CLAIMS

1. A method for synchronizing in a frequency-hopping ad-hoc telecommunications network comprising a plurality of pieces of equipment configured to exchange data organized into a time frame comprising time intervals called slots, each slot comprising at least one dwell of set duration transmitted in a frequency channel selected from among a plurality of frequency channels and a guard time of a duration at least equal to a propagation time of a signal over a distance corresponding to a maximum range of the telecommunications network, each slot being reserved for emissions of one particular piece of equipment among the pieces of equipment of the network, the method being wherein it comprises:

- a first step of periodically allocating at least one slot of the time frame per piece of equipment of the network for the transmission of a beacon,
- a second step wherein said beacon is emitted by the pieces of equipment of the network in the slots that are allocated thereto in the first step,
- a third step, carried out by each first piece of equipment of the network entering into radio contact with a second piece of equipment of the network, of receiving a beacon emitted by the second piece of equipment and of estimating a time difference Δt from a start time of the slot and from an actual reception time of said beacon, and
- a fourth step wherein the first piece of equipment of the network uses said time difference Δt to program the reception of data slots sent by said second piece of equipment of the network, by receiving the dwells of the data slot in each of the frequency channels associated with said dwells successively during durations equal to the duration of one dwell starting from a time determined by a start time of the slot and the time difference Δt.

2. The synchronizing method according to Claim 1, furthermore comprising a fifth step of updating the time difference Δt on the basis of emissions made by said second piece of equipment of the network.

3. The synchronizing method according to Claim 2, wherein the fifth step of updating the time difference Δt is carried out on each reception of a beacon emitted by the second piece of equipment.

4. The synchronizing method according to Claim 2, wherein the fifth step of updating the time difference Δt is carried out on each reception of a signal emitted by the second piece of equipment in a data slot, the update of the time difference Δt comprising estimating a time difference between a dwell start time and an actual reception time of the dwell for the dwells of said data slot, the time difference Δt being updated on the basis of the smallest time difference estimated in the dwells of the data slot.

5. The synchronizing method according to Claim 2, wherein the fifth step of updating the time difference Δt is carried out on each reception of a signal emitted by the second piece of equipment in a data slot, the update of the time difference Δt comprising estimating a time difference between a dwell start time and an actual reception time for the dwells of said data slot, the time difference Δt being updated on the basis of the average of the time differences estimated in the dwells of the data slot.

6. The synchronizing method according to Claim 1, wherein the slots allocated for the transmission of the beacon comprise a single dwell.

7. The synchronizing method according to Claim 1, wherein the transmitted dwells comprise an initial guard time, a final guard time, and at least one data

sequence known to all of the pieces of equipment of the network and used for the detection of the dwells.

8. The synchronizing method according to Claim 1, wherein the slot allocations for the transmission of beacons are performed statically, and the slot allocations for the transmission of signals other than beacons are performed dynamically.

9. A method for receiving data, said method being implemented by a first piece of equipment in a frequency-hopping ad-hoc telecommunications network comprising a plurality of pieces of equipment configured to exchange data organized into a time frame comprising time intervals called slots, each slot comprising at least one dwell of set duration transmitted in a frequency channel selected from among a plurality of frequency channels and a guard time of a duration at least equal to a propagation time of a signal over a distance corresponding to a maximum range of the telecommunications network, each slot being reserved for emissions of a particular piece of equipment among the pieces of equipment of the network, the method being wherein it comprises:

- a step of searching for a beacon emitted in a dedicated slot of the time frame for each second piece of equipment with which the first piece of equipment was not previously in radio contact, and when the beacon is received:
    - a step of estimating a time difference Δt relevant to said second piece of equipment from a start time of the slot and from an actual reception time of the beacon, and
    - a step of using the time difference Δt to program the reception of data slots sent by said second piece of equipment of the network by receiving the dwells of the data slot in each of the frequency channels associated with said dwells successively during durations equal to the duration of one dwell starting from a time determined by a start time of the slot and the time difference Δt.

10. The method for receiving data according to Claim 9, furthermore comprising a step of updating the time difference Δt on the basis of emissions made by said second piece of equipment of the network.

11. A piece of equipment in a frequency-hopping ad-hoc telecommunications network, wherein it is configured to implement a method for receiving data according to Claim 9.