Basic 3D Antenna Library usage in ADS.

‘Johanson\_3D AntennaLibrary\_and\_ADSexample’ contains the following files / directories.

* ‘Johanson\_ADS\_3DAnt\_Lib\_v1.zip’ is an archive of an Open Access encrypted EMPro Library containing 3D models of Johanson’s antenna catalog. It is unarchived in this directory as a library folder, ‘Johanson\_ADS\_3DAnt\_Lib\_v1’. You may unarchive this library in any convenient location in your file system. In the next steps, we will point ADS to this file location.
* ‘\_3Dant\_test\_v2\_wrk’ is an example ADS workspace.
  + Cell ‘0900AD47A2450-EB1SMA’ is the Eval Evaluation Board for this dual band 900M, 2.4G antenna. The rfpro cellview mounts the 3D antenna on the PCB and FEM simulates the assembly.
  + Cell ‘Ant\_Test’ is a simple S-parameter test bench simulating the EM results from the rfpro simulation.

To access the 3D Antenna Library in ADS, from the ADS Main Window🡪File🡪Manage Libraries🡪Add Library

A screenshot of a computer

Description automatically generated

Navigate to where your ‘Johanson\_ADS\_3DAnt\_Lib\_v1’ directory is located, you will see Library added to Workspace:

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

From the ADS Main Window, open the ‘0900AD47A2450-EB1SMA’ rfpro cellview. Or, from Layout🡪Tools🡪RFPro🡪Open

A screenshot of a computer

Description automatically generated

To use 3D Components in RFPro. File🡪Insert🡪EMPro 3D Component…

A screenshot of a computer

Description automatically generated

(0,0,0) of the Component will align with (0,0,0) of the Parent Design. Right Click the Component, either in the Design Tree or the Geometry Window🡪Specify Orientation:

A screenshot of a computer

Description automatically generated

Basic Move and Rotation commands are available.

A screenshot of a computer

Description automatically generated

‘Advanced Mode’ is quite useful for specifying exact x,y,z placement location:

A screenshot of a computer

Description automatically generated

3D Components will only simulation using FEM Generation 2. In Simulator Options, choose FEM🡪Generation2.

A screenshot of a computer

Description automatically generated

Simulate Away!