File IO

Version 1.2

The *File IO* module corresponds to the `fileio.dll` file and is responsible for importing image files in DIVA3D to construct video streams and files and for exporting video frames from video files to image files.

To install the *FileIO* module, the user has to copy the `fileio.dll` to the working directory of DIVA3D, where DIVA3D resides. Once installed, the menu entries depicted in Figure 1 are displayed under the *Modules* menu entry of DIVA3D.

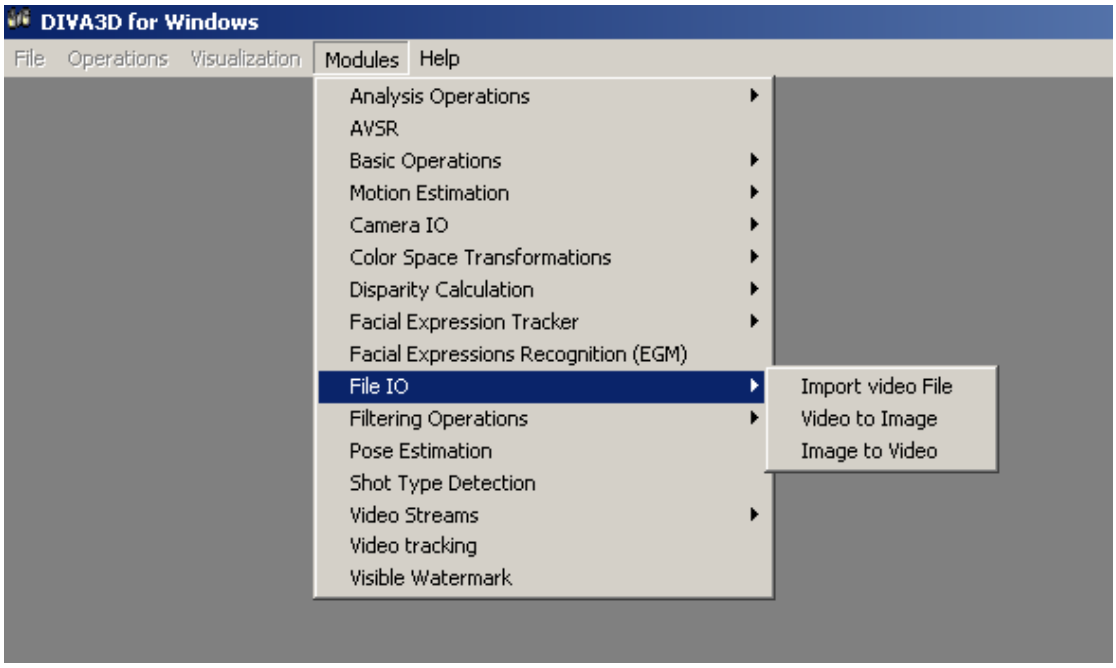

Figure 1: File IO menu entry.

- *Import Video File:* Using this option, the user can select a video file, located in the hard drive of the computer, and import the video file within the DIVA3D framework for further processing. It should be noted that the *FileIO* module requires the presence of the appropriate IO module to handle a video file (e.g. the *DirectX IO* module for *wmv* movies).

- *Video to Image:* This option is used for storing several video frames to the hard disk as image files. Initially, the user is prompted with a dialog box to select a previously imported video file. After doing so, the dialog box of Figure 2 appears, where all the frames of the video sequence are displayed as thumbnails.

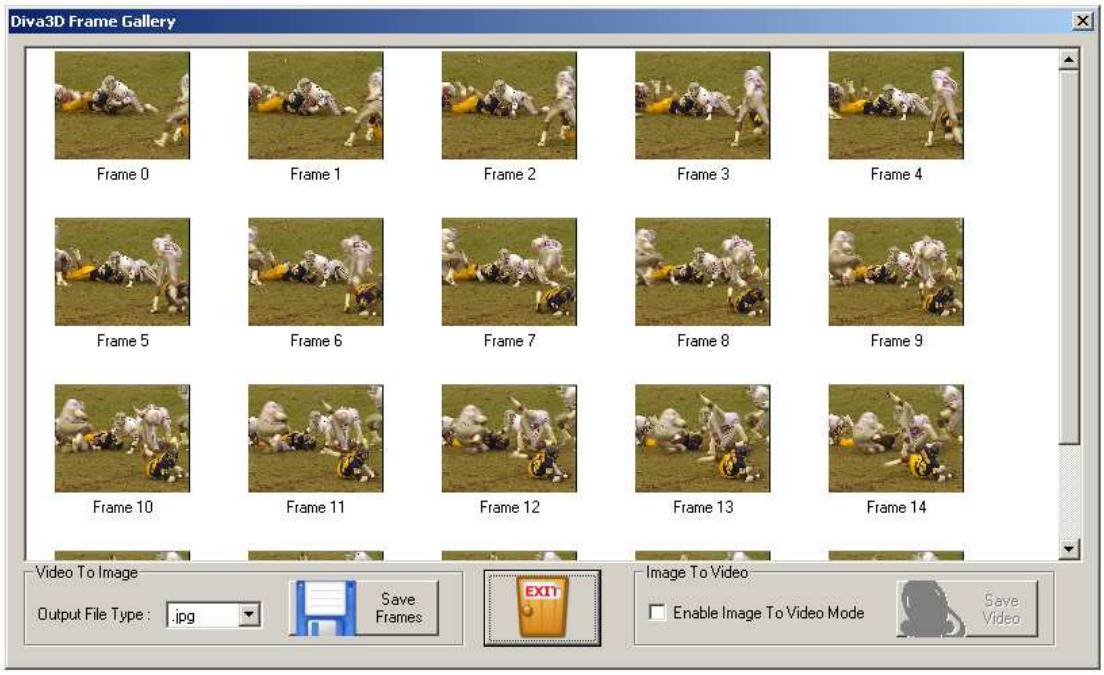

Figure 2: Video to Image dialog box.

The user can select, using the mouse, a video frame and, by clicking the *Save Frames* button, the selected frames will be saved at the location `C:\` of the hard disk, using, as image name, the frame number depicted under the thumbnail of each selected frame. The default extension for the output images is .jpg but the user can change this option, through the *Output File Type* dropdown menu, and select among *.tiff*, *.bmp*, and *.png* image file types. Finally, the user can switch to the *Image To Video* mode, explained below, by ticking the appropriate checkbox.

- *Image To Video:* The user can use this option to create a video file using images of any file type. By selecting this option, the dialog box displayed in Figure 2 appears, without any displayed frames. The user can drag and drop images of the same size in this empty area. If the images have varying dimensions, an appropriate message will be displayed and the image file will not be imported. Once the images have been imported, as in Figure 3, the user can select the desired images that will compose the video file and click the *Save Video* button to save the images as an *.avi* video file on the hard disk of the computer.

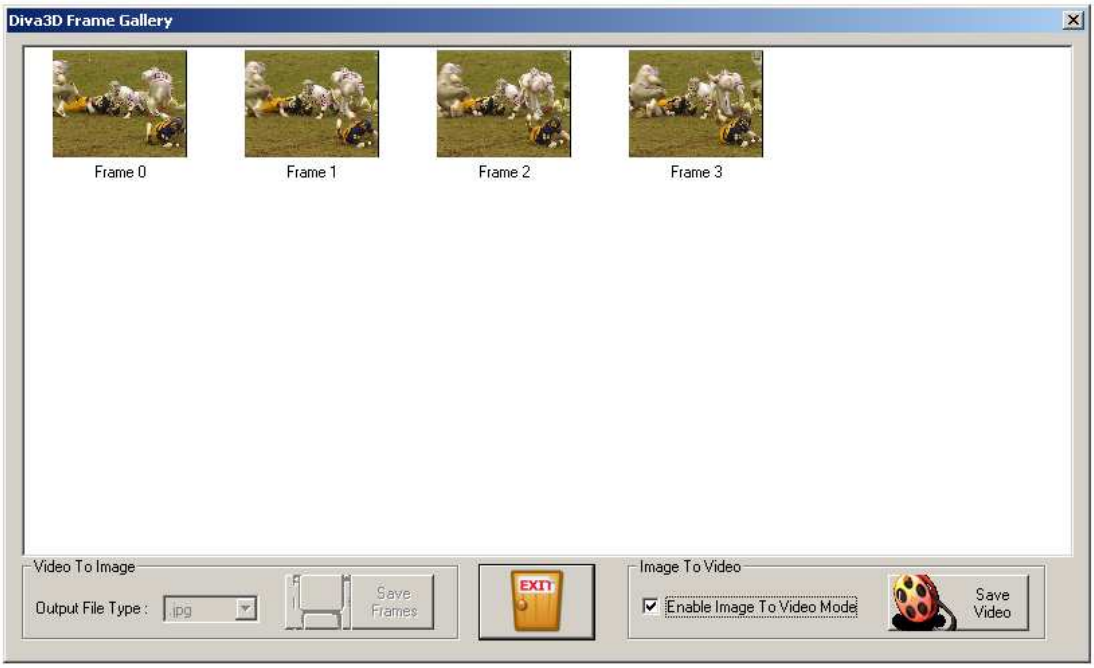

Figure 3: Image To Video dialog box.