CAD: The ArcGIS for AutoCAD Plug-in

Audience Participation URL: goo.gl/tN4Vzq
Open in device browser...
CAD: The ArcGIS for AutoCAD Plug-in

Don Kuehne, Product Manager
Karen Hodge, Lead Developer
ArcGIS for AutoCAD
Samples, Blogs, Documentation, Training, Tips...

- GISCADChannel: https://www.youtube.com/user/GISCADChannel
- ArcGIS for AutoCAD Support Forums
- Esri Technical Support

- Repeat of this Session: Wednesday 14A (3:15 – 4:30 pm)
- Using CAD in ArcGIS: Thursday Room 8 (8:30 - 9:45am)

More Services, More Access....
ArcGIS Supports the Enterprise

Making Mapping and GIS Available Across Your Organization

Knowledge Workers
Executive Access
Public Engagement
Work Anywhere
Enterprise Integration

CAD/GIS Professionals

Web GIS

Making Mapping and GIS Available Across Your Organization

Transforming the Role of GIS
ArcGIS for AutoCAD
Best Practice Interoperability for AutoCAD Users
ArcGIS for AutoCAD

What is it?

• Client of ArcGIS System
  - Web Services

• Edits ArcGIS Data
  - ArcGIS Data inside DWG Files

• Software User Interfaces
  - Ribbon, Panels, Table Viewer, Attribute Dialog, Commands…
  - AutoLISP API
ArcGIS for AutoCAD Implementation Patterns
File, Services, Shared Platform …System

- File Based
- Server Centric
- Web Centric
- Web GIS
Workflow Patterns
Supporting Common Daily Workflows

Consultants
Submittal
Standards

Disconnected/Field Editing

Enterprise Editing
We will map our meeting room

- Use Esri Services in AutoCAD
- Create AutoCAD Drawings with ArcGIS Data “Inside”
- Edit ArcGIS Web Feature Services with AutoCAD
- Enterprise (Desktop/Web/Mobile) Editing
- Disconnected Feature Service Editing (Long Transaction)

Best Practice Interoperability for ArcGIS and AutoCAD
Esri Web Services
What we built together

- Esri Maps: World Topographic, World Imagery... Soils, Survey Control...
- Esri World Locator Service
- Esri Coordinate System
- ArcGIS Global User Community...

Best Practice Interoperability for ArcGIS and AutoCAD
ArcGIS Data Inside AutoCAD Files
Direct Read / Data Migration

ArcGIS for Desktop

.DWG with ArcGIS Feature Classes

ArcGIS for AutoCAD
ArcGIS Data Inside AutoCAD Files

- Esri Coordinate System
- ArcGIS Feature Classes from Entities
- ArcGIS Feature Attributes
- Standard AutoCAD Geometric Editing
- ArcMap Reads as Native GIS Data Sets
- Appended CAD Data… Shared with Enterprise

Best Practice Interoperability for ArcGIS and AutoCAD
EXPORT TO CAD
Create and Append to CAD Files

ArcGIS data in AutoCAD files (MSC)
- Feature Classes
- Attributes
- Coordinate System
- Better than Shapefiles…

ArcMap

DWG
Feature Service Editing
ArcGIS for AutoCAD
Feature Service Editing
What we built together

- Connected to ArcGIS Server(s)
- GIS Schema Generated Automatically
- Editing with AutoCAD (Adding, Deleting, Modifying…)
  - Edits on “ESRI_” AutoCAD Layer
  - Optional “ESRI_” Point Symbols
- SYNCRONIZE with ArcGIS Server

Best Practice Interoperability for ArcGIS and AutoCAD
Template Files / GIS Submittals
ArcGIS for AutoCAD

Desktop Web Device

Server Online Content and Services

Web GIS

ArcGIS for AutoCAD

ArcGIS for AutoCAD

CAD: The ArcGIS for AutoCAD Plug-in
Enterprise Feature Editing / Collaboration

Making Mapping and GIS Available Across Your Organization

Transforming the Role of GIS
Audience Participation URL:

goo.gl/tN4Vzq

Open in browser on your device…
Enterprise Feature Editing / Collaboration

- Maps are Authored with ArcMap
- Maps are Served by ArcGIS for Server
- Same Maps/Services Consumed with Many Clients…
- ArcGIS for AutoCAD, ArcMap, WebMaps, WebApps… Collector… your apps

Best Practice Interoperability for ArcGIS and AutoCAD
Disconnected / Long Transaction
ArcGIS for AutoCAD
ArcGIS for AutoCAD

What we did

- Used Esri Services in AutoCAD
- Created ArcGIS Data “Inside” AutoCAD Drawings
- Edited ArcGIS Feature Services with AutoCAD
- Performed Enterprise (Desktop/Web/Mobile) Editing
- Edited Feature Services Disconnected (Long Transaction)
ArcGIS for AutoCAD 350

• Supports Windows 32/64 AutoCAD 2013-2014 (*2015)
  • Civil 3D, Map 3D… etc
  • For AutoCAD (2010-2012) use : AFA 300 Sp1

• ArcGIS 10.1+

• Download Now: http://www.esri.com/software/arcgis/arcgis-for-autocad

More Services, More Access….
Transforming the Role of GIS
ArcGIS for AutoCAD 400+

- Share CAD using ArcGIS Online

- *More* Esri Services in AutoCAD
  - Elevation
  - Analysis

- ArcGIS Online Hosted Feature Services

*More Services, More Access...*
Thank you...
We hope you had an \textit{EXCELLENT} experience...

- \textit{Please fill out the session survey:}

\begin{itemize}
  \item First Offering ID: 1187
  \item Second Offering ID: 1310
\end{itemize}

- Online – [www.esri.com/ucsessionsurveys](http://www.esri.com/ucsessionsurveys)
- Paper – pick up and put in drop box
Data Interoperability Extension

Translation and Conversion
- Geometric Manipulation
- File and Data Aggregation
- Filtering
- Feature Building/Creation/Reconstruction
- On-The-Fly Data Interpretation
- Geoprocessing Integration
- BIM (IFC), REVIT Plug-in
CAD and Geoprocessing

• Geoprocessing
  - ANALYSIS: BUFFER, FREQUENCY, FEATURE TO POLYGON, INTERSECT, SPATIAL JOIN…etc…
  - DATA MIGRATION: COPY FEATURE, FEATURE CLASS TO FEATURE CLASS, APPEND, MERGE, CAD TO GEODatabase, FEATURE to POLYGON, IMPORT CAD ANNOTATION…
  - WRITE TO CAD FILES: EXPORT TO CAD