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(54) **MULTICARRIER MODULATION MESSAGING FOR POWER LEVEL PER SUBCHANNEL INFORMATION**

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This patent is subject to a terminal disclaimer.

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**H04B 1/38** (2006.01)  
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(52) **U.S. Cl.**  
USPC ..... **375/222; 370/252**

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

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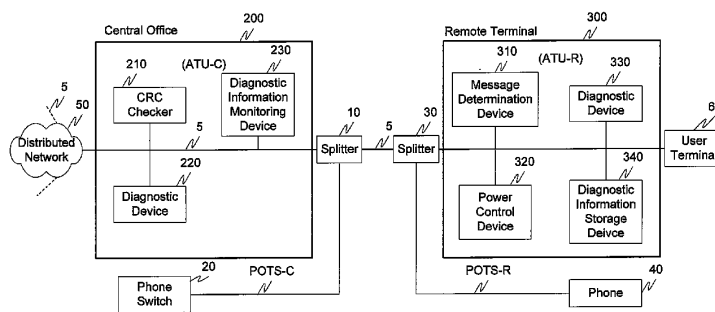
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(57) **ABSTRACT**

Upon detection of a trigger, such as the exceeding of an error threshold or the direction of a user, a diagnostic link system enters a diagnostic information transmission mode. This diagnostic information transmission mode allows for two modems to exchange diagnostic and/or test information that may not otherwise be exchangeable during normal communication. The diagnostic information transmission mode is initiated by transmitting an initiate diagnostic link mode message to a receiving modem accompanied by a cyclic redundancy check (CRC). The receiving modem determines, based on the CRC, if a robust communications channel is present, the two modems can initiate exchange of the diagnostic and/or test information. Otherwise, the transmission power of the transmitting modem is increased and the initiate diagnostic link mode message re-transmitted to the receiving modem until the CRC is determined to be correct.

**10 Claims, 2 Drawing Sheets**



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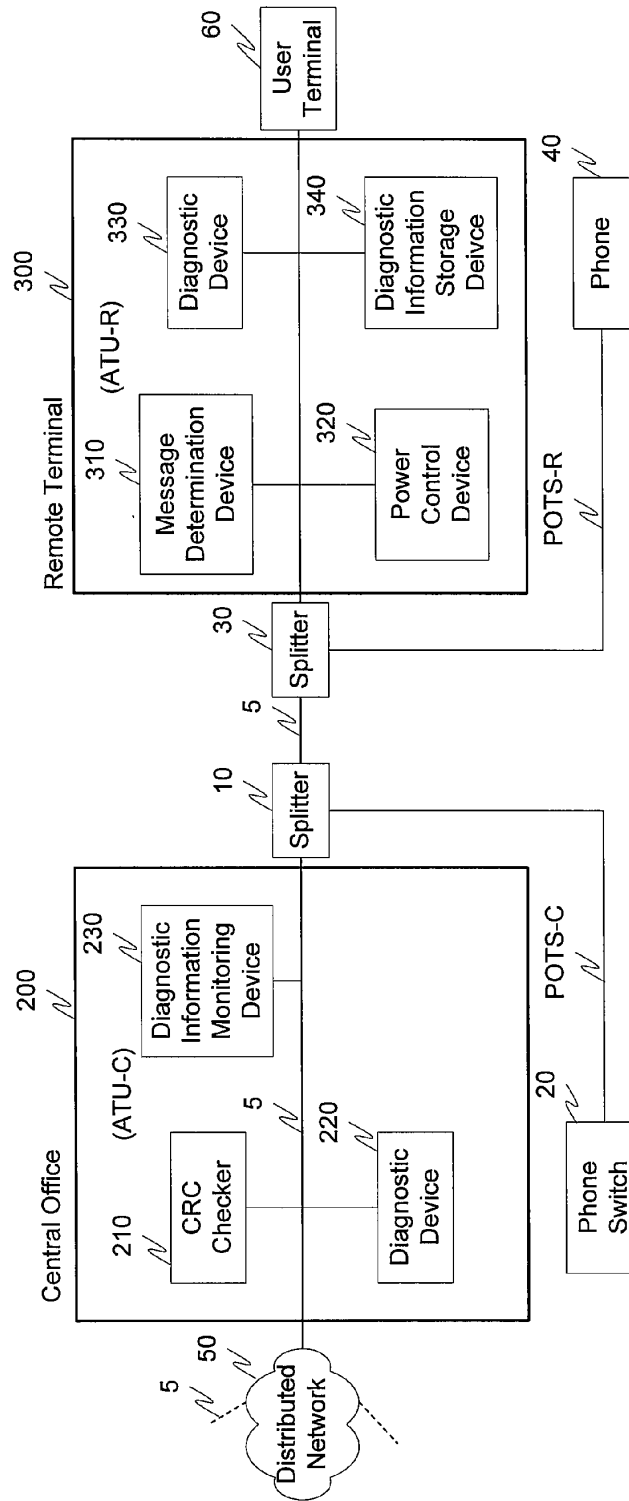
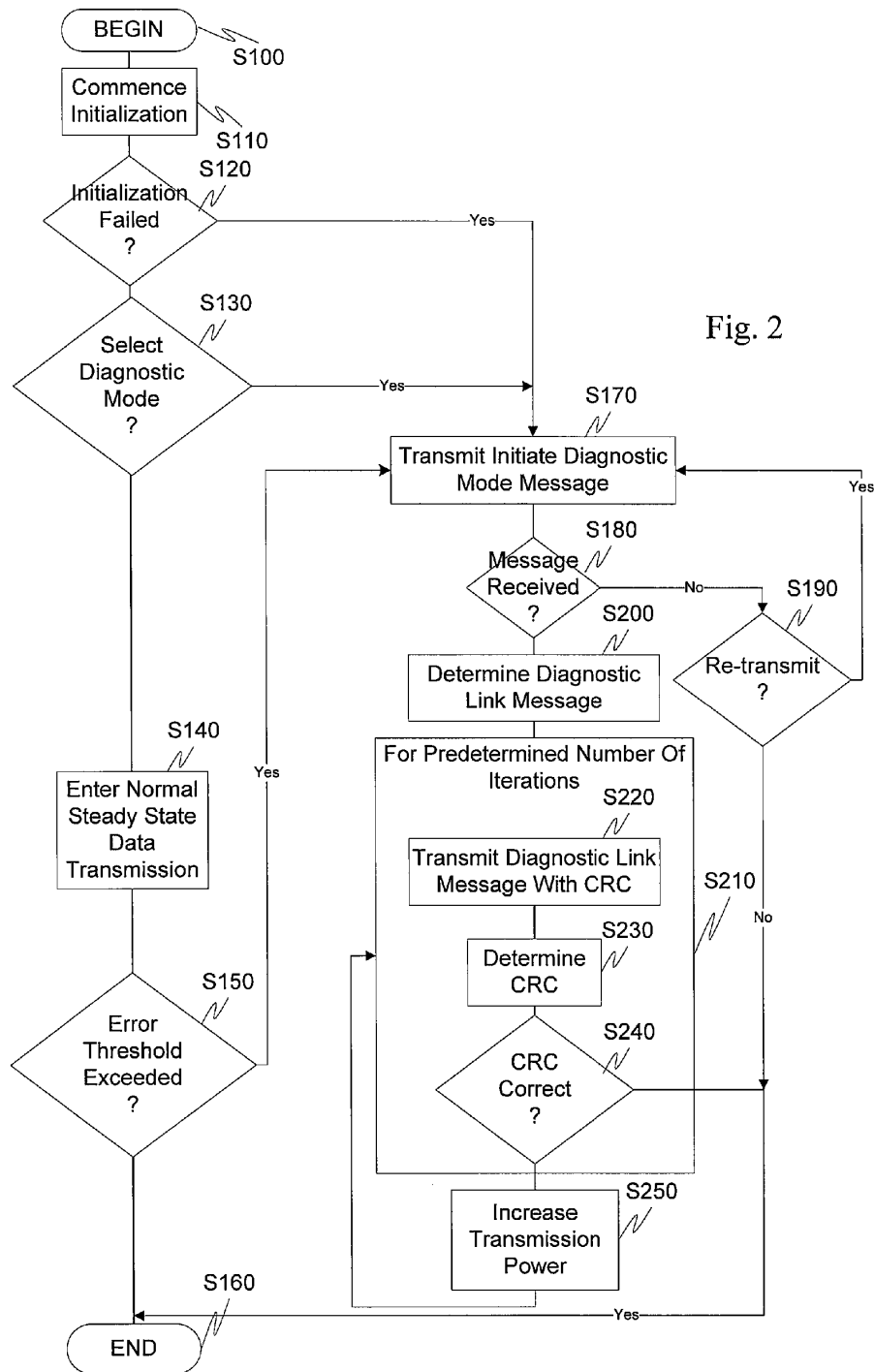


Fig. 1



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