United States Patent [19]

Thompson

[54] **COMMUNICATION SYSTEM AND METHODS FOR ENHANCED INFORMATION TRANSFER**

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[73] Assignee: **Texas Instruments Incorporated**, Dallas, Tex.

[*] Notice: The portion of the term of this patent subsequent to Aug. 2, 2012, has been disclaimed.

[21] Appl. No.: **991,015**

[22] Filed: **Dec. 15, 1992**

[51] **Int. Cl.^{6}** **H04B 1/38**; H04B 1/16

[52] **U.S. Cl.** **455/89**; 455/90; 455/343; 455/349; 379/58; 379/357; 379/420

[58] **Field of Search** 458/56.1, 74, 11.1, 458/347, 349, 89, 90, 344, 348, 349, 351, 186.1, 186.2; 379/57, 58, 59, 433, 434, 357, 201; 16/334, 321, 386, 387; 361/814; 343/702; 200/329, 318.2, 323, 327, 333, 336

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[57] **ABSTRACT**

A communication system (**20**) is provided with multiple purpose personal communication devices (**50** and **150**). Each communication device (**50** and **150**) includes a touch-sensitive visual display (**60** and **160**) to communicate text and graphic information to and from the user and for operating the communication device (**50** and **150**). Voice activation (**78**) and voice control capabilities (**76**) are included within communication devices (**50** and **150**) to perform the same functions as the touch-sensitive visual display (**60** and **160**). The communication device includes a built-in modem (**82**), audio input and output (**52** and **53**), telephone jacks (**86**), and wireless communication (**90**). A plurality of application modules (**100**) are used with personal communication devices (**50** and **150**) to perform a wide variety of communication functions such as information retrievable, on-line data base services, electronic and voice mail. Communication devices (**50** and **150**) and application modules (**100**) cooperate to allow integrating multiple functions such as real time communication, information storage and processing, specialized information services, and remote control of other equipment into an intuitively user friendly apparatus. The system (**20**) includes both desktop (**150**) and hand-held communication devices (**50**) with the same full range of communication capabilities provided in each type of communication device (**50** and **150**).

11 Claims, 6 Drawing Sheets
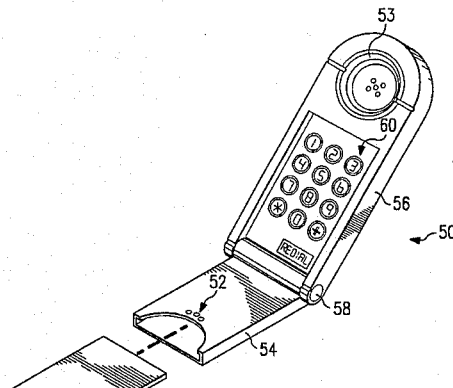
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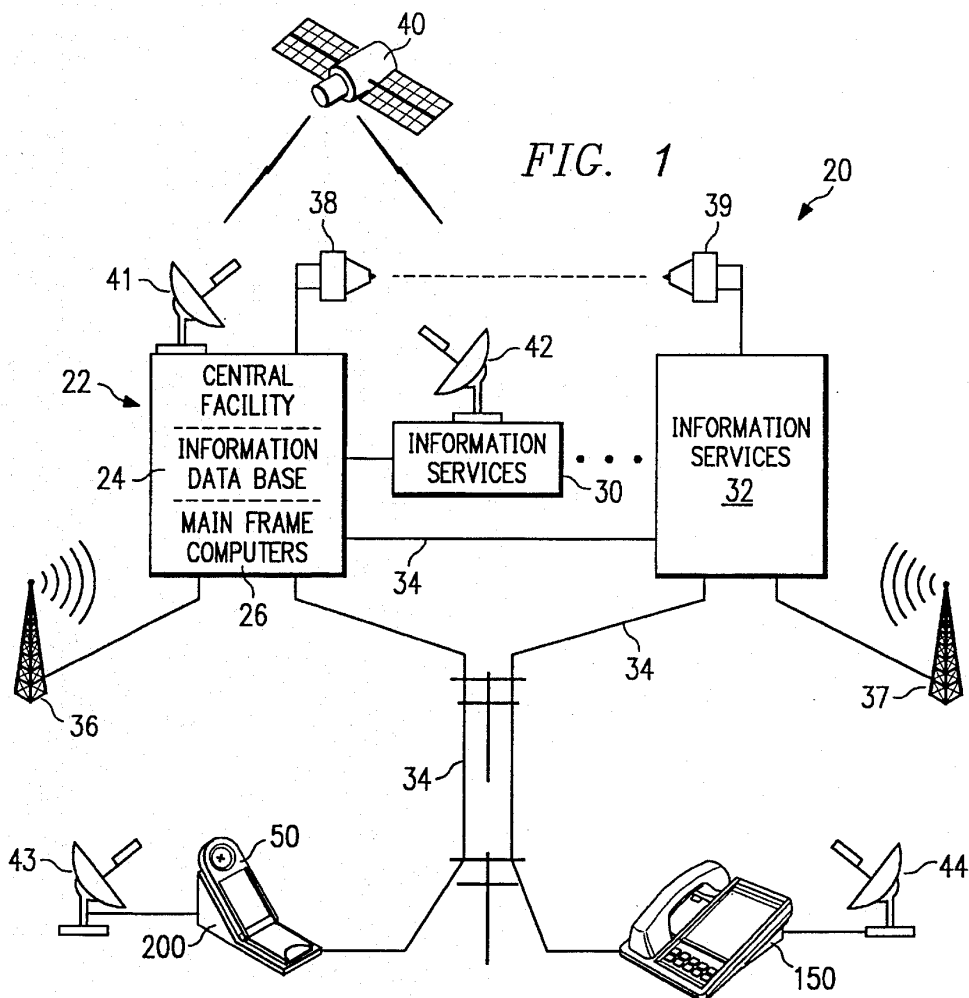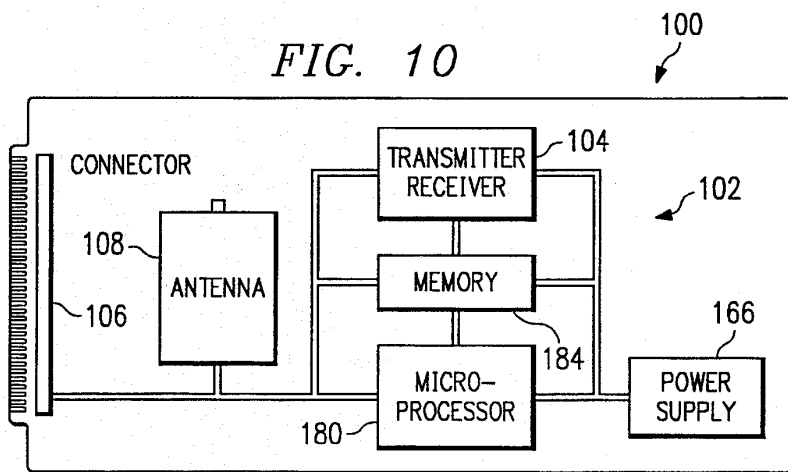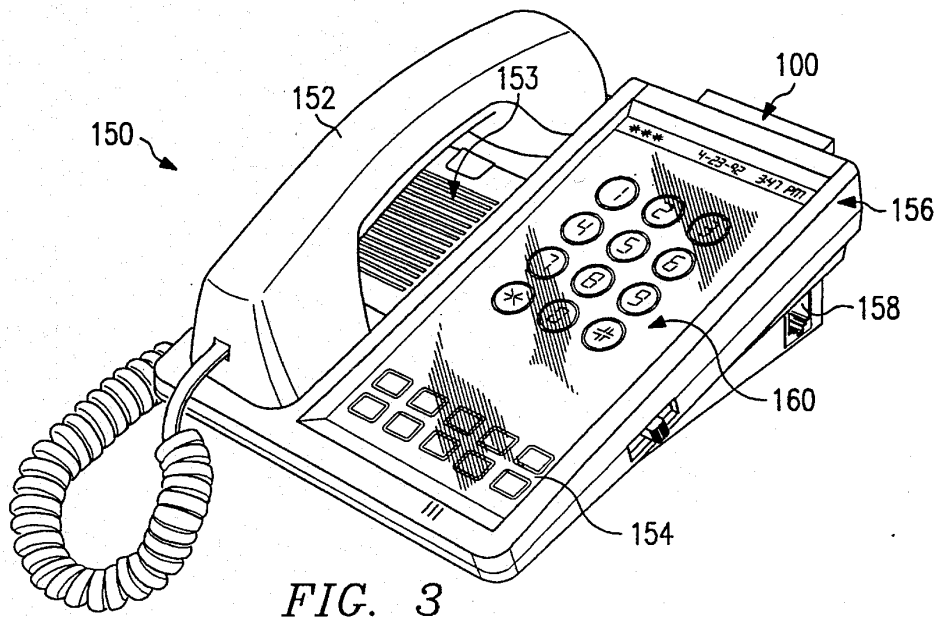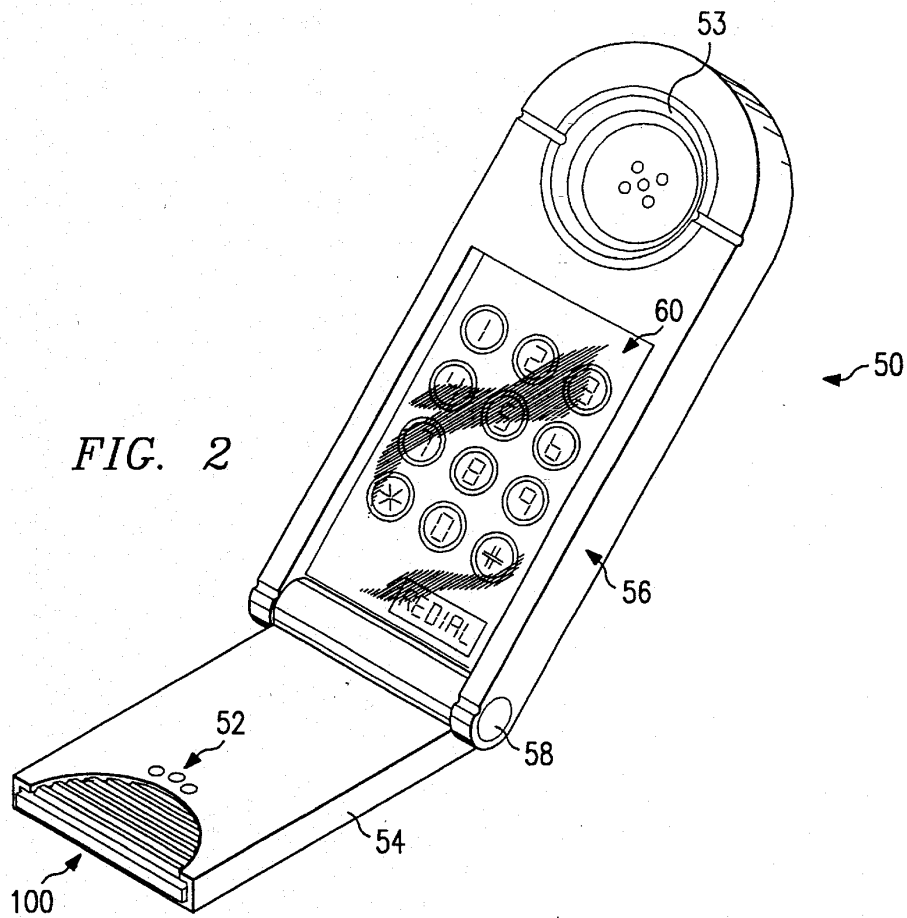"Remote Controls" Consumers Reports, Dec. 1992, pp. 796–799.

FIG. 1

FIG. 10

FIG. 2
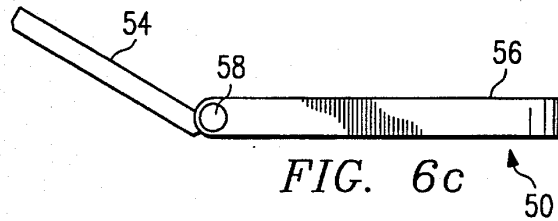

FIG. 3

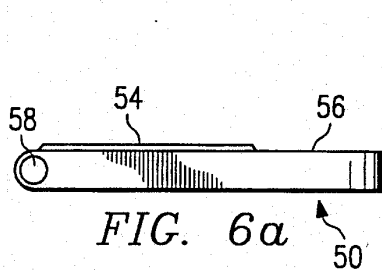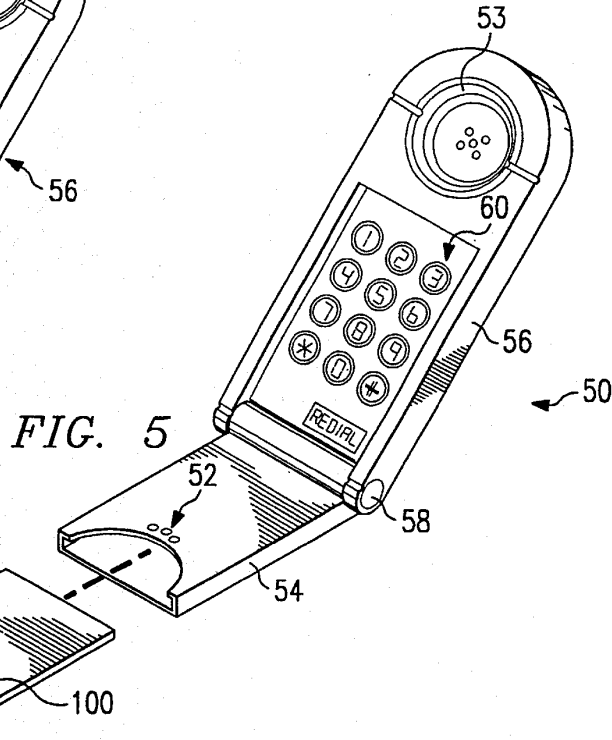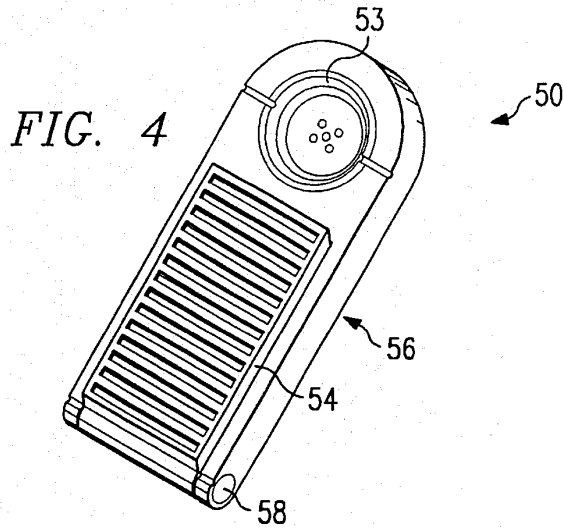FIG. 4

FIG. 5

FIG. 6a

FIG. 6b

FIG. 6c

FIG. 6d
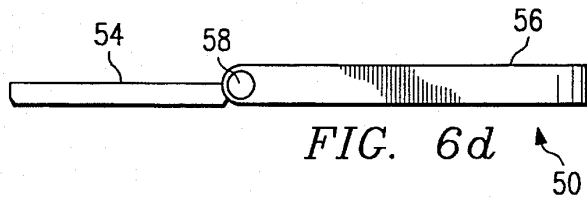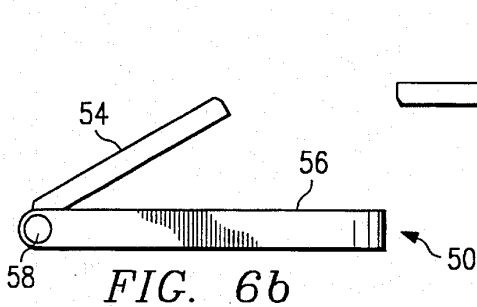
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