invention that using applets to accomplish what has been done previously using the well known html or cgi scripts is just an obvious variations of web accessing, see also Koven teaching applets.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehmet Geckil whose telephone number is (703) 305-9676. The examiner can normally be reached on Monday through Friday from 6:30 A.M. to 3:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Asta, can be reached on (703) 305-3817. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-9564.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-5359 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

8/10/99

MEHMET B. GECKIL
PRIMARY EXAMINER

Form PTO 948 (Rev. 8-98) U.S. DEPARTMENT OF COMMERCE - Patent and Trademark Office Application No. 08/997,[illegible]

NOTICE OF DRAFTSPERSON'S PATENT DRAWING REVIEW

The drawing(s) filed (insert date) 12/23/97 are:

A. ☐ approved by the Draftsperson under 37 CFR 1.84 or 1.152.

B. ☒ objected to by the Draftsperson under 37 CFR 1.84 or 1.152 for the reasons indicated below. The Examiner will require submission of new, corrected drawings when necessary. Corrected drawing must be sumitted according to the instructions on the back of this not

1. DRAWINGS. 37 CFR 1.84(a): Acceptable categories of drawings: Black ink. Color.
   - ___ Color drawings are not acceptable until petiton is granted. Fig(s) ___
   - ___ Pencil and non black ink not permitted. Fig(s) ___
2. PHOTOGRAPHS. 37 CFR 1.84 (b)
   - ___ 1 full-tone set is required. Fig(s) ___
   - ___ Photographs not properly mounted (must use brystol board or photographic double-weight paper). Fig(s) ___
   - ___ Poor quality (half-tone). Fig(s) ___
3. TYPE OF PAPER. 37 CFR 1.84(e)
   - ___ Paper not flexible, strong, white, and durable. Fig(s) ___
   - ___ Erasures, alterations, overwritings, interlineations, folds, copy machine marks not accepted. Fig(s) ___
   - ___ Mylar, velum paper is not acceptable (too thin). Fig(s) ___
4. SIZE OF PAPER. 37 CFR 1.84(f): Acceptable sizes:
   - ___ 21.0 cm by 29.7 cm (DIN size A4)
   - ___ 21.6 cm by 27.9 cm (8 1/2 x 11 inches)
   - ___ All drawing sheets not the same size. Sheet(s) ___
   - ___ Drawings sheets not an acceptable size. Fig(s) ___
5. MARGINS. 37 CFR 1.84(g): Acceptable margins:

   Top 2.5 cm Left 2.5cm Right 1.5 cm Bottom 1.0 cm
   SIZE: A4 Size
   Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm
   SIZE: 8 1/2 x 11
   - Margins not acceptable. Fig(s) 2-6,8,9,11-13
   - ___ Top (T) ☒ Left (L)
   - ___ Right (R) ___ Bottom (B)
6. VIEWS. 37 CFR 1.84(h)
   REMINDER: Specification may require revision to correspond to drawing changes.
   Partial views. 37 CFR 1.84(h)(2)
   - ___ Brackets needed to show figure as one entity. Fig(s) ___
   - ☒ Views not labeled separately or properly. Fig(s) 4-5, 7, 10
   - ___ Enlarged view not labeled separately or properly. Fig(s) ___
7. SECTIONAL VIEWS. 37 CFR 1.84 (h)(3)
   - ___ Hatching not indicated for sectional portions of an object. Fig(s) ___
   - ___ Sectional designation should be noted with Arabic or Roman numbers. Fig(s) ___
8. ARRANGEMENT OF VIEWS. 37 CFR 1.84(i)
   - ___ Words do not appear on a horizontal, left-to-right fashion when page is either upright or turned so that the top becomes the right side, except for graphs. Fig(s) ___
9. SCALE. 37 CFR 1.84(k)
   - ___ Scale not large enough to show mechanism without crowding when drawing is reduced in size to two-thirds in reproduction. Fig(s) ___
10. CHARACTER OF LINES, NUMBERS, & LETTERS. 37 CFR 1.84(l)
    - ☒ Lines, numbers & letters not uniformly thick and well defined; clean, durable, and black (poor line quality). Fig(s) 1-4-6, 8, 9, 11-14
11. SHADING. 37 CFR 1.84(m)
    - ___ Solid black areas pale. Fig(s) ___
    - ___ Solid black shading not permitted. Fig(s) ___
    - ___ Shade lines, pale, rough and blurred. Fig(s) ___
12. NUMBERS, LETTERS, & REFERENCE CHARACTERS. 37 CFR 1.84(p)
    - ☒ Numbers and reference characters not plain and legible. Fig(s) 1-4-6, 8, 9, 11-14
    - ___ Figure legends are poor. Fig(s) ___
    - ___ Numbers and reference characters not oriented in the same direction as the view. 37 CFR 1.84(p)(1) Fig(s) ___
    - ___ English alphabet not used. 37 CFR 1.84(p)(2) Figs ___
    - ☒ Numbers, letters and reference characters must be at least .32 cm (1/8 inch) in height. 37 CFR 1.84(p)(3) Fig(s) 1-4-6, 8, 9, 11-14
13. LEAD LINES. 37 CFR 1.84(q)
    - ___ Lead lines cross each other. Fig(s) ___
    - ___ Lead lines missing. Fig(s) ___
14. NUMBERING OF SHEETS OF DRAWINGS. 37 CFR 1.84(t)
    - ___ Sheets not numbered consecutively, and in Arabic numerals beginning with number 1. Sheet(s) ___
15. NUMBERING OF VIEWS. 37 CFR 1.84(u)
    - ___ Views not numbered consecutively, and in Arabic numerals, beginning with number 1. Fig(s) ___
16. CORRECTIONS. 37 CFR 1.84(w)
    - ___ Corrections not made from prior PTO-948 dated ___
17. DESIGN DRAWINGS. 37 CFR 1.152
    - ___ Surface shading shown not appropriate. Fig(s) ___
    - ___ Solid black shading not used for color contrast. Fig(s) ___

COMMENTS

REVIEWER [illegible] DATE 8/2/01 TELEPHONE NO. ___

ATTACHMENT TO PAPER NO. 4

FAXED

Notice of References Cited

Application No.	Applicant(s)		
08/997,348	Peter Sung-An Huang et al		
Examiner	Group Art Unit	Page	of
Geckil	2756	1	1

U.S. PATENT DOCUMENTS

*		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
	A	5,931,917	8/3/99	Nguyen et al	709	250
	B	5,925,101	7/20/99	Bayless et al	709	219
	C	5,915,085	6/22/99	Koved	395	186
	D	5,884,312	3/16/99	Dustan et al	707	10
	E	5,870,558	2/9/99	Brouton, Jr. et al	395	200.54
	F	5,867,495	2/2/99	Elliott et al	370	352
	G	5,838,682	11/17/98	Dekelbaum et al	370	401
	H	5,805,829	9/8/98	Cohen et al	395	200.32
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
	N						
	O						
	P						
	Q						
	R						
	S						
	T						

NON-PATENT DOCUMENTS

*		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
	U		
	V		
	W		
	X		

*A copy of this reference is not being furnished with this Office action.
(See Manual of Patent Examining Procedure, Section 707.05(a).)

Part of Paper No. 4

U.S. Patent and Trademark Office
PTO-892 (Rev. 9-96)

*U.S. GPO: 1997-417-387

EXHIBIT 4

#5/And Tag/~~2756~~
Inc. to Brown
11/26/99
2757

ATTORNEY'S DOCKET NO.
036560.5892

PATENT APPLICATION

OIPE JC81
NOV 15 1999
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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NOV 17 1999
TECH CENTER 2700

In re Application of:	Peter Sung-An Huang, et al.
Serial No.:	08/997,348
Filing Date:	December 23, 1997
Group Art Unit:	2756
Examiner:	Mehmet B. Geckil
Title:	GRAPHIC USER INTERFACE SYSTEM FOR A TELECOMMUNICATIONS SWITCH MANAGEMENT SYSTEM

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on the date shown below.

Lori Vonin
Name

November 10, 1999
Date of Signature

Assistant Commissioner
for Patents
Washington, D.C. 20231

Dear Sir:

RESPONSE TO EXAMINER'S ACTION

In response to the Official Action mailed August 11, 1999, Applicants respectfully request the Examiner to reconsider the rejection of the claims in view of the following amendments thereto and the comments as set forth below.

IN THE ABSTRACT

Please delete the last sentence of the Abstract from page 56, line 26, to page 57, line 5.

IN THE CLAIMS

For the convenience of the Examiner, all pending claims are shown below whether or not an amendment has been made. Please amend the claims as follows:

Sub B1

C1

1. (Amended) A graphic user interface system which provides displays for enabling one or more users to access a telecommunications switching system, comprising:

a remote computer having a browser for providing communications;

a server publicly accessible by said browser and having an application program which enables said remote computer to communicate with the telecommunications switching system, said server being in communication with said remote computer via a first public communications link, and being capable of providing a copy of said application program to said remote computer, said remote computer running the application program separate from the server; and

a system manager building block in communication via a second public communications link with said remote computer running said application program, said system manager building block also being in communication with a system management interface building block for communicating with the telecommunications switching system, said system manager building block containing information related to authorized users for determining whether to permit the users to access the telecommunications switching system.

2. The graphic user interface system of claim 1, wherein said server further comprises a server page for storing said application program.

3. The graphic user interface system of claim 1, wherein said server is a hypertext markup language (HTML) server.

4. The graphic user interface system of claim 1, wherein said system manager building block further comprises a runtime library for containing said information related to authorized users.

5. The graphic user interface system of claim 1, wherein said system manager building block is configured to maintain records related to each instance a user accesses the telecommunications switching system.

6. The graphic user interface system of claim 1, wherein said server provides said application program to said remote computer in the form of a Java Applet.

7. The graphic user interface system of claim 1, wherein said application program is configured to run on said remote computer in a stand-alone capacity without additional communication with said server, in order to communicate with said system manager building block to access said telecommunications switching system.

8. The graphic user interface system of claim 1, wherein said system manager building block and said system management interface building block conform to a common object request broker architecture (CORBA).

9. The graphic user interface system of claim 1, wherein said remote computer is in communication with said server via a first communications link, and wherein said remote computer is in communication with said system manager building block via a second communications link.

10. The graphic user interface system of claim 9, wherein said first and second communications links are internet communications links.

11. The graphic user interface system of claim 9, wherein said first and second communications links use an internet inter-ORB protocol (IIOP) communications protocol.

12. The graphic user interface system of claim 9, wherein said first and second communications links use a hypertext transport protocol (HTTP) communications protocol.

13. The graphic user interface system of claim 1, wherein said system manager building block further comprises said server, and wherein said remote computer is in communication with said server and with said system manager building block via a single communications link.

14. The graphic user interface system of claim 13, wherein said single communications link is an internet communications link.

15. The graphic user interface system of claim 13, wherein said single communications link uses an internet inter-ORB protocol (IIOP) communications protocol.

16. The graphic user interface system of claim 13, wherein said single communications link uses a hypertext transport protocol (HTTP) communications protocol.

17. (Amended) A method for accessing a telecommunications switching system, comprising the steps of:

initializing a browser running on a remote computer;

accessing a server with said browser, said server having an application program for communicating with said telecommunications switching system;

providing a copy of the application program from said server to said remote computer;

initializing said application program on said remote computer and accessing said telecommunications switching system with said application program from said remote computer;

determining whether to permit access to said telecommunications switching system by said remote computer; and

communicating with a system manager building block from said remote computer to provide communication with the telecommunications switching system.

18. The method of claim 17, wherein said step of accessing a server further comprises the step of accessing a server page in the server, wherein the server page contains said application program for communicating between said remote computer and said telecommunications switching system.

19. The method of claim 17, wherein the server comprises a hypertext markup language (HTML) server.

20. The method of claim 17, wherein said step of determining whether to permit access to said telecommunications switching system further comprises the step of comparing information provided by a user at said remote computer with information related to authorized users contained in a runtime library in said system manager building block.

21. The method of claim 17, wherein said step of determining whether to permit access to said telecommunications switching system further comprises the steps of:

comparing identification numbers provided by a user at said remote computer with identification numbers of authorized users; and

comparing passwords provided by said user with passwords of authorized users.

22. The method of claim 17, further comprising the step of maintaining records related to each instance a user accesses the telecommunications switching system.

23. The method of claim 17, further comprising the step of establishing a socket connection between said remote computer and a system security manager client building block.

24. The method of claim 17, wherein said application program is provided to the remote computer in the form of a Java Applet.

25. The method of claim 17, wherein said step of initializing said application program on said remote computer comprises running said application program in a stand-alone capacity without further communicating with the server.

26. The method of claim 17, wherein said system manager building block conforms to a common object request broker architecture (CORBA).

27. A graphic user interface system which provides displays for enabling one or more users to remotely access a telecommunications switching system, comprising:

a remote computer having an internet browser for accessing a first internet communications link;

a hypertext markup language (HTML) remote server accessible by said internet browser and having a server page, said server page having a Java application program which enables said remote computer to communicate with the telecommunications switching system, said remote server being in communication with said remote computer via said first internet communications link, and being capable of providing a copy of said Java application program to said remote computer in the form of a Java Applet so that said remote computer can run said copy of said Java application program in a stand-alone capacity without additional communication with said remote server; and

a system manager building block having a CORBA architecture and having a runtime library, said system manager building block being in communication via a second internet communications link with said remote computer running said copy of said Java application program, said system manager building block also being in communication with a system management interface building block having a CORBA architecture for communicating with the telecommunications switching system, said runtime library containing information related to identification numbers and passwords of authorized users for determining whether to permit the users to access the telecommunications switching system.

28. The graphic user interface launcher of claim 27, wherein said system manager building block is configured to maintain records related to each instance a user accesses the telecommunications switching system.

29. The graphic user interface launcher of claim 27, wherein said first and second internet communications links use an internet inter-ORB protocol (IIOP) communications protocol.

30. The graphic user interface launcher of claim 27, wherein said first and second internet communications links use a hypertext transport protocol (HTTP) communications protocol.

REMARKS

This Application has been carefully reviewed in light of the Official Action mailed August 11, 1999. In order to advance prosecution of this case, Claims 1 and 17 have been amended in order to clarify and further describe various inventive concepts. Applicants respectfully request reconsideration and favorable action in this case.

The abstract of the disclosure has been objected to as not being on a single page. The abstract has been amended to comply with M.P.E.P. § 608.01(b).

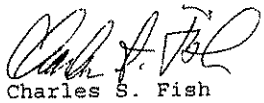
Claims 1-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Branton, Jr., et al. in view of Koved. Applicants note that the Examiner only provided an examination with respect to Independent Claim 1 and did not mention any of the limitations found in the other claims. Applicants respectfully request a full and complete examination of each and every presented claim. With respect to Independent Claim 1, there is recited ". . . said server being in communication with said remote computer via a first public communication link, and being capable of providing a copy of said application program to said remote computer, said remote computer running said application program separate from said server; and a system manager building block in communication via a second public communication link with said remote computer running said application program . . ." By contrast, the Branton, Jr., et al. patent uses a private Intranet for communications between a server and a workstation. Also, the workstations of the Branton, Jr., et al. patent have no communication link to its switch network other than through its server and no application program is provided to the workstation by the server. Thus, the Branton, Jr., et al. patent does not provide public access to a telecommunication switching system from a stand alone remote computer as provided by the claimed invention. Independent Claims 17 and 27 include similar patentably distinct limitations. Support for the above recitation can be found at page 12, lines 24-26, and page 13, lines 13-17, of Applicants' specification. Therefore, Applicants respectfully submit that Claims 1-30 are

patentably distinct from the proposed Branton, Jr., et al. - Koved combination.

Applicants have now made an earnest attempt to place this case in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request full allowance of Claims 1-30.

The Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker & Botts, L.L.P.

Respectfully submitted,
BAKER & BOTTS, L.L.P.
Attorneys for Applicant



Charles S. Fish
Reg. No. 35,870

2001 Ross Avenue
Dallas, Texas 75201-2980
(214) 953-6507
November 10, 1999

EXHIBIT 5

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/997,348	12/23/97	HUANG	P 036569.5

LM01/0124

BAKER & BOTTS
2001 ROSS AVENUE
DALLAS TX 75201-2980

EXAMINER	
GECKIL M	
ART UNIT	PAPER NUMBER
2756	6

DATE MAILED: 01/24/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

PTO-90C (Rev. 2/95) U.S. G.P.O. 1999 460-893 1- File Copy

Office Action Summary	Application No. 08/997,348	Applicant(s) Peter Seong-An Huang et al
	Examiner Gechel	Group Art Unit 2756

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 (three) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
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Status

☒ Responsive to communication(s) filed on 11/15/99.

☒ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-30 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-30 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____.

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☒ Notice of References Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

U. S. Patent and Trademark Office
PTO-326 (Rev. 3-97)

*U.S. GPO: 1997-417-381/62710

Part of Paper No. 6

1. Claims 1-30 are presented for examination.

2. Claims 1-16 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite because the amended claim language recites first and second public communications links but it is not clear whether the first and second public communications are the same communications link or separate communications links. For example, it is not clear in the claims whether these are dedicated separate communications wired links like frame relay links connected to the web server and to the system manager separately or whether they are like TCP/IP links for making a call to an address through a browser by writing the address like http://www.geckil.com and http://www.geckil.com/~harvest . As it can be seen from these examples, these are different links pointing to different addresses and for example, at htttp://www.geckil.com first public link a public web server is running and at a second public link at http://www.geckil.com/~harvest a harvest search engine is running. But in reality these first and second links are the same link running from the ppp connection running between the service provider and the server running at the geckil.com domain. Applicant's amending the claims in such a way is generating an ambiguity to the nature of these first and second public links.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Branton, Jr. et al in view of Koved.

5. Branton, Jr. et al (5,870,558) taught the invention substantially as claimed including a graphical user interface for enabling one or more users to access a sonet telecommunications switching system, comprising:

a) a remote computer having a browser (col 4-6);

b) a web server (284) accessible by the browser (col 4 line 4 et seq) and having an interface application program which enables the remote computer to communicate with the telecommunications network switching management system (col 4 line 5 et seq), and being capable of providing a copy of the application program to the remote computer, (col 13 line 1 et seq); and

c) a network management system or system manager building block (271-273) in communications with the remote computer running the browser application program, the system manager building block (271-273) also being in communication with the sonet (56,260) telecommunications

switching system (cols 4-6), the system manager building block containing information related to authorized users (col 4 line 26 et seq and col 7 lines 1-8.)

6. Branton Jr. et al due to the scope of his teachings did not go into details of determining whether to permit the users to access the telecommunications switching system, instead they only stated that authorized users associated with the service provider organization could access to the telecommunications switching system. It would have been obvious to one of ordinary skill in the Internet art at the time of the invention that users who has an account with a service provider are authorized to access the web services after passing an authentication scheme, e.g., filling the information requested by the service provider, e.g. submitting user ID at the login prompt and also submitting the password. These are provided by the security manager software running on the service provider computer. These are all well known features of web accessing. For example, Koved (5,915,085) taught such a security manager, e.g., see figure 7. It would have been obvious to one of ordinary skill in the Internet art at the time of the invention to combine the teachings of Branton Jr. et al and Koved because Koved just provided the well known details of the security manager which is used to authorize users taught by Branton Jr. et al. Koved suggested that one skilled in the art would realize that loadable content could be adapted to other environments, such as active X, or OMG's CORBA and IIOP, where the loadable content is

executable (col 4 lines 62-66.) Other claimed features are all obvious variations of the well known features of using graphical interfaces to access remote devices via the www features. It would have been obvious to one of ordinary skill in the Internet art at the time of the invention that using applets to accomplish what has been done previously using the well known html or cgi scripts is just an obvious variations of web accessing, see also Koved teaching applets and Branton et al also teaching applets on column 13 line 3. Applicant's new language in claim 1, e.g., "said remote computer running the application program separate from the server" is no more than stating the obvious because that is the way applets works. E.g., the applet is downloaded from the server and then is executed in the user space or in the client's computer and therefore runs in application program or applet separate from the server.

7. Applicant in the response argued that the Branton did not teach providing application program to the workstation from the server. Examiner addressed this issue by pointing out that Branton actually taught the applet program in column 13. It appears that applicant missed that portion of the patent while reading it through in order to understand how the Branton et al teachings apply to the present claims. Applicant further argued that Branton et al teaching were not relevant because they taught their invention in the intranet environment. Examiner states that the intranet definition is such that the TCP/IP protocol is running in the networking environment. Internet also runs with the same TCP/IP protocol. Therefore the difference between the Intranet and Internet is just in a degree. One kill in the art knows how to implement a teaching based on

an intranet to the Internet. If one skill in the art cannot do that then it is not qualified to be defined as one skill in the art. Branton et al teachings is a major teaching and cannot be trivialized by saying that they taught it in the intranet environment. Examiner runs a web site and a search engine at the http://www.geckil.com for the past three years and is very familiar to the scope of the TCP/IP in the intranet and in the Internet. As a final comment examiner likes to point out that the present claims are very broad and reads on the cited teachings. If applicant finds a major different differentiating point other than what is in the these claims examiner would like consider them in an after final consideration. But the differentiating must be a considerable.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Davis et al (5,870,545) taught accessing and managing a telecommunications switching system by using middleware software like Corba and applets, e.g., see col 6 line 1 et seq and explanation of figure 6 in column 9+.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehmet Geckil whose telephone number is (703) 305-9676. The examiner can normally be reached on Monday through Friday from 6:30 A.M. to 3:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Asta, can be reached on (703) 305-3817. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-9564.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-5359 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

18/20/00

MEHMET B. GECKIL
PRIMARY EXAMINER

Mehmet Geckil

Notice of References Cited

Application No.	Applicant(s)
08/997,348	Peter Leung-An Huang et al
Examiner	**Group Art Unit**
Gerkis	2756

Page 1 of 1

U.S. PATENT DOCUMENTS

*		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
	A	5,907,547	5/25/99	Foladare et al	370	352
	B	5,870,545	2/9/99	Davis et al	709	201
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
	N						
	O						
	P						
	Q						
	R						
	S						
	T						

NON-PATENT DOCUMENTS

*		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
	U		
	V		
	W		
	X		

* A copy of this reference is not being furnished with this Office action. (See Manual of Patent Examining Procedure, Section 707.05(a).)

U.S. Patent and Trademark Office
PTO-892 (Rev. 9-96)

Part of Paper No. 6

U.S. GPO: 1997-417-291

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Search Results -

Terms	Documents
123 and applet	9

Database: US Patents Full-Text Database

Refine Search: 123 and applet

Search History

DB Name	Query	Hit Count	Set Name
USPT	123 and applet	9	L30
USPT	124 and applet	1	L29
USPT	125 and applet	1	L28
USPT	126 and applet	0	L27
USPT	125 and 115	7	L26
USPT	124 same (browser or interface or display)	45	L25
USPT	123 same (authenticat$ or password or secret or user or id or identification)	158	L24
USPT	122 same (java or applet or code or application or program)	530	L23
USPT	121 same (access$ or manag$)	1643	L22
USPT	(telecommunication$1 adj3 (network$1 or switch$))	5715	L21
USPT	(telecommunication or network or switch$) same manag$	18269	L20
USPT	117 and 118	3	L19
USPT	17 and applet	29	L18
USPT	115 and applet	8	L17
USPT	115 and 18	10	L16
USPT	113 same (authoriz$ or authenticat$ or password or user$1 or login or permit$ or access$ or service$ or allow$)	1091	L15
USPT	113 same (authoriz$ or authenticat$ or password or user$1 or login)	492	L14
USPT	112 same (manag$ or application or server or code or block or interface)	1671	L13
USPT	((telephon$ or phone) adj call) same (telecommunication or switch$)	4006	L12
USPT	18 same (telecommunication)	3	L11
USPT	19 same (allow$ or permi$ or letting or authorizing)	4	L10
USPT	18 same (check$ or authenticat$ or password or log$ or secret or authoriz$)	28	L9
USPT	16 same 17	90	L8
USPT	15 same (making or calling or telephone or call or switch$ or telecommunication or phone)	208	L7

USPT	l5 same (making or calling or telephone or call or switch$ or telecommunication or phone)	208	L7
USPT	l5 same (run$ or execut$)	292	L6
USPT	l4 same (access$ or enabl$ or making or connect$ or communicat$ or link$)	678	L5
USPT	l3 same (user or interface or graphical or display$3)	916	L4
USPT	l2 same (client or computer or remote or browser)	1462	L3
USPT	l1 same server	2208	L2
USPT	(applet or code or application) same (download$ or transmit$ or copy$)	120450	L1

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Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC

Document Number 1

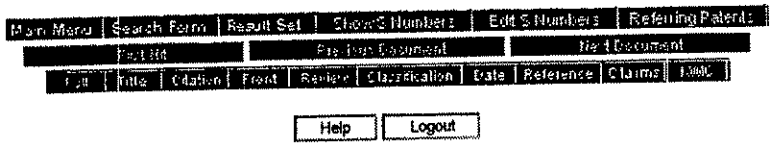
Entry 1 of 1 File: USPT Feb 9, 1999

DOCUMENT-IDENTIFIER: US 5870558 A
TITLE: Intranet graphical user interface for SONET network management

BSPR:
Two of the above mentioned needs are satisfied by above referenced U.S. patent applications and the third above referenced need is satisfied by the present invention. Specifically, the patent application entitled "System and Method for Tracking and Monitoring Network Elements" satisfies the above mentioned monitoring needs by providing a network management system that is controlled by the service provider. The Patent Application entitled "System And Method For The Automated Configuration Of Network Elements In A Telecommunications Network", satisfies the above mentioned configuration needs by providing a network management system that automatically configures the network elements. The present invention satisfies the above mentioned shared access needs by providing a graphical user interface that provides shared access to a network management system for a wide variety of diverse computer systems distributed over a large geographical area.

DEPR:
In a preferred embodiment, the user is notified and presented with the results in a user request browser window. For example, web browser programming tools such as Java.RTM. by Sun Microsystems, or ActiveX.RTM., by Microsoft Corporation, can be used to launch a new thread or applet, when the user submits a request. The applet is used to display a new and separate browser window which maintains communication links with a web page used to display results of the user request. In this fashion, the results page is updated with the results of the user request as soon as the results are available. If the user logs off the web browser before the results are available, the user may be presented with an option to re-launch the applet at a subsequent time to view the results of the user query. In addition to the examples presented, other methods may be used to report the results of a user request without departing from the principles disclosed herein. Such methods will be apparent to those skilled in the relevant arts. As such, the example used herein should not be construed to limit the scope and breadth of the present invention.

DEPR:
Next, in steps 1206 and 1208, the user request is scheduled. This involves assigning a time/date window, comprising a beginning time and date and an ending time and date for the request. As indicated in step 1206, for off-line requests, the determination of the time window depends on the current work that is scheduled for the controllers 271-273 and the requested time specified in the user request (if any). As indicated in step 1208, online requests are typically scheduled immediately if possible. In step 1210, the completed work request(s) is (are) stored in the dispatch table and control passes to step 1212. In step 1212, the scheduler sends status information to the user. As previously described, the status can be reported in an E-mail message, on the user request web page, or on a separate applet-launched user result web page.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Next Document
Full
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Citation
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Reference
Claims
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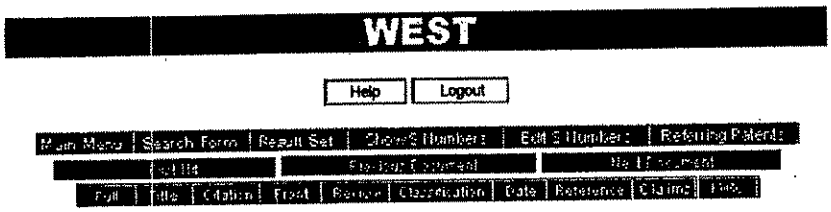


Document Number 2

Entry 2 of 3 File: USPT May 25, 1999

DOCUMENT-IDENTIFIER: US 5907598 A
TITLE: Multimedia web page applications for AIN telephony

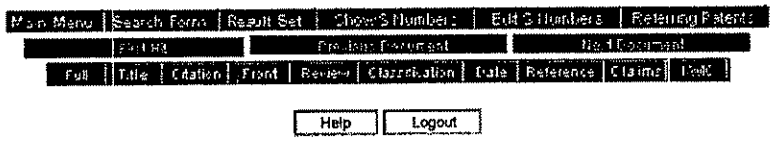
ABPL:
The disclosure allows for creation of special web-page repositories within subsystems of the present PSTN (public switched telephone network) that conform to present architectures for advanced intelligent network (AIN) constructs in telephony. Such repositories would be formed to receive facsimile (fax) telephone transmissions, convert them to HTML (Hypertext Markup Language) web page format, store the converted results and render the latter available for viewing simultaneously--under control of PSTN call management intelligence--to multiple users of the Internet and World Wide Web subject to authorization of would be viewers by the sending party. A typical application of this capability allows for a PSTN user setting up a voice conference to controllably distribute expository charts to other conference participants, via the Internet, thereby adding a video dimension to the voice conference without imposing a bandwidth strain on the PSTN voice networks currently handling the conference, and also allowing for the transmissions to be sent in an orderly manner coordinated with a given participant's voice presentation so that the conference participants can not merely compete in a random and potentially chaotic manner for making such graphic presentations to each other. Such repositories also would be useful to receive graphic information in forms other than that associated with present-day facsimile transmission; e.g. text generated by word processor and/or e-mail applications, or images generated by ordinary computer-graphic applications, all of which could be sent from computers to respective repositories/servers within the PSTN, via the Internet, after conversion by appropriately configured applets (e.g. mini-applications written in a language consistent with web browsers presently used on computers).

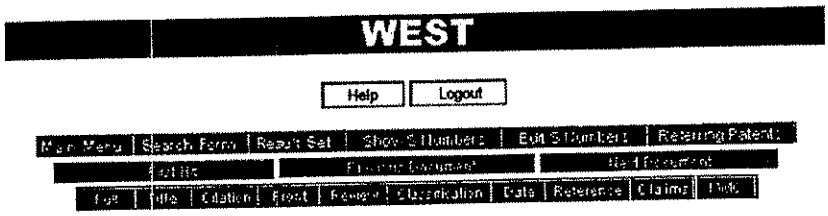
BSPR:
The related architecture pertains to advanced intelligent network (AIN) concepts, in which telephone call processing and customer/user services related thereto, are handled by intelligent peripheral entities, each containing a network of computer systems and switching apparatus linked by data communication media. The referenced application concerns an intelligent peripheral system of that character which is organized as a multiprocessor wherein applicational responsibilities for implementation of customer/user service functions (call waiting, call forwarding, speech recognition, etc.) are distributed among plural processors, and which is structured to allow for communication with networks external to the PSTN, the latter including the Internet.

BSPR:
Such transmissions are intercepted by the respective AIN intelligence, converted to a format suited for reproducible construction of an image page on the Internet or Web (e.g. a format such as HTML or Hypertext Markup Language), and stored by the interfacing server at a URL (Uniform Resource Location) or net "address" assigned to the respective user. Thereafter, individuals

authorized by the user who sent the original fax image can access the external data network (e.g. the Internet) via execution of standard "browser" software applications on their computers (e.g. browser applications such as Netscape's Navigator which are now ubiquitously available on millions of computers), request access to certain data resulting in a prompt from the browser to enter a PIN (personal identification number) uniquely associated with the URL and a pre-arranged password, and receive a downloaded copy of the stored image(s) associated with the original transmission in a form displayable on the requester's computer monitor. The PIN and password can be given to these individuals by the original transmitting user; e.g. in a voice telephone conversation or conference.

CLPR:
8. In a telephone call management system for the PSTN (public switched telephone network), a facility for adapting said call management system to provide users of said PSTN with an electronic document distribution service enabling a user subscribing to said service to have information representing a viewable document transmitted from that subscribing user to multiple parties pre-authorized by the subscribing user to view said viewable document; said adapting facility comprising:





Document Number 2

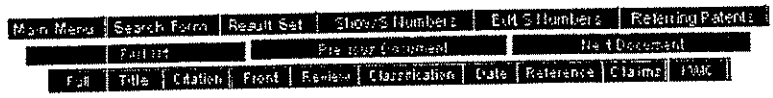
Entry 2 of 10 File: USPT May 25, 1999

DOCUMENT-IDENTIFIER: US 5907598 A
TITLE: Multimedia web page applications for AIN telephony

BSPR:
The related architecture pertains to advanced intelligent network (AIN) concepts, in which telephone call processing and customer/user services related thereto, are handled by intelligent peripheral entities, each containing a network of computer systems and switching apparatus linked by data communication media. The referenced application concerns an intelligent peripheral system of that character which is organized as a multiprocessor wherein applicational responsibilities for implementation of customer/user service functions (call waiting, call forwarding, speech recognition, etc.) are distributed among plural processors, and which is structured to allow for communication with networks external to the PSTN, the latter including the Internet.

BSPR:
Such transmissions are intercepted by the respective AIN intelligence, converted to a format suited for reproducible construction of an image page on the Internet or Web (e.g. a format such as HTML or Hypertext Markup Language), and stored by the interfacing server at a URL (Uniform Resource Location) or net "address" assigned to the respective user. Thereafter, individuals authorized by the user who sent the original fax image can access the external data network (e.g. the Internet) via execution of standard "browser" software applications on their computers (e.g. browser applications such as Netscape's Navigator which are now ubiquitously available on millions of computers), request access to certain data resulting in a prompt from the browser to enter a PIN (personal identification number) uniquely associated with the URL and a pre-arranged password, and receive a downloaded copy of the stored image(s) associated with the original transmission in a form displayable on the requester's computer monitor. The PIN and password can be given to these individuals by the original transmitting user; e.g. in a voice telephone conversation or conference.

CLPR:
8. In a telephone call management system for the PSTN (public switched telephone network), a facility for adapting said call management system to provide users of said PSTN with an electronic document distribution service enabling a user subscribing to said service to have information representing a viewable document transmitted from that subscribing user to multiple parties pre-authorized by the subscribing user to view said viewable document; said adapting facility comprising:



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Document Number 4

Entry 4 of 9 File: USPT Feb 9, 1999

DOCUMENT-IDENTIFIER: US 5870545 A
TITLE: System and method for performing flexible workflow process compensation in a distributed workflow management system

DEPR:
The overall architecture of the HP OpenPM system is depicted in FIG. 2. The core is the HP OpenPM engine 20, which supports five interfaces. The interfaces enable the HP OpenPM engine 20 to interact with workflow process designer 22a-c, workflow process instance execution 23a-b, workflow process monitor 24a-c, workflow management 28a-c and business object management modules 30, 31, 32, 33. In addition, worldwide web client support is provided by each individual network node 12a which can execute middleware modules expressed in platform-independent languages, such as Java Applets and HTML code. An HP OpenPM database 21 is maintained on the centralized WFPM server 17 (shown in FIG. 1) for use by the HP OpenPM engine 20.

DEPR:
FIG. 7 is a process definition diagram for configuration management of the telecommunications network in the example of FIG. 6 based on the HP OpenPM system. It depicts a prototype to demonstrate the application of WFPM technology in the specific domain of SONET (Synchronous Optical Network) configuration management. The prototype was a joint project between HP Laboratories in Bristol, England and Palo Alto, Calif. to demonstrate the middleware technologies required to automate the processes supporting the configuration management of a SONET telecommunications network.

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Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | HMC

Document Number 8

Entry 8 of 9 File: USPT Oct 20, 1998

DOCUMENT-IDENTIFIER: US 5826239 A
TITLE: Distributed workflow resource management system and method

DEPR:
The overall architecture of the HP OpenPM system is depicted in FIG. 2. The core is the HP OpenPM engine 20, which supports five interfaces. The interfaces enable the HP OpenPM engine 20 to interact with workflow process designer 22a-c, workflow process instance execution 23a-b, workflow process monitor 24a-c, resource management 28a-c and business object management modules 30, 31, 32, 33. In addition, worldwide web client support is provided by each individual network node 12a which can execute middleware modules expressed in platform-independent languages, such as Java Applets and HTML code. An HP OpenPM database 21 is maintained on the centralized WFPM server 17 (shown in FIG. 1) for use by the HP OpenPM engine 20.

DEPR:
FIG. 7 is a process definition diagram for configuration management of the telecommunications network in the example of FIG. 6 based on the HP OpenPM system. It depicts a prototype to demonstrate the application of WFPM technology in the specific domain of SONET (Synchronous Optical Network) configuration management. The prototype was a joint project between HP Laboratories in Bristol, England and Palo Alto, Calif. to demonstrate the middleware technologies required to automate the processes supporting the configuration management of a SONET telecommunications network.

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Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | HMC

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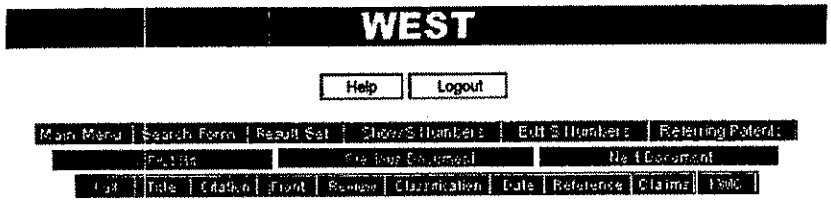


Document Number 9

Entry 9 of 9 File: USPT Aug 25, 1998

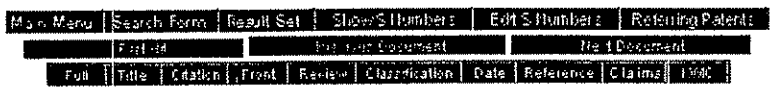
DOCUMENT-IDENTIFIER: US 5799285 A
TITLE: Secure system for electronic selling

DEPR:
In fact, the Open Systems Interconnection (OSI) seller interface layers 29 shown on the left side of FIG. 1 which are the same as the OSI layers 27 on the right side of FIG. 1 are the same as those discussed in the TRY-BUY application. In prior art schemes, the financial systems are based on interfacing to the Transport layer of the OSI seven-layer architecture whereas the financial system taught in the TRY-BUY application is coupled to the Physical layer of the OSI scheme. The latter approach is similarly employed in the present invention wherein the resulting system makes optimal use of two networks, the switched public services telecommunication network (PSTN) network, and the packet (Internet) network to achieve low cost product presentation and secure product transaction and evaluation thereby addressing the problem of security of information by using direct connection over the PSTN in place of packet ("Postcard") transmission over the (Internet). The present invention utilizes the physical layer coupling to the financial system to minimize the cost and to ease the access to the distribution systems.

DEPR:
The way in which the distributor system 20 automatically generates product information in the form of HTML web pages by extracting the product information included in the EKOM registration system 34, and adding the HTML "tags" as appropriate to format the web page. Accordingly, it is important for the seller to provide an accurate product description (preferably covered in the legal agreement between the seller and the distributor) and that the description of the product to be in a pre-defined format in accordance with the registration form's format. This will allow the distributor's software to extract the seller's information and, using HTML tags, to package it effectively for product advertising such as during the TRY connection disclosed in the TRY-BUY application. The uploaded registration form information provided by the seller to the distributor's subsystem 20 may include graphics to allow advertising of the seller's product through the use of graphics and potentially JAVA applets. The present invention allows for complete automation of the selling process with little or no human intervention.

DEPV:
Seller's "Demo" Applets or equivalent

DEPV:
a. create a JAVA class or applet (or story, etc.)



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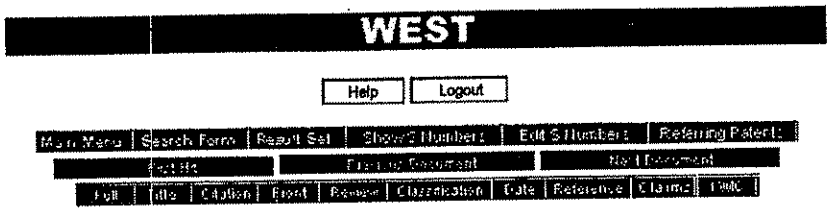
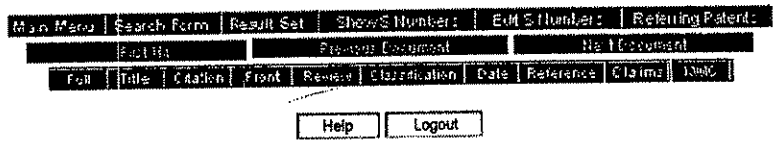


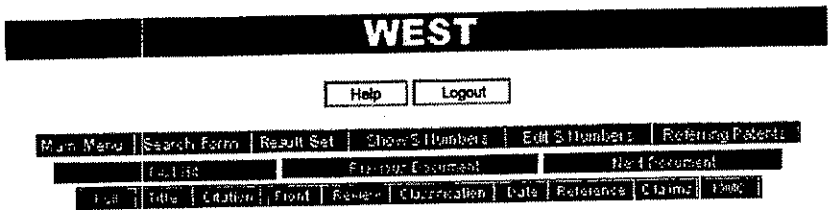
Document Number 3

Entry 3 of 10 File: USPT May 25, 1999

DOCUMENT-IDENTIFIER: US 5907547 A
TITLE: System and method for establishing internet communications links

DEPR:
When client 12 receives the notification packet, a notification message is displayed for the customer at client 12. For example, the message "customer service representative is now available--would you like to continue?" could be displayed. If the customer answers affirmatively (e.g., by clicking on a "yes" button), a data communications link is established between client 12 and server 14. The data communications link is established based on linking information provided to client 12. If desired, the linking information can be provided in advance, when the notification applet is downloaded. Alternatively, the linking information can be provided dynamically, as part of the notification packet. Preferably, the customer service representative and the customer both run standard Web browsers, which server 14 bridges together to form the data communications link. A telephone call between the customer and the customer service representative is also set up, in addition to the data communications link. For example, server 14 can direct private branch exchange 34 to set up a telephone call between the customer service representative and the customer via public switched telephone network 36 and local exchange carrier 18. The telephone call is established over lines 37.





Document Number 3

Entry 3 of 3 File: USPT May 25, 1999

DOCUMENT-IDENTIFIER: US 5907547 A
TITLE: System and method for establishing internet communications links

BSPR:
While the customer is accessing information in the merchant's on-line catalog, the customer may click on a button to request that one of the merchant's customer service representatives contact the customer. When the button is selected, the server downloads a notification applet containing a notification source identifier that identifies the server. The notification applet monitors incoming Internet traffic using the notification source identifier.

BSPR:
When a customer service representative is available the server sends a notification packet to the client, which is recognized by the notification applet. A notification message is then displayed for the customer that provides the customer with an opportunity to decide whether or not to continue with the process of establishing contact with the customer service representative. If the customer answers affirmatively (e.g., by clicking on a "yes" button), a data communications link is established between the client and the terminal of the customer service representative.

BSPR:
The data communications link is established based on linking information provided to the client. If desired, the linking information can be provided in advance, when the notification applet is downloaded. Alternatively, the linking information can be provided dynamically, as part of the notification packet. Preferably, the customer service representative and the customer both run standard Web browsers, which the server bridges together to form the data communications link. A telephone call between the customer and the customer service representative is also set up, in addition to the Internet data communications link.

DEPR:
In accordance with the present invention, the customer may click on a button on a Web page to request that one of the merchant's customer service representatives contact the customer. When the button is selected, server 14 downloads a notification applet containing a notification source identifier that identifies the source (i.e., server 14) from which a notification packet is to be sent when the customer service representative is available. The notification applet runs in the background on client 12 and continually monitors incoming communications traffic from Internet 20 for notification packets containing the notification source identifier.

DEPR:
When client 12 receives the notification packet, a notification message is displayed for the customer at client 12. For example, the message "customer service representative is now available--would you like to continue?" could be displayed. If the customer answers affirmatively (e.g., by clicking on a "yes" button), a data

communications link is established between client 12 and server 14. The data communications link is established based on linking information provided to client 12. If desired, the linking information can be provided in advance, when the notification applet is downloaded. Alternatively, the linking information can be provided dynamically, as part of the notification packet. Preferably, the customer service representative and the customer both run standard Web browsers, which server 14 bridges together to form the data communications link. A telephone call between the customer and the customer service representative is also set up, in addition to the data communications link. For example, server 14 can direct private branch exchange 34 to set up a telephone call between the customer service representative and the customer via public switched telephone network 36 and local exchange carrier 18. The telephone call is established over lines 37.

DEPR:
Various implementations of system 10 are possible. FIGS. 2 and 3 show steps involved in notifying a customer that a customer service representative is available to handle the customer's transaction. In the process of FIG. 2, the linking information used to establish the data communications link between the customer and the customer service representative is provided dynamically, as part of the notification packet. In the process of FIG. 3, the linking information is provided ahead of time, when downloading the notification applet.

DEPR:
In response to the request submitted at step 44, server 14 downloads a notification applet (e.g., a Java applet) to client 12 over the data communications link between client 12 and server 14 at step 46. The data communications link over which the notification applet is downloaded is preferably the same link used by the customer when accessing the merchant's Web site on server 14. The notification applet contains a notification source identifier that specifies how the notification applet should monitor incoming Internet traffic to determine when server 14 is trying to contact client 12. For example, the notification source identifier may contain one or more ports or Internet Protocol (IP) addresses to monitor. Preferably, the notification source identifier specifies a particular port (e.g., port 80) and a unique IP address associated with server 14.

DEPR:
After the notification applet is downloaded from server 14, it runs continuously in the background on client 12. While the notification applet is running on client 12, the customer is free to break the data communications link between client 12 and server 14 and to browse elsewhere on the Internet. The customer does not need to maintain a continuous data communications link between client 12 and server 14, because a suitable data communications link can be readily established once the customer service representative is available.

DEPR:
The notification applet can identify the notification packet by comparing incoming packets of Internet traffic to the notification source identifier and by confirming that the content of the data field of a given packet indicates the packet is a notification packet. The notification applet recognizes the notification packet from server 14 at step 50.

DEPR:
FIG. 3 shows steps involved in notifying a customer that a customer service representative is available to handle the customer's transaction, where the linking information used to establish the data communications link is provided ahead of time, when downloading the notification applet. At step 62, after a customer views information in an on-line catalog on the merchant's Web site, the customer can submit a request that a telephone call be set up between the customer and a customer service representative and that an associated data

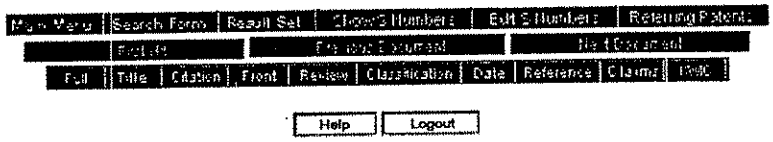
communications link be established. The request can be made by clicking on a button provided as part of the Web pages that make up the online catalog. The customer typically provides the telephone number for telephone 42 during or prior to step 62.

DEPR:
In response to the request submitted at step 62, server 14 downloads linking information identifying the customer and a notification applet (e.g., a Java applet) to client 12 over the data communications link between client 12 and server 14 at step 64. The data communications link used for downloading is preferably the same link used by the customer when accessing the merchant's Web site on server 14. The notification applet contains a notification source identifier that specifies how the notification applet should monitor incoming Internet traffic to determine when server 14 is trying to contact client 12. For example, the notification source identifier may contain one or more ports or Internet Protocol (IP) addresses to monitor. Preferably, the notification source identifier specifies a particular port and a unique IP address associated with server 14.

DEPR:
After the notification applet is downloaded from server 14, it runs continuously in the background on client 12. While the notification applet is running on client 12, the customer is free to break the data communications link between client 12 and server 14 and to browse elsewhere on the Internet. The customer does not need to maintain a continuous data communications link between client 12 and server 14, because a suitable data communications link can be readily established once the customer service representative is available.

DEPR:
The notification applet can identify the notification packet by comparing incoming packets of Internet traffic to the notification source identifier and by confirming that the content of the data field of a given packet indicates the packet is a notification packet. The notification applet recognizes the notification packet from server 14 at step 70.

DEPR:
Merchant facility 21 uses server 14 for supporting the on-line catalog, the transmission of the notification applet and notification packet, and the sales presentation function. Server 14 is preferably a single computer or a cluster of interconnected computers. If desired, however, server 14 could be provided by multiple geographically remote computers. For example, two computers could be used, a first to support the on-line catalog, and a second to handle all other aspects of the transaction. If desired, three computers could be used, a first to handle the on-line catalog, a second to handle transmission of the notification applet and packet, and a third to handle sales presentations.



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Document Number 1

Entry 1 of 3 File: USPT Jun 29, 1999

DOCUMENT-IDENTIFIER: US 5916302 A
TITLE: Multimedia conferencing using parallel networks

-5785931

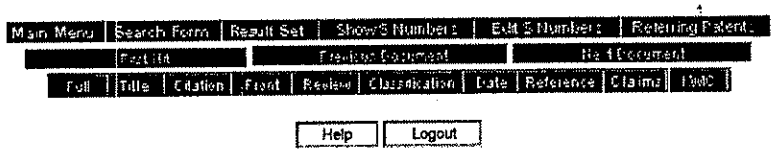
PCPR:
Patent application Ser. No. 08/761,527 by J. M. Dunn et al, entitled USER INVOCATION OF SERVICES IN PUBLIC SWITCHED TELEPHONE NETWORK VIA PARALLEL DATA NETWORKS and filed on the same date as the present application, discloses a telephone call management system for a PSTN (public switched telephone network) enabling users of that network to invoke or disable services (e.g. call waiting, call blocking, call forwarding, etc.) via public data networks like the Internet, and via user actions independent of telephone call activity; e.g. while a telephone connection is active or while the user's telephone is idle (on-hook). The present invention concerns extension of certain teachings of the referenced application to telephone conferences.

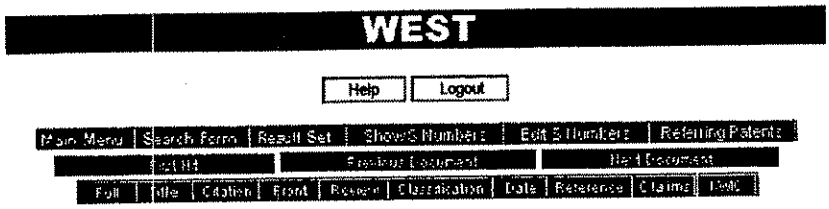
DEPR:
These conference servers are communication-oriented digital computer systems having communication links to both the PSTN and public data communication networks like the Internet, Web, etc., and their functions and sites of location are administered by the PSTN. The conference servers in general will be able to communicate with conference management resources of the PSTN. They also may be able to communicate with speech recognition apparatus and associated applications within a conference switching center of the PSTN so as to be able to react to voice commands issued by conferees; for example, commands to distribute data representing specific display images provided by the conferee issuing the command. These servers and their integration into the PSTN would enable the PSTN to offer cost-effective conference management services to its end users that are either completely new or presently considered impractical for existing PSTN facilities. Such services would include cost effective handling of voice conferences over conventional (unleased) lines in the "plain old telephone system" (POTS), concurrent with distribution of data over public data networks parallel to the PSTN (e.g. the Web), wherein conferees would be able to use their data network connections to control conditions of operation in the voice connection path, and conversely able to use voice commands to control functions performed in the data network, for example, to control distribution of image data in coordination with voice presentations Thus, a conferee would be able to administer and/or invoke specific services in either the PSTN or the parallel data network via signals sent on the other network. An example would be that a conferee could issue a "follow me" data request to switch their current voice connection (e.g. from a stationary phone to a mobile radio one), or another data request to have the amplitude or other parameters of voice transmitted to them changed (e.g. to adjust the sound delivered to a hearing impaired conferee).

DEPR:
Collaborative editing may be achieved in several ways. The method preferred presently would involve use at participating stations of browser software capable of receiving and executing mini-programs or "applets" suited to tasks required for performing collaborative

modifications. Such applets may for instance be written in a commonly used language such as the Java.TM. language (Java is a Trademark of Sun Microsystems company), which is interpretable by a number of existing browsers constructed to interpret Java scripts (e.g. Netscape Navigator, Microsoft Explorer, etc), stored in the conference server, and transferred from the conference server to conference participants as the latter sign onto the data network for a conference session. These applets could be constructed to either self-destruct/erase at participant stations when a conference ends, or to remain stored at participant stations after a conference for use in future conferences (since the server would not easily distinguish which stations have previously transferred applets, the preferred method would be to distribute them as a conference begins and have them self-destruct at participant stations when the conference ends. Such applets could enable conferees to modify graphic and/or text elements of a currently displayed page image, and communicate modifications to the conference server for distribution to stations of other conferees.

DEPR:
Computers at these stations (those other than station A) are shown as laptop style personal computers, but it is understood that they may be computers of any physical form (e.g. laptop, desktop, floor console, or even computers integral to an appliance such as a TV monitor), and need not even be personal type computers (i.e. they could even be computers like mainframes or such that are larger in size and operating capabilities than personal computers). The only requirement is that they contain browser software that is compatible with applets or scripts written in a common language such as Java, and that communicate with protocols that are compatible with those employed at the conference server to be described below.





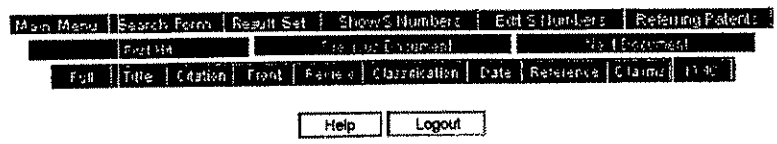
Document Number 4

Entry 4 of 10 File: USPT Mar 30, 1999

DOCUMENT-IDENTIFIER: US 5889845 A
TITLE: System and method for providing a remote user with a virtual presence to an office

DEPR:
It is noted that a road warrior preferably has virtual phone and virtual fax software applications executing on his computer system. The telecommuter operating from his home may include a "real" fax machine as well as a "real" phone. Where a telecommuter's system includes a physical fax machine, and an ISDN connection is used, the analog facsimile data generated by the fax machine is preferably re-digitized in the remote computer system 102 and communicated over the PSTN to the virtual presence server 106. In this embodiment, each of the remote computer system 102 and the virtual presence server 106 include a fax/modem chip. When the remote user sends a fax using the "real" fax machine, the remote computer 102 receives the fax, converts the analog data to digital data, and transmits the digital data to the virtual presence server 106. The virtual presence server 106 uses its fax modem to perform digital to analog conversion and provides the analog fax data to a "real" or virtual fax machine at any location, such as the corporate office. Alternatively, the virtual presence server may forward the fax data to a fax server for transmission.

DEPR:
As shown in FIG. 15, first in step 562 the remote user initiates a communication, i.e., picks up the telephone, or in some manner enables the telephone or modem to become "off-hook". For example, if the user is using a virtual telephone executing on the remote computer system, the user clicks a telephone call icon on the virtual telephone. If the remote user is connected to the virtual presence server 106 in step 564, or after a connection is established in step 568, then the following steps occur. In step 570 the corporate PBX 112 provides a dial tone to the remote user. The corporate PBX 112 provides the dial tone through the virtual presence server 106, through the public switched telephone network (PSTN) and through the open connection to the user's telephone instrument, or to the user's virtual telephone executing on the computer system 102. Thus the corporate PBX 112 provides the dial tone to the remote user's telephone, and the remote user acts as an extension to the corporate PBX 112.



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Document Number 5

Entry 5 of 10 File: USPT Feb 23, 1999

DOCUMENT-IDENTIFIER: US 5875234 A
TITLE: Computer integrated PBX system

BSPR:
The integration of telecommunication equipment with data processing equipment provides for powerful tools that coordinate the advanced features of digital telephony with the computer processing power of digital computer networks. For example, computer integrated telephony (CIT) systems exist that integrate PBX systems with LAN systems. These PBX CIT systems provide advanced call control and processing. For example, these CIT systems can run applications that detect incoming telephone calls, employ a caller ID function to determine the identified source of the incoming call, pass the source identification information to a computer database application program that employs the source identification as an entry point to the database. From the database, the CIT system can collect relevant customer records such as the invoice statements. The CIT system at that time can transfer both the incoming call and the associated data records to a customer service agent that is most suited for handling this incoming call. For example, if the invoice records show that the account associated with the call is overdue, the CIT system transfers both the incoming call and the relevant invoice data record to an available customer service agent in the billing department of the company.

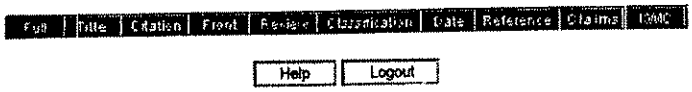
BSPR:
The logical connection between the PBX and the server determines how messages are exchanged across the physical interface. Typically, a client/server application running on the computer network generates either requests for actions or requests for instructions for the PBX system. The client passes these requests on to the server. The server has a translator program that translates the message requests from the application program into commands that can be used to operate the PBX. These commands are sent to a software driver that puts the commands into a format suitable for transmission over the data channel, such as the ISDN line or X.25 line. The PBX system receives through its interface card the commands and performs the functions as dictated. The PBX then transmits status messages back to the server system which translates the PBX messages into a format that the application program can understand and the server sends the translated messages to the application program. The application program determines from the translated messages what data records the application program needs to access and proceeds to route the data records to the appropriate client computer and to send further instructions to the PBX system to route any associated incoming calls to the telephone associated with that client's computer.

DEPR:
The depicted telecom unit 14 is a PBX system according to the invention that includes a host interface 44 with an onboard controller for exchanging data and commands directly with server 12 and for operating the switching functions to establish and maintain telephone calls. Such a PBX system according to the invention can be physically and logically integrated into a LAN server element, or stand alone computer, running telephony enabled applications to thereby allow the

telephony enabled applications to directly communicate with the onboard controller to direct the operation of the PBX system. The depicted PBX telecom unit 14 creates circuit connections between the trunk lines 20 and the subscriber telephone units 16. In a preferred embodiment of the invention, the telecom unit 14 is an electrical circuit card assembly dimensionally adapted for fitting within a PC compatible file server and having an ISA PC bus interface for connecting into an ISA bus slot and for exchanging data between the telecom unit 14 and the server 12.

DETL:

```
_____ /* The following is an example of a platform neutral
telephony service application **program public interface message
service that operates on a message unit **in an input buffer and
produces a reply message unit in a result buffer. ** **Inputs: **
inBuffer pointer to incoming message unit ** outBuffer pointer to
space for reply message unit (big enough for max) **Returns: ** -1
error or failure, failure message unit in outBuffer to be sent ** 0
error, could not build reply message unit ** 1 success, reply message
unit in outBuffer to be sent LOCALDEF int NBmessageHandler(void far
*inBuffer,void far *outBuffer) /* declare pointers to the input and
output buffers */ TDIDriverControlBlock.sub.-- t far *inDCB =
(TDIDriverControlBlockt.sub.-- far *)inBuffer;
TDIDriverControlBlock.sub.-- t far *outDCB =
(TDIDriverControlBlock.sub.-- t far *)outBuffer; /* declare pointers
for the message unit and the reply message unit */ void far *pMsg;
void far *pReply; /* check in the input and output buffer pointers are
set */ if (outDCB == NULL) return 0; if (inDCB == NULL) return 0; /*
assign the pointers for the message unit and the reply message unit */
pMsg = &((char far *)inDCB)[inDCB.fwdarw.messageOffset];/* the message
unit pointer is directed to the request block 124*/ pReply = &((char
far *)outBuffer)[sizeof(TDIDriverControlBlock.sub.-- t)]; /* copy and
initialize header information for the reply message unit */ .sub.--
fmemcpy(outDCB,inDCB,sizeof(TDIDriverControlBlock.sub.-- t));
outDCB.fwdarw.privateOffset = 0; outDCB.fwdarw.privateLength = 0;
outDCB.fwdarw.messageOffset = sizeof(TDIDriverControlBlock.sub.-- t);
outDCB.fwdarw.messageLength = 0; outDCB.fwdarw.monitorCrossRefID =
0;/* will be set as the message is shipped */ /*Begin the dispatch and
switch operation*/ switch (inDCB.fwdarw.messageClass) /* switch on the
type of message */{ case ACSREQUEST: outDCB.fwdarw.messageClass =
ACSCONFIRMATION;/* establish and intialize class of reply message unit
*/ switch (inDCB.fwdarw.messageType)/* switch on message type */{ * *
* case CSTA.sub.-- MAKE.sub.-- CALL: /* the CSTA.sub.-- MAKE.sub.--
CALL code is activated */ { LINE.sub.-- ID callerID; CALL.sub.-- ID
callID; CSTAMakeCall.sub.-- t far *pMake = pMsg;
CSTAMakeCallConfEvent.sub.-- t far *pCall = pReply;
outDCB.fwdarw.messageLength = sizeof(CSTAMakeCallConfEvent.sub.--
t);/*set size of reply message unit */ outDCB.fwdarw.messageType =
CSTA.sub.-- MAKE.sub.-- CALL.sub.-- CONF;/*set type of reply message
unit */ callerID = lookupDeviceID(pMake.fwdarw.callingDevice);/* get
local representation of the caller */ if (callerID == NO.sub.-- LINE)
{ cstaFail(outDCB,INVALID.sub.-- CALLING.sub.-- DEVICE); return -1; };
/* create a phone call */ callID =
callDeviceToDevice(callerID,pMake.fwdarw.calledDevice); if (callID ==
NO.sub.-- CALL) { cstaFail(outDCB,INVALID.sub.-- CALLED.sub.--
DEVICE); return -1; }; pCall.fwdarw.newCall.callID =
encodeCallID(callID);/* create an external representation of an
internal callID*/ .sub.--
fmemcpy(pCall.fwdarw.newCall.deviceID,pMake.fwdarw.callingDevice, .
DIM(pCall.fwdarw.newCall.deviceID));/ pCall.fwdarw.newCall.devIDType =
STATIC.sub.-- ID;/* define the type of device ID created */ return 1;
} * * * } default: }; return 0; }
```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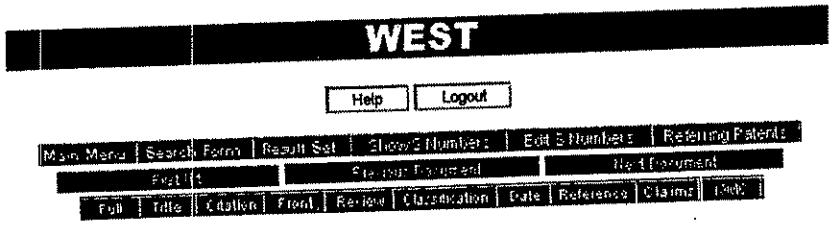
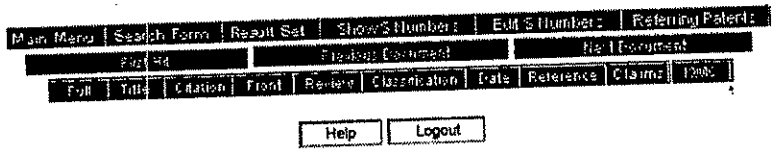


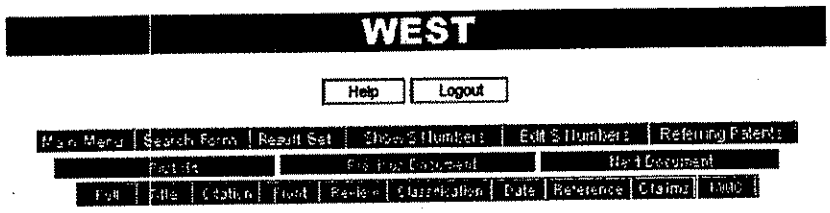
Document Number 6

Entry 6 of 10 File: USPT Nov 10, 1998

DOCUMENT-IDENTIFIER: US 5835565 A
TITLE: Telecommunication system tester with integrated voice and data

BSPR:
For example, a telecommunication system might run a telephony application that allows a telephone call to be transferred from the telecommunication system to a human operator, who can then request a set of data related to the telephone call from a file server for subsequent display on a computer screen. This is commonly known as a "screen pop." Also, local user switches that connect to switched telephone networks generally incorporate digital data lines for transmitting call history logs.





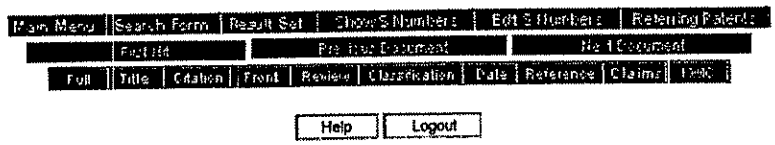
Document Number 7

Entry 7 of 10 File: USPT Jun 9, 1998

DOCUMENT-IDENTIFIER: US 5764639 A
TITLE: System and method for providing a remote user with a virtual presence to an office

DEPR:
It is noted that a road warrior preferably has virtual phone and virtual fax software applications executing on his computer system. The telecommuter operating from his home may include a "real" fax machine as well as a "real" phone. Where a telecommuter's system includes a physical fax machine, and an ISDN connection is used, the analog facsimile data generated by the fax machine is preferably re-digitized in the remote computer system 102 and communicated over the PSTN to the virtual presence server 106. In this embodiment, each of the remote computer system 102 and the virtual presence server 106 include a fax/modem chip. When the remote user sends a fax using the "real" fax machine, the remote computer 102 receives the fax, converts the analog data to digital data, and transmits the digital data to the virtual presence server 106. The virtual presence server 106 uses its fax modem to perform digital to analog conversion and provides the analog fax data to a "real" or virtual fax machine at any location, such as the corporate office. Alternatively, the virtual presence server may forward the fax data to a fax xerver for transmission.

DEPR:
As shown in FIG. 15, first in step 562 the remote user initiates a communication, i.e., picks up the telephone, or in some manner enables the telephone or modem to become "off-hook". For example, if the user is using a virtual telephone executing on the remote computer system, the user clicks a telephone call icon on the virtual telephone. If the remote user is connected to the virtual presence server 106 in step 564, or after a connection is established in step 568, then the following steps occur. In step 570 the corporate PBX 112 provides a dial tone to the remote user. The corporate PBX 112 provides the dial tone through the virtual presence server 106, through the public switched telephone network (PSTN) and through the open connection to the user's telephone instrument, or to the user's virtual telephone executing on the computer system 102. Thus the corporate PBX 112 provides the dial tone to the remote user's telephone, and the remote user acts as an extension to the corporate PBX 112.



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Document Number 8

Entry 8 of 10 File: USPT Jun 3, 1997

DOCUMENT-IDENTIFIER: US 5636209 A
TITLE: Modem to support multiple site call conferenced data communications

DEPR:
Some on-line services (e.g. AMERICA ON-LINE.TM.) also provide special access for computers with modems (11, 14) via a Wide Area Telephone Service ("WATS," also known as "1-800" service in the United States). Because the on-line service is charged for the duration of a user's call through a WATS line (51, 52), such service is typically provided only for a first-time dial-up so that the user can determine a local access number to a modem pool in the user's calling area. In this way, it is possible for the operators of an on-line service to distribute generic client application software with no knowledge of a given user's local calling area. Such client application software executing in computers (11, 14) directs a new user's computer (11, 14) to dial up a WATS number (51, 52) and connect to a central modem pool 53 accessible through that WATS number. Computers (11, 14) thereby communicate with a server 54 dedicated to the task of specifying local access numbers (and therefore local modem pool access numbers), given a user's area code. Subsequently, client application software executing in computers (11, 14) downloads one or more local access numbers from the server 54 and terminates the WATS call (51, 52). From this point on, the local access number (e.g. in the case of computer 11, the phone number to call modem pool 22) is used to access the on-line service. Even though the WATS access does incur a charge to the on-line service, the actual WATS usage per customer is insignificant relative to the overall time the user spends using the on-line service.

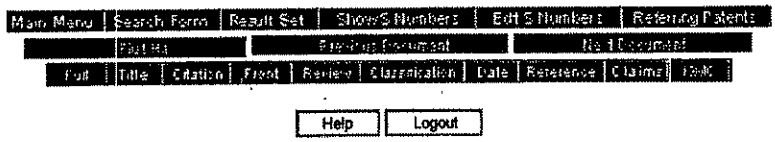
DEPR:
Any of the above cases will cause the client application software running in computer 65 to determine that it has not successfully reached computer 66. Depending on the circumstances, it might be worthwhile for the client application software to attempt to call again (e.g. if the phone was busy), but if not, it will notify User A that the connection attempt to User B was unsuccessful. Computer 65 will again dial into modem pool 76, log into server 88 using the methods previously described, and report that it was unable to reach computer 66. Server 88 makes a record internally of the problem. If there has been a history of calling problems for computer 65, server 88 transmits a message to computer 65 to notify User A to call a customer service number and get technical assistance. If there is no history of calling problems, returning to Step 4 above, User A will be matched up with a different currently logged-in user.

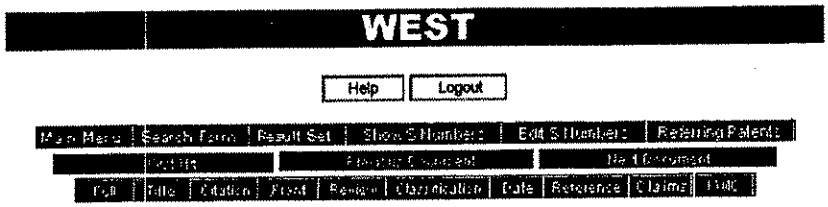
DEPR:
If User A is thus unsuccessful in reaching User B, the client application software running in computer 66, after a reasonable mount of time (e.g. 2 minutes) will give up waiting for computer 65 to call. It will notify User B that the connection attempt to User A was unsuccessful, and computer 66 will again dial into modem pool 76, log into server 88 using the methods previously described, and report that it was unable to reach computer with modem 65. Server 88 applies

heuristics to the report submitted by the client software of computer 65 combined with previous reports on the connection history of computer 66 and attempts to diagnose the problem. The diagnosis will be based on the past history of connection attempts to computer 66 (e.g. if there has never been a successful connection, a wrong number was probably specified in Step 1). If the heuristics lead to a likely cause of the connection problem, server 88 will transmit a message to computer 66 to notify User B of the likely cause. If the heuristics lead to an indeterminate cause, server 88 will transmit a message to computer 66 to notify User B to call a customer service number and get technical assistance.

DEPR:
f. Outside modem call to User B's telephone between Step 7(b) and Step 8. If a modem happens to call User B's telephone after computer 66 has hung up from modem pool 76 and before computer 65 has called, computer 66 will answer the phone, anticipating computer 65, and will generate a modem answer tone. If the calling modem is not compatible with the answer tone, it will hang up, or in any case the computer 66 will hang up within a reasonable amount of time (as defined in the modem protocol) if it does not hear an originating modem tone in reply. If the calling modem is compatible with the answer tone, the two modems will synchronize and connect, and the client application software running in computer 66 will expect to receive the identification code it had been transferred by server 88 in Step 5. It is virtually impossible that the wrongly-calling modem will happen to transmit this particular identification code if the code is of reasonable complexity. When the client application software fails to receive the identification code within a reasonable period of time (e.g. under 5 seconds), it will hang up the telephone, and treat the situation exactly the same as the outside voice call case described above.

DEPR:
2) Another Custom Calling feature available in many areas of the United States is Three-Way Calling. Three-Way Calling is typically used to establish three-person conference calls, but in some telephone areas (such as Mountain View, Calif.) when a telephone line is equipped with both Three-Way Calling and Call Waiting, it is possible to deactivate Call Waiting on an incoming call by flashing the switchhook and dialing a Call Waiting deactivation number (*70 in Mountain View, Calif.). In the situation shown in FIG. 28, the dummy answering system 276 has just hung up. If USER B'S 272 telephone line were equipped with Three-Way Calling as well as with Call Waiting, computer 274 would then flash the switchhook and dial the Call Waiting deactivation code, thereby deactivating Call Waiting for the duration of telephone call 280.





Document Number 9

Entry 9 of 10 File: USPT Dec 17, 1996

DOCUMENT-IDENTIFIER: US 5586257 A
TITLE: Network architecture to support multiple site real-time video games

DEPR:
Some on-line services (e.g. America On-line) also provide special access for computers with modems (11, 14) via a Wide Area Telephone Service ("WATS," also known as "1-800" service in the United States). Because the on-line service is charged for the duration of a user's call through a WATS line (51, 52), such service is typically provided only for a first-time dial-up so that the user can determine a local access number to a modem pool in the user's calling area. In this way, it is possible for the operators of an on-line service to distribute generic client application software with no knowledge of a given user's local calling area. Such client application software executing in computers (11, 14) directs a new user's computer (11, 14) to dial up a WATS number (51, 52) and connect to a central modem pool 53 accessible through that WATS number. Computers (11, 14) thereby communicate with a server 54 dedicated to the task of specifying local access numbers (and therefore local modem pool access numbers), given a user's area code. Subsequently, client application software executing in computers (11, 14) downloads one or more local access numbers from the server 54 and terminates the WATS call (51, 52). From this point on, the local access number (e.g. in the case of computer 11, the phone number to call modem pool 22) is used to access the on-line service. Even though the WATS access does incur a charge to the on-line service, the actual WATS usage per customer is insignificant relative to the overall time the user spends using the on-line service.

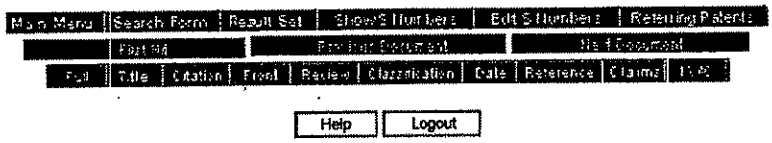
DEPR:
Any of the above cases will cause the client application software running in computer 65 to determine that it has not successfully reached computer 66. Depending on the circumstances, it might be worthwhile for the client application software to attempt to call again (e.g. if the phone was busy), but if not, it will notify User A that the connection attempt to User B was unsuccessful. Computer 65 will again dial into modem pool 76, log into server 88 using the methods previously described, and report that it was unable to reach computer 66. Server 88 makes a record internally of the problem. If there has been a history of calling problems for computer 65, server 88 transmits a message to computer 65 to notify User A to call a customer service number and get technical assistance. If there is no history of calling problems, returning to Step 4 above, User A will be matched up with a different currently logged-in user.

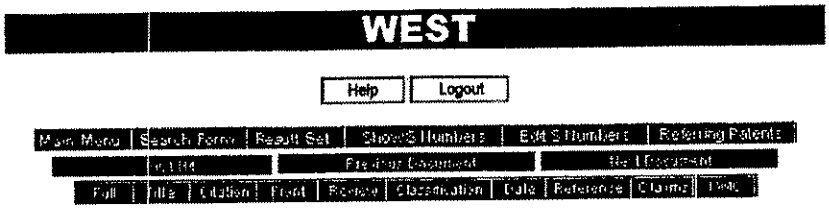
DEPR:
If User A is thus unsuccessful in reaching User B, the client application software running in computer 66, after a reasonable amount of time (e.g. 2 minutes) will give up waiting for computer 65 to call. It will notify User B that the connection attempt to User A was unsuccessful, and computer 66 will again dial into modem pool 76, log into server 88 using the methods previously described, and report that it was unable to reach computer with modem 65. Server 88 applies

heuristics to the report submitted by the client software of computer 65 combined with previous reports on the connection history of computer 66 and attempts to diagnose the problem. The diagnosis will be based on the past history of connection attempts to computer 66 (e.g. if there has never been a successful connection, a wrong number was probably specified in Step 1). If the heuristics lead to a likely cause of the connection problem, server 88 will transmit a message to computer 66 to notify User B of the likely cause. If the heuristics lead to an indeterminate cause, server 88 will transmit a message to computer 66 to notify User B to call a customer service number and get technical assistance.

DEPR:
f. Outside modem call to User B's telephone between Step 7(b) and Step 8. If a modem happens to call User B's telephone after computer 66 has hung up from modem pool 76 and before computer 65 has called, computer 66 will answer the phone, anticipating computer 65, and will generate a modem answer tone. If the calling modem is not compatible with the answer tone, it will hang up, or in any case the computer 66 will hang up within a reasonable amount of time (as defined in the modem protocol) if it does not hear an originating modem tone in reply. If the calling modem is compatible with the answer tone, the two modems will synchronize and connect, and the client application software running in computer 66 will expect to receive the identification code it had been transferred by server 88 in Step 5. It is virtually impossible that the wrongly-calling modem will happen to transmit this particular identification code if the code is of reasonable complexity. When the client application software fails to receive the identification code within a reasonable period of time (e.g. under 5 seconds), it will hang up the telephone, and treat the situation exactly the same as the outside voice call case described above.

DEPR:
2) Another Custom Calling feature available in many areas of the United States is Three-Way Calling. Three-Way Calling is typically used to establish three-person conference calls, but in some telephone areas (such as Mountain View, Calif.) when a telephone line is equipped with both Three-Way Calling and Call Waiting, it is possible to deactivate Call Waiting on an incoming call by flashing the switchhook and dialing a Call Waiting deactivation number (*70 in Mountain View, Calif.). In the situation shown in FIG. 28, the dummy answering system 276 has just hung up. If USER B'S 272 telephone line were equipped with Three-Way Calling as well as with Call Waiting, computer 274 would then flash the switchhook and dial the Call Waiting deactivation code, thereby deactivating Call Waiting for the duration of telephone call 280.





Document Number 10

Entry 10 of 10 File: USPT Sep 24, 1996

DOCUMENT-IDENTIFIER: US 5558339 A
TITLE: Network architecture to support recording and playback of real-time video games

DEPR:
Some on-line services (e.g. "AMERICA ON-LINE.TM.") also provide special access for computers with modems (11, 14) via a Wide Area Telephone Service ("WATS," also known as "1- 800" service in the United States). Because the on-line service is charged for the duration of a user's call through a WATS line (51, 52), such service is typically provided only for a first-time dial-up so that the user can determine a local access number to a modem pool in the user's calling area. In this way, it is possible for the operators of an on-line service to distribute generic client application software with no knowledge of a given user's local calling area. Such client application software executing in computers (11, 14) directs a new user's computer (11, 14) to dial up a WATS number (51, 52) and connect to a central modem pool 53 accessible through that WATS number. Computers (11, 14) thereby communicate with a server 54 dedicated to the task of specifying local access numbers (and therefore local modem pool access numbers), given a user's area code. Subsequently, client application software executing in computers (11, 14) downloads one or more local access numbers from the server 54 and terminates the WATS call (51,52). From this point on, the local access number (e.g. in the case of computer 11, the phone number to call modem pool 22) is used to access the on-line service. Even though the WATS access does incur a charge to the on-line service, the actual WATS usage per customer is insignificant relative to the overall time the user spends using the on-line service.

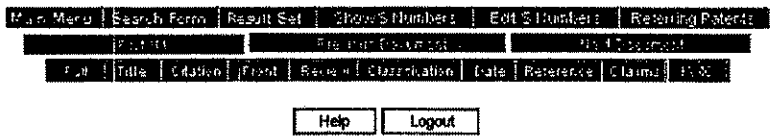
DEPR:
Any of the above cases will cause the client application software running in computer 65 to determine that it has not successfully reached computer 66. Depending on the circumstances, it might be worthwhile for the client application software to attempt to call again (e.g. if the phone was busy), but if not, it will notify User A that the connection attempt to User B was unsuccessful. Computer 65 will again dial into modem pool 76, log into server 88 using the methods previously described, and report that it was unable to reach computer 66. Server 88 makes a record internally of the problem. If there has been a history of calling problems for computer 65, server 88 transmits a message to computer 65 to notify User A to call a customer service number and get technical assistance. If there is no history of calling problems, returning to Step 4 above, User A will be matched up with a different currently logged-in user.

DEPR:
If User A is thus unsuccessful in reaching User B, the client application software running in computer 66, after a reasonable amount of time (e.g. 2 minutes) will give up waiting for computer 65 to call. It will notify User B that the connection attempt to User A was unsuccessful, and computer 66 will again dial into modem pool 76, log into server 88 using the methods previously described, and report that it was unable to reach computer with modem 65. Server 88 applies

heuristics to the report submitted by the client software of computer 65 combined with previous reports on the connection history of computer 66 and attempts to diagnose the problem. The diagnosis will be based on the past history of connection attempts to computer 66 (e.g. if there has never been a successful connection, a wrong number was probably specified in Step 1). If the heuristics lead to a likely cause of the connection problem, server 88 will transmit a message to computer 66 to notify User B of the likely cause. If the heuristics lead to an indeterminate cause, server 88 will transmit a message to computer 66 to notify User B to call a customer service number and get technical assistance.

DEPV:
f. Outside modem call to User B's telephone between Step 7(b) and Step 8. If a modem happens to call User B's telephone after computer 66 has hung up from modem pool 76 and before computer 65 has called, computer 66 will answer the phone, anticipating computer 65, and will generate a modem answer tone. If the calling modem is not compatible with the answer tone, it will hang up, or in any case the computer 66 will hang up within a reasonable amount of time (as defined in the modem protocol) if it does not hear an originating modem tone in reply. If the calling modem is compatible with the answer tone, the two moderns will synchronize and connect, and the client application software running in computer 66 will expect to receive the identification code it had been transferred by server 88 in Step 5. It is virtually impossible that the wrongly-calling modem will happen to transmit this particular identification code if the code is of reasonable complexity. When the client application software fails to receive the identification code within a reasonable period of time (e.g. under 5 seconds), it will hang up the telephone, and treat the situation exactly the same as the outside voice call case described above.

DEPV:
2) Another Custom Calling feature available in many areas of the United States is Three-Way Calling. Three-Way Calling is typically used to establish three-person conference calls, but in some telephone areas (such as Mountain View, Calif.) when a telephone line is equipped with both Three-Way Calling and Call Waiting, it is possible to deactivate Call Waiting on an incoming call by flashing the switchhook and dialing a Call Waiting deactivation number (*70 in Mountain View, Calif.). In the situation shown in FIG. 28, the dummy answering system 276 has just hung up. If USER B'S 272 telephone line were equipped with Three-Way Calling as well as with Call Waiting, computer 274 would then flash the switchhook and dial the Call Waiting deactivation code, thereby deactivating Call Waiting for the duration of telephone call 280.



L37	14	S L36 AND SESSION
L38	3	S L3 ND APPLET
L39	4	S SE ET#

ASSIGNEE: Verifone, Inc., Santa Clara, CA (U.S. corp.)

ABSTRACT:
A plurality of clients are connected to one or more servers. When a client initiates a connection with a server, the server responds to the request for connection by transmitting a message back to the client to determine whether the client is a network terminal or not. The client responds with a message that is received by an application dispatcher at the server which takes one of a pair of actions based on whether the client is a network terminal. If the client terminal is a network terminal, then the application dispatcher spawns a server application in the server which responds to the client application in the client. Going forward, the server application responds to all future requests from the client application. If the client is not a network terminal, then the application dispatcher initiates a client application in the server to service the client terminal application requirements. Requests from the client application on behalf of the client terminal are subsequently serviced by a server application at the server which communicates to the client terminal via the client application at the server.

=> d his

(FILE 'USPAT' ENTERED AT 09:40:48 ON 09 AUG 1999)

```
L1          3583 S (BROWSER OR CLIENT)(30A)(SERVER)
L2           383 S L1(30A)(TELECOMMUNICATION OR TELEPHONE OR SWITCH?)
L3           254 S APPLET#
L4            12 S L2 AND L3
L5          3545 S L1(30A)(APPLICATION OR CLIENT OR PROGRAM OR INTERFACE OR
 TE
L6           416 S L1(30A)(TELECOMMUNICATION# OR TELEPHONE OR SWITCH?)
L7           131 S L6(30A)ACCESS?
L8           407 S L6(30A)(APPLICATION OR CLIENT OR PROGRAM OR INTERFACE)
L9           407 S L6(30A)(APPLICATION OR CLIENT OR PROGRAM OR INTERFACE OR
 AP
L10           70 S L7(30A)(PERMI? OR AUTHORIZ? OR USER# OR AUTHENTICAT? OR
LET
L11            9 S L10(30A)(PAGE OR START? OR HOME OR BLOCK)
L12           18 S L10(30A)(PAGE OR START? OR HOME OR BLOCK OR MANAG? OR LI
BRA
L13           15 S L12 AND (WEB OR HTTP OR HTML OR IIOP OR PASSWORD# OR RUN
TIM
L14            2 S L13 AND SOCKET
L15          571 S 713/2!!/CCLS
L16          584 S JAVA OR APPLET
L17           16 S L16 AND CORBA
L18            2 S L15 AND L17
L19          254 S L16  AND (TELECOMMUNICATION# OR TELEPHONE OR SWITCH?)
L20          148 S L19 AND BROWSER
L21          144 S L20 AND ACCESS?
L22        39656 S ACCESS?(30A)(TELECOMMUNICATION# OR TELEPHONE OR SWITCH?)
L23         3600 S MANAGER(30A)(LOGON OR SECUR? OR PASSWORD OR AUTHENT? OR
USE
L24           15 S L23(30A)SOCKET
L25            2 S L24 AND L22
L26           54 S L22(30A)L23
L27            3 S L26 AND BROWSER
L28            0 S L27 AND SOCKET
L29            2 S L26 AND SOCKET
L30           72 S L19 AND L23
L31           72 S L19(30A)L23
L32           36 S JAVA AND APPLET AND SOCKET#
L33           11 S L32 AND L31
L34           38 S APPLET AND SOCKET# AND BROWSER
L35           13 S L34 AND L23
L36           33 S INTERNET(30A)TELEPHONE CALL
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