

Exhibit B



US007295532B2

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

(10) **Patent No.:** US 7,295,532 B2
(45) **Date of Patent:** Nov. 13, 2007

(54) **SYSTEM, DEVICE AND COMPUTER READABLE MEDIUM FOR PROVIDING NETWORKING SERVICES ON A MOBILE DEVICE**

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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 298 days.

(21) Appl. No.: **09/932,180**

(22) Filed: **Aug. 17, 2001**

(65) **Prior Publication Data**

US 2003/0035397 A1 Feb. 20, 2003

(51) **Int. Cl.**

H04Q 7/00 (2006.01)

(52) **U.S. Cl.** **370/328; 370/338**

(58) **Field of Classification Search** **370/310.1, 370/310.2, 313, 319, 326, 328, 338, 345, 370/389, 392, 395.3, 395.54, 400, 401, 475**

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- | | | |
|-------------|---------|--------------------|
| 5,442,680 A | 8/1995 | Schellinger et al. |
| 5,457,737 A | 10/1995 | Wen |
| 5,572,528 A | 11/1996 | Shuen |
| 5,742,237 A | 4/1998 | Bledsoe |
| 5,771,438 A | 6/1998 | Palermo et al. |

5,774,791 A 6/1998 Strohellen et al.

(Continued)

FOREIGN PATENT DOCUMENTS

JP 3153213 4/2001

(Continued)

OTHER PUBLICATIONS

White Paper, Handheld Devices: Comparing the Major Platforms, www.dell.com/r&d, Dec. 2000.

(Continued)

Primary Examiner—Chi Pham

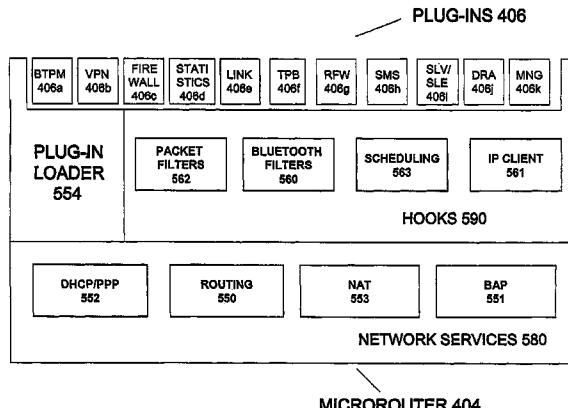
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(57) **ABSTRACT**

A system, device and computer readable medium that monitors and reconfigures a LAN by a WAN operator is provided. In an embodiment of the present invention, a telecommunications operator monitors and manages devices and/or applications communicating with a wireless device, such as cellular telephone. In an embodiment of the present invention, a telecommunication operator adds LAN network services to microrouter 404 in a cellular telephone without user intervention. In an embodiment of the present invention, the cellular telephone has a Bluetooth™ processor and transceiver. In an embodiment of the present invention, microrouter 404 includes a Bluetooth™ LAN Access Profile software component, routing software component, PPP server software component and a NAT software component. In an embodiment of the present invention, microrouter 404 includes hooks and interfaces for adding other network services, such as a Bluetooth™ Terminal Pairing Management software component, a VPN software component, Firewall component, Statistics software component, Link Optimization software component, LAN reverse firewall software component, Terminal Flashing software component, SMS software component, SLV and SLE software component and a Device Resources software component.

31 Claims, 6 Drawing Sheets



US 7,295,532 B2

Page 2

U.S. PATENT DOCUMENTS

5,793,763 A	8/1998	Mayes et al.	2002/0155830 A1	10/2002	Iyer
5,805,166 A	9/1998	Hall et al.	2002/0160764 A1	10/2002	Gorsuch
5,838,252 A	11/1998	Kikinis	2003/0013438 A1	1/2003	Darby
5,896,369 A	4/1999	Warsta et al.	2003/0017810 A1	1/2003	Janninck et al.
5,929,848 A	7/1999	Albukerk et al.	2003/0022699 A1	1/2003	Lin
5,978,386 A	11/1999	Hamalainen et al.	2003/0027563 A1	2/2003	Herle et al.
5,987,011 A	11/1999	Toh	2003/0027570 A1*	2/2003	Yang et al. 455/432
5,987,033 A	11/1999	Boer et al.	2003/0032417 A1	2/2003	Minear et al.
6,064,734 A	5/2000	Hasegawa et al.	2003/0050058 A1	3/2003	Walsh et al.
6,067,291 A	5/2000	Kamerman et al.	2003/0054765 A1	3/2003	Botteck
6,069,896 A	5/2000	Borgstahl et al.	2003/0060188 A1	3/2003	Gidron
6,078,789 A	6/2000	Bodenmann et al.	2003/0078036 A1	3/2003	Minear et al.
6,085,098 A	7/2000	Moon et al.	2003/0091917 A1	4/2003	Chang et al.
6,130,602 A	10/2000	O'Toole et al.	2003/0114105 A1	5/2003	Davenport et al.
6,151,628 A	11/2000	Xu et al.	2003/0115351 A1	6/2003	Haller et al.
6,198,948 B1	3/2001	Sudo et al.	2003/0122856 A1	6/2003	Giobbi
6,218,958 B1	4/2001	Eichstaedt et al.	2003/0143992 A1	7/2003	Hubbard
6,223,029 B1	4/2001	Stenman et al.	2003/0153280 A1	8/2003	Humphrey et al.
6,243,581 B1	6/2001	Jawanda	2003/0187807 A1	10/2003	Kopp et al.
6,265,788 B1	7/2001	Davidson et al.	2003/0194090 A1	10/2003	Matsubara et al.
6,282,183 B1	8/2001	Harris et al.	2003/0214940 A1	11/2003	Tachikawa
6,298,443 B1	10/2001	Colligan et al.	2003/0224773 A1	12/2003	Deeds
6,326,926 B1	12/2001	Shoobridge et al.	2003/0232616 A1	12/2003	Cromer et al.
6,333,973 B1	12/2001	Smith et al.	2004/0001467 A1	1/2004	Rowe
6,343,276 B1	1/2002	Barnett	2004/0048671 A1	3/2004	Ahmavaara et al.
6,434,537 B1	8/2002	Grimes	2004/0066769 A1	4/2004	Barber
6,446,127 B1	9/2002	Schuster et al.	2004/0196812 A1	7/2004	Anastasakos et al.
6,452,910 B1	9/2002	Vij et al.	2005/0170825 A1*	9/2004	Dowling 455/418
6,459,882 B1	10/2002	Palermo et al.	2006/0046664 A1	3/2006	Paradiso et al.
6,463,078 B1	10/2002	Engstrom et al.			
6,487,180 B1	11/2002	Borgstahl et al.			
6,519,460 B1	2/2003	Haartsen			
6,532,366 B1	3/2003	Chung et al.			
6,600,428 B1	7/2003	O'Toole et al.			
6,600,734 B1	7/2003	Gernert et al.			
6,630,925 B1	10/2003	Ostergaard et al.			
6,633,759 B1	10/2003	Kobayashi			
6,636,489 B1	10/2003	Fingerhut			
6,654,616 B1*	11/2003	Pope et al. 455/445			
6,665,549 B1	12/2003	Reed			
6,891,820 B1*	5/2005	Pham et al. 370/338			
2001/0022780 A1*	9/2001	Mizutani et al. 370/261			
2001/0047424 A1	11/2001	Alastalo et al			
2002/0010008 A1	1/2002	Bork et al.			
2002/0010683 A1	1/2002	Aune			
2002/0037700 A1	3/2002	Dooley et al.			
2002/0055333 A1	5/2002	Davies et al.			
2002/0058502 A1	5/2002	Stanforth			
2002/0063472 A1	5/2002	Irvin			
2002/0065099 A1	5/2002	Bjorndahl			
2002/0065817 A1	5/2002	Ito et al.			
2002/0068559 A1	6/2002	Sharma et al.			
2002/0068600 A1	6/2002	Chihara et al.			
2002/0069037 A1	6/2002	Hendrickson et al.			
2002/0082054 A1	6/2002	Keinonen et al.			
2002/0086718 A1	7/2002	Bigwood et al.			
2002/0091633 A1	7/2002	Proctor			
2002/0102974 A1	8/2002	Raith			
2002/0118663 A1	8/2002	Dorenborch et al.			
2002/0128051 A1	9/2002	Liebenow			
2002/0132610 A1	9/2002	Chaplin et al.			
2002/0142762 A1	10/2002	Chmaytelli et al.			
2002/0143952 A1	10/2002	Sugiarto et al.			

FOREIGN PATENT DOCUMENTS

WO	WO99/48315	9/1999
WO	WO 00/39967	7/2000
WO	WO 01/048977	7/2001

OTHER PUBLICATIONS

Miyatsu, Bluetooth Design Background and Its Technological Features, IEICE Trans, Fundamentals, vol. E83-A, No. 11, Nov. 2000.
 Parekh, Operating Systems on Wireless Handheld Devices, A Strategic Market Analysis, Massachusetts Institute of Technology, Sep. 28, 2000.
 Johansson, et al., Short Range Radio Based Ad-hoc Networking: Performance and Properties, IEEE, 1999.
 Yee et al., "Integrating Bluetooth With Wireless and Ricochetting", pp. 1310-1314, 2000 IEEE.
 Haartsen, "BLUETOOTH—The universal radio interface for ad hoc wireless connectivity", pp. 110-117, Ericsson Review No. 3, 1998.
 Guthery et al., "The WebSIM—Clever Smartcards Listen to Port 80", version 15.12.99.
 Project P946-GI, Smart Devices "When Things Start to Think", Jan. 2000, 2000 EURESCOM Participants in Project P946-GI.
 Karagiannis, "Mobility support for ubiquitous Internet access", ERICSSON Open report, pp. 1-70, Dec. 21, 2000.
 Frodigh et al., "Wireless ad hoc networking - The art of networking without a network", Ericsson Review No. 4, 2000, pp. 248-263.
 Faruque et al, "Design and Analysis of Ad Hoc Wireless Networks for Battlefield Applications", Part of the SPIE Conference on Digitization of the Battlespace IV, Orlando, Florida, Apr., 1999, pp. 118-122.
 Garcia-Luna-Aceves et al., "Wireless Internet Gateways (Wings)", 1997 IEEE, pp. 1271-1276.

* cited by examiner

U.S. Patent

Nov. 13, 2007

Sheet 1 of 6

US 7,295,532 B2

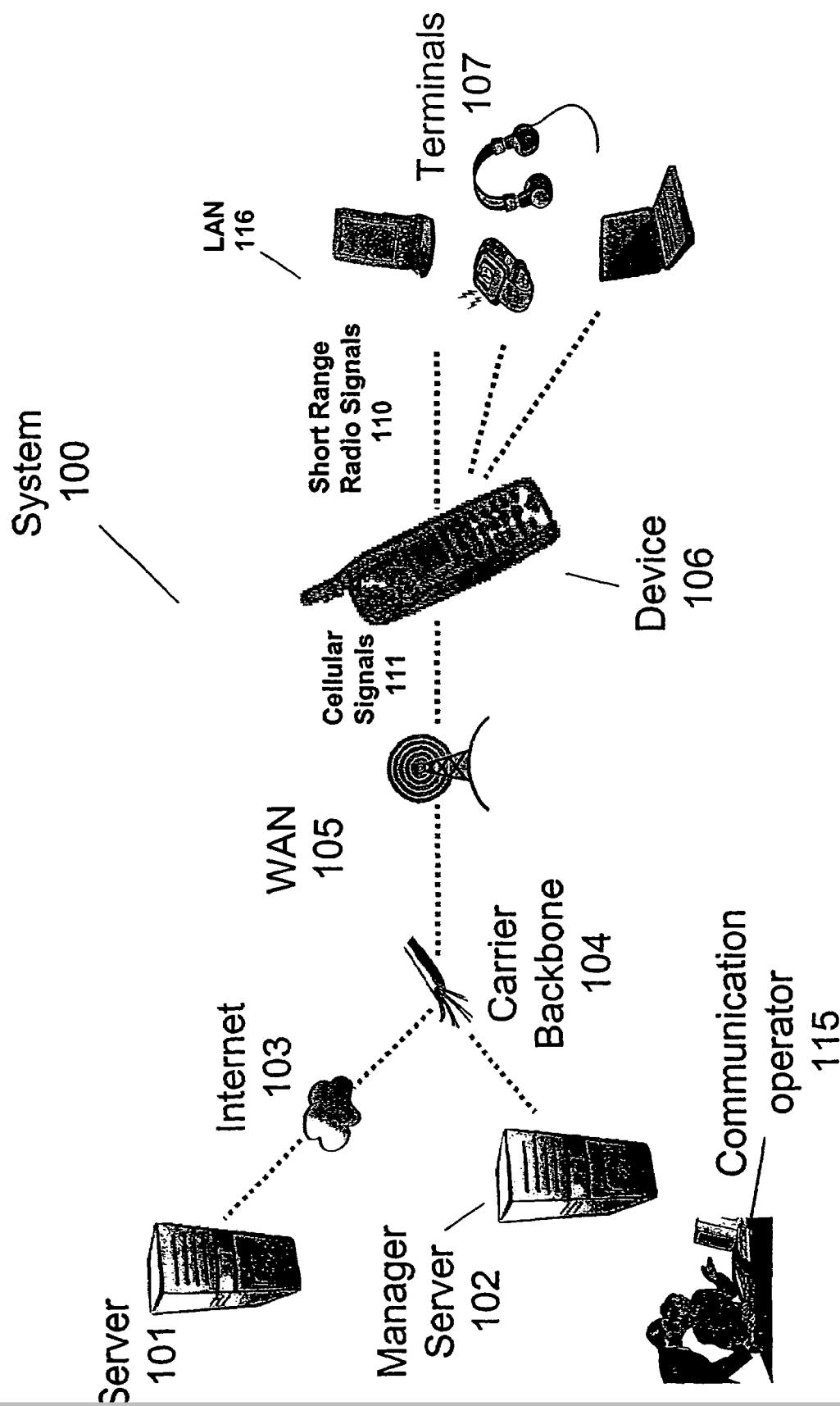


Fig. 1

U.S. Patent

Nov. 13, 2007

Sheet 2 of 6

US 7,295,532 B2

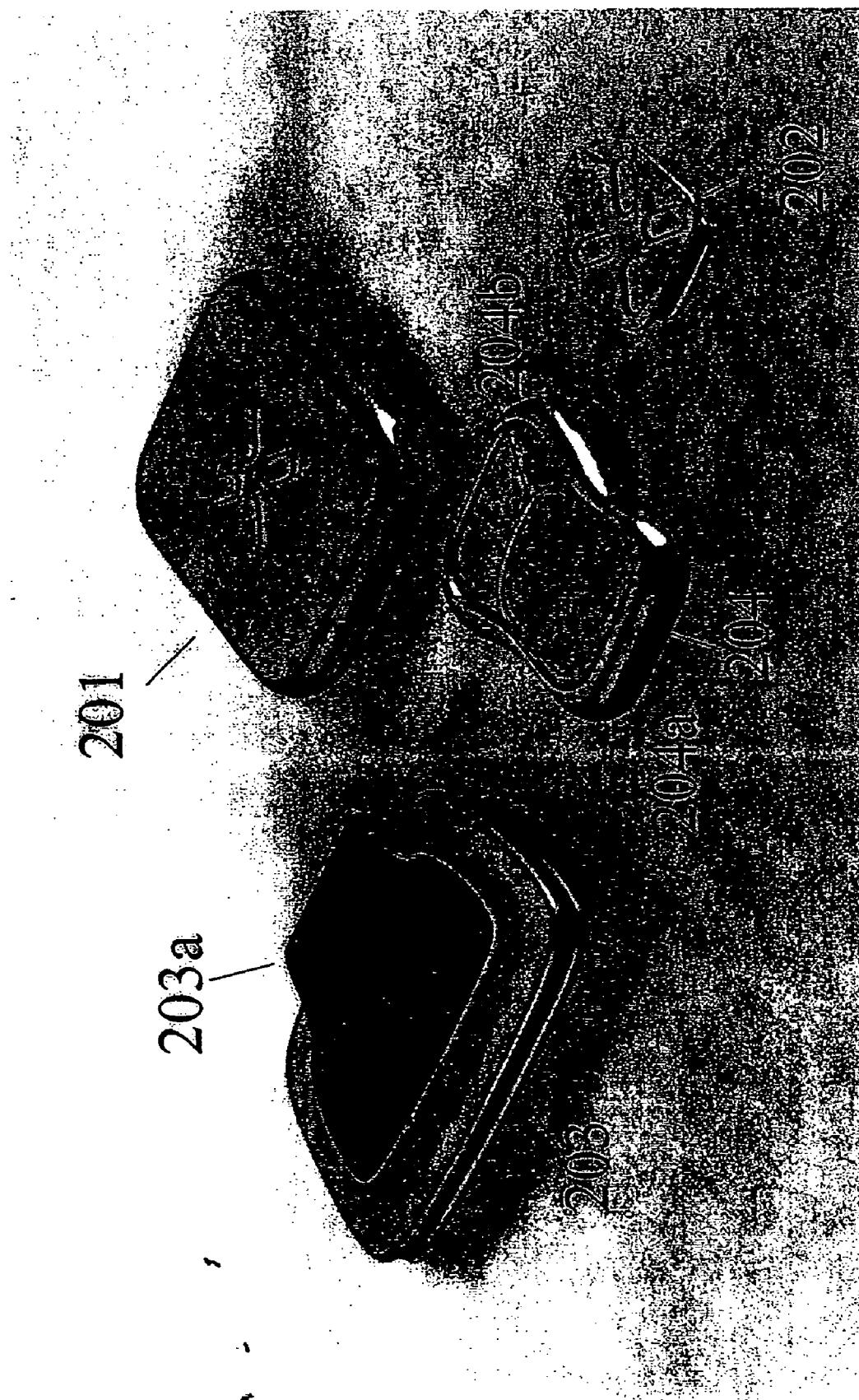


Fig. 2

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