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Zhou et al.

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(54) **SYSTEM FOR LOCALIZING AND SENSING OBJECTS AND PROVIDING ALERTS**

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(51) **Int. Cl.**⁷ **G08B 23/00**

(52) **U.S. Cl.** **701/213; 701/36; 340/426.1; 340/426.119; 342/357.07; 455/404.1**

(58) **Field of Search** **701/36, 213; 340/426.1, 340/426.12, 426.19, 989, 426, 425.5, 825.3; 342/357.07, 357, 450; 455/404.1, 521, 562.1, 277.1, 273**

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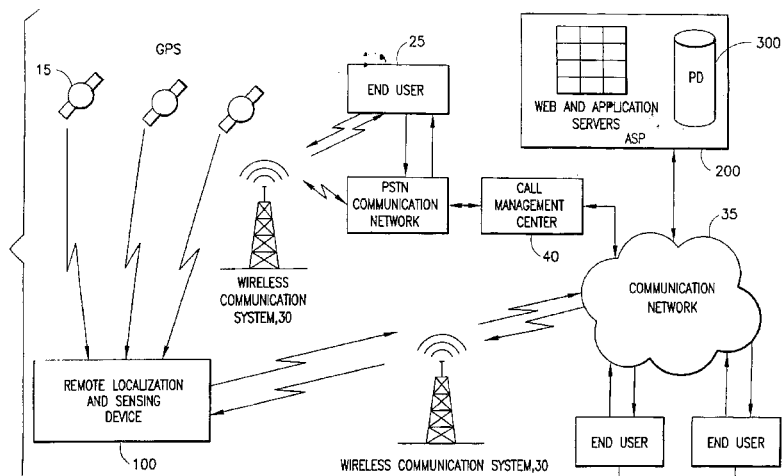
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(57) **ABSTRACT**

The present invention generally relates to systems, methods and applications utilizing the convergence of any combination of the following three technologies: wireless positioning or localization technology, wireless communications technology and sensor technology. In particular, certain embodiments of the present invention relate to a remote device that includes a sensor for determining or measuring a desired parameter, a receiver for receiving position data from the Global Positioning System (GPS) satellite system, a processor for determining whether or not alert conditions are present and a wireless transceiver for transmitting the measured parameter data and the position data to a central station, such as an application service provider (ASP). The ASP, in turn, may communicate the measured data, position data and notification of any alerts to an end user via an alert device. The present invention also relates to various applications and systems utilizing the capabilities of such a device.

1 Claim, 57 Drawing Sheets



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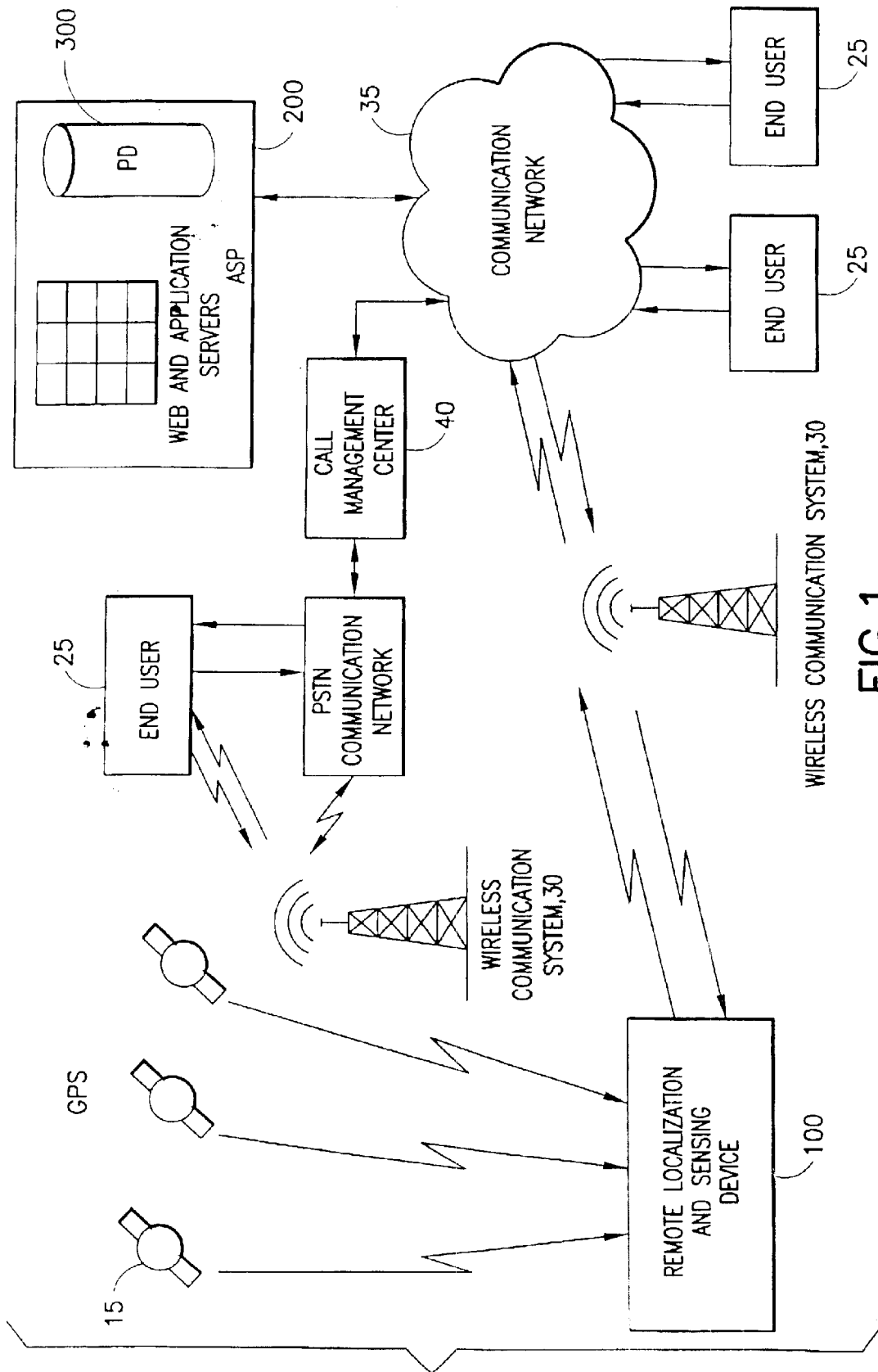


FIG. 1

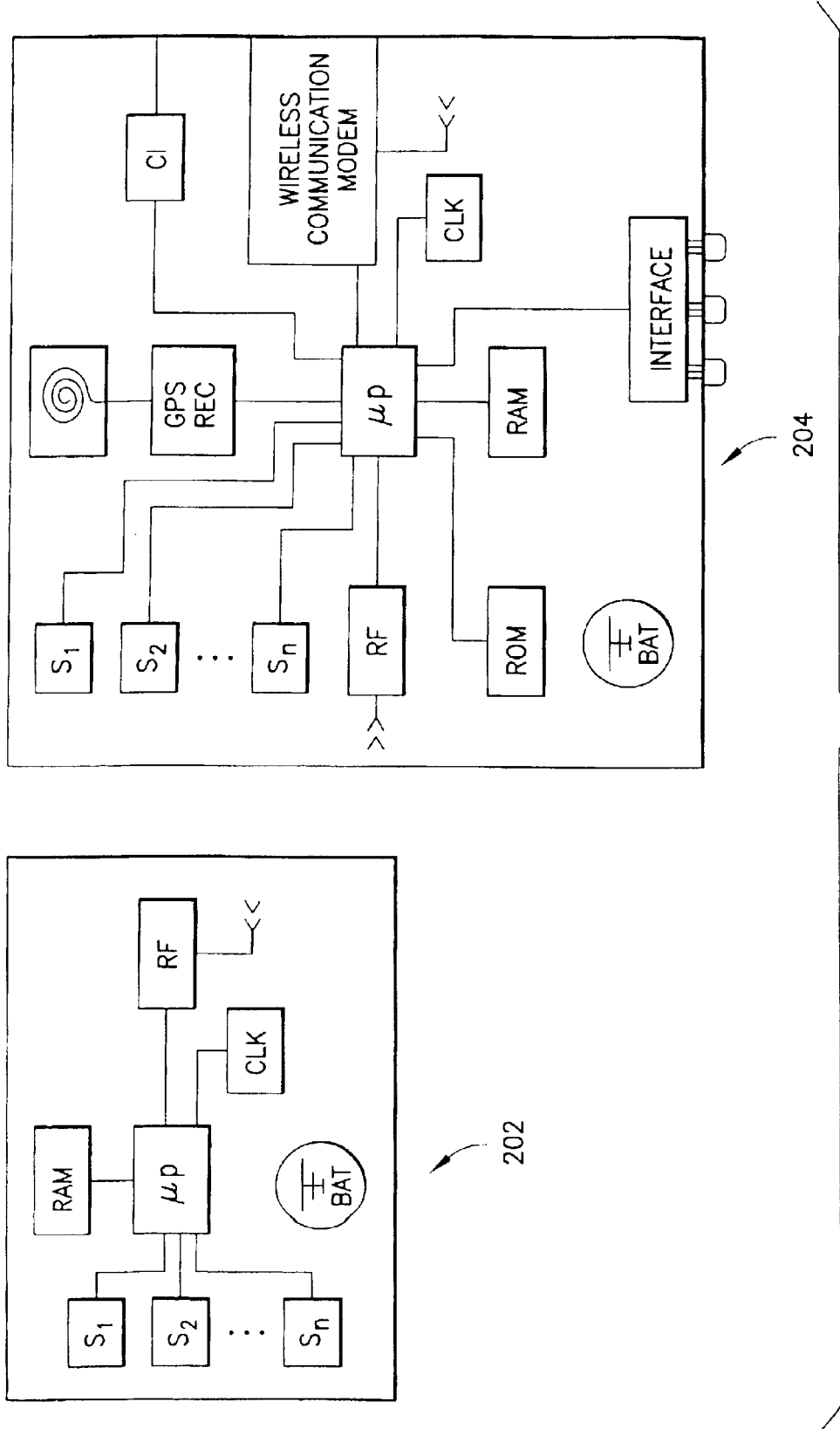
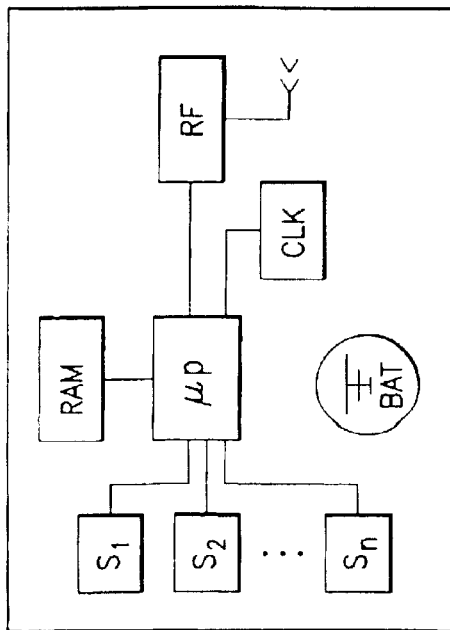


FIG.2a



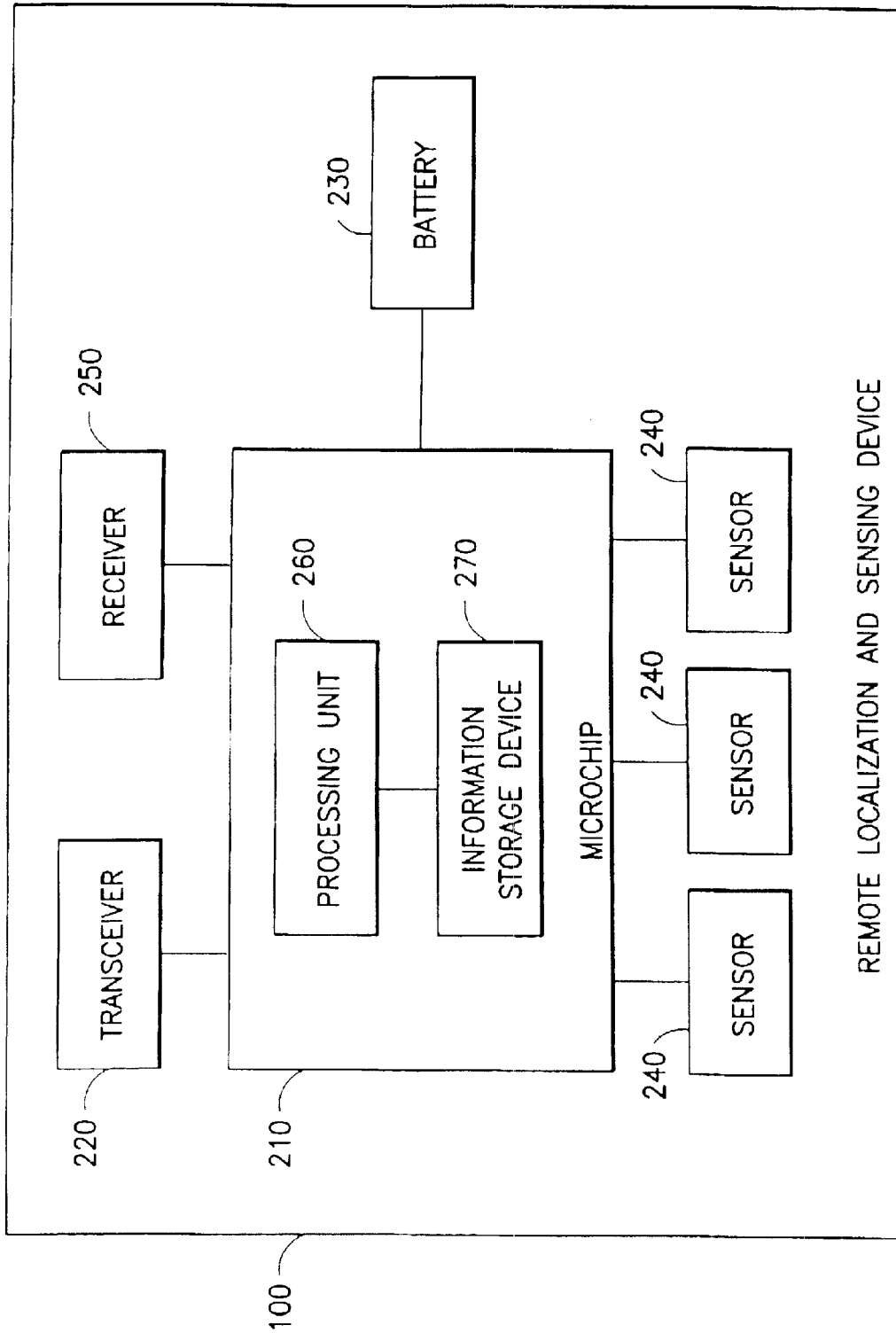


FIG.2b

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