

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

(10) **Patent No.: US 6,587,684 B1**
 (45) **Date of Patent: Jul. 1, 2003**

(54) **DIGITAL WIRELESS TELEPHONE SYSTEM FOR DOWNLOADING SOFTWARE TO A DIGITAL TELEPHONE USING WIRELESS DATA LINK PROTOCOL**

(75) Inventors: **Jay Hsu**, Bedminster, NJ (US);
Stanley Zadrozny, Lake Hopatcong, NJ (US)

(73) Assignee: **Bell Atlantic Nynex Mobile**,
 Bedminster, NJ (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.: **09/123,454**

(22) Filed: **Jul. 28, 1998**

(51) **Int. Cl.**⁷ **H04Q 7/20**

(52) **U.S. Cl.** **455/419; 370/401; 370/328**

(58) **Field of Search** 370/401, 402, 370/403, 404, 338, 351, 352, 353, 354, 355, 356, 328, 400; 455/560, 561, 418, 419, 420; 709/209, 223

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,109,403	A	4/1992	Sutphin	370/59
5,454,024	A	9/1995	Lebowitz	370/40
5,465,401	A	11/1995	Thompson	455/89
5,524,135	A	6/1996	Mizikovskiy et al.	379/58
5,533,029	A	7/1996	Gardner	370/94.1
5,544,222	A	8/1996	Robinson et al.	379/58
5,590,133	A *	12/1996	Billstrom et al.	370/401
5,594,779	A	1/1997	Goodman	379/59
5,603,084	A	2/1997	Henry, Jr. et al.	455/33.1
5,684,799	A	11/1997	Bigham et al.	370/397
5,689,825	A	11/1997	Averbuch et al.	455/89
5,722,084	A	2/1998	Chakrin et al.	455/551

5,726,984	A	3/1998	Kubler et al.	370/349
5,729,536	A	3/1998	Doshi et al.	370/328
5,729,549	A	3/1998	Kostreski et al.	370/522
5,732,074	A *	3/1998	Spaur et al.	370/313
5,794,142	A	8/1998	Vanttila et al.	455/419
5,887,254	A *	3/1999	Halonen	455/419
5,896,566	A *	4/1999	Averbuch et al.	455/419
5,910,946	A *	6/1999	Csapo	370/328
6,023,620	A *	2/2000	Hansson	455/419
6,031,830	A *	2/2000	Cowan	370/338
6,078,820	A *	6/2000	Wells et al.	455/466
6,138,009	A *	10/2000	Birgerson	455/419
6,292,833	B1 *	9/2001	Liao et al.	709/229
6,370,389	B1 *	4/2002	Isomursu et al.	455/466

* cited by examiner

Primary Examiner—Steven Nguyen

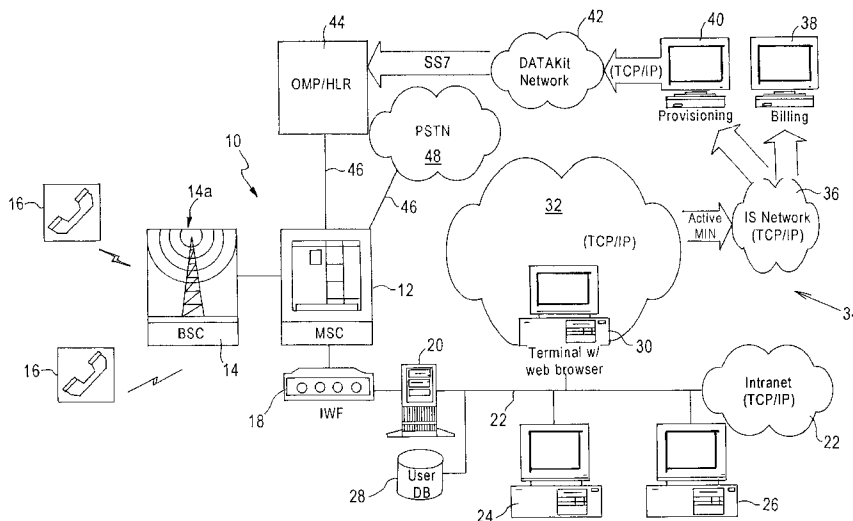
Assistant Examiner—Duc Duong

(74) *Attorney, Agent, or Firm*—McDermott, Will & Emery

(57) **ABSTRACT**

A digital wireless telephone downloads software related to digital telephone services using a client browser. The digital telephone initiates a data call to an interworking unit via a digital wireless telephone network, using a prescribed wireless data protocol such as IS-95A. The interworking unit recovers the payload of the wireless data packets to establish a two-way data link with the digital telephone. The interworking unit sends data messages to a destination server across a second two-way data link in a packet switched network to establish a two way session between the digital telephone and the destination server. The user of the digital telephone can thus communicate with the server via a two-way application-layer session using hypertext-based messaging. The digital telephone can thus navigate between different servers on the packet switched network for activation of different digital telephone services, and for downloading new software or updating existing software related to the digital telephone services.

35 Claims, 6 Drawing Sheets



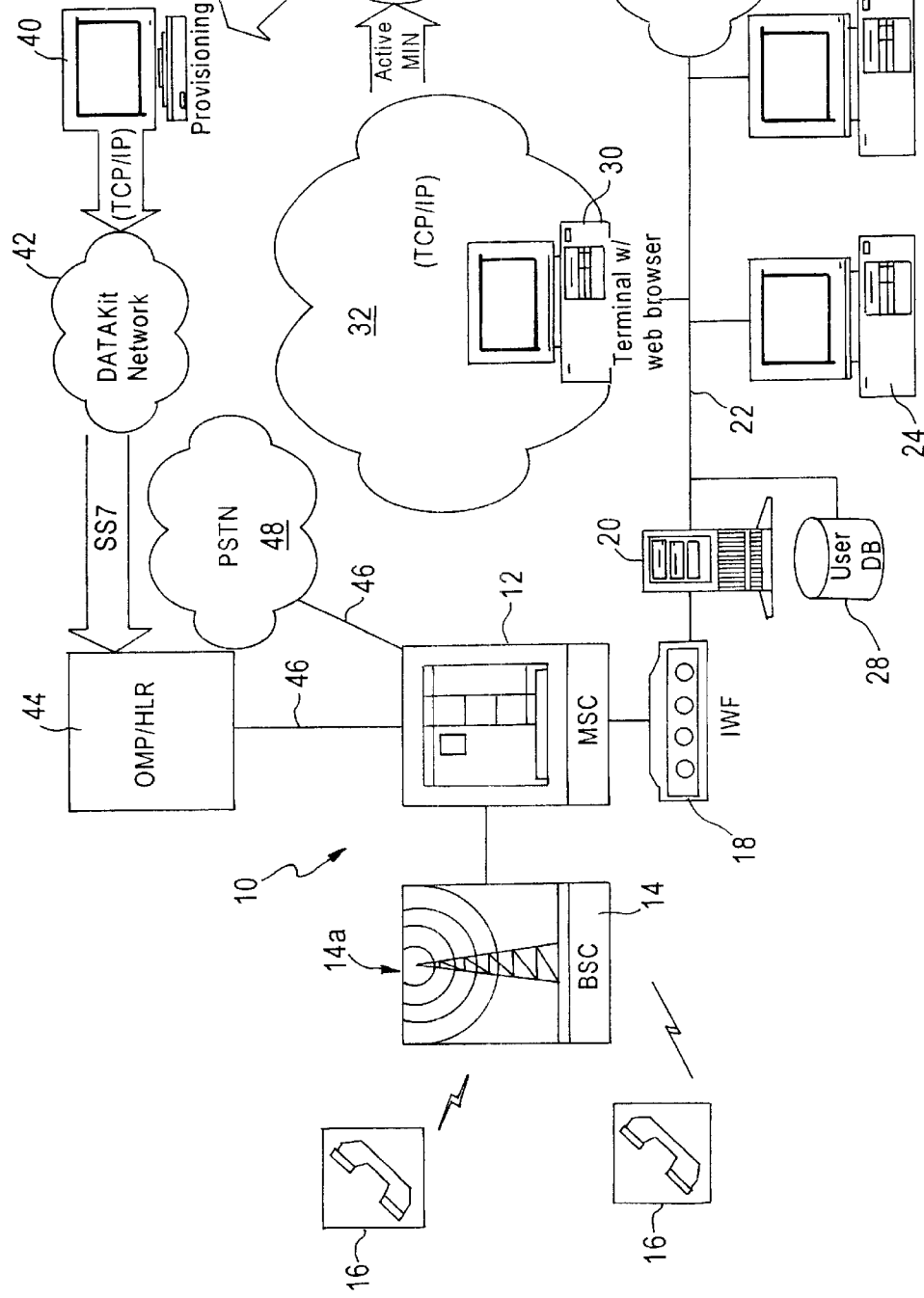


Figure 1

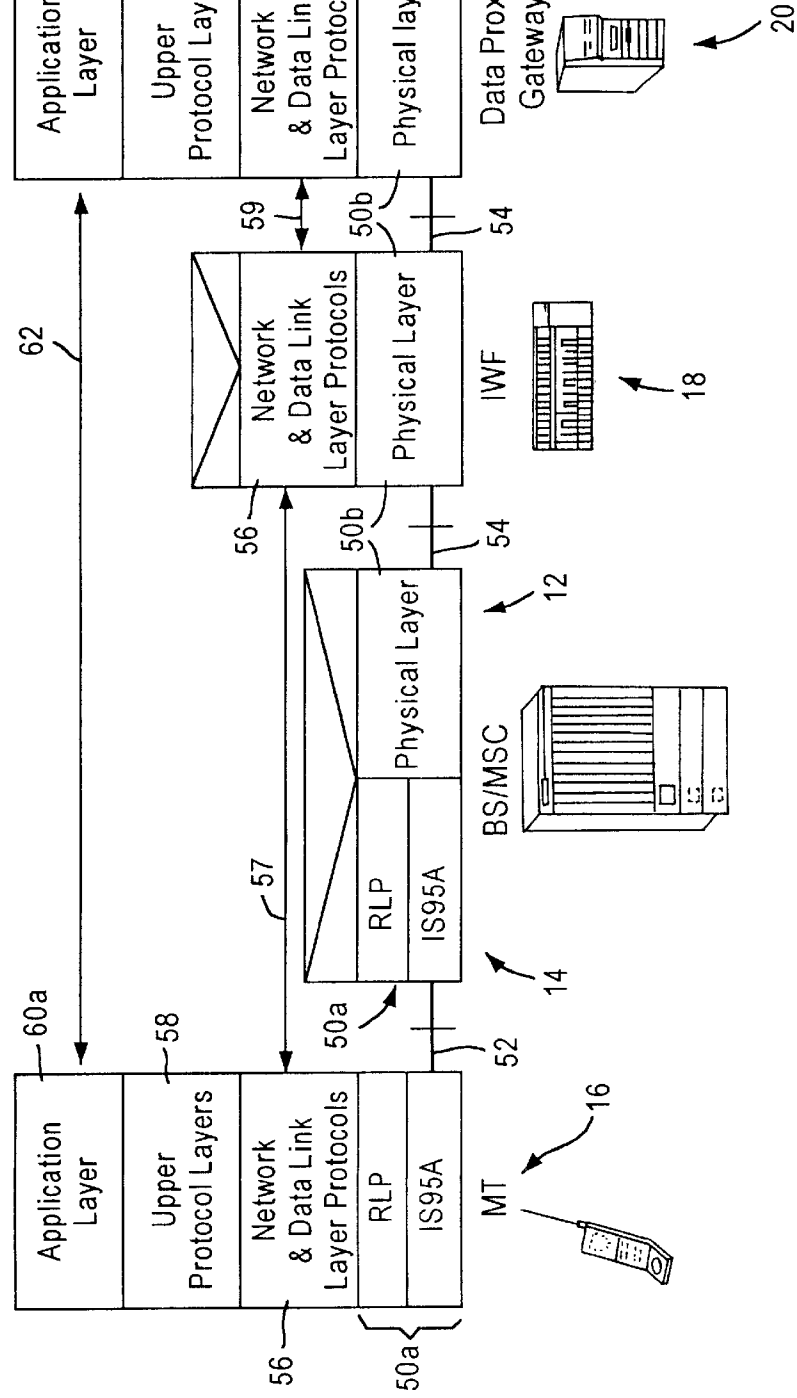


Figure 2

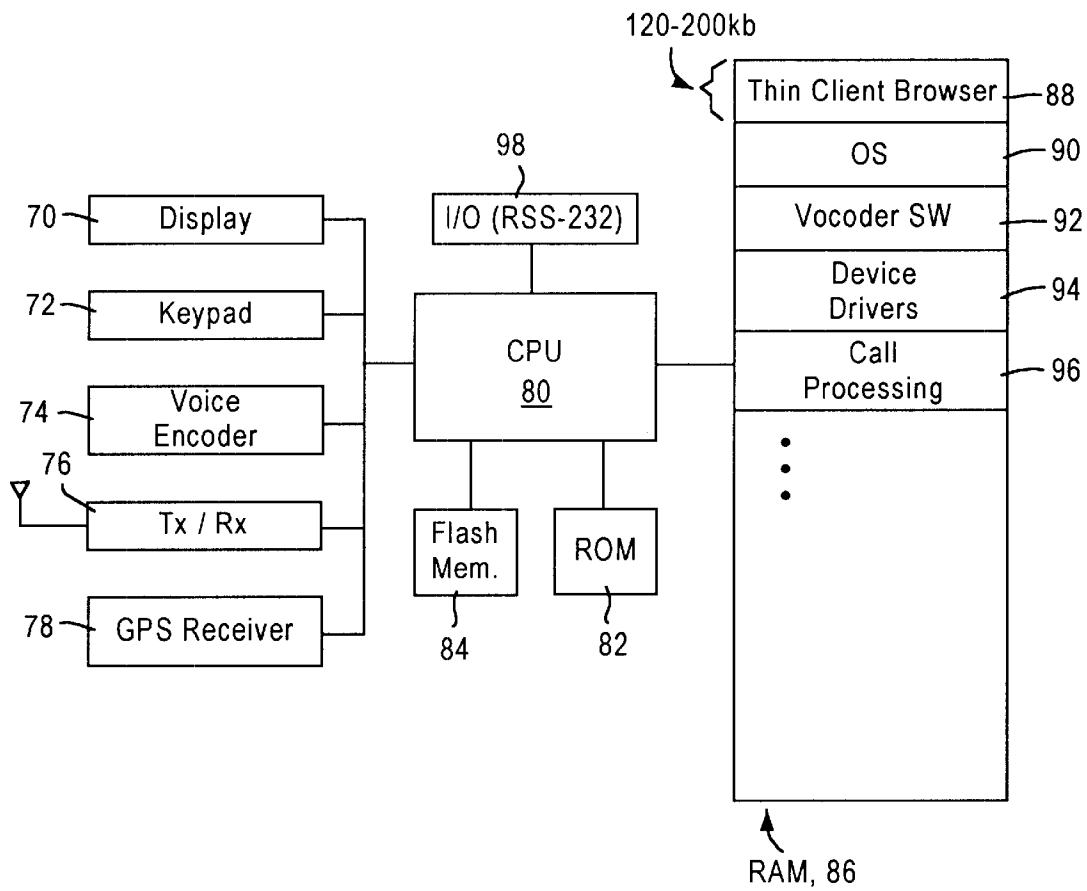


Figure 3

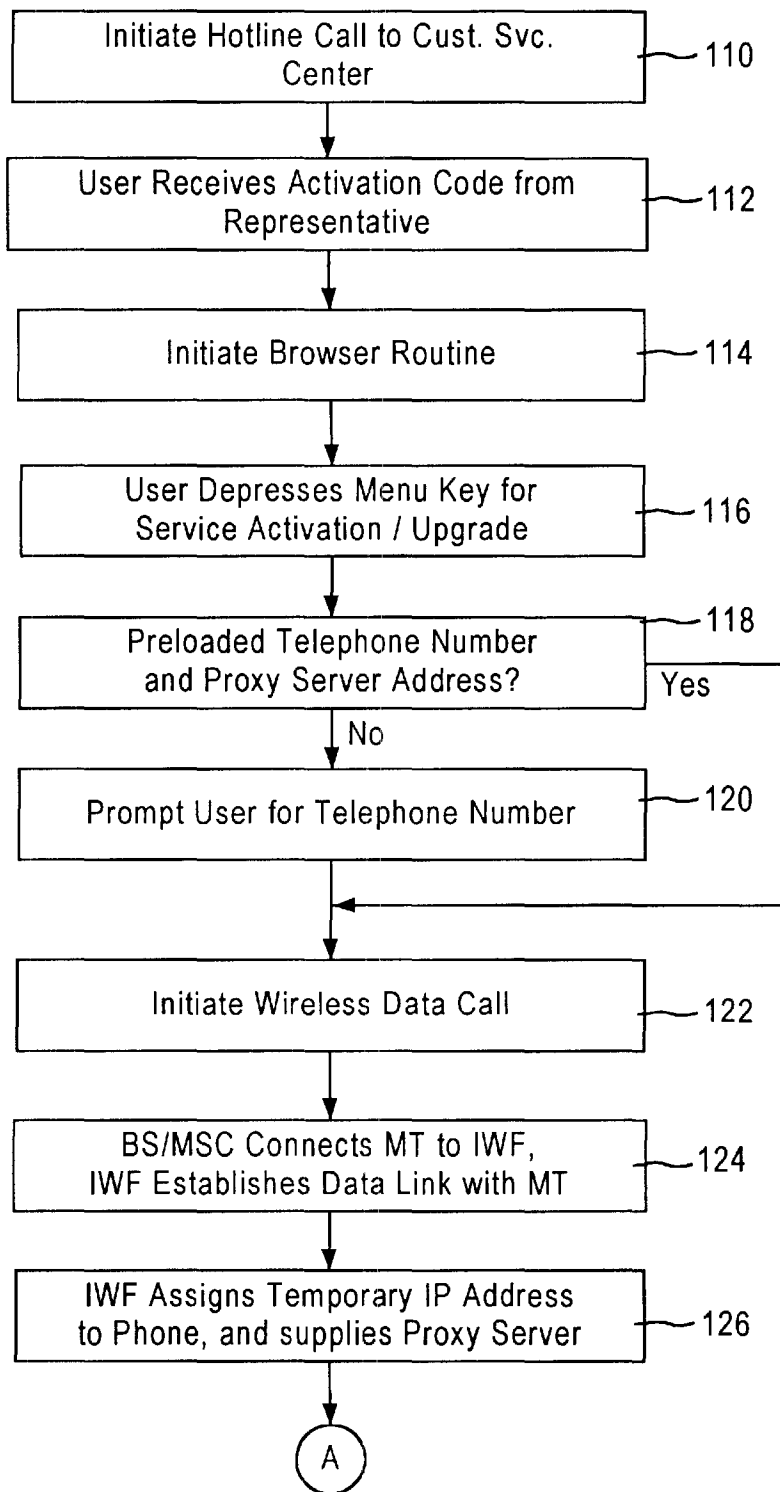


Figure 4A

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.