



US006112099A

United States Patent [19]

[11] Patent Number: **6,112,099**

Ketola

[45] Date of Patent: ***Aug. 29, 2000**

[54] **TERMINAL DEVICE FOR USING TELECOMMUNICATION SERVICES**

5,371,734	12/1994	Fischer	340/825.47
5,404,392	4/1995	Miller et al.	455/466
5,422,656	6/1995	Allard et al.	345/173
5,509,050	4/1996	Berland	455/557
5,627,878	5/1997	Strauch et al.	455/466
5,907,555	5/1999	Raith	455/422

[75] Inventor: **Pekka Ketola**, Tampere, Finland

[73] Assignee: **Nokia Mobile Phones, Ltd.**, Espoo, Finland

[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

FOREIGN PATENT DOCUMENTS

0 605 349 A2	7/1994	European Pat. Off. .
0 666 681 A2	8/1995	European Pat. Off. .
0 695 075 A1	1/1996	European Pat. Off. .
WO 93/07684	4/1993	WIPO .
WO 94/12938	6/1994	WIPO .

[21] Appl. No.: **08/787,864**

Primary Examiner—Dwayne D. Bost
Assistant Examiner—Jean A Gelin
Attorney, Agent, or Firm—Perman & Green, LLP

[22] Filed: **Jan. 23, 1997**

[30] Foreign Application Priority Data

Feb. 26, 1996 [FI] Finland 960894

[51] **Int. Cl.⁷** **H04Q 7/20**

[52] **U.S. Cl.** **455/466; 370/252; 370/338**

[58] **Field of Search** 455/524, 556, 455/566, 466, 67.1, 38.3, 517, 551, 557, 574, 403; 379/93.18, 89; 370/218, 299, 912, 913, 338, 349, 428, 252

[57] ABSTRACT

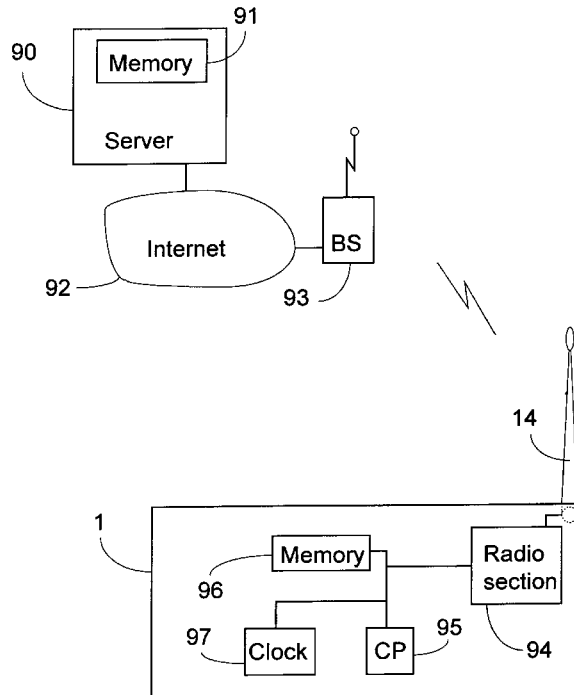
The terminal device according to the invention provides means for connecting said terminal device with telecommunication network for utilizing data based services and means for offering information processing services, such as display (15) and means for data input (15, 16, 17). The user utilizes data processing services, e.g. WWW browser prior known from Internet, without a mouse or any corresponding pointing device. In the terminal device according to the invention the data connection with the telecommunication network is closed in order to save current and cost, when data transfer is not needed. The closing of the data connection is optimized between service speed and current saving. In the terminal device according to the invention the user interface and the use of WWW services are functionally divided into several logical levels.

[56] References Cited

U.S. PATENT DOCUMENTS

4,527,267	7/1985	Cohen	370/428
4,759,014	7/1988	Decker et al.	370/503
4,837,800	6/1989	Freeburg et al.	455/557
4,914,650	4/1990	Sriram	370/528
5,146,454	9/1992	Courtois et al.	370/252
5,220,501	6/1993	Lawlor et al.	380/24

13 Claims, 9 Drawing Sheets



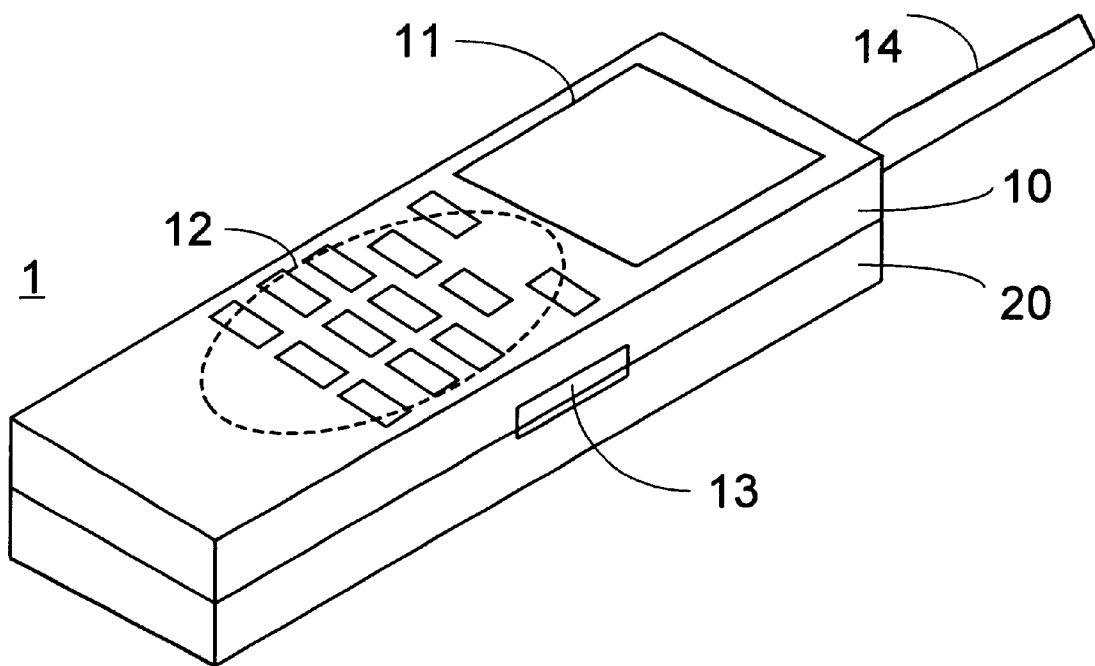


Figure 1

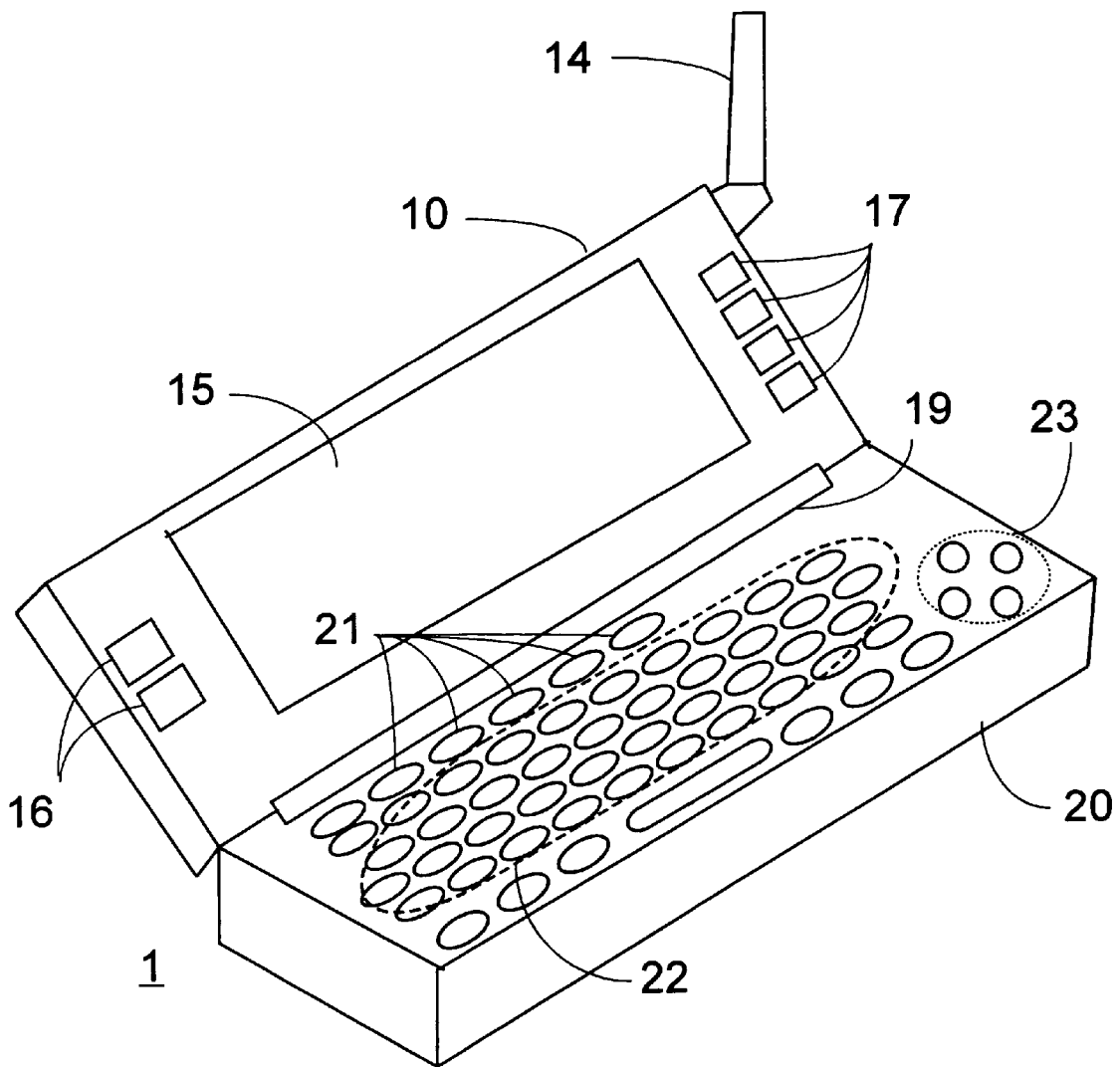


Figure 2

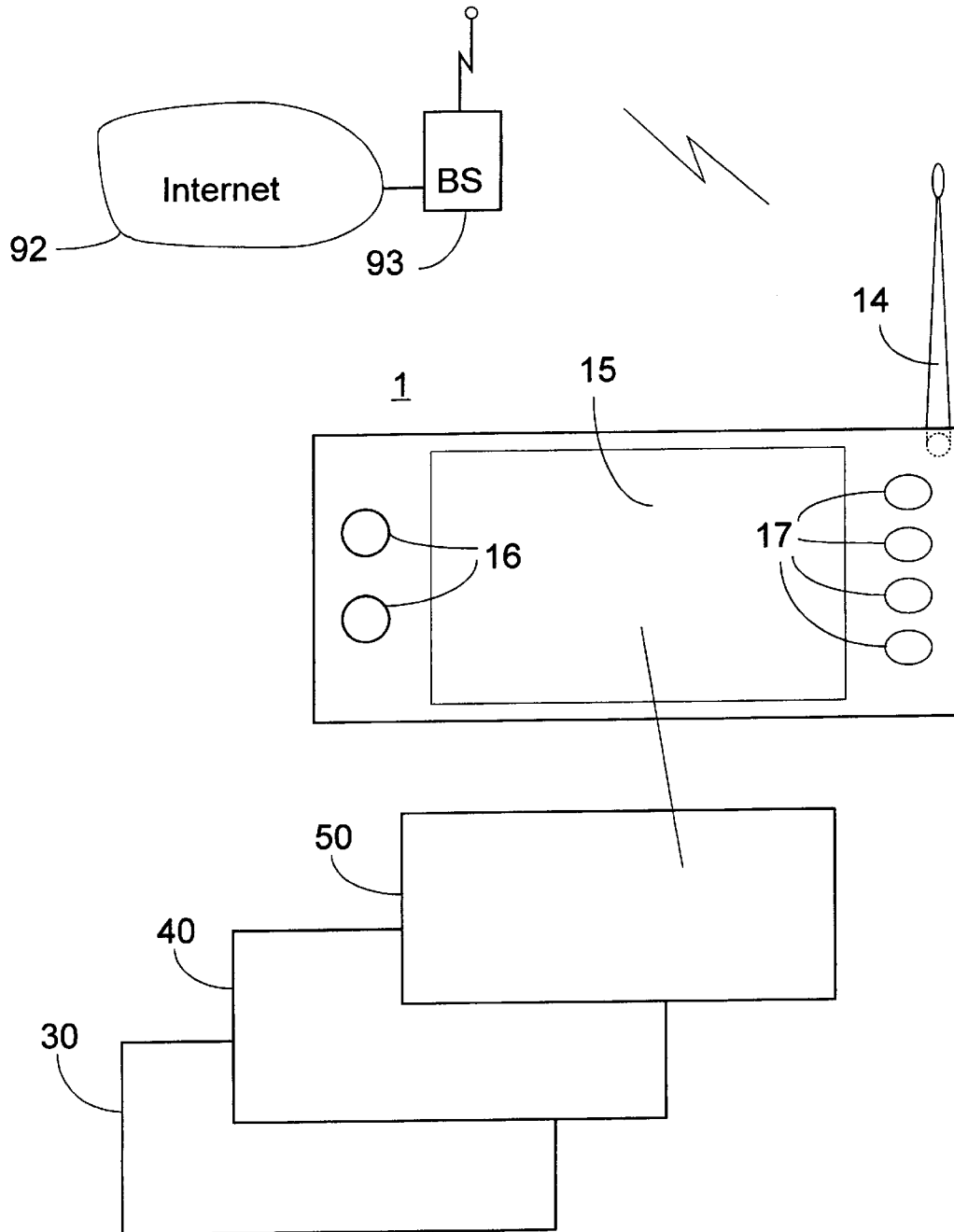


Figure 3

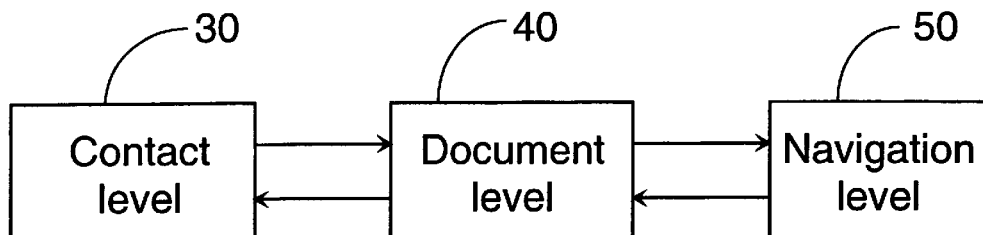


Figure 4

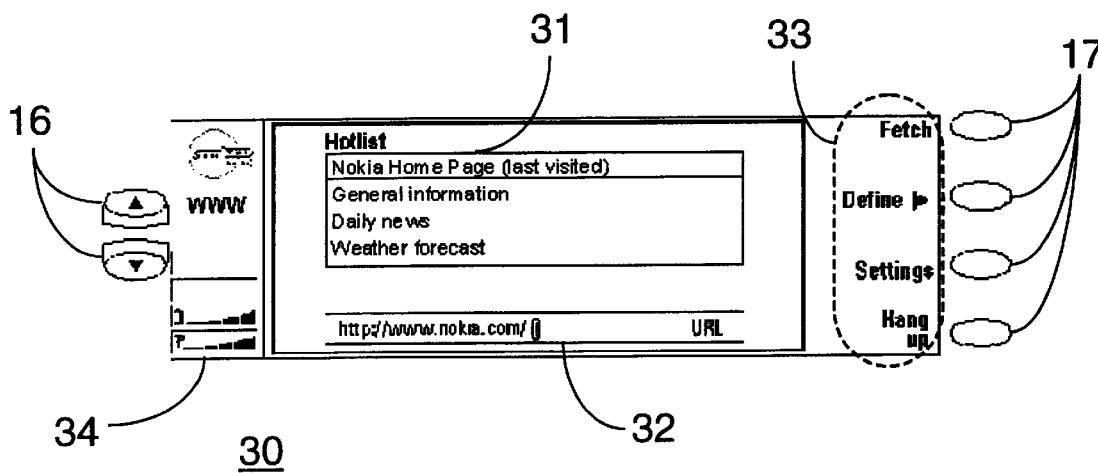


Figure 5

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.