# MaskCreator User's guide

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## Purpose:

The aim of this software is to provide a segmented emission image of the object. The segmented image is suitable as input for the Scatter correction software CorrectScatter_multiCore*. For segmentation purposes, but with a segmented image and the respective mesh as outputs, please use MeshCreator instead.

## 1. Instalation

To run MaskCreator the following programs may need to be pre-installed on the user's computer:

- ITK (http://www.itk.org/).

The following [executable] files are integrating parts of this tool and are provided with it:

- MaskCreator.

Other tools/files necessary to run MaskCreator:

- RawImport.h file.

## 2. Input/Output

Mandatory Input:

- Primary reconstructed image obtained from the emission acquired data. This reconstruction can be performed with stronger filtering included (ex. Metz filter FWHM=3) to reduce noise and facilitate segmentation procedures;
- Segmentation mode: auto (1) | low-auto (2) | thresholdValue (3) – 1 and 2 are automatic options for thresholding based segmentation, 3 is a manual option where the threshold value is introduced directly. 2 is a convenient option when processing data with high uptake small regions such as lesions. For these datasets option 1 can result in lesion segmentation instead of whole breast

segmentation. Option 2 will choose a lower threshold value. If the user is not satisfied with any of the results from the previous options, mode 3 shall be the solution. This option shall be used after 1 and 2 fail. Open “Image_smooth.nii” (ex. with Amide) and check by visual inspection the correct threshold value. Provide this value directly.

Optional Inputs:

Outputs:

Two output files are generated: Image_smooth.nii and Image_segmented_holesFilled.nii. First one will be necessary to get the threshold value by visual inspection when using segmentation mode 3. The second output file is the segmented output that can be used as input for Scatter correction software.

## 3. How to run MaskCreator

./MaskCreator [inputMaskImageFile.hv] [auto | low-auto | thresholdValue]

Input parameters are as detailed in the previous section.