

Patent Number:

US006009151A

United States Patent [19]

Staples

Dec. 28, 1999 **Date of Patent:** [45]

6,009,151

[54] PC CARD MODEM WITH MICROPHONE AND SPEAKER CONNECTIVITY

[75] Inventor: Leven E. Staples, Granbury, Tex.

Assignee: Data Race, Inc., San Antonio, Tex.

[21] Appl. No.: **08/703,444**

Aug. 27, 1996 [22] Filed:

Int. Cl.⁶ H04M 11/00

379/93.07, 93.14, 93.15, 93.23, 93.37, 110.01;

370/58.1; 365/164; 395/882, 884

[56] References Cited

U.S. PATENT DOCUMENTS

4,578,537	3/1986	Faggin et al
4,597,077	6/1986	Nelson et al
4,614,144	9/1986	Sagara et al
4,679,191	7/1987	Nelson et al
4,750,171	6/1988	Kedar et al
4,916,607	4/1990	Teraichi et al
4,972,457	11/1990	O'Sullivan .
4,979,144	12/1990	Mizuta .
5,136,631	8/1992	Einhorn et al
5,192,999	3/1993	Graczyk et al
5,274,738	12/1993	Daly et al
5,297,231	3/1994	Miller .
5,317,630	5/1994	Feinberg et al

(List continued on next page.)

OTHER PUBLICATIONS

Anderson, D., PCMCIA System Architecture, Mindshare, Inc., 1994, pp. 1-50.

Bryan, John, "PCMCIA: Past, Present and Promise," Byte, pp. 65-72, Nov. 1994.

Rigney, Steve, "Socket to Us: PCMCIA Connectivity," PC Magazine, pp. 207-212, Jan. 24, 1995.

Nass, Richard, ("Nass I"), "PCMCIA Fax-Modem and LAN Run Simultaneously," Electronic Design, pp. 131–132, Oct.

Nass, Richard, ("Nass I"), "Multifunction Cards Pose Design Challenges," Electronic Design, pp. 51-53, Oct. 3, 1994.

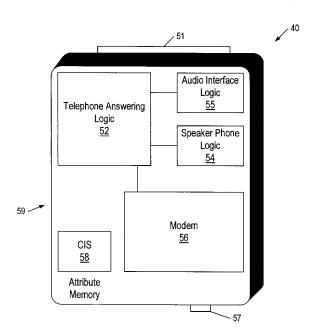
Primary Examiner—Curtis A. Kuntz Assistant Examiner—Melur Ramakrishnaiah Attorney, Agent, or Firm—Conley, Rose & Tayon; Robert C. Kowert; Jeffrey C. Hood

ABSTRACT [57]

[11]

The present invention comprises a PC Card adapted for insertion in a PC Card slot in a computer system. The PC Card includes a housing having a PC Card adapter having a plurality of input and output pins for coupling the housing to the PC Card slot and receiving and transmitting signals in said computer system. A microphone is disposed within said housing, as is audio interface logic coupled to the microphone. The audio interface logic is configured to process audio signals from the microphone across said PC Card adapter. The PC card further includes a modem coupled to a connector defining an external communication path and configured to receive telephony signals, and telephone answering logic operably coupled to the modem and audio interface logic and configured to receive telephony signals from the modem and to store data corresponding to the telephony signals. The PC Card further includes speakerphone logic configured to provide speakerphone functionality to the PC Card. In one embodiment, the PC Card also includes a speaker configured to provide an audio output. The audio interface logic interfaces the microphone and/or speaker to the PC Card and the telephone answering and speakerphone logic. In alternate embodiments, the PC Card provides for external microphone and/or speaker connectiv-

30 Claims, 9 Drawing Sheets



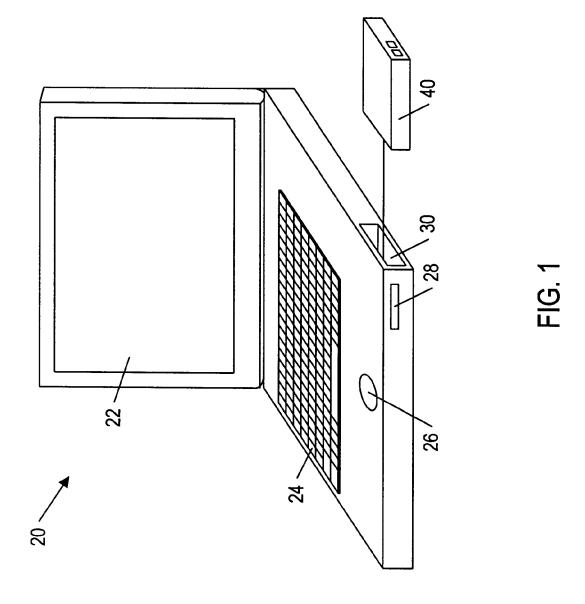


6,009,151

Page 2

	U.S. PA	TENT DOCUMENTS	5,463,742	10/1995	Kobayashi .
5 000 000	5 4004	D	5,471,470	11/1995	Sharma et al
5,333,266	,	Boaz et al	5,475,691	12/1995	Chapman et al
5,335,276		Thompson et al	5,481,616	1/1996	Freadman.
5,349,640		Dunn et al	5,483,530	1/1996	Davis et al
5,353,334		O'Sullivan .	5,509,811		Homic .
5,361,061		Mays et al	5,515,423		Beck et al
5,392,223	2/1995		5,517,646		Piccirillo et al
5,408,614		Thornton et al			Beers et al
5,411,405	5/1995	McDaniels et al	5,519,641		
5,420,852	5/1995	Anderson et al 370/58.1	5,524,047		Brown et al
5,423,697	6/1995	MacGregor .	5,526,408		Yekutiely .
5,426,564	6/1995	Hsu .	5,574,682	11/1996	Shinohara
5,428,663	6/1995	Grimes et al	5,602,902	2/1997	Satterlund et al
5,437,019	7/1995	Brockmann .	5,606,599	2/1997	O'Mahoney et al
5,440,585	8/1995	Patridge, III .	5,701,515	12/1997	Gradeler
5,444,768	8/1995	Lemaire et al 379/93.01	5,752,082	5/1998	Staples
5,444,869	8/1995	Stricklin et al	5,799,036		Staples .
5,445,525	8/1995	Broadbent et al	5,812,870	9/1998	Kikinis et al
5,457,782	10/1995	Daly et al	5,822,692		Krishan et al 455/557







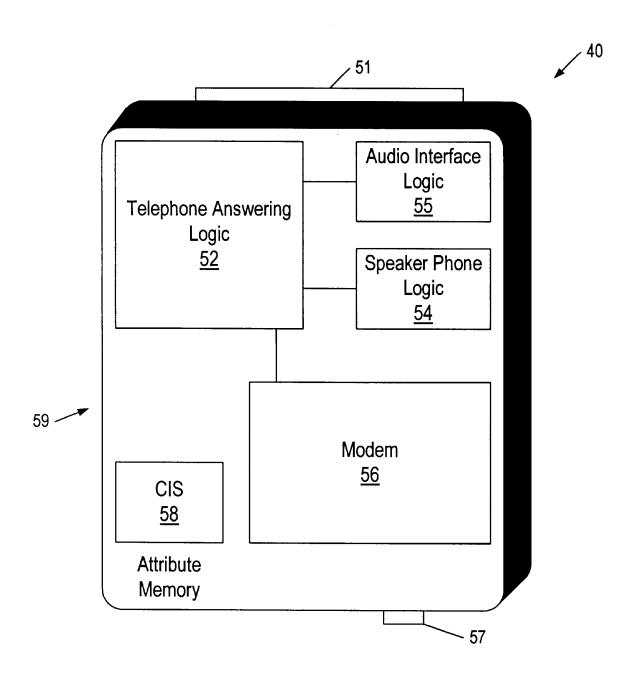


FIG. 2

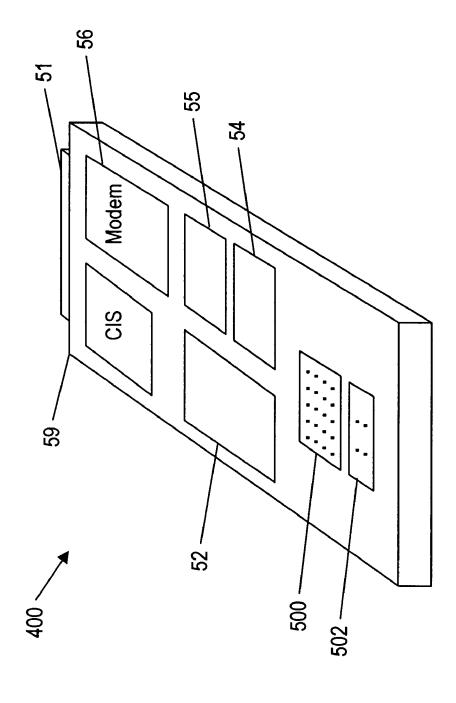


FIG. 2a

DOCKET A L A R M

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.

