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Bark et al.

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(54) **MOBILE STATION MEASUREMENTS WITH EVENT-BASED REPORTING**

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(52) **U.S. Cl.** **455/423**; 455/436; 455/437; 455/439; 455/522; 370/331; 370/332

(58) **Field of Search** 455/403, 423, 455/424, 425, 436, 437, 439, 453, 442, 522, 524, 525, 513, 512; 370/331, 332

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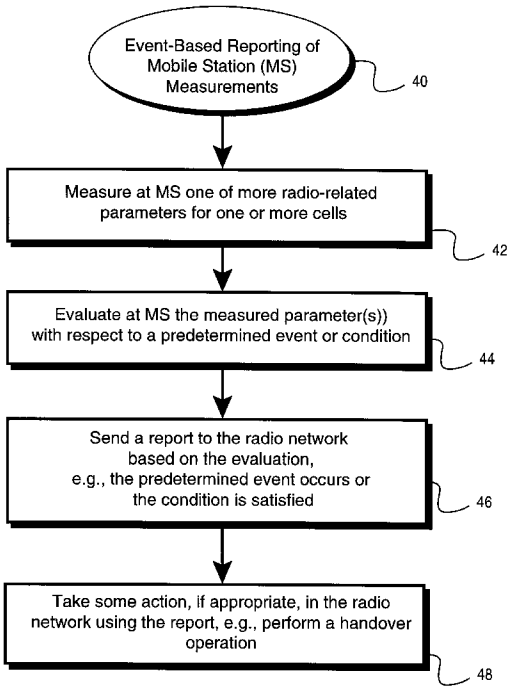
(57) **ABSTRACT**

The present invention provides event-based or driven reporting of mobile station measurements. A mobile station measures one or more radio-related parameters for one or more cells in a radio access network. The mobile station evaluates the measured radio-related parameter with respect to a predetermined condition or event and determines that the predetermined condition is satisfied or that the event has occurred. Based on that evaluation, the mobile radio sends a report to the radio access network. Accordingly, the occurrence of an event and/or the satisfaction of a condition triggers the sending of the report to the network. That way, the network receives the information so that it can take timely and appropriate action without sending outdated or redundant measurement reports that do not convey relevant or new information.

74 Claims, 9 Drawing Sheets



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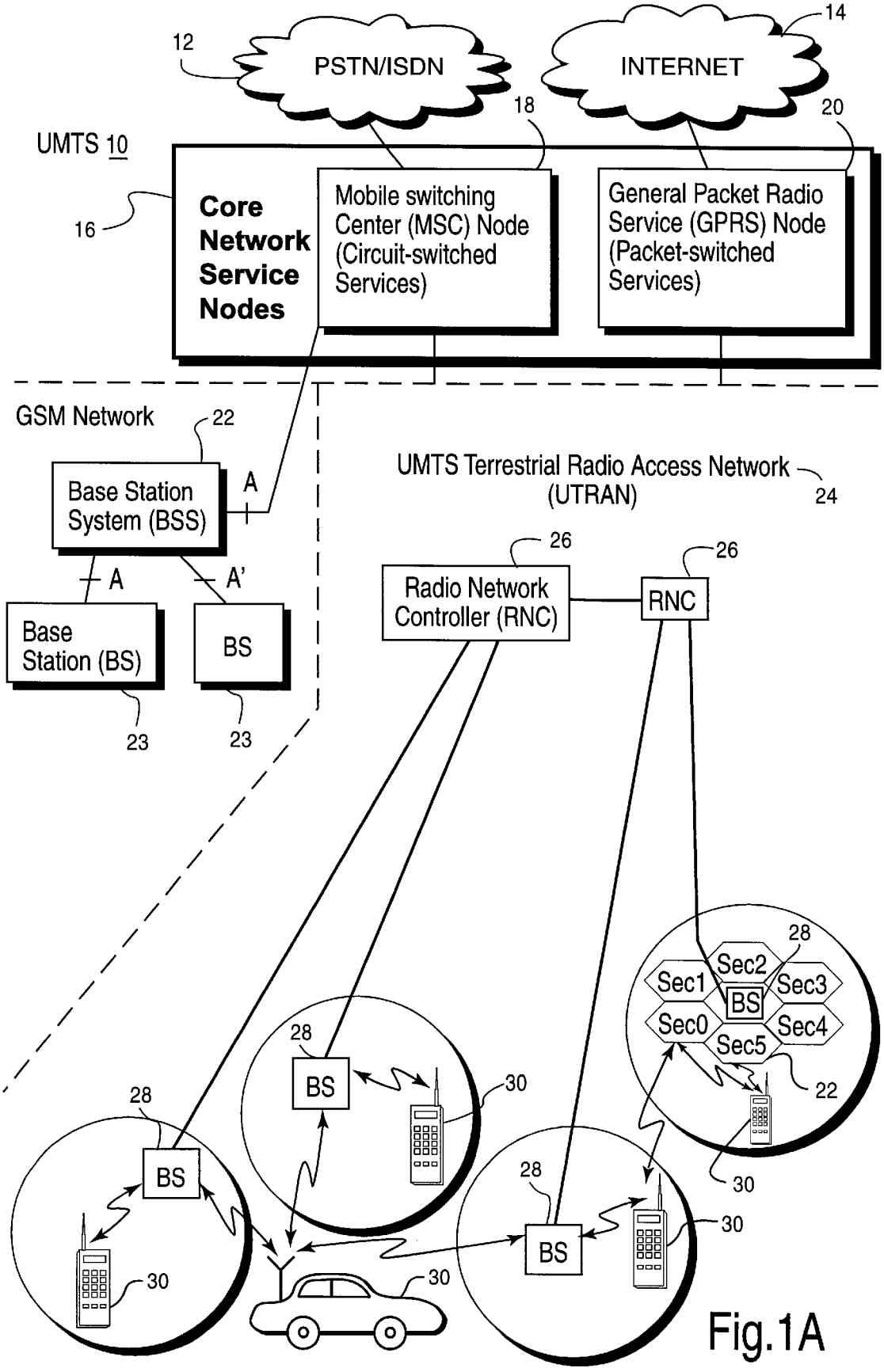

Fig.1A

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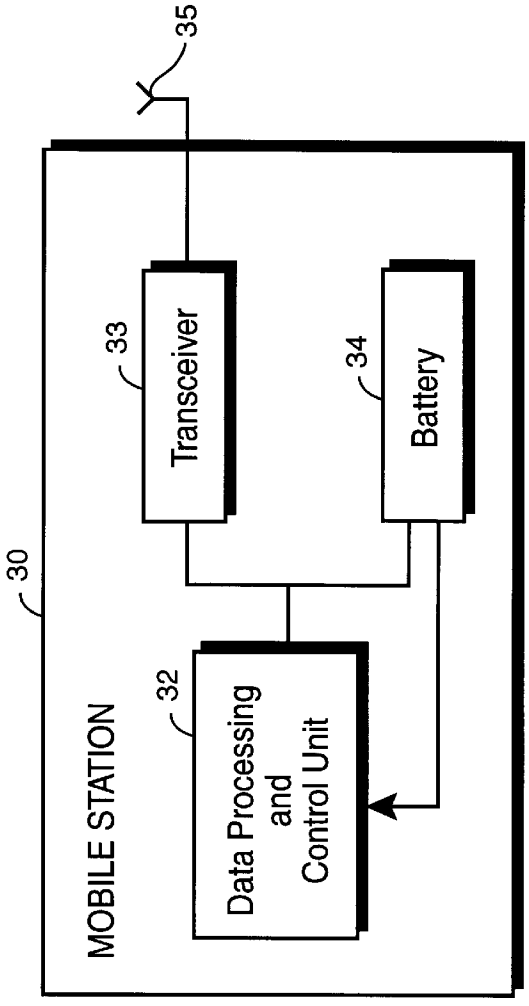

Fig.1B

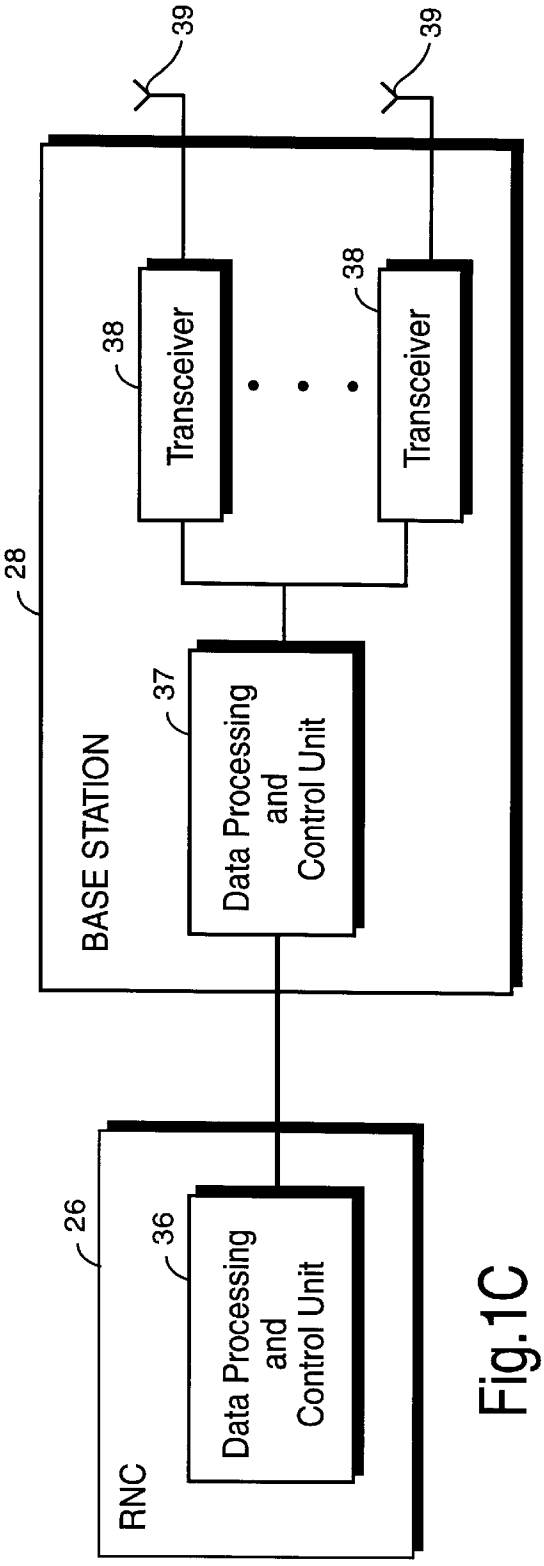

Fig.1C

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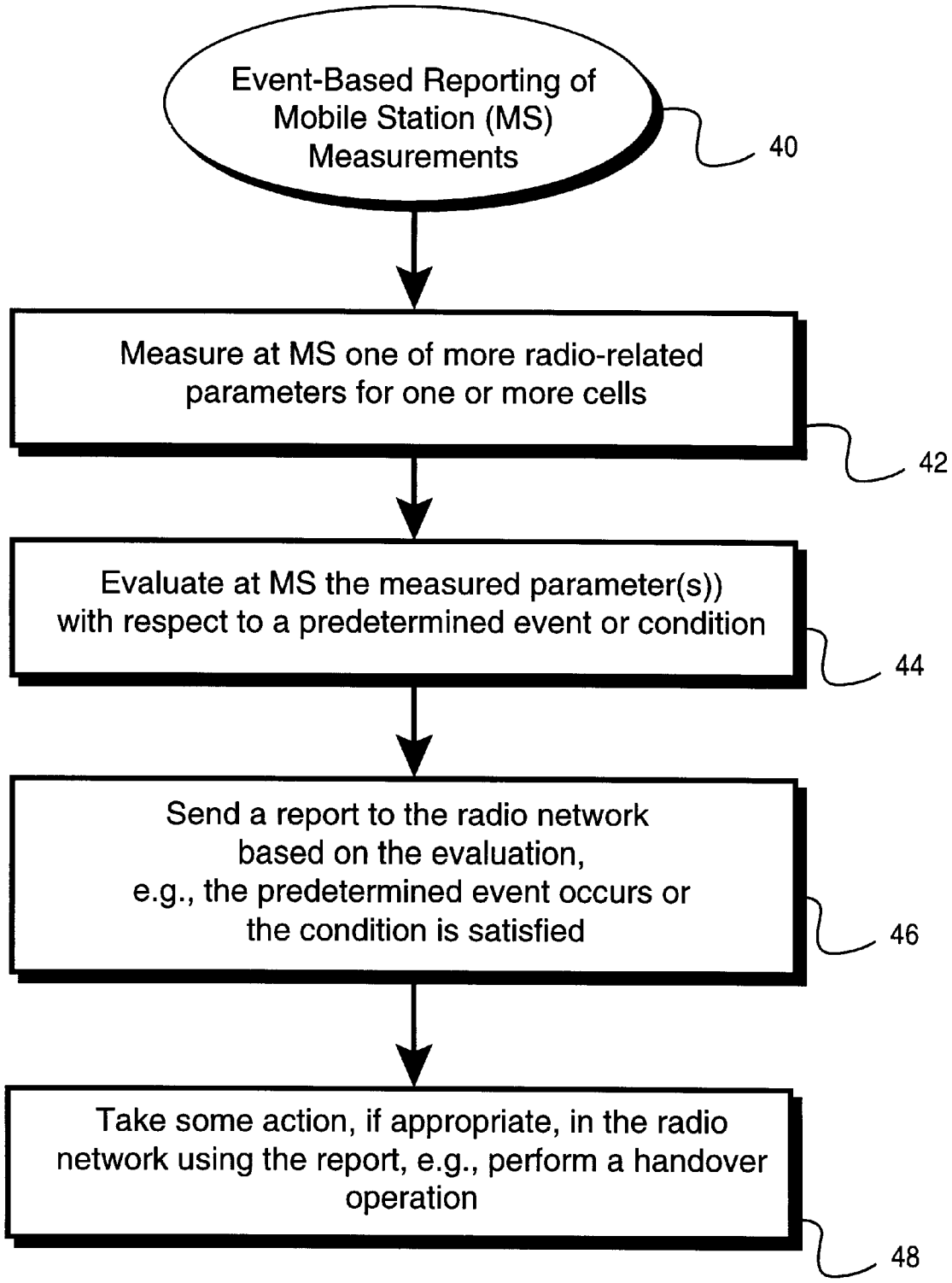

Fig.2

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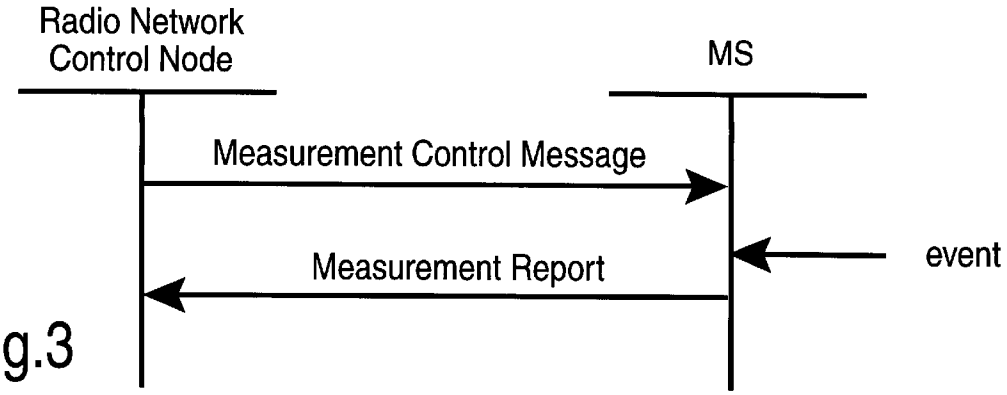

Fig.3

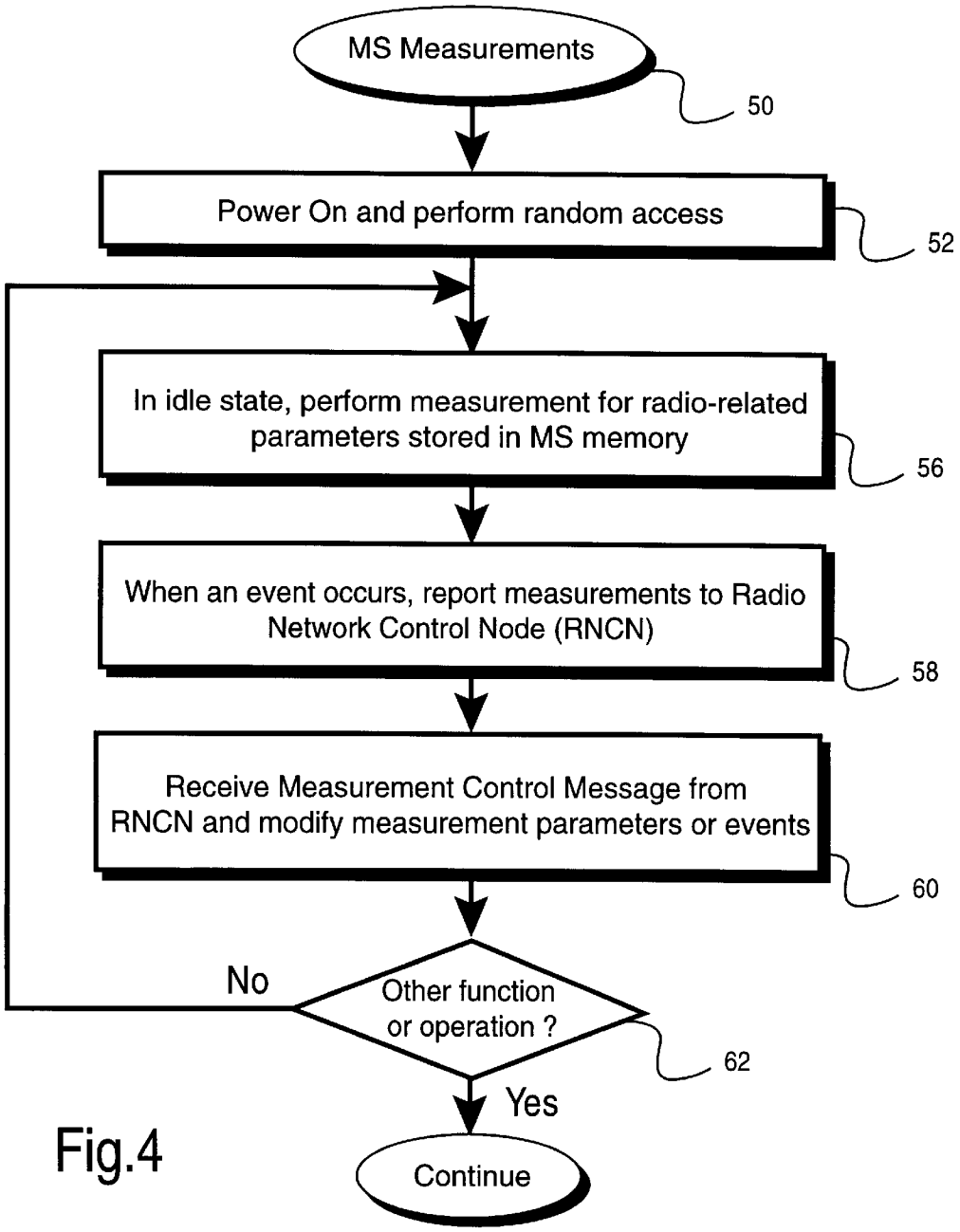

Fig.4

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