

Microstrip Antenna Synthesis using an Application Programming Interface

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Abstract : For the synthesis or the modeling of passive microwave structures like antennas, filters, adapters...etc, the simulation plays a very important role. It allows us to get precise estimation of the structure response without having to realize it. In order to synthesis a micro-strip antenna, we create an Application Programming Interface (API) between two softwares. The first one is MATLAB and the second is Ansys HFSS. The error rate between obtained and desired results is used to estimate the optimal dimensions of the structure using Practical Swarm Optimization technique. This method proofs to be effective in synthesizing a micro-strip antenna even for complicated geometry.

Keywords : Application Programming Interface, Microstrip antenna, Optimization Algorithm