



# Chapter 1

## Batch Tiff to SIS Format Translator (T2S)

The TIFF to SDI program (T2S) may be used to translate from TIFF to ISM SDI (SIS) format from outside MicroStation. It is supplied with a batch (or script) file to allow convenient batching of multi-file translation tasks.

The T2S batch file may be used as follows

**For single file:** T2S <inputTiffFile> [XOrigin YOrigin]

or: T2S <inputTiffFile> <outputSDIFile> [XOrigin YOrigin]

**For multiple files:** T2S <wildcardspec> [XOrigin YOrigin]

EXAMPLES:

*“T2S test.tif”* will translate test.tif -> test.sis

*“T2S test.sis testout.sio”* will translate test.tif -> testout.sio

*“T2S c:\\*.tif”* will translate c:\\*.tif -> c:\\*.sis

*“T2S test.sis testout.sio 1000000.0 2000000.0”* will translate test.tif -> testout.sio and place the top left corner pixel of the SIS image at origin of (1000000,2000000)

The T2S program reads an (optional) configuration file named TIFF2SDI.CFG which may be used to specify certain parameters not available from the TIFF file itself. The format of the TIFF2SDI.CFG file is as follows:

xOrigin yOrigin xResolution yResolution masterUnits  
uorPerMast xGlobOrigin yGlobOrigin zGlobOrigin



# Chapter 1

The default TIFF2SDI.CFG file causes the translation to create an SIS file which is the equivalent of IMPORTING into the SYSM-SCAN.DGN design file with a pixel size of 20 microns. For translation of TIFF files into other design filespace, or with other resolutions, the TIFF2SDI.CFG file should be modified appropriately.

If the XOrigin and YOrigin parameters are specified on the command line, they will override the values in the TIFF2SDI.CFG file.

The T2S program appends an output record to the TIFF2SDI.LOG file indicating the parameters used during the translation.

## NOTES:

Memory requirements for the T2S program vary with the number of columns in the input image. This ranges from about 10 MB for 6000 column grayscale file (e.g.: 600 dpi 9x9inch scan) to as much as 64 MB for a 24000 column color file (e.g: 10 micron 9x9 color scan).



# Chapter 2

## Batch SIS to Tiff format Translator

The SDI2TIFF (S2T) program may be used to translate SDI (SIS) to TIFF from outside MicroStation. It is supplied with a batch (or script) file to allow convenient batching of multi-file translation tasks.

The S2T batch file may be used as follows

**For single file:** S2T <inputSDI> [-awf]

or:

S2T <inputSDI> <outputTIFF> [-awf]

**For multiple files:** S2T <wildcardspec> [<outputTIFF>] [-awf]

The -awf option, if specified, will cause the generation of an arcinfo world file with the same name as <inputSDI> and the .TFW extension. If <outputTIFF> is a path specifier (ending in \), then the output .TIF file will have the same name as <inputSDI>, but will have the path replaced by <outputTIFF>, and the extension .TIF.

### EXAMPLES:

*“S2T test.sis”* will translate test.sis -> test.tif

*“S2T test.sio testout.tif -awf”* will translate test.sio -> testout.tif and will generate a testout.tfw world file.

*“S2T c:\\*.sio e:\test\”* will translate c:\\*.sio -> e:\test\\*.tif

The S2T program appends an output record to the SDI2TIFF.LOG file indicating the parameters used during the translation.

### NOTES:

Memory requirements for the SDI2TIFF program vary with the number of columns in the input image. This ranges from about 10 MB for 6000 column grayscale file (e.g.: 600 dpi 9x9inch scan) to as much as 64 MB for a 24000 column color file (e.g: 10 micron 9x9 color scan).



# Chapter 2



# Chapter 3

## Batch SIS to SJS format Translator

The SIS2JPEG (S2J) program may be used to translate SDI (SIS) to JPEG (SJS) from outside MicroStation. It is supplied with a batch (or script) file to allow convenient batching of multi-file translation tasks.

The S2J batch file may be used as follows

**For single file:** S2J <inputSDIFile>

or: S2J <inputSDIFile> <outputSDIFile> [<quality>]

**For multiple files:** S2J <wildcardspec>

### EXAMPLES:

*"S2J test.sis"* will translate test.sis -> test.sjs the default quality is 95

*"S2J test.sis testjpg.sis 60"* will translate test.sis -> testjpg.sis using a quality factor of 60

*"S2J c:\\*.sis"* will translate c:\\*.sis -> c:\\*.sjs



# Chapter 3



# Chapter 4

## PatB ORI to DiAP Model File Converter

This is a command line utility which reads PATB .ORI files and creates DiAP .MOD files.

To run the converter:

```
PATB2MOD <patborifile> <diapcamfile> <diapcontrolfile>
```

where

**<patborifile>** is the name of the Patb ori file containing transformation matrices for the photos.

**<diapcamfile>** is the name of a DiAP camera file to be used in the models

**<diapconfile>** is an optional DiAP control file name to be placed in model setup record. This allows the control points to be used for autodriving once the model is attached. This may be a Patb .ADJ file.

Example:

```
"patb2mod.exe D:\mar.ori D:\mar.cam D:\mar.adj"
```

The PATB2MOD program reads a data file PATB2MOD.DAT, which contains lines describing the models to be formed. You must edit this file to cause the desired models to be created. Lines in the patb2mod.dat file have the following format:

```
<modelfilename> <leftphotoid> <rightphotoid> <leftimagefile> <rightimagefile>
```

where

**<modelfilename>** is the full path and name of the DiAP model file to be created

**<leftphotoid>** is the photoid from the Patb ORI file to be used for the left photo

**<rightphotoid>** is the photoid from the Patb ORI file to be used for the right photo



# Chapter 4

<leftimagefile> is the full path and name of the .SDI image file for the left photo

<rightimagefile> is the full path and name of the .SDI image file for the right photo

e.g.:

D:\mar\165164.mod 1605 1604 D:\mar\16\_5.sis D:\mar\16\_4.sis

D:\mar\152153.mod 1502 1503 D:\mar\15\_2.sis D:\mar\15\_3.sis

The DiAP model files will contain camera file name, image file names and control file name information, as well as left and right photo transformation matrices, but will contain no interior orientation information.

To use the models within DiAP, use the following procedure:

1. Open a design file with appropriate design units. It is recommended that some design elements such as vectors, grid, etc be present to establish a suitable view extents/depth.
2. Load DiAP
3. Attach one of the models
4. Perform interior orientation as usual.
5. If available, autodrive to one or more relevant control points to verify the setup (usually, verifying that the control points are on the ground is sufficient).

## NOTES:

1. The Fit to Model command may be used to fit a view to the model. This saves the step of driving to a control point after the model has been attached.
2. The model will have a BUNdle transformation when created. Proceeding with a manual relative or absolute orientation will permanently clear this setup, so use of the Exterior orientation dialog is not generally recommended (or required).





# Chapter 5

## DiAP ConvDiAP File Converter

The ConvDiAP program runs two batch files, Tiff to SIS (T2S.bat) image converter and DiAP model maker (makemod.bat). T2S converts Tiff images to DiAP's SIS format and makemod creates DiAP model files from exterior image coordinates. Either batch files can be run independently or concurrently using Convdiap.bat.

Usage:

**For image conversion only:** convdiap -img

**For model file creation only:** convdiap -mod

**For both image file and model:** convdiap

The path location of the images and the makemod path will need to be edited in convdiap.bat file.

Example:

ConvDiAP.bat

```
@echo off
```

```
if "%1" == "-mod" goto mods
```

```
cd ..\t2s
```

```
call t2s.bat d:\iso\*.tif
```

```
cd ..\iso
```

```
if "%1" == "-img" goto done
```

```
:mods
```

```
..\makemod d:\iso-eo.txt d:\kkc92mm.cam d:\test.con
```

```
:done
```



# Chapter 5

Both the T2S batch program and Makemod program require additional parameters.

For the parameters of the T2S.bat translator, please see Chapter 1.

For the parameters of the makemod.bat creator, please see Chapter 6.

Example using the above file:

Convdiap -mod will only create model files from files in the d:\ folder.

Convdiap -mod will only translate model files from files in the d:\ folder.

Convdiap will create model files and from files in the d:\ folder.



# Chapter 6

## DiAP Model File Creator (makemod.exe)

Usage: makemod <extorifile> [<camerafile> [<controlfile>]]

Where the <extorifile> is the name of the orientation file containing photo ID, x,y,z coordinates and Omega, Phi and Kappa in Degrees. For example:

Iso-eo.txt

```
8 0244 -14012.799 -60139.580 2471.336 1.78521 -1.56994 24.41749
8 0245 -13634.890 -59980.421 2471.318 0.96038 -1.70539 26.5051
8 0246 -13257.021 -59814.528 2467.308 0.78128 -1.53094 28.28044
8 0247 -12880.256 -59639.049 2462.921 1.51732 -2.04906 28.77775
```

Where the <camera> file is the name of the DiAP camera file to be used in the models. Please see the DiAP manual for the file format.

Where the <controlfile> is the name of the DiAP control file name to be placed in the model setup record. This allows the control file points to be used for autodiving once the model is attached. Please see the DiAP manual for the file format.

The Makemodel reads a data file makemod.dat, which contains lines describing the models to be formed. You must edit this file to cause the desired model files to be created. Lines in the makemod.dat file have the following format:

<modelfile name> <left photo ID> <right photo ID> <left image file>  
<right image file>

Example:

```
d:\iso\244245.mod 0244 0245 d:\iso\0244.sis d:\iso\0245.sis
d:\iso\245246.mod 0245 0246 d:\iso\0245.sis d:\iso\0246.sis
d:\iso\246247.mod 0246 0247 d:\iso\0246.sis d:\iso\0247.sis
```



# Chapter 6

The exterior orientation file needs

8 0244 -14012.799 -60139.580 2471.336 1.78521 -1.56994 24.41749

8 0245 -13634.890 -59980.421 2471.318 0.96038 -1.70539 26.5051

8 0246 -13257.021 -59814.528 2467.308 0.78128 -1.53094 28.28044

8 0247 -12880.256 -59639.049 2462.921 1.51732 -2.04906 28.77775



# Chapter 7

## DiAP Model File Printout

This is an MDL application to generate SystemMap style printouts from DiAP .MOD files.

Usage:

It is NOT necessary to have DiAP loaded in order to use. Keyin the following line in the MicroStation command window:

```
MDL LOAD MODPRINT <modfile>
```

where <modfile> is the name of a DiAP .MOD file.

The application will create a model data printout file with the same path and base filename as the .MOD file, but with the .PRT extension.

Example:

```
MDL LOAD MODPRINT e:\sample\test.mod
```

will create the file: e:\sample\test.prt