

Working with Animations in ArcMap

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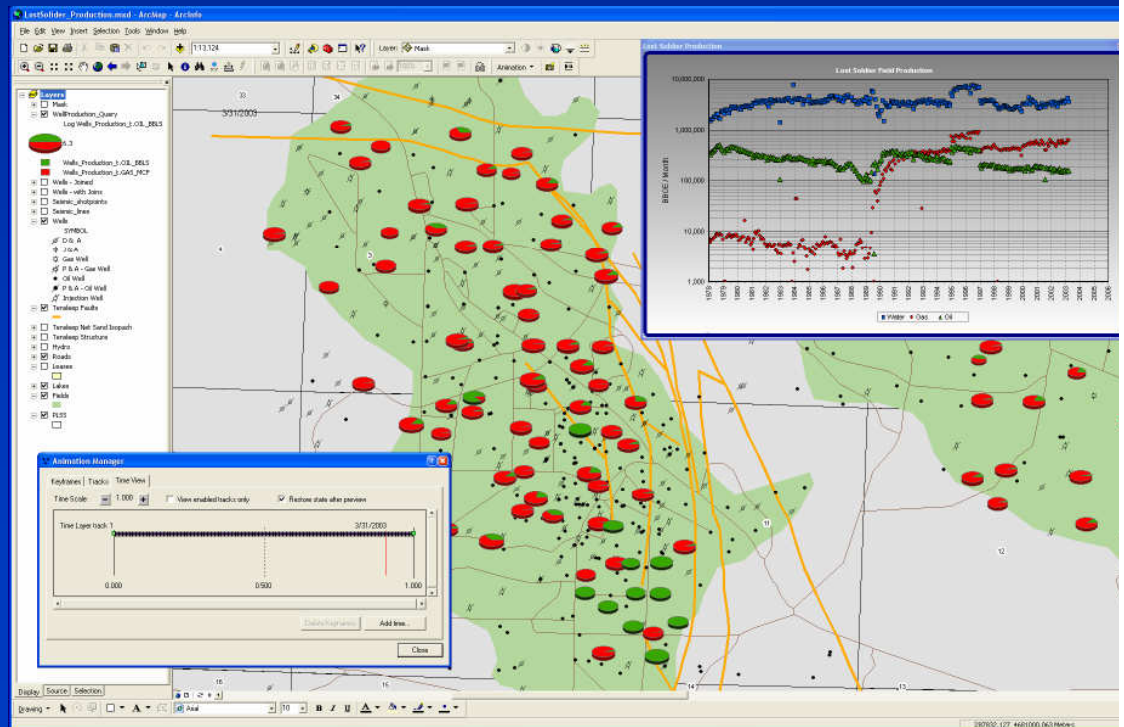
San Diego Regional User Meeting

March 2007

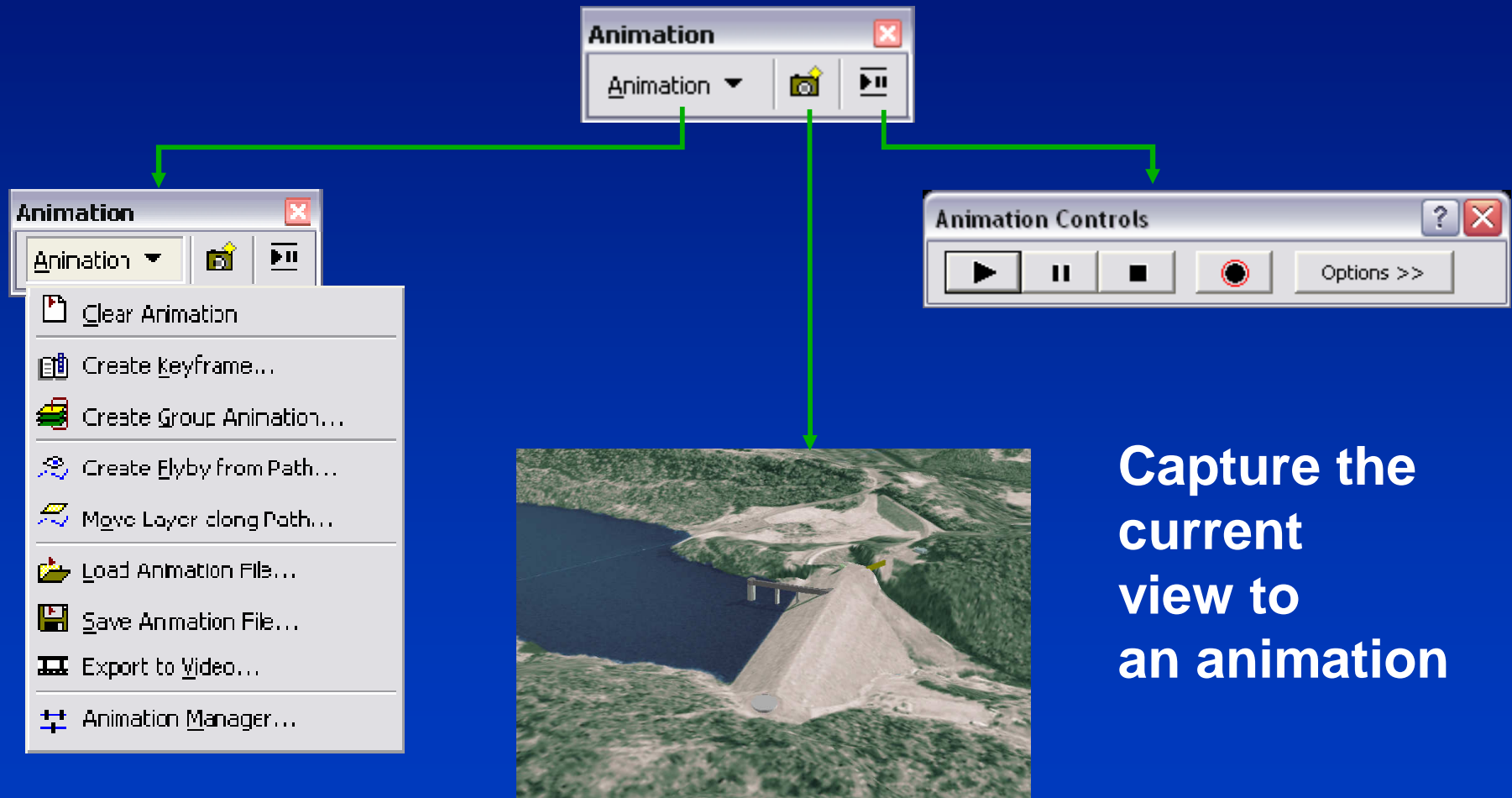
Animation

- Tool to animate Maps and Globes
- Interactive slices or drives by attributes
- Record to Video

- Show Data
 - Over time
 - Different Models



Animation Toolbar



**Capture the
current
view to
an animation**

Creating Animations

- Building animations from **keyframes**
 - Capturing current view to animation
 - Recording and playing a flyby
 - Creating Time Layer animations
- Building animations from paths
 - Creating flyby using flight paths
 - Moving layers along a path (Scene)
- Creating Group Layer animations
- Manipulating object properties
 - Using the Animation Manager
- **ArcObjects** customization

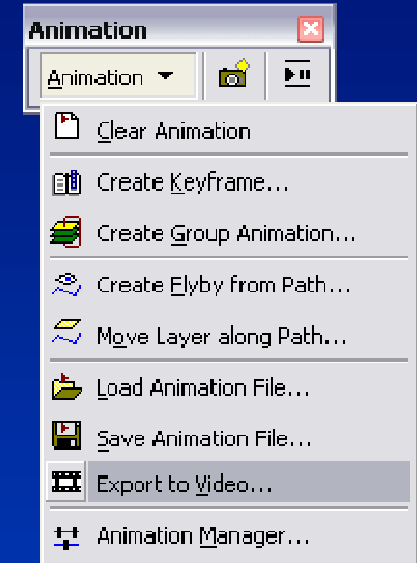
Simple



Advanced

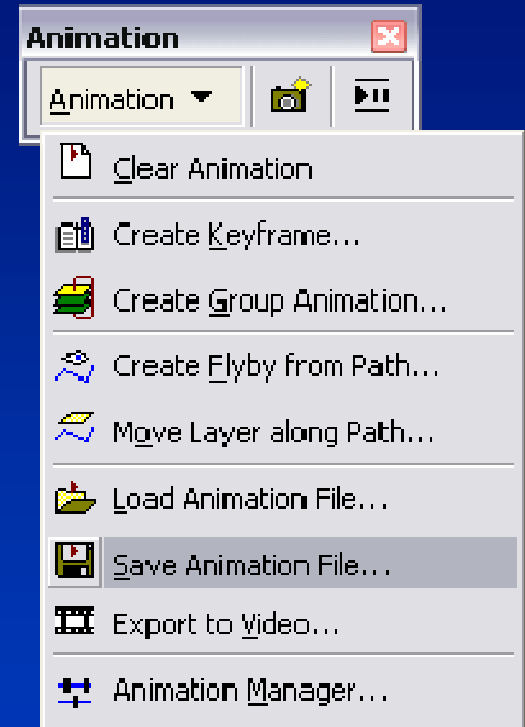
Exporting Animations

- **Supported formats:**
 - **Audio Video Interleave (*.avi)**
 - **QuickTime (*.mov) format**
- **Advantages:**
 - **Standard media players**
 - **Resolution and quality can be controlled**
 - **Codecs**
 - **Custom resolution videos without distortion**



Storing and Sharing Animations

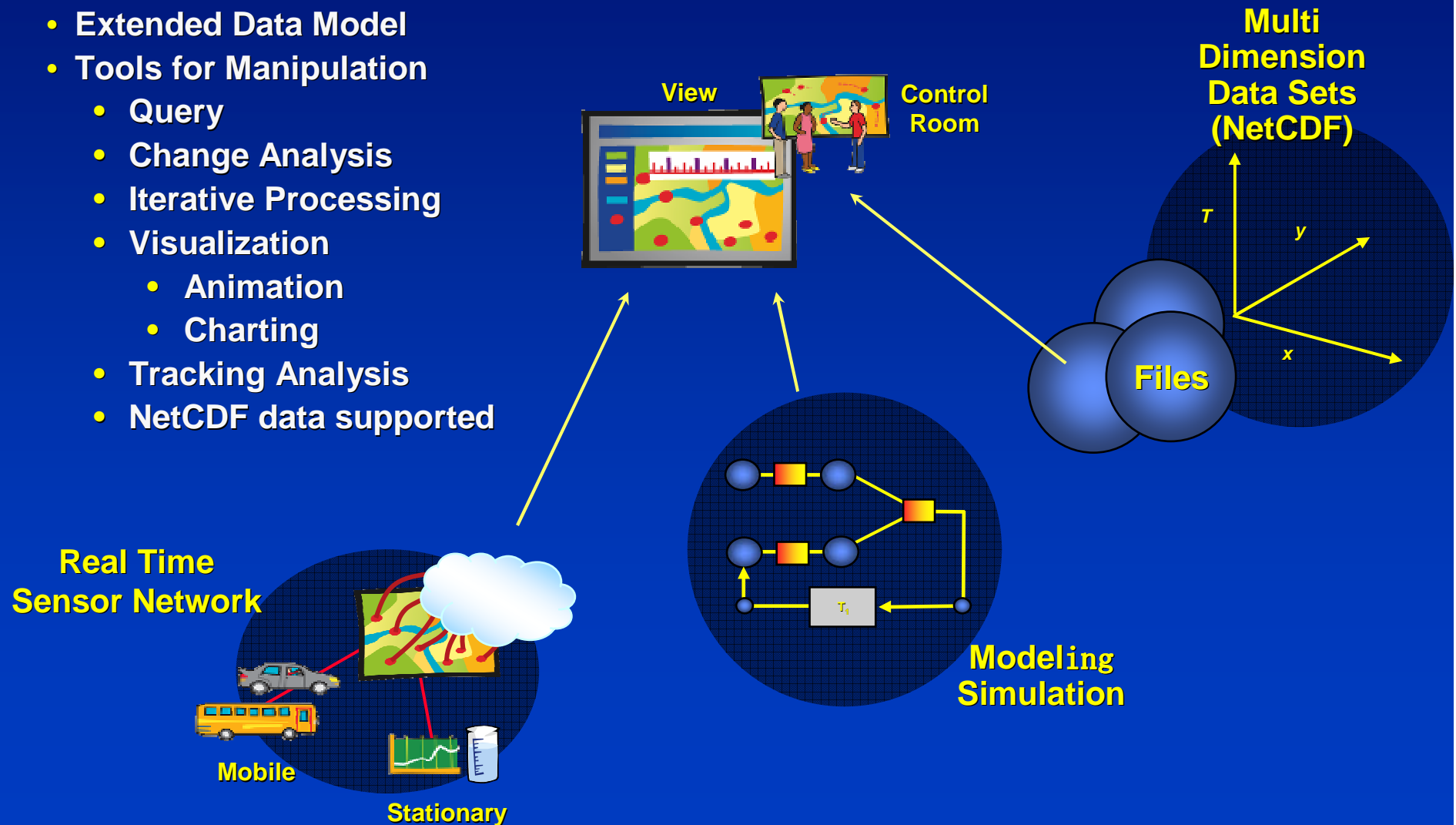
- **Formats supported**
 - **ArcScene animation (*.asa) file**
 - **ArcGlobe animation (*.aga) file**
 - **ArcMap animation (*.ama) file**
- **Reusable in the same or different session**



Integration of Time

New Ways to Manage, Analyze & Visualize Geography

- Extended Data Model
- Tools for Manipulation
 - Query
 - Change Analysis
 - Iterative Processing
 - Visualization
 - Animation
 - Charting
 - Tracking Analysis
 - NetCDF data supported



Temporal Animations

- Animate data using a time-based attribute
- Feature layers, raster catalogs, Tables, netCDF, Geodatabase Archive layers, Tracking Analyst layers: all supported
- Data preparation:
 - If not DATE data type, TEXT ok, may have to format: **See Help**
 - **Transpose Time Fields** tool in ArcToolbox

Supported time field formats

- **Any Date field**
- **String fields of these formats:**
 - YYYYMMDD
 - YYYY/MM/DD
 - YYYY-MM-DD
 - YYYYMMDDhhmmss
 - YYYY/MM/DD hh:mm:ss
 - YYYY-MM-DD hh:mm:ss
- **Long & Double fields of these formats:**
 - YYYYMMDD
 - YYYYMMDDhhmmss

What if my time is stored in columns?

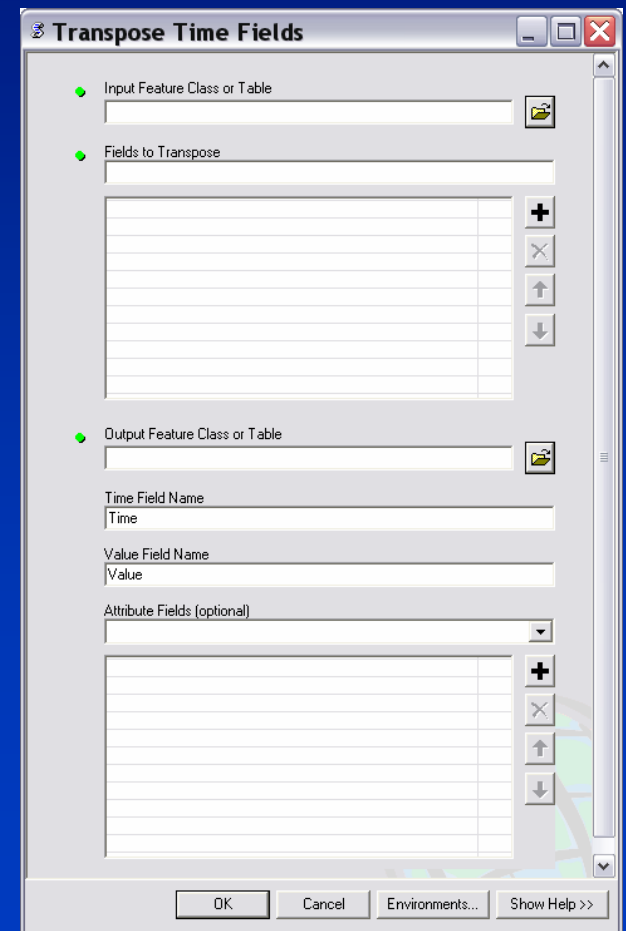
- ArcGIS animates across records, not columns
- Use the Transpose Time Fields tool to reformat the table

Input table:

OBJECTID*	Shape*	Shape_Length	Shape_Area	STATE_NAME	Y1980	Y1981	Y1982	Y1983
1	Polygon	17.237647	12.897167	Alabama	106	105	115	129
2	Polygon	407.571028	277.524118	Alaska	20	22	22	25
3	Polygon	23.257265	28.859093	Arizona	0	0	0	0
4	Polygon	20.877157	13.517466	Arkansas	109	115	111	117
5	Polygon	42.260167	41.533613	California	539	706	697	707
6	Polygon	22.025629	28.0416	Colorado	101	113	122	136
7	Polygon	5.722455	1.392525	Connecticut	180	215	245	274

Output reformatted for time animation:

OBJECTID*	SHAPE*	SHAPE_Length	SHAPE_Area	Name	Time_	Expense
1	Polygon	17.237645	12.897165	Alabama	1980	106
2	Polygon	407.57095	277.52409	Alaska	1980	20
3	Polygon	23.257266	28.859101	Arizona	1980	0
4	Polygon	20.877127	13.517461	Arkansas	1980	109
5	Polygon	42.260156	41.533616	California	1980	539
6	Polvaon	22.025622	28.041602	Colorado	1980	101



Demos

Questions?

Thank You!!!