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**Trompower**

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(54) **802.11 NETWORKS USING DYNAMIC POWER CONTROL FOR RF TRANSMISSION**

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(51) **Int. Cl.**  
**H04B 1/04** (2006.01)

(52) **U.S. Cl.** ..... **455/114.3**

(58) **Field of Classification Search** ..... 455/114, 455/91, 522, 127, 575, 64, 114.3, 574, 127.1, 455/127.5, 13.4; 375/297, 296, 295; 370/318, 370/319, 321, 465, 337, 347, 338; 709/229, 709/240

See application file for complete search history.

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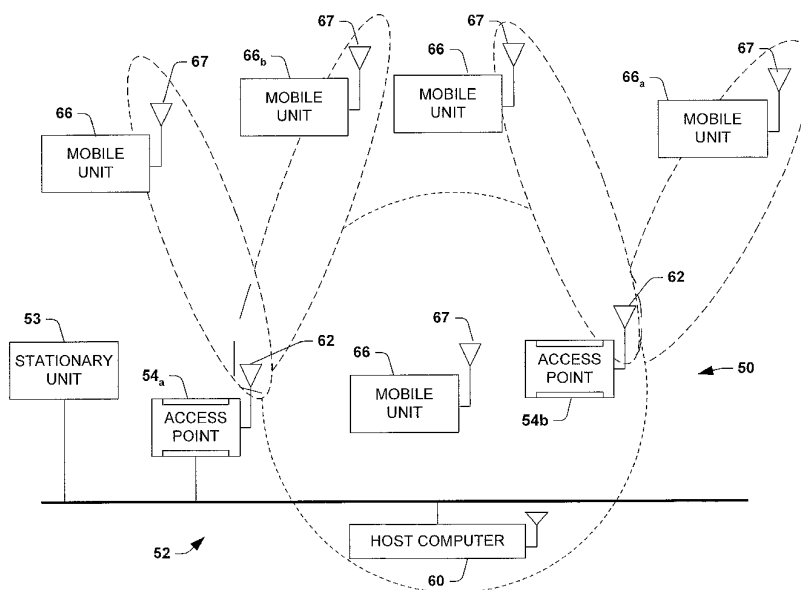
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(57) **ABSTRACT**

A system and method is provided for adjusting transmission power of different portions of a data packet. The system and method is especially useful when utilizing the IEEE 802.11 standard protocol due to the varying transmission data rates of a packet. A IEEE 802.11 packet includes a preamble portion, a header portion and a data portion. The preamble portion has a data rate of 1 Mbps, the header has a data rate of 1 or 2 Mbps and the data portion has a data rate of 1, 2, 5.5 or 11 Mbps. At a given fixed power level, a transmission at a higher data rate has a lower transmission range than a transmission at a lower data rate. Therefore, the present invention provides for a system and method that adjusts the power level of different portions of a data packet, so that the entire data packet has a more uniform range. This eliminates the need for components in the system receiving a preamble portion of a transmission at higher ranges to remain idle during transmission of an entire frame. The system and method can be applied to both access points and mobile units in a cellular communications system.

**31 Claims, 10 Drawing Sheets**



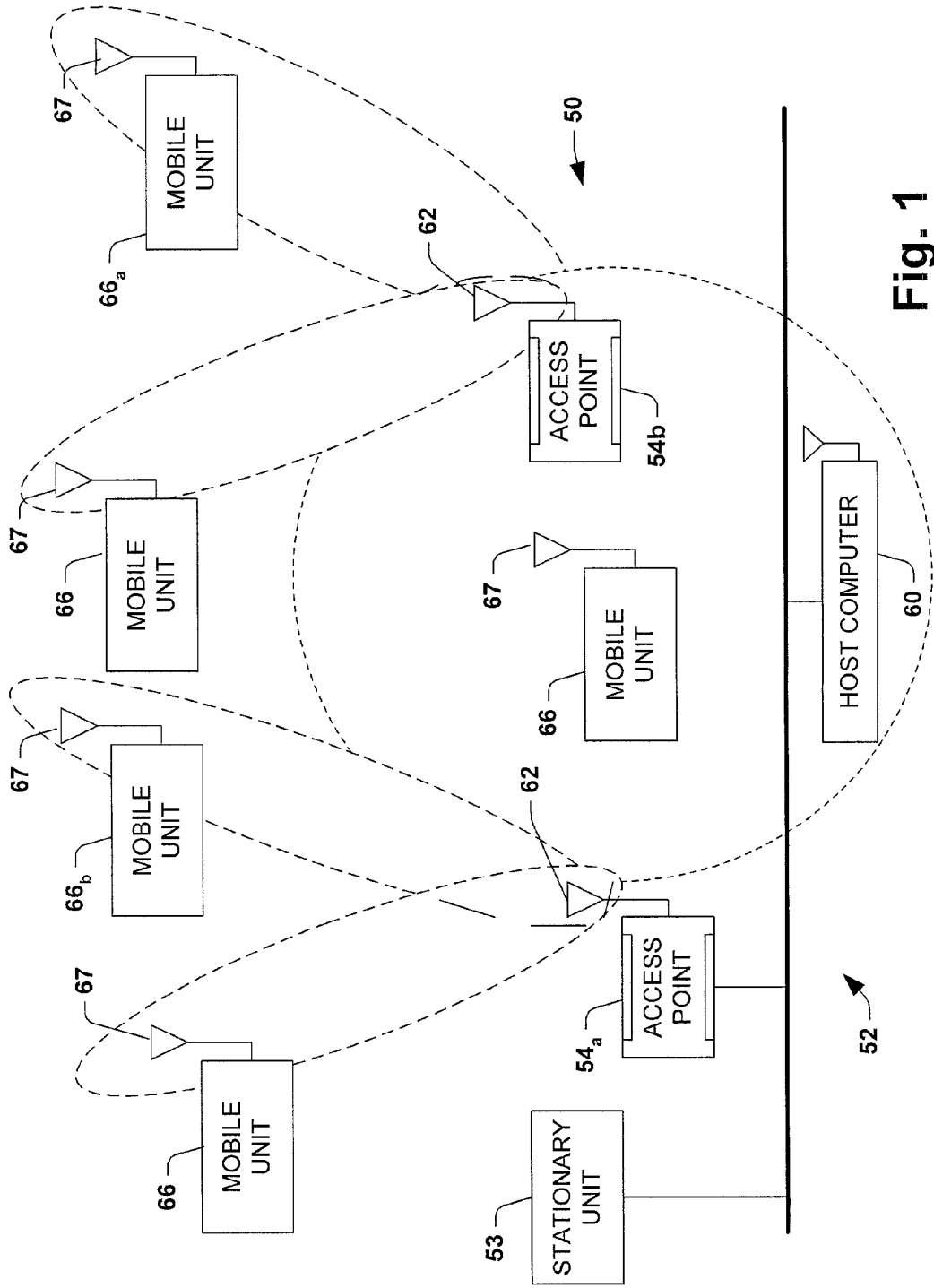


Fig-1

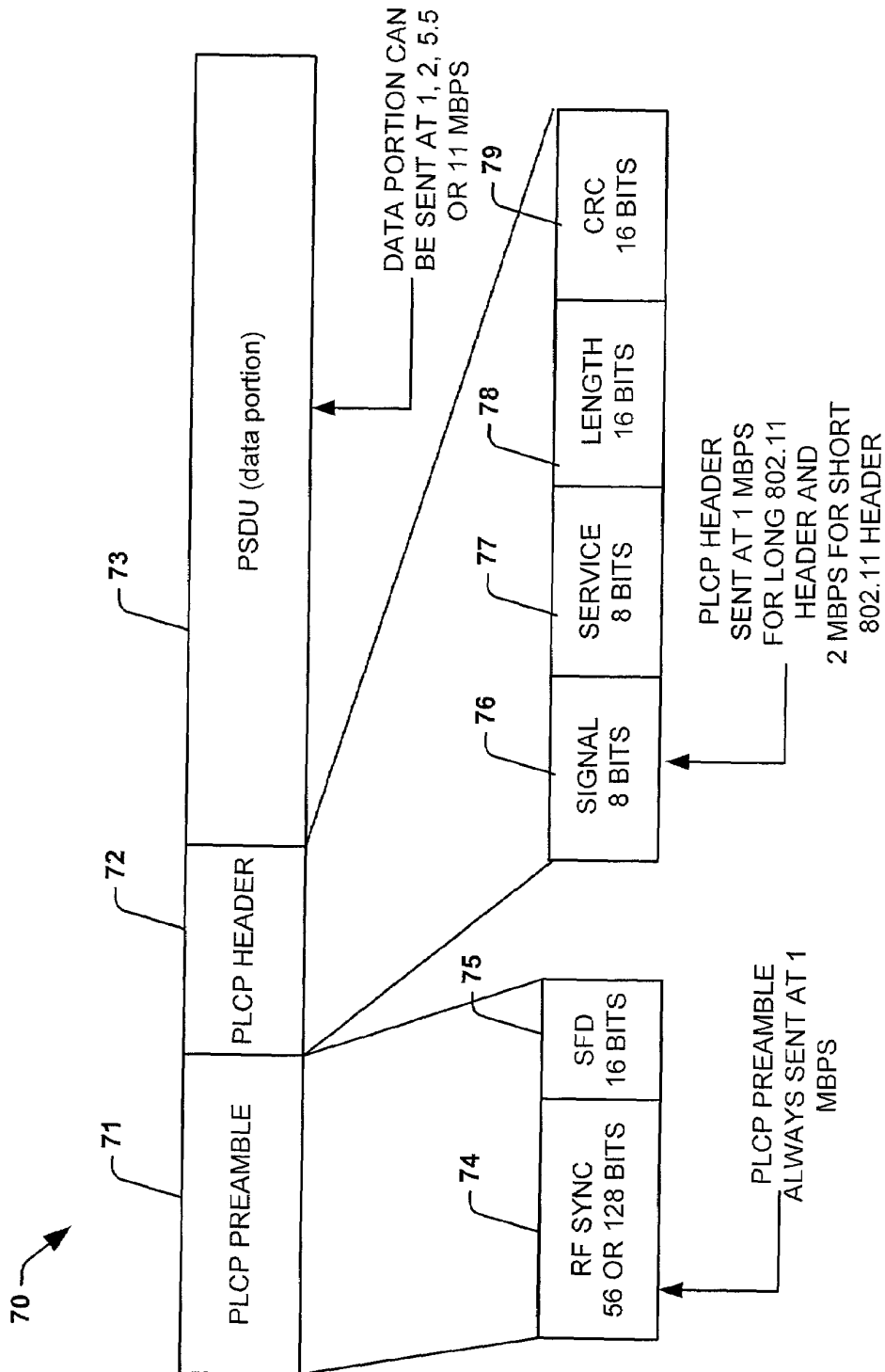
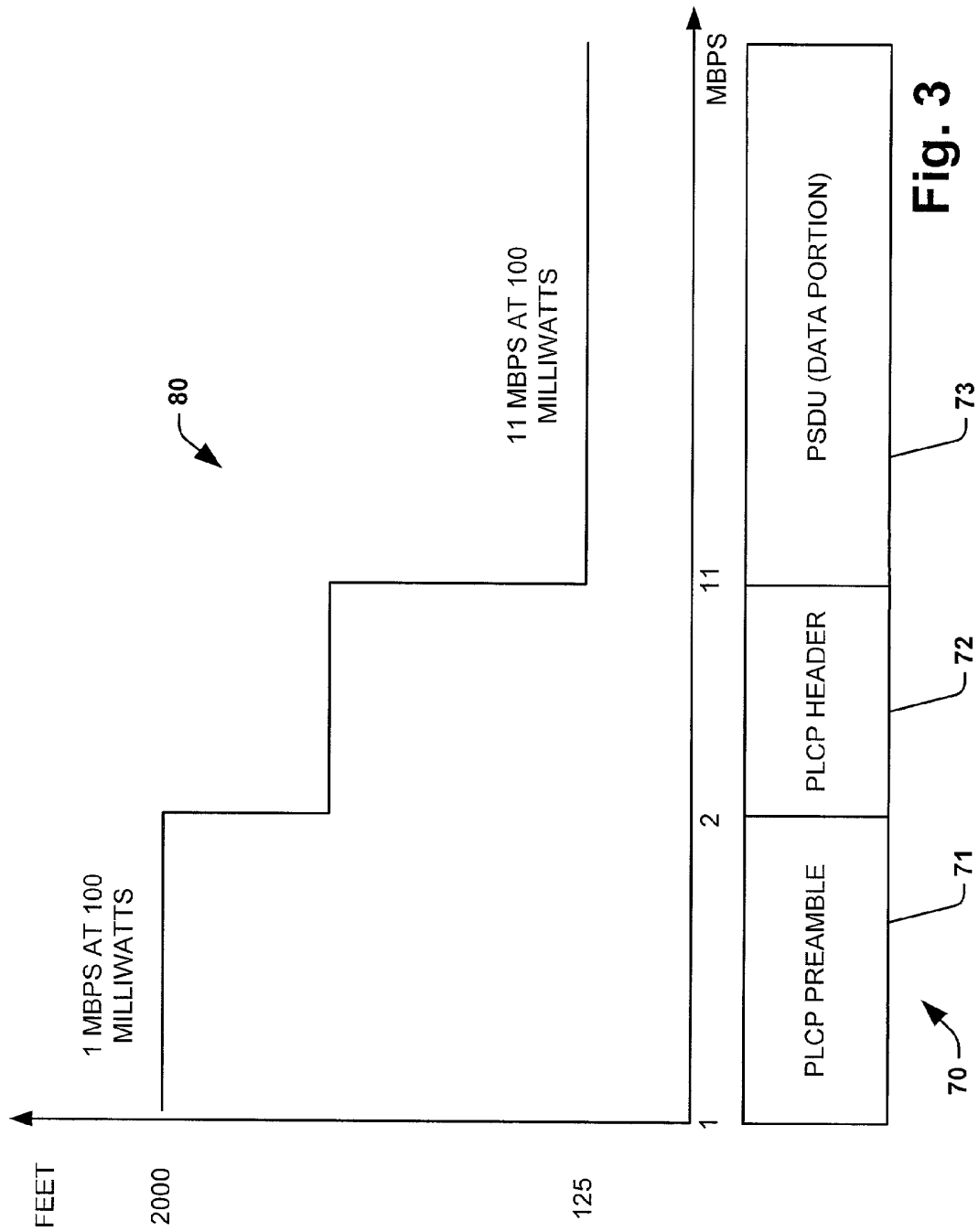
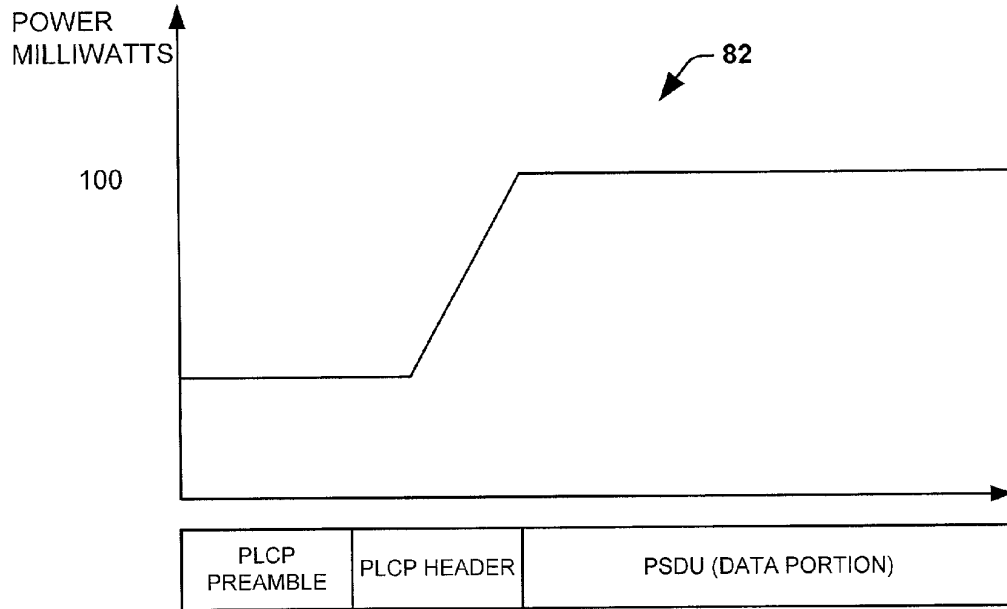


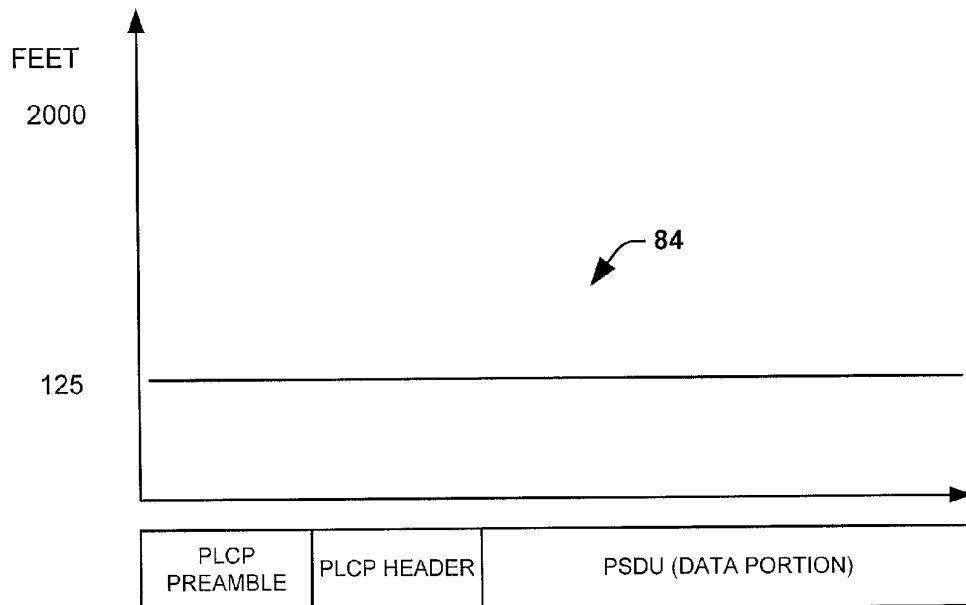
Fig. 2





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Fig. 4a



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Fig. 4b

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