ArcGIS Workflow Manager
An Introduction

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Objectives of Workshop

- Present ArcGIS Workflow Manager framework
- Understand how to solve business challenges using ArcGIS Workflow Manager
- Demonstrations
- Questions
Session Topics

- Introduction to ArcGIS Workflow Manager
- Defining and executing workflows
- Integrating workflows with ArcGIS
- Tracking and reporting progress
Introduction
What is ArcGIS Workflow Manager

- Enterprise workflow management application
  - Manages organization-wide projects
  - Integrates GIS and non-GIS workflows
What is ArcGIS Workflow Manager

Provides a framework for continuous process improvement

Allows users to:

- **Plan & Create** workflows quickly
- **Execute & Manage** standardized workflows efficiently
- **Evaluate & Improve** workflow performance continuously
Workflow Manager System Framework

- **Server**
  - Web applications
  - SOAP/REST API
  - ...Standard edition or higher

- **Desktop**
  - Administrator
  - Application
  - Developer Kit
  - ...ArcEditor or higher

- **Workflow Manager Geodatabase**

- **Geospatial Data**

- **Web applications**

- ...Windows only
Why ArcGIS Workflow Manager Server?

**Customers**
- Non-GIS Users
  - Customers
  - Admin staff
- GIS Users
  - GIS analyst
  - QA
  - Data stewards

**GIS Department**
- GIS Users
  - GIS analyst
  - QA
  - Data stewards

**Business Systems**
- Applications
  - Maximo, SAP
  - In-house apps
  - SOA
Defining your Business Processes
Defining Workflows

• How do I “model” my business processes?

• Using 3 steps
  - Outline steps to represent your activities
  - Connect steps with paths to define the flow
  - Update step and path properties to improve efficiency
Outline Steps

- Break down your process into activities (for e.g.)
  - Data collection
  - Data processing
  - Create map product in ArcMap
  - Review quality of map content
  - Create final output

- Translate these into step types
Connect Steps

- Steps are connected by defining their paths.
Update Step and Path Properties

• Preset default behavior on steps and paths
Defining Workflows

Workflow Tools

Step Properties
Utilizing your Business Processes
Executing Workflows

- How do I make these processes operational?
  - Associate workflow to job type
  - Create a job (an instance of the workflow)

- Examples:
  - Evaluate a new development plan
  - Create a 1:50,000 scale map product for a specific area
Accessing Jobs

- Queries
- List / Map View
  - Filter results based on business specific rules
Components of a Job

- Geodatabase Version
- Activity Log
- Resource
- Workflow
- Descriptive Information
- Geographical Area of Interest
Job Properties

- **Standard**
  - Name, due date, assignment, priority, etc.

- **Extended**
  - Custom, business specific
  - For e.g. Parcel Number, Department, Permit ID
Notes and Attachments

- **Notes**
  - Free form text
  - Miscellaneous information

- **Attachments**
  - Files supporting a job
Job Resource

- Automatically assign job at any point in workflow to either:
  - User
  - Group

- User can belong to any number of groups
Application Privileges

- Gate keepers of business process
- User group links privileges and user

...Who is allowed to do which action?
Area of Interest

- Spatial component of job
  - Defines work location for users
  - Restrict edits to within job AOI
Step Descriptions

- Documentation about current task
  - HTML-based
  - Link to any URL or design your own
Workflow Execution Tools

- Progression defined via *Step Properties*
  - Required
  - Automatically executed
  - Automatic reassignment of job
Holds and Dependencies

- **Holds**
  - Arbitrary suspension of job

- **Dependencies**
  - Restricts job execution based on other jobs
  - Models relationships between jobs
Integrating ArcGIS with your Business Processes
ArcGIS in your Business Processes

- Provide spatial orientation for your work
- Manage your geodatabase
  - Versioning
- Automate advanced GIS tasks
  - Batch execution
  - Create map templates
Version Management

- Versioning is required for multi-user data editing
- Automate version creation
- Associate version with task/job
- Automate clean up of unused versions
Data Management

- Access data from multiple geodatabases
- Control user access to database
- Associate editing version with job
- Simplify user experience when working with versions

... access the right data at the right time
Map Document Management

- Associated and persisted with job

- Predefined layers and symbology

- Storage options
  - Central repository
  - File system
ArcMap Integration

- Step to launch ArcMap in preconfigured state
  - Load workflows within ArcMap using Task Assistant Manager

- Toolbar for ArcMap
  - Job information and properties
ArcMap integration

- Access to entire workflow within ArcMap
  - Manage steps
  - Set current job
- Use Job Information window to
  - Update properties
  - Add notes, attachments
  - Execute current steps
  - View history
Geodatabase Archiving

- Integrated with SDE geodatabase archiving
- Investigate edits that happened on jobs
- Revert changes to features
Geoprocessing Tools

- Step to launch GP Tools
  - Increased productivity
- Workflow Manager Toolbox
ArcGIS Integration

Workflow Execution
Geoprocessing
ArcMap Tools
Tracking your Work Progress
Why Track Progress?

- Enhance communication
- Automatically route work to appropriate resource
- Provide real time status to stakeholders
- Automatically capture history
Notification

• Email notifications on
  - Job action
  - Workflow step

• Fully configurable
Spatial Notifications

- Be notified when feature edits made

- Create rules for changes to:
  Feature class, geographic area, or specific feature
Job History

- What’s happened on this job?
- Tagged with user and date
- Supplemented with user input
Reporting Job Information

- Report on resource allocation, job status, etc.
- Information stored in central repository
- Present contents of repository using different methods
  - Built-in reports
  - Web charting
  - Crystal Reports
Tracking and Notification

Job History
Job Notification
Reports
Summary

- Translate your business processes
  - Create and execute jobs
  - Manage and track jobs
- Evaluate for continual improvement
- This can be your process!
Where We Are

- Geodatabase Management Island
  - Today until 6:00 pm
  - Thursday 9:00 am - 1:30 pm
Other Sessions

**ArcGIS Workflow Manager - Version management and feature tracking**
- Thur, July 14th from 3:40 - 4:00 PM in Room 23B

**Road Ahead: ArcGIS Workflow Manager**
- Thur, July 14th from 8:55 - 9:15 AM in Room 6A

•...and more
Resources

- **ArcGIS Workflow Manager User Guide**
  - [http://resources.arcgis.com/content/web-based-help](http://resources.arcgis.com/content/web-based-help)

- **Forums**

- **Resource Center**
  - [http://resources.arcgis.com/](http://resources.arcgis.com/)

- **Product Page**
  - [http://esri.com/workflowmanager](http://esri.com/workflowmanager)