

Location, Location, Location: New Field Workflows for AutoCAD

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Safe Harbor

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Key learning objectives

At the end of this class, you will be able to:

- Understand advancements in geolocation features for AutoCAD 2014 products, including LT
- Access Live Map Data directly in any AutoCAD 2014 product
- Work with geolocated satellite and aerial imagery and other raster formats in AutoCAD 2014
- Seamlessly connect your AutoCAD desktop to project teams with web and mobile tools

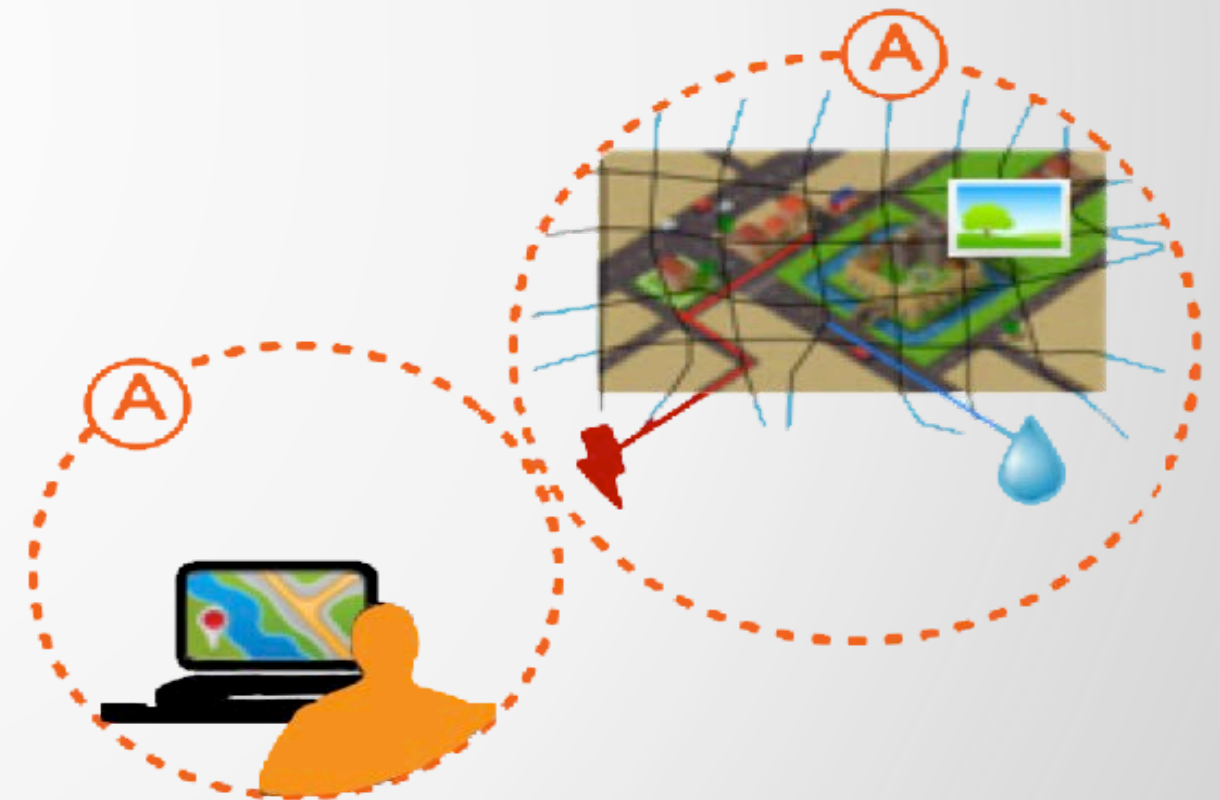
Time is Now

Unleash the power of Location



The Location Opportunity

- Discover existing conditions
- See how my project fits in its environment
- Mashup data to start my design accurately
- Show me relevant data near me
- Locate myself on my design in the field
- Make location based comments and mark-up
- Location collaboration on projects
- Capture field data and photos



Demonstrations

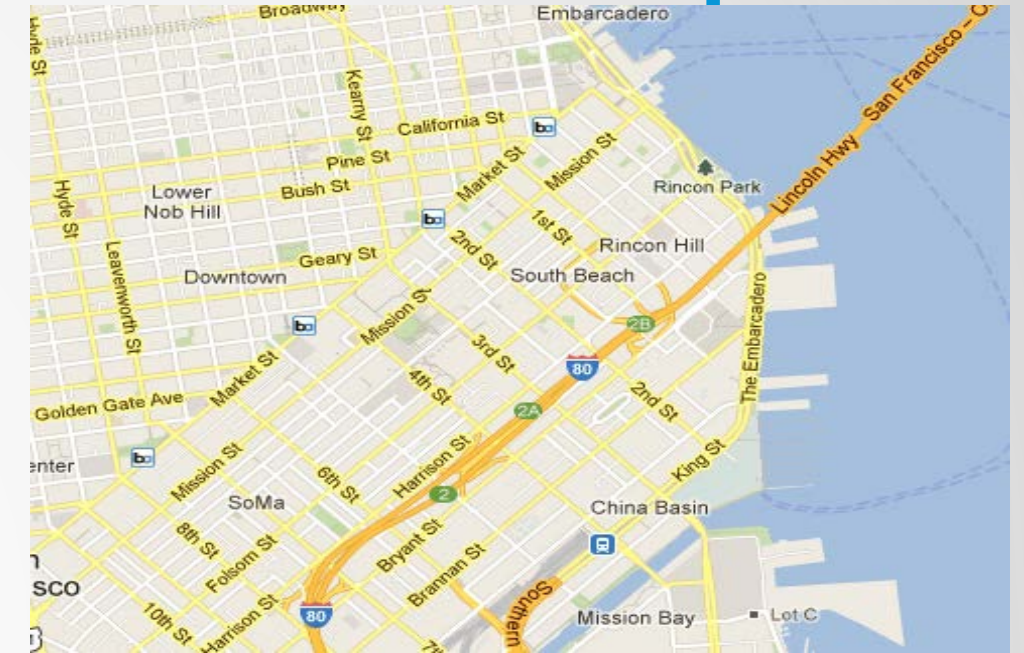
- Working with Live Maps
- Assign location to existing DWG
- Other ways to access location data
- Working with Raster Design CS features
- Web & Mobile Collaboration



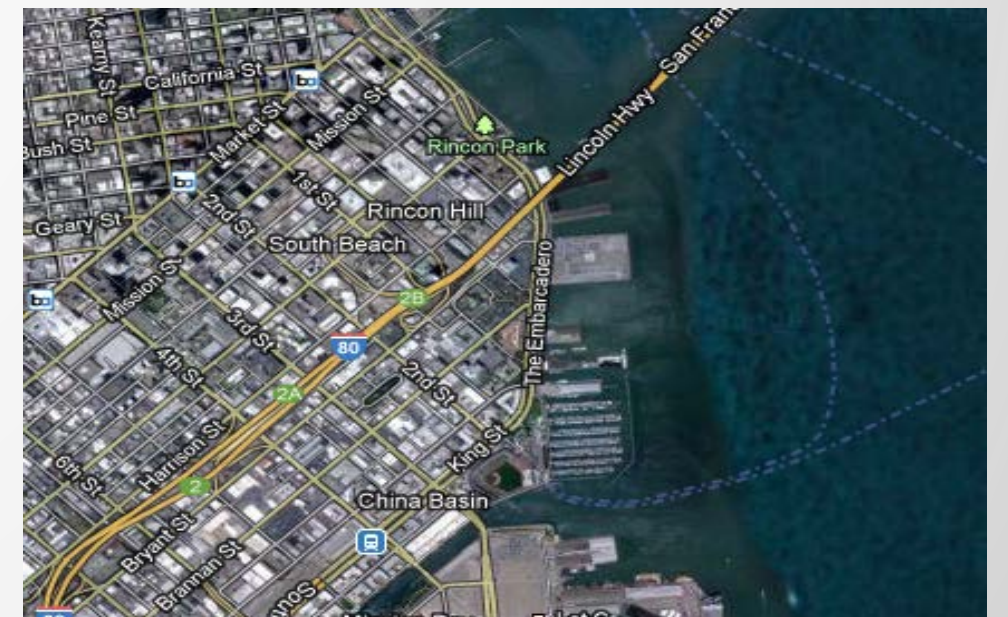
Working with Live Maps

- Set Location from Map
 - Create new DWG
 - Insert – Set Location From Map
 - Enter Autodesk login if not already logged in
 - Search for location or address (i.e. Venetian, Las Vegas NV)
 - Set Coordinate system (i.e. State Plane NAD 83)
 - Set drawing units, can be different from CS
 - Place or move marker, press Continue
 - Select location in AutoCAD canvas to place marker, choose north or enter angle
 - Pan and zoom
 - Change different map styles
 - Digitize assets and turn off Map
- Set Location from File
 - Create new DWG
 - Insert – Set Location From File
 - Select KML file (3 versions prepared)

Roadmap



Satellite



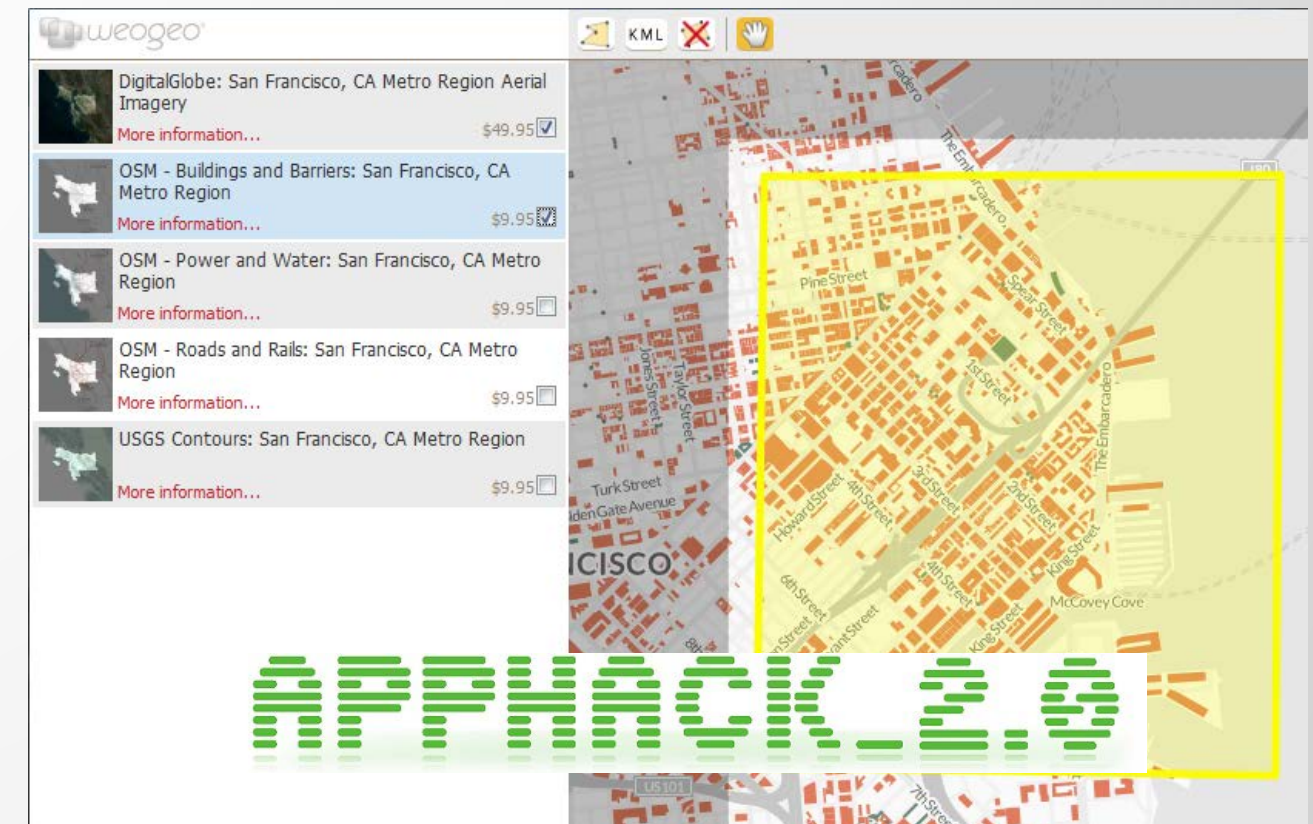
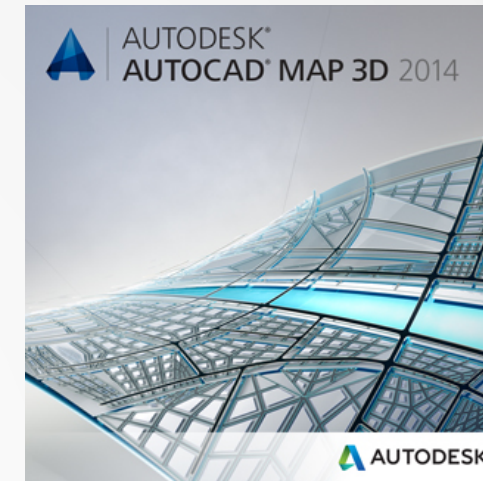
Assign Location to Existing DWG

- Open existing DWG from A360Cloud (San Francisco Parcels)
- Insert – Set Location From Map
- Show no coordinate system assigned
- Search by address location (32 Agua, San Francisco)
- Place marker at known point (top-left corner of reservoir),
- Choose coordinate system and units (i.e. state plane and feet)
- Select same location on DWG (top-left corner of reservoir)
- Select “angle” and enter any known rotational offset (i.e. -1 degree)
- Aerial photo loads
- Pan and zoom to see results



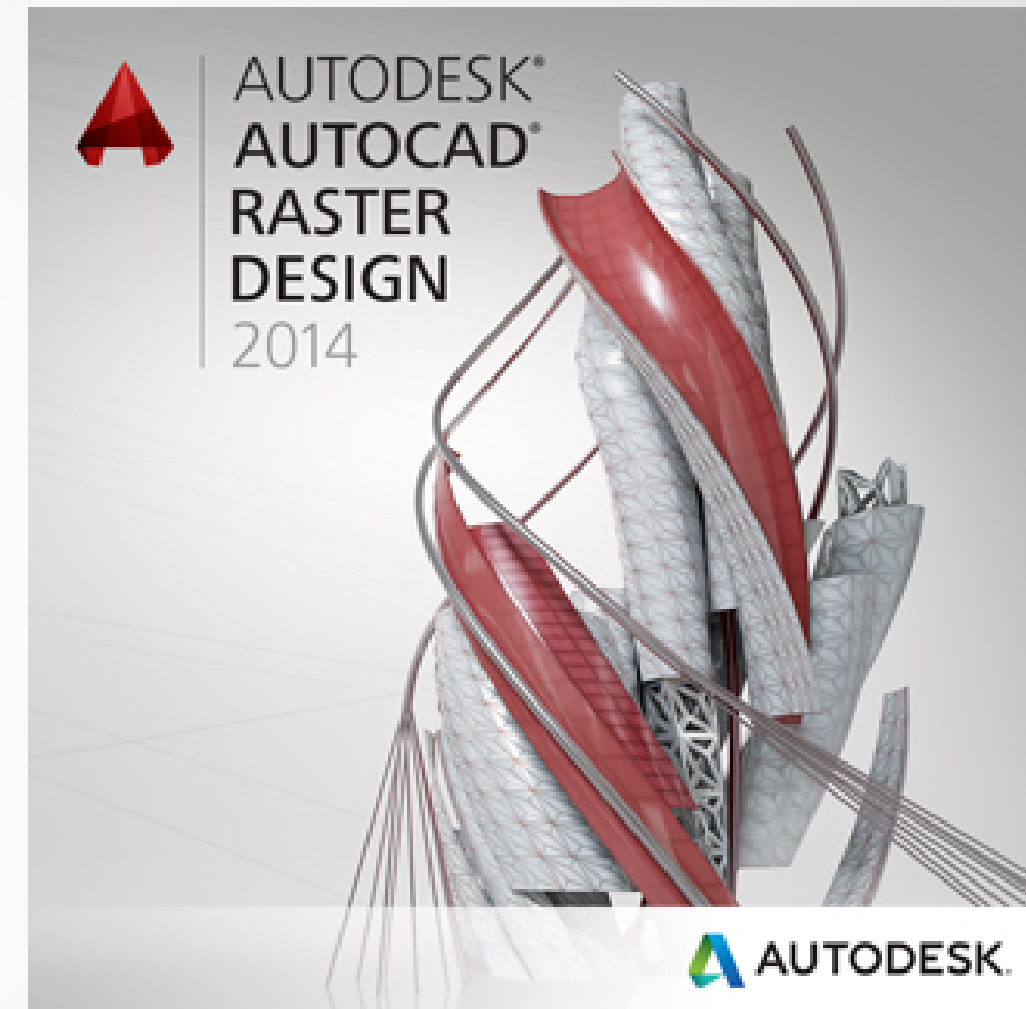
Other Ways to Access Location Data

- Bring in Map 3D from Google Drive (North Dakota)
 - Open existing DWG from Google Drive through file explorer (North Dakota Plat)
 - Edit Location – From Map
 - See Coordinate system and units have been assigned
 - Close dialog and turn on aerial photo
 - Pan, zoom, and explore
- Bring in Weogeo
 - Install and sign in to Weogeo app
 - Purchase Data button to see available data
 - Demarcate polygon
 - Select data sets to purchase
 - Enter credit card
 - Wait for data to be ready download a dataset
 - Import into AutoCAD in the correct location
- Point Clouds
 - Insert point cloud into DWG with correct Coordinate System assigned
 - Select use geographic location on insert
 - Rotate view and digitize directly off the point cloud



Working with Raster Design CS Tools

- Open DWG with CS already defined (San Rafael KM2)
- Turn on Aerial and Roadmap
- Raster Design: Insert, select San Rafael image 200_y32_3.tif
- Keep defaults and choose use geographic location
- Select 3-point affine for quick load, turn on Aerial
- Raster Design: toggle to turn on/off attached image
- Note Rite Aid structure added to mall
- Insert San Rafael DEM UTM,
- Assign palette on load and use geographic location
- Notice transformation of different coordinate system
- Crop the image
- Generate World file
- Notice the rubber sheet tools



Web & Mobile Collaboration

- Open AutoCAD 360 Web
- Open Butterfly valve file
- Open AutoCAD 360 Mobile
- Open Butterfly valve file
- From AutoCAD 360 Mobile make note and take photo
- See it update quickly in the design feed in AutoCAD 360 Web
- Change color in AutoCAD 360 Mobile of object
- See it update quickly in the design feed in AutoCAD 360 Web

