

Fixing Bounds for Michigan GeoREF in MapInfo to Display Western UP Correctly

MapInfo implemented a different version of Oblique Mercator than used in MichGeoRef. USGS requested MapInfo to build a Hotine Oblique Mercator projection for Alaska, quite some time ago. The version used in MichGeoRef is the Standard form. The important difference is the Hotine defines false grid coordinates at the natural origin, and the Standard uses the projection center. There should be no more than a few meters difference, and anything more is due to incorrect parameters. Blah...Blah...Blah...

To the point - the problem is with the default table (layer) bounds that are set by the universal translator when you translate the ESRI shape file into MapInfo. They bounds are not set far enough west. As a result all objects west of the bounds are compressed along the bounds line. If you try to draw any object west of it, it will also get placed on that line. I found a manual way to fix the bounds (there are probably others but this one is relatively easy and seems to work pretty well). Do the following steps:

1. Use the Universal Translator (a format conversion utility that comes with MapInfo) to translate the ESRI shape file but translate it to a MapInfo MID/MIF file instead of a MapInfo TAB file. This will create a Tablename.MIF and a Tablename.MID file. The MID/MIF format is a generic ASCII Import/Export format for MapInfo.
2. Open the Tablename.MIF file in a text editor such as Microsoft Word. (The file can easily take up over 1000 pages but you shouldn't have trouble opening it.
3. The first few lines of the Tablename.MIF file should look something like this:

```
VERSION 450
DELIMITER ","
CoordSys Earth Projection 7, 33, "m", -86, 45.3091666666, 337.25556, 0.9996,
2546731.4959999998, -4354009.8159999996
COLUMNS 2
    DISTRICT char(25)
    NDISTRICT decimal(8,0)
DATA
REGION 358
27771
414168.011391073 660965.791134957
414638.658549864 661034.209435463
...
```

4. Add a bounds clause to the CoordSys line so that it reads as follows:

```
CoordSys Earth Projection 7, 33, "m", -86, 45.3091666666, 337.25556, 0.9996,
2546731.4959999998, -4354009.8159999996 Bounds (0,0) (1000000,1000000)
```

5. Save the File.
6. Launch MapInfo and from the Table Menu select Import. Select the Tablename.MIF file that you just modified and open it. This will create the standard four .TAB, .MAP, .ID, .DAT tables.
7. Open the Table as you normally would and the Western UP should appear normal.

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