Managing Geospatial Content Production with Esri Production Mapping

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Agenda

1. Business benefits of Production Mapping
2. Workflow and task management
3. Data management and editing
4. Quality control in data and map production
ArcGIS 10 — A Complete System

Easier
More Powerful and Everywhere

Discover
Create
Manage
Visualize
Analyze
Collaborate

Cloud
Enterprise
Local

Web
Mobile
Desktop
Approaches to Building an Enterprise GIS

A spectrum of implementation patterns

Custom System
Custom code

Component System
COTS components with significant development

COTS System
Configured with minimal development
Comparing Enterprise Implementations

Custom
- Design based on detailed functional requirements
- Emphasis on software development
- Isolated environment
- Static system

COTS
- Design based on business goals and capability
- Emphasis on workflows and configuration
- Collaborative environment
- Evolving system with COTS releases
Authoritative Content Producers

- **Data**
- **Maps**
- **Publishing**

standardization, repeatability, batch processing
Common Expectations

Challenges

• Increasing demands and expectations
• Reduced funding and resources
• Increasing competition
• Steep technology curve

Solutions

• Authoritative content
• Standardized and streamlined
• Improve accuracy and production speed
• Reduce production cost
• Collaborative environment
• COTS technology
The Data and Map Production Workflow

- Collect and Inventory Data
- Load Data
- Derive Cartographic Data
- Capture, Edit and Maintain
- Store and Manage
- QA/QC
- Database Design
- Manage Workflows & Tasks
- Output and Disseminate

Collect and Inventory Data → Load Data → Derive Cartographic Data → Capture, Edit and Maintain → Store and Manage → QA/QC → Database Design → Manage Workflows & Tasks → Output and Disseminate
Esri Production Mapping

*Timely, cost-effective, authoritative data and map production*

- ArcGIS Workflow Manager
  - Task Assistant Manager

- ArcGIS Data Reviewer

- Data Loader
- Enhanced Editing Tools
- Product Library
- Cartographic Production Tools
Workflow Management
Why Manage Workflows and Tasks?

- Translate business goals into best practices
- Integrate business systems with clients and GIS staff
- Manage projects and resources
- Enforce standards and consistency
- Capture institutional knowledge
What is ArcGIS Workflow Manager?

- Enterprise workflow management application
- Server and Desktop components
ArcGIS Workflow Manager

- Standardize repeat processing
- Automate tasks
- Assign resources and handoff
- Notifications
- Track and manage work
Defining Workflows

How do I “model” business processes?

- Outline steps
- Configure steps
Defining Workflows

How do I “model” business processes?

- Outline steps
- Configure steps
- Connect steps
- Update job properties
Components of a Job

- Workflow
- Descriptive Information
- Activity Log
- Resource
- Geodatabase Version
- Geographical Area of Interest
Customization Options

- ArcGIS WMX Viewer (for Flex and JavaScript)
- ArcGIS Viewer (for Flex, JavaScript and SilverLight)
- ArcGIS APIs (for Flex, JavaScript and SilverLight)
Workflow Management
Demonstration
Task Management and Data Editing
Manage workflows at multiple levels

- Macro – link to multiple systems at a high level
- Micro – tasks inside ArcMap

**Workflow Manager**

**Task Assistant Manager**
Enhanced Editing Tools

- Extensive tool sets for editing and managing data
Enhanced Editing Tools

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• Composite templates
Enhanced Editing Tools

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- Composite templates
- Configurable attribute display
- On-the-fly attribute validation
Enhanced Editing Tools

- Extensive tool sets for editing and managing data
- Composite templates
- Configurable attribute display
- On-the-fly attribute validation
- Automated feature-level metadata tracking
Data Quality Control
Defining Quality

**Business Perspective**
- Intended purpose and use
- Client requirements
- Technical specifications
- Industry standards

**Technical Perspective**
- Positional Accuracy
- Attribute Accuracy
- Completeness
- Logical Consistency
- Lineage
How Does Quality Control Work?

**Validate**
- Detect
- Review

**Notify**
- On-the-fly Data Validation (Automated)

**Correct**
- Traditional Quality Control Session (Automated or Visual)

**Verify**
Types of Quality Control

Automated Quality Control
- Fast, consistent and repeatable
- Objective and provides 100% coverage

Visual Quality Control
- As subjective as needed to focus on priority areas
- Better for finding patterns and missing elements
Topology and ArcGIS Data Reviewer

**Topology**
- Confined to feature datasets
- Extensive for spatial checks
- Alters data within tolerance setting

**Data Reviewer**
- Multiple file formats
- Spatial and non-spatial
- Configurable tolerance
- Data filtering
- Correction and verification tracking
- Handles exceptions and error duplication
Systematic Review

- Custom overview grid
- Reviewer Overview Window
Sampling

- Visual or automated purposes
- Sample data elements
- Sample map grids
- Error reporting
Data Batch Validation Options

Inside ArcMap

Outside ArcMap

- Step in Workflow Manager
- Windows Service
- Within a Python script
- From ArcToolbox
- Command Line
Quality Control

Demonstration
Additional Tools and Resources
Data Loader

- Repeatable way to batch load data
- Uses a cross-reference database
Product Library

- Centralized management of production rules, maps and documents
- Version management
- Check in and out
Cartographic Production Tools

- Grid and graticule creation
- Views
- Visual specifications tools
- Dynamic table element
- Layout control
Resources – Production Mapping

Resource Center - resources.arcgis.com/
Product Description - www.esri.com/
Help - help.arcgis.com/
Training- www.esri.com/training
Tech Workshops and Jumpstarts
### Managing Geospatial Content Production with Esri Production Mapping

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<td><a href="mailto:bleff@esri.com">bleff@esri.com</a></td>
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Upcoming Events (www.esri.com/events)

March 8 - MeetUp at Esri (Vienna, VA)
April 12 - MeetUp in DC area (location TBD)
Mar 24-27 – Esri Partner Conference (Palm Springs, CA)
Mar 26-29 – Esri Developer Summit (Palm Springs, CA)
July 21-24 – Esri Homeland Security Summit (San Diego, CA)
July 23-27 – Esri International User Conference (San Diego, CA)
Friday Closing Session and Hosted Lunch

- Join conference attendees for lunch and closing session
- 11:30 am – 1:30 pm
- Ballrooms A-C, Third Level
- Closing Speaker – Chris Smith, United States Department of Agriculture
- Wrap-up and request for feedback with Jack Dangermond
Thank You

Please complete session evaluation form

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