

4 – Method according to one of Claims 1 to 2, characterized in that spectrum sharing rules are used between two or more systems as a function of the date and time.

5 5 – Method according to one of the preceding claims, characterized in that the networks are radio networks.

6 – Method according to one of the preceding claims, characterized in that the systems use a 15 KHz, OFDMA frequency modulation, as applied by the LTE
10 technology.

7 – Method according to one of Claims 1 to 6, characterized in that it implements a spectrum allocation algorithm implemented by the server comprising the following steps:

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Radio transmission system affiliation request

Decoding:

- Of the area or areas of coverage provided, Z_k ,
- Of the frequency range in which the network operates, B_k ,
- 20 • Of the capacity of the network to change frequency in the range,
- Of the capacity of the network to work with a variable bandwidth.

Identification of the spectrum sharing networks as a function:

- Of the geographic area Z_i ,
- Of the frequency range B_i ,

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For each geographic area Z_i affected by the new network:

- Positioning frequency-constrained systems
- Determining, in the common frequency range, the best frequency of the new network, the one providing the greatest bandwidth, by taking into account its spectral capabilities,
- 30 • Determining the pairs of systems spectrally adjacent to the new network,

For each system adjacent to the constrained system:

- Computing a necessary guard band taking into account the characteristics of the two types of systems,
- If both have fixed bandwidths, checking that this band is available,
5 otherwise returning an alarm,
- If one has a variable band and the other has a fixed band, computing a maximum bandwidth of the system with variable bandwidth taking into account the necessary guard band and taking into account the possibility of fixing or not fixing the width of the sub-carriers,
- 10 • If both have a variable band, computing the maximum bandwidths applicable to each of the systems,

For each system with variable width:

- Taking into account adjacencies, computing authorized channelization widths,
- 15 • Indicating to the system a frequency, the channelization widths, IP access point, for example, of the system or systems with which the spectrum will be shared and the protocol applicable for semi-static management of inter-system spectrum.

20 8 – Method according to Claim 7, characterized in that, for the initialization step, the server will indicate to each system the other systems with which it will interact, then the step is executed as follows:

- establishment of an IP link with spectrum management sub-system of each of the systems present in the adjacent bands,
- 25 • starting up of the system with previously computed parameters: sub-carriers frequency, bandwidth of the system and the channelization widths,
- starting up of the spectrum sharing protocol with the other system with which the link is established.

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9 – System for implementing the method according to one of Claims 1 to 8 comprising a server (13) linked to a first network (10) operated by a first