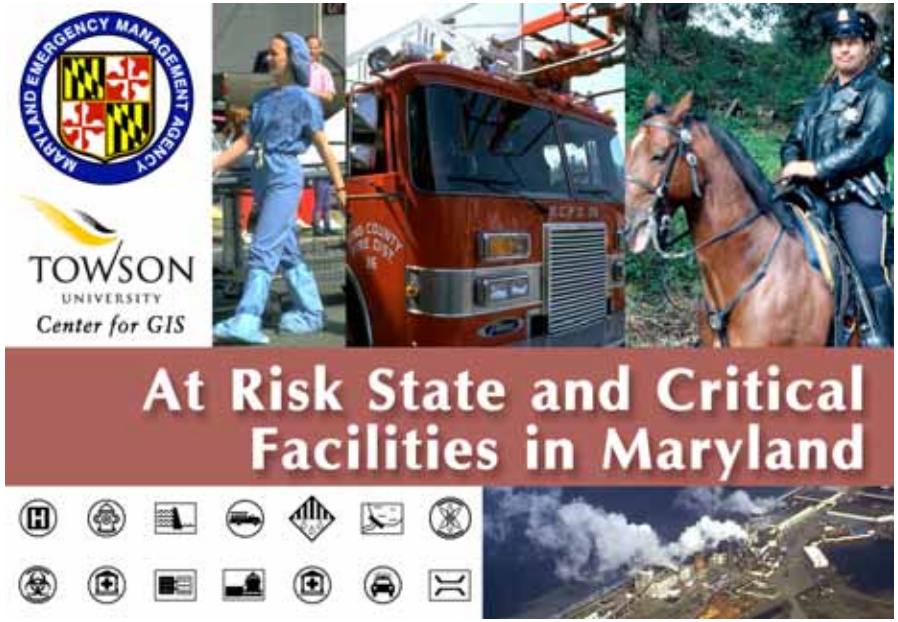
Using ArcReader to Share Maps: An Emergency Management Agency Application



Ashley Lesh

Towson University Center for GIS

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Distribution of GIS Data via ArcReader

- A growing need to get data out to people (public, clients, etc.)
- Adobe Acrobat Comparison
- Controlled Access – Version 9.0
- Good planning tool
- Keeps all officials on same page

ArcReader Sample Project
Purpose

- Client: Maryland Emergency Management Agency (MEMA)

- Needing a means to distribute geographic data to emergency managers within each Maryland county and several specific municipalities (Ocean City, Annapolis)

Purpose

- MEMA has GIS capabilities
- Keeping in mind that not all jurisdictions have GIS departments and/or capabilities
- ArcReader was chosen to meet the needs of all jurisdictions.

Project Background

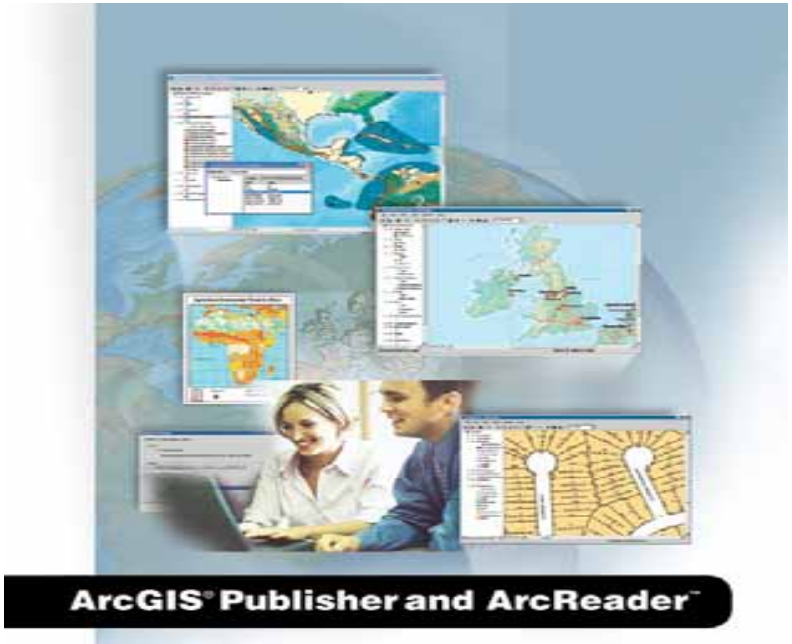
- Hazards
  - Coastal Storm
  - Dam Inundation Areas
  - 100-Year Floodplains
  - Radiological Exposure
  - Shoreline Erosion
  - Sinkhole-Prone Areas
  - Heavy Snow
  - Wildfire

Project Background

- Critical and state-owned and operated facilities
  - Fire, Police, School, Medical
  - Hazardous Waste Generators
  - High Potential Loss Facilities (Dams, Power Plants, etc.)
  - Lifeline Utilities (Water Sources, Pumping Stations, etc.)
  - Transportation Facilities
- Residential Areas
  - At Risk
  - No Risk

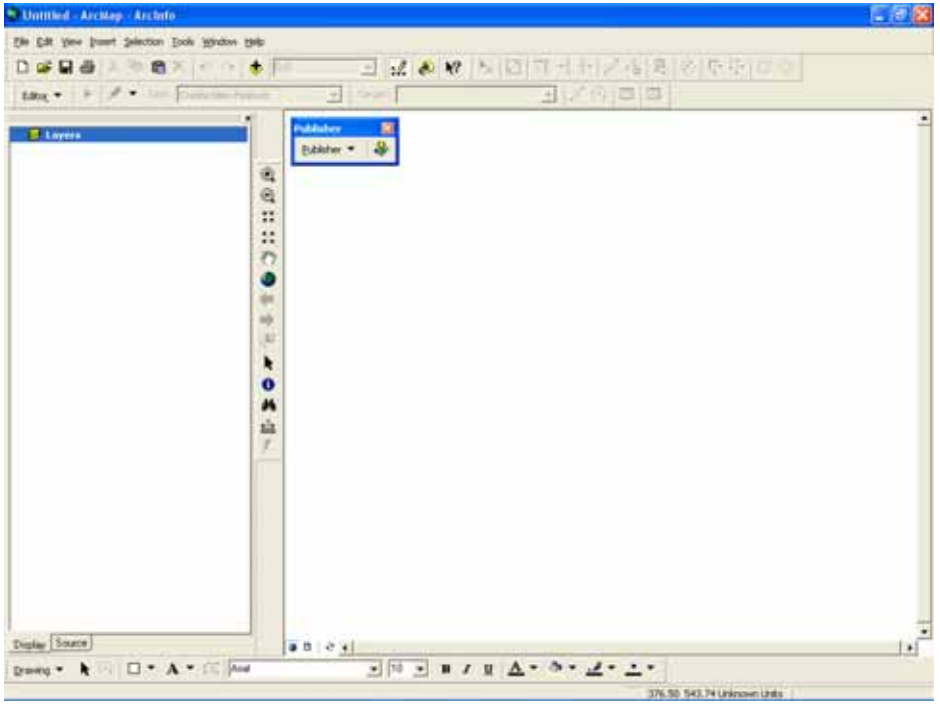
Overview of ArcReader 8.3

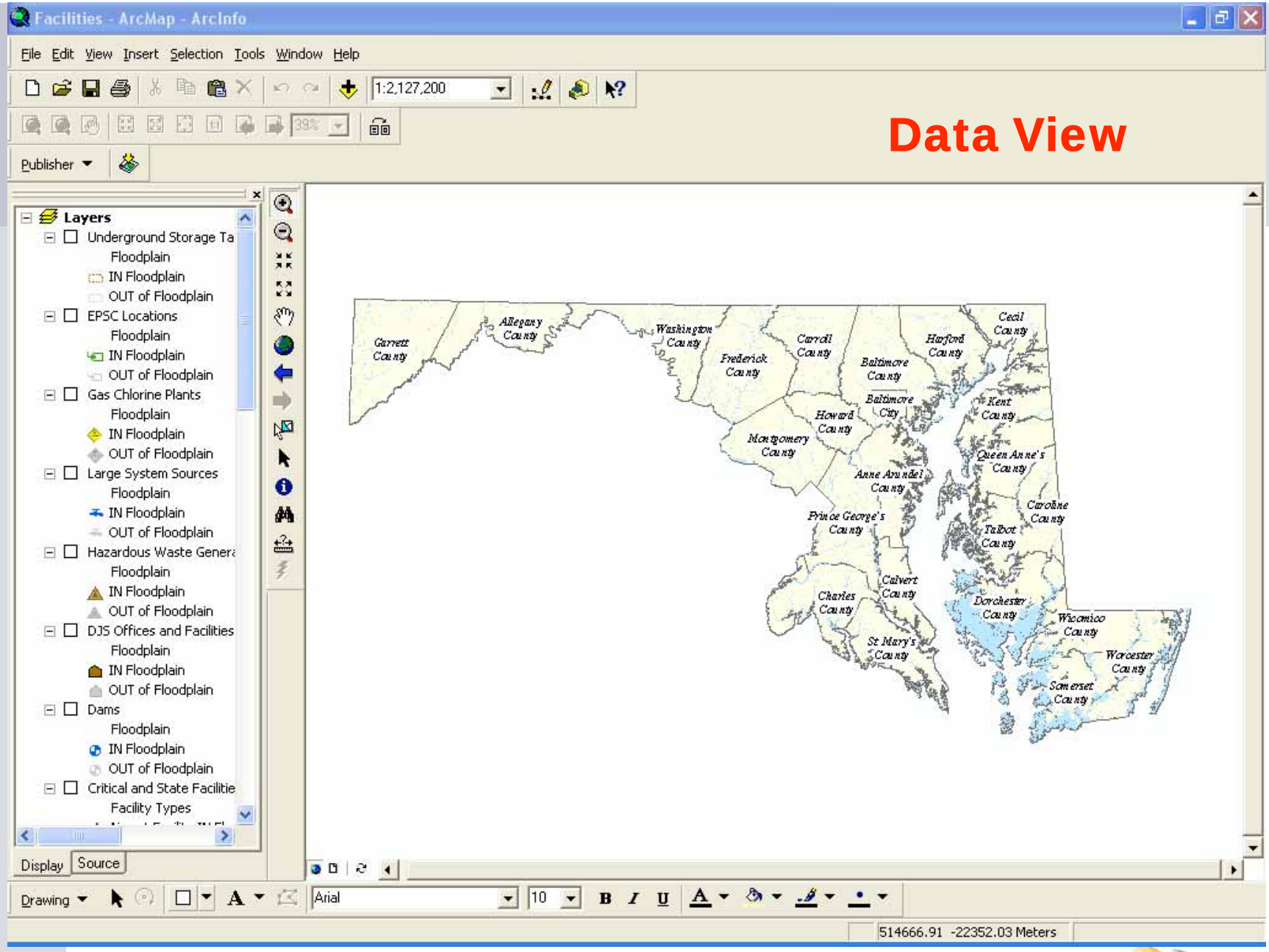
- ESRI Product
- Freely available
  - Downloadable
  - CD
  - ArcGIS Purchase
- Easy-to-use
- Windows-based
- ArcGIS look and feel



Creating ArcReader File in ArcGIS

- Data Presentation is Designed in ArcMap
  - Compilation of data
  - Symbolization
  - Labeling
  - Layout
  - Bookmarking




Facilities - ArcMap - ArcInfo
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Floodplain
IN Floodplain
OUT of Floodplain
Hazardous Waste Gener
Floodplain
IN Floodplain
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DJS Offices and Facilities
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IN Floodplain
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10
Garrett County
Allegany County
Washington County
Frederick County
Carroll County
Baltimore County
Harford County
Cecil County
Baltimore City
Howard County
Montgomery County
Kent County
Queen Anne's County
Anne Arundel County
Caroline County
Prince George's County
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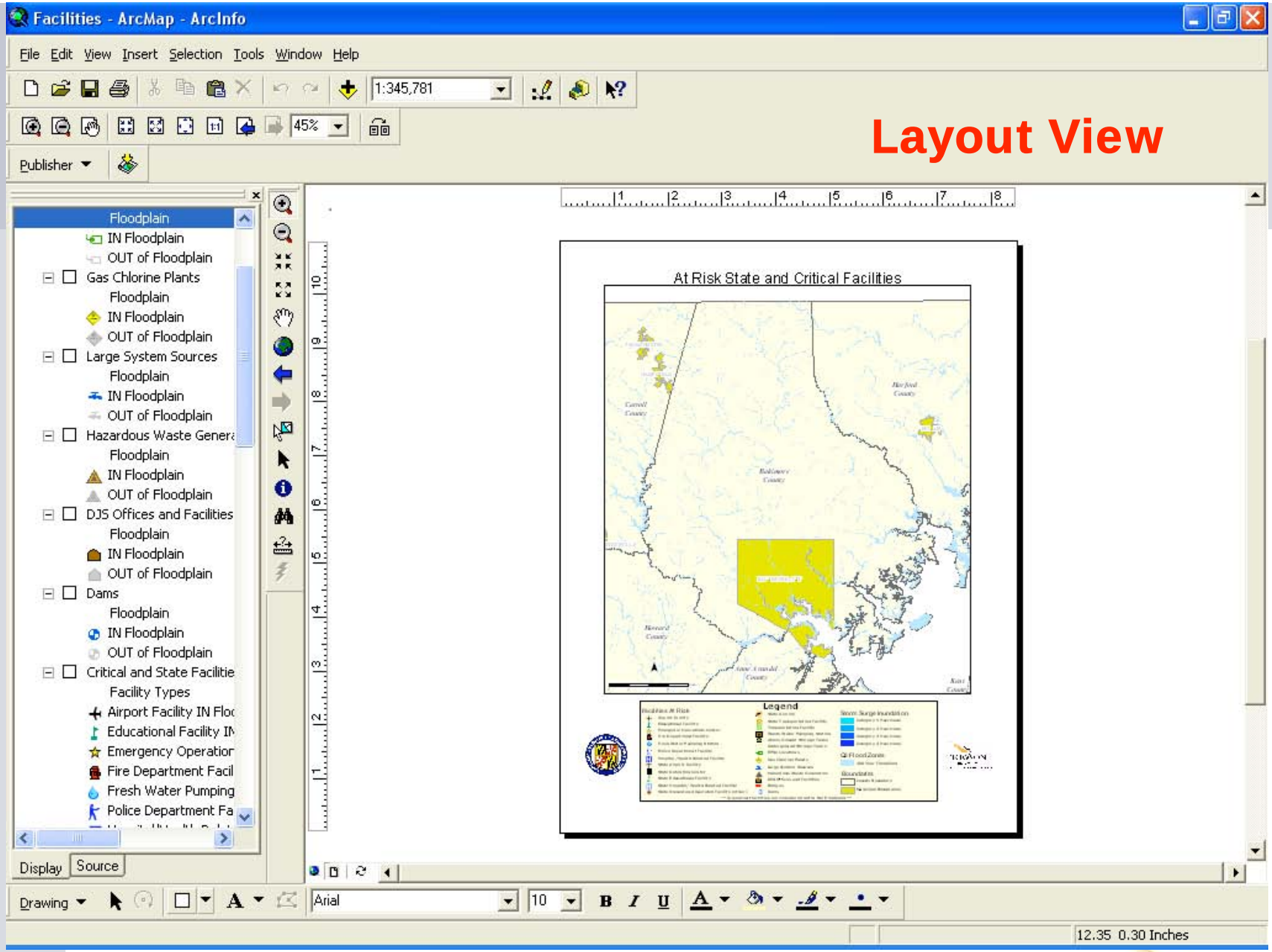

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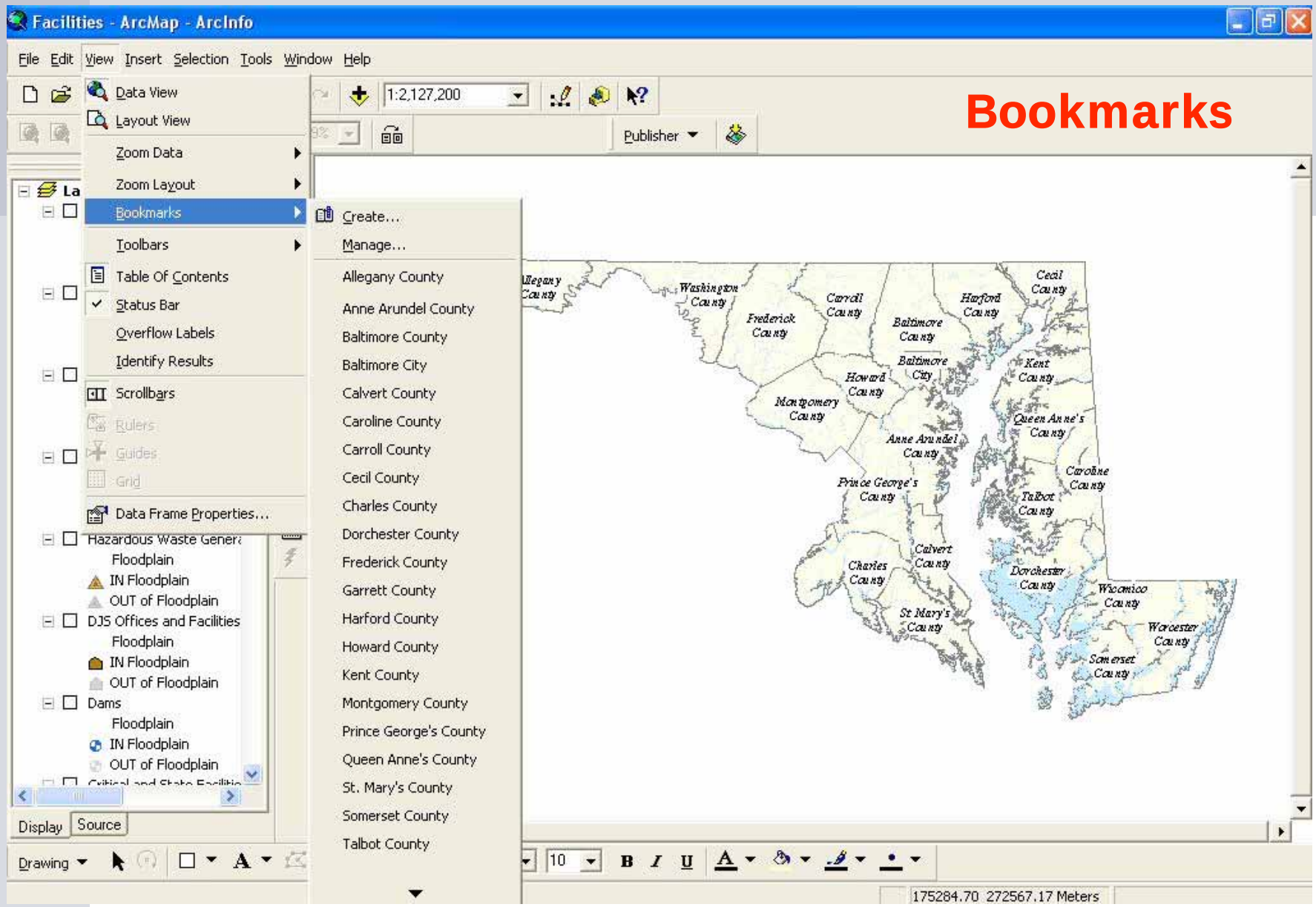
Bookmarks


Facilities - ArcMap - ArcInfo
File Edit View Insert Selection Tools Window Help
Data View
Layout View
Zoom Data
Zoom Layout
Bookmarks
Toolbars
Table Of Contents
Status Bar
Overflow Labels
Identify Results
Scrollbars
Rulers
Guides
Grid
Data Frame Properties...
Create...
Manage...
Allegany County
Anne Arundel County
Baltimore County
Baltimore City
Calvert County
Caroline County
Carroll County
Cecil County
Charles County
Dorchester County
Frederick County
Garrett County
Harford County
Howard County
Kent County
Montgomery County
Prince George's County
Queen Anne's County
St. Mary's County
Somerset County
Talbot County
Washington County
Worcester County
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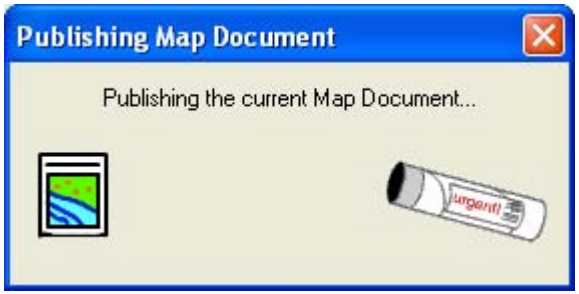
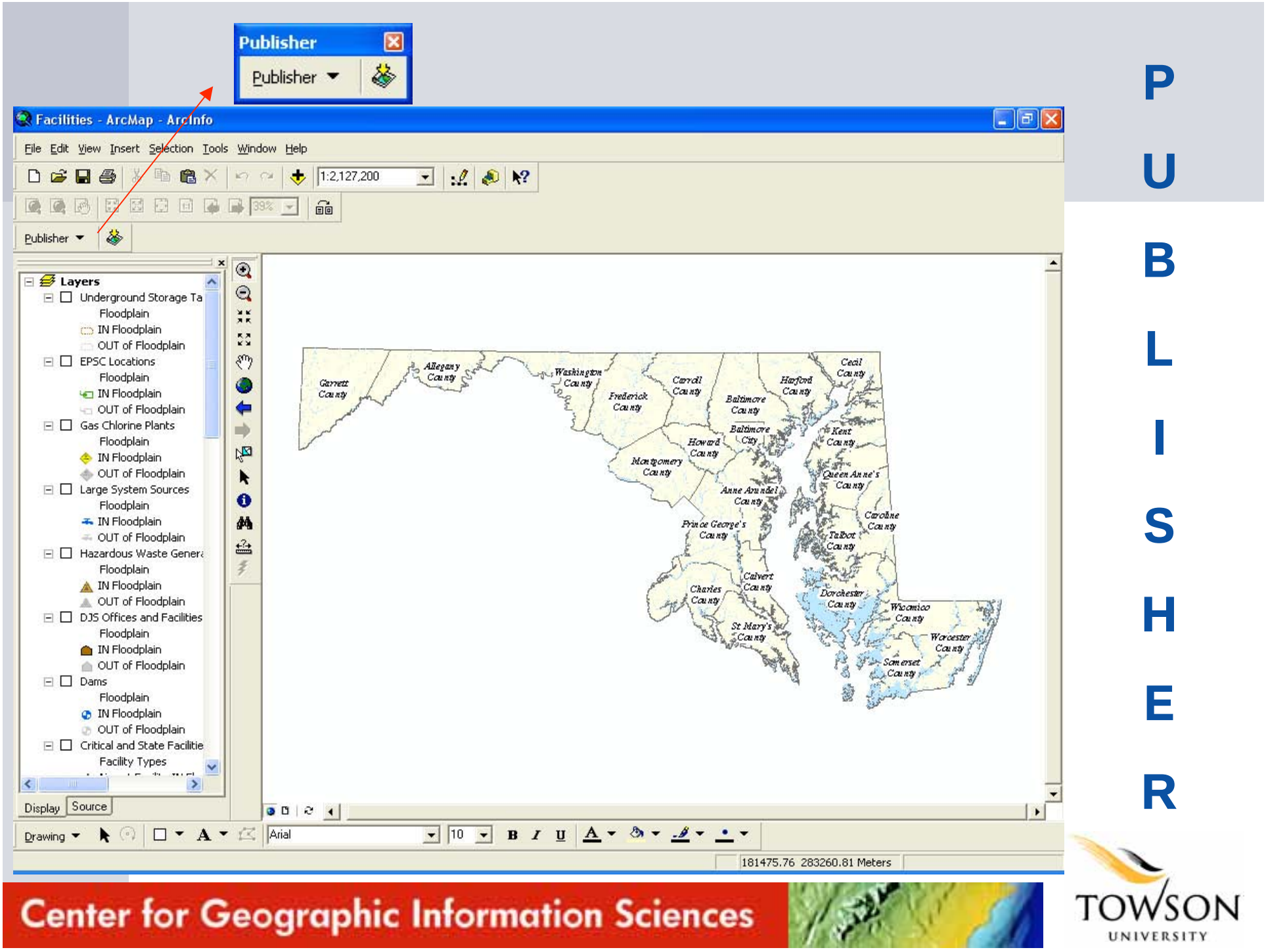
ArcGIS Publisher



- ArcGIS Publisher extension converts map documents (.mxd) to published map files (.pmf)
- ArcReader views these published files



PUBLISHER

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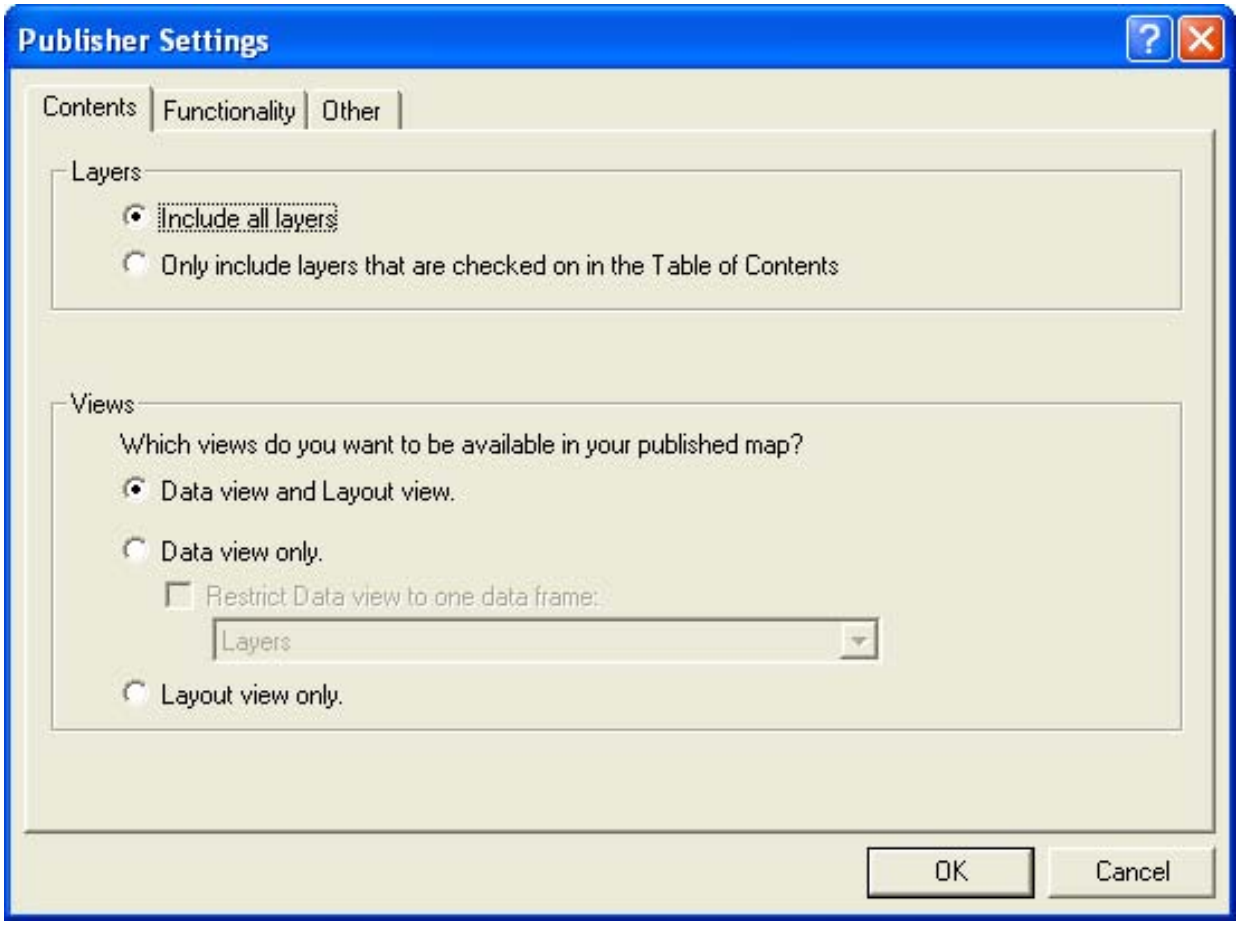
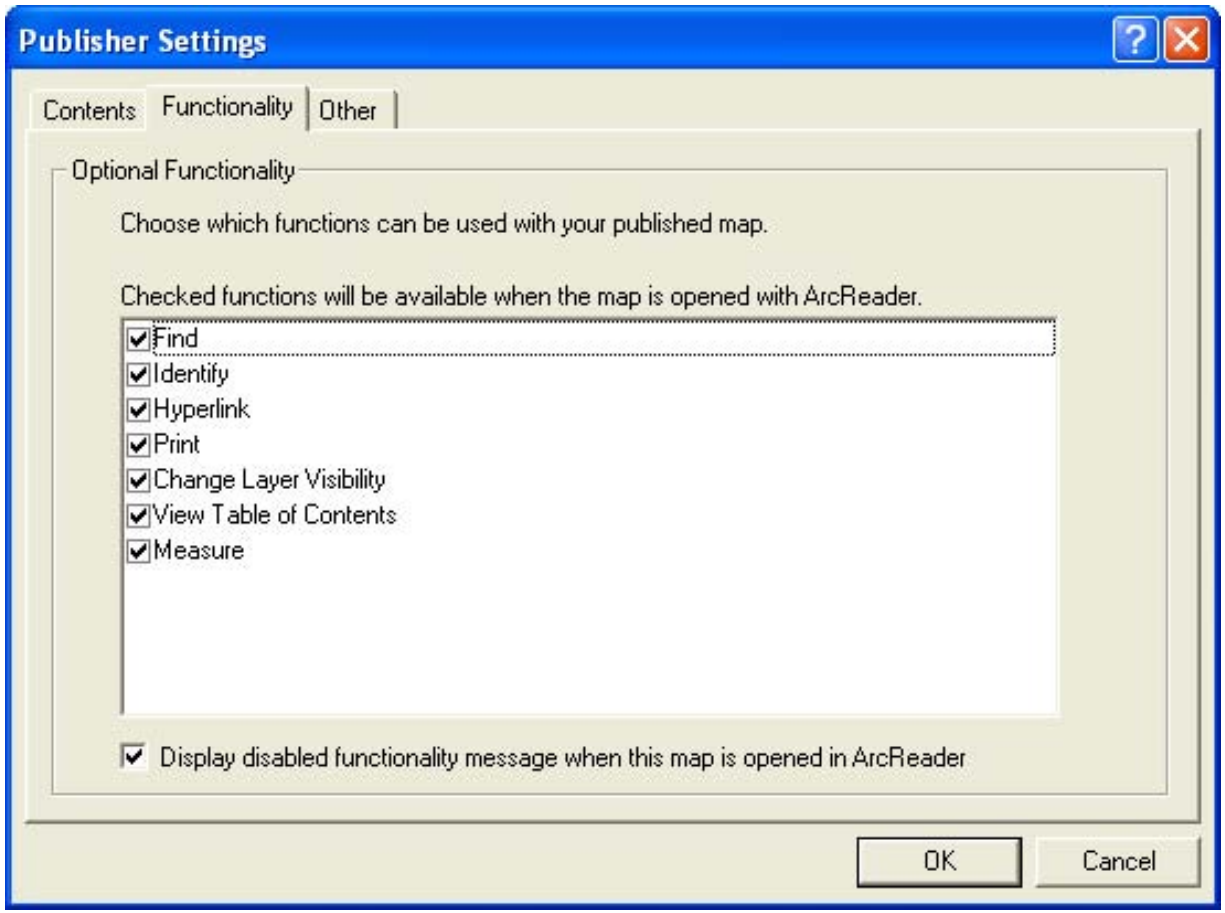
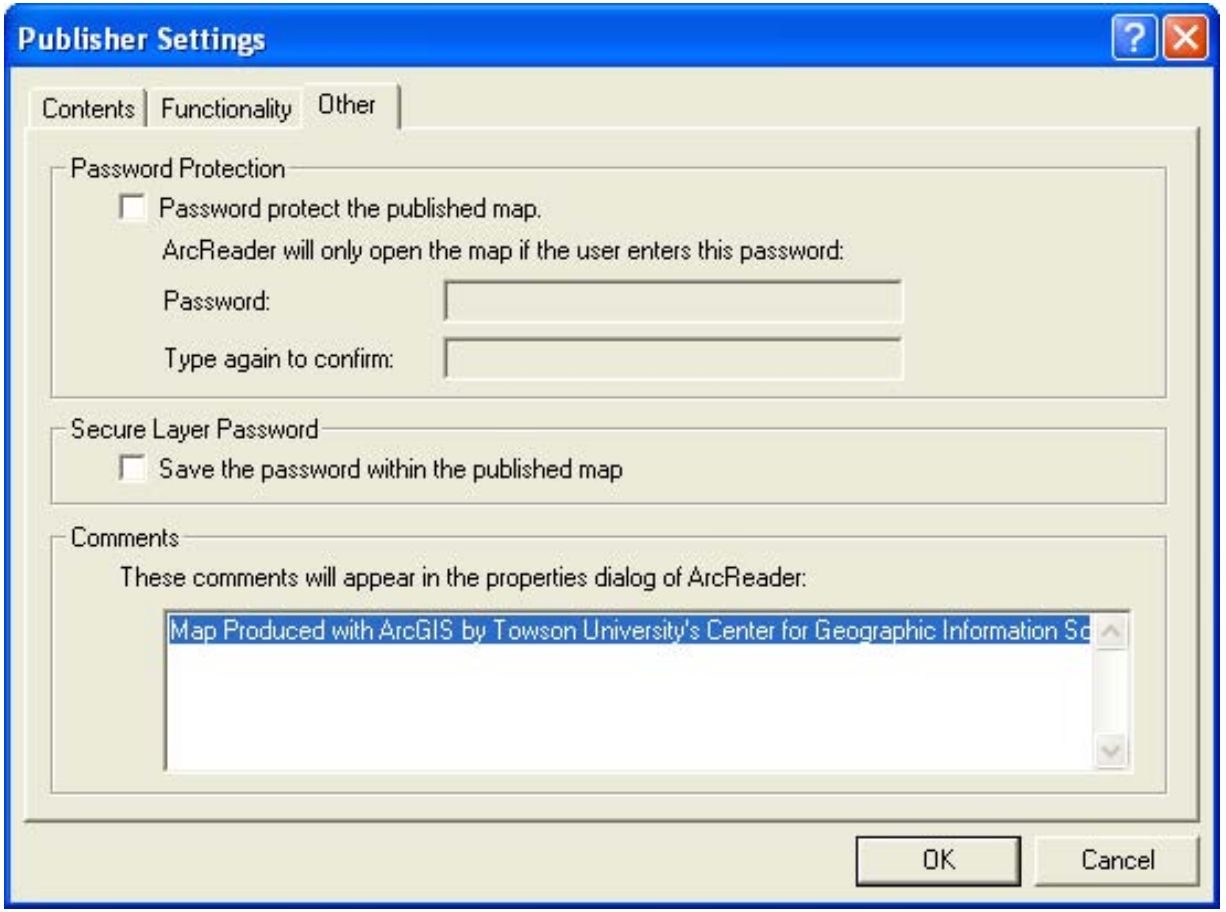
ArcGIS Publisher 8.3 Settings



ArcGIS Publisher 8.3 Settings



ArcGIS Publisher 8.3 Settings



ArcReader 8.3 Functionality

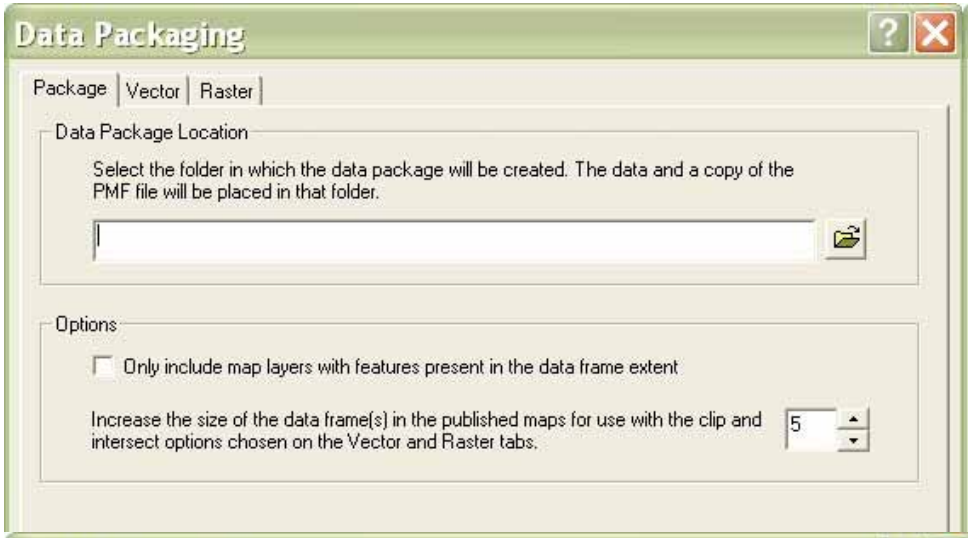
- View, explore, and print
- Read-only data

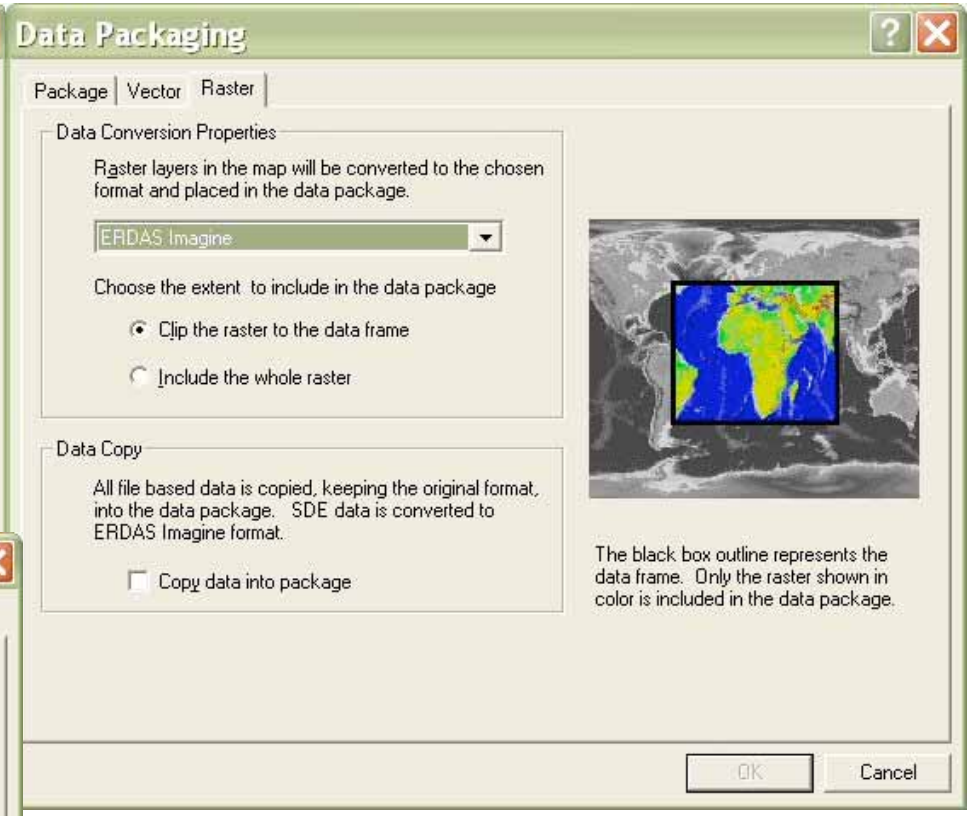
ArcReader Key Functions

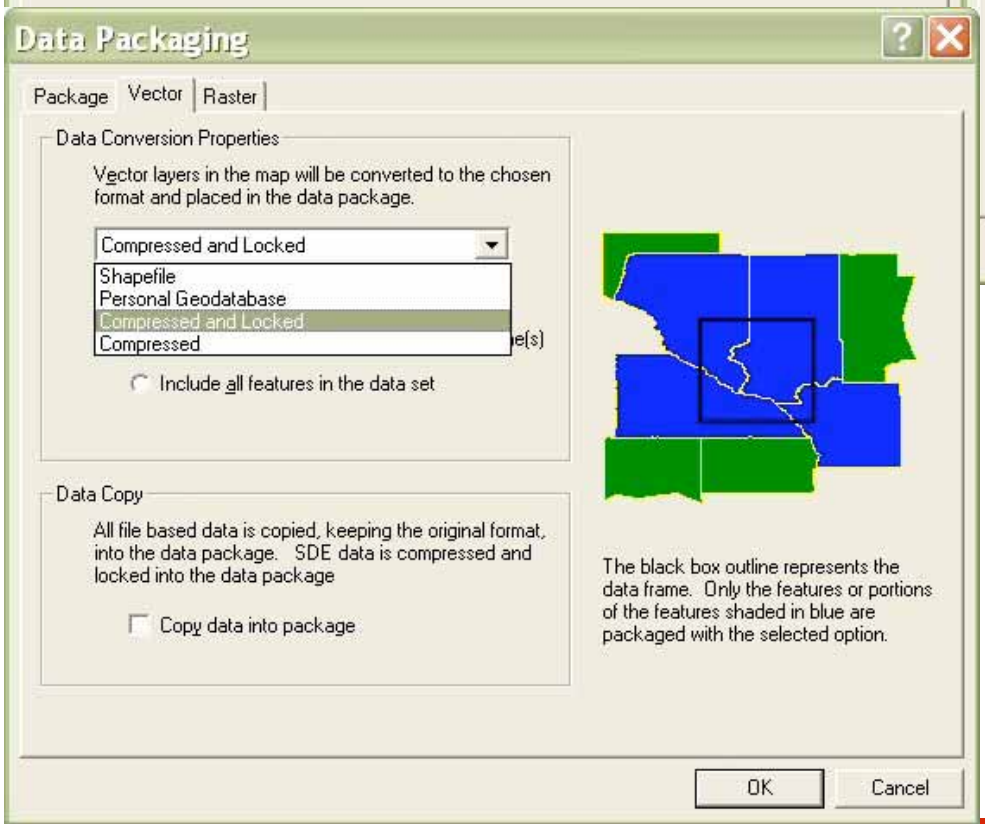
- Zoom in/out
- Pan
- Go to full extent
- Go to previous/next extent
- Identify Tool (multilayer)
- Data view and layout view
- View spatial bookmarks
- Find Tool
- View and print preauthored map layouts
- Open/Close published map files
- Shows recently opened maps
- Measure Tool
- Hyperlink Tool
- Magnifier Window

ArcGIS Publisher 9.0

- Data Packaging (bundling of data)
  - Clip vector and raster data
  - Export vector data/convert it to shapefile, personal geodatabase
  - Export raster data in its original format or convert it to an ERDAS IMAGINE file







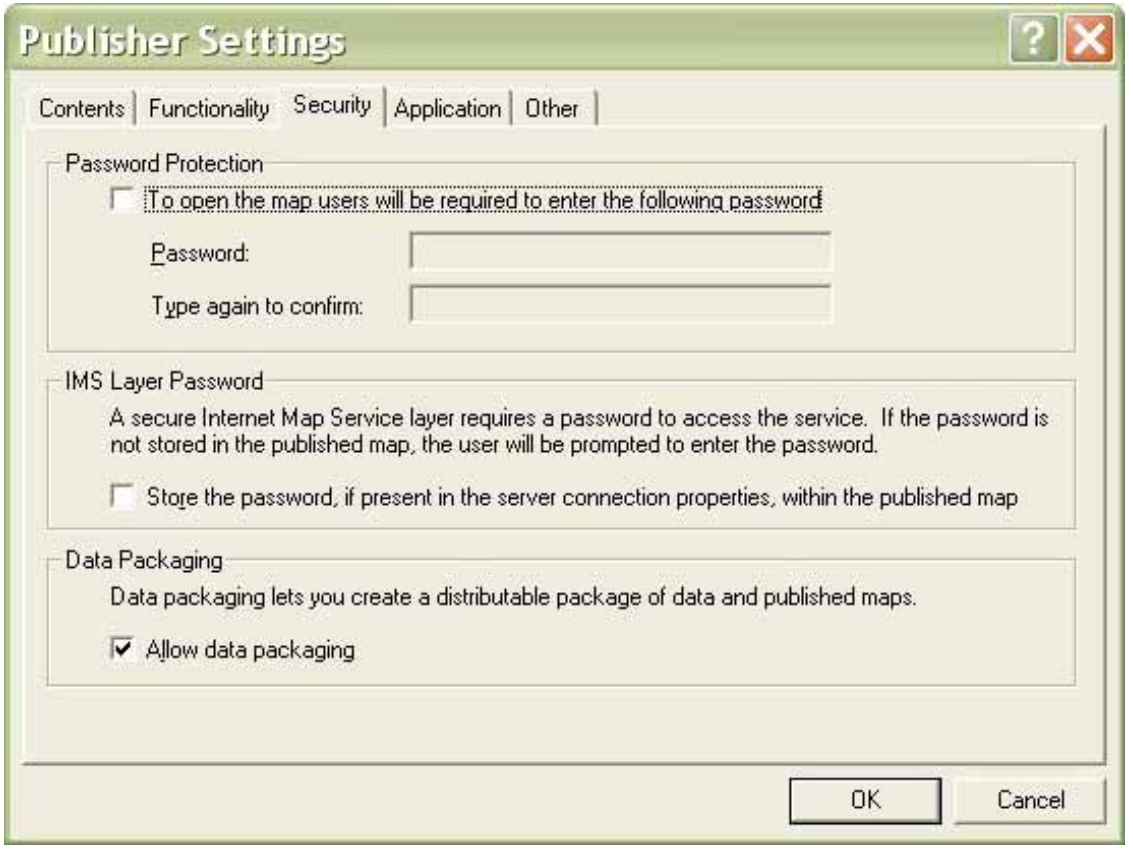
Publisher 9.0 Data Packaging Options

ArcGIS Publisher 9.0

- ArcReader Developer Control (Customizing)
  - Simple query and search functionality
  - Direct read-only access to published map files
  - ActiveX and .NET Windows Control versions
  - Help and code samples
  - Royalty–free distribution

Additional Security Features

- Restricted Access to only ArcReader
- Expiration Date
- Passwords



ArcReader 9.0

- Improved Identify tool
- Take snapshots of current display (bitmap)
- Enhanced Find Dialog Box
- Improved Measure tool
- Supports topology layers, event layers, and geometric networks
- Support for many of the new ArcGIS 9 features
  - ArcGIS Server
  - Raster catalogs
  - ArcSDE 9
  - Advanced labeling
- Improvements to the performance of hyperlinks

Acknowledgements

Maryland Emergency Management Agency (MEMA)
&
Towson University Center for Geographic Information Sciences:

David Sides, Project Manager GIS Database Development
Jeff Roberts, Project Manager GIS Applications Development
Jaime Alvarez, GIS Specialist
Missy Valentino, GIS Specialist

Questions?

Please Contact Towson University Center for Geographic Information Sciences for technical questions at:

Ashley Lesh, GIS Specialist

alesh@towson.edu

David Sides, Project Manager GIS Database Development

dsides@towson.edu

Please Contact the Maryland Emergency Management Agency (MEMA) for project-related questions at:

Carver Struve, Mitigation Planner

cstruve@mema.state.md.us