CLAIMS

1. A ~~wireless device~~wireless device, comprising:

a wireless interface, the wireless interface configured to communicate with a wireless network;

a processor; and

a computer apparatus suitable for reading storage media having a storage medium with at least one computer program stored thereon, the at least one computer program configured to,

when executed by the processor, cause the wireless system to:

partition one or more frequency resources into one or more frequency partitions, where the number of the frequency partitions is dynamically configured based on a parameter of the wireless network, and each frequency partition contains one or more control channel regions, and each control channel region comprises a logical mapping of resource blocks and a scalable size dependent on a frequency range of the frequency resource;

identify one or more control channel

regions for transmitting control channel information from the one or more frequency partitions; and

determine control channel information from the identified one or more control channel regions based on the logical mapping of resource blocks.

2. The wireless device system of Claim 1, wherein the logical mapping of resource blocks is permuted over a number of physical resource blocks.

3. The wireless device system of Claim 1, wherein the determination of the one or more frequency partitions is performed dynamically.

4. The wireless device of Claim 1, wherein the extracted control channel information comprises one or more reference signals specific to the wireless device.

extracting control channel information from the identified one or more control channel regions based on the logical mapping of resource blocks.

10. The method of Claim 9, wherein the logical mapping of resource blocks is permuted over a number of physical resource blocks.

11. The method of Claim 9, wherein the logical mapping of resource blocks changes over a number of transmissions.

12. The method of Claim 9, wherein the logical mapping of resource blocks is fixed.

13. A method of transmitting control information, comprising:

partitioning one or more frequency resources into a number of frequency partitions, where each frequency partition contains one or more control channel regions, and each control channel region comprises a logical mapping of resource blocks;

associating one or more wireless devices to one or more control channel regions;

assigning the one or more control channel regions to one or more remote radio heads; and

transmitting control information for the associated one or more wireless devices.

14. The method of Claim 13, wherein the logical mapping of resource blocks is dynamically determined.

15. The method of Claim 13, wherein:

the one or more remote radio heads are geographically distinct; and

the associating of one or more wireless devices to the one or more control channel regions is based at least in part on a location of the one or more wireless devices.

16. The method of Claim 13, wherein the one or more remote radio heads share a common identifier.