



ARCHITECTURE FOR ARRAY ANTENNA (OAM)

New architecture of transmitters and receivers for high-speed network antennas at reduced cost

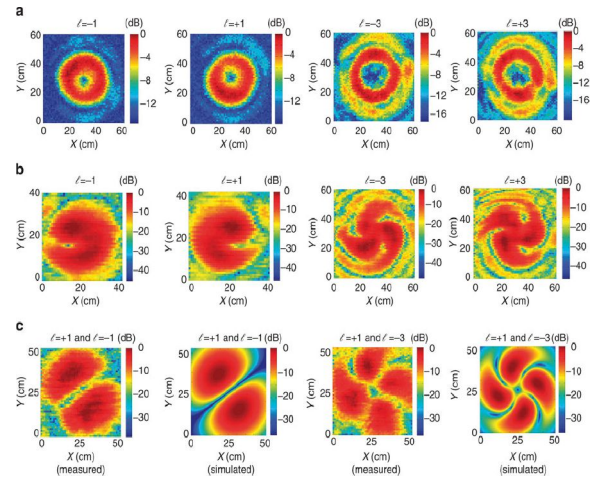
Technological benefits

Innovative technology

- High flexibility of OAM beamforming using the same antenna
- Configurable architecture for a given application
- Signal encoded in a physical way on the mode order allowing direct encoding between a transmitter and a broadband receiver

A simple and efficient system

- Existing technology, simple and reliable
- Standard modulators & demodulators
- Fast switching
- High Speed

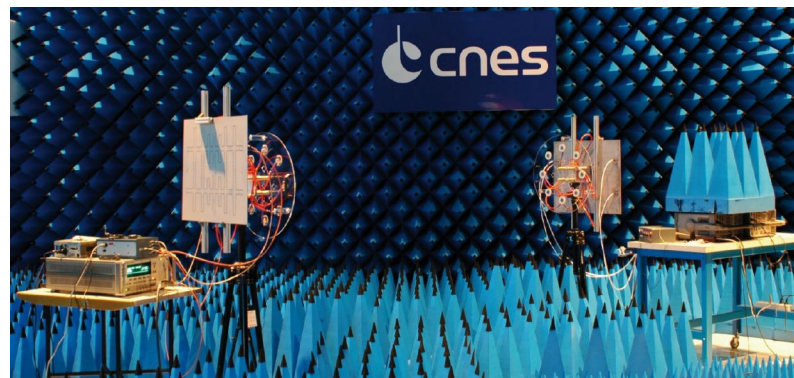


Invention overview

The invention deals with a new OAM network antenna architecture for which beamforming is done through the use of PSK modulators / demodulators (or other kind) placed upstream of each radiating element (or group of radiating elements).

The control of the amplitude and the phase of the output of each modulator is used for forming the signal sent to the radiating elements of the array antenna.

It allows to generate a beam with special features while being able to modify them instantly.



Potential applications

Array antennas for transmission and reception links between satellites in low orbit and the Earth

Radar applications

Military communications (encrypted) in broadband

Broadband telecommunications application

Commercial benefits

A significant cost reduction

Use of commercially available components (antenna, modulator, etc.).

Improved performance

high-speed transmission,
Better performance than the state of the art.

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Patented invention, available under license