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(54) **METHOD AND APPARATUS FOR ALLOCATING A PILOT SIGNAL ADAPTED TO THE CHANNEL CHARACTERISTICS**

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(57) **ABSTRACT**

A set of different pilot structures are designed for use in different environments and/or different user behaviours that are expected to occur in a cell. The radio conditions for a user are estimated. Each user is then assigned an area (108A-E) in resource space for its communication, which has a suitable pilot configuration. In one embodiment, the entire resource space is provided with different pilot structures in different parts (110A-D) In advance and allocation of resources to the users are then performed in order to match estimated radio conditions to the provided pilot structure. In another embodiment, allocation is performed first, and then the actual pilot structure is adapted within the allocated resource space area to suit the environmental conditions.

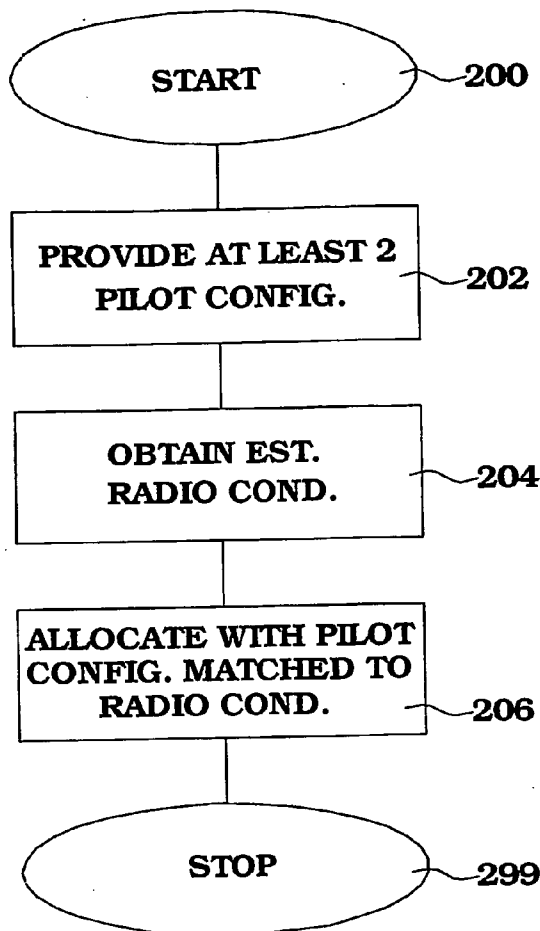
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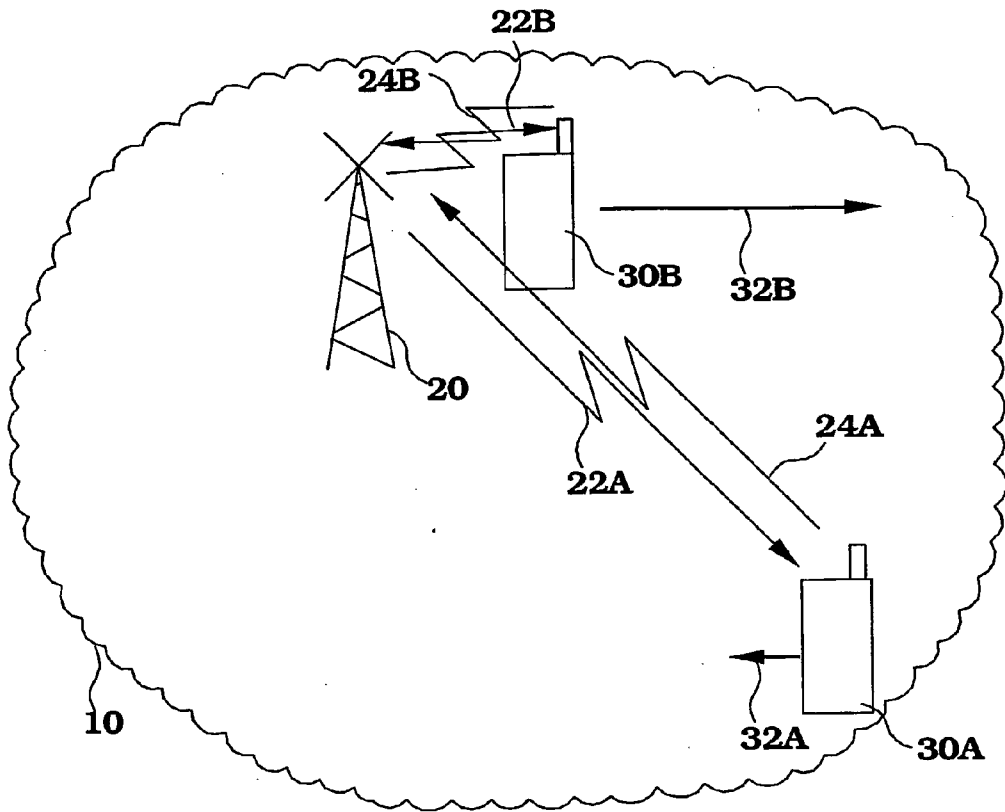


Fig. 1

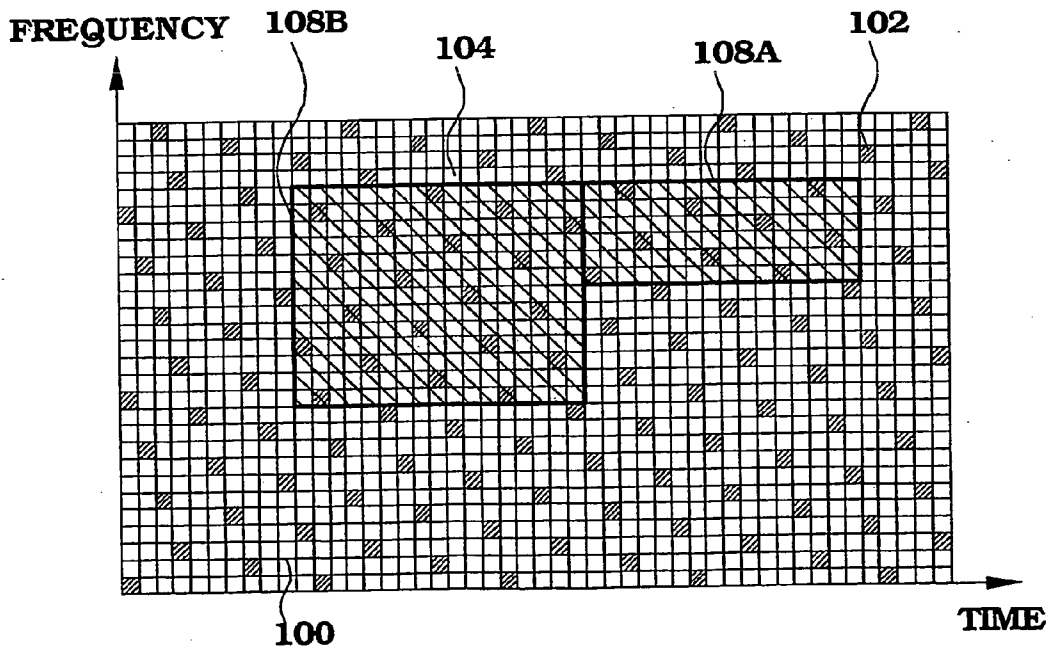


Fig. 2A

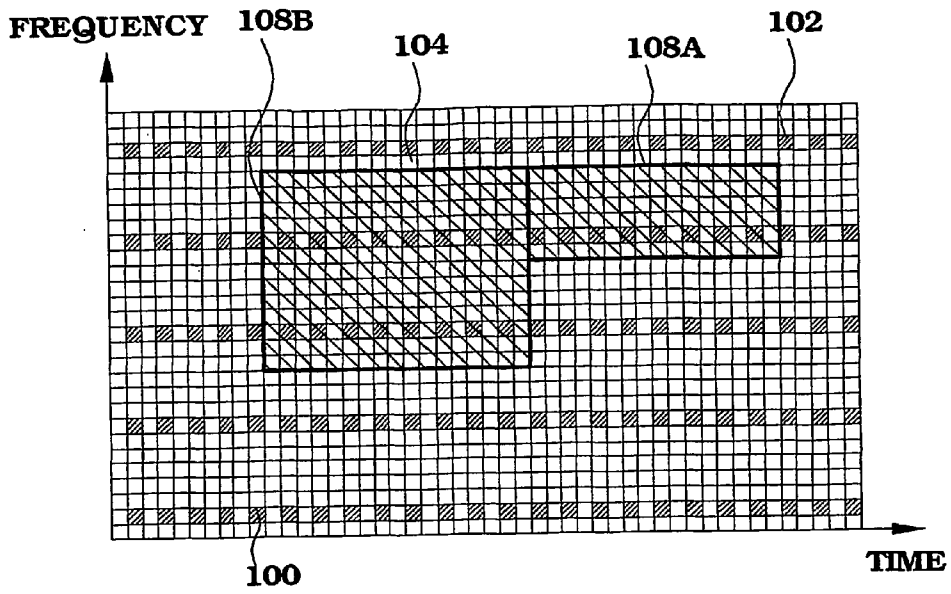


Fig. 2B

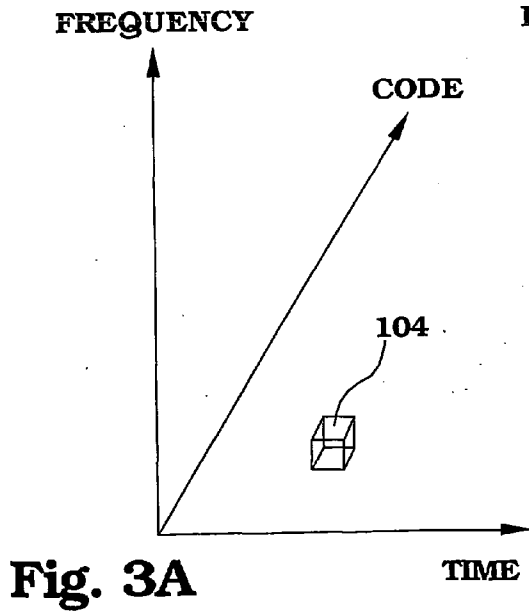


Fig. 3A

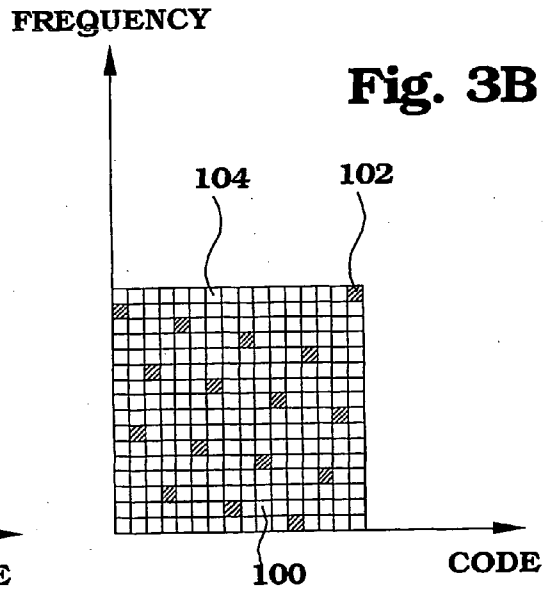
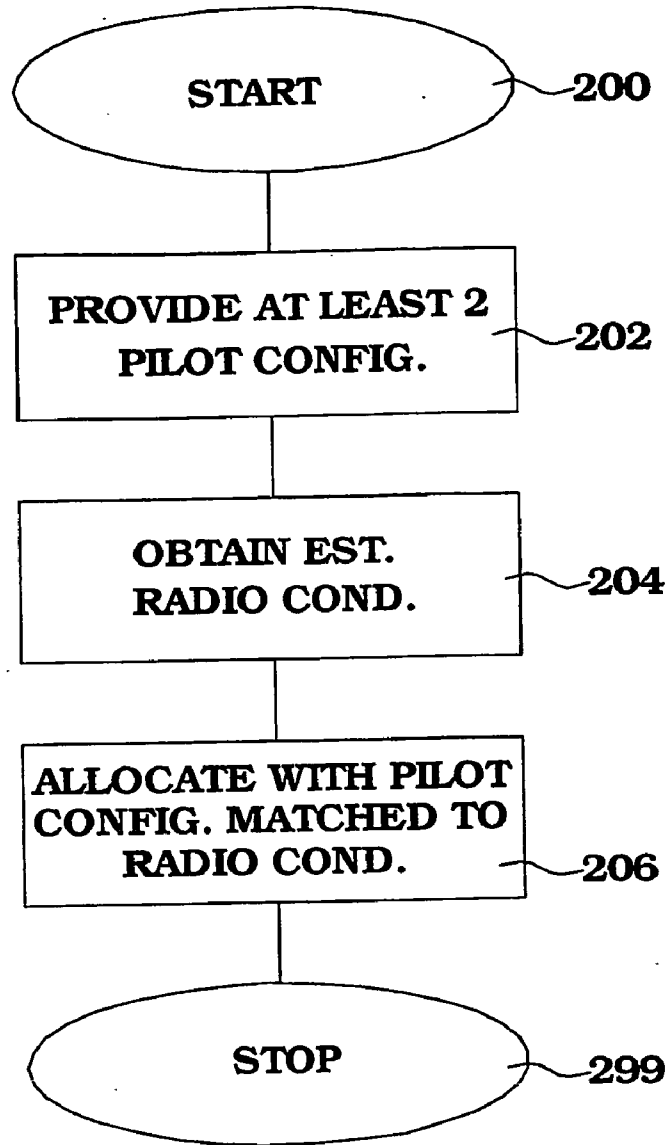


Fig. 3B



**Fig. 4**

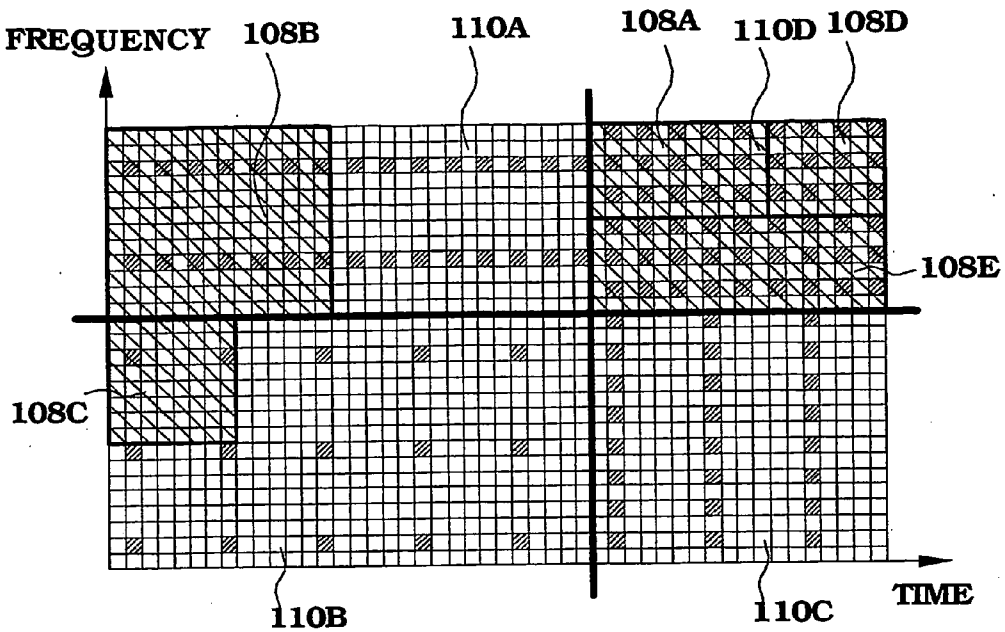


Fig. 5A

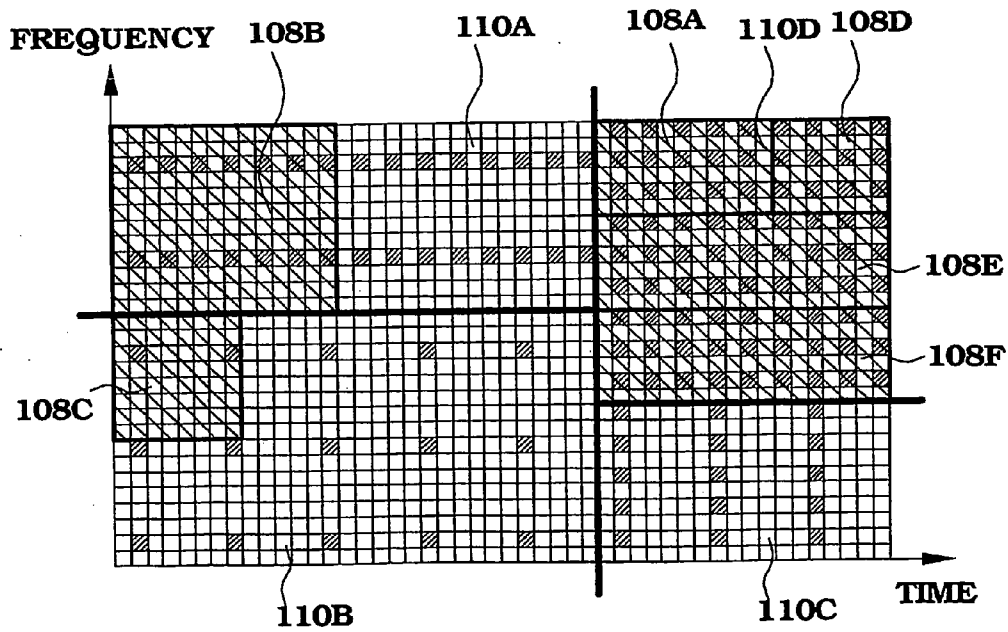


Fig. 5B

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