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**Hayes, Jr. et al.**

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(54) **SHORT DISTANCE COMMUNICATION AND REMOTE CONTROL CAPABILITY FOR MOBILE TELEPHONES**

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(52) **U.S. Cl.** ..... **455/420**; 455/454; 455/556; 340/825.72

(58) **Field of Search** ..... 455/375, 403, 455/414, 462, 415, 420, 450, 454, 550, 552, 553, 556, 151.4; 379/110.01, 38, 102.03, 56.3, 355, 142, 93.23; 240/825.69, 825.72

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*Primary Examiner*—Vivian Chang

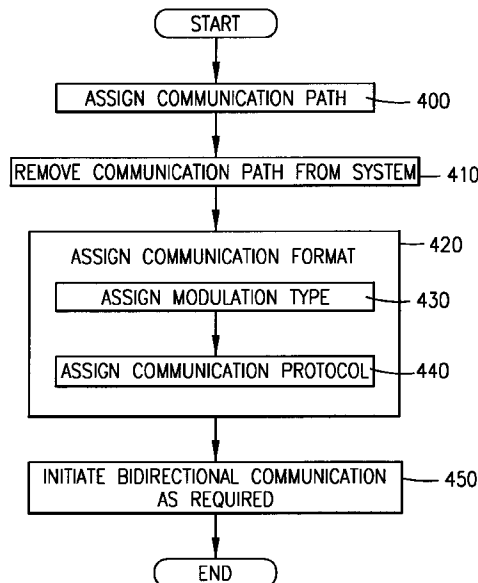
*Assistant Examiner*—Charles N. Appiah

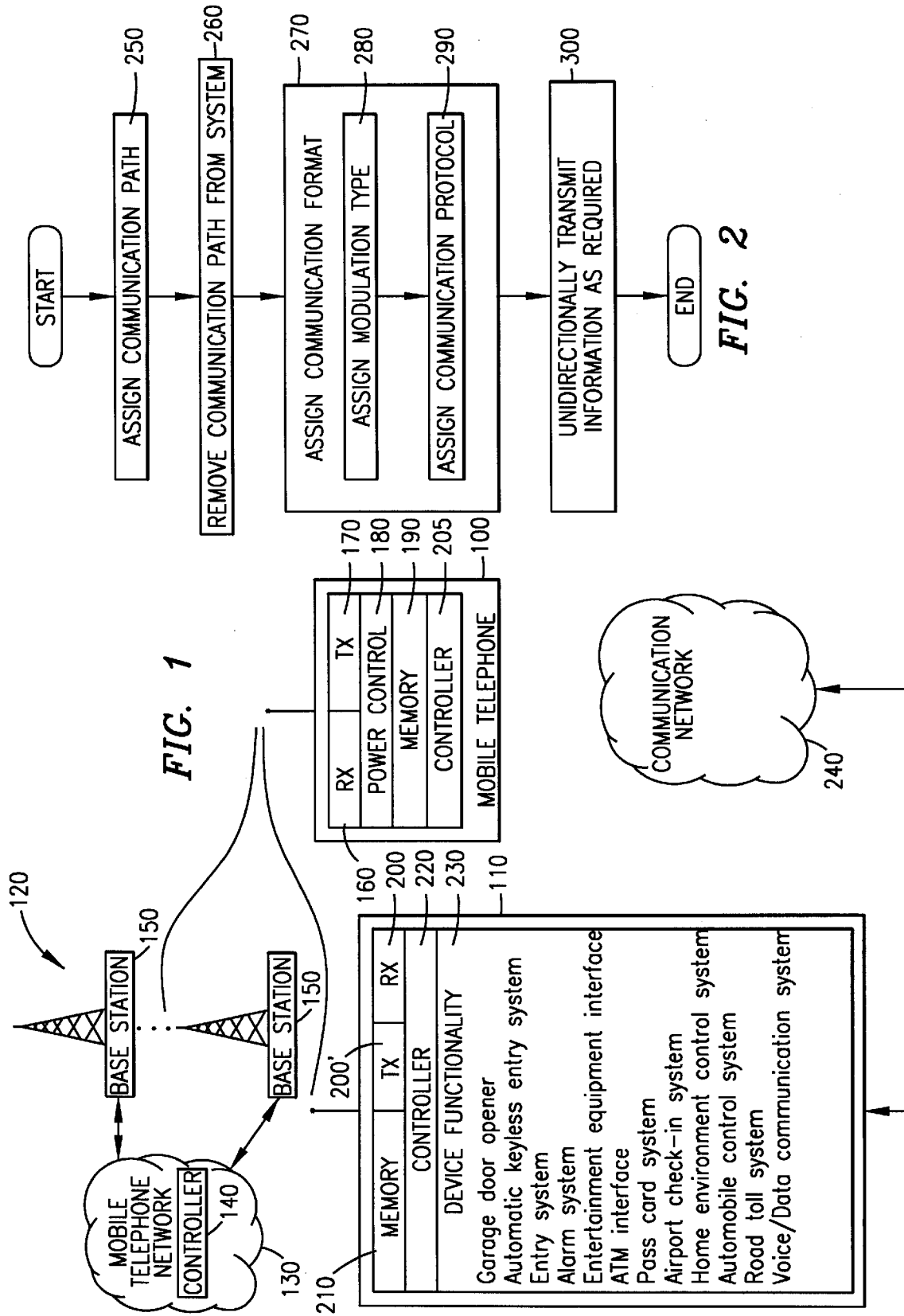
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(57) **ABSTRACT**

A method and apparatus for effectuating unidirectional and bidirectional communication directly between a mobile telephone and another device without the use of a mobile telephone system to carry the communication. A communication path and a communication format are assigned to the mobile telephone and the device either through a fixed preassignment or dynamically by the mobile telephone system. The communication path constitutes a portion of a radio spectrum assigned to the mobile telephone system, and the communication format includes a modulation type and a communication protocol. The communication path is removed from a set of communication paths allocated for use by the mobile telephone system and the communication path and communication format are stored in separate memories located in the mobile telephone and the device. Controllers located within the mobile telephone and the device initiate communication directly between the mobile telephone and the other device on the assigned communication path using the assigned communication format.

**21 Claims, 4 Drawing Sheets**





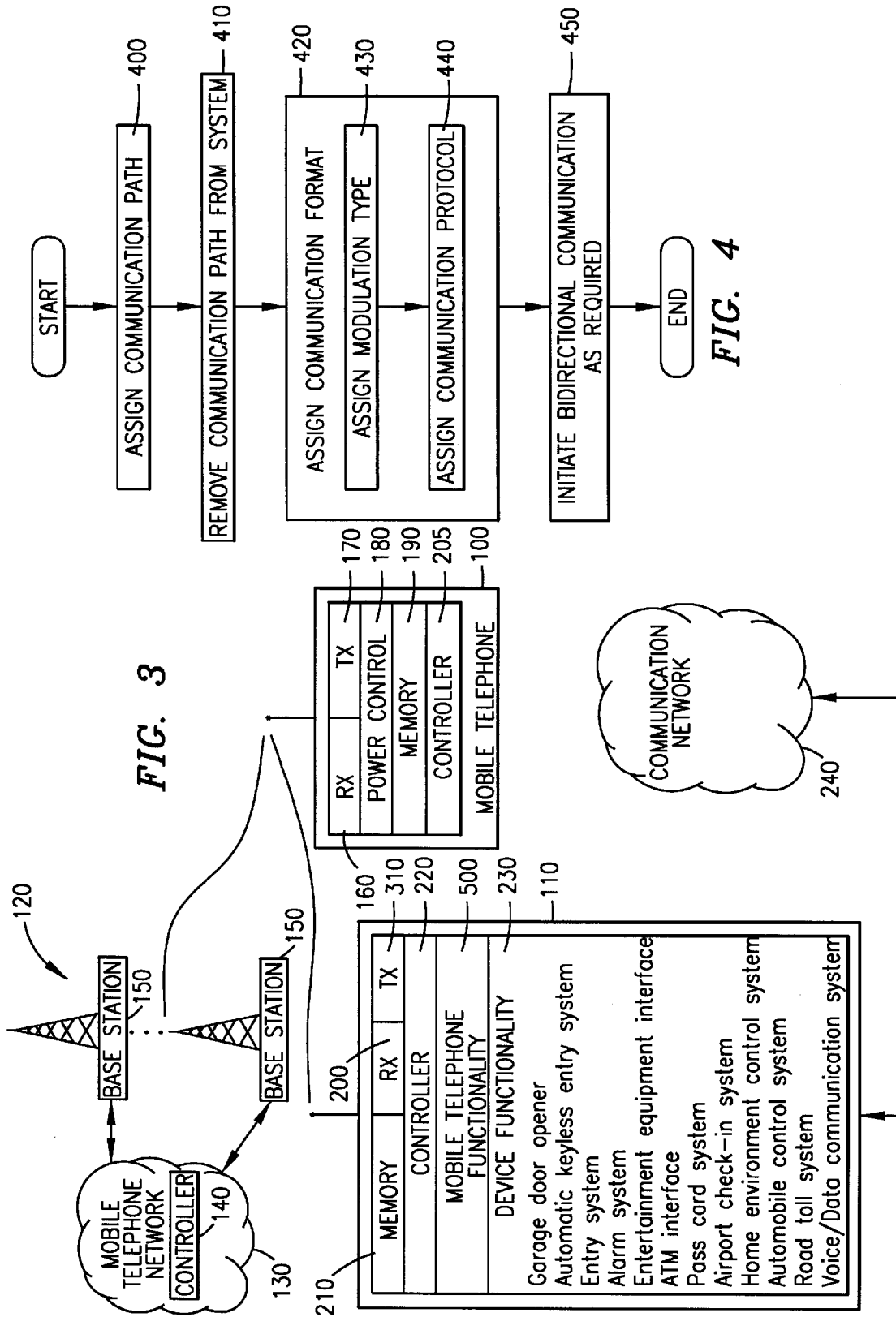


FIG. 3

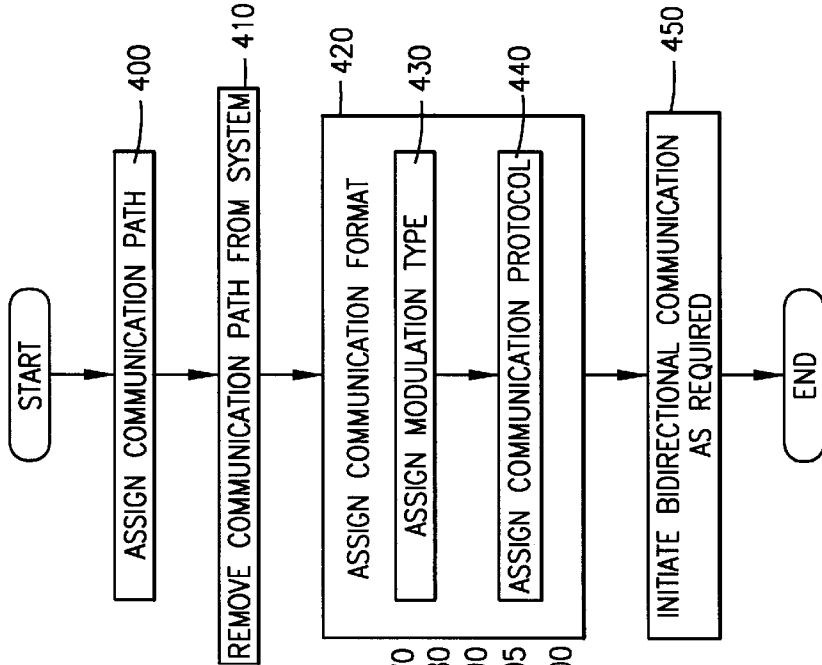


FIG. 4

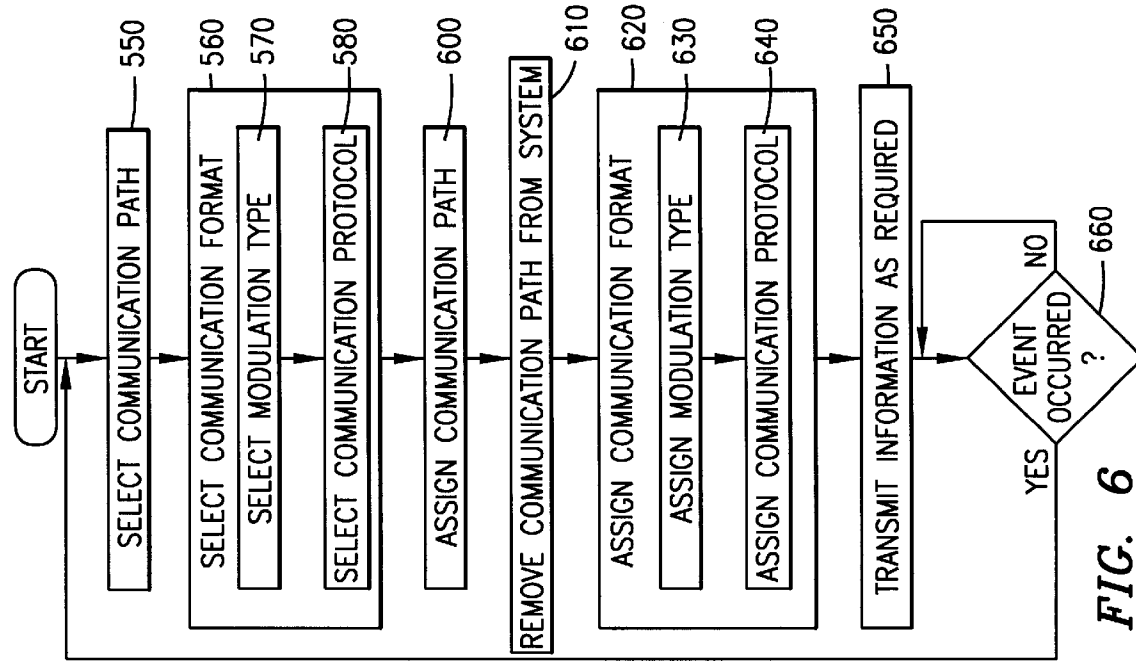


FIG. 6

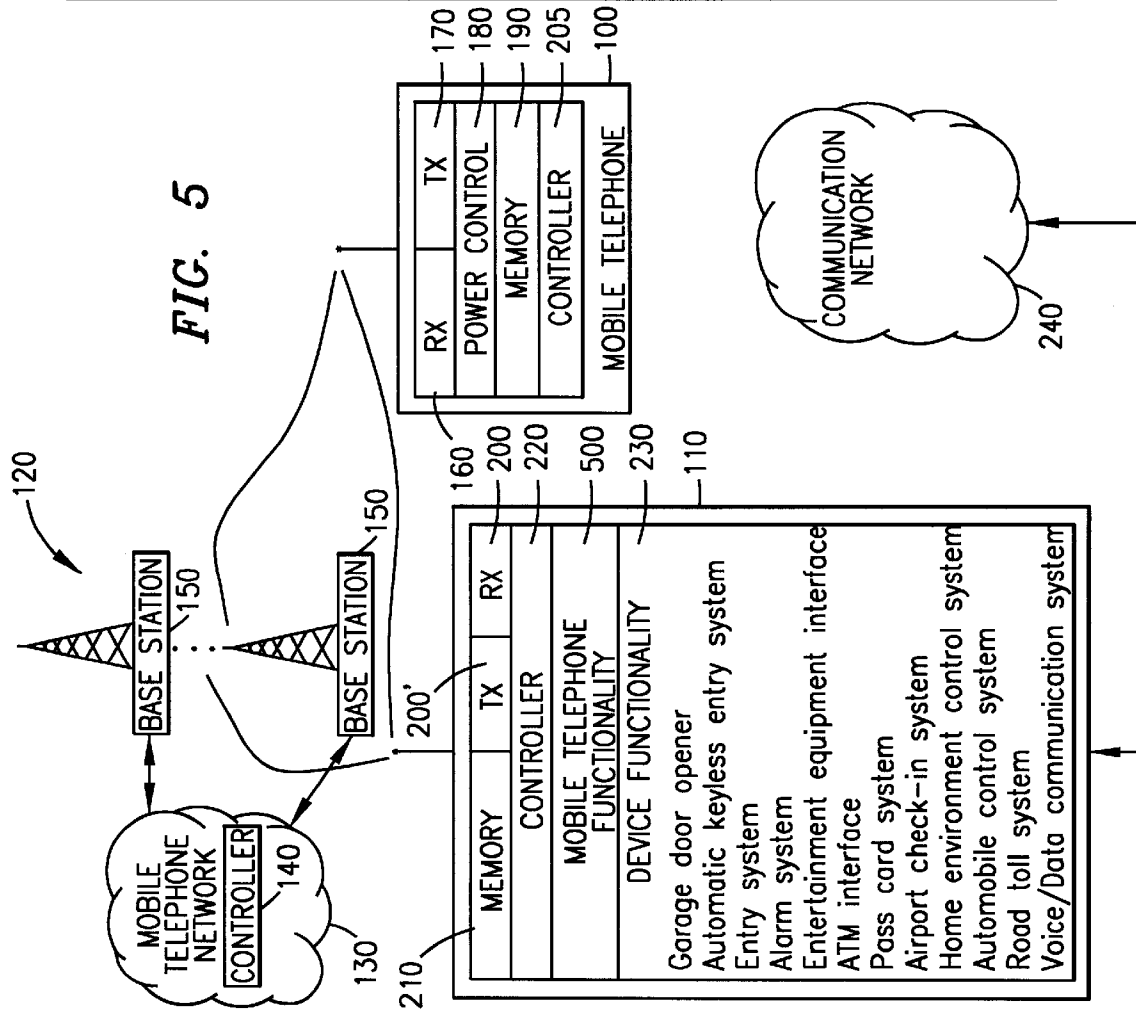


FIG. 5

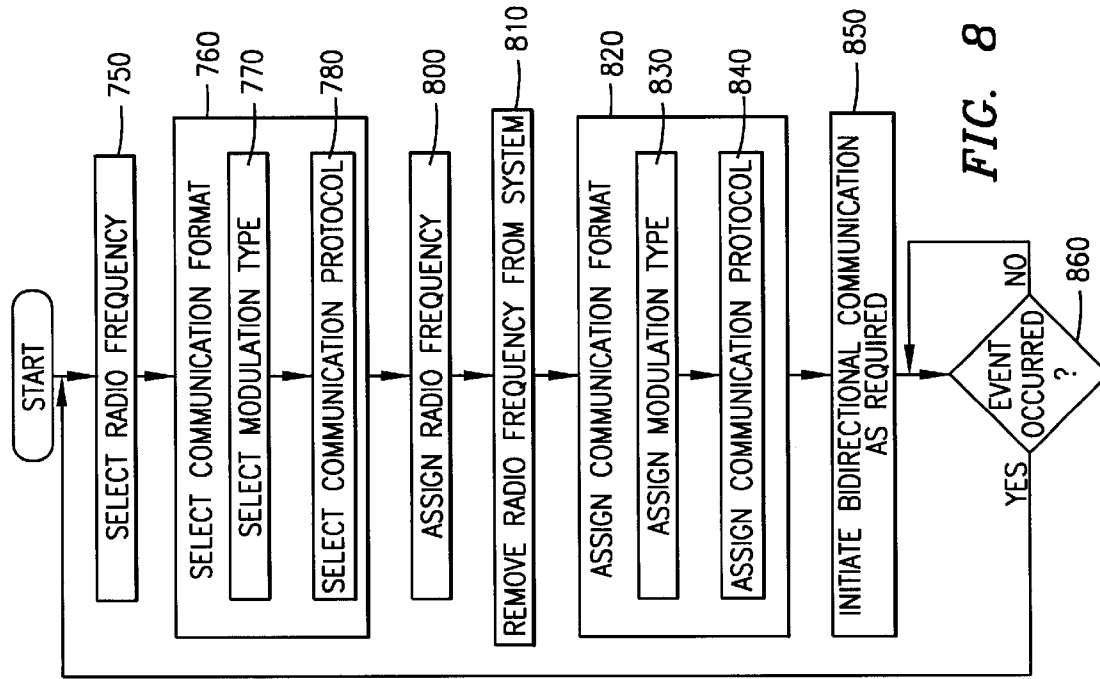


FIG. 8

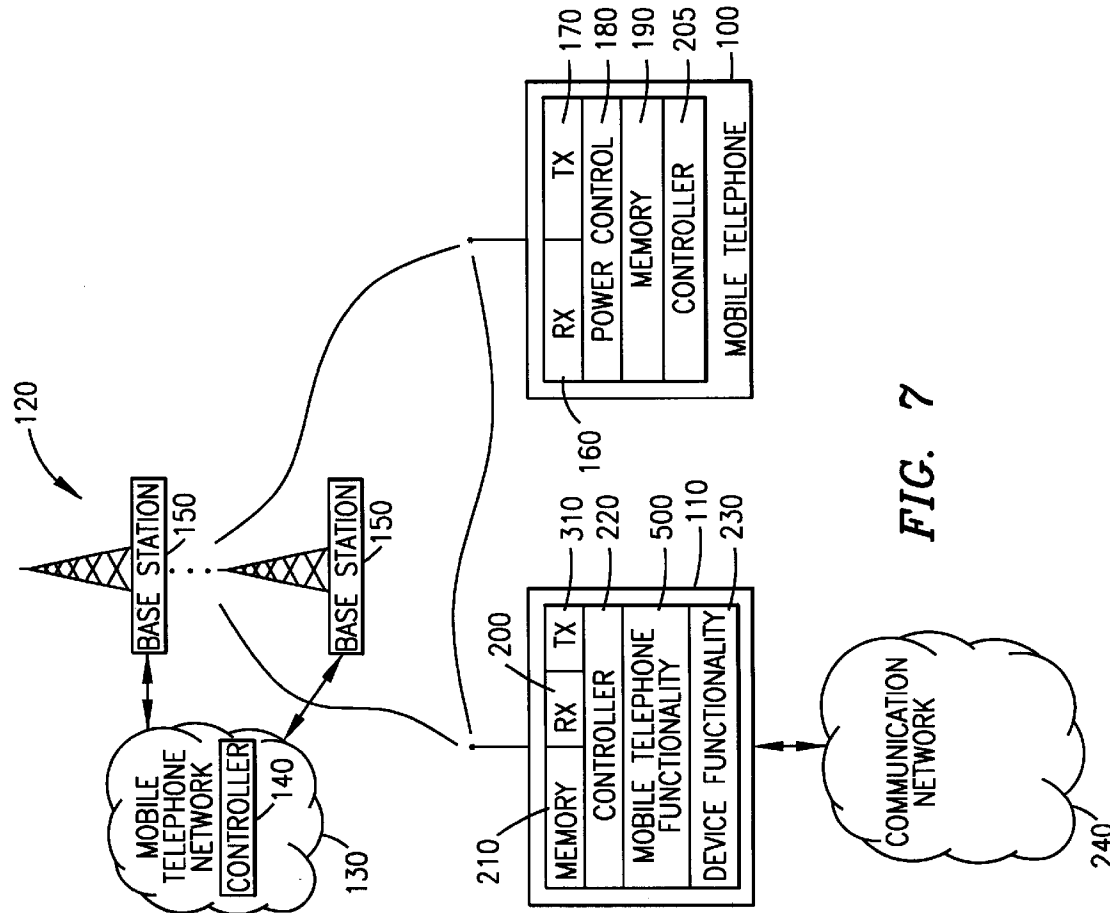


FIG. 7

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