

Susunan rolled - dipole untuk ground penetrating radar (GPR) dengan multiple footprint

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Abstrak

Antenna footprint indicates the shape and size of the area illuminated by the antenna on the ground surface or subsurface. For GPR it is important as it determines the cross-range resolution of the radar. In this paper we demonstrate that an array antenna comprising a number of rolled-dipole elements can produce a variable footprint by activating certain elements and deactivating the others. In this way the size of the array's footprint can be adjusted to remain comparable with the cross section of various targets which in turn minimizes clutter and improving the GPR performance . This paper presents FDTD simulation results and preliminary experimental result of the proposed antenna.