



US006798767B1

(12) **United States Patent**
Alexander et al.

(10) **Patent No.:** US 6,798,767 B1
(45) **Date of Patent:** Sep. 28, 2004

(54) **SYSTEM AND METHOD FOR GENERATING MULTIPLE LINE APPEARANCES IN A COMMUNICATION NETWORK**

(75) Inventors: **John D. Alexander**, Plano, TX (US);
Kenneth P. Pruski, Plano, TX (US);
Michael H. McClung, Alexandria, VA (US)

(73) Assignee: **Cisco Technology, Inc.**, San Jose, CA (US)

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

(21) Appl. No.: **09/442,161**

(22) Filed: **Nov. 16, 1999**

(51) **Int. Cl.** **H04L 12/66**

(52) **U.S. Cl.** **370/352**; 370/401; 379/93.01;
379/211.02; 379/221.01; 455/445

(58) **Field of Search** 370/352, 353,
370/354, 355, 356, 389, 400, 401, 522;
379/88.17, 93.01, 207.02, 207.03, 207.04,
207.08, 207.09, 211.01, 211.03, 211.04,
212.01, 220.01, 221.01, 221.02, 221.08,
221.09; 455/445, 461

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,876,707	A	10/1989	Hashimoto	
5,742,905	A *	4/1998	Pepe et al.	455/461
5,809,128	A *	9/1998	McMullin	379/215.01
5,862,207	A	1/1999	Aoshima	
5,963,864	A *	10/1999	O'Neil et al.	455/445
6,282,275	B1 *	8/2001	Gurbani et al.	379/142.06
6,304,565	B1 *	10/2001	Ramamurthy	370/352

6,327,267	B1 *	12/2001	Valentine et al.	370/466
6,327,358	B1 *	12/2001	March et al.	379/221.01
6,359,892	B1	3/2002	Szlam	
6,421,339	B1	7/2002	Thomas	
6,421,437	B1 *	7/2002	Slutsman	379/201.02
6,445,682	B1	9/2002	Weitz	
6,445,694	B1	9/2002	Swartz	
6,449,269	B1	9/2002	Edholm	
6,453,034	B1 *	9/2002	Donovan et al.	379/220.01
6,480,484	B2 *	11/2002	Morton	370/352
6,515,997	B1 *	2/2003	Feltner et al.	370/401
6,519,252	B2	2/2003	Salberg	
6,526,033	B1	2/2003	Wang et al.	
6,532,286	B1	3/2003	Burg	

OTHER PUBLICATIONS

Cisco Systems, Inc.; "System Description for the Cisco Communications Network Version 2.1;" Cisco Communications Network; all, 1997.

* cited by examiner

Primary Examiner—Bob A. Phunkijlh

(74) *Attorney, Agent, or Firm*—Baker Botts L.L.P.

(57) **ABSTRACT**

A communication system includes a communication network, and an originating telephony device, a target telephony device, and a call manager coupled to the communication network. The call manager signals the target telephony device to indicate an incoming call from the originating telephony device. The call manager includes an alternate number list that identifies at least one alternate telephony device to be signaled in response to an incoming call directed to the target telephony device. The call manager additionally includes one or more mapping tables associating a network address with each identified alternate telephony device.

34 Claims, 5 Drawing Sheets

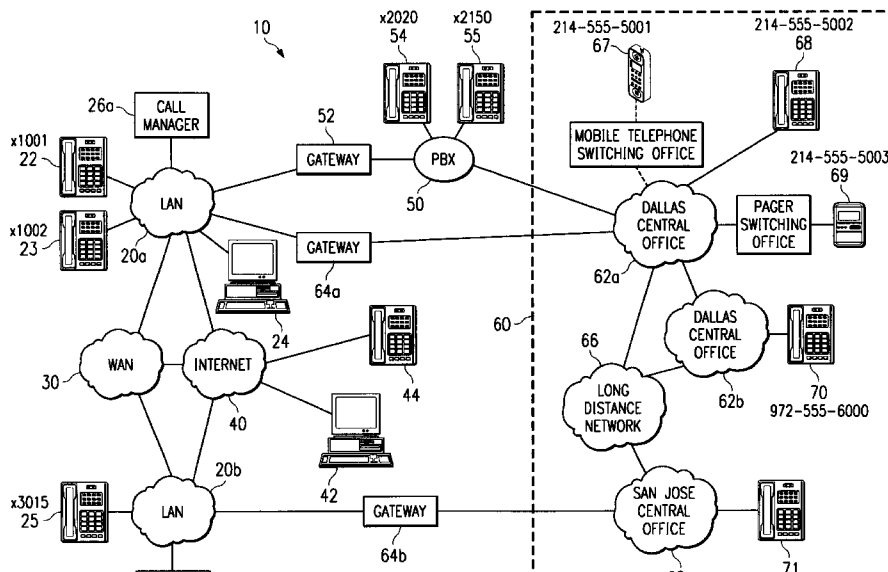


FIG. 1

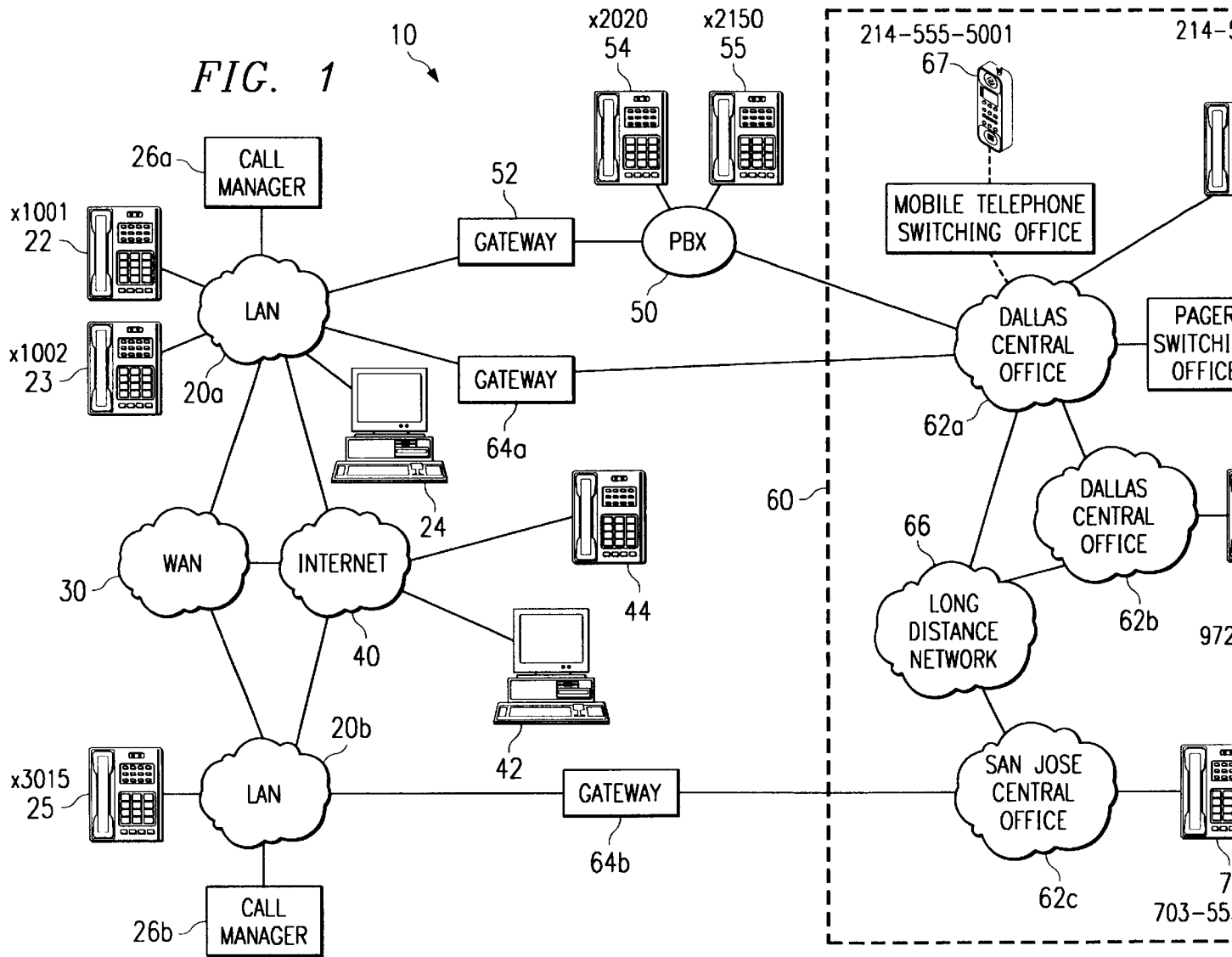
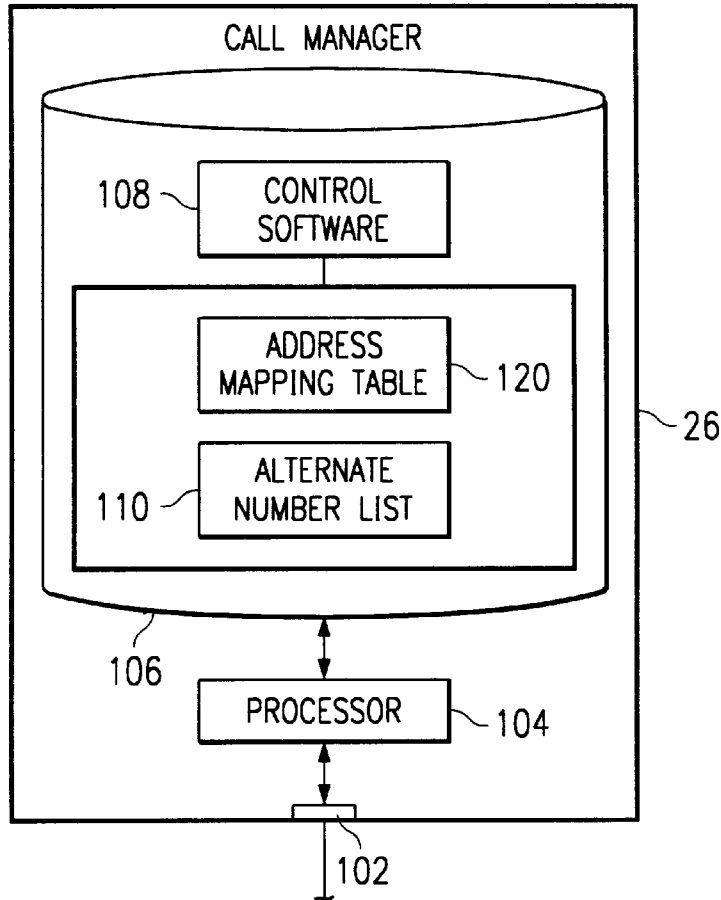


FIG. 2



110
FIG. 3

ALTERNATE NUMBER	RING DELAY TIME
1002	0
2150	0
214-555-5001	3
3015	3
214-555-5003	7

112

114

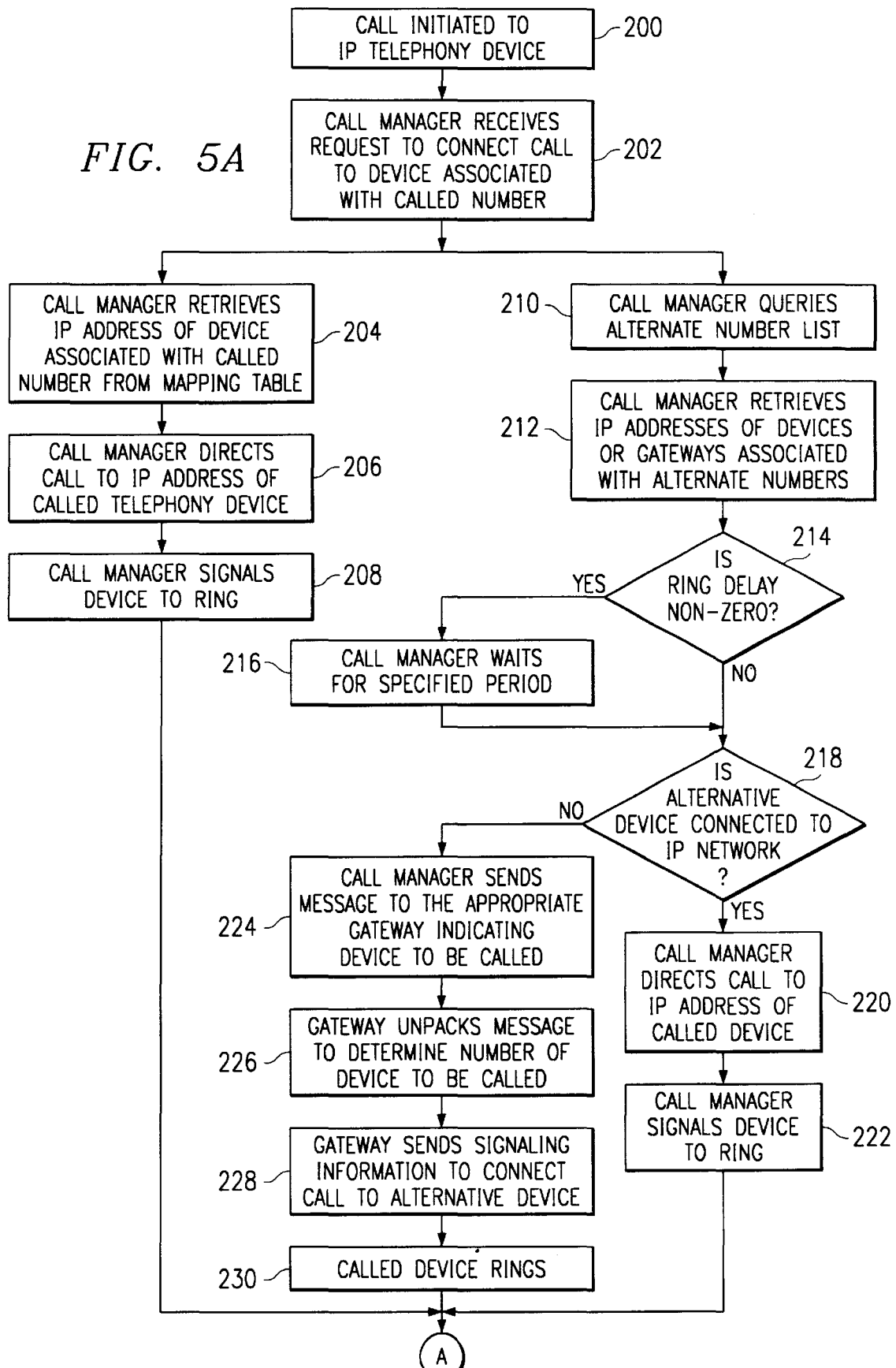
FIG. 4A ^{120a}

PHONE NUMBER	DEVICE/GROUP NAME
1001	PHONE1
1002	PHONE2
1002	PHONE3
2000-2999	PBXGATEWAY
214-555-5001	GATEWAYGROUP1
214-555-5002	GATEWAYGROUP1
214-555-5003	GATEWAYGROUP1
972-555-6000	GATEWAY5
3015	PHONE25
703-XXX-XXXX	GATEWAYGROUP2

FIG. 4B ^{120b}

DEVICE NAME	IP ADDRESS
PHONE1	150.100.30.1
PHONE2	150.100.30.2
PBXGATEWAY	150.100.30.50
GATEWAY1	150.100.30.55
GATEWAY2	150.100.30.56
GATEWAY3	150.100.30.57
GATEWAY5	150.100.30.58
PHONE25	150.200.70.15
GATEWAY10	150.200.70.50
GATEWAY11	150.200.70.51

FIG. 5A



Explore Litigation Insights

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

Real-Time Litigation Alerts



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

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

Advanced Docket Research



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

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

Analytics At Your Fingertips



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

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

API

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

LAW FIRMS

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

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

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.