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Lindholm et al.

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(54) **METHOD, APPARATUS AND COMPUTER PROGRAM FOR POWER CONTROL RELATED TO RANDOM ACCESS PROCEDURES**

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(21) Appl. No.: **12/387,661**

(22) Filed: **May 5, 2009**

(65) **Prior Publication Data**

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Related U.S. Application Data

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(51) **Int. Cl.**
H04B 7/00 (2006.01)

(52) **U.S. Cl.** **455/522**; 455/521

(58) **Field of Classification Search** ..... None
See application file for complete search history.

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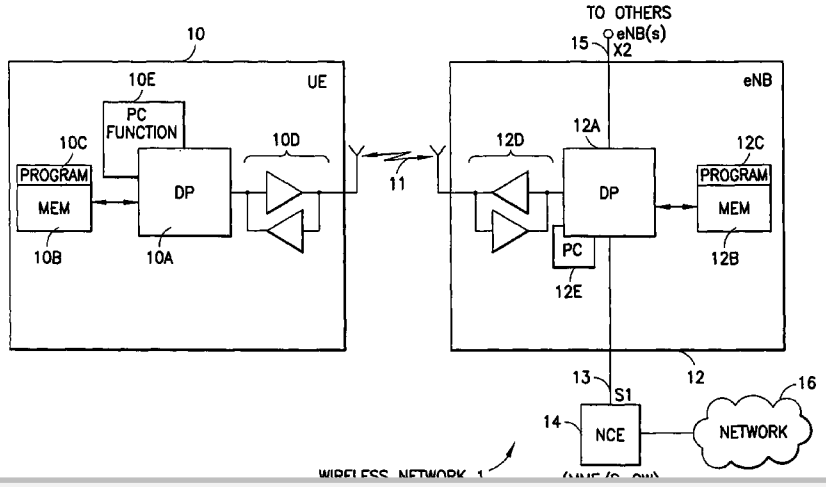
(57) **ABSTRACT**

A first power control adjustment state g(i) and a second power control adjustment state f(i) are initialized for i=0 to each reflect an open loop power control error. An initial transmit power for a shared uplink channel is computed using full pathloss compensation. The computed initial transmit power depends on a preamble power of a first message sent on an access channel, and the initial transmit power is initialized with the second power control adjustment state f(0). A third message is sent from a transmitter on an uplink shared channel at the initial transmit power. In various implementations, the power for i=0 on the uplink control channel is also initialized similar to the initial transmit power for the third message and using full pathloss compensation, and after the third message (and retransmissions of it), subsequent messages sent on the uplink shared channel are sent at a power that is computed using fractional pathloss compensation.

17 Claims, 5 Drawing Sheets



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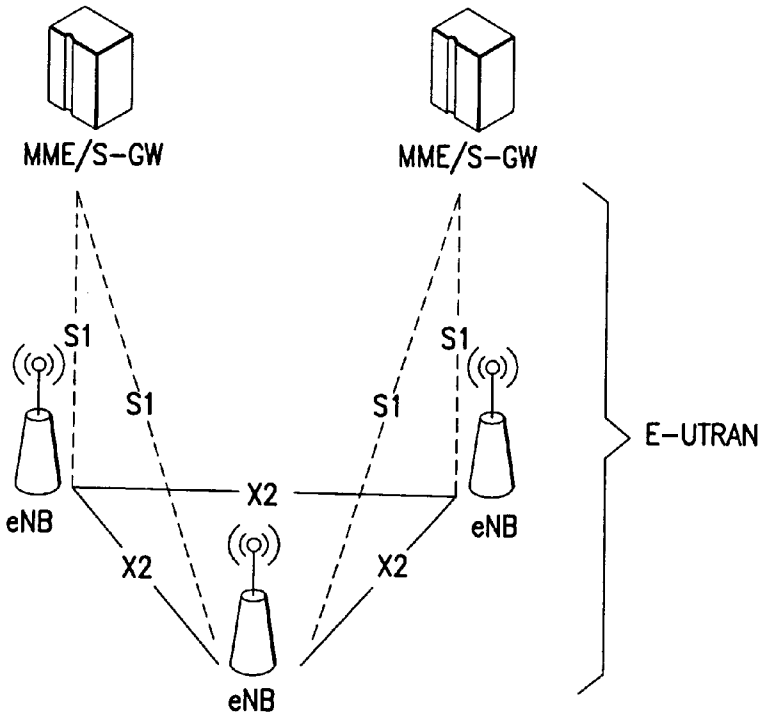

FIG. 1A
PRIOR ART

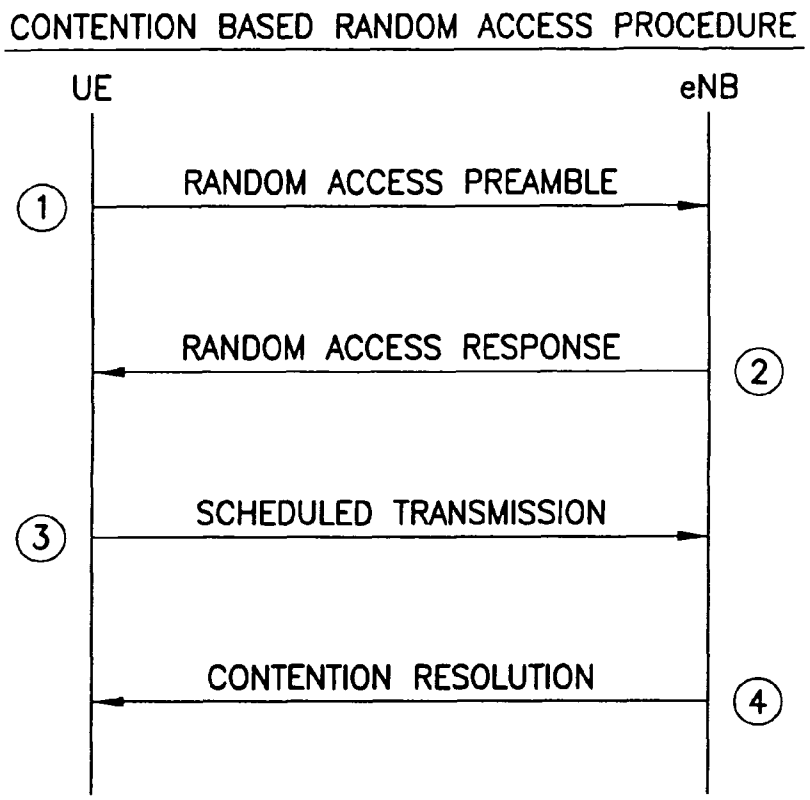

FIG. 1B
PRIOR ART

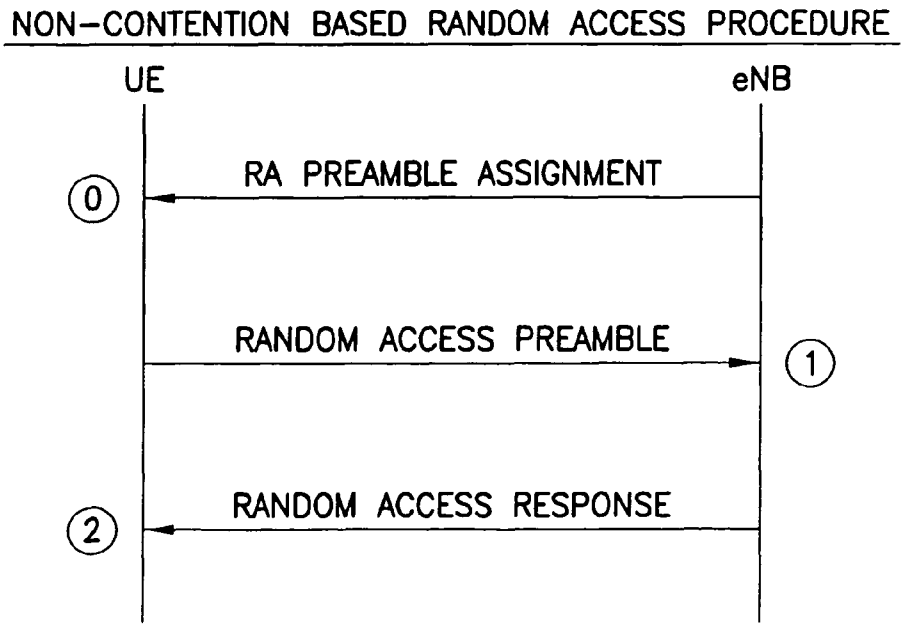

FIG. 1C
PRIOR ART

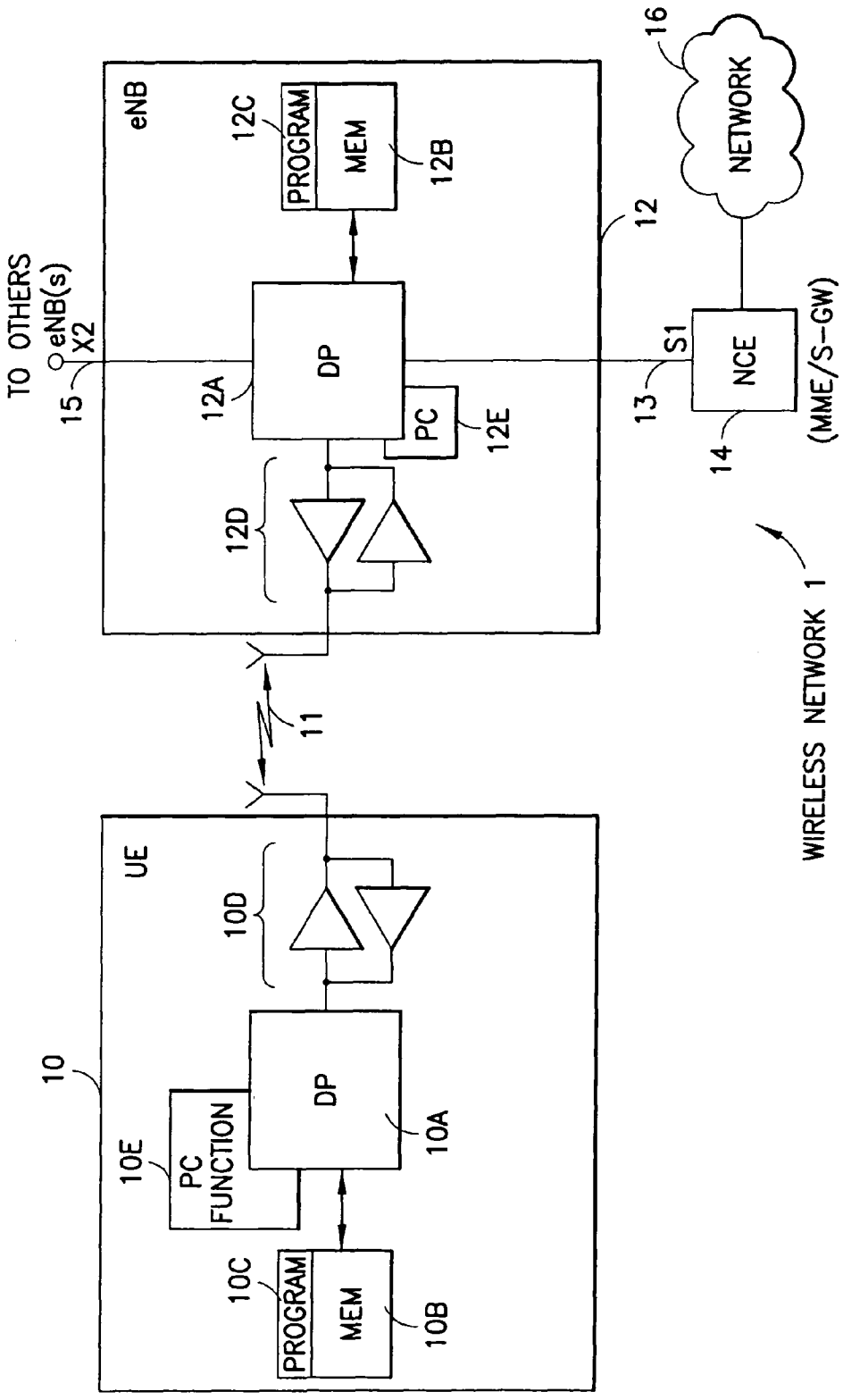

FIG.2

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