Smarter AutoCAD Drawings:
Using Attributes to Automate Text Data

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About the speaker

Volker Cocco

Employed at Autodesk, Inc., as a Technical Support Specialist and AutoCAD KDE (Knowledge Domain Expert), Volker Cocco has been working with AutoCAD software since 1991. He has worked for various Autodesk Resellers since 1997 and has had extensive experience troubleshooting and supporting Autodesk products. With a background in CAD drafting and management, Volker has instructed basic to advanced AutoCAD technical classes including sessions at Autodesk User Group International (AUGI) CAD Camp and Autodesk University.

Before We Begin…

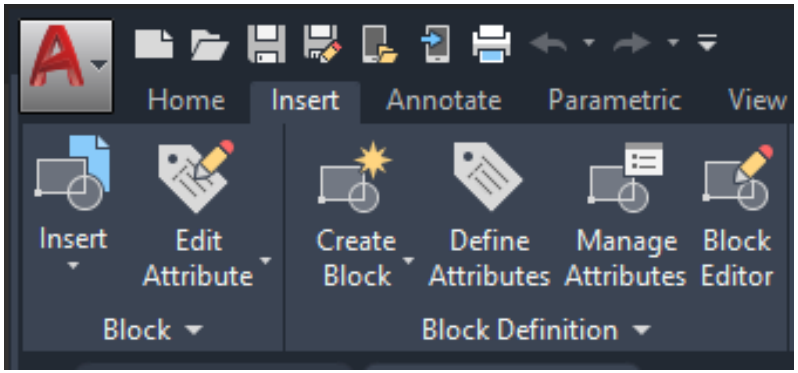
- Please silence cell phones
- If this class isn't right, feel free to attend a different class
- This session will be recorded
- Download the handout and dataset

Key Learning Objectives

- How to create an attribute definition
- How to modify and update attributes
- How to add document and field information to attribute definitions
- How to extract attribute data to an AutoCAD table or external file

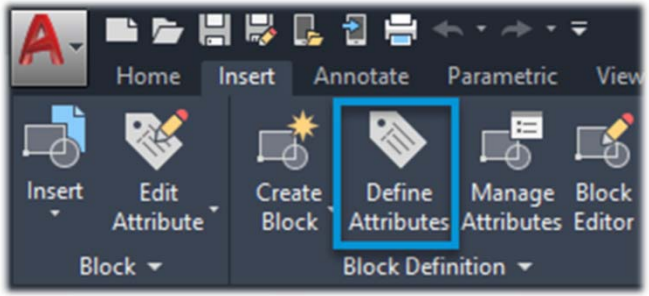
About Attributes

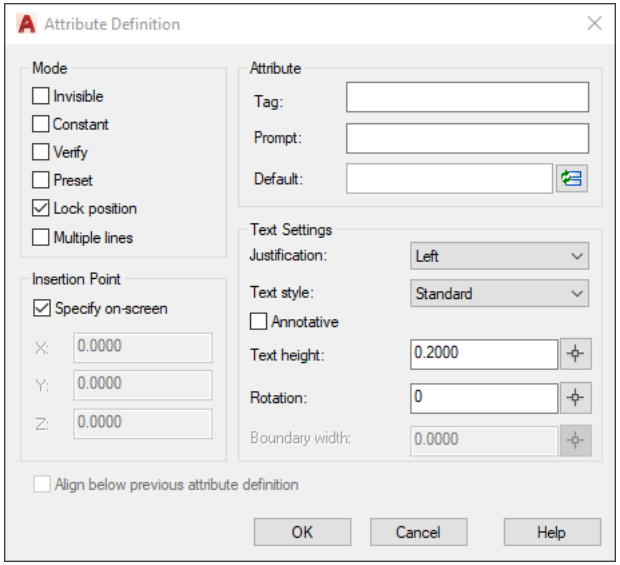
- An attribute is a label or tag that attaches data to a block
  - Commands are found on the Ribbon à Insert tab à Block & Block Definition panels
  - Common attribute use is in title blocks
  - Examples attribute data are part numbers, prices, comments, and owners' names, etc.
    - Enforce consistency
  - Attribute data can be extracted to a Table or external file



About Defining Attributes

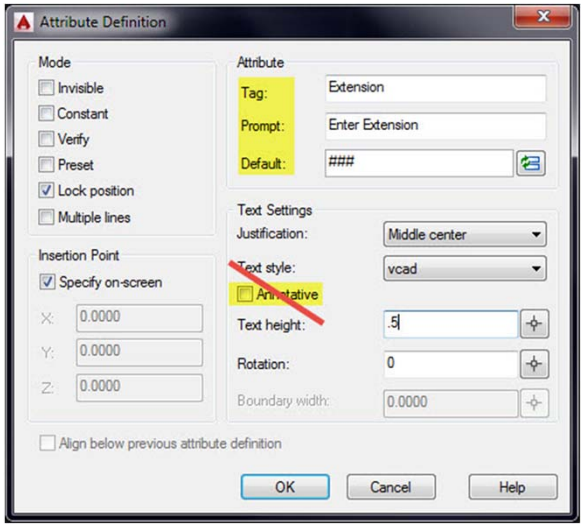
- To Define is to Create
  - Defined using the Attribute Definition dialog
  - Commands: **ATTDEF** or **AT**
  - Attached to a block or as a stand alone block





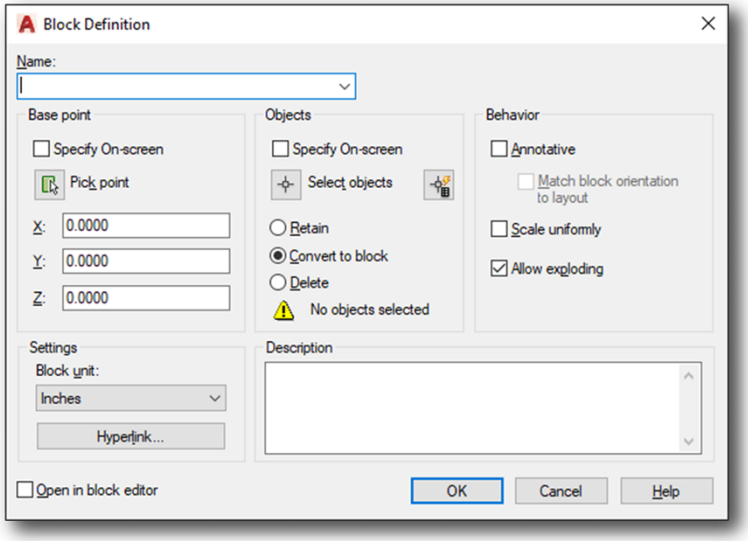
About Defining Attributes

- There are three primary components to an attribute definition:
  - A unique tag
  - A prompt
  - A default value
- Additional Settings:
  - Mode Options:
    - ATTDISP: [Normal/ON/OFF] Overrides Display of Attributes (Visibility Mode)
    - ATTDIA: 0 or 1 [Off or On] = Command Line or Dialog
  - Text Settings
    - Recommend Not Using Annotative (Make Block Annotative)
  - Placement



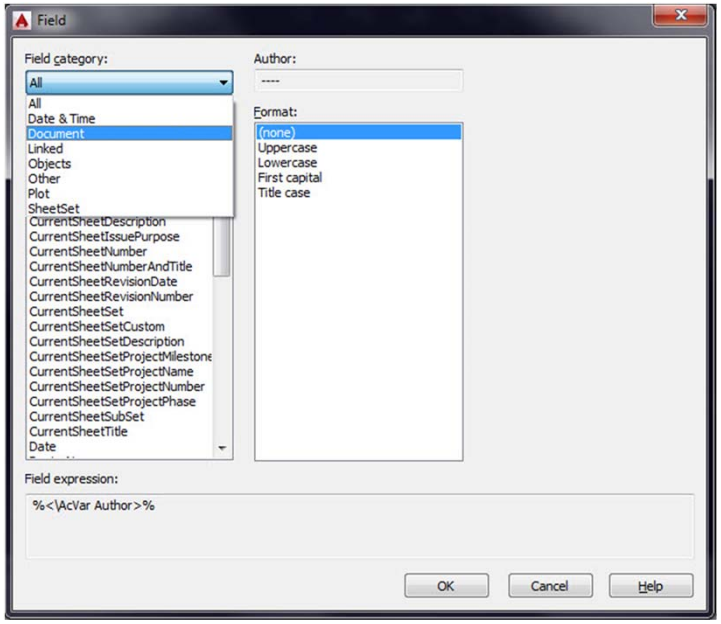
About Defining Attributes

- Define the Block using the Block command
  - Can be Defined as:
    - Stand alone block, i.e., a label block
    - Associated with Linework
  - When Defining the Block
    - Select Linework
    - Select Attributes In Order Desired
- Commands which Reorder Attributes:
  - BATTMAN = Block Attribute Manager
  - BATTORDER = Only Available in Block Editor



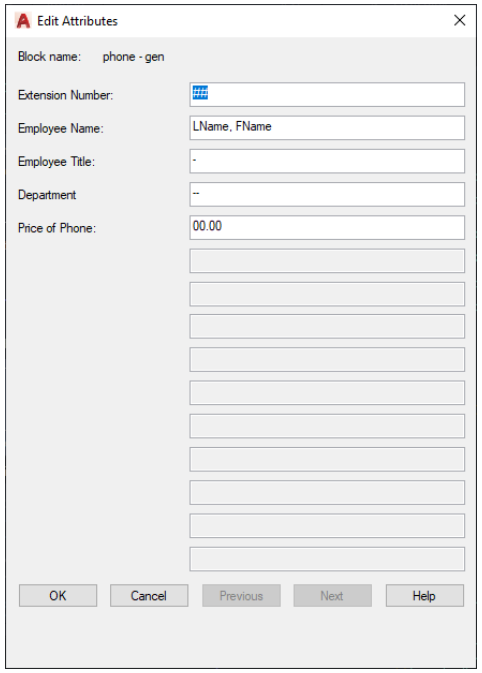
Defining an Attribute with Fields

- Use Fields to Define Dynamic Attributes
  - Drawing Properties (DWGPROPS)
  - Area
  - Location
  - More…



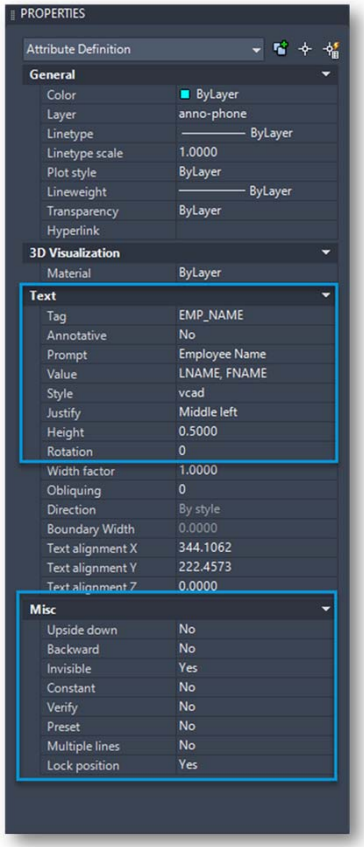
Inserting Attributed Blocks

- Commands
  - INSERT – Inserts Attributed Block
    - Displays Edit Attributes dialog
  - ATTDISP – Controls Visibility of Attributes Once Inserted
    - Normal (Default)
    - Off
    - On
- System Variables (toggles how a command works)
  - ATTDIA – Controls Display of Prompts via Dialog or CLI
    - 0
    - 1 (Default)
  - ATTREQ – Controls Display of Prompts
    - 0
    - 1 (Default)



Modifying Attributes

- Single Modification
  - Properties Palette
  - ATTEDIT – Edit Attributes Dialog (Same as Insert Attribute dialog)
  - EATTEDIT – Enhanced Attribute Editor (Double-Click default)
- Global Modification
  - BATTMAN – Block Attribute Manager
  - BEDIT – Block Editor
    - ATTSYNC – Synchronize Attributes



About Extracting Attribute Data

- EATTEXT (Command) or Data Extraction Wizard
  - Extracts Property Data from Selected Objects
  - Extract to a Table in the Drawing
  - Extract to External File
    - File Formats Include *.XLS, *.CSV, *.MDB, *.TXT
  - Creates a template (DXE file) for reuse
- Not available in AutoCAD LT

The Wright brothers flew right through the smoke screen of impossibility

Charles Kettering



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