CLAIMS

1. A direction-finding antenna system, comprising:

a plurality of tapered dipole antenna elements arranged in circular array around a central axis;

wherein each of the plurality of tapered dipole antenna elements comprises a pair of rectangular elongated antenna elements mounted radially from said central axis and configured to be curved such that a distance between said pair of rectangular elongated antenna elements is larger at periphery of the direction-finding antenna system with respect to a center thereof.

2. The direction-finding antenna system of claim 1, wherein said pair of rectangular elongated antenna elements comprise at least one metal stripe sandwiched between two flexible dielectric stripes.

3. The direction-finding antenna system of claim 1, wherein each of said pair of rectangular elongated antenna elements is configured with ratio between length dimension and width dimension thereof being greater than 10 (L/W>10).

4. The direction-finding antenna system of claim 1, wherein each of said pair rectangular elongated antenna elements comprises one or more chokes along length thereof.

5. The direction-finding antenna system of claim 4, wherein said one or more chokes are located at peripheral end of the pair of rectangular elongated antenna elements.

6. The direction-finding antenna system of claim 4, wherein said one or more chokes comprise at least outward choke and inward choke of different lengths.

7. The direction-finding antenna system of claim 1, wherein the pair of rectangular elongated antenna elements are curved such that a phase center of the plurality of tapered dipole antenna elements is distal for signals of lower frequency and central for signals of higher frequency.

8. The direction-finding antenna system of claim 7, wherein curvature of the pair rectangular elongated antenna elements is selected to provide a ratio between wavelength of collected signal and radial distance of corresponding phase center of signal detection being within predefined range for a selected bandwidth.

9. The direction-finding antenna system of claim 1, wherein said plurality of tapered dipole antenna elements comprises dipole antenna elements of two groups configured for collection of signals of two orthogonal polarizations respectively.

10. The direction-finding antenna system of claim 8, wherein arrangement of the tapered dipole antenna elements defines a general plane for determining signal direction, dipole antenna elements of said two groups comprise dipole antenna mounted for collection of signals of polarities at +45degrees and -45degrees with respect to said general plane.

11. The direction-finding antenna system of claim 1, wherein said plurality of tapered dipole antenna elements comprise dipole antenna elements mounted for collection of signals having vertical polarization with respect to general plane defined by the circular arrangement thereof.

12. The direction-finding antenna system of claim 11, further comprising a second circular array of antenna elements configured for collection of signal having horizontal polarization.

13. The direction-finding antenna system of claim 1, configured for operation in RF frequencies between 20 MHz and 1000MHz.

14. The direction-finding antenna system of claim 1, configured for operation in RF frequencies between 80 MHz and 600MHz.

15. The direction-finding antenna system of claim 1, configured for operation in RF frequencies between 80 MHz and 250MHz.

16. The direction-finding antenna system of claim 1, configured for operation in RF frequencies between 80 MHz and 150MHz.

17. The direction-finding antenna system of claim 1, configured for operation in RF frequencies between 180 MHz and 250MHz.

18. The direction-finding antenna system of claim 1, configured for operation in RF frequencies between 400 MHz and 600MHz.

19. The direction-finding antenna system of claim 1, wherein said direction-finding antenna system being configured in mobile mode suitable for low form factor and high mobility and in operation mode configured to be deployed at a selected location for operating in determining direction of origin of collected signals.