CLAIMS

1. A communications array comprising:

(a) a support structure configured to support array elements, wherein the support structure includes:

(i) a first dielectric substrate disposed over a second dielectric substrate; and

(ii) a first electrically conductive material disposed over the first dielectric substrate; and

(b) a plurality of array elements supported by the support structure,

(i) wherein each array element of the plurality of array elements includes a radiator; and

(ii) wherein each radiator includes a square-shaped opening milled through the first electrically conductive material and into the first dielectric substrate.

2. The communications array of claim 1, wherein the support structure is fabricated from a printed circuit board (PCB) or similar dielectric material.

3. The communications array of claim 1, wherein each array element of the plurality of array elements includes a beamformer.

4. The communications array of claim 3, wherein the beamformer includes multiple receptors and accordant output signal traces.

5. The communications array of claim 1, wherein the plurality of array elements includes an 8 X 8 array having 64 array elements.

6. The communications array of claim 1, further comprising a copper vertical launch (CVL).

7. The communications array of claim 6, wherein the CVL includes a copper wire staked into a hole formed in the support structure.

8. The communications array of claim 1, further comprising an electromagnetic boundary.

9. The communications array of claim 8,

wherein the electromagnetic boundary includes a trench passing through the support structure; and

wherein the trench is filled with a second electrically conductive material.

10. The communications array of claim 9, wherein the second electrically conductive material includes a conductive ink.