

WORKING WITH DWGS

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WORK ENVIRONMENT

This focus course is for the experienced Archicad user, who has knowledge of the Work Environment Interface.

Please note that the Work Environment viewed in this session may be viewed differently, than the version of Archicad you are using.

LEARNING OBJECTIVES

After attending this course, the attendee will have an understanding of the following:

- 1) Gain an understanding of what questions need to be answered prior to any DWG coordination or exchange
- 2) Compare the various general DWG import techniques and distinguish the optimal technique to meet coordination objectives
- 3) Understand key translation settings to create a DWG with the appropriate appearance and behavior
- 4) Learn about additional ARCHICAD functionality to aid in the DWG translation process

AGENDA

PART 1 - DWG Import

PART 2 - DWG Export

PART 3 - Special Considerations

DWG IMPORT



UNDERSTANDING REQUIREMENTS

Prior to importing any DWG content, ask yourself these five questions:

- 1) Where is the content?
- 2) What is the nature of the content?
- 3) What is it intended for?
- 4) Does it need to be updated?
- 5) Is the origin important?

GENERAL TECHNIQUES

=> Uses Translators

		Drawing	XRef	Merge	Convert to Object	Import Blocks
Location	In Model Space	X	X	X	X	-
	In Paper Space	-	X	X	-	-
	Blocks within File	-	-	-	-	X
Content	2D Geometry Only	X	X	X	X	-
	Mix of 2D & 3D	X	X	X	X	X
Display	Display as 2D Only	X	X	X	-	X
	Force 2D to 3D	-	-	-	X	X
	Mix of 2D & 3D	-	-	X	X	-
Reuse	Edit the Content	.*	.*	X	-	-
	Reference Only	X	X	.*	X	-
	3D Faces to Mesh	-	X	X	-	-
Update	Updated Regularly	X	X	-	-	-
	No Updates	X	X	X	X	-
DWG Origin	Relevant	-	X	X	-	-
	Not Relevant	X	X	X	X	-

DRAWING

		Drawing
Location	In Model Space	X
	In Paper Space	-
	Blocks within File	-
Content	2D Geometry Only	X
	Mix of 2D & 3D	X
Display	Display as 2D Only	X
	Force 2D to 3D	-
	Mix of 2D & 3D	-
Reuse	Edit the Content	.*
	Reference Only	X
	3D Faces to Mesh	-
Update	Updated Regularly	X
	No Updates	X
DWG Origin	Relevant	-
	Not Relevant	X

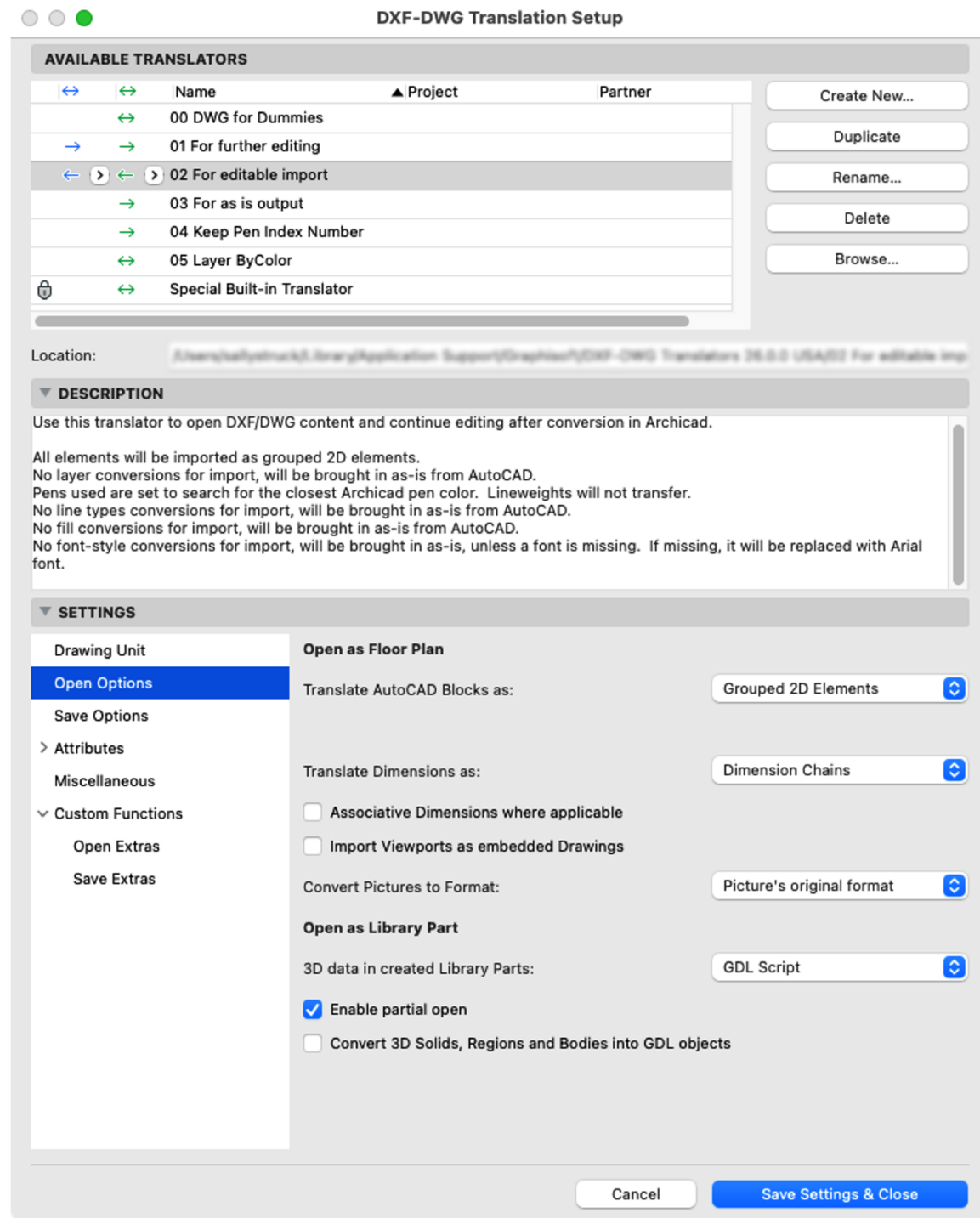
WHAT YOU WILL NEED

A DWG file with content in Model Space (2D and 3D elements will be displayed as its 2D plan representation)

WORKFLOW STEPS

- 1) Locate the DWG file to import
- 2) Drag and drop the DWG file into Archicad's Worksheet/Viewpoint/Layout/Master
- 3) Set the unit equivalent to scale properly

IMPORT TRANSLATOR SETTINGS



TRANSLATOR LOCATION

- 1) Expand 'File' drop-down menu
- 2) Hover over 'Interoperability'
- 3) Hover over 'DXF-DWG'
- 4) Select 'DXF-DWG Translation Setup...'

BEST PRACTICE

Read the description for the out-of-the-box translators to decide if it will meet your needs. Should an existing translator be close, but need additional customization, duplicate it rather than change the original. That way the originals can always be referenced in the future. Any changes made to translation settings will also impact all Archicad project opened on the same computer.

XREF

		XRef
Location	In Model Space	X
	In Paper Space	X
	Blocks within File	-
Content	2D Geometry Only	X
	Mix of 2D & 3D	X
Display	Display as 2D Only	X
	Force 2D to 3D	-
	Mix of 2D & 3D	-
Reuse	Edit the Content	.*
	Reference Only	X
	3D Faces to Mesh	X
Update	Updated Regularly	X
	No Updates	X
DWG Origin	Relevant	X
	Not Relevant	X

WHAT YOU WILL NEED

A DWG file with content that is 2D and/or 3D
Faces that are non-vertical planes (solids and simple 3D lines or points will not translate)

WORKFLOW STEPS

- 1) Expand 'File' drop-down menu
- 2) Hover over 'External Content' and select 'Attach Xref...'
- 3) Browse for the DWG file to import
- 4) Review dialog box settings and choose an appropriate translator
- 5) Press 'Attach'
- 6) Select layers to import into Archicad and click 'OK'
- 7) Imported DWG Layers may not default to not be visible, so they will need to be updated in Layer Combinations

MERGE

		Merge
Location	In Model Space	X
	In Paper Space	X
	Blocks within File	-
Content	2D Geometry Only	X
	Mix of 2D & 3D	X
Display	Display as 2D Only	X
	Force 2D to 3D	-
	Mix of 2D & 3D	X
Reuse	Edit the Content	X
	Reference Only	.*
	3D Faces to Mesh	X
Update	Updated Regularly	-
	No Updates	X
DWG Origin	Relevant	X
	Not Relevant	X

WHAT YOU WILL NEED

A DWG file with content that is 2D and/or 3D
Faces that are non-vertical planes (solids and simple 3D lines or points will not translate)

WORKFLOW STEPS

- 1) Expand 'File' drop-down menu
- 2) Hover over 'Interoperability'
- 3) Hover over 'Merge...' and select 'Merge from File...' or 'Merge from BIMcloud...'
- 4) Browse for the DWG file to import and select 'Open'
- 5) Specify if the content is from Model Space or Paper Space and click 'OK'

CONVERT TO OBJECT

		Convert to Object
Location	In Model Space	X
	In Paper Space	-
	Blocks within File	-
Content	2D Geometry Only	X
	Mix of 2D & 3D	X
Display	Display as 2D Only	-
	Force 2D to 3D	X
	Mix of 2D & 3D	X
Reuse	Edit the Content	-
	Reference Only	X
	3D Faces to Mesh	-
Update	Updated Regularly	-
	No Updates	X
DWG Origin	Relevant	-
	Not Relevant	X

WHAT YOU WILL NEED

A DWG file with content in Model Space (2D and 3D elements will be displayed as Archicad planar objects)

WORKFLOW STEPS

- 1) Expand 'File' drop-down menu
- 2) Hover over 'Interoperability'
- 3) Hover over 'Merge...' and select 'Merge from File...' or 'Merge from BIMcloud...'
- 4) Browse for the DWG file to import and select 'Open'
- 5) Specify that the content is from Model Space
- 6) Make sure the 'Import Model Space Content as GDL Object' setting is checked and select 'Merge'

IMPORT BLOCKS

		Import Blocks
Location	In Model Space	-
	In Paper Space	-
	Blocks within File	X
Content	2D Geometry Only	-
	Mix of 2D & 3D	X
Display	Display as 2D Only	X
	Force 2D to 3D	X
	Mix of 2D & 3D	-
Reuse	Edit the Content	-
	Reference Only	-
	3D Faces to Mesh	-
Update	Updated Regularly	-
	No Updates	-
DWG Origin	Relevant	-
	Not Relevant	-

WHAT YOU WILL NEED

A DWG file with DWG blocks saved within it (Dynamic blocks will be converted as their representation with default parameter values)

WORKFLOW STEPS

- 1) Expand 'File' drop-down menu
- 2) Hover over 'Libraries and Objects'
- 3) Select 'Import Blocks from DXF/DWG'
- 4) Browse for the DWG file with blocks to import
- 5) Select the appropriate translator and click 'Open'
- 6) To use imported blocks, they will be found in the Object Tool's Embedded Library

DWG EXPORT



UNDERSTANDING REQUIREMENTS

Prior to exporting any DWG content, ask yourself these questions based on the purpose of exchange:

What is the exported DWG going to be used for?

COORDINATION

- 1) What is the Geometry needed as?
- 2) Does it need to be editable?
- 3) Is the Origin relevant?

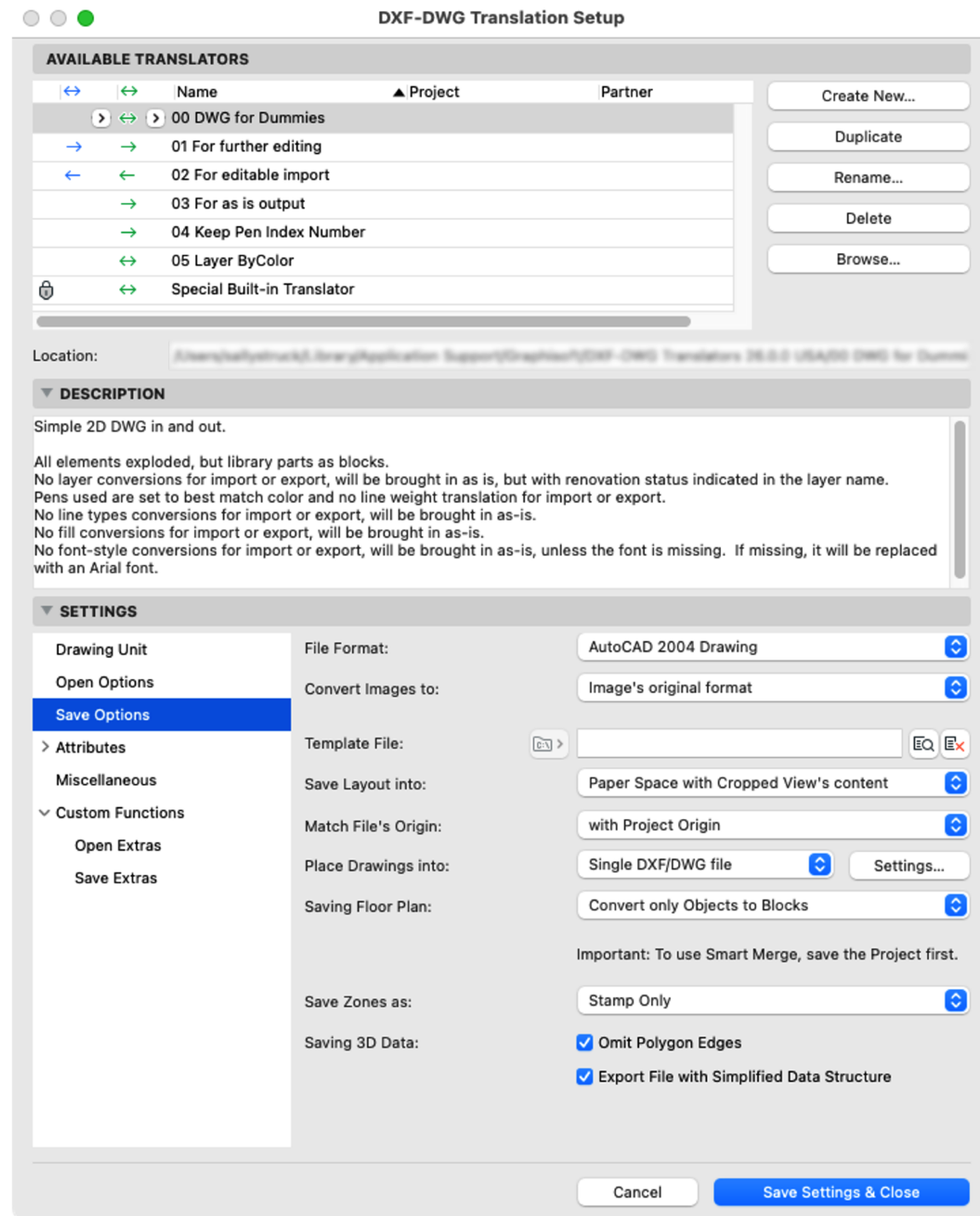
DOCUMENTATION

- 1) Where do Layouts need to be saved to?
- 2) How much content needs to be shared?
- 3) Are multiple Layouts required to be combined into a single DWG?

GENERAL EXPORT SETTINGS

		Layout to Paper Space	Layout/View to Model Space	Matching Origin	Content as Blocks	Content Cropped	Exploded Content	Merge to One DWG
Geometry	2D Only	X	X	X	X	X	-	-
	3D Only	X	X	X	X	-	-	-
Editability	Easily Editable	X	X	X	-	X	-	-
	Not Easily Editable	-	-	-	X	X	-	-
	As Referenced Files	-	-	X	X	X	-	-
Origin	Match Project Origin	-*	-*	X	-	X	-	-
	Match Survey Point	X	X	-*	X	X	-	-
Documentaion	To Paper Space	X	X	-	-	-	X	X
	To Model Space	X	X	X	X	-	X	X
DWG Matching	Match Layers	X	X	X	X	X	-	-
	Match Line/Fill Types	-	X	X	-	X	-	-
	Fonts & Blocks	-	-	-	-	X	-	-

EXPORT TRANSLATOR SETTINGS



TRANSLATOR LOCATION

- 1) Expand 'File' drop-down menu
- 2) Hover over 'Interoperability'
- 3) Hover over 'DXF-DWG'
- 4) Select 'DXF-DWG Translation Setup...'

BEST PRACTICE

Read the description for the out-of-the-box translators to decide if it will meet your needs. Should an existing translator be close, but need additional customization, duplicate it rather than change the original. That way the originals can always be referenced in the future. Any changes made to translation settings will also impact all Archicad project opened on the same computer.

SPECIAL CONSIDERATIONS

ATTRIBUTE POLLUTION

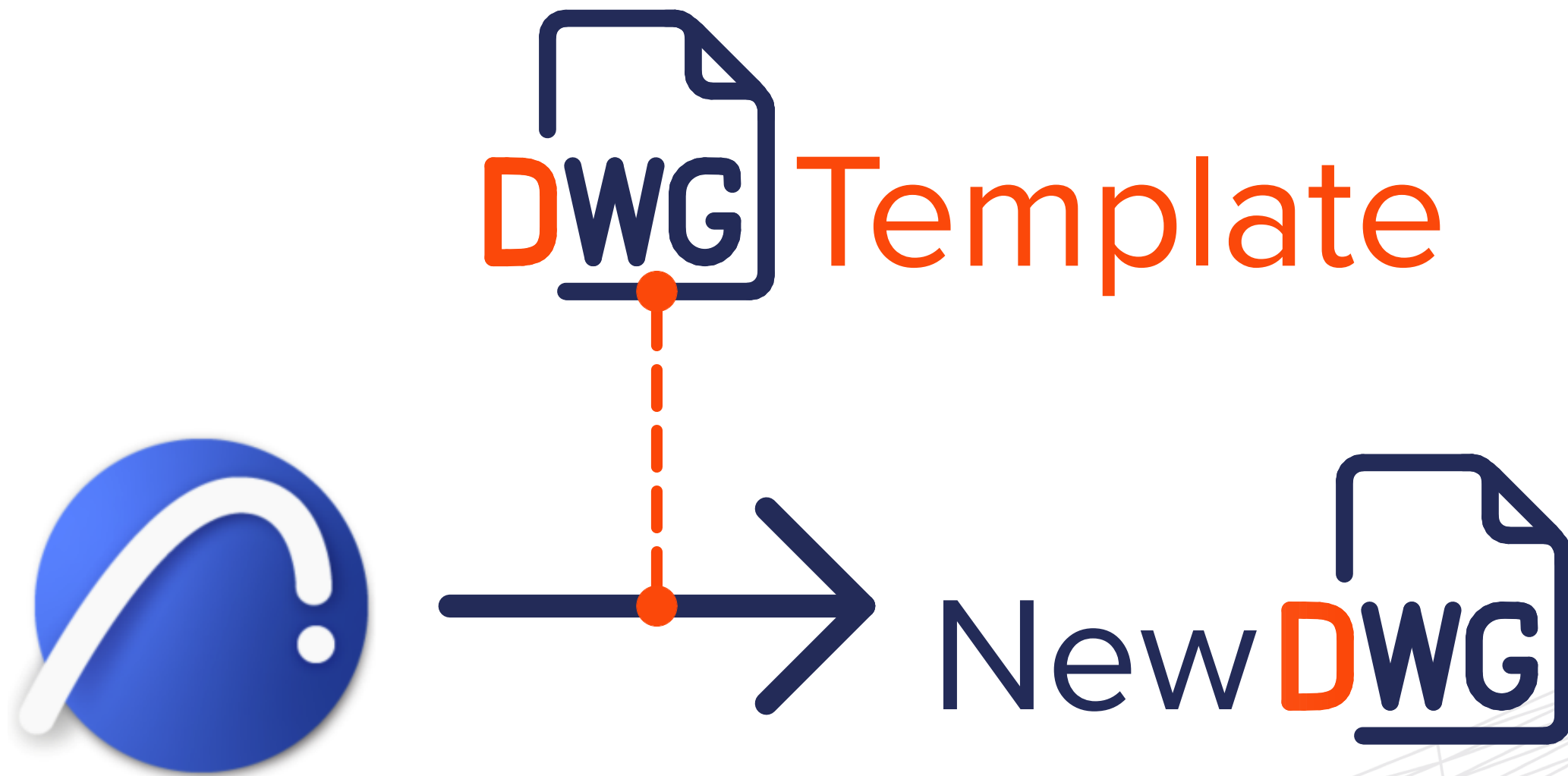
How does Attribute Pollution occur?

- Mismanagement/unintentional import of Layers, Line Types, Fill Types, and other Attributes

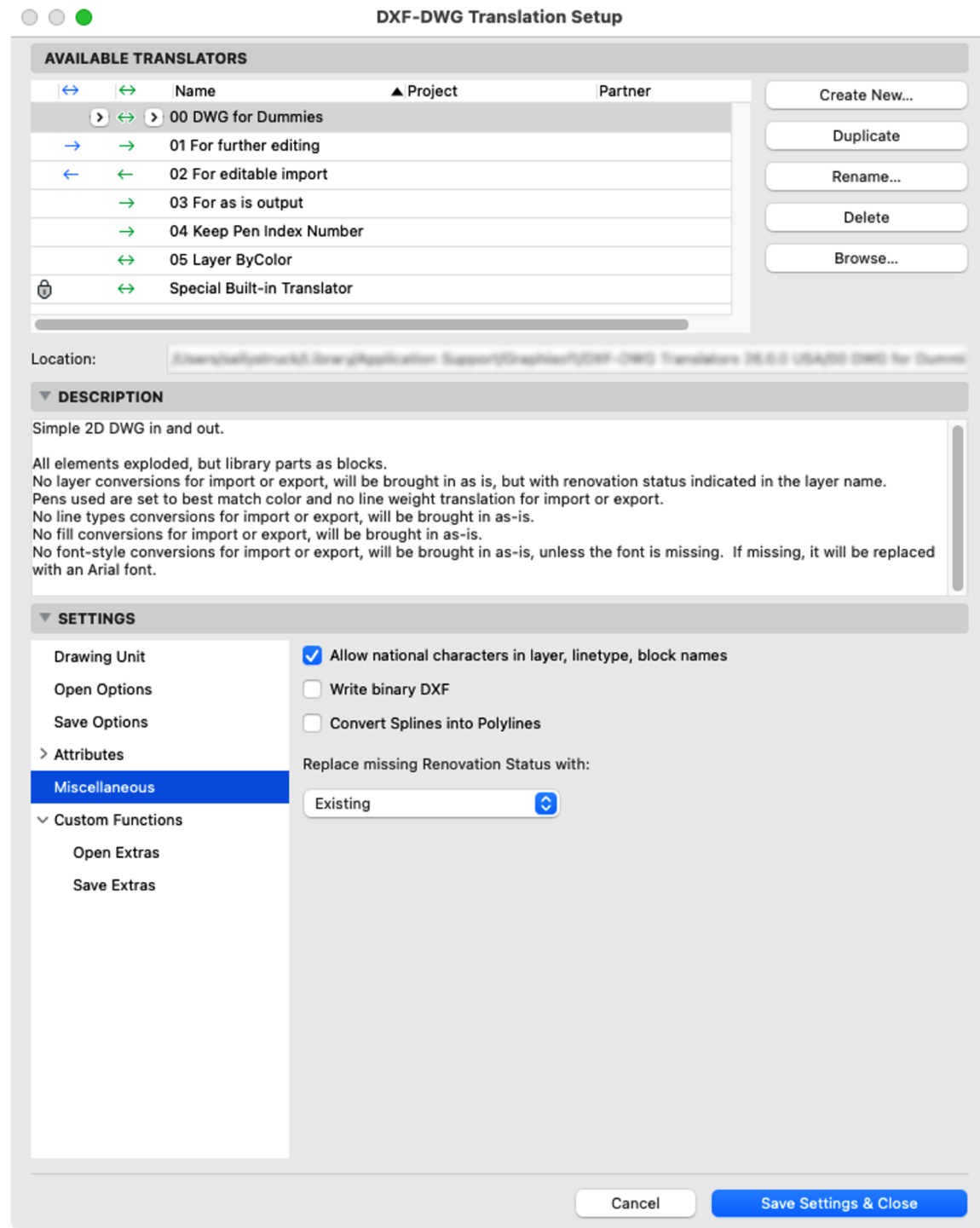
What are the main sources of Attribute Pollution?

- Detaching an XRef
- Exploding DWG Drawings
- Copy & Paste from an XRef
- Picking Up Properties from an XRef
- Conversion of Autocad Blocks to Archicad Objects

DWG TEMPLATE MAPPING



OPEN & SAVE EXTRA OPTIONS



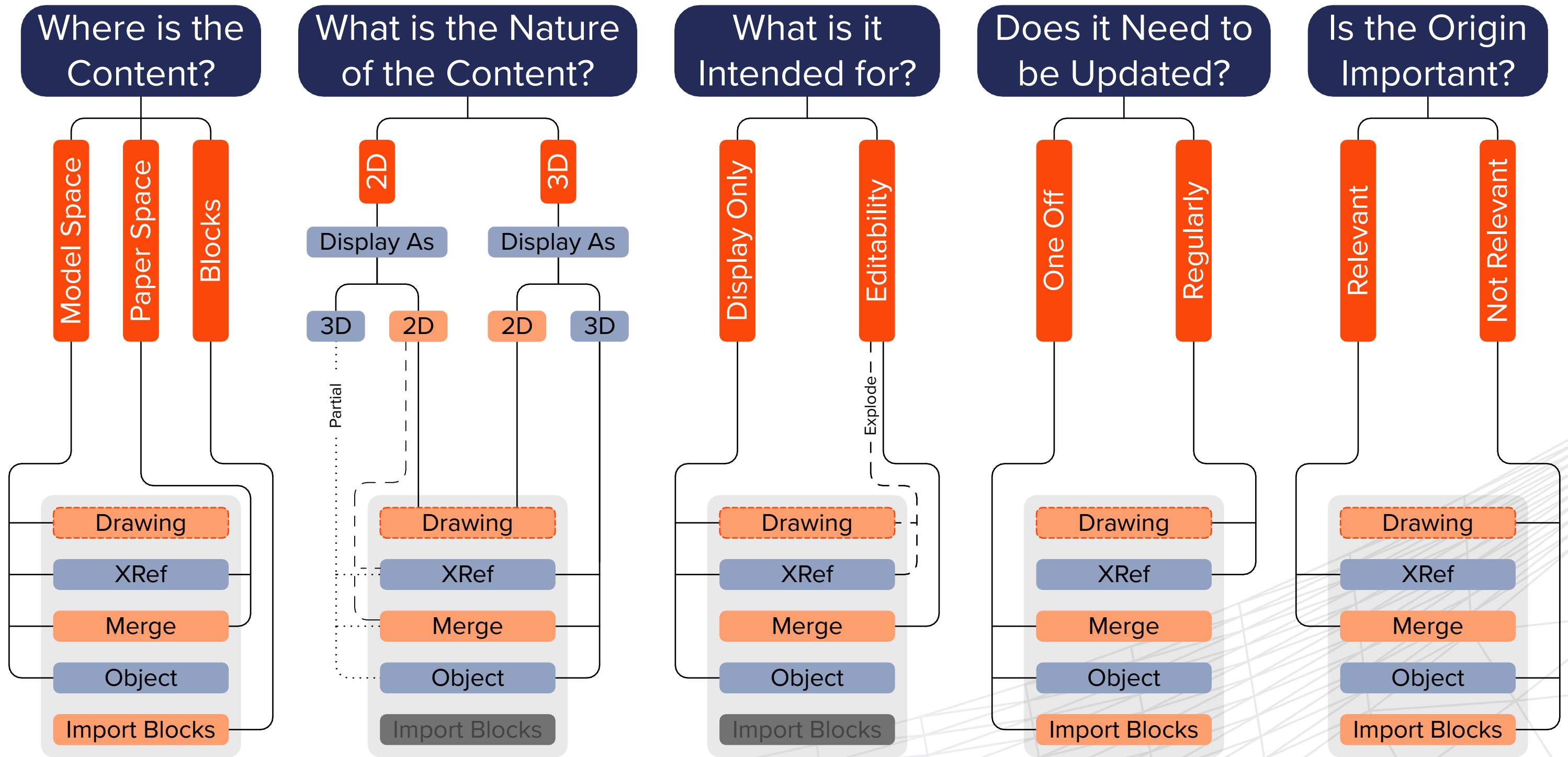
MISCELLANEOUS OPTIONS

Are settings that give users additional control of how some DWG elements will behave in Archicad.

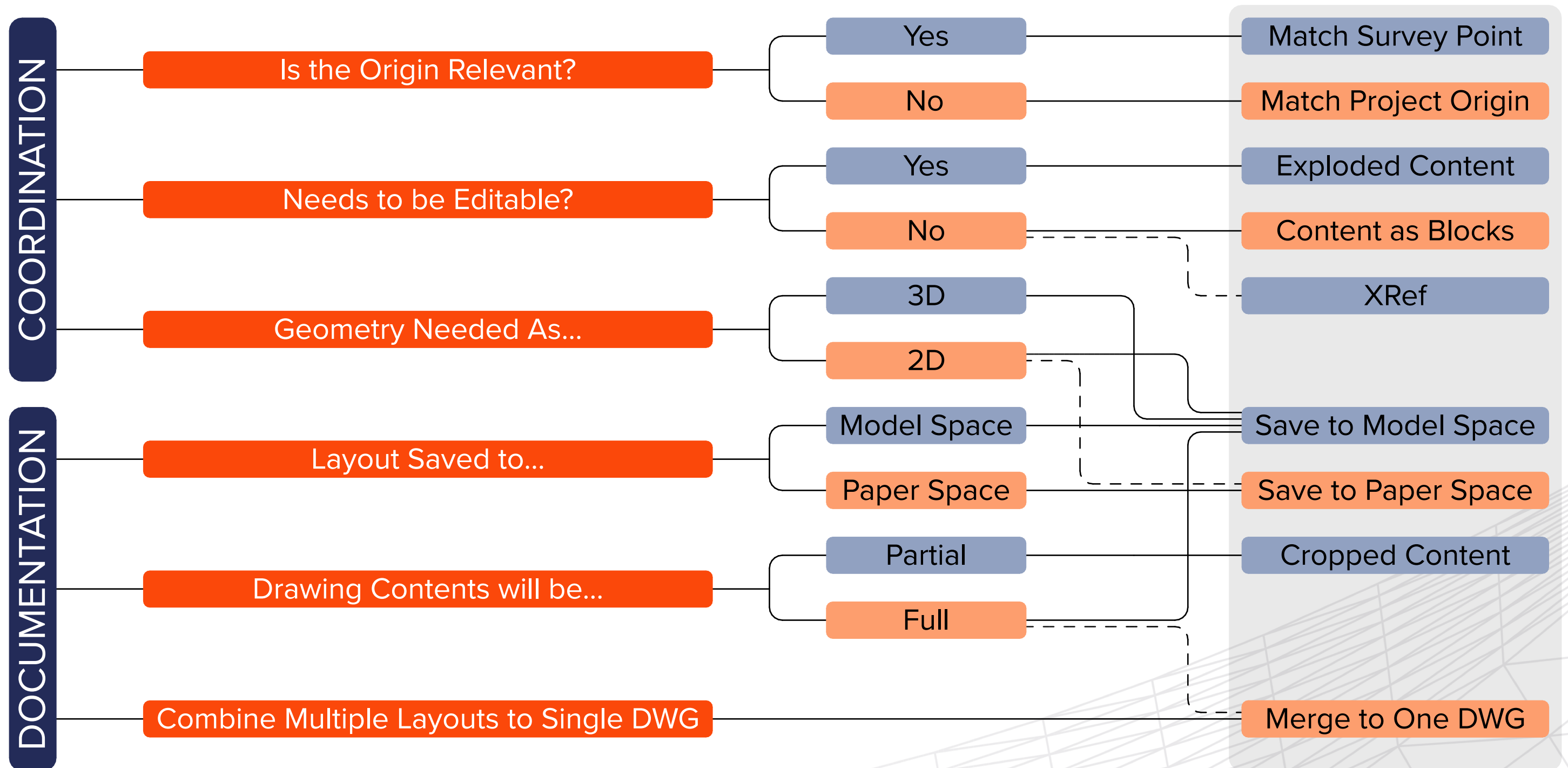
BEST PRACTICE

Read the descriptions of the Custom Functions to decide if they will meet your needs. Should an existing translator be close, but need additional customization, duplicate it rather than change the original. That way the originals can always be referenced in the future. Any changes made to translation settings will also impact all Archicad project opened on the same computer.

BRINGING DWGS IN



BRINGING DWGS OUT




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Reading List




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?




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