



Accessing Data Where it Lives

Session **3A**

Steve Carr –TSI

Tyson Haverkort – Safe Software



Session Description

We'll discuss many types of data that can be used in MapInfo Professional such as:

Business Data

Vector Data

Raster Data

GPS Data

Grid Data

Public Data



Business Data

- What does MapInfo Professional support?
 - Flat Files
 - DBF, MDB, XLS, TXT, CSV, WK*
 - Use File > Open
 - ODBC Connections
 - MS Access, Oracle, SQL Server, OCI Spatial
 - And any other ODBC enabled database
 - IBM, Informix
 - File > Open DBMS Connection



Business Data

- What is the purpose of the data?
 - Describe existing geographies?
 - Join data with a common denominator to geography
 - Query > SQL Select
 - Table > Update Column
 - Map > Create Thematic Map (Join)
 - View as Points?
 - Presence of Longitude / Latitude
 - Create Points
 - Presence of Addresses
 - Geocoding
 - Not all data needs to be geocoded!



Vector Data

What is Vector Data?

Vector data consists of points, lines, polylines, and polygons.

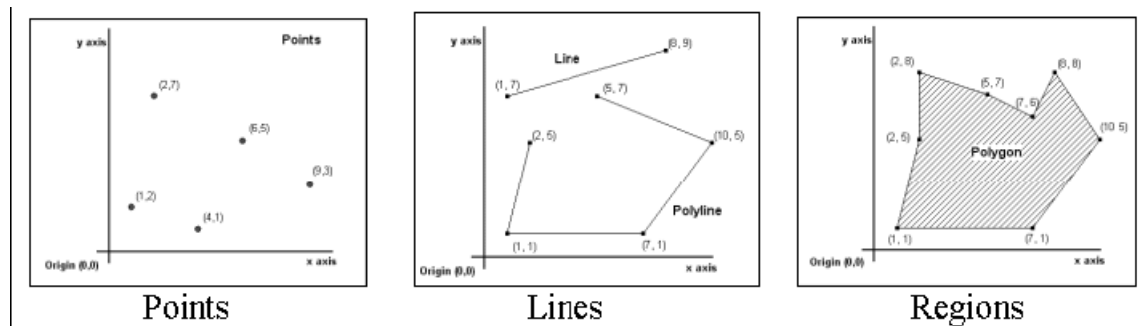
Described by one or more points within a coordinate system.

- A Point is an x,y value.
- A Line is a linear feature that has a beginning and ending x,y value. Has length and orientation.
- A Polyline is a linear feature with multiple nodes serving as inflection points. Has length and orientation.
- A Polygon is a closed feature with multiple nodes serving as inflection points. Has area and perimeter.
- These are known as “objects” and spatial analysis can be performed on them.



Vector Data

- What kind of vector data does MapInfo Professional support?
 - MapInfo Tables
 - MapInfo Interchange Files
 - E00, SHP, DXF, DWG, DGN, SDTS, VPF, GML
 - SpatialWare





How to Introduce Vector data into MapInfo Professional?

- Flat Files
 - File > Open
- External Databases
 - File > Open DBMS Table
- E00, SHP, DXF, DWG, DGN, SDTS, VPF
 - Tools > Universal Translator
 - Table > Import
- Vector Registration Utility



Universal Data in MapInfo

- What can I do with Universal data?
 - Access data in it's native format – great performance!
 - Includes attributes, symbology and coordinate system.
 - Changes to the underlying data are reflected in MapInfo



Extending Universal Data with FME

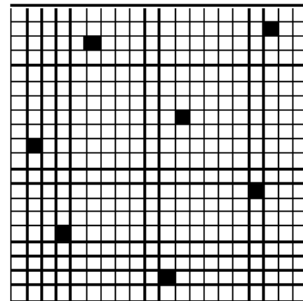
- Installing FME adds:
 - Many more formats, including the new SQLServer Spatial
 - The ability to create and use custom formats



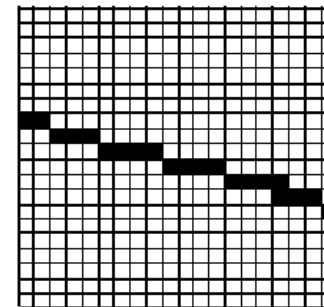
Raster Data

What is Raster Data?

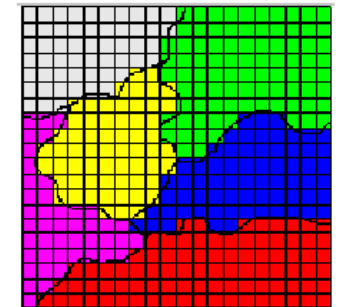
- Raster data represents features as a rectangular matrix of square cells.
 - Scanned maps
 - Aerial Photography
 - Oblique Photography
 - Logos
 - Even Clipart



Points



Lines



Regions



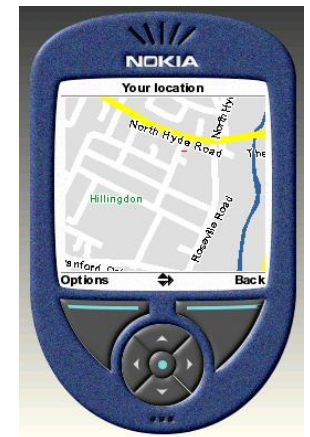
Raster Data

- JPEG, GIF, TIFF, PCX, BMP, TGA (Targa), and BIL (SPOT satellite).
 - Images are to be REGISTERED
 - No attributes can be attached
 - Georectified
 - North always points up!
- Use File > Open
- Don't forget clip art and logos!



GPS

- What does MapInfo Professional support?
 - Blue Marble
 - GPS export to DBF, XLS
- MapInfo Professional expects a certain format:
 - Decimal Degrees
- Though:
 - Degrees Minutes and Seconds can be converted
 - Tools > Degree Converter
 - Eastings and Northings can be read
 - Table > Create Points





GRID

- GRID Defined:
 - Continuous shading of cells to represent a naturally occurring phenomena such as elevation, temperature. Though can be applied to business data such crime analysis, concentration of risk.
 - GRD, MIG, DEM, DTED
 - Does the data have geography?



Public Data

- National Data
 - US Census Data: www.census.gov
 - USGS: www.usgs.gov
 - NOAA: www.noaa.gov
 - NASA: www.nasa.gov
- Regional Data
 - Google / Yahoo “GIS Clearinghouse”
 - NYS GIS Clearinghouse:
 - <http://www.nysgis.state.ny.us/>
 - GA GIS Clearinghouse:
 - <https://gis1.state.ga.us/>
 - Alaska Region GIS Clearinghouse:
 - <http://www.nps.gov/akso/gis/>
 - GIS Data Depot:
 - <http://data.geocomm.com/>



Public Data

- Most popular formats
 - MIF, GRD, E00, SHP, and, of course, TAB
- Considerations:
 - If Raster
 - Is the data registered?
 - Source, Vintage, Licensing
 - If Vector
 - Source, Vintage, Licensing



Public Data

WFS & WMS

(Web Feature Service & Web Mapping Service)

File > Open Web Service

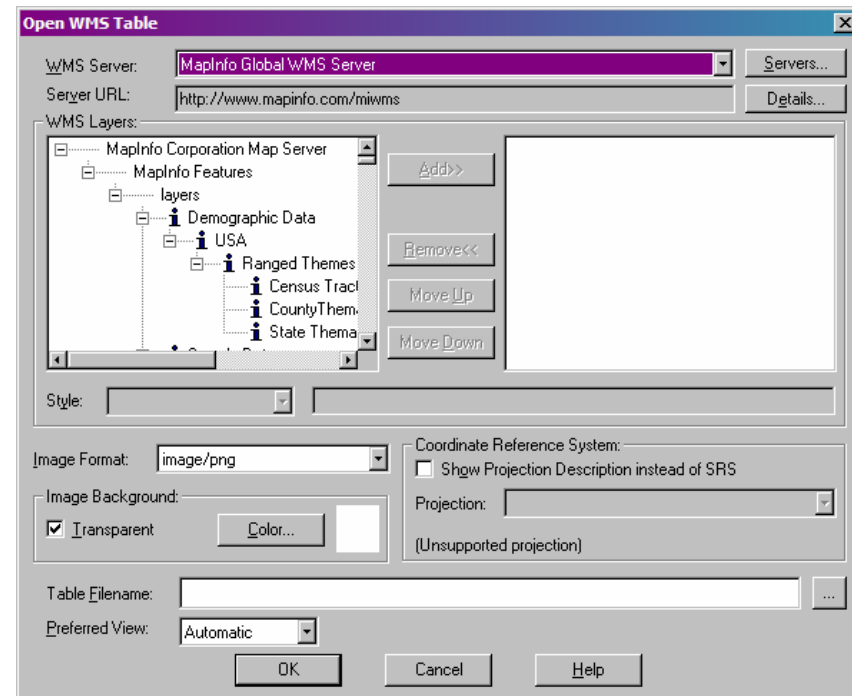
- Supports any OGC (Open Geospatial Consortium) compliant WFS or WMS server
- Internet or Intranet



Public Data

WMS:

- Web Mapping Service
- Raster Data
- Free / Paid

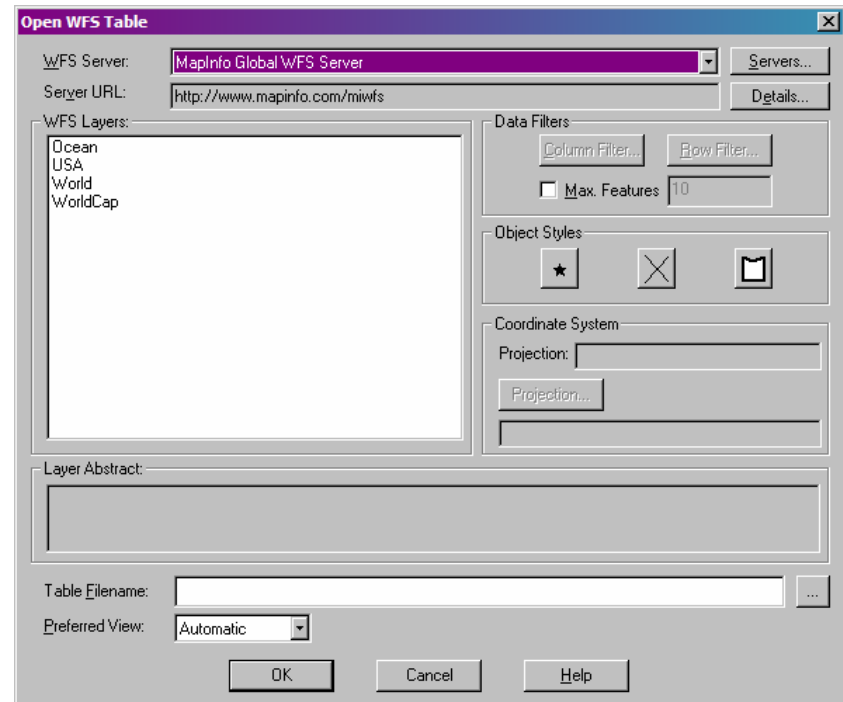




Public Data

WFS:

- Web Feature Service
- Vector Data
- Row / Column Filters
- Free / Paid





Summary

- MapInfo Professional supports a variety of data ranging from:
 - Vector data, Raster data, Grid data, other mapping application data
- Determine the file type will dictate how to open the data
 - File > Open?
 - File > Open DBMS?
 - Tools > Universal Translator?
 - File > Open Web Service?



Thank You!

Steve Carr –TSI

www.tsimapping.com

Steve@tsimapping.com

Tyson Haverkort – Safe Software

www.safe.com

Tyson@safe.com