INTRODUCTION TO MAPINFO/DISCOVER
SHORT COURSE PROPOSAL

Course Title

Introduction to MapInfo Professional/Discover for Geologists

Course Description

Utilizing MapInfo Professional and Encom Discover software, the course provides an introduction to the basics of GIS concepts and the elements of desktop mapping. MapInfo Professional and Encom software are recognized as current industry standards. The software combination, designed especially for the geosciences, provides the tools to effectively compile, visualize, analyze and map spatial geosciences data. The course consists of a series of lectures and hands-on exercises using geological data to build maps and visualize data. The course has been customized to allow participants to work with their own data sets and produce maps and data analysis which they can immediately implement.

Specific Objectives

Participants will learn how to:
- Use MapInfo's interface to open and manage map files. Utilize Discover's Enhanced Layer Control to manage multiple map windows.
- Understand and use MapInfo's map layering system.
- Build geological datasets - Import Excel files, delimited ASCII files, AutoCAD dxf files into MapInfo Professional. Rectify and manipulate raster images.
- Geocode and create points for data sets. Turn your database of geochem samples into points on a map.
- Perform querying and geographic searching of maps and data. Query your maps and databases for information you need to get your job done.
- Color code maps using symbols for geochem data, lineaments, rock units (a.k.a.). Thematic Mapping
- Create a geologic map using on-screen digitizing, build polygons from your linework, edit the objects created, use Autotrace to trace existing objects, create a color table, attribute and color your map.
- Retrieve map data from Web Mapping Services
- Utilize Discover to produce high-quality scaled output with grids and a title block. Use the layout window to produce high-quality scaled geological maps for the plotter, Word document or the Internet.
- Review additional useful MapInfo tools and utilities.

Course Audience – Who Should Attend?

The course is designed for geologists, cartographers, exploration managers, exploration technicians, students, and others involved with GIS and map making in mineral exploration. The course is recommended for any professional who wishes to learn how to utilize the powerful data analysis and mapping tools of MapInfo Professional and Encom Discover.

Estimated # of Pages of Course Notes

200 pages

Course Duration

2 days

Course Outline

Day One	Day Two
Basics of Desktop Mapping Exercise 1 (using a different dataset)	Creating a Geologic Map Exercise 7 (using a different dataset)
Mapping in Layers Exercise 2 (using a different dataset)	Retrieving Map Data from Web Mapping Services
Building Geological Datasets Exercise 3 (using a different dataset)	Working with Layouts
Creating Points on a Map Exercise 4 (using a different dataset)	Embedding a MapInfo Map in Other Programs
Using Queries Exercise 5 (using a different dataset)	Useful MapInfo Utilities
Using Thematic Mapping to Analyze your Data Exercise 6 (using a different dataset)	

Prerequisites:

Windows familiarity is required and knowledge of MS Excel is beneficial. No previous experience with MapInfo is necessary. Each attendee is required to provide their own laptop. An evaluation license for both MapInfo and Discover will be provided for the duration of the course. Attendees are encouraged to bring their own data sets.

Special Features

The course provides each attendee with a workbook, documentation, data sets and an evaluation license to the current versions of both MapInfo and Discover. See attached Table of Contents for content from course workbook.

Course Instructor

Barbara Carroll
Barbara Carroll is a Principal Consultant and Founder of GeoGRAFX. Her firm provides professional and technical geological services and products to the resource exploration and mining industries worldwide. Ms. Carroll is a geologist with over 30 years of wide ranging international exploration experience in the mining industry. Immediately prior to forming GeoGRAFX, Ms. Carroll served as Project Manager for Phelps Dodge Mining Co.'s Jerome Project, a multi-million dollar preliminary evaluation of the remaining potential of the United Verde Mine in Arizona which resulted in completion of a new geologic model and preliminary resource estimate. Prior to working for Phelps Dodge, she was Systems Geologist at Battle Mountain Gold Co., and responsible for resource evaluation and selection and support of software/hardware for all US

Exploration offices as well as remote computer communications. She has extensive experience in construction of geologic models and resource/reserve estimation, as well as creation and management of GIS databases.

Course History:

This course was developed in response to the requests of geologists and mining consultants who recognize the need to expand and update their skill set. In the highly competitive world of mining, the ability to quickly and easily map and analyze data has become increasingly important. MapInfo Professional and Encom Discover software are the industry data analysis tools of choice.

The course has been presented throughout the US, Central / South America and Canada. The course has been customized to allow participants to utilize their own data sets, which allows the participants to take away a completed project for immediate use.

Course Outline (taken from workbook)

Lesson 1: Basics of Desktop Mapping
  Starting MapInfo
  Viewing your Map
  Toolbars
  Discover User Interface
  Button Bars and Icons
  MapInfo Browser Window
  Make the geology bigger
  Organize the Screen
  Saving Time with Workspaces
  Finding Information

Exercise 1 (a different dataset)

Setting Preferred Distance and Area Units

Lesson 2: Mapping in Layers
  Maps as Layers
  Layering your Data
  Working with Layers
  Discover - Enhanced Layer Control
  ECL Pop-Up Menu Options
  ELC Layer Controls
  ELC Layer Pop-Up Menu Options
  ELC Previous View
  Selective Layering
  Labeling your Layers

Exercise 2 (a different dataset)
  Browser windows

Lesson 3: Build Geological Datasets
  Introduction
  Import an Excel Spreadsheet
  Import an ASCII delimited file (.CSV)
  Import AutoCAD .dxf files
  Comparison of DXF Import – MapInfo,
  Universal Translator or Discover
  Opening a Registered Raster Image
  Opening a GeoReferenced Image
  Registering a Raster Image
  Adjust Image Styles

Exercise 3 (a different dataset)

Lesson 4: Creating Points on a Map
  Introduction
  Assigning Co-ordinates

Map Projections and Datums
Creating Points
Assigning Co-ordinates

Exercise 4 (a different dataset)
  Assigning Co-ordinates

Lesson 5: Using Queries
  Introduction
  Using the Select Tool
  Using Find command (Query menu)
  Using the Radius Select Tool
  Using the Boundary Select Tool
  Using the Marquee Select Tool
  Selecting By Query

Exercise 5 (a different dataset)
  Introduction
  Query Select

Lesson 6: Using Thematic Mapping to Analyze your Data
  Introduction
  Creating a Ranged Map
  Using Graduated Symbols

Saving a Theme to a Table

Exercise 6 (a different dataset)
  Individual Themes
  Highlighting particular Objects

Lesson 7: Creating a Geologic Map
  On-Screen Digitizing
  Clean Linework
  Building Polygons
  Object Editing
  Using Autotrace to Trace Existing
  Objects
  Add Attributes to Polygons
  Building a Color Table
  Attributing and Coloring the Map
  Line Annotation
  Labeling
  Final Map

Lesson8 - Retrieving Map Data from Web Map Services