

## **GRASS Data To ArcView**

This document will show the procedure to export GRASS raster and vector data to ArcView.

### **GRASS Vector Data to ArcView 2.1/3.0**

- 1) In GRASS use the ***v.out .ascii*** command on the vector file you wish to export.
- 2) In GRASS use the ***v.out.dxf*** command on the ascii file you created above. When GRASS prompts you for a dxf file name, type in the name with extension(i.e. soils.dxf). The .dxf extension will be needed for ArcView.

**Please note** that dxf files can only be displayed in ArcView 2.1(MS Windows) and ArcView 3.0(UNIX and MS Windows).

- 3) To display the dxf file in ArcView you first need to open a VIEW then add a theme(Feature Data Source). The dxf file should be selectable on the screen. Open the dxf file. You have to convert the dxf file to a shapefile in order to change projection etc.

### **GRASS Raster Data To ArcView 2.1/3.0**

This procedure will georeference a raster image within ArcView!

- 1) In GRASS use the ***r.out.tiff*** command on the Raster file you wish to export. Use defaults for the command! In particular DO NOT use the LZW compression! This may make your file unreadable in ArcView. The GRASS generated TIFF file should have a tiff extention(i.e. photo1.tif)
- 2) After making the TIFF file goto your "cellhd" sub-directory!
- 3) Cat the raster cellhd file you exported! You will use the information in this file to build a world file. A world file is a ascii file ArcView uses to georeference information for the TIFF file you created. With the world file your TIFF file will be georeference in ArcView.
- 4) Start a vi session, name the file the same as your TIFF file except with a different extention! Use the extention .tfw (i.e. photo1.tfw ). You will enter six lines of information in your vi session. You can use this file as a base for future world file.

Below is the possible contents of a typical world file.

```
10.0
0.0
0.0
-10.0
590005
4927995
```

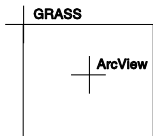
Below is the possible contents of a typical GRASS cellhd file.

```
proj:      1
zone:     16
north:    4928000.000000
south:    4914000.000000
west:     590000.000000
east:     609000.000000
n-s resol: 10.000000
e-w resol: 10.000000
format:   1
compressed: 0
```

Below is the information you will need to create the above world file(tfw). Please note that the world file contains information in your GRASS cellhd file! Information on the world file can be found in ArcView 3.0 manual on page 301.

World File	GRASS Cellhd File	Description
10.0	"e-w resol:"	Size of pixel in x direction.
0.0	N/A	Rotation term for row(usually 0).
0.0	N/A	Rotation term for column(usually 0).
-10.0	"n-s resol:"	Size of pixel in y direction(- sign is needed!)
590005	"west" + 1/2 "e-w resol"	The x coordinate of pixel in upper left corner. *
4927995	"north" - 1/2 "n-s resol"	The y coordinate of pixel in upper left corner. *

### Pixel 1,1



\* ArcView georeferences the center of the pixel while GRASS uses the NW edge in the cellhd file. Thus a slight adjustment is needed to correctly georeference a TIFF file in ArcView. For these lines you need to add one half the pixel resolution(west) and subtract one half the pixel resolution(north).

5) Place your TIFF and world file in the same directory. These files now can be used in ArcView and should be georeferenced correctly!.

A sample world file call be found at the NCG FTP Site! The NCG FTP is listed below.  
***ftp.ftw.nrcs.usda.gov*** (goto the /outgoing directory! and get the file "base.tfw")

If You have any questions please contact me at your convenience.

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