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(54) **RANDOM ACCESS SIGNALING TRANSMISSION FOR SYSTEM ACCESS IN WIRELESS COMMUNICATION**

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H04J 1/16   (2006.01)
(52) **U.S. Cl.**
USPC **370/252**; 370/278; 370/311; 455/522; 455/69; 455/127.1
(58) **Field of Classification Search**
USPC 370/329, 335, 418, 330, 336, 282, 278, 370/252, 311; 455/522, 69, 63.1
See application file for complete search history.

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(57)   **ABSTRACT**

Techniques for transmitting random access signaling for system access are described. In an aspect, random access signaling may be sent based on at least one transmission parameter having different values for different user equipment (UE) classes. At least one parameter value may be determined based on a particular UE class, and the random access signaling may be sent based on the determined parameter value(s). The random access signaling may be a random access preamble, and the at least one transmission parameter may include a target SNR, a backoff time, and/or a power ramp. The random access preamble may then be sent based on a target SNR value, a power ramp value, and/or a backoff time value for the particular UE class. In another aspect, a message for system access may be sent based on a power control correction received in a random access response for the random access preamble.

33 Claims, 8 Drawing Sheets
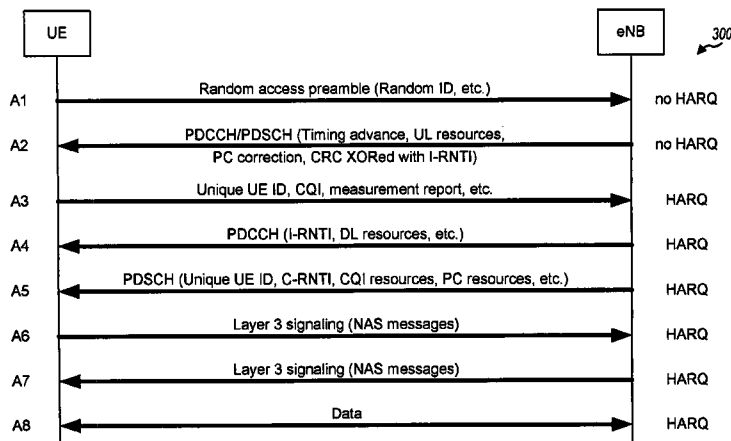
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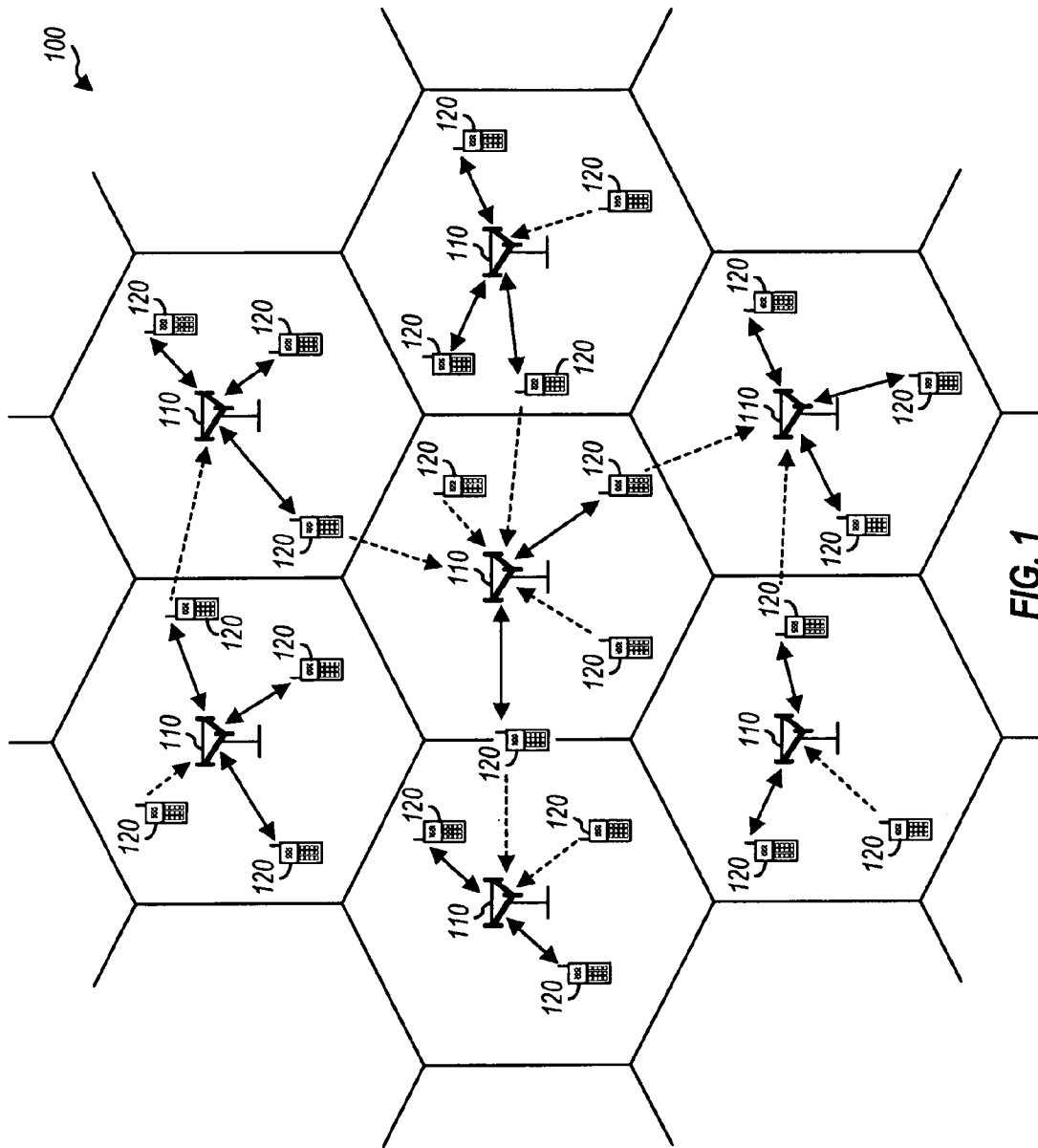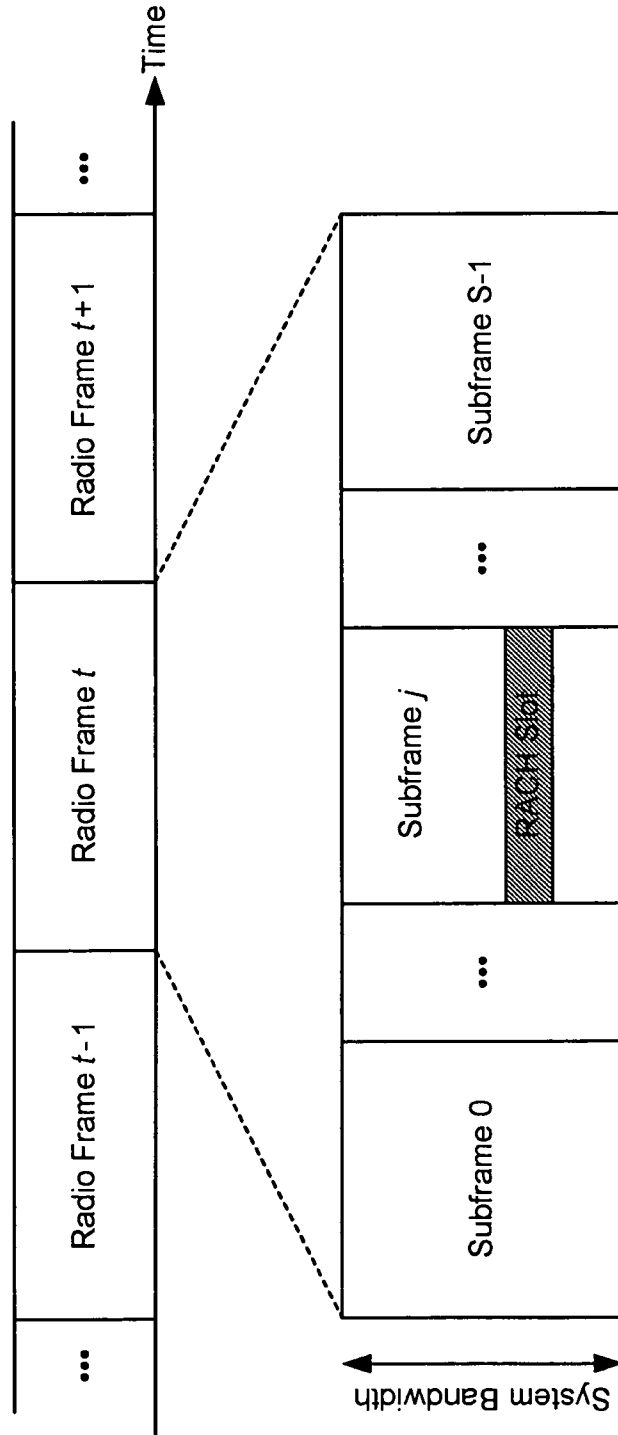Taiwan Search Report—TW096137087—TIPO—Apr. 22, 2011.
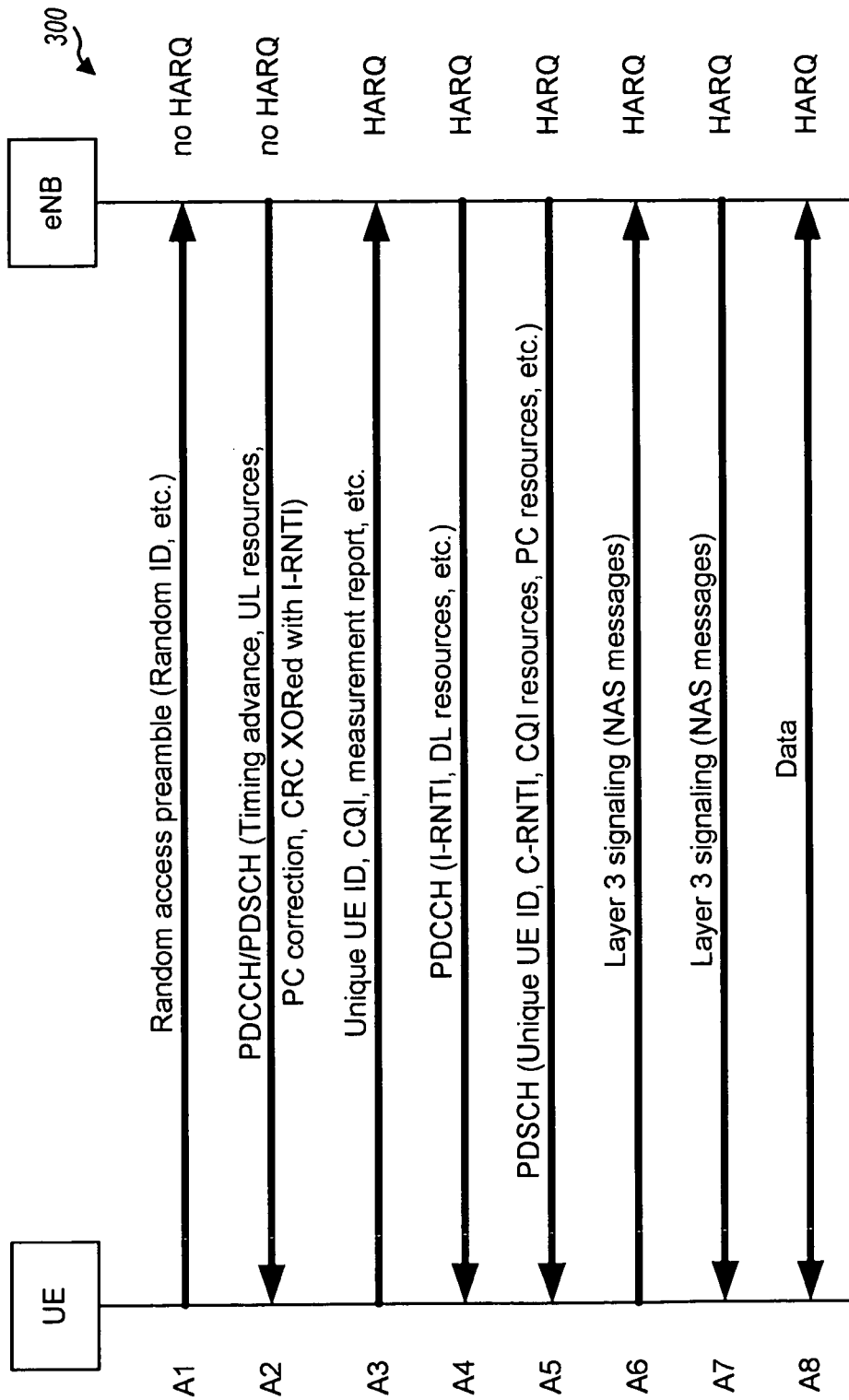
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FIG. 1

FIG. 2

300

A1	Random access preamble (Random ID, etc.)	no HARQ	
A2	PDCCH/PDSCH (Timing advance, UL resources, PC correction, CRC XORed with I-RNTI)	no HARQ	
A3	Unique UE ID, CQI, measurement report, etc.	HARQ	
A4	PDCCH (I-RNTI, DL resources, etc.)	HARQ	
A5	PDSCH (Unique UE ID, C-RNTI, CQI resources, PC resources, etc.)	HARQ	
A6	Layer 3 signaling (NAS messages)	HARQ	
A7	Layer 3 signaling (NAS messages)	HARQ	
A8	Data	HARQ	

UE   eNB

FIG. 3

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