Description:

This XTension will do several things:

1)Place spots at each point along the filament, allowing for

visualizing and measuring the instensity along the dendrites

2)Find synaptic bouton(varicosities) along dendrite segments, place

a spot at that point.

3)Place spots at each of hte following places:

beginning point,

dendrite branch,

dendrite terminal point,

Spine Attachment point

Spine terminal point

4)Generate a duplicate of the filament object with NEW statistics

Dendrite mean intensity (for each channel)

Spine intensity (not just the spine head, the whole spine)

Bouton(varicosity) number per dendrite segment

Bouton density

Spot Detection within a certain distance of filament

Spot Density

**Usage**: Select Filament object in the Surpass scene, and choose which options you wish to run. IF you choose none, the default on measuring intensity of each dendritic segment will be calculated and the filament will be converted a series of spot (dendrite and spines) for each filament in the Filament scene object

**Installation**: Copy this these files into the appropriate directory. If running the full version of Matlab, copy this in the “matlab” folder in the current version of Imaris directory. If you are running Imaris XTensions using the Matlab Compiler Runtime, then you will need to copy both the .exe and .xml files in the “rtmatlab” folder is the current version of Imaris directory.

XTension made in Matlab 2014b, and runs on Imaris 8.1.2 and earlier.

NOTES: This is XTension seems to be working for most files. However, its speed is rather slow when processing a large filament dataset, but it will process. I will kindly take advice on improving the speed and function of this. It is not a fully supported Bitplane-sponsored XTension. Thus, this it may have bugs or it may not work with all datafiles. I have tried to make it as universal as I can. This something I did on my own time. If you do find a bug or error in the code, please let me and I can look into it when I can.