



[54] **RADIO DATA COMMUNICATION APPARATUS HAVING A RELAY FUNCTION AND RADIO DATA COMMUNICATION METHOD AND SYSTEM USING THE SAME**

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[30] **Foreign Application Priority Data**

Sep. 21, 1994 [JP] Japan 6-226246

[51] Int. Cl.⁶ **H04B 7/15; H04J 3/26**

[52] U.S. Cl. **370/315; 370/349; 370/351; 370/393; 455/11.1**

[58] **Field of Search** **370/315, 328, 370/338, 349, 351, 312, 393, 492, 501; 455/7, 11.1, 13.1**

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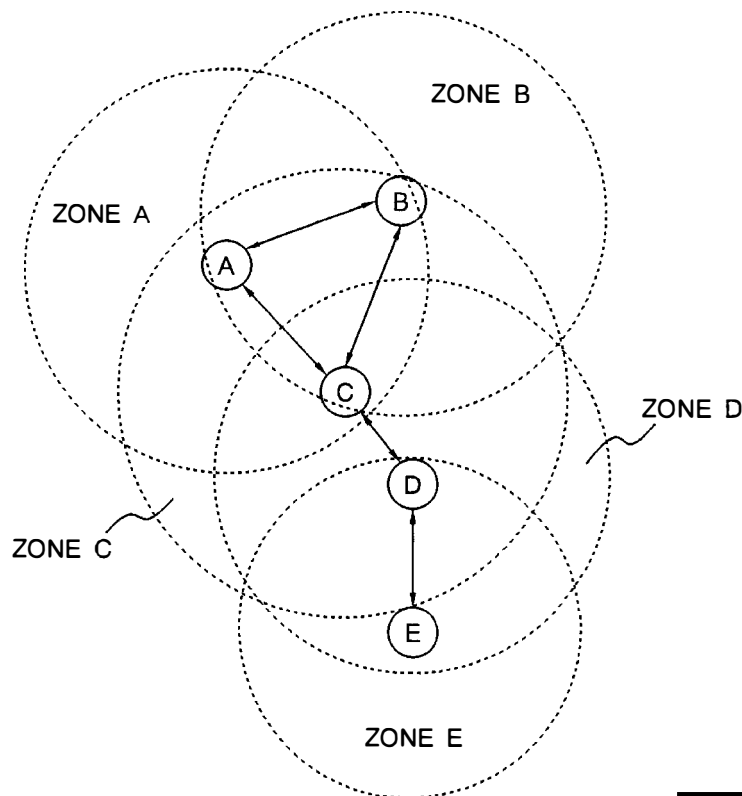
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[57] **ABSTRACT**

In a radio data communication network where a plurality of radio data communication apparatuses mutually communicate information through frames carried by radio waves, a communication method using radio data communication apparatuses having a relay function is provided. When two radio data communication apparatuses cannot directly communicate with each other due to the limit of the radio wave range, another radio data communication apparatus serves as a relay station to relay frames between the two apparatuses, thus extending a communicable range.

24 Claims, 14 Drawing Sheets



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FIG. 1

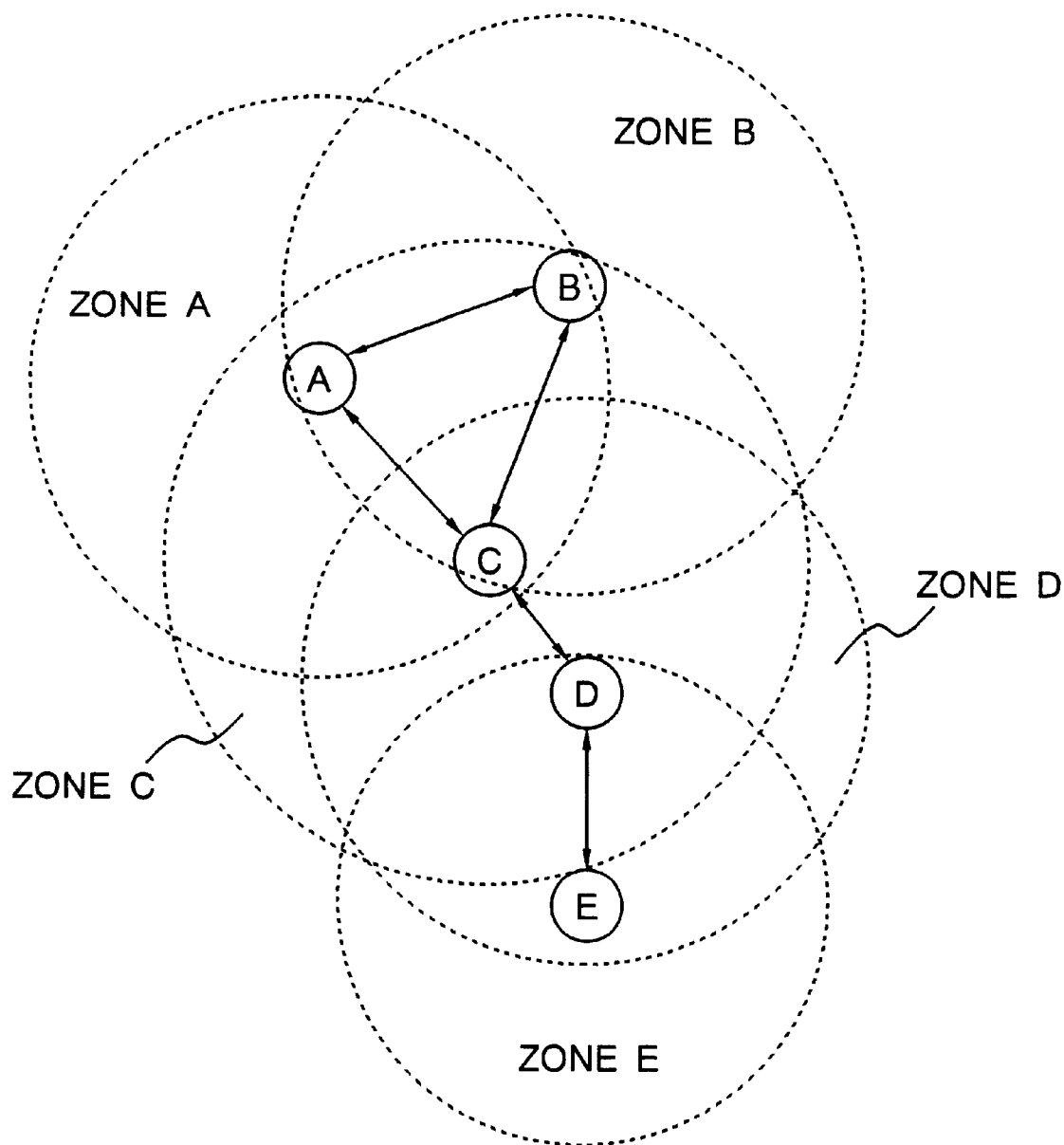


FIG. 2

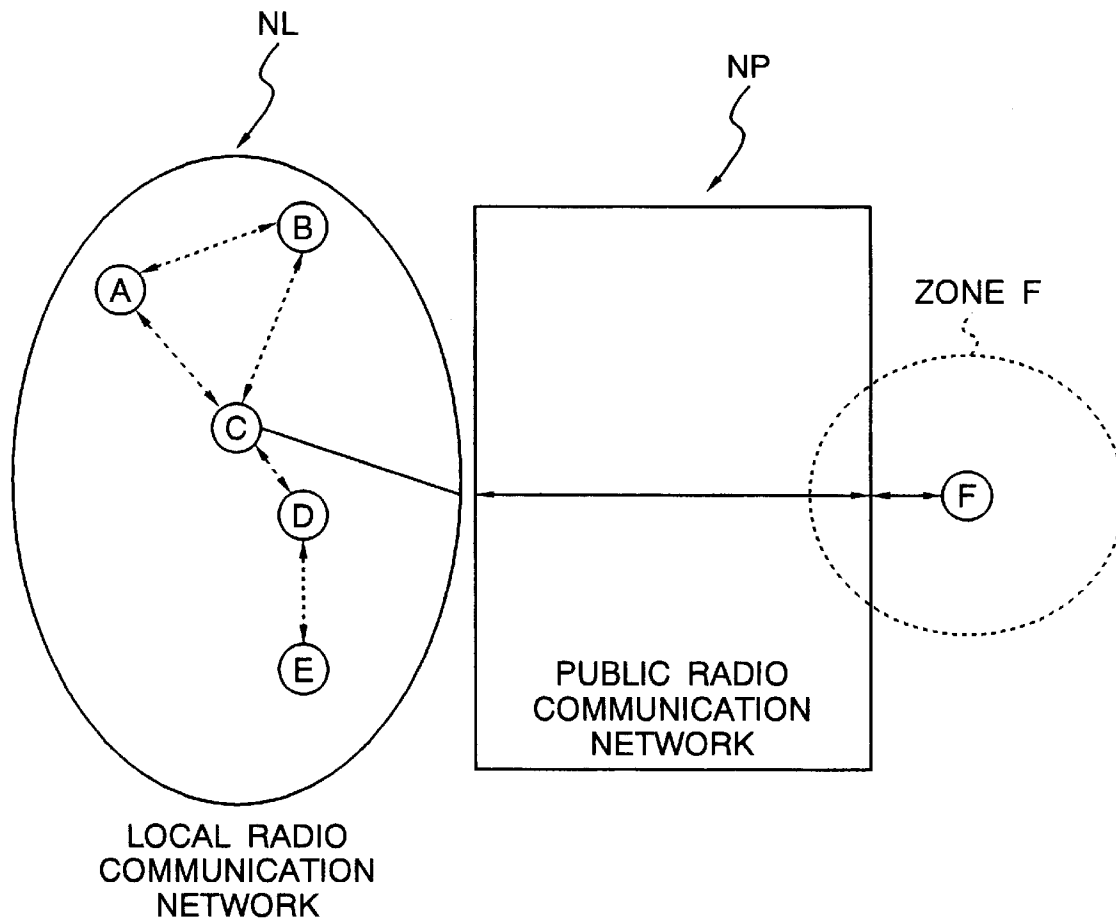


FIG. 3

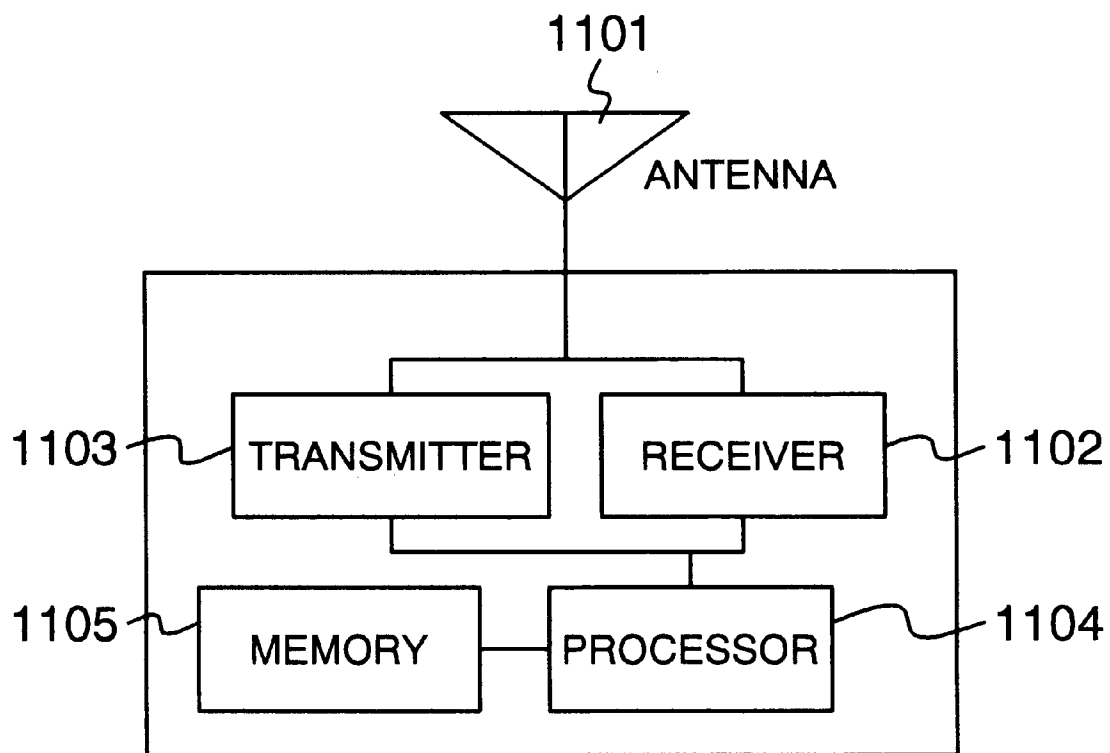
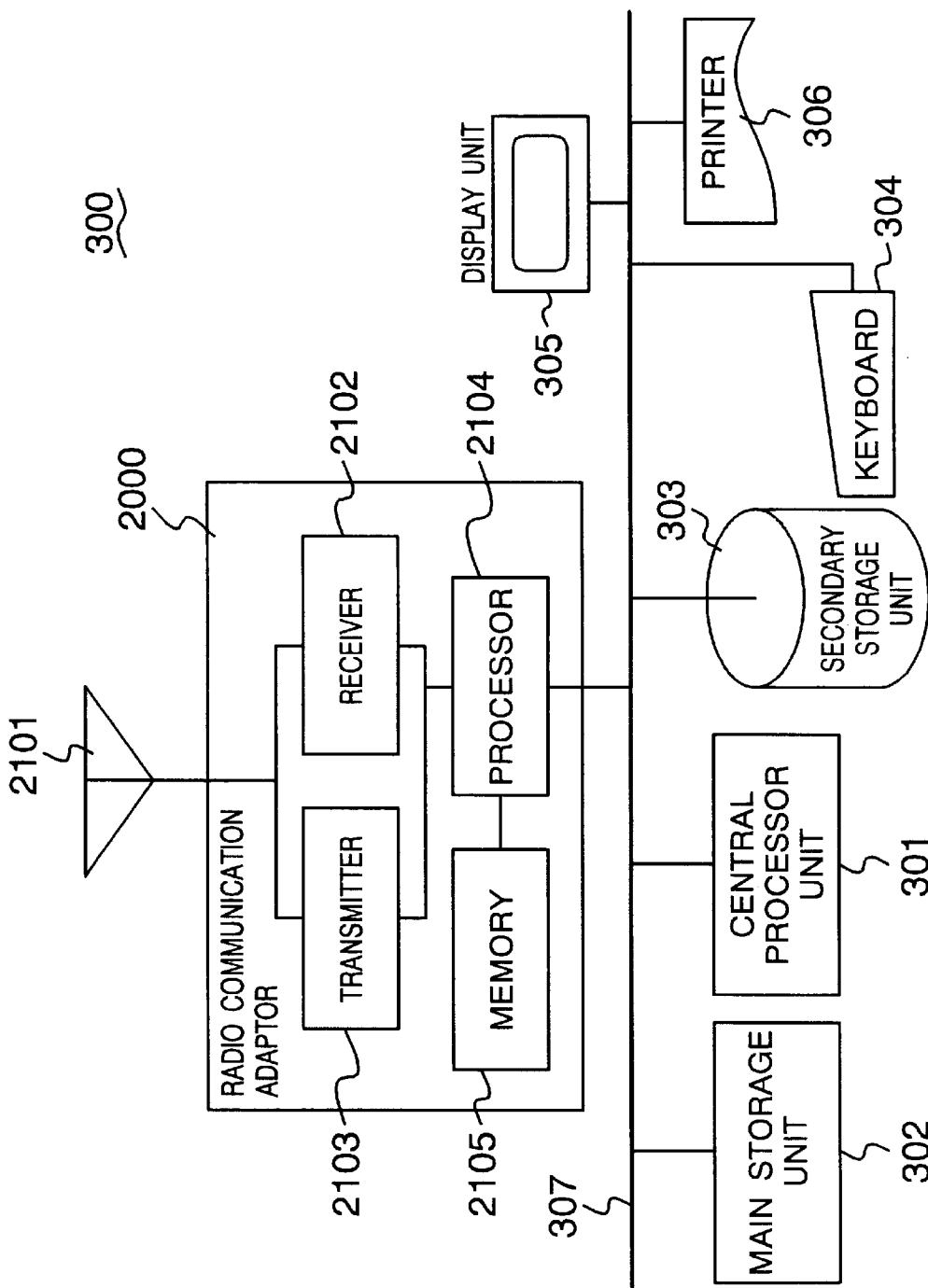


FIG. 4



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