

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

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

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- (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

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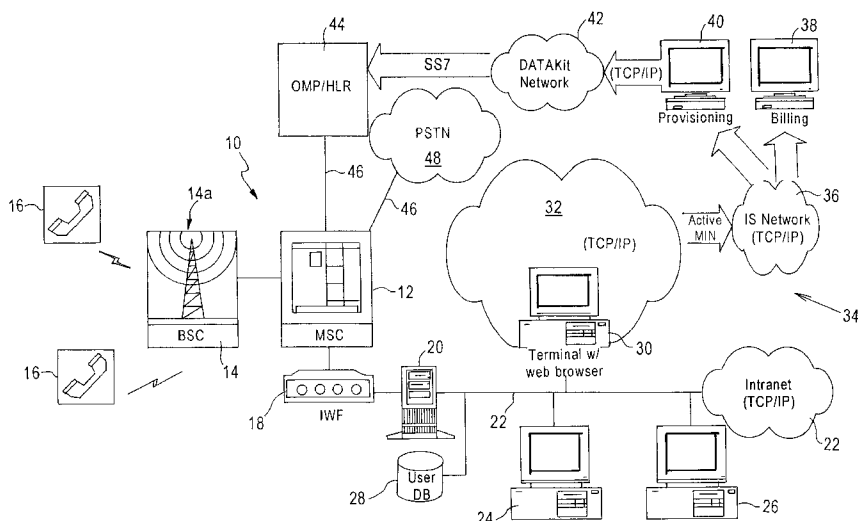
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(57) **ABSTRACT**

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**



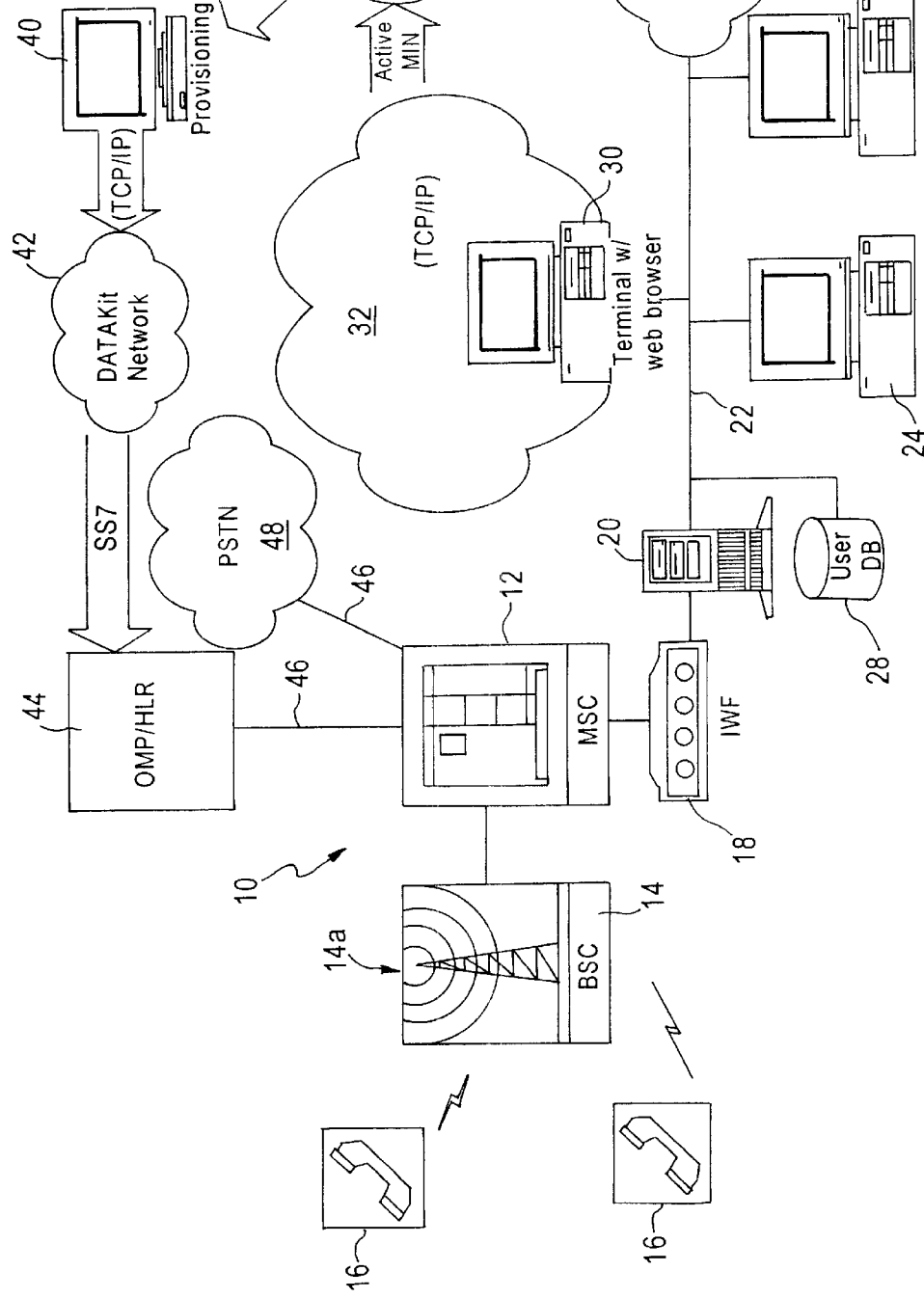


Figure 1

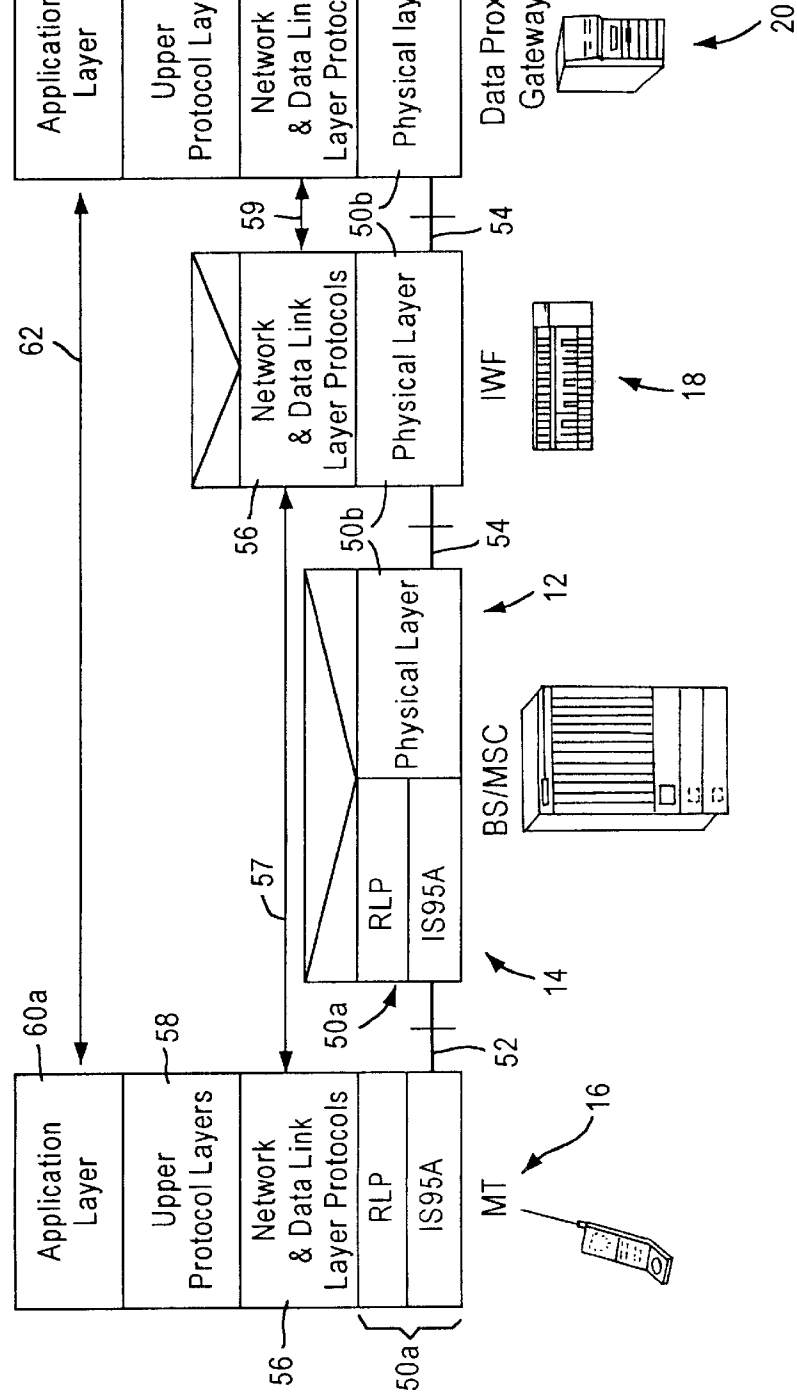


Figure 2

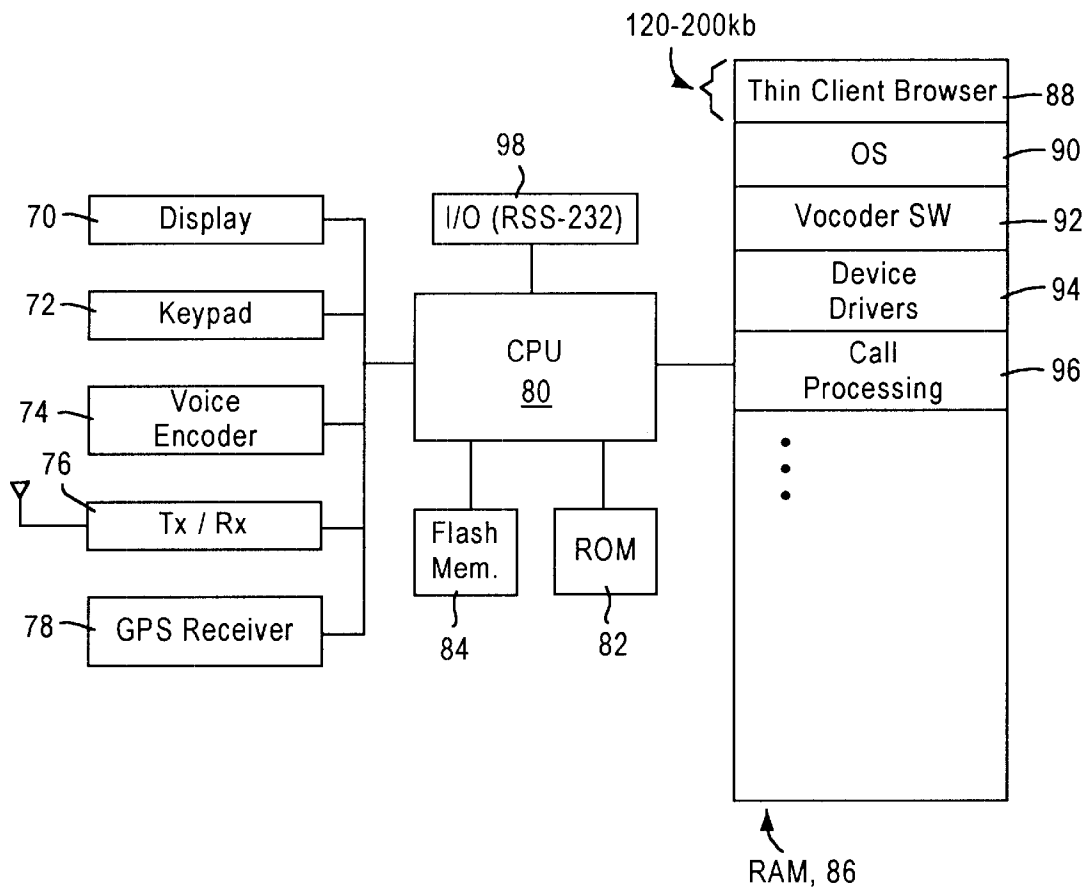


Figure 3

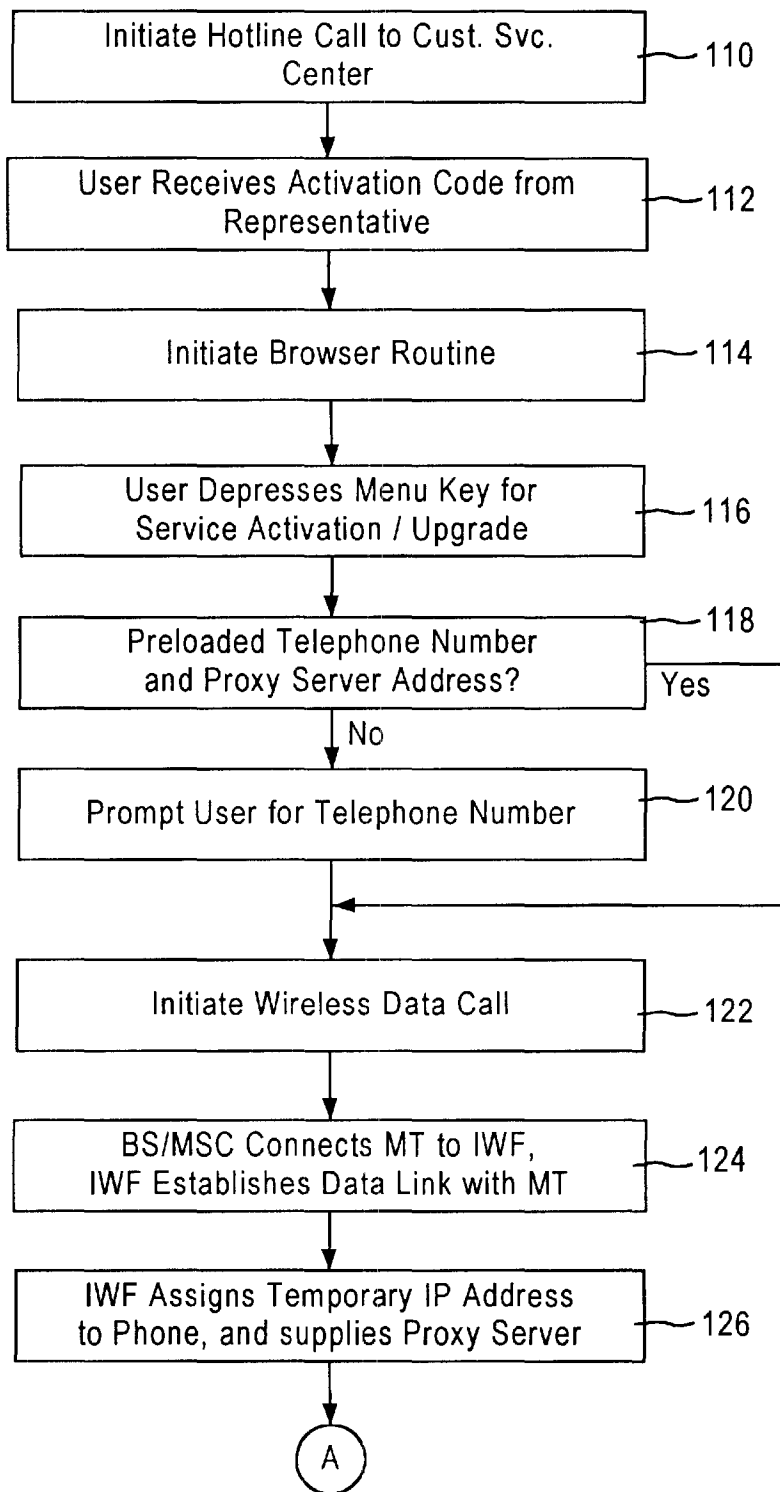


Figure 4A

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