Patent Owner's Demonstratives

IPR2015-00369

IPR2015-00373

Patent No. 6,128,290

Before Jameson Lee, Matthew R. Clements, and Charles J. Boudreau, *Administrative Patent Judges*

Apple Exhibit 1001
Carvey, U.S. Pat. No. 6,128,290
Col. 11, line 62 to Col. 12, line 19

1. A data network system for effecting coordinated operation of a plurality of electronic devices, said system comprising:

a server microcomputer unit;

a plurality of peripheral units which are battery powered and portable, which provide either input information from the user or output information to the user, and which are adapted to operate within short range of said server unit;

said server microcomputer incorporating an RF transmitter for sending commands and synchronizing information to said peripheral units;

said peripheral units each including an RF receiver for detecting said commands and synchronizing information and including also an RF transmitter for sending input information from the user to said server microcomputer;

said server microcomputer including a receiver for receiving input information transmitted from said peripheral units;

said server and peripheral transmitters being energized in low duty cycle RF bursts at intervals determined by a code sequence which is timed in relation to said synchronizing information.

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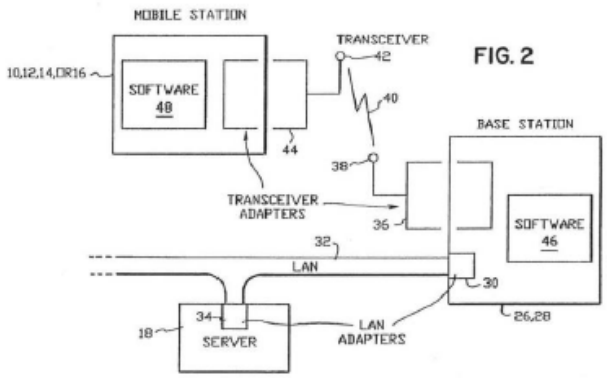

Figure 2 is a block diagram of a digital data communication system of the type in which Natarajan's invention is implemented, illustrating the basic components of a mobile station and a base station. *Id.* at col. 1, l. 67–col. 2, l. 3. As depicted in Figure 2, mobile stations 10, 12, 14, and 16 communicate with gateways (i.e., base stations 26, 28) connected with server 18, via wireless transceivers adapters 36, 44. *Id.* at col. 2, ll. 32–39, 51–52, 58–59, 65–67. According to Natarajan:

> The scheduled access multiaccess protocol is implemented to effectively conserve battery power by suitable control of the state of the controller, the transmitter and receiver units at the wireless link adapter by scheduling when the adapter is in a normal running mode, or a standby mode in which power is conserved.

Id., Abst; *see also id.* at col. 3, l. 66–col. 4, l. 1.

Natarajan discloses that "[a] desirable solution is one in which the transmitter (or receiver) consumes power only when it is actively transmitting a message (or actively receiving a message)." *Id.* at 4:3–6.

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energized in low duty cycle RF bursts." *Id.* at 22. DSS does not dispute that, during time slots in which Natarajan's mobile units are designated to receive a message, the base station's (i.e., the server unit's) transmitter is energized to transmit data to the mobile units. *Id.* at 23 (quoting Pet. 54). DSS contends, however, that the server transmitter's being energized during the time slots at which the mobile units are scheduled to receive data "does not logically lead to a conclusion that the server transmitter is powered OFF during the remaining time slots when no active transmission between the server and peripheral units occurs" (*id.*).

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Based on the record before us, we are persuaded that the disclosure of Natarajan pertaining to a scheduled multi-access protocol in which time is divided into fixed-length frames, along with Natarajan's description of frames being divided into slots and multiple subframes, is sufficient to demonstrate a reasonable likelihood that Natarajan discloses "said server and peripheral transmitters being energized in low duty cycle RF bursts," as recited in claim 1. Claims 1–4 do not recite any requirement that the server transmitter must be "powered OFF" during the time slots when no active transmission between the server and peripheral units occurs; nor is such required by the plain and ordinary meaning of the claim phrase "energized in low duty cycle RF bursts." Regardless, by disclosing, for example, that "a scheduled multi-access protocol is used in which time is divided into fixed-length frames" and that "frame[s] [are] divided into multiple subframes," including different periods for broadcast of packets from base station to mobile units (outbound traffic) and for transfer of traffic from mobile units to base station (inbound traffic) (*see, e.g.*, Ex. 1003, col. 4, ll. 20–22, 28–38), we are persuaded for purposes of this Decision that Natarajan conveys that both the receivers and the transmitters in the base station, as well as in the mobile units, are energized only in low duty cycle RF bursts.

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