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Astala et al.

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(54) **TOUCH SCREEN INPUT TECHNIQUE**

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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 0 days.

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(52) **U.S. Cl.** **345/173**; 345/1.1; 709/217
(58) **Field of Search** 345/173, 174, 345/175, 176, 177, 178, 179, 863, 864, 1.1, 345/1.2, 2.1, 2.3; 178/18.1, 18.01, 19.01; 709/217–219

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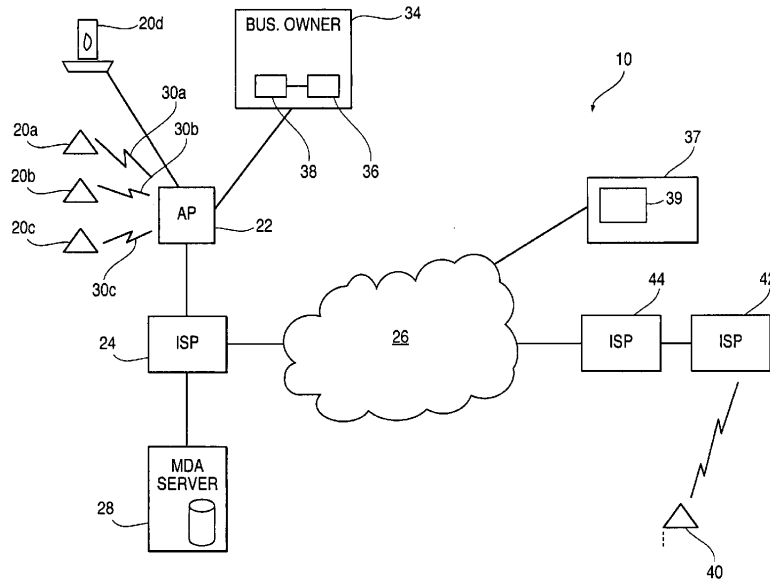|				
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(57) **ABSTRACT**

A technique for inputting data, such as selecting a particular function of electronic device, using a touch screen of the electronic device, includes detecting when an object, such as a finger or a stylus or a pointed object, is touching the touch screen and detecting when the object is no longer touching the touch screen. The location of the object touching the touch screen is also detected. The time duration from the time of detection of the object first touching the touch screen until the time of detection of the object no longer touching the touch screen is detected. A determination of the data being inputted, such as the particular function of the electronic device being selected, is made based on the detected location of the object on the touch screen and the measured time duration. The detecting that the object is touching the touch screen may include detecting that a pressure of the object on the touch screen is greater than a predetermined value and the detecting that the object is no longer touching the catch screen may include detecting that the pressure of the object on the touch screen is less than a predetermined value. The measuring of the time duration may include determining which of a predetermined group of time duration ranges the measured time duration is within.
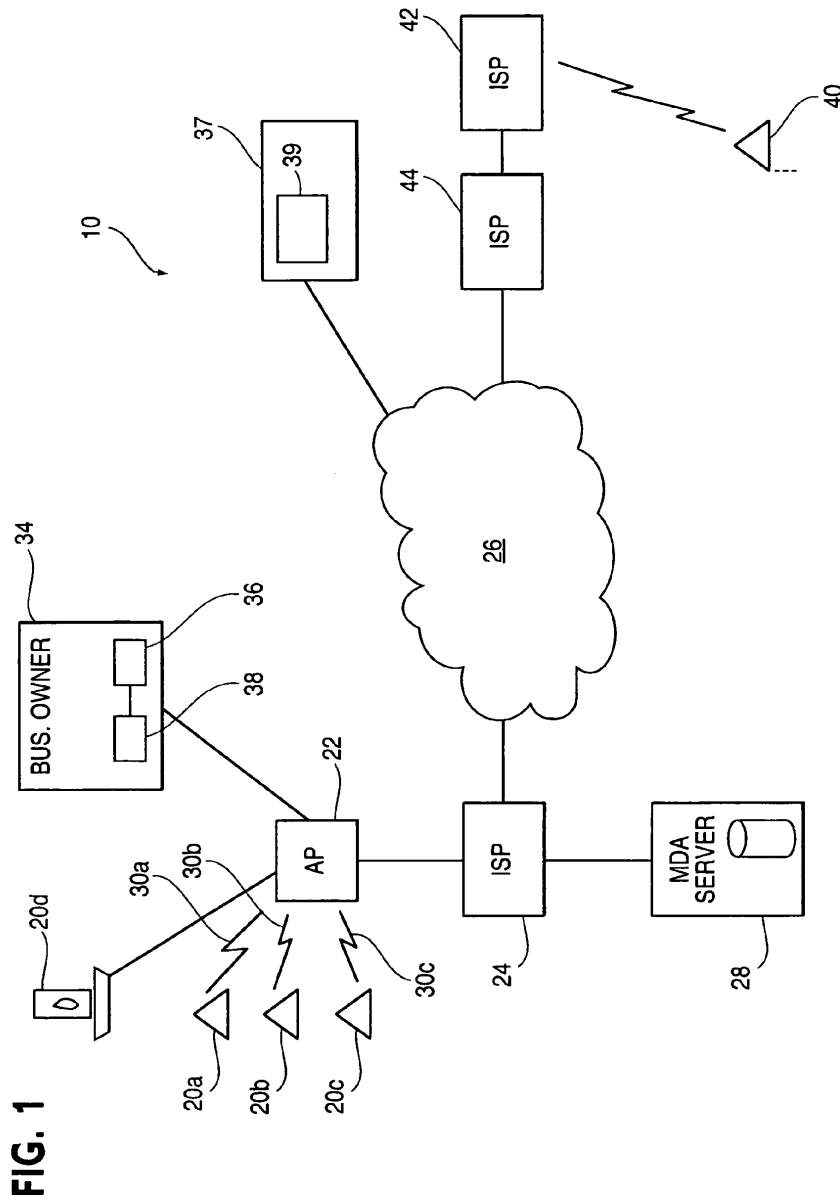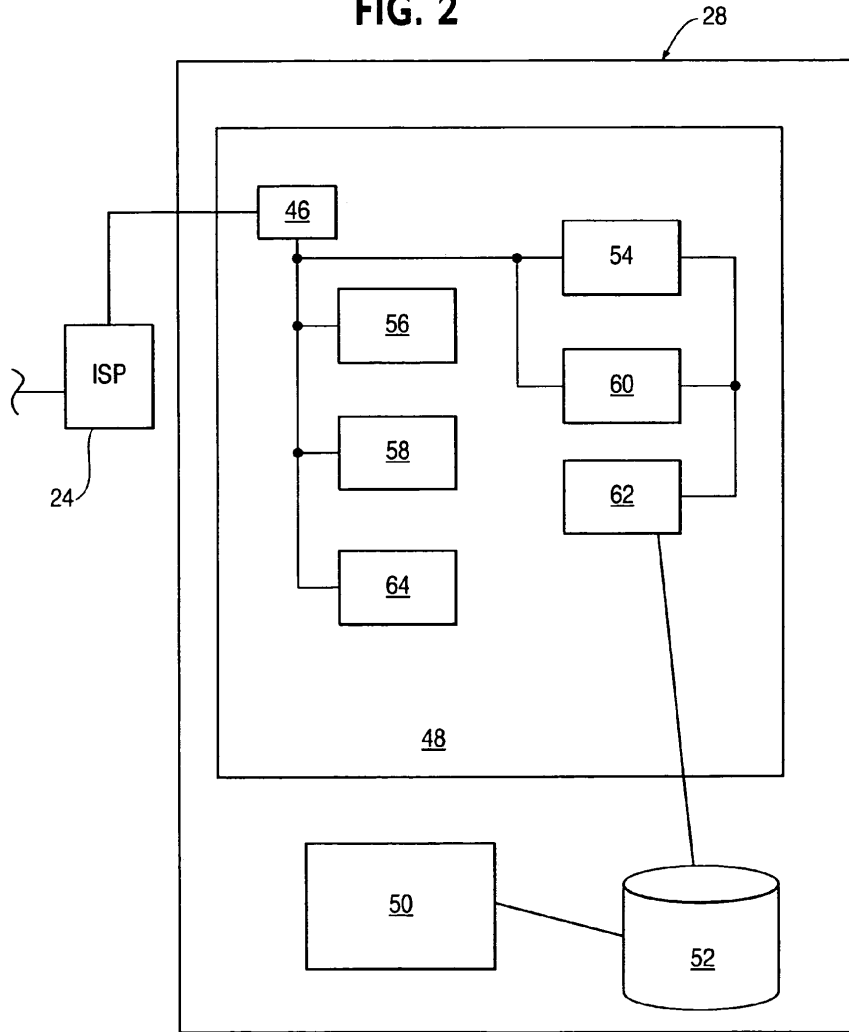
86 Claims, 7 Drawing Sheets

FIG. 1

FIG. 2

FIG. 3

DISPLAY

70

72

74

76

78

80

20

FIG. 4

400
START

402
TEMINAL POWER ON?

404
NO COMMUNIC. LINK ESTAB.

NO

YES

406
ESTABLISH A COMM. LINK WITH ACCESS POINT

426
END

408
GET INTERNET ADDRESS OF MDA SERVER FROM THE GLOBAL ADDRESS SERVER

424
TERMINAL POWER STILL ON?

NO

YES

410
AUTHENTICATE TERMINAL AND ESTAB FAMILY SESSION WITH MDA SERVER

412
USER REQUESTS A PRIVATE SESSION AT A PRIVATE LEVEL?

NO

414
FAMILY SESSION ACTIVE AND USER CAN CONTINUE TO RETRIEVE FAMILY LEVEL INFO.

422
TERMINATE PRIVATE SESSION

YES

416
AUTHORIZED USER LOGS INTO START PRIVATE SESSION

420
USER REQUESTS TERMINATION OF PRIVATE SESSION

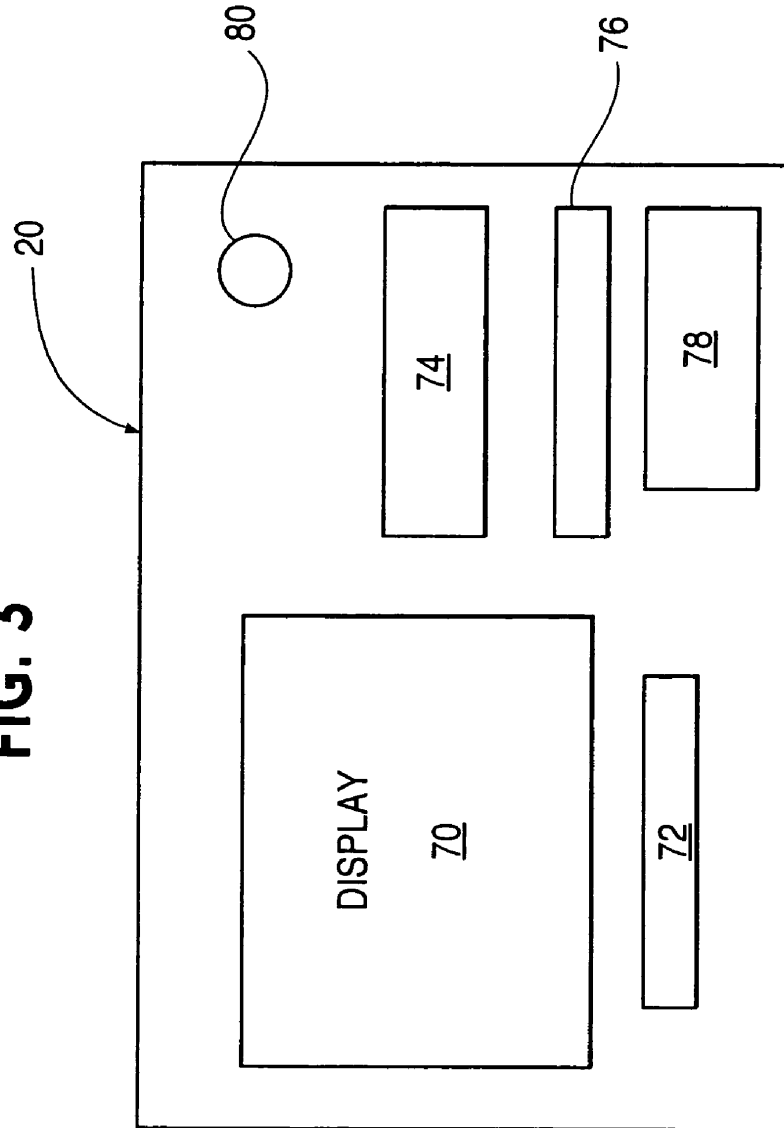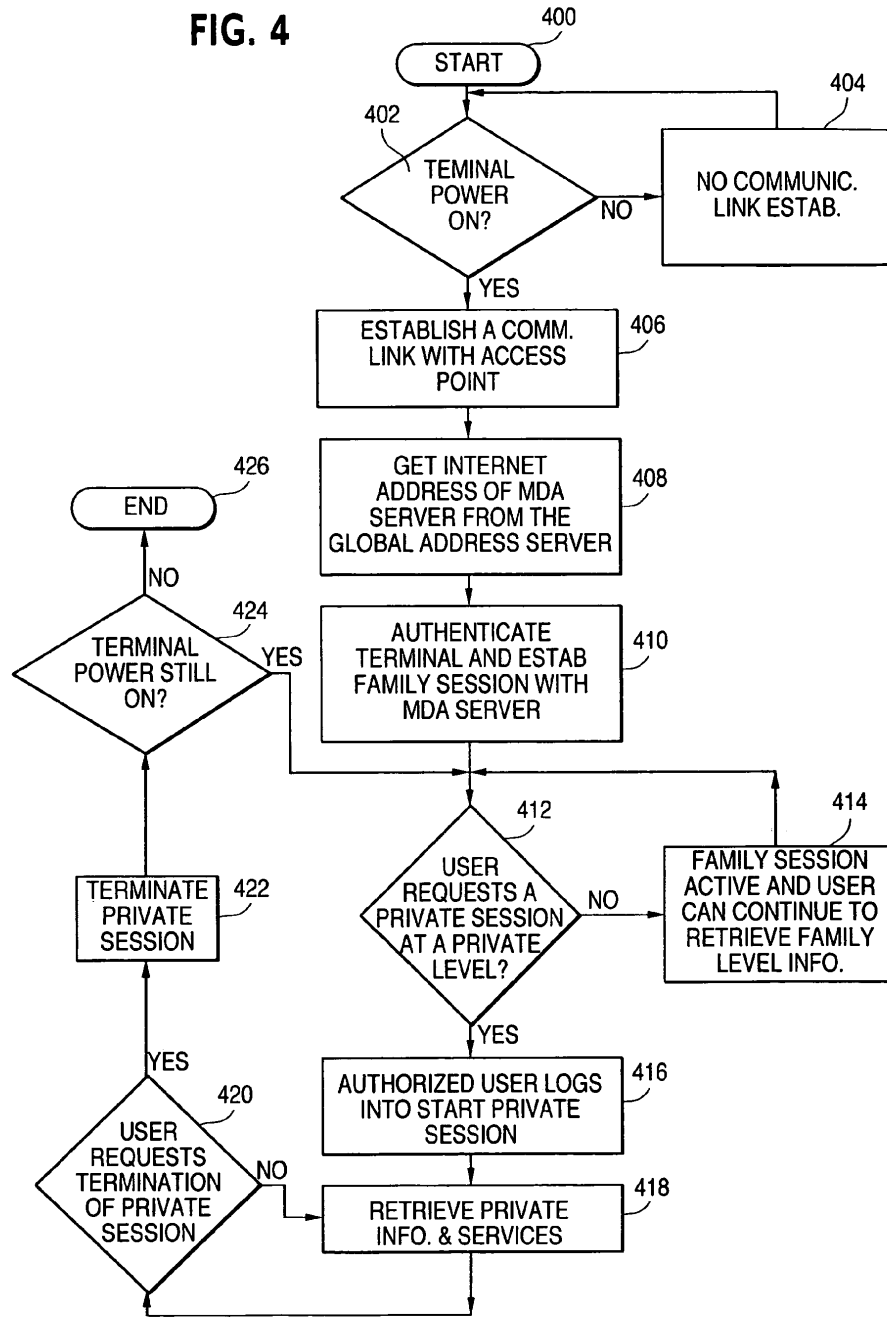NO

418
RETRIEVE PRIVATE INFO. & SERVICES

YES

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