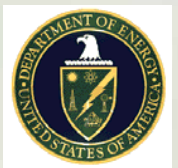


Fluor Hanford

Federal Users Conference *PLTS MPS Atlas Custom Grids*

January, 2007
Washington DC

Jeff Hayenga
Fluor Hanford



Fluor Hanford Central Mapping Services

What's to Talk About

- The “Why” and “How Big” - Hanford Atlases
- “How” and “Why” Of Location Indexes
- General Design and Specific Setup
- School of Hard Knocks – Lessons Learned
- Terms
 - Grids – User Defined Reference Coordinate System
 - Location Indexes – Which Page and Zone Feature Occurs On

Making a Hanford Atlas

“Why” and “How Big”

- PLTS MPS Map Atlas
- Atlas to locate features
- Location Index – “Why”
- Consistent Index Within and Among Atlases
- Other Requirements – “How Big”
 - Multiple Map Series per Atlas
 - Multiple Data Frames Per Map
 - Several Themed Atlases
 - Book Format, Left and Right Pages
 - 250 Map Sheets
 - 5500 labeled features

Atlas Layout Elements

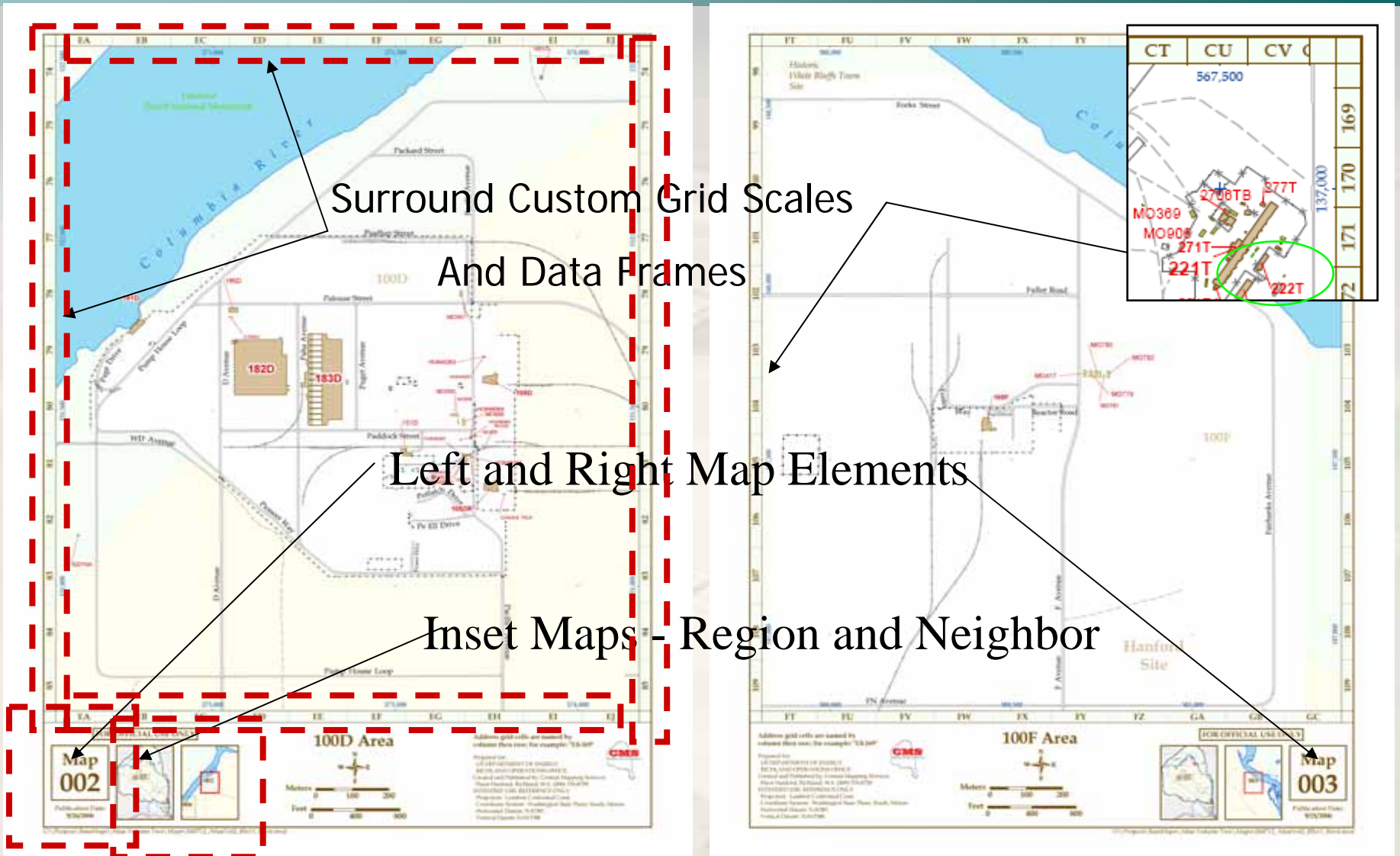


Figure 1 Map Layout Elements

Where and What Hanford

- Cold War Nuclear Weapons Production Facility
- Cleanup Site
- 586 sq miles
- Multiple DOE Divisions
- Multiple Contractors
- Typical of a County



Location Indexes Current and Analysis

- Location Indexes – Building Number Centric
- Cold War Locations – 9 Coordinate Systems
- “Tribal Knowledge” Where Was It At
- Key Customer
 - Emergency Services
 - Environmental Cleanup
- Building Numbers and Commercial Applications

Custom Grids

Block Numbers Street Names

- Block Number and Street Names
 - .1 Mile Grid
 - Commercial Standard
 - Build Clusters Egress Point Standard
 - Locate Other Features
 - 7 Digit Block Number
- Compromise - Columns and Rows - Cells
- How to Display the Grid on Maps?

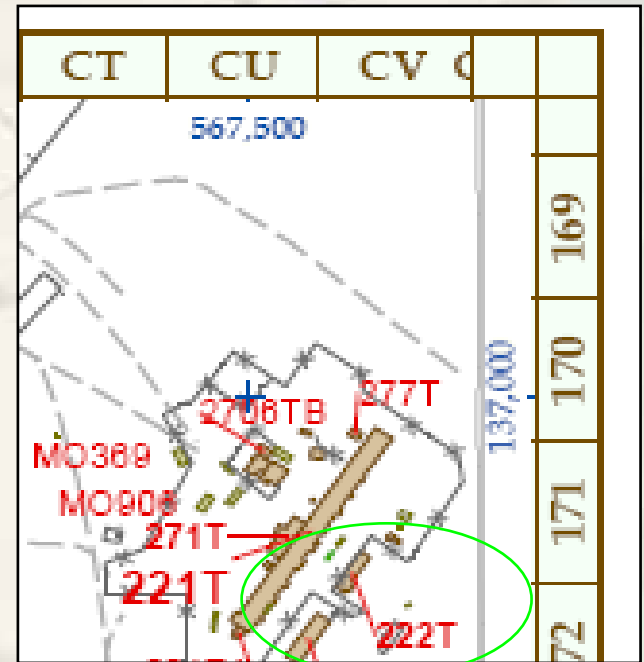
PLTS MPS-Atlas

A View From The Edge

- Map Layout Tools – ArcMap Core
 - Labeling
 - Screen Refresh
 - Dynamic Map Elements
- Reference Grids
 - Reset Values Between Maps
 - Customization
- Printing
 - Memory Constraints

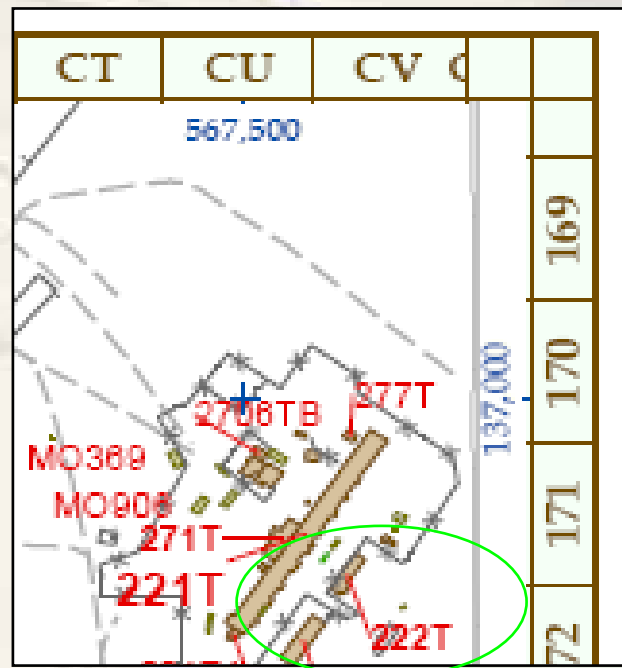
Custom Grids and Maps

- Custom Grids
 - Polygon Feature Class
 - .1 miles wide x 35 miles long
 - Rows and Columns – Cells
 - Rows - Numeric Names
 - Columns - Alpha Names



Surround Grid Value Data Frames

- Data Set
 - Custom Grid Feature Class
 - Area of Interest Feature Class
 - Zoom Scale Factor - Attribute
 - Label Inside Polygon

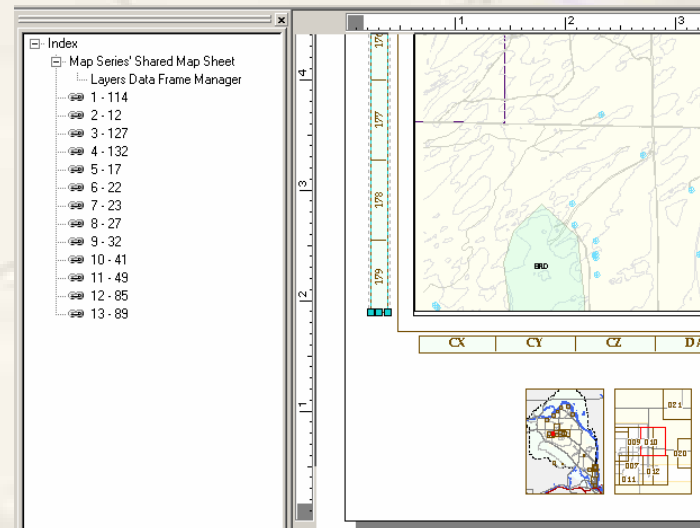


Atlas Design and Development Guides

- Design – Create Map Series
- AOI Feature Class
- What Controls Zoom Scale and Extent
- Layout for Book or Map Sheets
- Graphic and Dynamic Elements
- Map Content
 - Base Data Sets
 - Labeling
- Data Frames
- Map Series per Atlas

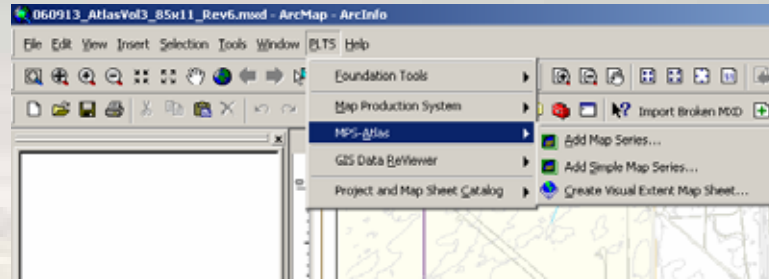
Map Series Creation - Layout

- Main Data Frame
- Content – Common to Map Series
- Surround Data Frames
- Graphic Elements
- Dynamic Elements



Map Series Creation – Setup

- Add Map Series Wizard



- Area of Interest



- Area of Interest Data



Map Series Creation – Setup – Cont

- Scale and Extent

The screenshot shows the 'Data Frame Manager Properties' dialog box with the 'Scale and Extent' tab selected. The dialog has several tabs: 'Area of Interest Data Source', 'Buffer', 'Rotation', 'Spatial Reference', 'Feature Layer Definition Query', 'Area of Interest', 'Scale and Extent', and 'Data Frame Manager Properties'. The 'Scale and Extent' tab is active, showing the following options:

- Round Scale to Nearest
- Do Not Calculate Scale or Extent
- Dynamic Scale
- Fixed Scale
- Scale From Field

Under 'Scale From Field', the 'Scale Field' is set to 'Z_Scale'. The 'Extent' section has three radio button options:

- Do Not Resize Data Frame
- Resize Data Frame to Fit Area of Interest
- Set Data Frame Size

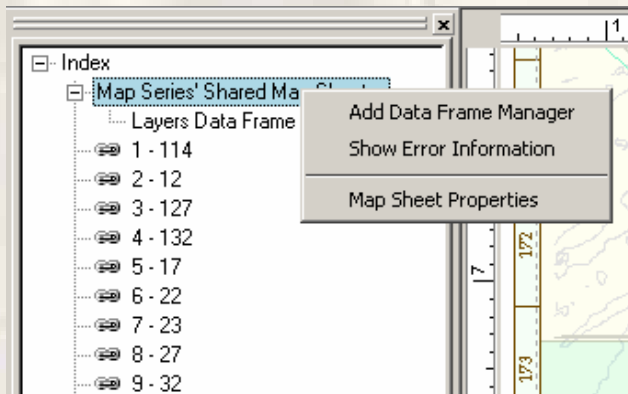
When 'Set Data Frame Size' is selected, the following fields are visible:

Width	Units	Unit Type
8.11938997821351	Inches	Page
Height	Units	Unit Type
9.12113289760349	Inches	Page

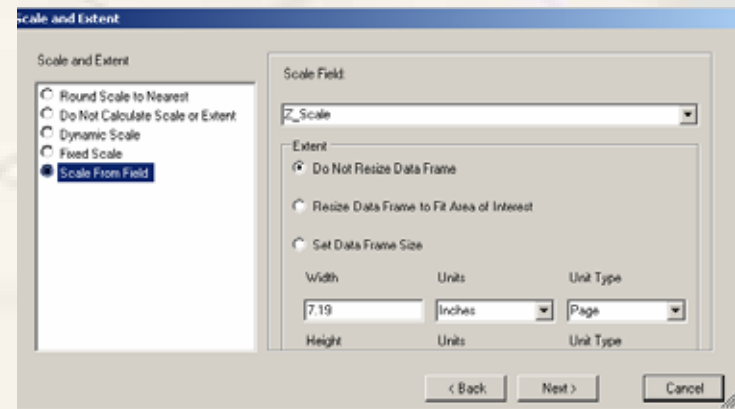
At the bottom of the dialog are 'OK', 'Cancel', and 'Apply' buttons.

Data Frame Manager Setup

- Add A Data Frame Manager For Each Surround Data Frame
- Area Of Interest Data Source



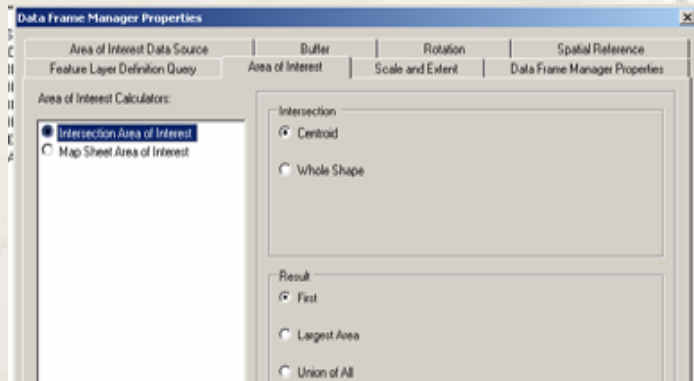
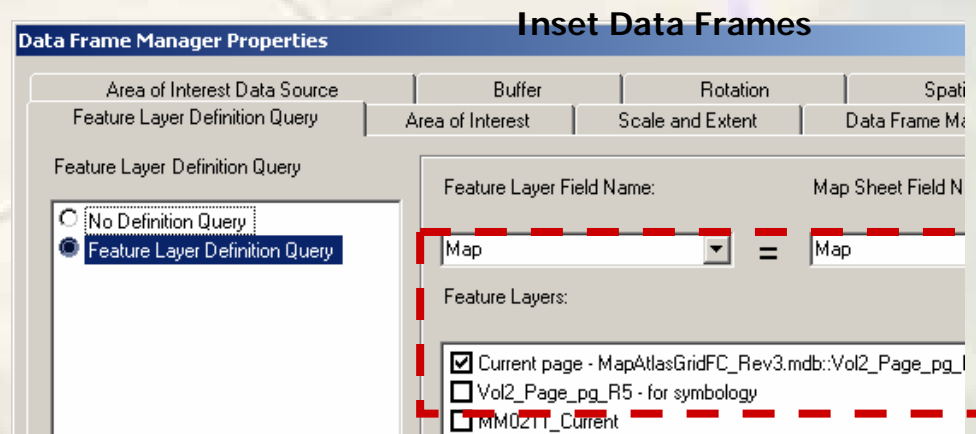
Add a Data Frame Manager



Scale and Extent

Inset Maps

- Add Data Frames and Content
- Add a Data Frame Manager
- Differs
 - Area of Interest Setup
 - Feature Layer Definition Query



Area Of Interest Dialog Box

Feature Layer Definition Query

Location Feature Index

- ArcMap Tool – Analysis/Overlay
- New Feature Class – Combines Attributes
- MS Access Query – Index
- MS Access SQL Query
 - Create the Multiple Values - Span of Cells

Bldg	Zone	Page
222S-BA	CU189	110
222SE	CU190	110
222SF	CU190	110
222SH	CT189	110
222T	CV171	110

School of Hard Knocks

- Use True Type fonts, consistent printing
- Adobe – Better Pagination
- Print Preview – More Accurate WYSIWYG
- Raster and Graphic elements last
- Export or Printing is resource intensive
- Dynamic elements
- Re-positioning features class annotation