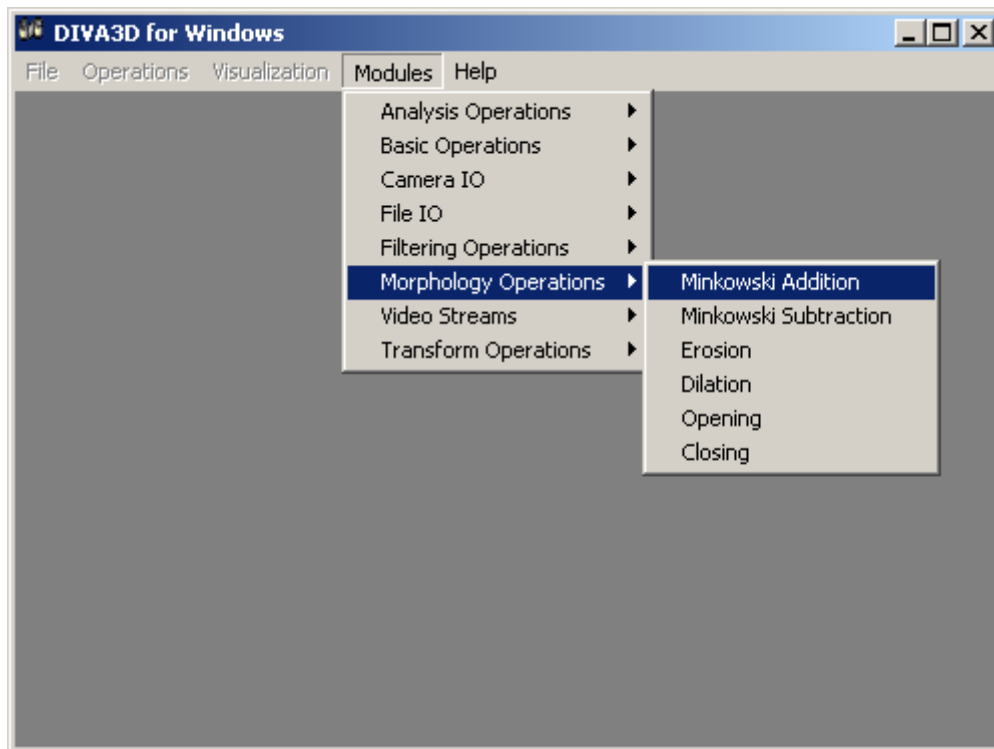


# Morphology Operations

## Version 1.0

This sub-menu includes the following 3D binary mathematical morphology operations, which require that a binary video stream buffer containing the 3D structuring element exists.



**Figure 17.** A view of the Morphology Submenu

Whenever a 3D structuring element is required, the user will be prompted with an *OpenFile* dialog box to select a \*.par file containing the structuring element. A definition of the \*.par file can be found in Part I, section Filtering Operations, of Diva3D Manual. The operations of this submenu are only applied to one channel binary video buffers and are not supported by the CameraIO Module.

- **Minkowski addition:** Performs Minkowski addition of a binary video stream with the structuring element. The user selects the input video stream, a \*.par file containing the structuring element for the operation and a file to store the output video stream.
- **Minkowski subtraction:** Performs Minkowski subtraction of a binary video stream with a structuring element. The user selects the input video stream, a \*.par file

containing the structuring element for the operation and a file to store the output video stream.

- **Dilation:** Performs dilation of a binary video stream with a structuring element. The user selects the input video stream, a \*.par file containing the structuring element for the operation and a file to store the output video stream.
- **Erosion:** Performs erosion of a binary video stream with a structuring element. The user selects the input video stream, a \*.par file containing the structuring element for the operation and a file to store the output video stream.
- **Opening:** Performs opening of a binary video stream with a structuring element. The user selects the input video stream, a \*.par file containing the structuring element for the operation and a file to store the output video stream.
- **Closing:** Performs closing of a binary video stream with a structuring element. The user selects the input video stream, a \*.par file containing the structuring element for the operation and a file to store the output video stream.

[1] N.Nikolaidis , I.Pitas '3D image processing algorithms' , Willey 2000.