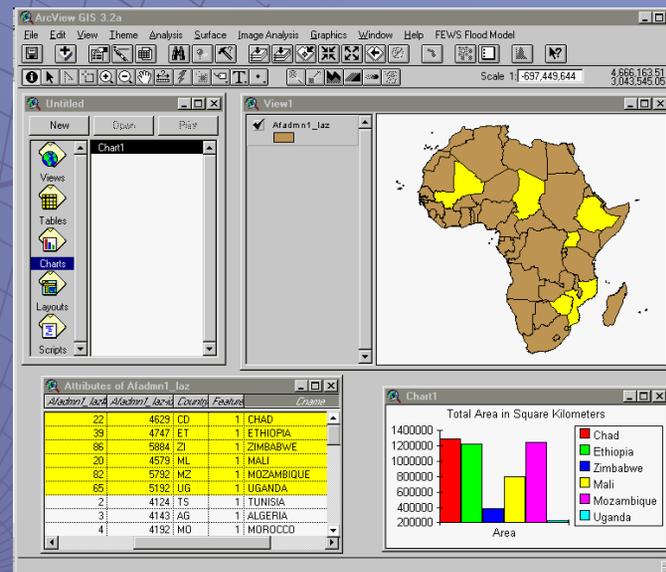




Introduction to ArcView 3.2a

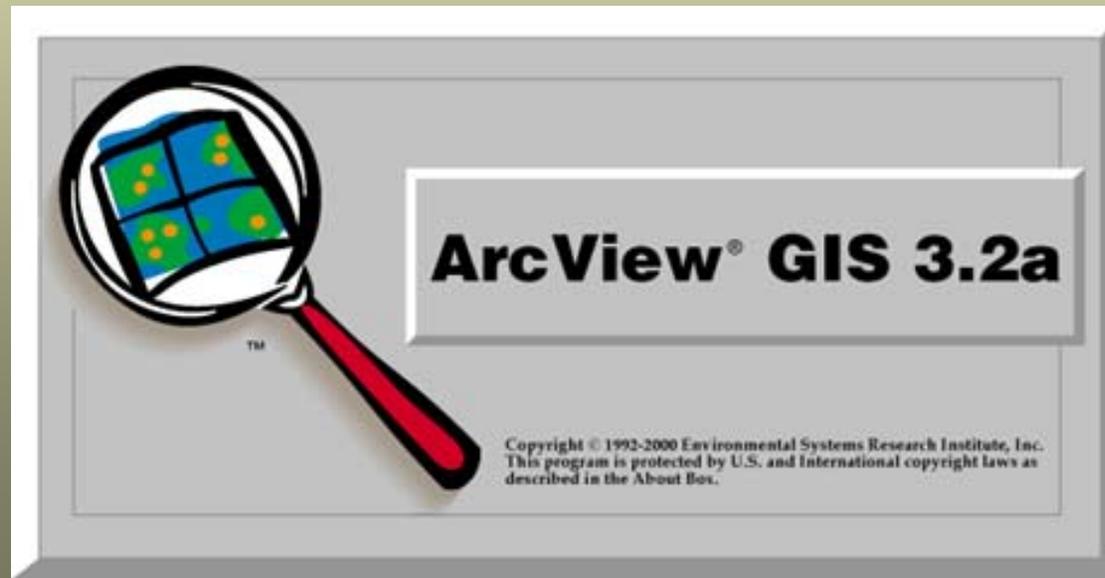


Training Center
U.S. Geological Survey
Center for Earth Resources
Observation and Science (EROS)
Sioux Falls, South Dakota, USA

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Introduction to ArcView 3.2a



Introduction to ArcView 3.2a

Course Outline

1. ArcView Basics
2. Getting data into ArcView
3. Displaying Themes
4. Working with Tables

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ArcView Basics



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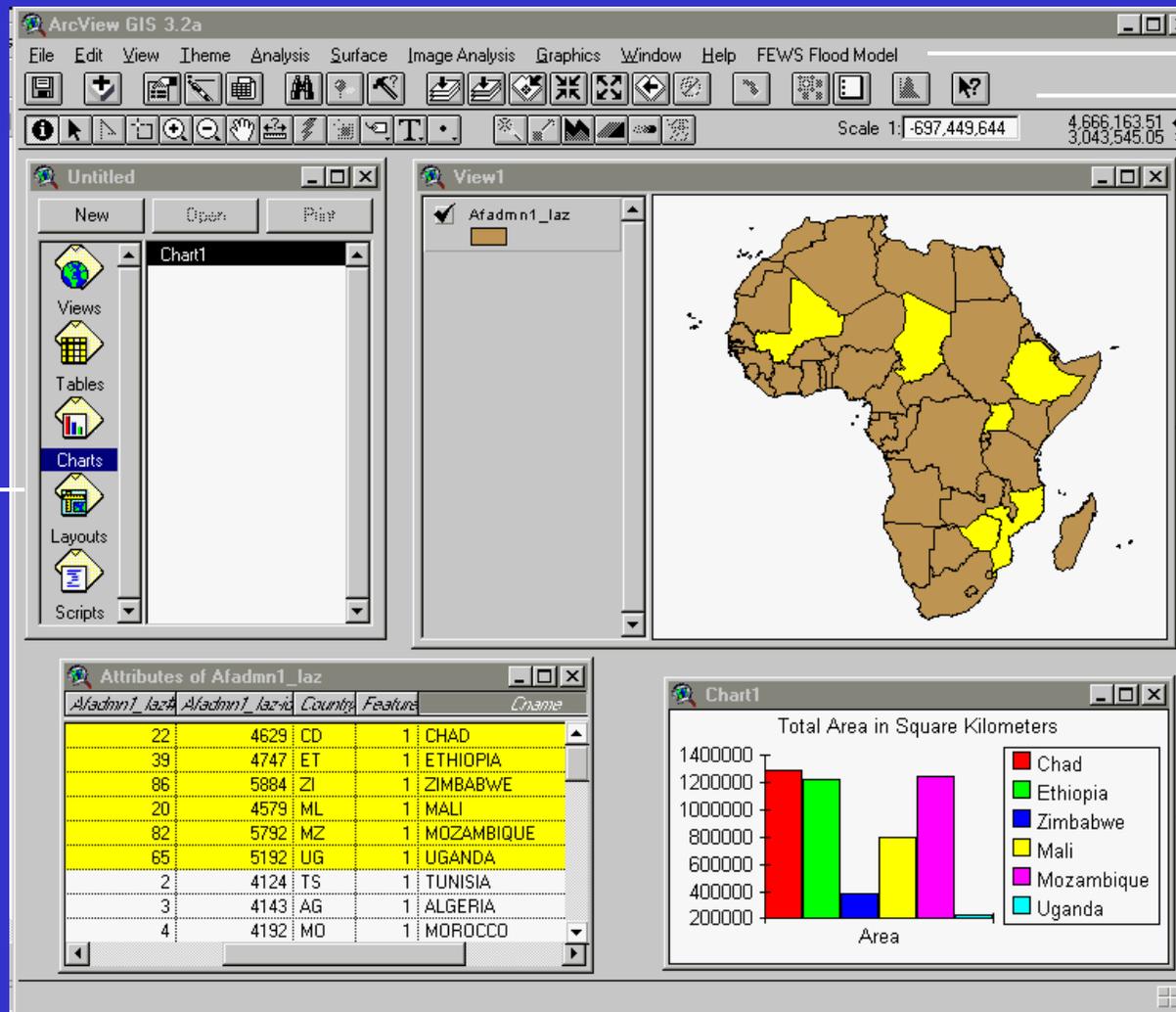


ArcView Introduction

Exploring the ArcView Interface:

Graphical User Interface (GUI)

Project Window



Menu Bar

Button Bar

Tool Bar

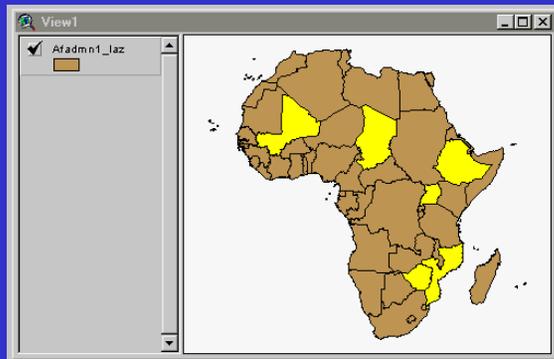
Document Windows



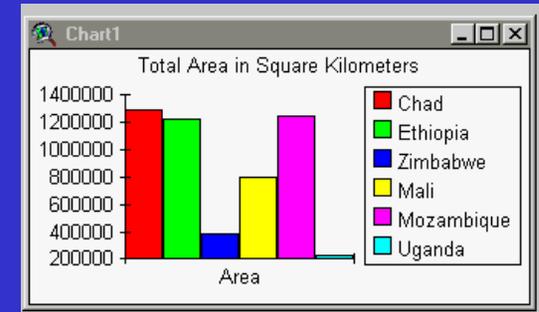
Introducing Document Windows:

All data sources supported by ArcView are presented in their own window called a "document window."

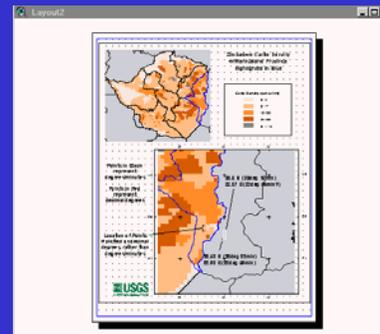
View



Chart



Layout



Script

```

Script2
View_BatchImportE00

Allows batch conversion of Arc/INFO e00 files from ArcView
Using the Import71 Utility included in ArcView

User is shown a file dialog to select e00 files to import,
then a file dialog to select the output directory (only) for
the new Arc/INFO coverages. The script will then convert each
selected e00 to an Arc/INFO coverage. If run from a view,
the user will be given the choice of adding the new coverages
via the "Add Theme" dialog. May take a long time to run.

Requires the Import71 utility to exist in the \\arcview\bin32 direct
Windows 95, 98, or NT only

Author: Tim Johnson, Maricopa County Elections Department
(the backbone of this script is from the "E00 Importer" scrip
from Bill Dollins but it uses 'system.ExecuteSynchronous' i
a call to the dll to avoid segmentation violations and allo
    
```

Table

Afadm1_laz#	Afadm1_laz	Country	Feature	Cname
22	4629	CD	1	CHAD
39	4747	ET	1	ETHIOPIA
86	5884	ZI	1	ZIMBABWE
20	4579	ML	1	MALI
82	5792	MZ	1	MOZAMBIQUE
65	5192	UG	1	UGANDA
2	4124	TS	1	TUNISIA
3	4143	AG	1	ALGERIA
4	4192	MO	1	MOROCCO



ArcView Graphical User Interfaces (GUI's):

The tools visible in the GUI vary depending on the type of document window you are working with. Each window has it's own GUI palette.

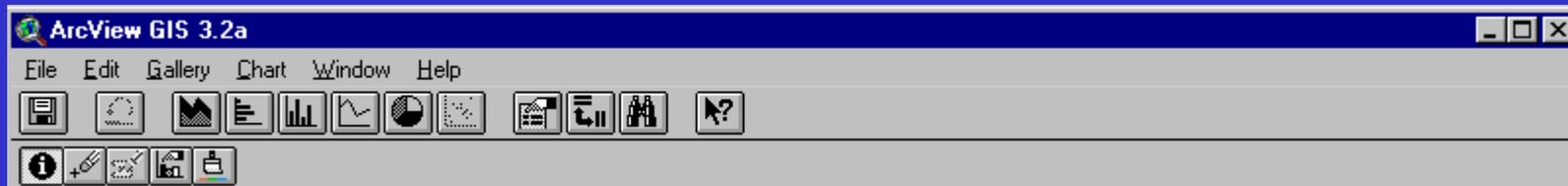
View



Table



Chart

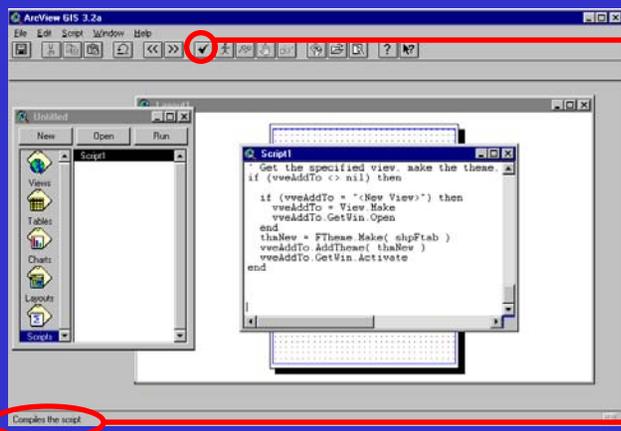


GUI's cont'd.

Layout



Script



Tool tips appear at the bottom of the interface when the cursor is placed over a button.

Compiles the script

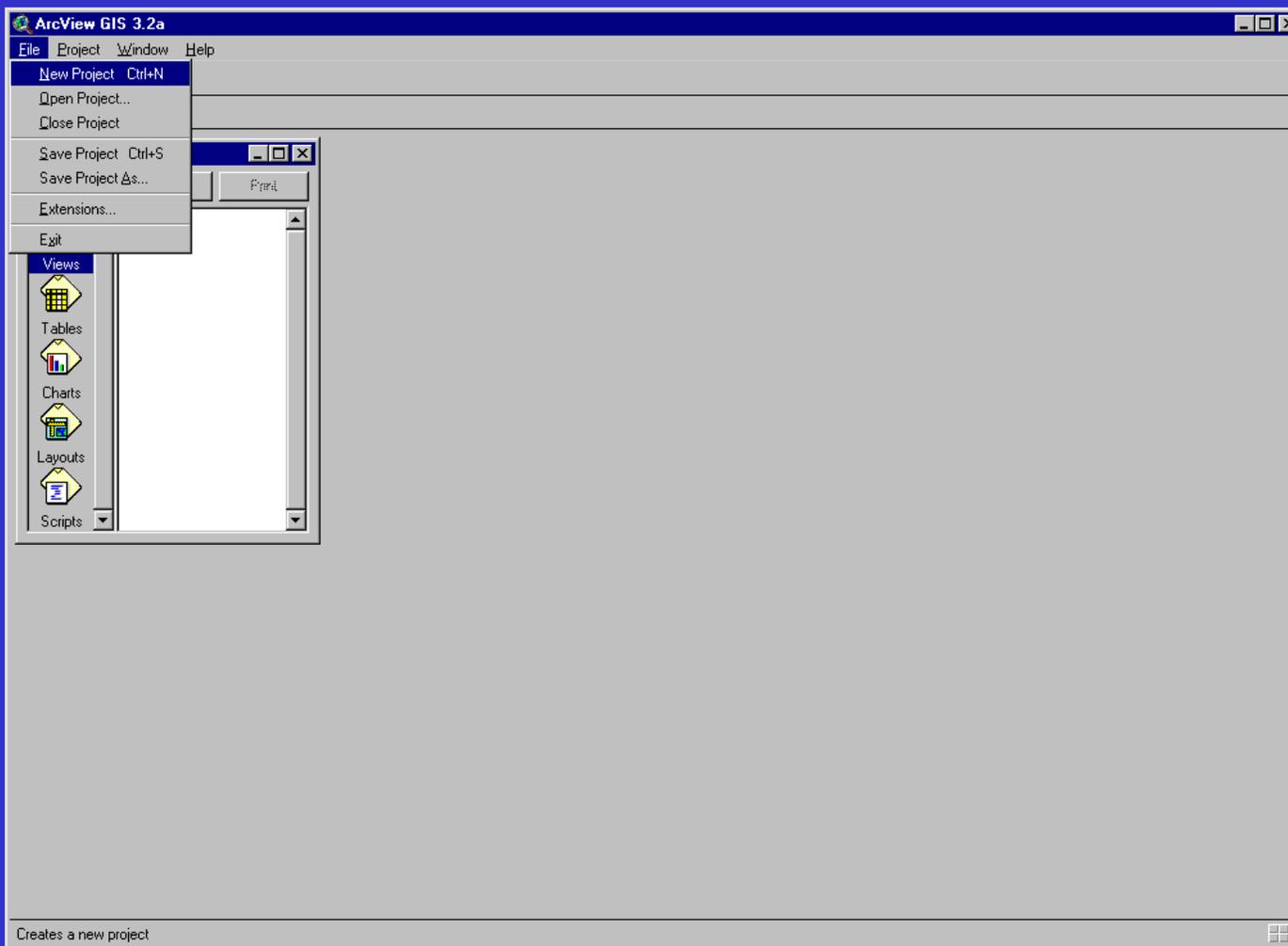
A quick reference of button functions is included in the training materials.

ArcView Projects

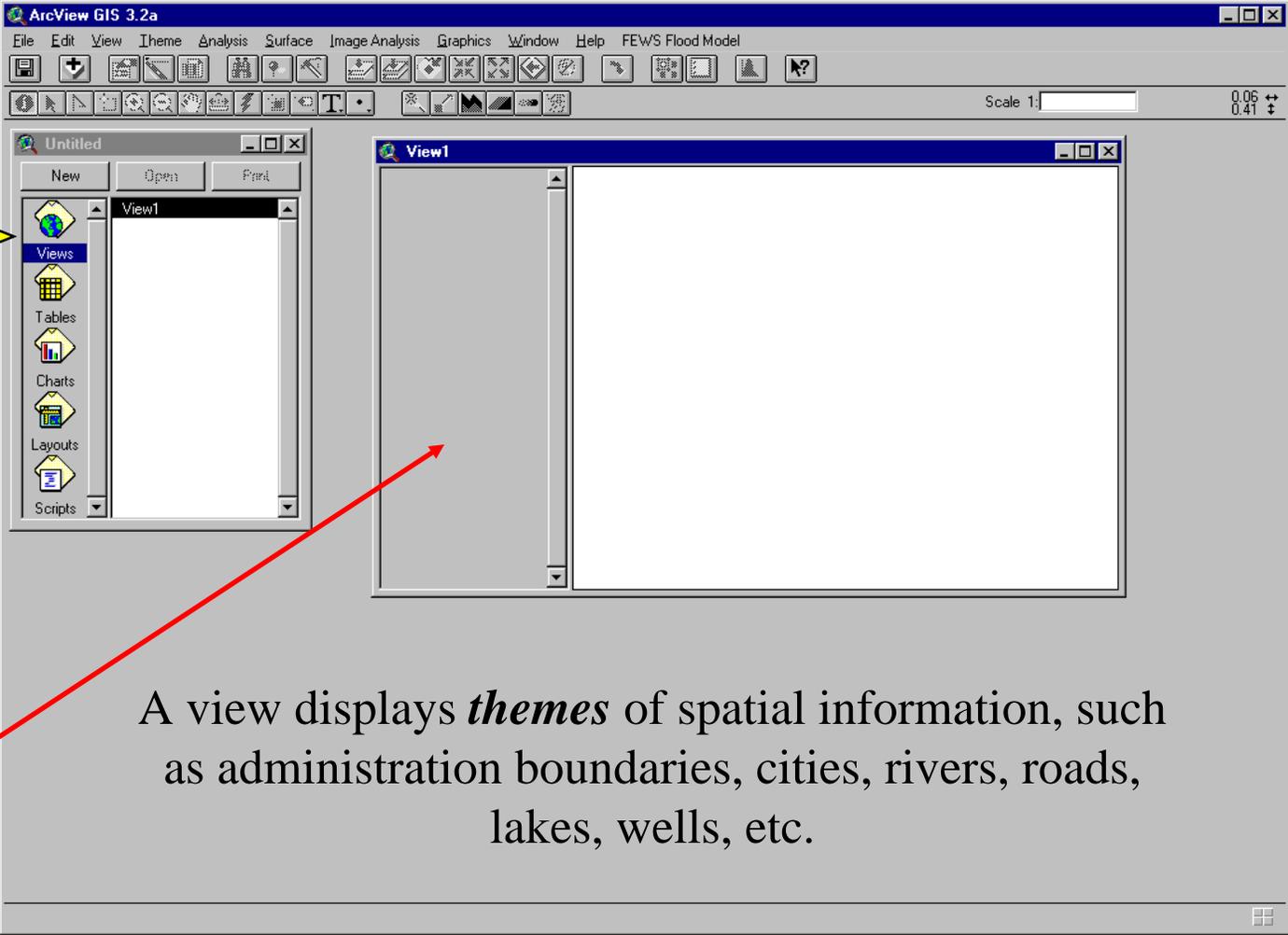
- ❖ All activities in ArcView are conducted within a “project”.
- ❖ A project is simply a collection of associated documents that you work with during an ArcView session (views, charts, tables, layouts, or scripts).
- ❖ Only one project can be open during any given session.
- ❖ An ASCII formatted text file (.apr) stores project information.
- ❖ When you save a project you are saving a snapshot of the state of ArcView at the time of the save, including paths to the data used in the project.



Opening a New Project:



Adding a View document to the project:



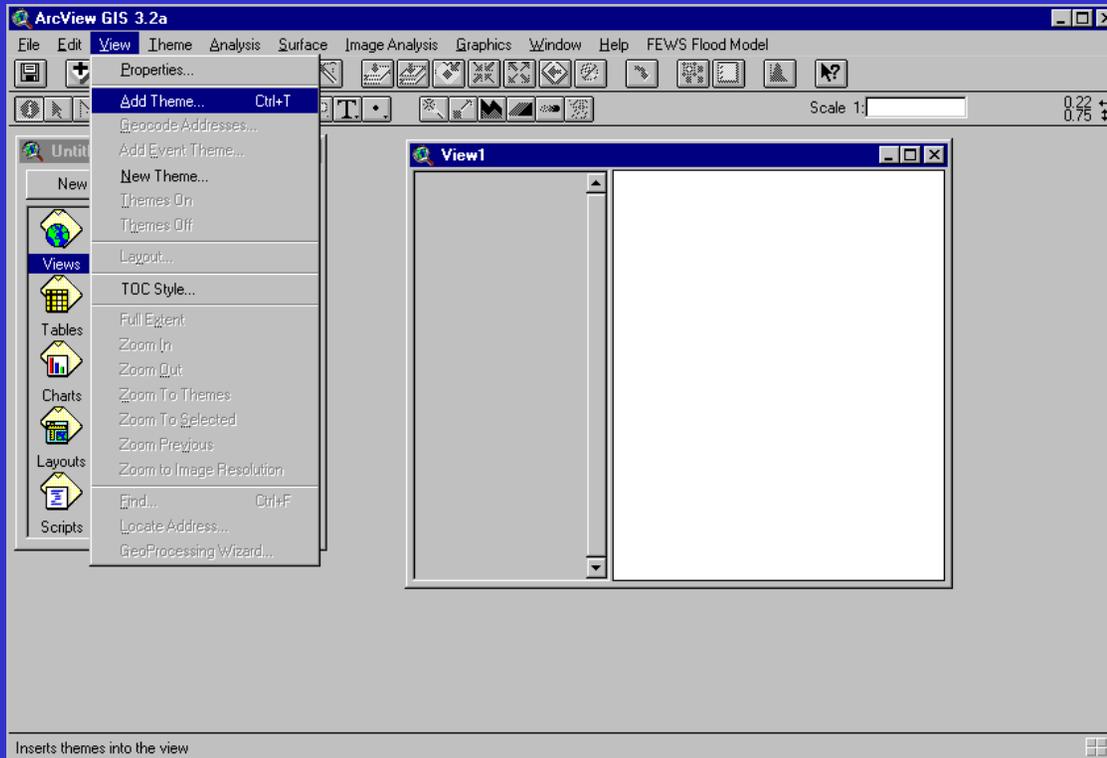
Select Views / New

Each View Contains a Table of Contents which lists all themes in that view

A view displays *themes* of spatial information, such as administration boundaries, cities, rivers, roads, lakes, wells, etc.

Introducing Themes:

Menu Bar (View..Add Themes)



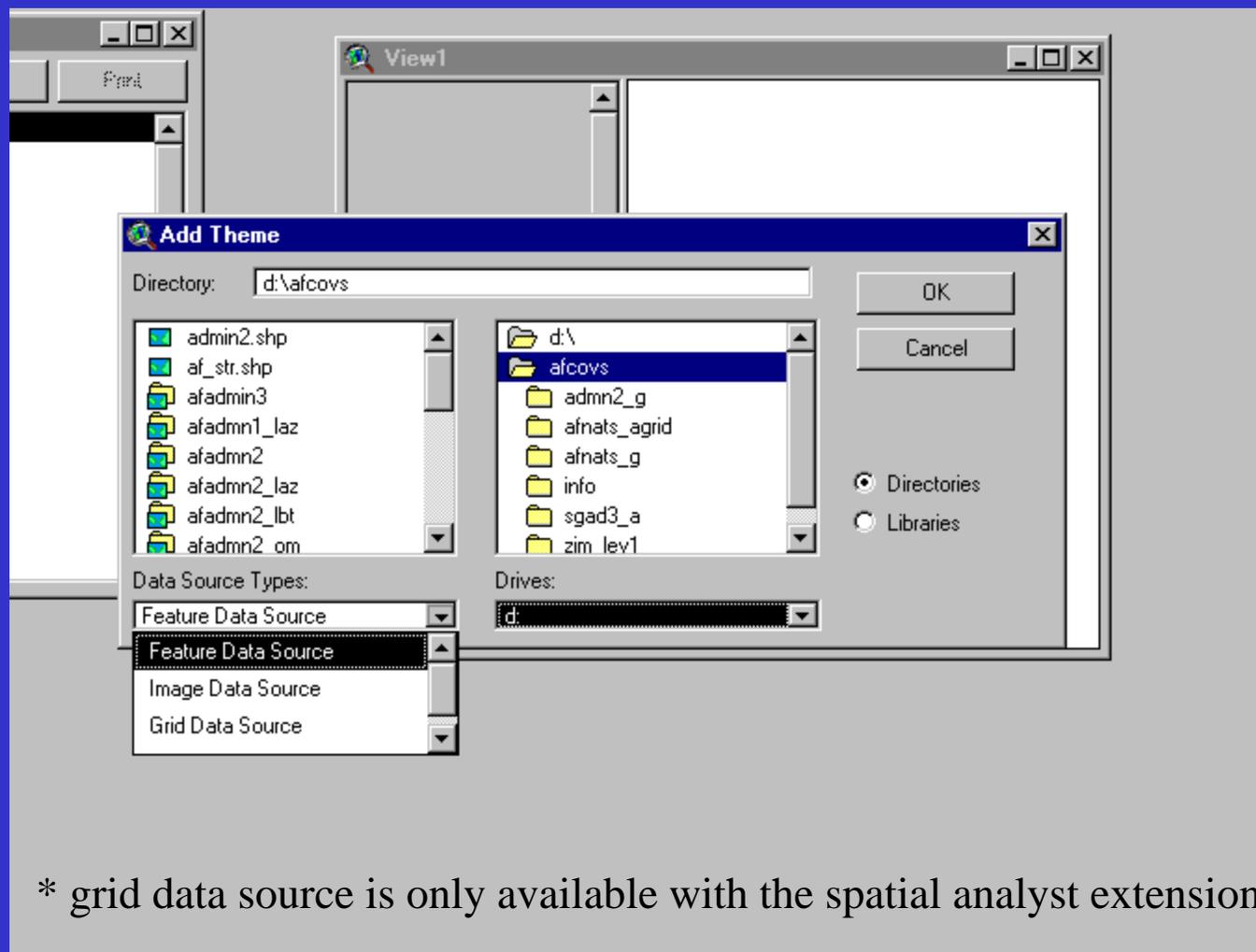
Two ways to add themes to a view

Button Bar



Adding Themes:

The add themes dialog allows the user to select different data source types



Feature Data Sources:

- ArcView Shapefiles
- Arc/Info Coverages (point,line,polygon)

Image Data Sources:

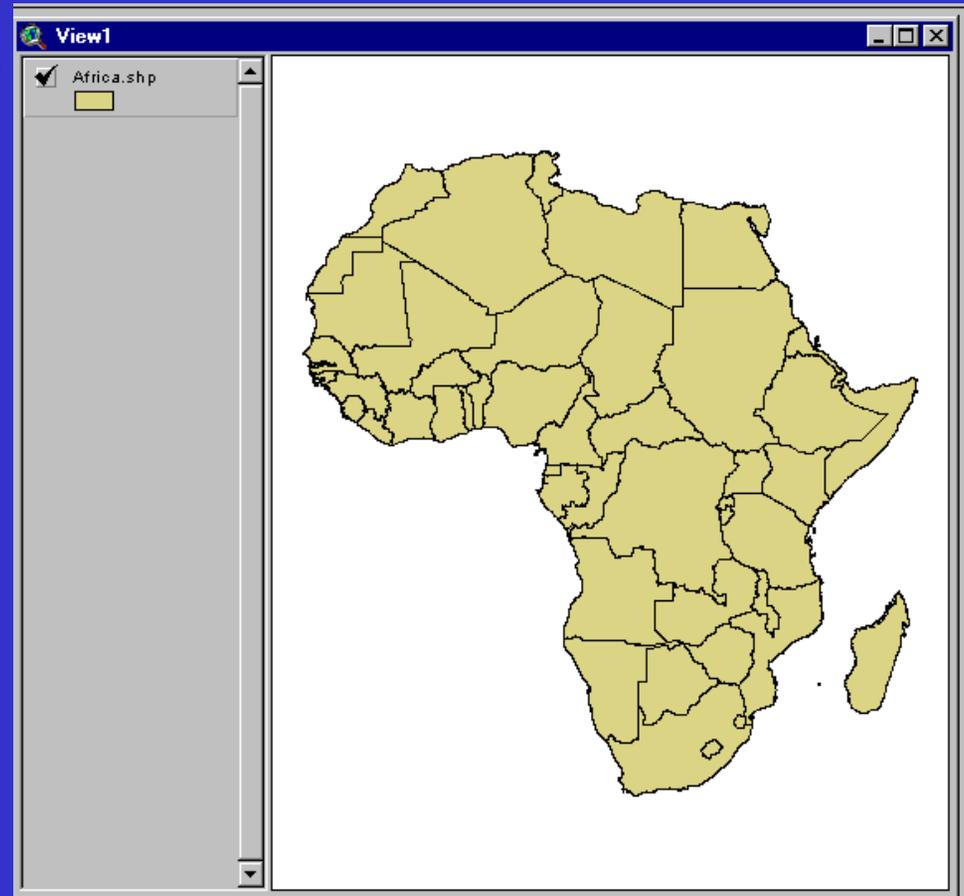
- Proprietary Image Formats (ERDAS,etc.)
- Binary Image Files (.bil,.bsq,.bip,etc.)
- Graphic Image Files (.jpg and .bmp)

Grid Data Sources:

- Gridded Geographic Data (spatial analyst)

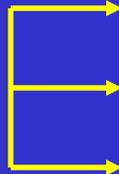
Displaying Themes in a View:

Check boxes
Turn Themes
On/Off



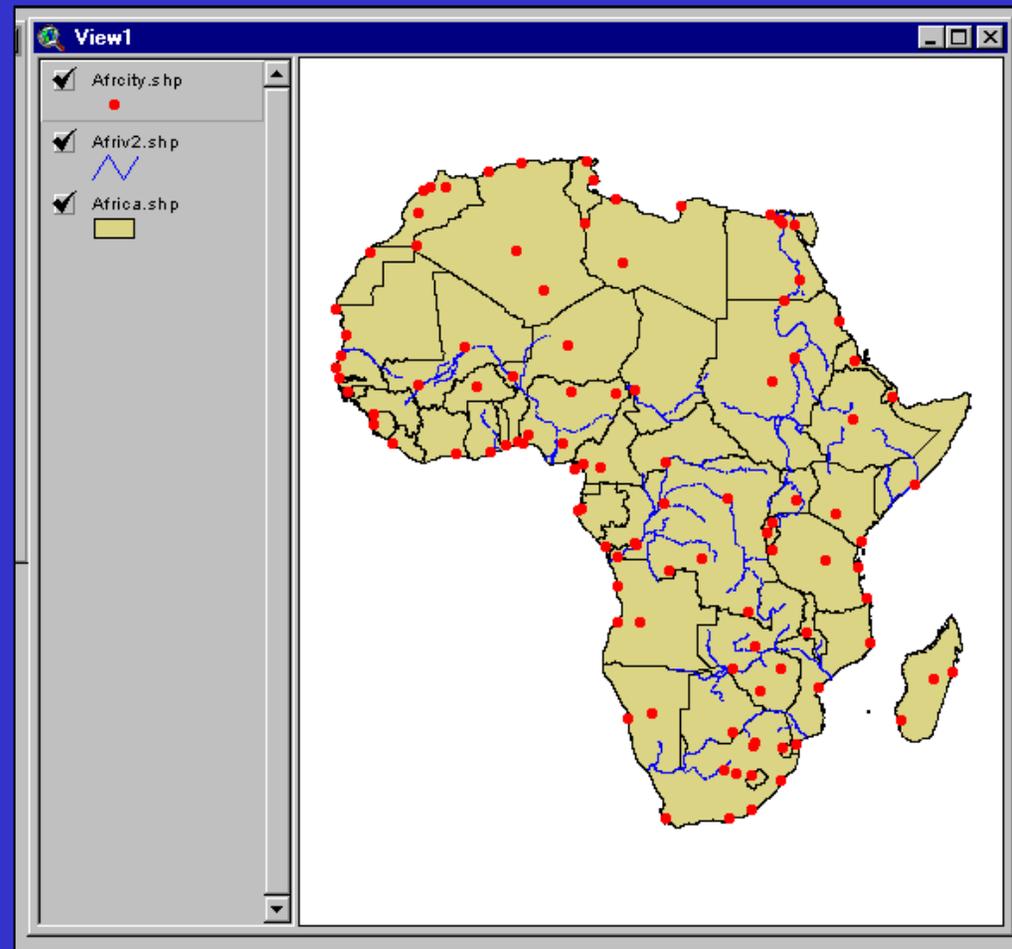
Multiple Theme Display:

Themes display in the order they are stacked in the view's table of contents.



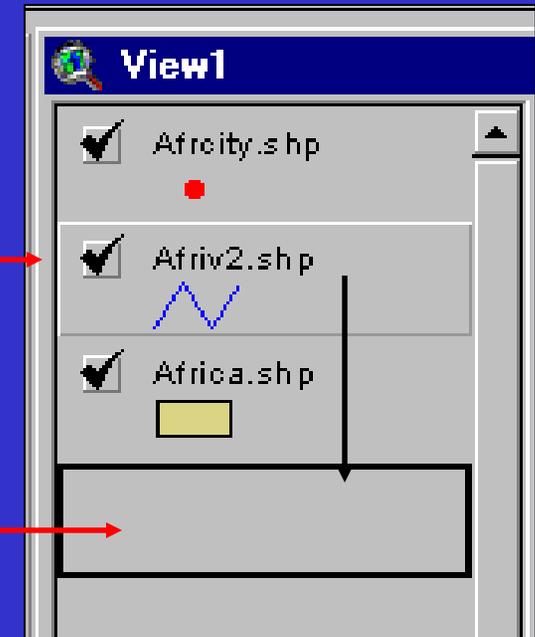
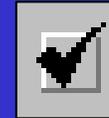
Types of Themes:

- 1) Point (cities)
- 2) Line (rivers)
- 3) Polygon (admin)



Managing Themes:

- 1) Turn themes on/off using check boxes.
- 2) Select themes in the table of contents to make them active*. Active themes appear raised.
- 3) Change the order of themes in the table of contents by clicking and dragging the theme to the desired location.



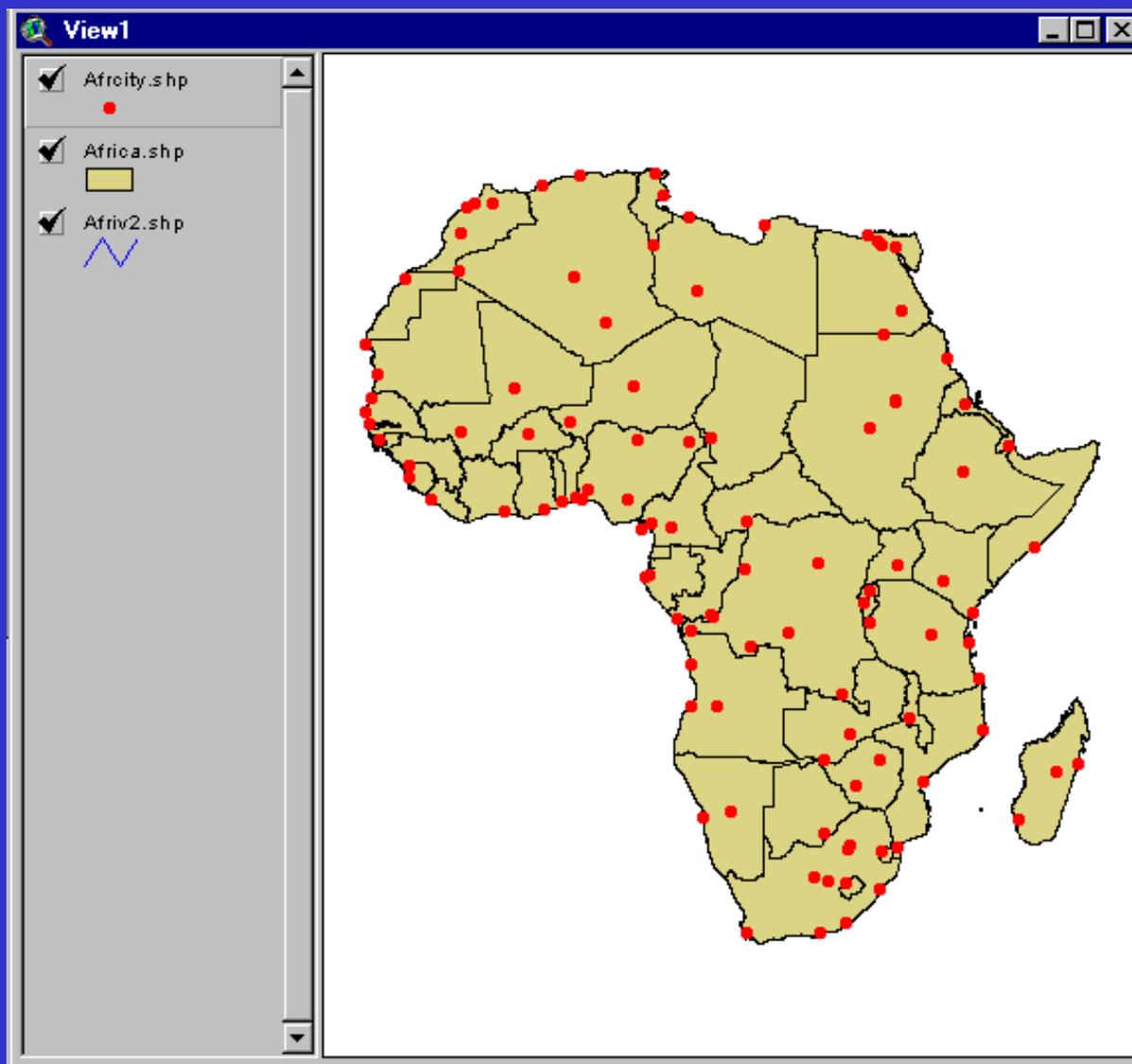
* Many operations can only be performed on active themes

Theme Ordering:

Changing the order of themes can result in some themes being hidden even though they are turned on.

In this case, the rivers theme is “behind” the africa.shp theme.

Logical ordering of themes is necessary to create effective maps.



Introducing Tables:

- A document for displaying tabular information
- Formatted into records (rows) and fields (columns)
- Contains descriptive information about theme features

Fields

Records

Shape	Area	Perimeter	Cities	Cities_id	Name	Country	Population	Capital
Point	0.000	0.000	137	181	Tunis	Tunisia	1225000	Y
Point	0.000	0.000	162	210	Fes	Morocco	535000	N
Point	0.000	0.000	181	241	Cairo	Egypt	9300000	Y
Point	0.000	0.000	220	296	Bur Sudan	Sudan	206727	N
Point	0.000	0.000	234	322	Niamey	Niger	398265	Y
Point	0.000	0.000	237	326	Bamako	Mali	646163	Y
Point	0.000	0.000	246	344	Ibadan	Nigeria	1144000	N
Point	0.000	0.000	248	350	Enugu	Nigeria	252500	N
Point	0.000	0.000	250	355	Accra	Ghana	1250000	Y
Point	0.000	0.000	251	356	Abidjan	Ivory Coast	1950000	Y
Point	0.000	0.000	253	359	Bangui	Cent Af Rep	473817	Y
Point	0.000	0.000	254	361	Yaounde	Cameroon	653670	Y
Point	0.000	0.000	258	365	Muqdisho	Somalia	600000	Y
Point	0.000	0.000	259	367	Kisangani	Zaire	282650	N
Point	0.000	0.000	263	377	Brazzaville	Congo	585812	Y

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ArcView Introduction

Tables provide the ability to...

- **display** descriptive data
- **query** data fields
- **analyze** information

Shape	Area	Perimeter	Cities	Cities_id	Name	Country	Population	Capital
Point	0.000	0.000	181	241	Cairo	Egypt	9300000	Y
Point	0.000	0.000	283	414	Johannesburg	South Africa	3650000	N
Point	0.000	0.000	403	235	Alexandria	Egypt	3350000	N
Point	0.000	0.000	526	1203	Lagos	Nigeria	3800000	Y
Point	0.000	0.000	137	181	Tunis	Tunisia	1225000	Y
Point	0.000	0.000	162	210	Fes	Morocco	533000	N
Point	0.000	0.000	220	296	Bur Sudan	Sudan	206727	N
Point	0.000	0.000	234	322	Niamey	Niger	398265	Y
Point	0.000	0.000	237	326	Bamako	Mali	646163	Y
Point	0.000	0.000	246	344	Ibadan	Nigeria	1144000	N
Point	0.000	0.000	248	350	Enugu	Nigeria	252500	N
Point	0.000	0.000	250	355	Accra	Ghana	1250000	Y
Point	0.000	0.000	251	356	Abidjan	Ivory Coast	1950000	Y
Point	0.000	0.000	253	359	Bangui	Cent Af Rep	473817	Y
Point	0.000	0.000	254	361	Yaounde	Cameroun	653670	Y

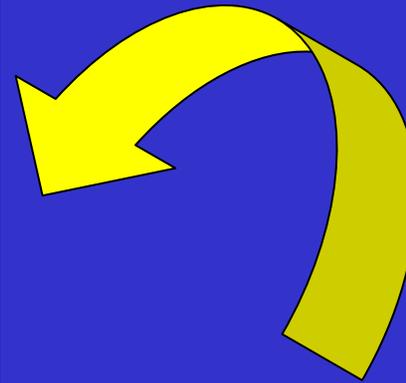
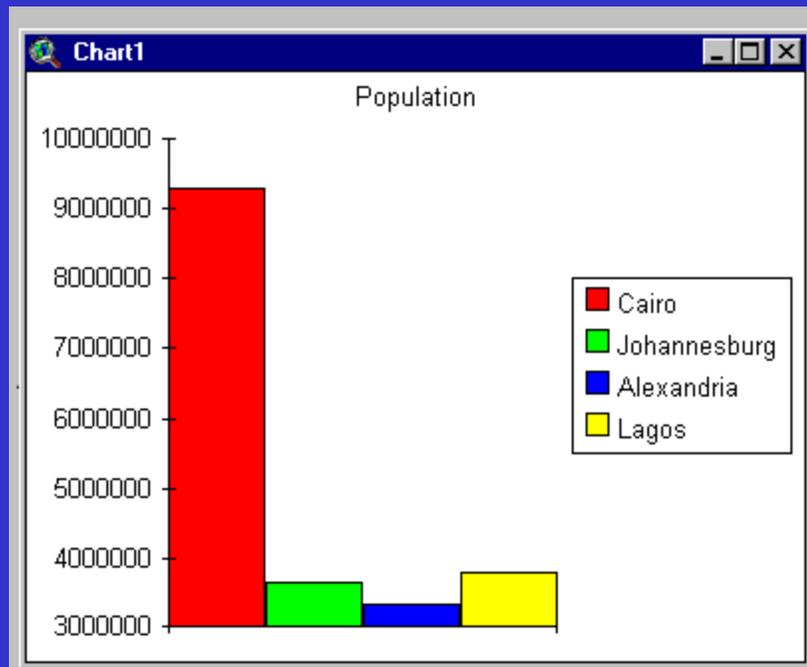
Selected cities with a population greater than 3,000,000

Four Field Types

- 1) Character
- 2) Numeric
- 3) Date
- 4) Boolean (y/n, t/f)

Introducing Charts:

- Graphic display of tabular data
- Attribute information can be visually compared

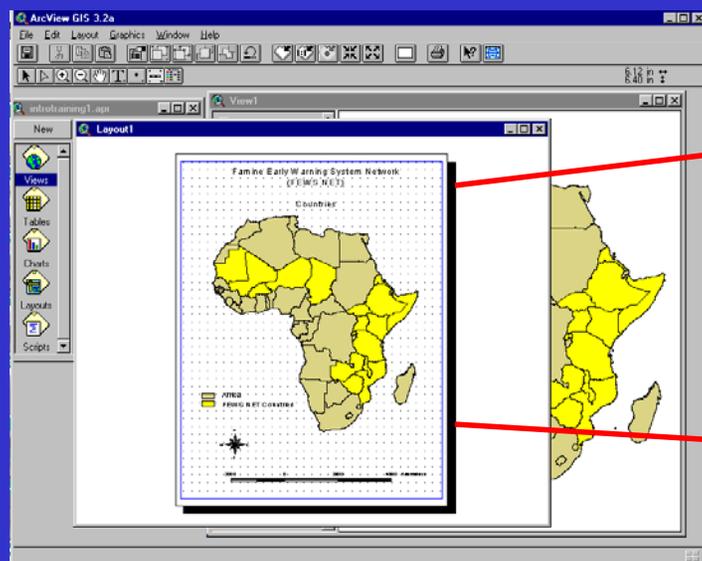


Charts are dynamic in that they display the current state of data in the table

Shape	Area	Perimeter	Cities	Cities_id	Name	Country	Population	Capital?
Point	0.000	0.000	181	241	Cairo	Egypt	9300000	Y
Point	0.000	0.000	283	414	Johannesburg	South Africa	3650000	N
Point	0.000	0.000	403	235	Alexandria	Egypt	3350000	N
Point	0.000	0.000	526	1203	Lagos	Nigeria	3800000	Y
Point	0.000	0.000	137	181	Tunis	Tunisia	1225000	Y
Point	0.000	0.000	162	210	Fes	Morocco	535000	N
Point	0.000	0.000	220	296	Bur Sudan	Sudan	206727	N
Point	0.000	0.000	234	322	Niamey	Niger	398265	Y
Point	0.000	0.000	237	326	Bamako	Mali	646163	Y
Point	0.000	0.000	246	344	Ibadan	Nigeria	1144000	N
Point	0.000	0.000	248	350	Enugu	Nigeria	252500	N
Point	0.000	0.000	250	355	Accra	Ghana	1250000	Y
Point	0.000	0.000	251	356	Abidjan	Ivory Coast	1950000	Y
Point	0.000	0.000	253	359	Bangui	Cent Af Rep	473817	Y
Point	0.000	0.000	254	361	Yaounde	Cameroun	653670	Y

Introducing Layouts:

- Allow the user to create presentation-quality maps
- Enable the display of multiple documents including views, tables, charts and graphics
- Layouts can be saved as graphics files for use in word documents or sent to a printer/plotter for creating hard-copy maps

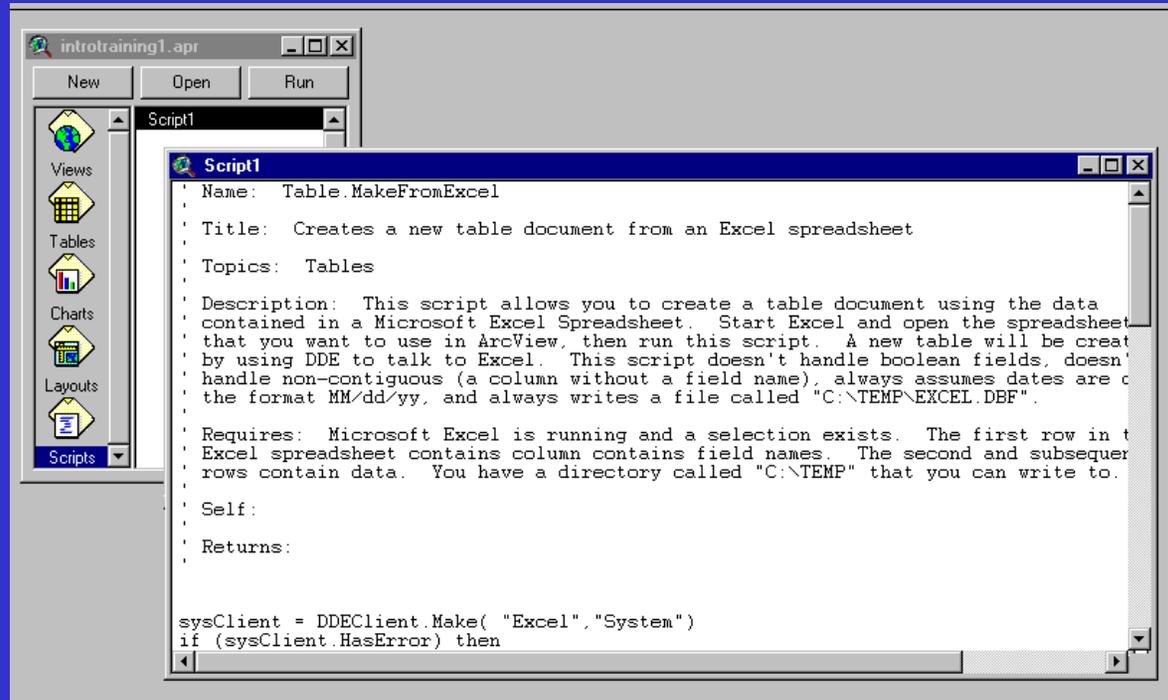


Graphics File
(.bmp, jpg, .wmf, and others)

Printer / Plotter

Introducing Scripts:

- A text document written in the Avenue programming language
- Automates tasks, adds new functions, creates complete applications

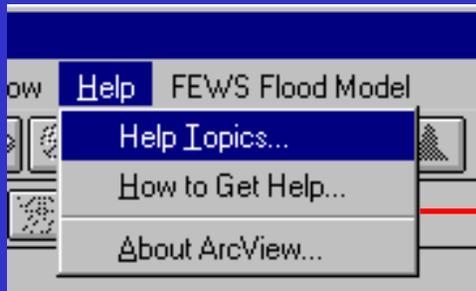


Scripts Are:

- readily available
- easy to use
- customizable

Using ArcView Help:

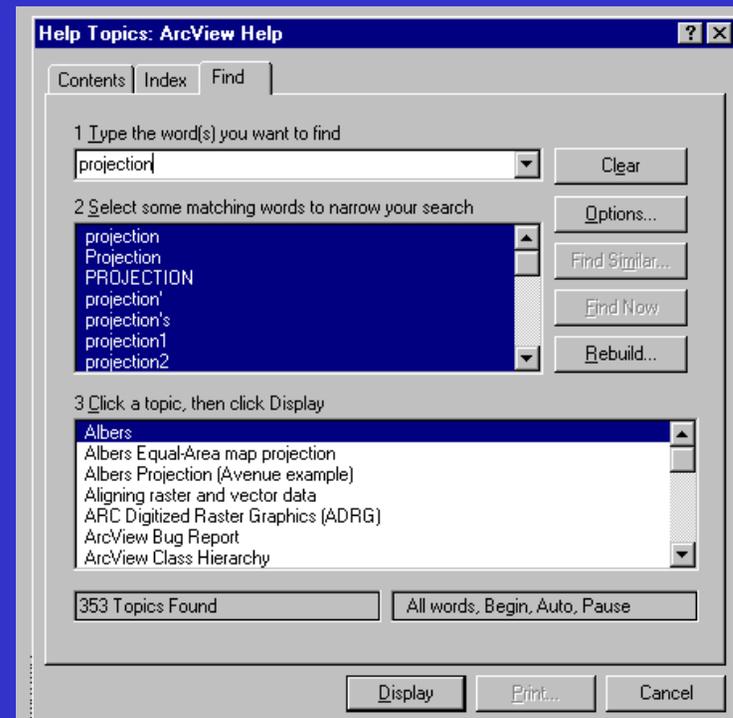
ArcView help is available at anytime during an ArcView session. The system is easy to navigate and provides guidance for specific tasks. The help system also provides a glossary of ArcView and GIS terms.



Menu Bar – contents, index, find



Button Bar – buttons, tools, menus



Section 1 Procedures

- Examine Graphical User Interface (GUI)
- Open a New Project
- Add a View Document to the Project
- Add Themes to the View
- Display and Manage Themes
- Open a Table
- Open a Script Window / View a Script
- Explore ArcView Help

