



SWAN 2010 – MAIN NEW FEATURES

Subarrays can now be divided in arbitrary number of sections, and single sections can be enabled or disabled in order to create arbitrarily placed holes in the radiating aperture.

Complete arbitrary geometry definition is now possible. Each section can have arbitrary number of slots and feeding point can be placed anywhere inside the section.

An automatic elliptic shaping tool is now present to easily shape the aperture and define the array geometry.

Synthesis algorithm has been substantially improved and convergence is now guaranteed at any time.

Waveguide Beam Forming Network made of inclined slots is automatically synthesized. A number of parameters can be modified, such as the number of sections of the BFN, the input impedance, etc.

Layout of the whole antenna, including the waveguide BFN, is automatically generated. The layout is *ready-to-be-fabricated*, and needs no further post processing.

Arbitrary shaped beams can now be synthesized either providing with and external file the complex excitations or by providing the radiation pattern masks. A powerful optimization tool based on the intersection method will automatically evaluate the optimum complex excitation to fulfill the requirements on the radiation pattern.

In the *Synthesis* module a *Preview* button is now present, that allows immediate estimation of the antenna performance.

Improved result exporting capabilities (e.g. 3D far field pattern).

Synthesis process can be forced to produce an antenna layout with E-plane and/or H-plane symmetry.