

telephones 10A–C coupled to computers 135E, integrated access devices 135C, or caller identification devices 135B; or wireless phones 135D. It is known in the art that such devices may be coupled via a single or multiple number of networks 110.

In some embodiments, integrated access device 135C may be a personal computer, personal digital assistant (PDA), wireless phone, or other such network-computing device. Integrated access device 135C may be any apparatus known in the art that is able to communicate on the network 110.

Caller identification device 135B may be a caller ID box or other such data-collecting device. In addition to performing caller ID functions, caller identification device 135B may include features to perform passive call blocking. For example, caller identification device 135B may be a caller ID box that incorporates a modifiable caller database which is used in determining whether to block a call.

The network 110 may also include other networkable devices known in the art, such as other integrated access devices 135C, storage media 140, a call server 135A, telephone server 150 and wireless telephone base station 160. Call server 135A may be any server coupled to network 110 that is accessed in connection with any communication across the network 110. Call server 135A may perform passive call blocking as disclosed herein. For example, a call may be routed through a call server 135A that determines whether or not to block the call.

It is well understood in the art that any number or variety of networkable devices or components may be coupled to the network 110 without inventive faculty, such as printers 170. Examples of other devices include, but are not limited to, servers, computers, workstations, terminals, input devices, output devices, printers, plotters, routers, bridges, cameras, sensors, or any other such device known in the art.

Network 110 may be any communication network known in the art, including a conventional telephone network, the Internet, a local-area-network (LAN), a wide-area-network (WAN), or any system that links a call server 135A to a telephone 10. Further, network 110 may be configured in accordance with any topology known in the art, including star, ring, bus, or any combination thereof.

Passive call block device 135 is connected to a network 110 that supports the receipt and transmission of digital packets. Telephone network server 150 may be configured to allow different networks to communicate, as well as communicate with a public switched telephone network (PSTN), plain old telephone service (POTS), Integrated Services Digital Network (ISDN), or any other telephone network. In some system embodiments, a call server 135A may obviate the use of integrated access devices 135C by call participants.

Furthermore, as shown in FIG. 1, telephone network server 150 may be coupled to wireless base station 160, which allows communication to wireless phone 135D.

Embodiments will now be disclosed with reference to a functional block diagram of an exemplary passive call block device 135 of FIG. 2, constructed and operative in accordance with an embodiment of the present invention. Passive call block device 135 runs a multi-tasking operating system and includes at least one processor or central processing unit (CPU) 102. Processor 102 may be any microprocessor or micro-controller as is known in the art.

The software for programming the processor 102 may be found at a computer-readable storage medium 140 or, alternatively, from another location across network 110. Processor 102 is connected to computer memory 104. Passive call

block device 135 may be controlled by an operating system (OS) that is executed within computer memory 104.

Processor 102 communicates with a plurality of peripheral equipment, including communication interface 116. Additional peripheral equipment may include a display 106, manual input device 108, storage medium 140, microphone 112, video input 122, and data port 114.

Display 106 may be a visual display such as a cathode ray tube (CRT) monitor, a liquid crystal display (LCD) screen, touch-sensitive screen, or other monitors as are known in the art for visually displaying images and text to a user.

Manual input device 108 may be a conventional keyboard, keypad, mouse, trackball, or other input device as is known in the art for the manual input of data.

Storage medium 140 may be a conventional read/write memory such as a magnetic disk drive, floppy disk drive, compact-disk read-only-memory (CD-ROM) drive, transistor-based memory or other computer-readable memory device as is known in the art for storing and retrieving data. Significantly, storage medium 140 may be remotely located from processor 102, and be connected to processor 102 via a network 110 such as a local area network (LAN), a wide area network (WAN), or the Internet.

Microphone 112 may be any suitable microphone as is known in the art for providing audio signals to processor 102. In addition, a speaker 118 may be attached for reproducing audio signals from processor 102. Video input 122 may be a digital or analog video camera device to record still or moving images. In some embodiments, video input 122 may be a scanner device. It is understood that microphone 112, speaker 118, and video input 122 may include appropriate digital-to-analog and analog-to-digital conversion circuitry as appropriate.

Data port 114 may be any data port as is known in the art for interfacing with an external accessory using a data protocol such as RS-232, Universal Serial Bus (USB), or Institute of Electrical and Electronics Engineers (IEEE) Standard No. 1394 ('Firewire'). In some embodiments, data port 114 may be any interface as known in the art for communicating or transferring files across a computer network, examples of such networks include Transmission Control Protocol/Internet Protocol (TCP/IP), Ethernet, Fiber Distributed Data Interface (FDDI), token bus, or token ring networks. In addition, on some systems, data port 114 may consist of a modem connected to communication interface 116. Similarly, communication interface 116 provides connectivity to passive call block device 135 to communicate with a telephone network server 150. Thus, the communication interface 116 allows the passive call block device 135 to communicate and process input and output from a telephone line.

FIG. 3 is an expanded functional block diagram of CPU 102 and storage medium 140. It is well understood by those in the art that the functional elements of FIG. 3 may be implemented in hardware, firmware, or as software instructions and data encoded on a computer-readable storage medium 140. As shown in FIG. 3, central processing unit 102 comprises a data processor 202, an application interface 204, a media interface 200, and a call manager 210. These structures may be implemented as hardware, firmware, or software encoded on a computer readable medium, such as storage media 140. In addition, as shown in FIG. 3, storage media 140 may also contain a voice mail database 242 and a caller database 244.

Data processor 202 interfaces with display 106, manual input device 108, storage medium 140, microphone 112, data port 114, video input 122, and communication interface