

Phased Array Antennas For Mobile Communications

Mobile communications demands present new challenges for transmission. Traditionally, antennas used at base stations to communicate with mobile units within an area are omni-directional. In order to allow a higher density of participants within the area, a “pencil” beam is used. The beam tracks and follows the movement of the mobile unit. This results in an additional advantage: the fading effect due to multipath reflections can be reduced by adjusting the beam direction. The phase shifting used to direct the antenna beam is done at base band, not at RF. This allows for the use of DSPs and provides for a less expensive and less complex solution.

Applications

Applications for phased array antennas include cellular and mobile communications systems.

Advantages

The phased array antennas and pencil beam offer both quality and cost benefits over current technology.

Development Stage

Research and development in the area of phased array antennas are at an early stage.

Business Opportunity

Industry collaborators are sought to develop a functional prototype.

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