

PFD Mask Viewer- User Manual

PFD Mask Viewer tool is for visualizing the PFD masks used in the EPFD analysis.

Mask has to be provided in xml format and structured as indicated in ITU-R Recommendation S.1503-3.

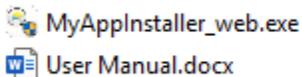
The tool reads xml file and plots PFD mask of type: azimuth_elevation and $\alpha_{\Delta Lon}$.

The tool has been developed with MATLAB R2024a.

Installation

Copy the file PFD Mask ViewerV25_1 on your PC.

It contains the following files:



Click on  **MyAppInstaller_web.exe** to install the tool.

If you don't have MATLAB software on your PC, MATLAB Runtime will be downloaded automatically, saved and installed in C:\Program Files\MATLAB\MATLAB Runtime\R2024a.

MATLAB® Runtime contains the libraries needed to run compiled MATLAB applications on a target system without a licensed copy of MATLAB.

Alternatively, you can download and install the Windows version of the MATLAB Runtime for R2024a from the following link on the MathWorks website:

<https://www.mathworks.com/products/compiler/mcr/index.html>

NOTE: You will need administrator rights to run the MATLAB Runtime installer.

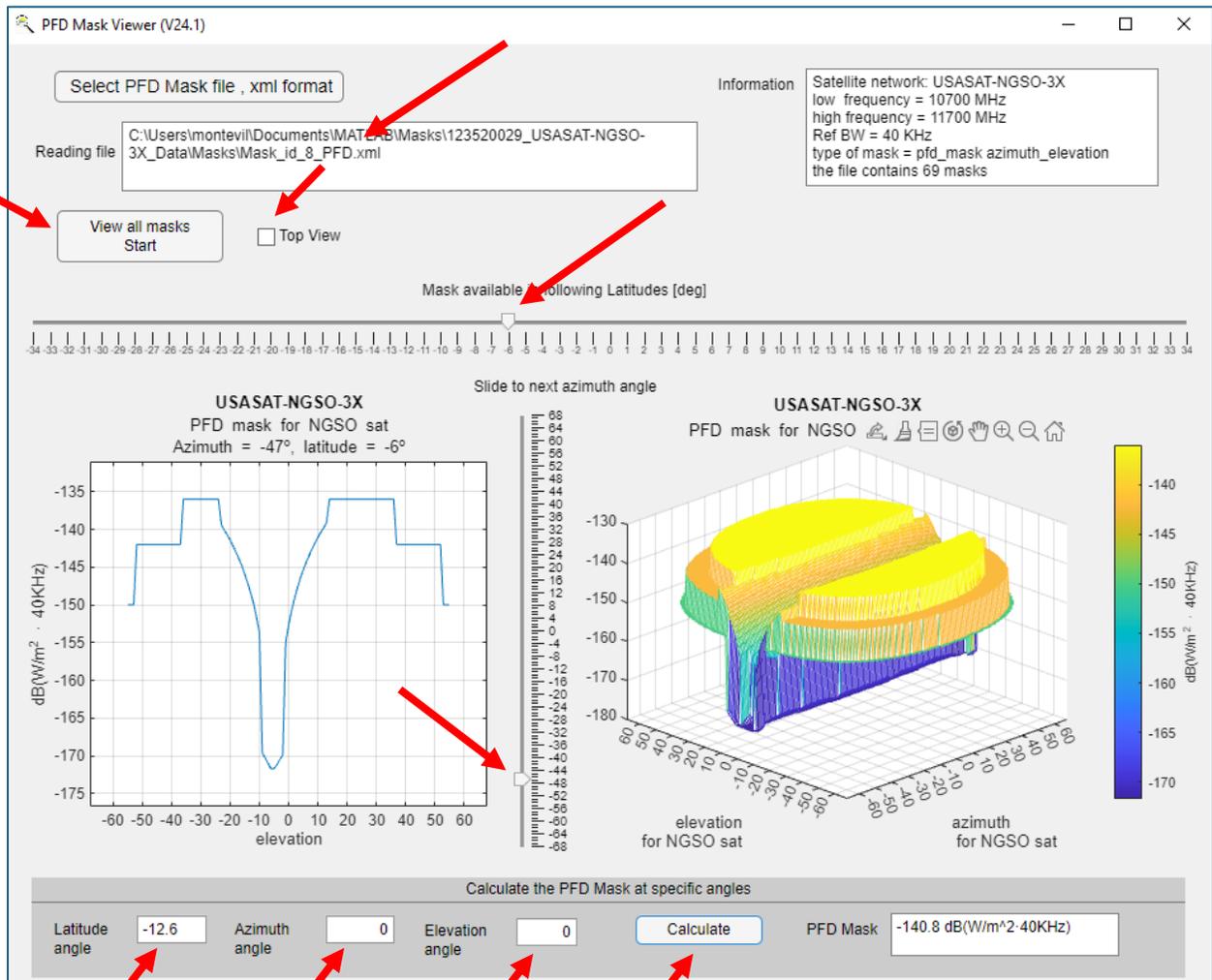
The installation of MATLAB Runtime installer might take a while.

A desktop icon will be created to launch the tool.



Usage

→ Launch the program by clicking on PFDMaskViewer



(Window app has been designed to fit on a 14-inch laptop screen on the bottom left corner. You can resize the window app at your convenience.)

→ Click on the button "Select FPD Mask, xml format" to choose the xml file. Be aware that big xml files might take a long time to be read.

Reading file window indicates the path of the selected file

Information window gives information about the selected mask or if there is any problem reading the file.

→ Click on the button "View all Masks- Start" if you want to see all masks contained in the file. Only the 3D window on the right will be activated.

→ Check box Top View at any time, it will set the angle of the view from which the observer sees the 3D plot to overhead view.

→ Select with the cursor the latitude in the "latitude slider". This will activate both windows: 3D and 2D.

In the 2D window, depending on the type of PFD mask:

-it will plot the mask with respect to elevation angle at azimuth = 0° , or the mask with respect to α angle at $\Delta\text{long} = 0^{\circ}$.

-It will activate the slider "Slide to next azimuth/ α angle"

→ Select with the cursor the azimuth/alpha angle in the "Slide to next azimuth/ α angle" slider by moving the cursor to next angle. It will update the PFD profile in the 2D window.

If you put the mouse on the figures, you will see several options: save the figure, rotate, zoom in, zoom out, pan.



→ At the bottom of the window, there is the possibility to calculate the PFD mask at any angle by entering the latitude, azimuth- elevation or α - Δlong angles and pressing calculate. PFD interpolation is done as specified in Recommendation ITU-R S.1503-3.