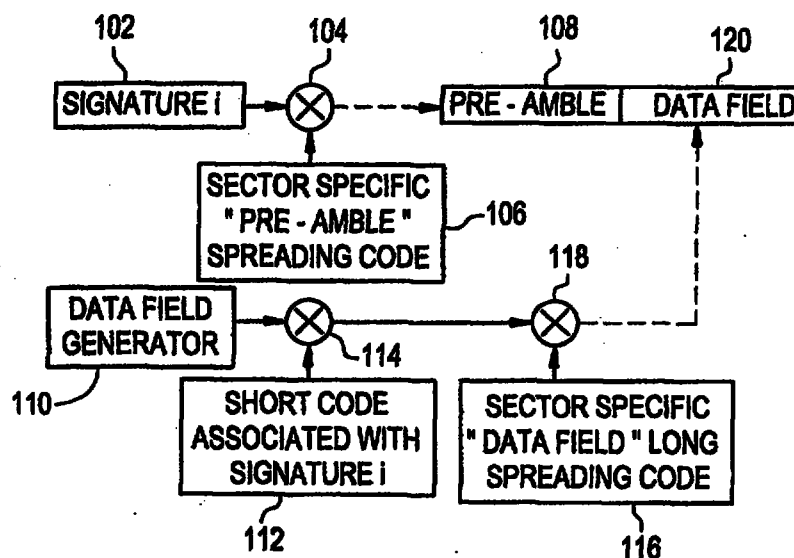




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(54) Title: RANDOM ACCESS IN A MOBILE TELECOMMUNICATIONS SYSTEM**(57) Abstract**

A method for processing multiple random access requests is disclosed in which a base station (204) transmits an acquisition indicator signal (A), which indicates that the base station (204) has detected the presence of a random access transmission (P,M). The acquisition indicator (A) can be generated based (212) on the amount of energy received (210) on the random access channel (e.g., as opposed to the correct/incorrect decoding of a random access message). Consequently, the delay between the beginning of the random access transmission (P,M) and the beginning of the acquisition indicator transmissions (A) is significantly shorter than the delay to the beginning of an acknowledgement transmission based on the reception of a correctly decoded random access message. If a mobile station (202) does not receive a positive acquisition indicator (A), it should interrupt the present transmission and start to retransmit the random access burst in the next time slot, while modifying the transmission power level accordingly between the successive re-transmissions.