

In this guide in the coding sections, varyingly large tab spaces are used to signify and clarify spaces between groups. When actually typing, only a single space is needed.

DIGITIZING:

Always start with setting the workspace and running a station file:

- &workspace [di rectory]
- &stati on 9999

Set the map extent to the raster map, and draw the map:

- arcedi t
- mapextent i mage [name]. [extensi on]
- i mage [name]. [extensi on] composit e 1 2 3
- draw

Create a new coverage:

- create [coverage name]

When creating tics, use locations that can be located on your imported map as well as an external map such as Google Maps. Input the tic number being created, then click on the image where it is, then repeat. Input the number 0 to stop and draw the bounding box.

Draw the general digitized environment (so far):

- drawenvi ronment arcs nodes tic i ds
- draw

One can turn the background image on and off, as needed while digitizing:

- i mage off
- draw

And:

- i mage on
- draw

Adding arcs (for creating lines and polygons, jump below to create a point coverage):

- edit feature arc
- add

A menu will pop up, and the map will become the active window. Keep it the active window. Press 2 to place a node and start a new segment, click the left mouse or press 1 to place a new point (NOT a node) and press 2 to end the segment. Press 9 to quit the menu.

The thickness of the arcs can be changed, to do so:

- linescale [integer value]
- draw

Save work by typing:

- save

To create a point coverage:

- create [point coverage name] [name of coverage to import tic marks from, if desired]
- edit feature label
- add

Follow the menu's instructions, keeping the map window active. Press 9 to quit the menu.

To fully build a polygon coverage, place labels inside each polygon.

To edit an existing coverage, make sure you're in the correct workstation and then:

- edit [coverage name]
- edit feature labels
- add

To save:

- save

To quit arccedit (and arc):

- `quit`

COMPILING:

To compile the coverages, be in arc (not arccedit) and use the `clean` or `build` commands. If working with a point coverage, use `build`:

- `build [coverage name] [type of coverage; can technically be point, line, or poly]`

If working with a line or polygon coverage, use `clean` (The two 0.1s have something to do with tolerance, generally those two specific numbers do the trick):

- `clean [import coverage name] [output coverage name] 0.1 0.1 [type of coverage; line or poly]`

After cleaning and building, edit the coverage by going back into arccedit and using:

- `editfeature [labels, nodes, arcs]`

When using labels, the commands `select`, `calc`, and `delete` are available. When using nodes, the commands `move` and `delete` are available. When using arcs, the commands `select`, `add`, `delete`, `extend`, `move`, and `split` are available. Build or clean again when further changes are made and deemed necessary.

ADDING DATA TO TABLES:

Each coverage has a data table after being built or cleaned at least once. Point and polygon coverages use `.pat` files, and line coverages use `.aat` files. To view the table, be in arc and type:

- `list [coverage name]. [aat or pat, whichever one applies]`

To add a column to the table, type in arc:

- add item [input data table, this just uses the data table's coverage's name]. [aat or pat] [output data table, usually the same as the input data table]. [aat or pat] [name of column] [item width] [output width] [item type]

The common types of items are text, integers, and decimals (listed below in the order [item width] [output width] [item type]):

```
30  30  c
4   5   b
8   8   f
```

C stands for characters (text), B stands for binary (integers), and F stands for floating point (decimals). The item width and output width are variable; the above numbers are just good averages to use.

To add data to the columns, go back into arccedit, draw the data, and:

- edit [coverage name]
- editfeature [feature to be edited]
- select
- (select the element with the pointer)
- calc [column name] = '[input]'

To view the individual element's data to see the changes:

- select
- (select the element)
- list

PROJECTING:

Make sure you have your tic mark ID numbers on hand, and know what the real world coordinates of their locations are (for now this guide will be using GCS). To view the tic ID numbers if you don't have them, go into arccedit, edit the correct coverage, and then:

- drawenvironment tic id
- draw

To start projecting, create an empty coverage back in arc:

- create [new coverage name] [name of the coverage being projected; this will only import the tic marks]

Go into arcinfo by typing info in arc, and make sure your caps lock is on (arcinfo requires it). When prompted, the username is ARC:

- SELECT [NEW COVERAGE NAME CREATED JUST ABOVE]. TIC
- LIST
- UPDATE PROMPT

When asked RECNO?, enter the first tic ID. For the LDTIC, enter the same tic ID. For the XTIC, enter the longitude coordinate. For the YTIC, enter the latitude coordinate. When all the tics are done and it asks RECNO? again, hit enter to stop and then enter Q STOP.

Back in arc, to transform the data, enter:

- transform [original coverage tic marks were imported from] [new coverage created just above]

This will stretch the data from the original coverage's tic marks to the new coverage's tic marks. A table will pop up displaying the results; if the x error and y error numbers are all exceptionally close to 0, then the transformation was a success.

However, draw the data back in arcedit; if the data looks ~90 degrees rotated, but otherwise correct, then repeat the whole projecting process again but switch the XTIC and YTIC values around for each tic.

Add the GCS projection information in arc. Below, the NAD27 datum will be used; but it can be substituted as well:

- projectdefine cover [created coverage]
- projection geographic
- units dd
- datum nad27
- parameters

Use the following command to check and make sure the projection information took:

- describe [created coverage]

Below is an example to convert the data from one coordinate system to another in arc; in this case to UTM:

- project cover [created coverage] [new, converted coverage name (in this case, the UTM coverage)]
- output
- projection UTM
- units meters
- zone [zone number goes here]
- datum nad27
- parameters
- end

EXPORTING:

To export the coverage into a convenient .e00 file, enter in arc:

- export cover [coverage name] [new file name].e00

Note though that these files cannot be imported into arcmap. Instead, simply import the raw coverage files straight into arcmap.

SHORTCUTS:

Quick tip: if the arcedit map window ever becomes unresponsive, simply draw the data again by using the draw command.

```
&stat = &station
&works = &workspace
de = drawenvironment
ef = editfeature
```