Texting Gone Wild: Advanced Annotation Tips and Tricks for Fabrication CADmep

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Class summary

Annotation of shop drawings in Fabrication CADmep software can be a time-consuming process, and if it is not done properly, it can have devastating results. This class will cover these struggles in detail, along with looking at solutions in the Fabrication CADmep 2016 software release. We will describe the best practices for getting shop drawings produced with the correct annotation sizes per viewport, as well as tips for moving text in a single viewport and NOT the others. We will also touch on best practices when using CTEXT—creating the block and report to go along with it—to ensure proper scaling within viewports. Fabrication CADmep 2016 software also has a new command for text placement location using LISP routines. We will show examples of each of these advanced tips and tricks, and we will have discussion time at the end.

Key learning objectives

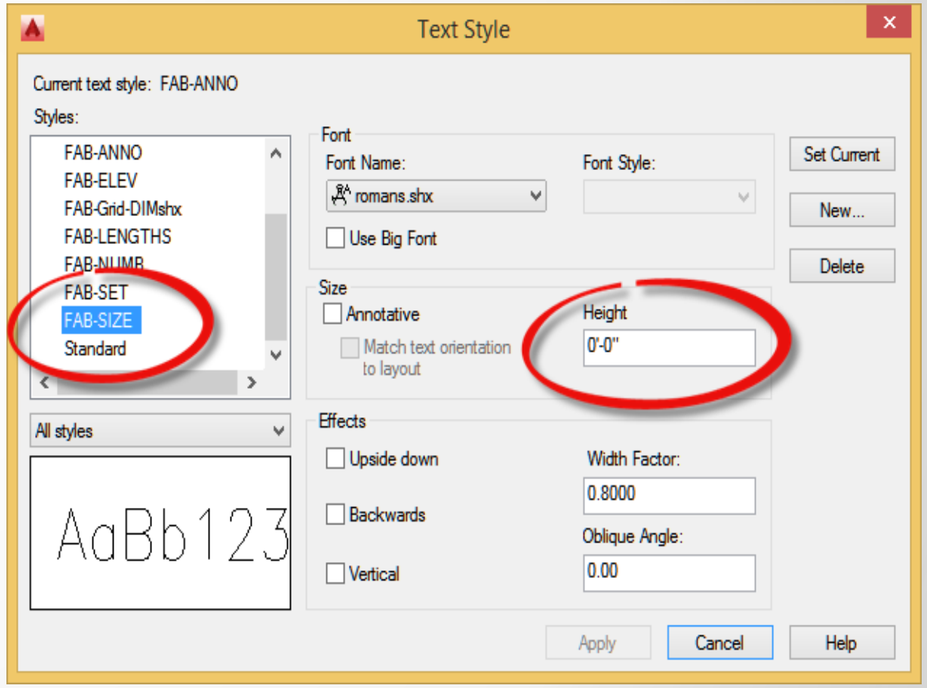
At the end of this class, you will be able to:

- Learn how to make ALL text on your shop drawings the same height, no matter what viewport scale you have
- Learn how to setup ADDREPORT with CTEXT so that the heights match and resize based on viewport scale
- Learn how to modify text in a single viewport without affecting others
- Learn how LISP can be used to automatically determine text placement location relative to the object selected

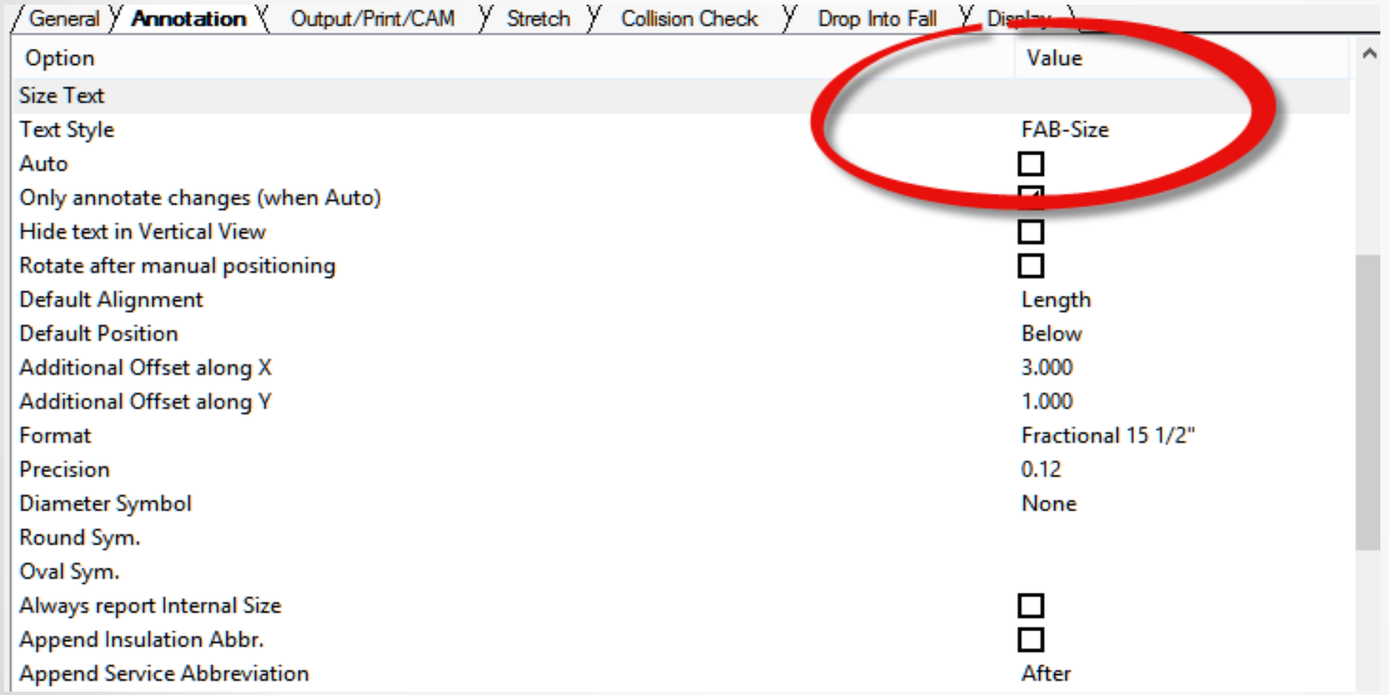
Learning Objective 1:

Learn how to make ALL text on your shop drawings the same height, no matter what viewport scale you have

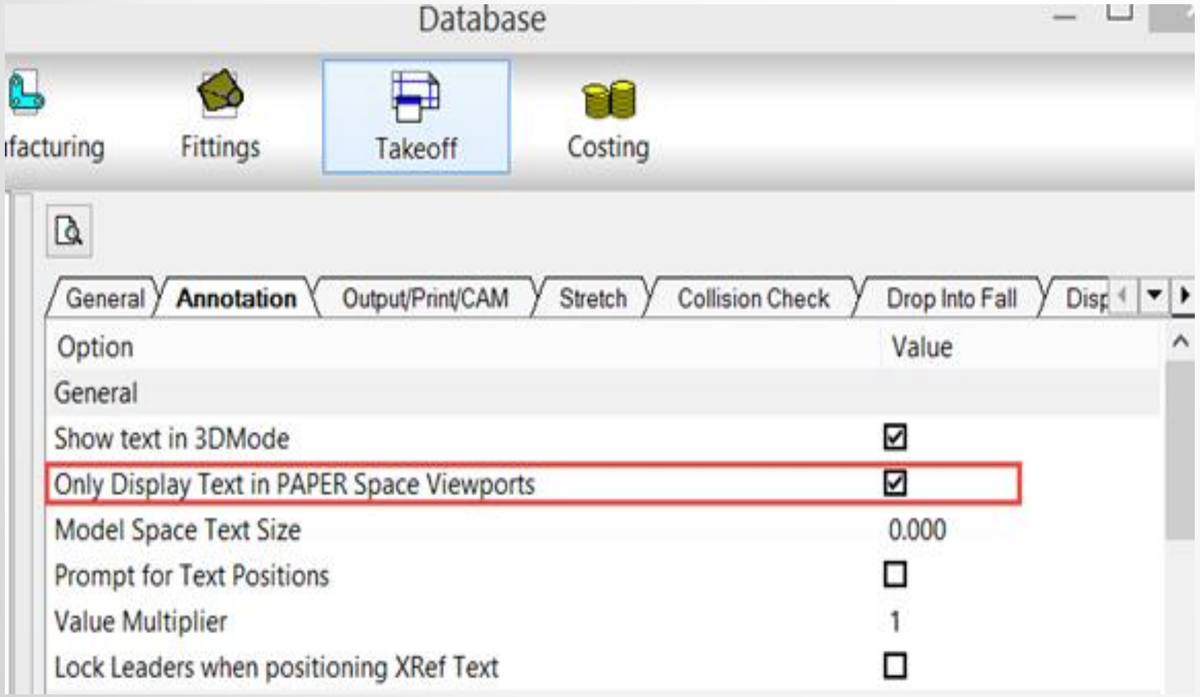
- Setting up Text Styles in Autocad is first step with height of 0”
- A common mistake is to set this height to 4” here
- Multiple Text Styles can be created
- If no Text Style found, CADmep defaults to Standard Text Style



- Apply your Autodesk Fabrication CADmep Item Annotation Text to these pre-defined Autocad Text Styles
- Assign ALL CADmep styles the proper Text Style



- In Main Database>Takeoff>Cad Settings>Annotation Tab, tick the box for “Only Display Text in Paper Space Viewports”
- Set TEXTSIZE to 3/32” when annotating in Paper Space
- Hint: Always leave text in Paper Space for best results



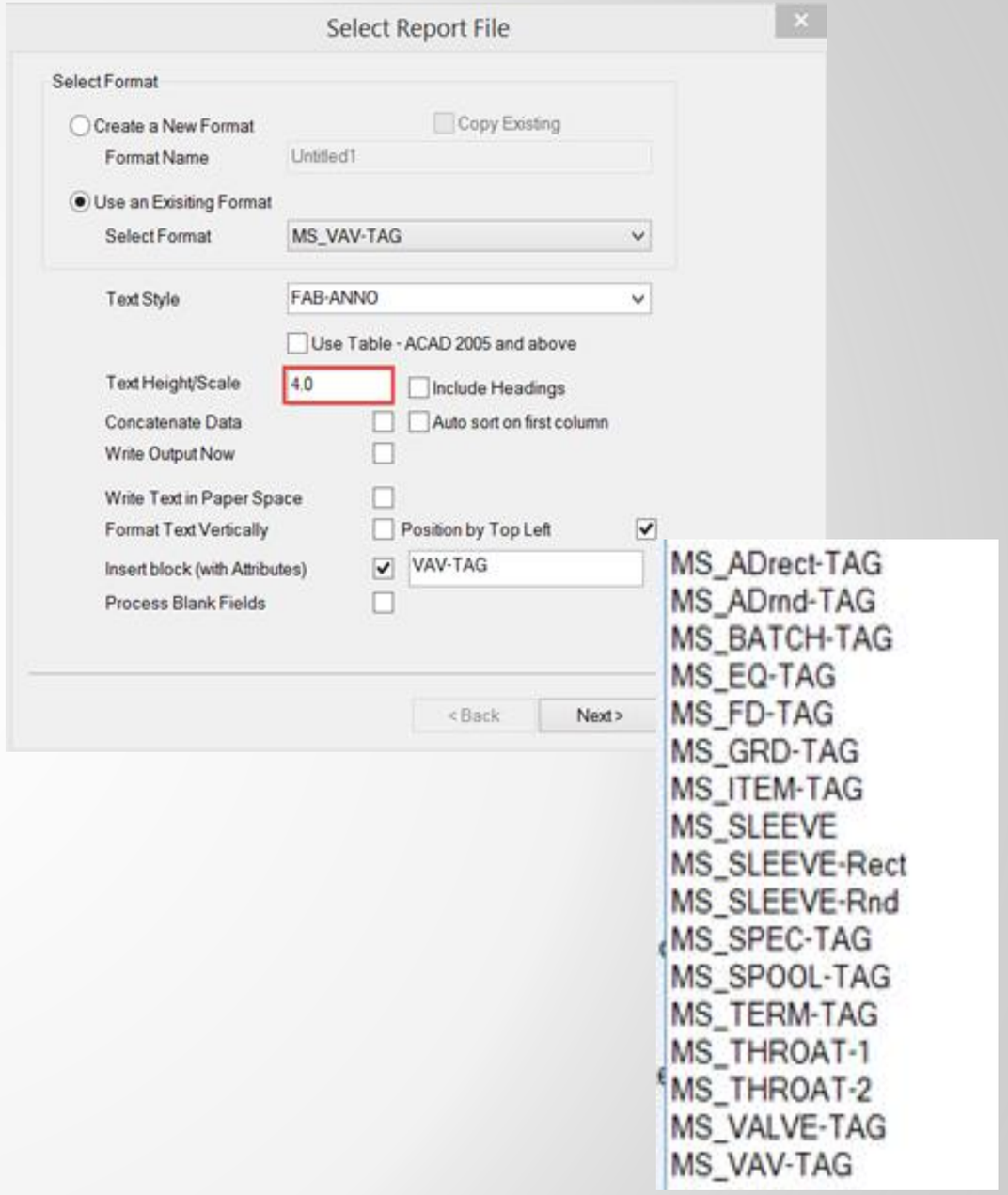
- When Annotating in Paper Space, on a single sheet with two viewports, one can be set to ¼” scale and the other to ½” scale. ALL text will be the same height!
- Use REGEN to update text heights
- Making the transition is difficult for some, but once the benefits are understood, it’s full steam ahead!
- Benefits of Paper Space Annotation
  - Cleaner models without text in them
  - Correct text height across ALL shop drawings
  - CTEXT Blocks scale correctly per viewport, which does not occur with any other settings

Learning Objective 2:

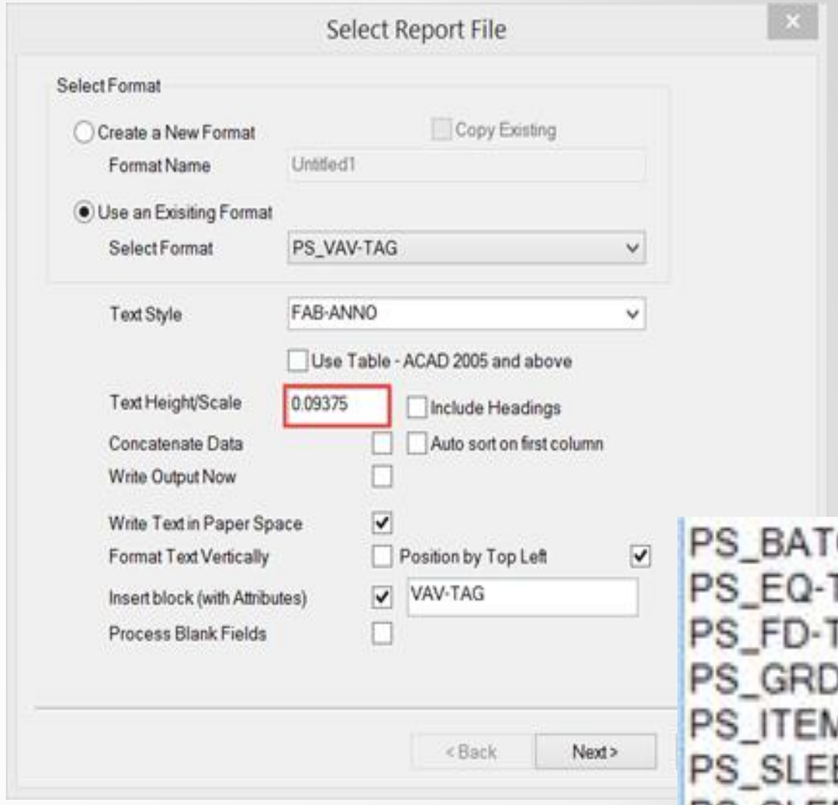
Setting up ADDREPORT and CTEXT so that text heights match and resize based on viewport scale

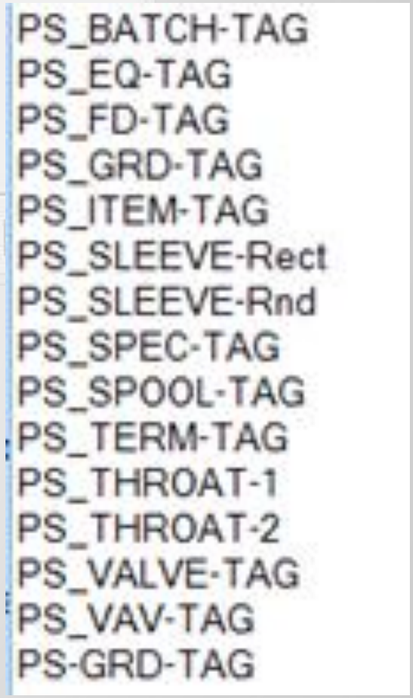
- Two separate ADDREPORT reports will most likely be created, one for model space and one for paper space, especially if making the transition to annotating completely in Paper Space
- Same block can be used for both reports as long as text height within block is set to 1 unit
- Adding these reports to the ribbon with buttons increases productivity

- Settings for Model Space ADDREPORT
  - Text Height set to 4” tall
  - Use a Autocad Text Style that exists in the model
  - Use a name with MS_VAV-Tag or similar
  - Insert Block ticked with the name of the block(VAV-Tag) filled out



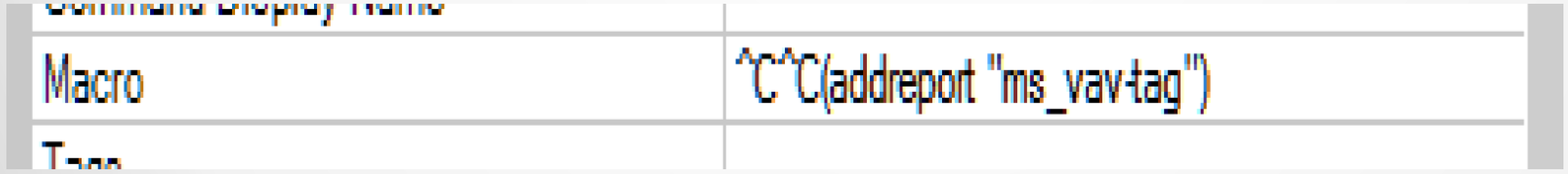
- Settings for Paper Space ADDREPORT
  - Text Height set to 0.09375” tall
  - Use a Autocad Text Style that exists in the model
  - Use a name with PS_VAV-Tag or similar
  - Insert Block ticked with the name of the block(VAV-Tag) filled out
  - Tick box for “Write Text in Paper Space”





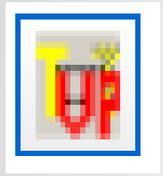
- Building the CTEXT Block
  - Make sure text height is 1 unit tall
  - Works for both Model Space and Paper Space reports
  - The Text Height/Scale on the ADDREPORT adjusts the block size and text height accordingly
  - Apply this block to each ADDREPORT for proper annotation

- Adding the ADDREPORT to a button on the ribbon
  - Create Button
  - Use CUI to add the button, possibly on a new tab, and then add the macro to it
  - LISP can also be used to “enhance” this process
  - Combine LISP and Scripting to get best results



Learning Objective 3:

Learn how to modify text in a single viewport without affecting other viewports



- Move Object Text in This Viewport only

(Hint) use Alt and Grip

- Hide Object Text in Viewport
- (Hint use Shift and Object Text button)

Learning Objective 4:

Learn to use LISP to automatically determine text placement location relative to the object selected

- AddTextAtPoint

  Command line Automation to add selected object text to be displayed at a selected point on the object

AddTextAtPoint Text Index Name 3Dpoint Report Name

(addTextAtPoint 7 hang pnt "MS_Z-ConElev")

Learning Objective 4:

Learn to use LISP to automatically determine text placement location relative to the object selected

```
(setq Item_Number 1)
(setq Item_Size 2)
(setq Item_Elevation 3)
(setq Item_Alias 4)
(setq Item_Set 5)
(setq Item_Length 6)
(setq Item_Custom 7)
```

```
(defun c:racktext()
  (setq ent1 (car (entsel)))
  (setq ent2 (car (entsel)))
  (setq ent3 (car (entsel)))

  (setq pnt (getpoint "\n Text Position"))
  (setq Xcoord (car pnt))
  (setq Ycoord (cadr pnt))
  (setq Zcoord (caddr pnt))

  (setq SPACING 5.0)

  (addTextAtPoint 2 ent1 pnt)
  (setq pnt (list Xcoord  (- Ycoord SPACING) Zcoord))
  (addTextAtPoint 2 ent2 pnt)
  (setq pnt (list Xcoord  (- Ycoord (* SPACING 2)) Zcoord))
  (addTextAtPoint 2 ent3 pnt)
)
```

- Examples/Ideas
  - Adding both throat dimensions to elbows at one time
  - Filtering drawing for Valves and adding Valve Tags on ALL valves
  - Add Size and Elevation to Items at the same time
  - Adding Damper tags to entire drawing
  - Adding VAV tags to entire drawing
  - Adding Diffuser Tags, with prompt for Type and CFM
  - Add processes for automated report printing

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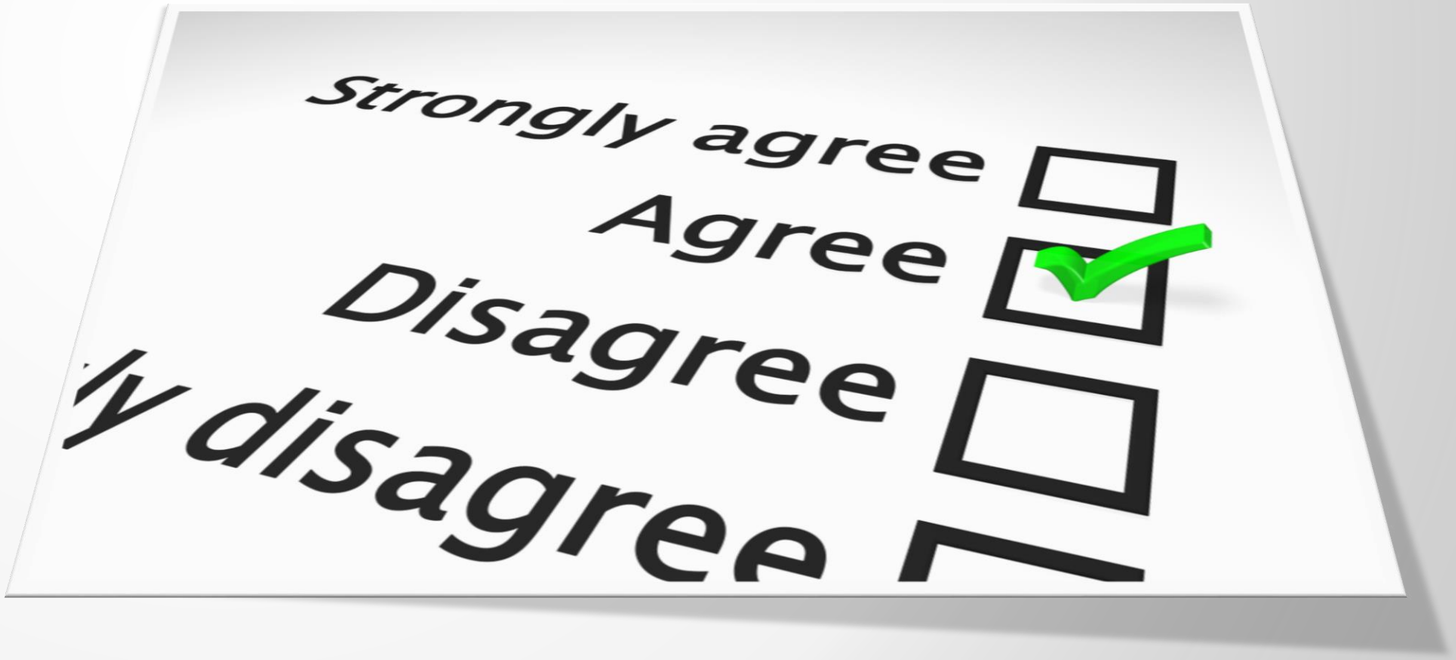

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