Distance Transform

The output image of the distanceTransform XTension is a 32-bit floating-point, single-channel image

For Surface objects

This XTension computes and creates a new channel. The created channel intensity indicates the shortest distance to a surface object border. The border of the surface objects defines the origin of the distance transformation. The intensity value of the voxels at the border of the surface is always set to 0.

There are two options for the distance transformation calculation:

Inside Surfaces object

Outside Surfaces object

Each voxel is mapped with the intensity representing the measured minimum distance to the nearest surface border. The intensity value correlates directly to the distance to the border. The higher the intensity value corresponds to the larger the distance.

Please note: In order to calculate the distance correctly, the data should be transformed into a 32-bit float image. To change the data set type, select the Change Data Type option under the Edit menu.

To modify the channel visibility contrast and range open the Display Adjustment window under the Edit tab.

For Spots objects

This XTension computes and creates a new channel. The created channel intensity values are based on the distance to a spot object. Each voxel is mapped with an intensity representing the minimum distance measured to the nearest spot’s centre. A higher intensity value corresponds to a larger distance to an object. The center of the spot object defines the origin of the distance transformation. Voxels in the centre of the spot object are always set to have an intensity value of 0.

Please note: In order to calculate the distance correctly, the data should be transformed into 32-bit float images. To change the data set type, select the Change Data Type option under the Edit menu.

To modify the channel visibility contrast and range open the Display Adjustment window under the Edit tab.