~~System and method for communication r~~Resource allocation

The present invention relates to the field of mobile and meshed communications networks, for example mobile ad hoc networks. Networks of this type comprise a plurality of radio transceivers interconnected via radio links. These radio transceivers are, for example, a computer terminal equipped with a Wi-Fi Link, a portable telephone or any other wireless communication device, but they may also be a mobile vehicle with an on-board wireless communication device. These radio transceivers are also known as nodes in the prior art.

The invention relates more precisely to resource allocation, a resource being defined as a time slot, and at least one associated channel, said channel being at least one transmit/receive frequency allowing one of more communications in the mobile network. An example of these resources is shown in Figure 1. The resource allocation is implemented in particular by using "Time Division Multiple Access" (TDMA) or Frequency Division Multiple Access (FDMA).

The mobile and meshed communications network comprises radio transceivers distributed in different groups, these groups also being referred to as clusters in the prior art. An example of a mobile radio network is shown in Figure 2. Each group has a group master transceiver, and one of the transceivers is defined as being the central transceiver of the network. The groups are defined by adhering to the following rules:

- Each radio transceiver is either a group master transceiver of the group (CH) or a subordinate transceiver of the group (CM).

- The subordinate transceivers are all within the radio range of the master transceiver (CH).

- Each radio transceiver belongs to one group only.

- The master transceivers (CH) are not radio neighbors.

- The central radio transceiver may be any one of the radio transceivers.

Two transceivers are neighboring if they are within radio range.

Two groups A and B are referred to as neighbors if at least one transceiver of one group is a neighbor to a transceiver of the other group.