The structure's geometry can be easily drawn in AN-SOF using the mouse, menus, and user-friendly dialog windows. Wires are drawn in a 3D space, where tools are available to zoom, move, and rotate the structure.

To plot the results from a simulation, a suite of integrated applications allows us to display graphs: **AN-XY Chart**, **AN-Smith**, **AN-Polar**, and **AN-3D Pattern.** These tools can also be executed independently for subsequent graphic processing.

With AN-SOF and its software suite for displaying graphics, we have all the necessary tools to guide us through the stages of an antenna design process.

Learn more

Introduction to AN-SOF: Antenna Simulation Essentials

AN-SOF performs computations of **electric currents** flowing on metallic structures, including antennas in transmitting and receiving modes, as well as **scatterers.** A scatterer refers to any object capable of reflecting and/or diffracting radiofrequency waves. For instance, wave scattering analysis can be conducted on the surface of an aircraft to determine optimal antenna placement, on a parabolic reflector to examine gain in relation to the reflector shape, or on a car's chassis to predict interference effects.

The **Method of Moments (MoM)** stands as one of the most widely validated techniques for antenna simulation. AN-SOF incorporates an enhanced and advanced version of this method called the **Conformal Method of Moments (CMoM) with Exact Kernel**, which addresses various challenges associated with traditional MoM approaches and achieves **unparalleled accuracy**.

Interested in learning more about the CMoM implementation in AN-SOF? **Read this article >.**

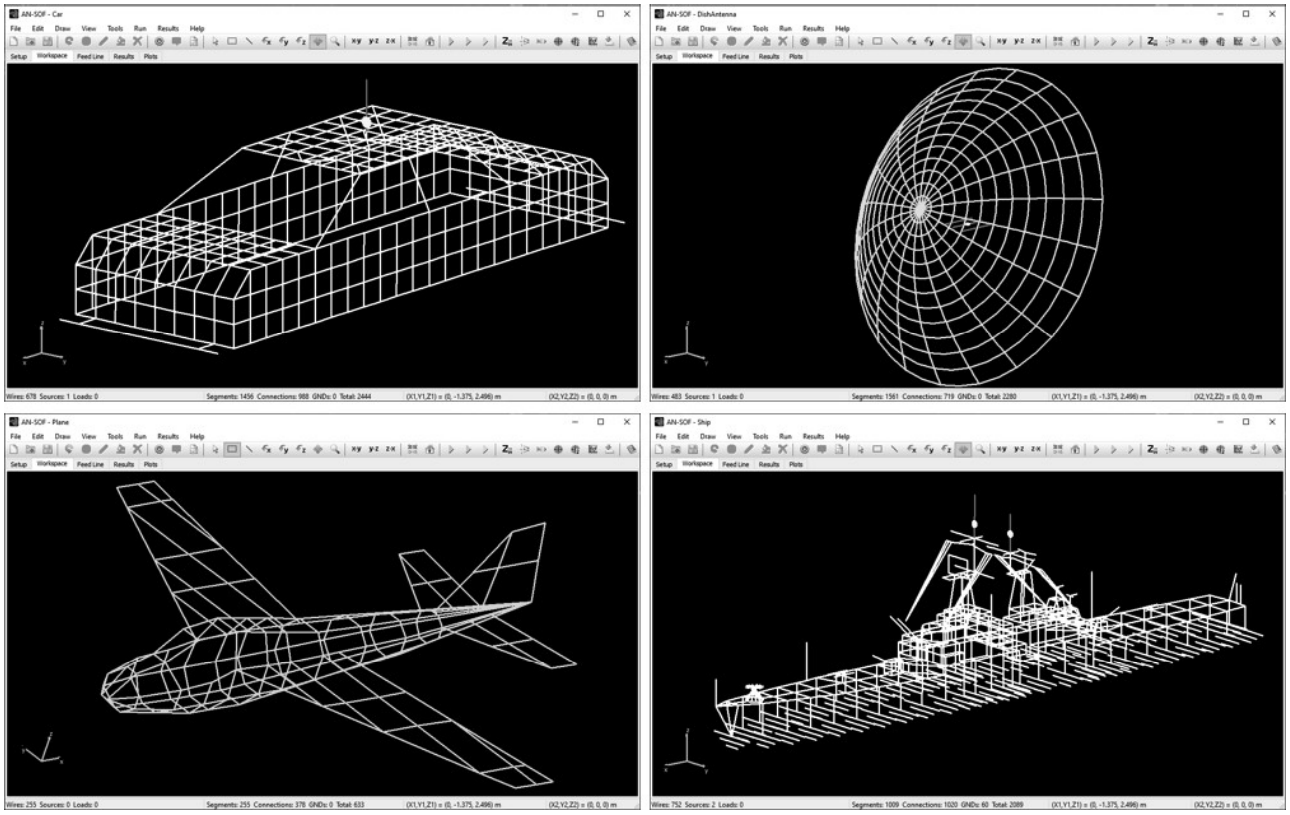

Fig. 1: Computer models of a car, a parabolic reflector, an airplane, and a ship using wire grids.

According to the MoM, any metallic structure can be represented using **conductive wires**, as illustrated in Fig. 1. These wires are subdivided into **small segments**, which assume the shape of cylindrical tubes. To obtain accurate results, the length of each wire segment should be comparatively **short** compared to the **wavelength**, as depicted in Fig. 2. However, this concern can be alleviated during the initial simulation since AN-SOF automatically handles the segmentation of wires.