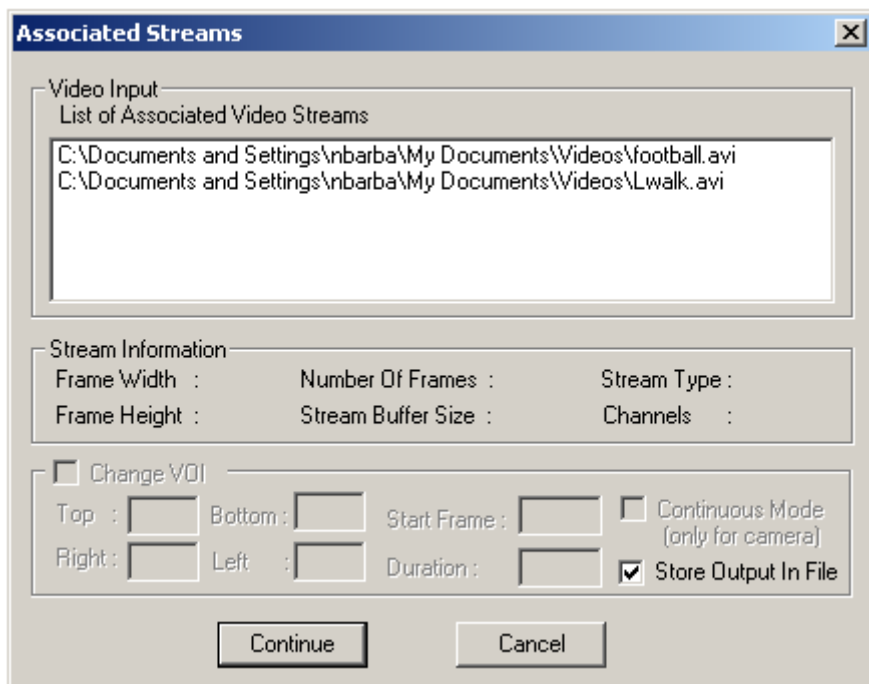


# Colour Transformation

Version 2.0.1

The Colour Transformation Module is used to transform a video stream to different colour models used to encode the colour information inside the video stream. To install the Colour Transformation module for DIVA3D, the user has to copy the `colour.dll` in the DIVA3D working directory, where DIVA3D.EXE resides. The module will be loaded automatically by DIVA3D the next time it is started and the entry *Colour Space Transformations* will be displayed under the DIVA3D Modules menu with 28 subentries, one for each colour transformations function available.

For all the available functions, the same procedure is followed. The user selects the input video stream (optionally with modified VOI) as shown in Figure 1 and, if the user selected to store output video stream in a file, a file to contain the output video stream.



**Figure 1:** Video input selection.

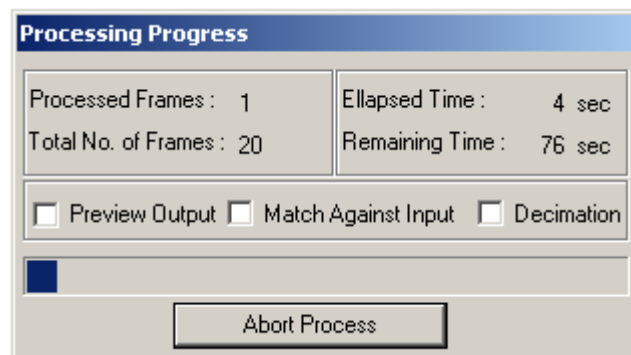
Because the different colour models require different video stream types (unsigned character *ucval* or floating point *fval*), the user is informed for the type of video streams appropriate for each operation through message boxes each time a video stream is selected or

created. In Table 1, there is a list of all the currently supported colour transformation functions and their appropriate video streams.

**Table 1:** Colour Transformation functions available.

<i>ucval</i> input – <i>ucval</i> output	<i>ucval</i> input – <i>fval</i> output	<i>fval</i> input – <i>ucval</i> output
RGB to CMY CIE RGB to XYZ XYZ to CIE RGB NTSC RGB to XYZ XYZ to NTSC RGB	XYZ to CIE uvY XYZ to CIE xyY XYZ to CIE UVW XYZ to CIE U*V*W* XYZ to SthetaW* XYZ to L*u*v* XYZ to L*a*b* RGB to HLS RGB_to_HSI RGB_to_HSV NTSC RGB to YIQ	CIE uvY to XYZ CIE xyY to XYZ CIE UVW to XYZ CIE U*V*W* to XYZ SthetaW* to XYZ L*a*b* to XYZ HSI to RGB HSV to RGB HLS to RGB YIQ to NTSC RGB L*u*v* to XYZ

During colour transformation processing, the user is informed with the Progress dialog box about the progress of the operation (see DIVA3D Manual, Part I).



**Figure 2:** Processing progress window.

This window informs the user about the process progress and remaining/elapsed time in seconds. Also there is a check box “Preview Output”. By clicking on that, the user is able to preview the output file without having to wait for the whole process to be finished. Also there is option to match the output against the input and to decimate both windows. (Note: When the output is an \*.*fval* file, previewing is disabled)

All operations that require a *ucval* video stream as an input are supported by the CameraIO module.