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Thompson et al.

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(54) **SYSTEM AND METHOD FOR PERFORMING  
SUBSTITUTE FULFILLMENT  
INFORMATION COMPILATION AND  
NOTIFICATION**

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(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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**Related U.S. Application Data**

(63) Continuation-in-part of application No. 09/217,116, filed on Dec. 21, 1998, now Pat. No. 6,334,133.

(51) **Int. Cl.<sup>7</sup>** ..... G06F 17/60

(52) **U.S. Cl.** ..... 705/9

(58) **Field of Search** ..... 705/9

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,686,482 A	8/1972	Gelder	
4,937,743 A *	6/1990	Rassman et al.	705/8
5,111,391 A *	5/1992	Fields et al.	705/9
5,113,430 A *	5/1992	Richardson, Jr. et al.	370/400
5,117,353 A *	5/1992	Stipanovich et al.	705/11
5,164,897 A	11/1992	Clark et al.	

(List continued on next page.)

**FOREIGN PATENT DOCUMENTS**

JP 10003492 A \* 1/1998 ..... G06F/17/60

**OTHER PUBLICATIONS**

"Automated Substitute Finder System," Fall 1994 [retrieved from the Internet on Aug. 23, 2002]. URL: <http://www.cs-ba.org/ssd/samples/Technology/automated.htm>.\*

Haddad, Anne. "Computer calls for substitutes," The Sun, Dec. 15, 1994.\*

Stepp, Diane. "School watch The daily hunt for substitute teachers," The Atlanta Journal the Atlanta Constitution, Apr. 9, 1998.\*

(List continued on next page.)

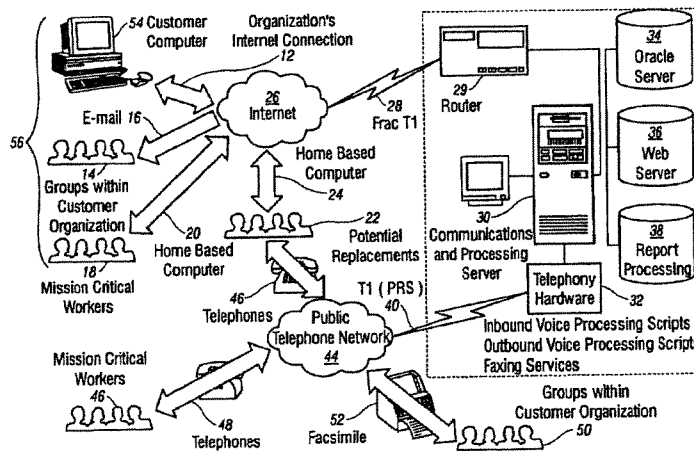
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(57) **ABSTRACT**

A system and method for automating the performance of substitute fulfillment to assign a replacement worker to substitute for a worker during a temporary absence, performing placement of floating workers, tracking absences and entitlements of workers, notifying interested parties regarding unexpected events and daily announcements, and bidding for temporary workers. Substitute fulfillment, contact, absence, entitlement and notification data is stored centrally in a database on a server at a common site for multiple organizations employing the substitute fulfillment or notification system. When a worker absence is indicated, the system searches the database to obtain a list of potential replacements for the absent worker and tracks the worker's absences and entitlements. The system contacts potential replacements until one is found or until the list is exhausted. The system generates suitable reports and notifies organization personnel of any activity. The system also records announcements regarding unexpected or current events and contacts the interested parties of an organization with these announcements. The system stores and aggregates historical operation data, prepares reports and provides relevant services.

**13 Claims, 26 Drawing Sheets**



U.S. PATENT DOCUMENTS

5,255,305 A	*	10/1993	Sattar .....	379/32.01
5,325,292 A		6/1994	Crockett	
5,369,570 A	*	11/1994	Parad .....	705/8
5,416,694 A		5/1995	Parrish et al.	
5,548,506 A	*	8/1996	Srinivasan .....	700/8
5,634,055 A		5/1997	Barnewall et al.	
5,832,497 A	*	11/1998	Taylor .....	707/104
5,884,270 A		3/1999	Walker et al.	
5,911,134 A	*	6/1999	Castonguay et al. ....	705/9
5,913,029 A		6/1999	Shostak	
5,913,201 A	*	6/1999	Kocur .....	705/9
5,918,207 A		6/1999	McGovern et al.	
5,974,392 A		10/1999	Endo	
6,044,354 A		3/2000	Asplen, Jr.	
6,044,355 A		3/2000	Crockett et al.	
6,049,776 A	*	4/2000	Donnelly et al. ....	705/8
6,058,423 A		5/2000	Factor	

OTHER PUBLICATIONS

"Myriad locations, student populations no longer hinder substitute management system," *The Journal*, Nov. 1993.\*

Willis, William. "Telephony products enhance convenience, communication & distance learning," *The Journal* v23 n7 p12(4), Feb. 1996.\*

Gellermen, Elizabeth. "Telephone technology increases communication across the board," *The Journal* v21 n10 p14(4), May 1994.\*

Baca, Aaron. "Throwing out the sub routine now computers, not secretaries, can find substitutes for absent teachers," *The Santa Fe New Mexican*, Feb. 20, 1996.\*

Wilson, Carol. "The start of something big," *Telephony*, Jul. 6, 1992.\*

"BellSouth annual meeting takes shareholders back to school and demonstrates education-related technologies," *PR Newswire*, Apr. 27, 1992.\*

"TeacherReacher' A New Feature," *NEA Today* v11, Nov. 1992.\*

Hippel et al. "Temporary employment: Can organizations and employess both win?" *The Academy of Management Executive*, vol. 11, pp. 93-104. Feb. 1997.\*

Adecco [online], 1997 [retrieved on Mar. 10, 2002]. Retrieved from the Internet: <URL: <http://www.Usadecco.com>>.\*

Poindexter, Joanne. "Teacher absence plan ok'd policy calls for using substitutes," *Roanoke Times & World News*. Aug. 9, 1996.\*

LaPlante, Joseph. "New policy drafted to overcome shortage of substitute teachers," *Providence Journal—Bulletin*. Apr. 23, 1996.\*

Givens, Ann. "Schools struggle to find substitute teachers," *The Patriot Ledger*. Dec. 20, 1997.\*

LaPlante, Joseph. "Two school departments struggle to fill vacancies There's no substitute for a substitute . . .," *Providence Journal—Bulletin*. Nov. 25, 1998.\*

Sunoo, Brenda. "Thumbs up for staffing Web sites," *Workforce* v76n10 pp: 67-72, Oct. 1997 [Dialog].\*

Business Ware Services, Inc.—TempWizard Solutions.

Bridgware Systems—Staffing Industry Software Products.

ASA Staffing World—Expo: Exhibitors.

Clearview staffing software.

CRS, Inc.—Human Resource Automation, *Sub Finder, Make Every Day A Productive Day!*, CRS—SubFinder Page, pp. 1-3. Available at website: <http://www.crs-ivr.com/sub-subfinder.asp>.

CRS, Inc.—Human Resource Automation, *Interfacing*, CRS—Interfacing Page, pp. 1-2. Available at website: <http://www.crs-ivr.com/sub2-interfacing.asp>.

CRS, Inc.—Human Resource Automation, *Technology*, CRS—SubFinder Technology Page, p. 1 of 1. Available at website: <http://www.crs-ivr.com/sub2-technology.asp>.

CRS, Inc.—Human Resource Automation, *Network Configurations*, CRS—Network Configurations Page, pp. 1-3. Available at website: <http://www.crs-ivr.com/sub2-networkconfigurations.asp>.

eSchool Solutions, *Substitute Employee Management System (SEMS)*, © 1999, 2000, 2001 eSchool, pp. 1-2. Available at website: <http://www.eschoolsolutions.com/sems.htm>.

eSchool Solutions, *SEMS Advantage version 2.8 release announced*, Press Release Sep. 21, 2000, pp. 1-2. Available at website: [http://www.eschoolsolutions.com/press\\_release/StaffCenter28-5-15-01.htm](http://www.eschoolsolutions.com/press_release/StaffCenter28-5-15-01.htm).

Computer Software Innovations, Inc., *Substitute Online Demo—an online tool for managing substitute teachers*, Substitute Logon, © 1999, p. 1 of 1. Available at website: [http://www.subdemo.com/subdemo/webcode/4\\_0.html](http://www.subdemo.com/subdemo/webcode/4_0.html).

Substitute Online, Inc., *Logon Page*, © 1999, p. 1 of 1. Available at website: <http://www.substituteonline.com/sub-Online/webcode/main/logon.asp>.

T.H.E. Journal L.L.C., *Arrange for Substitute Teachers Online*, Aug. 1999—*Telecommunications*, T.H.E. Journal Online: Technological Horizons in Education, Jan. 2002, p. 1 of 1. Available at website: <http://www.thejournal.com/magazine/vault/A2120.cfm>.

Thomas L. Dean, "Decision Support for Coordinated Multi-Agent Planning", *ACM* 1986, pp. 81-91.

\* cited by examiner

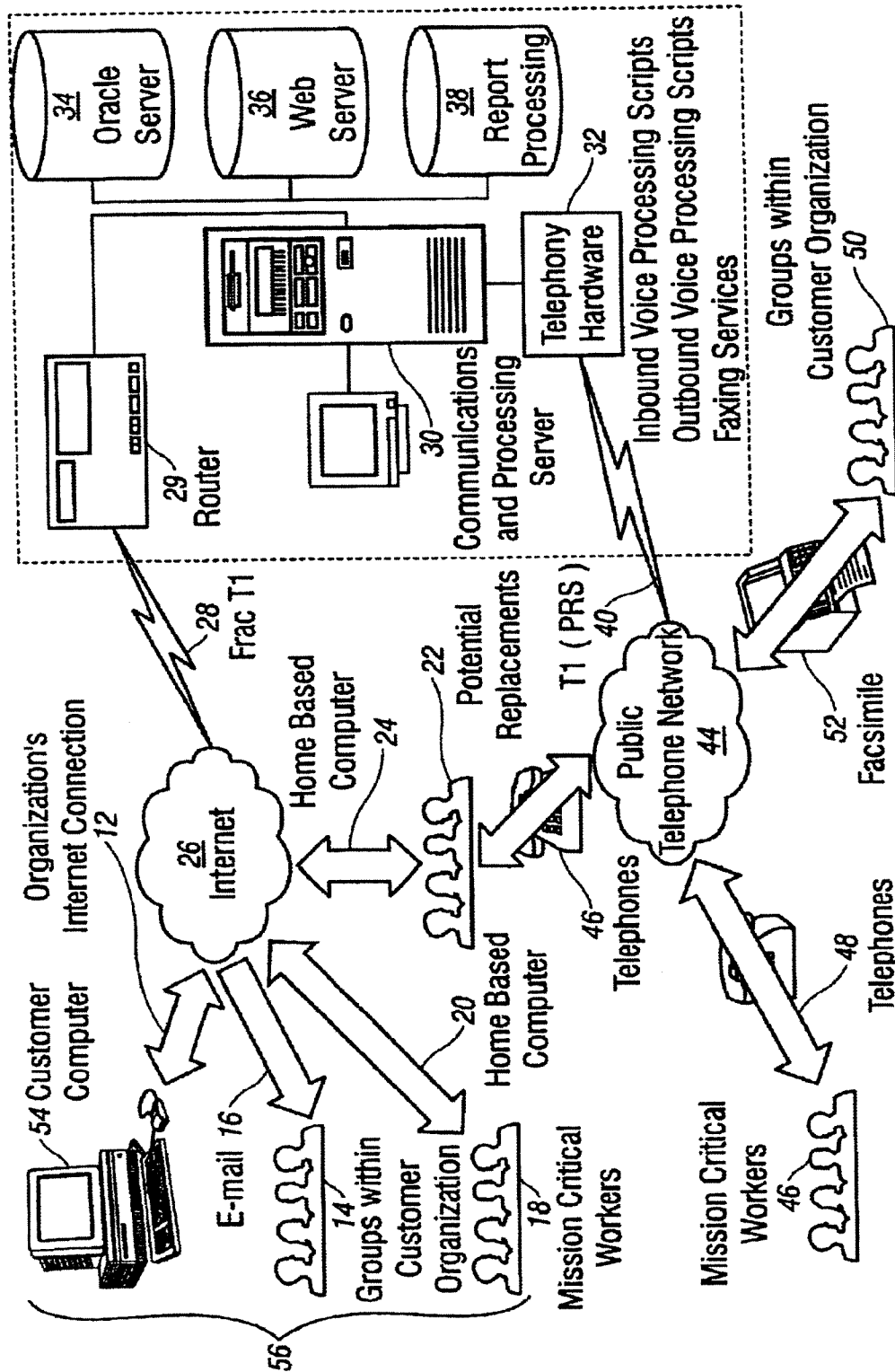


FIG. 1

**Data Flow Process and Interface**

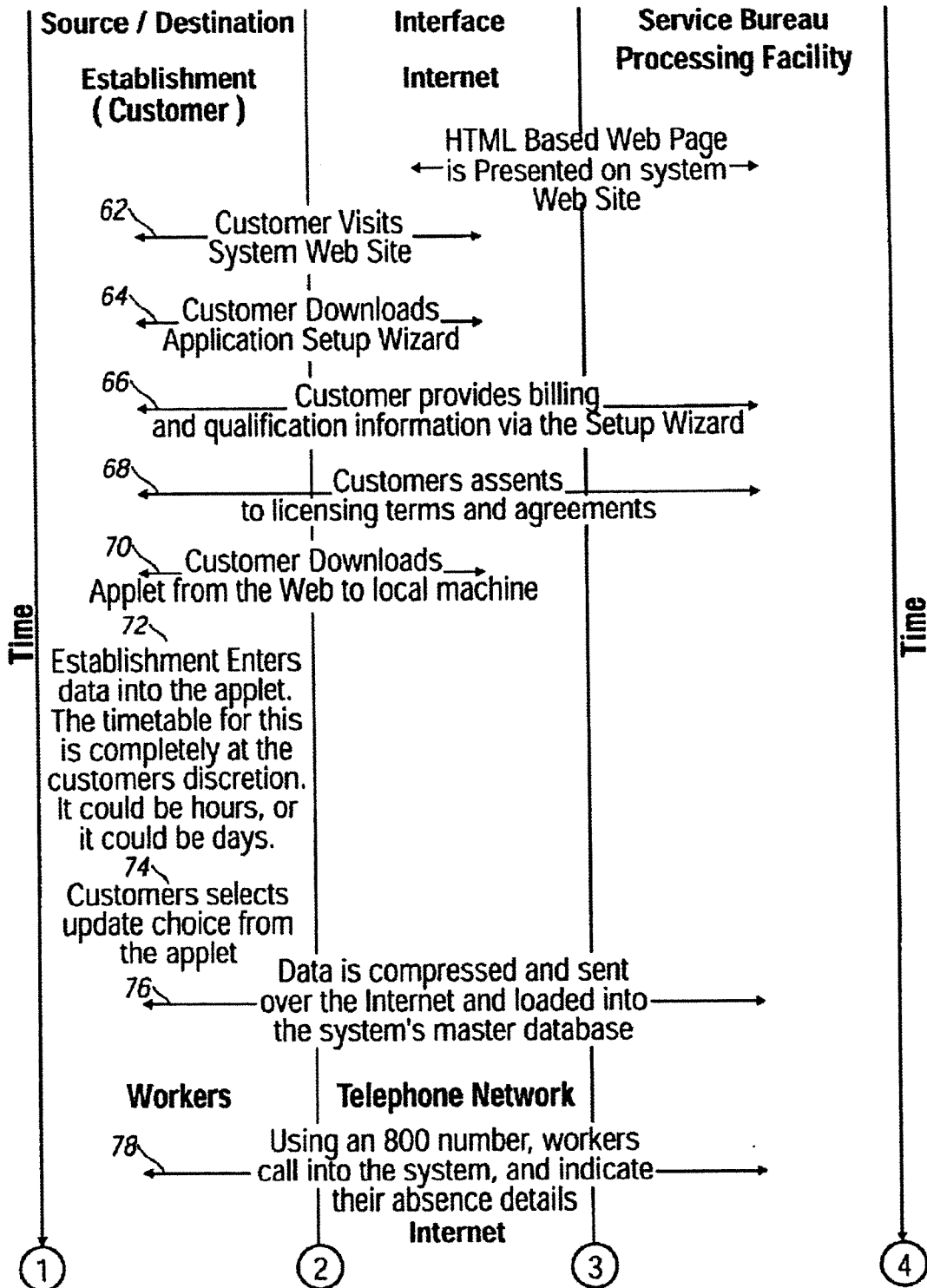


FIG. 2 (1 of 2)

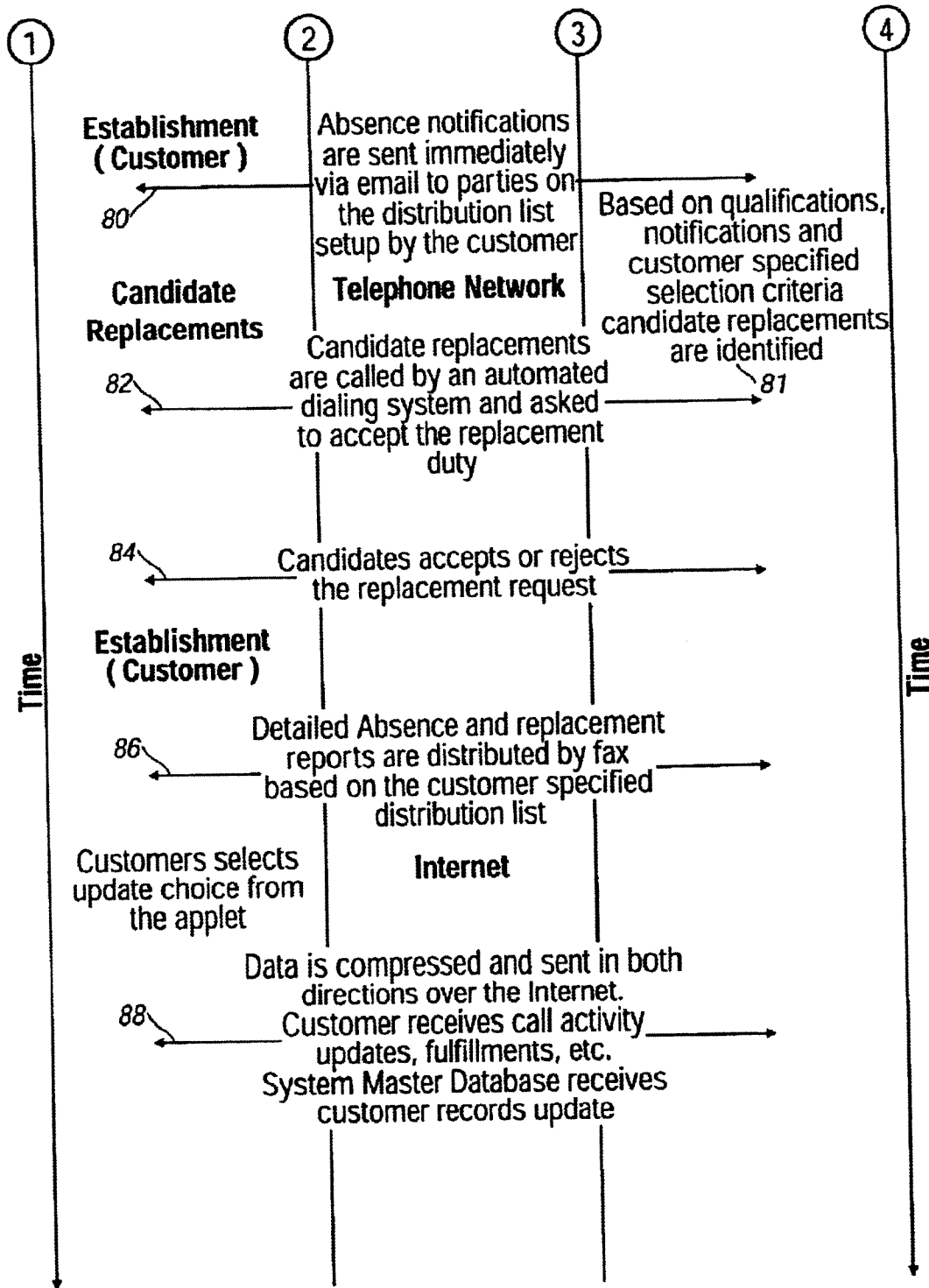


FIG. 2 ( 2 of 2 )

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