

A new concept of combining RF MEMS switches with fractal antennas is presented. The idea is to connect several antenna configurations together using RF MEMS switches to cover several frequency bands. By using a 'smart combination' of fractal shaped antennas, wideband coverage can be achieved for satellite and wireless communications. Moreover, the same antennas can be used for phased array applications as well. The analysis and design principles are discussed and presented. Several examples are shown to demonstrate the proposed concept.