

Abstract

Smart Antennas constitute a promising technology in wireless communication systems as they mitigate multiple access interference through spatial filtering. One basic building block of smart antennas is the antenna array itself. This latter generates a wide range of aspects that can be the subject of deep investigations namely their geometry, physical parameters, feeding techniques etc... Hence, it is important to investigate whether certain array geometry will enable optimal performance. In this work, the effect of the array geometry choice on the interference rejection capability is investigated. Linear and circular array geometries are considered with mutual coupling between real antenna elements taken into account. Assessment of both geometries is done through a figure of merit that takes into account the rejection capability and radiation characteristics of the array