

United States Patent [19]

Jaszewski et al.

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[54] **METHOD AND APPARATUS FOR ASSIGNING SPECTRUM OF A WIRELESS LOCAL AREA NETWORK**

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[21] Appl. No.: **08/640,184**

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[51] Int. Cl.⁶ **H04J 1/02**

[52] U.S. Cl. **370/329; 370/343**

[58] Field of Search **455/446, 447; 370/343, 310, 328, 329, 330, 332, 338, 342, 431, 480, 464**

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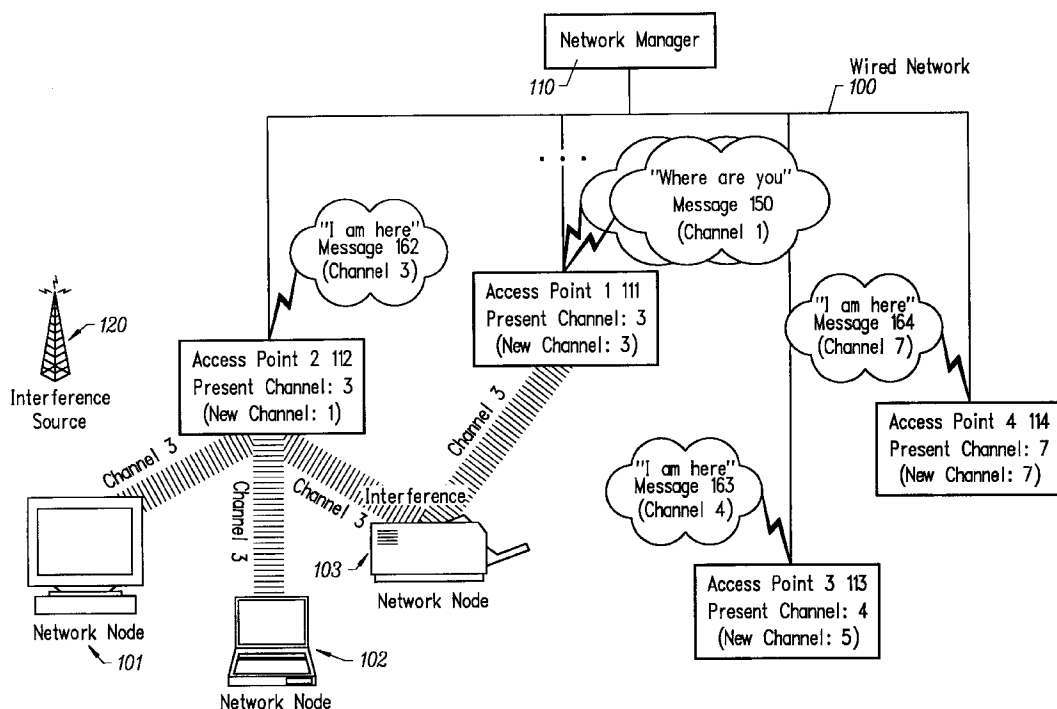
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[57] ABSTRACT

One embodiment of the invention includes assigning channels to a set of access points coupled to a network. The network includes a set of wireless network nodes. Each access point communicates, using one of the channels, to a subset of the wireless network nodes. Each channel corresponds to a different frequency range in the electromagnetic spectrum. The embodiment includes the following steps. At least a first access point of the set of access points transmits a plurality of messages. A measure of interference between access points communicating on a first channel is determined from the plurality of messages. A second set of channel assignments, that results in a lower amount of interference between access points communicating on the first channel, is determined. The second set of channel assignments is assigned to the set of access points. Thus, non-interfering frequency assignments for the access points can be determined.

15 Claims, 4 Drawing Sheets



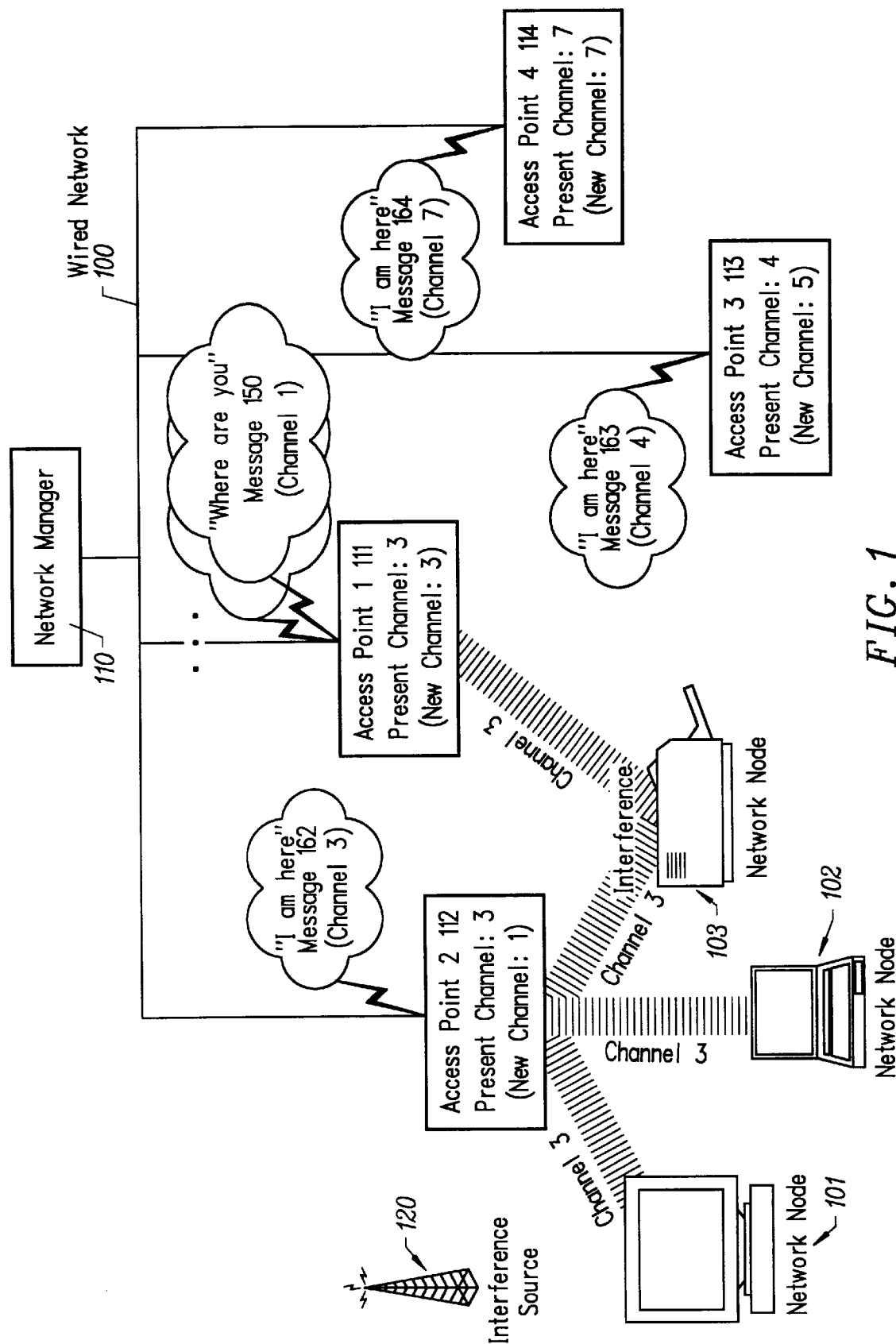


FIG. 1

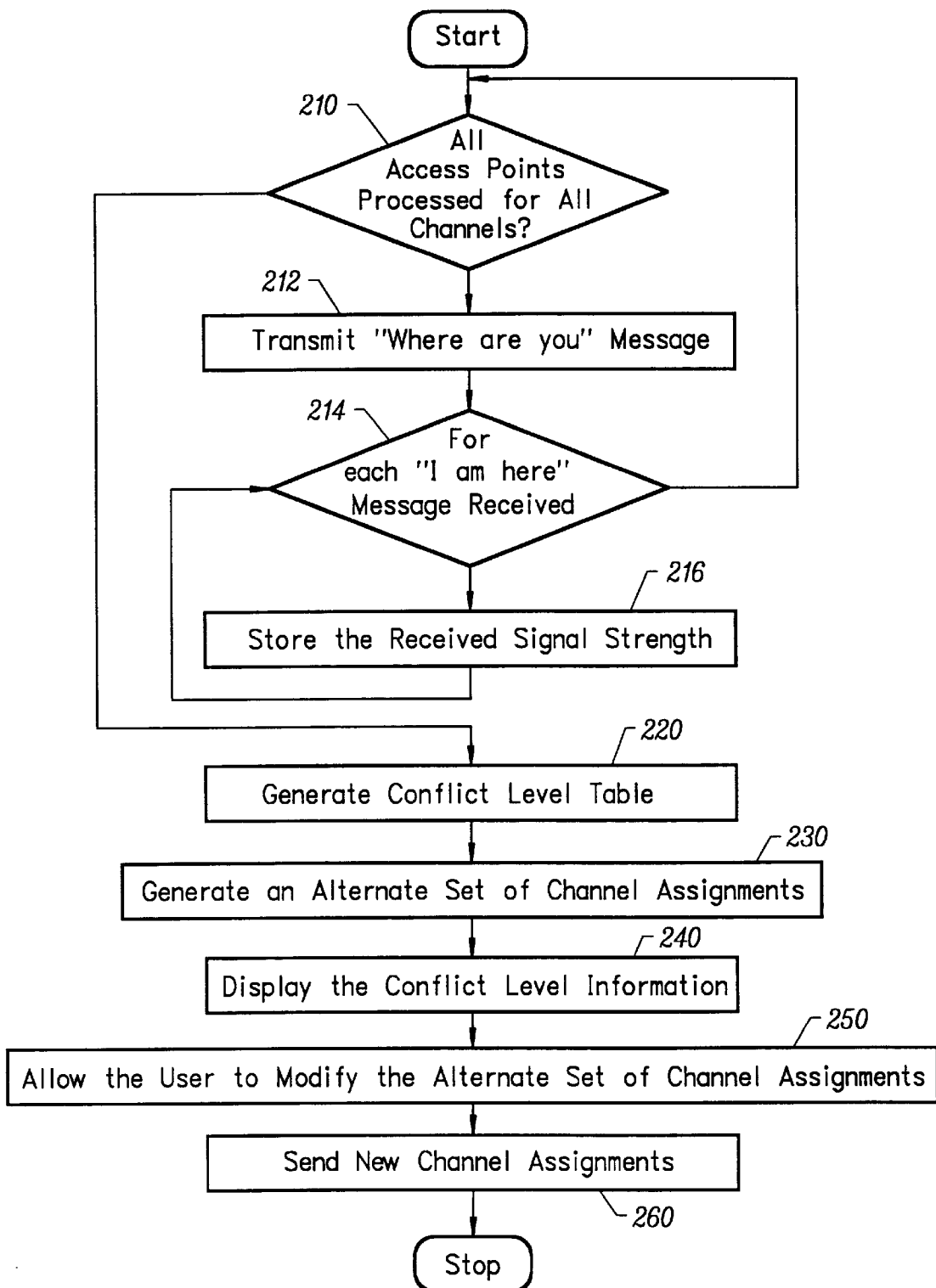


FIG. 2

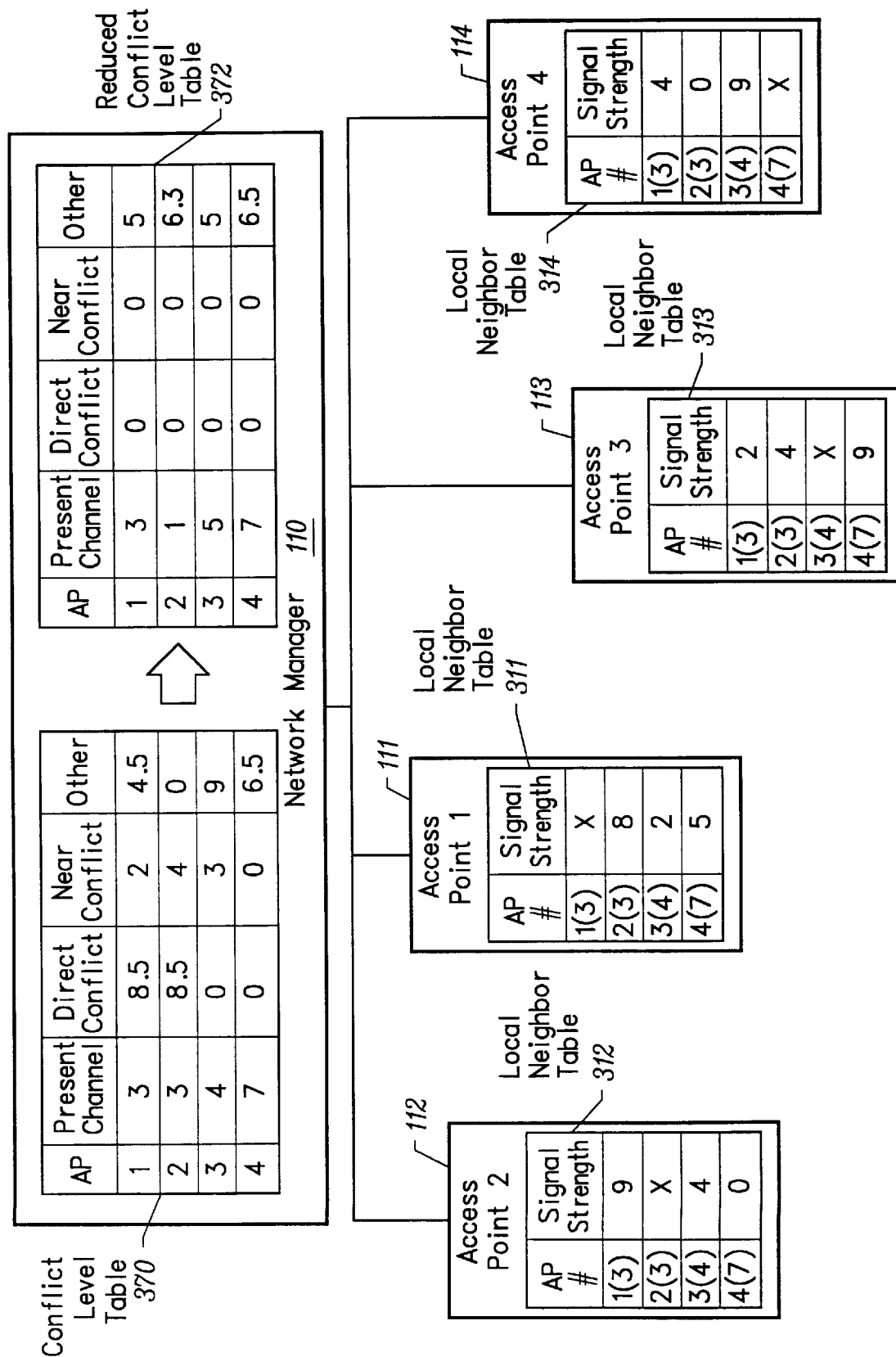


FIG. 3

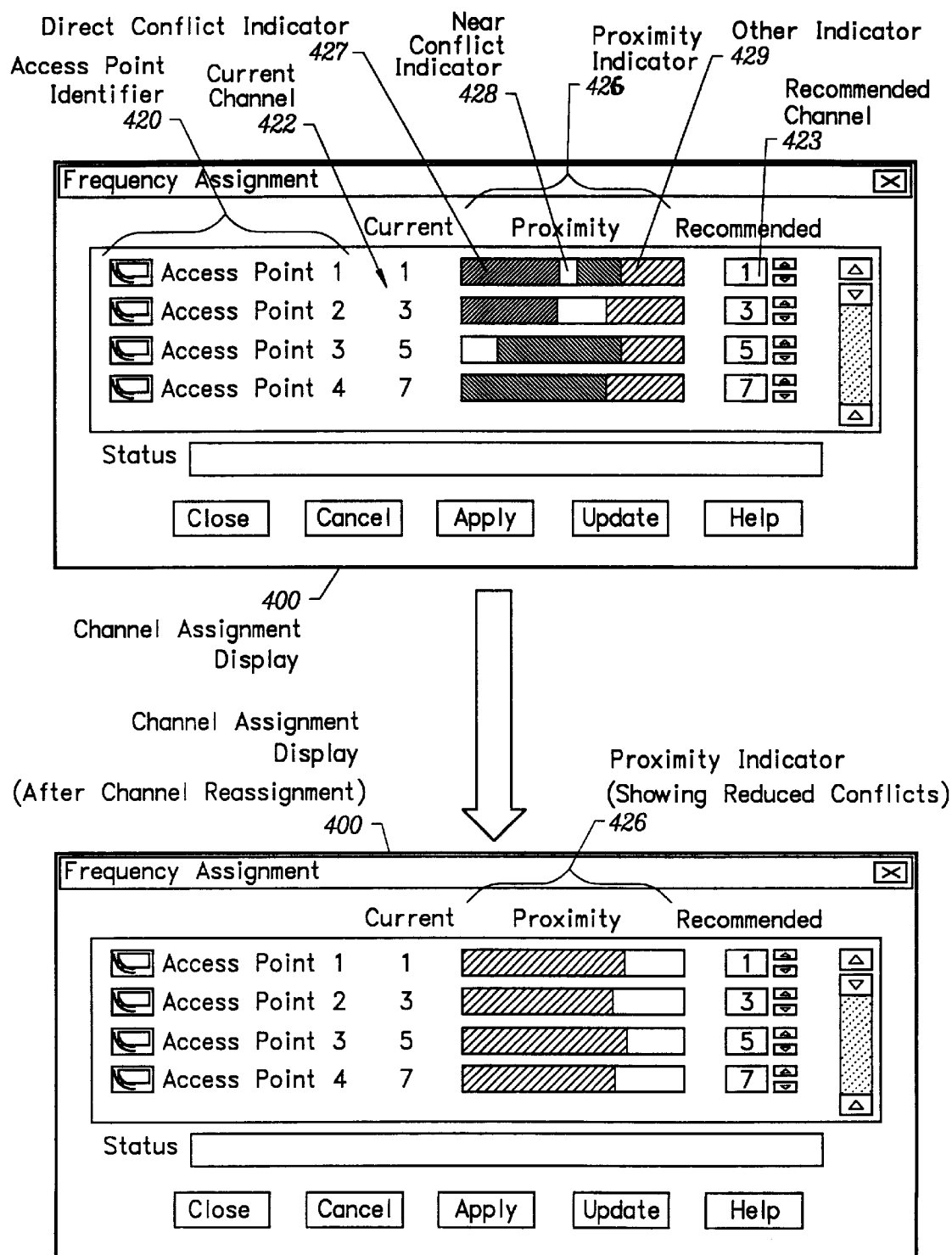


FIG. 4

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