

CAD: The ArcGIS for AutoCAD Plug-in



Audience Participation URL:
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Technical Workshop



CAD: The ArcGIS for AutoCAD Plug-in

Don Kuehne, Product Manager

Karen Hodge, Lead Developer

Technical Workshop

ArcGIS for AutoCAD

Samples, Blogs, Documentation, Training, Tips...

- **GIS CAD Interoperability Blog** : <http://giscadblog.blogspot.com/>
- **GISCADChannel** : <https://www.youtube.com/user/GISCADChannel>
- **Esri CAD Resource Center**: <http://resources.arcgis.com/en/communities/cad-integration/>
- **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

Knowledge
Workers



Executive
Access



Public
Engagement



Work
Anywhere



Enterprise
Integration



CAD/GIS
Professionals



ArcGIS

Web GIS

Making Mapping and GIS
Available Across Your Organization

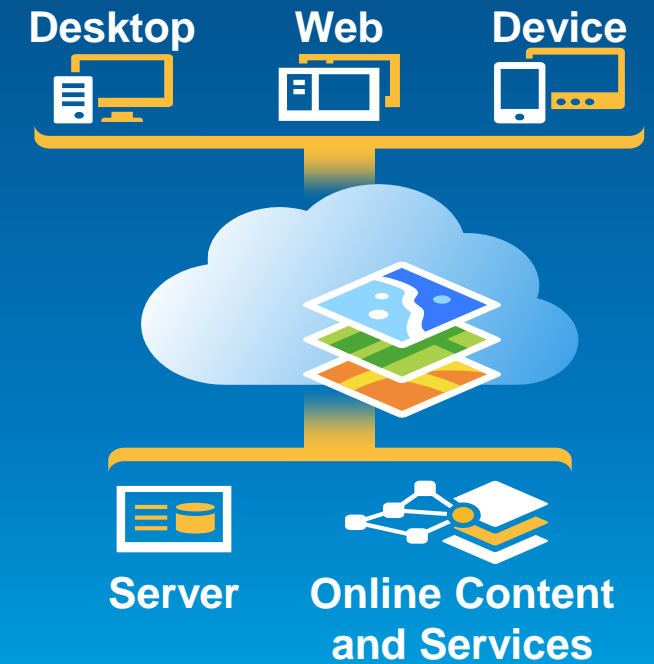
Transforming the Role of GIS

ArcGIS for AutoCAD

Best Practice Interoperability for AutoCAD Users



ArcGIS Platform



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

ArcGIS for AutoCAD Implementation Patterns

File, Services, Shared Platform ...System



File Based



Server Centric



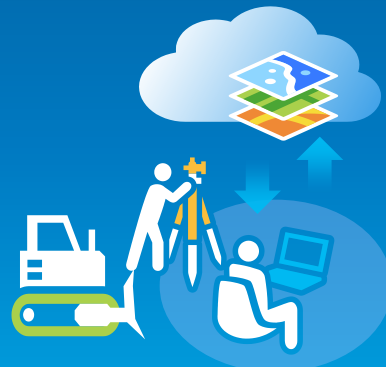
Web Centric

Workflow Patterns

Supporting Common Daily Workflows



Consultants
Submittal
Standards



Disconnected/Field
Editing



A g e n d a

Demonstrations

What we will build

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

Location, Maps, Imagery...Features



Review

Esri Web Services

What we built together

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

Best Practice Interoperability for ArcGIS and AutoCAD

ArcGIS Data Inside AutoCAD Files

Direct Read / Data Migration

ArcGIS for Desktop



Server



ArcGIS for AutoCAD



ArcGIS Data Inside AutoCAD Files

What we built together

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

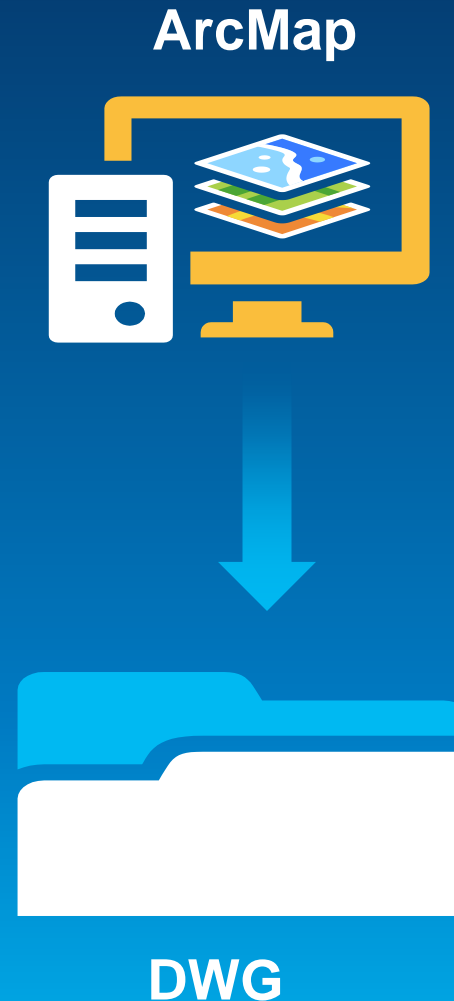
Best Practice Interoperability for ArcGIS and AutoCAD

EXPORT TO CAD

Create and Append to CAD Files

ArcGIS data in AutoCAD files (MSC)

- Feature Classes
- Attributes
- Coordinate System
- Better than Shapefiles...



Feature Service Editing

ArcGIS for AutoCAD



Feature Service Editing

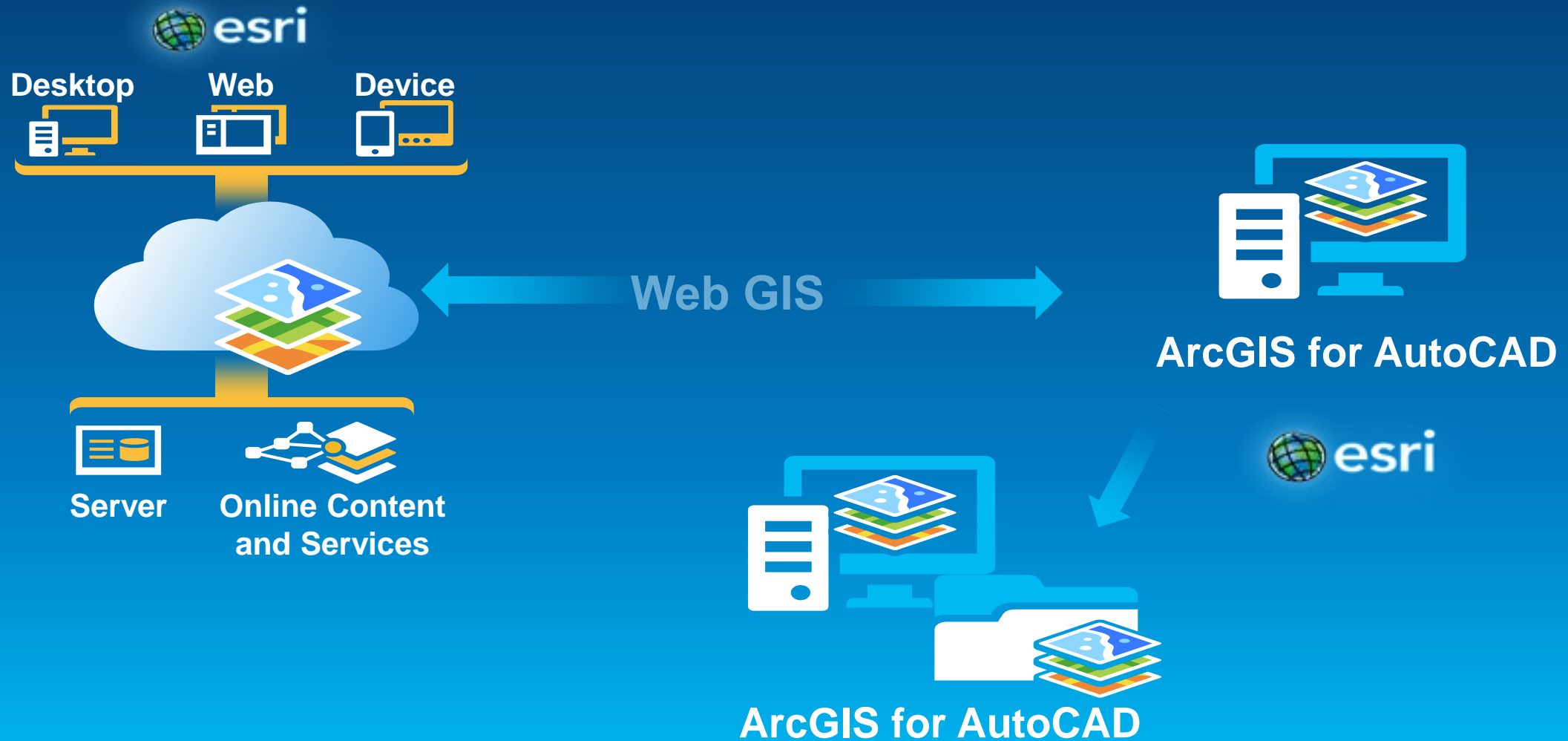
What we built together

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

Best Practice Interoperability for ArcGIS and AutoCAD

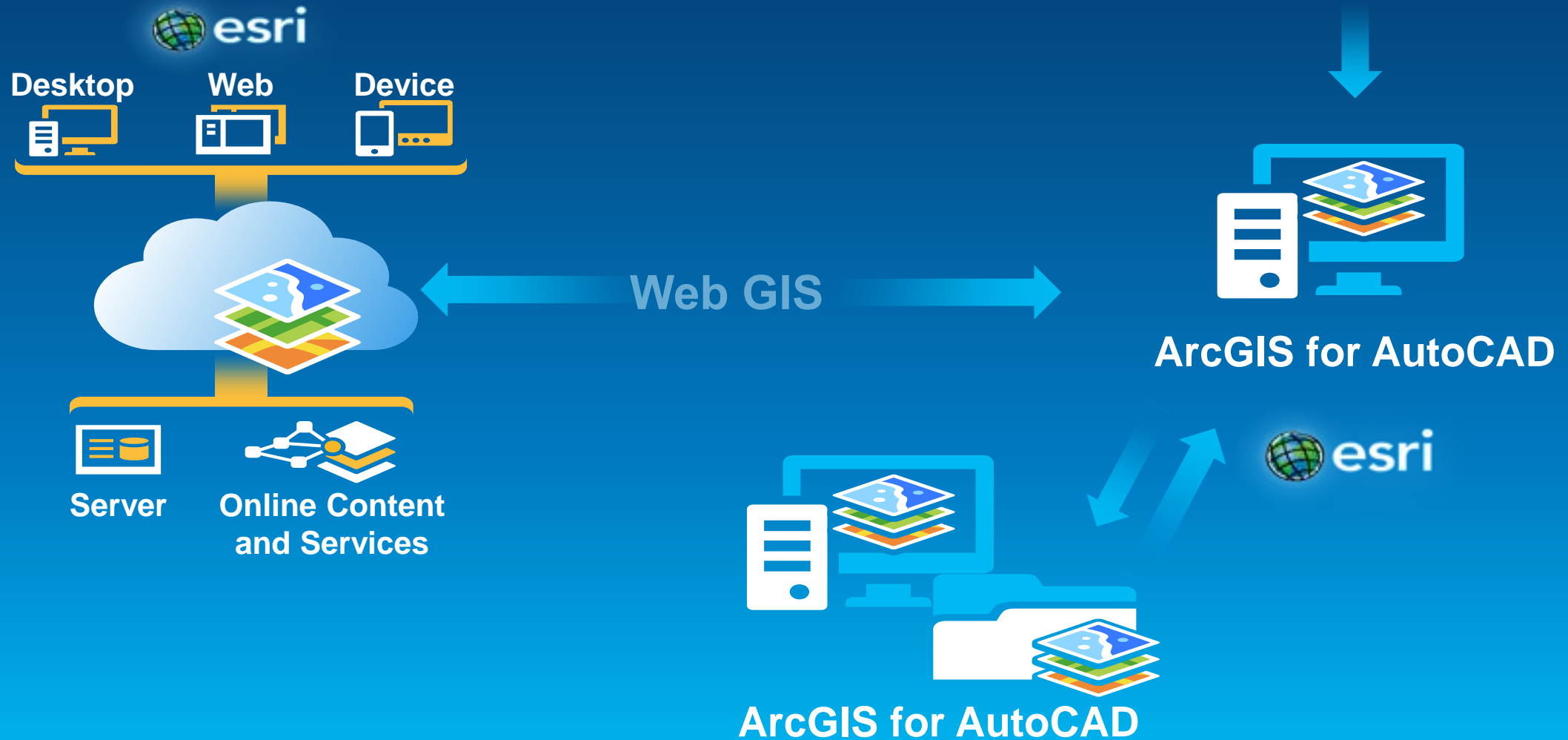
Template Files / GIS Submittals

ArcGIS for AutoCAD



Template Files / GIS Submittals

ArcGIS for AutoCAD



Enterprise Feature Editing / Collaboration

Knowledge Workers



Executive Access



Public Engagement



Work Anywhere



Enterprise Integration



ArcGIS for AutoCAD



ArcGIS

Web GIS

**Making Mapping and GIS
Available Across Your Organization**

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Enterprise Feature Editing / Collaboration

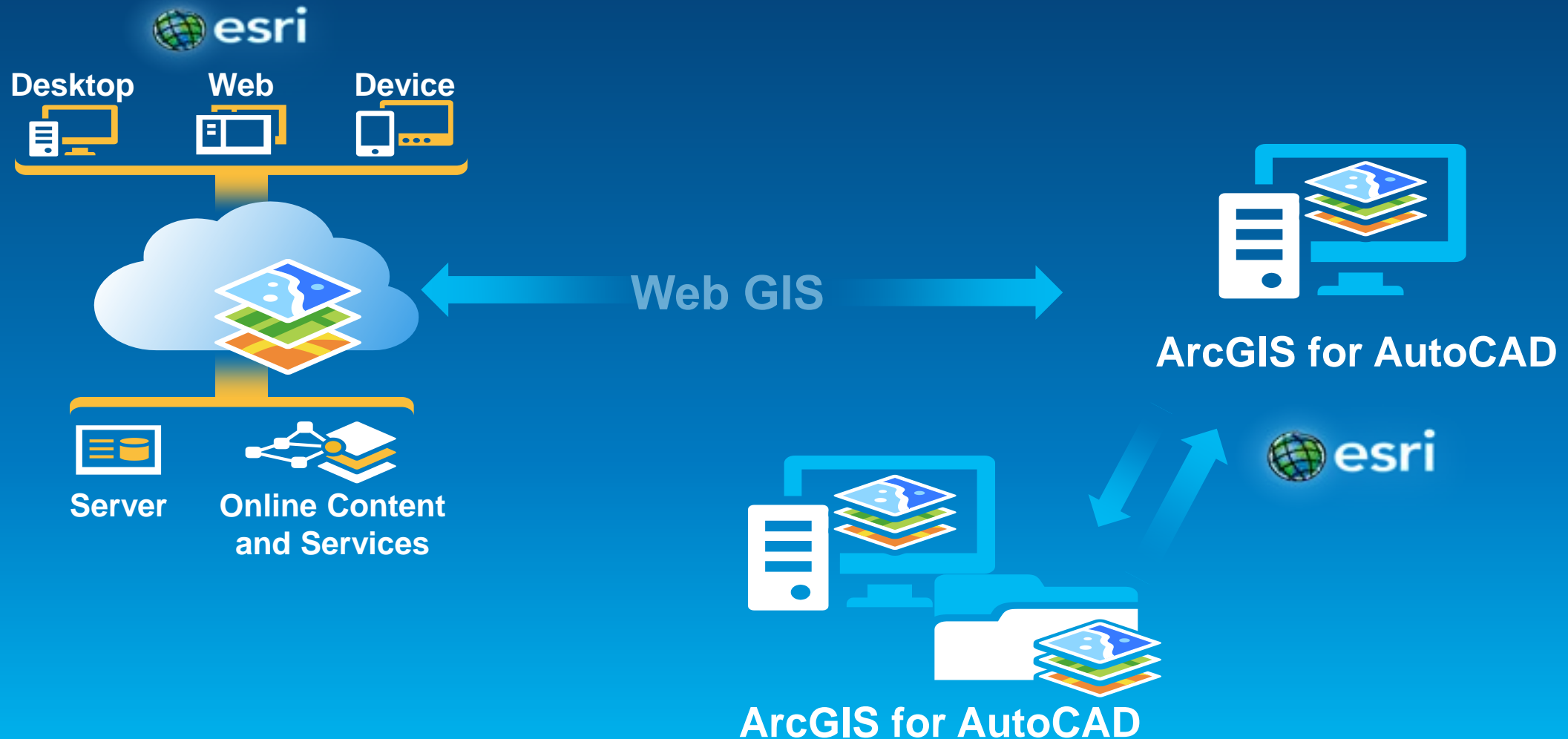
What we built together

- Ü Maps are Authored with ArcMap
- Ü Maps are Served by ArcGIS for Server
- Ü Same Maps/Services Consumed with Many Clients...
- Ü 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....

Transforming the Role of GIS

Feedback

Thank you...

We hope you had an *EXCELLENT* experience...

- *Please fill out the session survey:*

First Offering ID: 1187

Second Offering ID: 1310

Online – www.esri.com/ucsessionsurveys

Paper – pick up and put in drop box

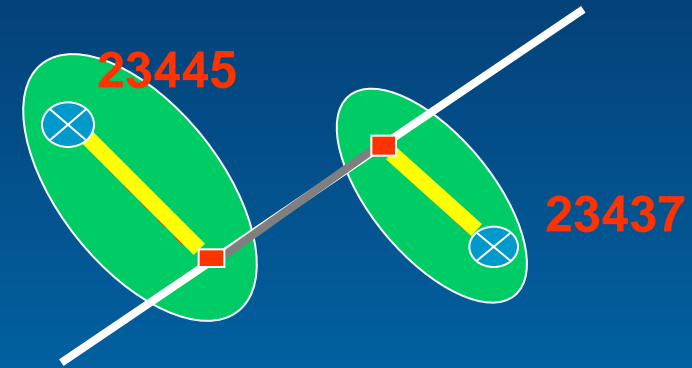


Understanding our world.

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

