chain, each node including a satellite antenna adapted to receive radio signals, the communication network being characterized by at least one configuration determining the operation of the communication network, the set of nodes including reception nodes and satellite nodes,

wherein the satellite nodes are configured to transmit satellite signals to a satellite, and wherein the reception nodes lack an antenna configured to emit signals to the satellite,

the method for managing comprising the following steps:

- reception by the controller from the satellite nodes of at least one reconfiguration need of the communication network,

- determination of a configuration of the communication network by the controller based on a synthesis of the reconfiguration needs expressed during a given time interval,

- generation of a reconfiguration message of the communication network ~~making it possible~~ to transmit the configuration determined in the determining step to each node,

- emission by the transceiver chain of the reconfiguration message to each node via ~~a~~ the satellite,

- reception by the satellite antenna of the reconfiguration message, and

- for each node, moving to the determined configuration by commanding the node so that the node conforms to the new configuration of the network by applying configuration setpoints contained in the configuration message to ~~the~~ a transceiver device of said node.

According to specific embodiments, the method comprises one or more of the following features, considered alone or according to any technically possible combinations:

- the reconfiguration message is sent to a modem adapted to perform transmissions by spread spectrum over a width greater than 1 MHz, in particular obtained by a direct sequence spread spectrum technique;

- the satellite antenna is an antenna not pointed on the satellite and adapted to receive a transmission by spread spectrum coming from a multitude of directions;

- the central station is fixed;

- the reconfiguration message includes a datum relative to an application time of the determined configuration;

- the moving step is only carried out if the application time is less than or equal to the local time;

- when a node does not receive the signals coming from the transceiver chain, the method includes a step for warning at least one other node of the fact that said node does not receive the signals coming from the transceiver chain and a step for resending the reconfiguration message from the warned node to said node not receiving the signals coming from the transceiver chain;

- the configuration includes at least one of the following commands:

- a change in the distribution into subgroups of the set of nodes, and
- a change of at least one communication channel allocated for a communication between the nodes of the communication network;

- at least one need depends on the quantity of data to be transmitted between at least two nodes, the distance between two nodes or the number of nodes communicating with one another;

- each receiving node lacks an antenna configured to emit signals to the satellite;

- each satellite node is equipped with an antenna configured to emit signals to the satellite;

- the determined configuration is a configuration of all network elements;

- the determined configuration applies to all nodes of the communication network;

- the determined configuration is independent of a status or the presence or not of a node of all nodes.

The present description also relates to a communication network comprising a set of mobile nodes and at least one central station, the central station including a controller and a transceiver chain, each node including a satellite antenna adapted to receive radio signals, the set of nodes including reception nodes and satellite nodes, each satellite node including a satellite antenna able to send and receive radio signals, the satellite nodes being configured to transmit satellite signals to a satellite, and the reception nodes lacking an antenna configured to emit signals to the satellite, the communication network being characterized by a configuration determining the operation of the communication network, the controller being able to obtain at least one reconfiguration need of the communication network of the satellite nodes, determine a configuration of the communication network based on a synthesis of the reconfiguration needs expressed during a given time interval, and generate a reconfiguration message of the communication network ~~making it possible~~ to pass the determined configuration to each node, the transceiver chain being able to transmit the reconfiguration message to each node via ~~a~~ the satellite, each satellite antenna able to receive the reconfiguration message, each node being able to switch to the determined configuration by commanding the node so that the node conforms to the new configuration of the network by applying configuration setpoints contained in the configuration message to ~~the~~ a transceiver device of said node.

Other features and advantages of the invention will appear upon reading the following description of embodiments of the invention, provided solely as an example and done in reference to the drawings, which are:

- figure 1, a schematic illustration of a communication system comprising a plurality of nodes, and
- figure 2, a detailed schematic illustration of the communication system of figure 1.

A communication system 11 is illustrated schematically in figure 1.

CLAIMS

1.- A method for managing a communication network, the communication network comprising a set of mobile nodes and at least one central station, the central station including a controller and a transceiver chain, each node including a satellite antenna adapted to of receive radio signals, the communication network being characterized by at least one configuration determining the operation of the communication network, the set of nodes including reception nodes and satellite nodes,

wherein the satellite nodes are configured to transmit satellite signals to a satellite, and wherein the reception nodes lack an antenna configured to emit signals to the satellite,

the method for managing comprising the following steps:

- reception by the controller from the satellite nodes of at least one reconfiguration need of the communication network,

- determination of a configuration of the communication network by the controller based on a synthesis of the reconfiguration needs expressed during a given time interval,

- generation of a reconfiguration message of the communication network ~~making it possible~~ to transmit the configuration determined in the determining step to each node,

- emission by the transceiver chain of the reconfiguration message to each node via ~~a~~ the satellite,

- reception by the satellite antenna of the reconfiguration message, and

- for each node, moving to the determined configuration by commanding the node so that the node conforms to the new configuration of the network by applying configuration setpoints contained in the configuration message to ~~the~~ a transceiver device of said node.

2.- The method according to claim 1, wherein the reconfiguration message is sent to a modem adapted to perform transmissions by spread spectrum over a width greater than 1 MHz, in particular obtained by a direct sequence spread spectrum technique.

3.- The method according to claim 1 or 2, wherein the satellite antenna is an antenna not pointed on the satellite and adapted to receive a transmission by spread spectrum, the transmission being received from a multitude of directions.

4.- The method according to any one of claims 1 to 3, wherein the central station is fixed.

5.- The method according to any one of claims 1 to 4, wherein the reconfiguration message includes a data relative to an application time of the determined configuration.

6.- The method according to claim 5, wherein the moving step is only carried out if the application time is less than or equal to the local time.

7.- The method according to any one of claims 1 to 6, wherein, when a node does not receive the signals coming from the transceiver chain, the method includes a step for warning at least one other node of the fact that said node does not receive the signals coming from the transceiver chain and a step for resending the reconfiguration message from the warned node to said node not receiving the signals coming from the transceiver chain.

8.- The method according to any one of claims 1 to 7, wherein the configuration includes at least one of the following commands:

- a change in the distribution into subgroups of the set of nodes, and
- a change of at least one communication channel allocated for a communication between the nodes of the communication network.

9.- The method according to any one of claims 1 to 8, wherein at least one need depends on the quantity of data to be transmitted between at least two nodes, the distance between two nodes or the number of nodes communicating with one another.

10.- A communication network comprising a set of mobile nodes and at least one central station, the central station including a controller and a transceiver chain, each node including a satellite antenna adapted to receive radio signals, the set of nodes including reception nodes and satellite nodes, each satellite node including a satellite antenna able to send and receive radio signals, the satellite nodes being configured to transmit satellite signals to a satellite, and the reception nodes lacking an antenna configured to emit signals to the satellite, the communication network being characterized by a configuration determining the operation of the communication network, the controller being able to obtain at least one reconfiguration need of the communication network of the satellite nodes, determine a configuration of the communication network based on a

synthesis of the reconfiguration needs expressed during a given time interval, and generate a reconfiguration message of the communication network ~~making it possible~~ to pass the determined configuration to each node, the transceiver chain being able to emit the reconfiguration message to each node via ~~a~~ the satellite, each satellite antenna able to receive the reconfiguration message, each node being able to switch to the determined configuration by commanding the node so that the node conforms to the new configuration of the network by applying configuration setpoints contained in the configuration message to ~~the~~ a transceiver device of said node.