Airbus A320 in 3D with OpenVSP-Connect, X3D and PDF

OpenVSP

NASA's Open Vehicle Sketch Pad (OpenVSP) is a parametric aircraft geometry tool. OpenVSP (https://openvsp.org) allows the user to create a 3D model of an aircraft defined by common engineering parameters. This model can be processed into many formats suitable for engineering analysis. Among other options, OpenVSP supports export of its parametric 3D aircraft data to the X3D standard. X3D files (*.x3d) can be displayed on the Internet embedded in HTML. The HTML-internal viewer X3DOM produces good results and should be selected. This allows us to share 3D aircraft design results, without any software requirements for the recipient, besides having an Internet connection and a browser. Another easy way to distribute 3D aircraft is embedding them in PDF files. OpenVSP files (*.vsp) can be viewed by OpenVSP. X3D files (*.x3d) can be viewed by many viewers like FreeWRL or view3dscene.

OpenVSP-Connect

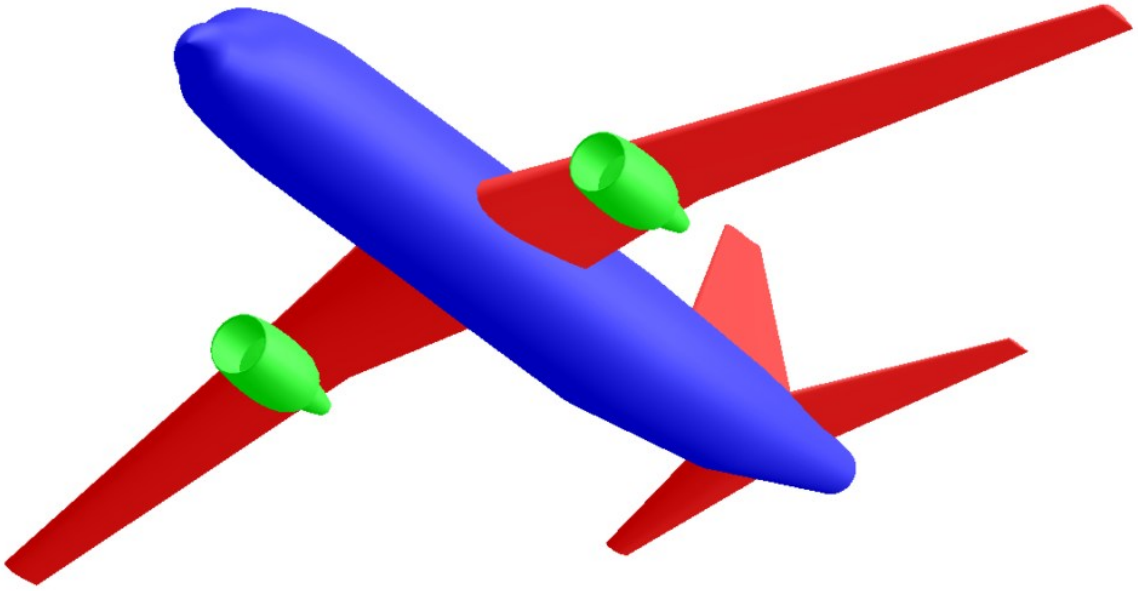
Aircraft preliminary sizing tools need a 3D visualization to show results. OpenVSP has such 3D visualization capabilities, it is easy to us e, but unfortunately lacks an interface to input consistently calculated aircraft parameters. Such an interface has been programmed with Excel and is called OpenVSP-Connect (https://purl.org/OpenVSP). Aircraft are sketched from about 50 parameters. These are automatically converted to more than 3500 parameters to make up an input file with parametric aircraft data in OpenVSP Version 2 format (*.vsp). Just two input parameters are sufficient to get started in OpenVSP-Connect's "automatic mode": cruise Mach number and number of passengers.

OpenVSP-Connect Hangar

OpenVSP-Connect Hangar (https://purl.org/OpenVSP/Hangar) is a collection of aircraft designed with OpenVSP-Connect.

Airbus A320

The Airbus A320 has been modeled as a 3D aircraft merely from a few parameters found at Wikipedia with OpenVSP-Connect. See the 3D A320 on https://purl.org/OpenVSP/A320. Find a set of files with 3D content (and 2D preview) of the A320 in this dataset: https://doi.org/10.48441/41201.3359.



A320 2D preview.