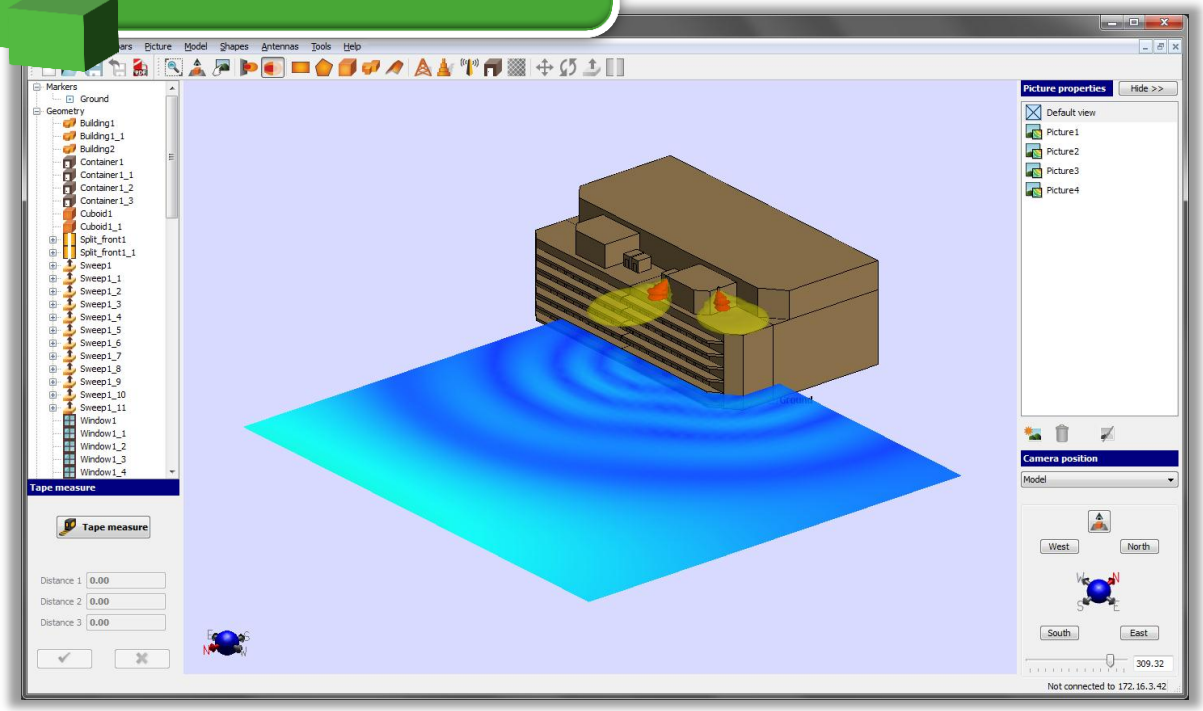
IXUS | EMF COMPLIANCE MANAGEMENT SOFTWARE

Getting Started

A short guide that explains how to create a base station, calculate EMF non-compliance zones and exporting pictures to use in documentation using IXUS.

How IXUS Modeller works

Modeller



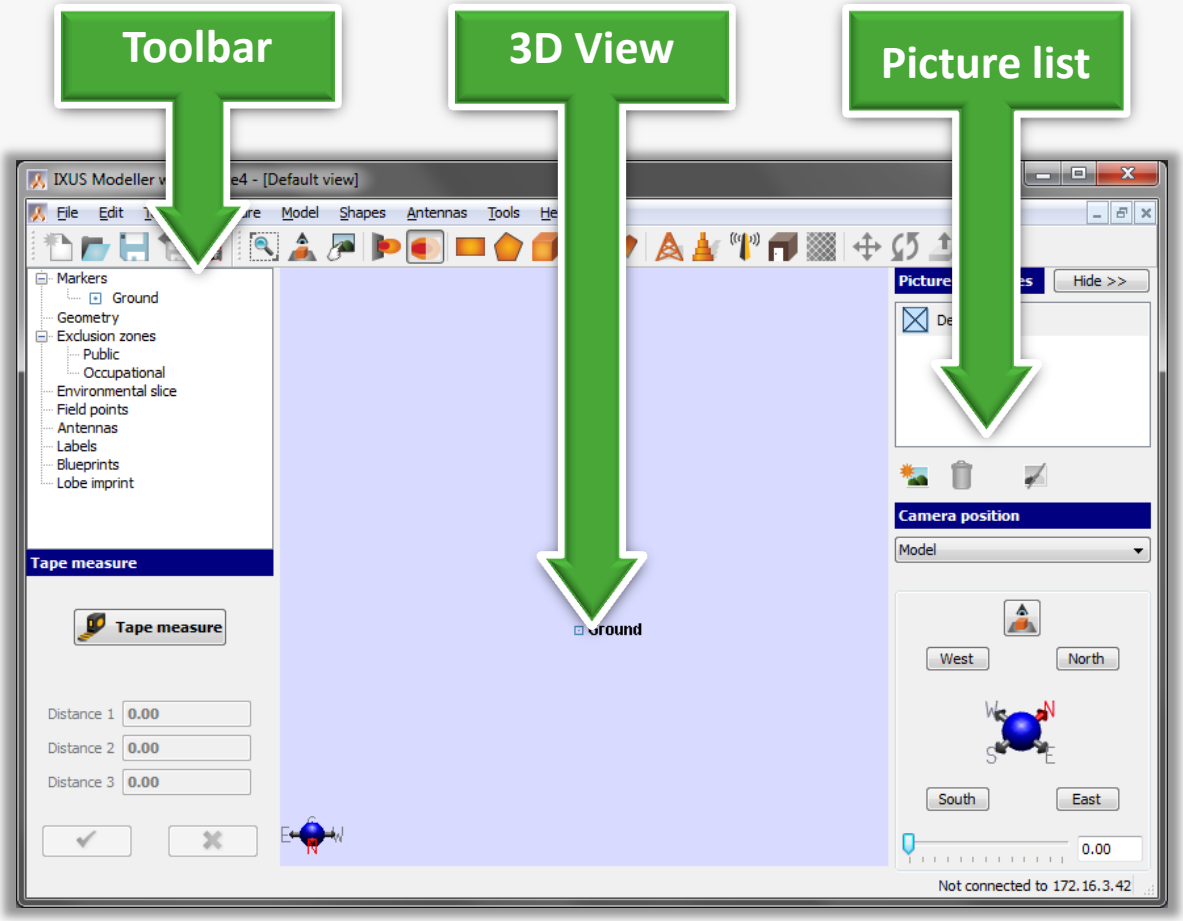
IXUS **Modeller** is used for the 3D modelling of base stations, and calculating EMF exclusion zones.

Follow these easy steps to complete a simple example site...

1 Start by opening IXUS Modeller

Modeller

✓ The Modeller starts up with a Tutorial. You can close the tutorial for now and view it later by clicking on **Help** > **Tutorial**.

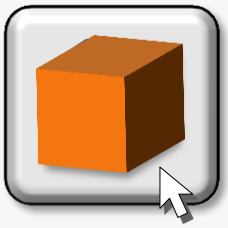


✓ The Toolbar is located just below the **File** menu and the **3D view** is just below the Toolbar in the middle with the picture list and properties on the right.

2 Creating objects in the Modeller

Modeller

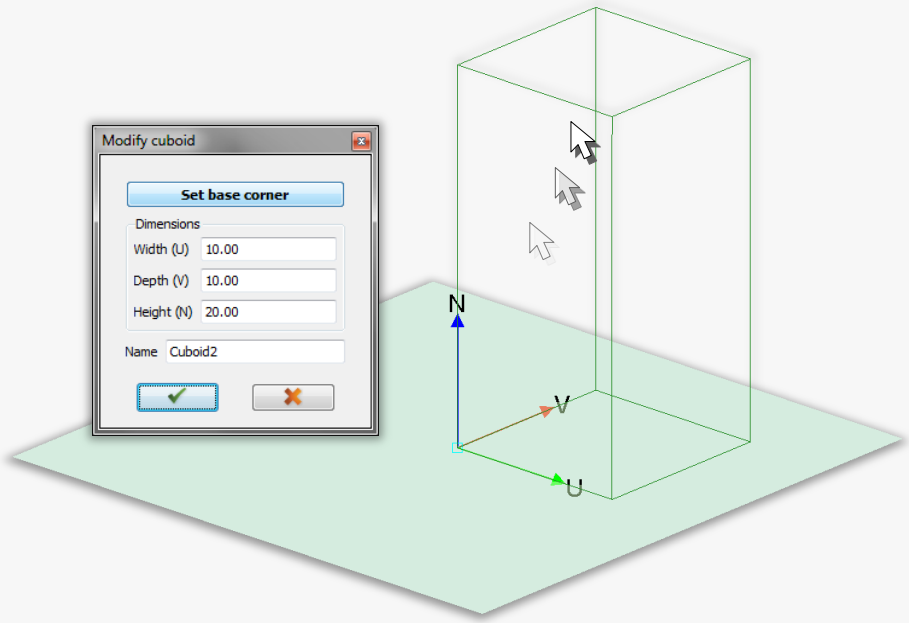
Let’s add a basic shape like the cuboid…



✓ Click on the “**cuboid**” button or choose **Shapes** > **Basic shapes** > **Cuboid**.

✓ Click anywhere on the 3D view to position the base corner of the cuboid. Enter the cuboid dimensions for example: Width = “**10**” Depth = “**10**” and Height = “**20**”.

✓ Click the  to complete the cuboid.



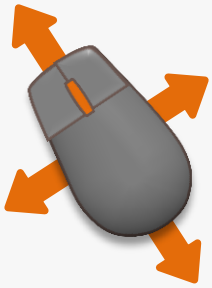
3 Changing your view of the 3D model

Modeller

To move around your model you can use the following mouse actions.

- ✓ **Rotate**: Hold down the left button and drag your mouse to rotate around the model.

- ✓ **Zoom**: Scroll the mouse wheel to move closer to the model or further from it.



- ✓ **Pan**: Hold down the scroll wheel button and drag your mouse to slide your view up, down, left or right.

4 Adding an antenna to a base station

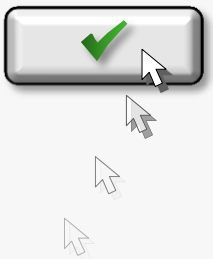
Modeller

✓ Click on the “**Add Antennas**” button.

✓ Specify antenna details and orientation. You can use the antenna selected by default for this example.

✓ Add the GSM900 frequency band by selecting it in the dropdown box and clicking on “**Add**” button.

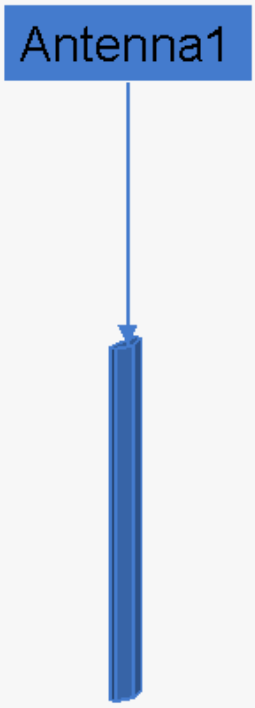
✓ Enter frequency band electrical tilt and power at both ports. Use power of “**40**” Watt on both ports for typical results. Select an electrical tilt of “**0**” degrees for this example.

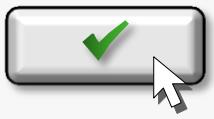
✓ Click 

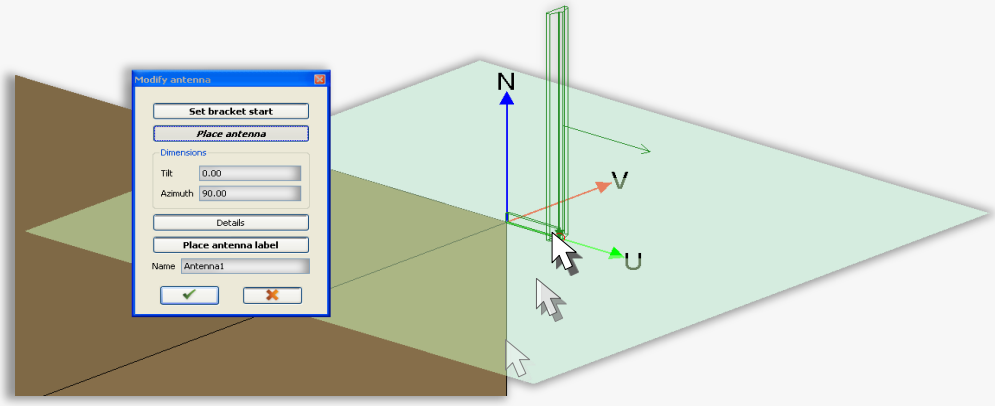
5 Place the antenna on the cuboid

Modeller

The antenna placement dialog will open in the 3D View.



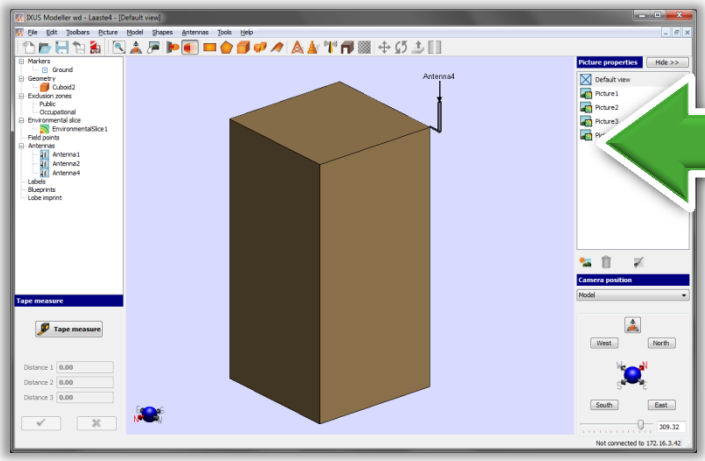
- ✓ Note that the focus is set to "**Set bracket start**" button in the antenna dialog.
- ✓ Click on the top corner of the cuboid in 3D view to place the antenna bracket.
- ✓ Then click anywhere on the transparent green plane to place the antenna.
- ✓ Change the **Azimuth** to "**90**" degrees by clicking in the text field next to it and typing "**90**".
- ✓ Click the  to complete the antenna.



6 Creating pictures of the 3D Model

Modeller

Now that you have a 3D model you can create pictures that can be used outside IXUS Modeller.



✓ To add a new picture to the picture list, click the **New picture** button, below the list box. Add two or more pictures.

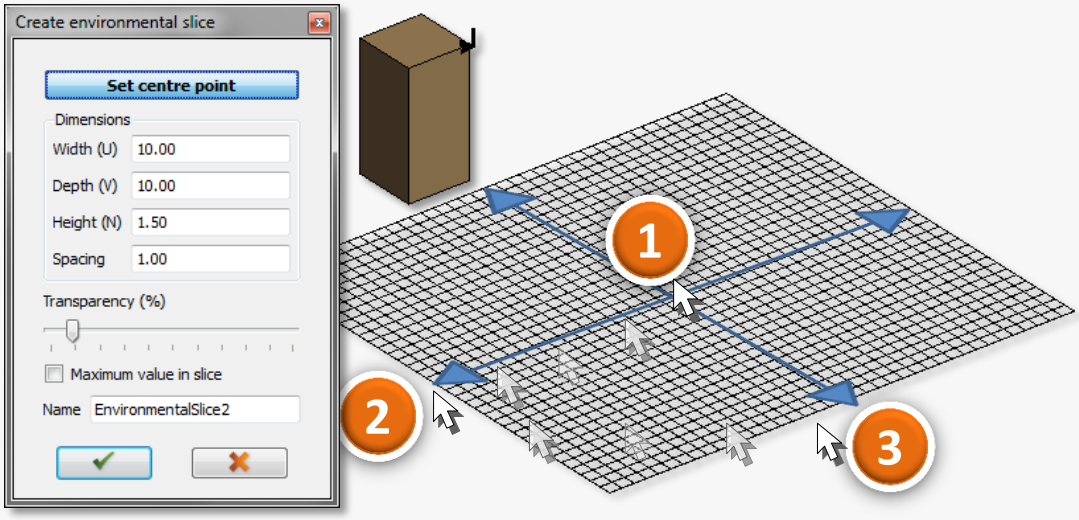
✓ To select a picture, click on it in the list box. Change the view until you are happy with the view that you would like to export as a picture.

7 Creating Environmental Slices

Modeller

You can add environmental slices to use in environmental reports.

✓ Select a picture in the list (not **Default view**) and choose **Model > Environmental slice...**



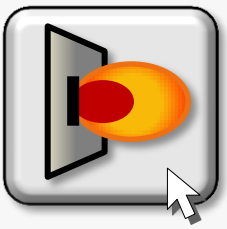
✓ Click to position the middle point of the plane then type "**50**" in the Width field and "**50**" in the Depth field to specify the size of the plane as 50m x 50m.

✓ Specify the height as "**1.5**" meter by typing "**1.5**" into the height field and then click the 

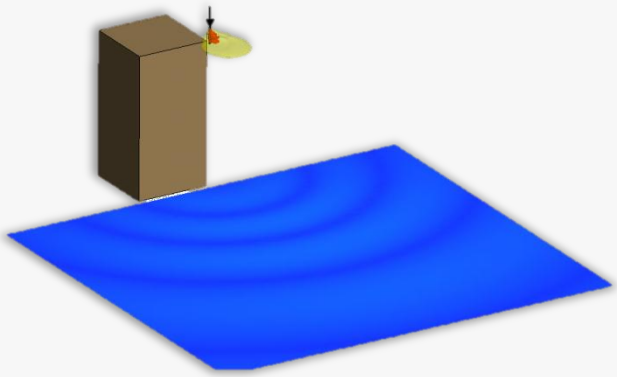
8 Calculating the EMF Zones

Modeller

Now you are ready to calculate the EMF Zones for that antenna and export the pictures to a folder.



✓ Click the Calculate EMF Zones button on the Toolbar or choose **Model** > **Simulate EMF Zones**... IXUS **Modeller** will ask you to select a speed/quality setting and an EMF standard. Select "**Medium**" and "**ICNIRP**" for this example.



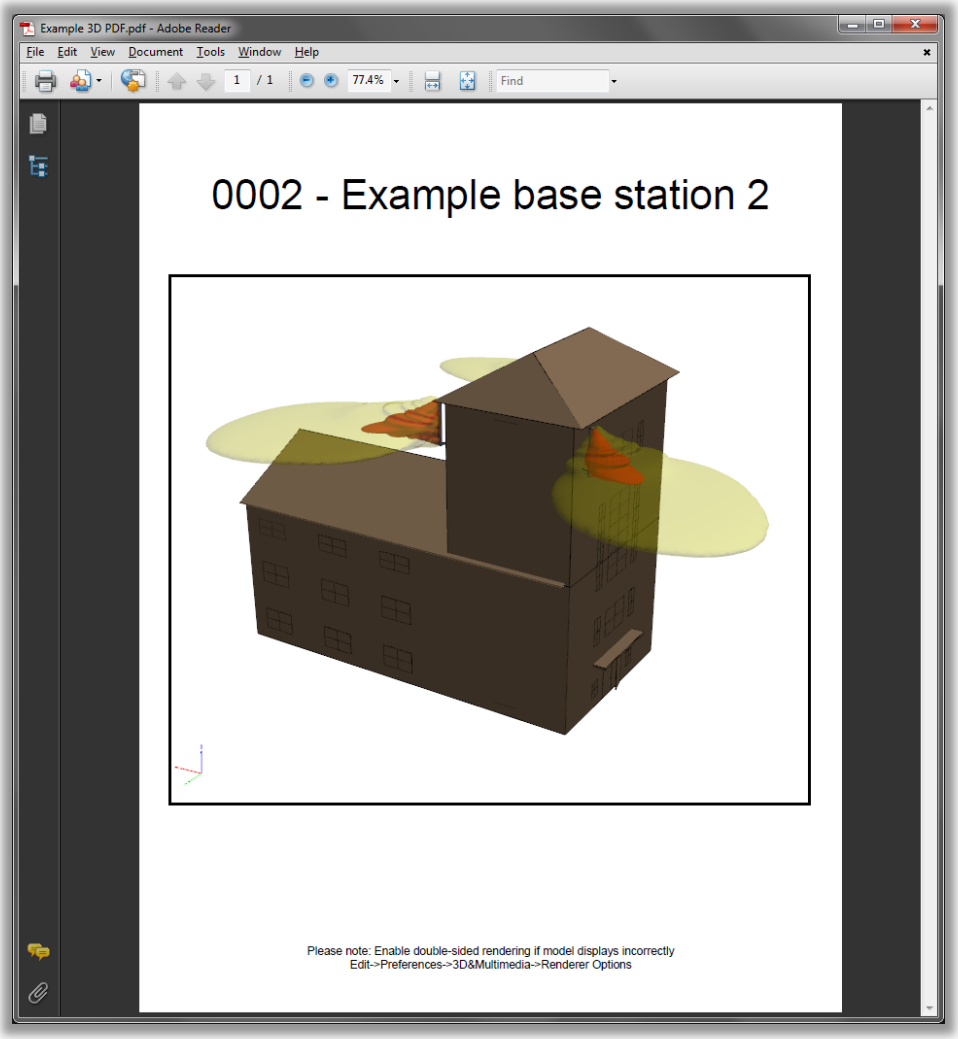
✓ The yellow and red zones in front of the antenna indicates the selected standard public and occupational exclusion zones respectively whereas the Environmental slice indicates the percentage of the public selected standard value at any point on the specified plane.

✓ Now you can export the saved pictures by clicking **File** > **Export > Pictures**... or click the **Export pictures** icon.

9 Creating a 3D PDF document

Modeller

✓ A 3D PDF document can also be exported by clicking **File** > **Export** > **3D PDF...** Specify a file name and location and click save. Follow the instructions at the bottom of the page if it displays incorrectly.



That's it!

Well done! You've created a base station , calculated EMF non-compliance zones and generated pictures and a 3D PDF to use in compliance documentation.

For more information on the use of IXUS please view the help documentation. On your Windows desktop click: **Start** > **Programs** > **IXUS** > **Help** or contact us on support@emssixus.com

IXUS | EMF COMPLIANCE MANAGEMENT SOFTWARE