

# Importing File Properties from PLM to Solid Edge

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Premium Partners:



Microsoft

# Outline

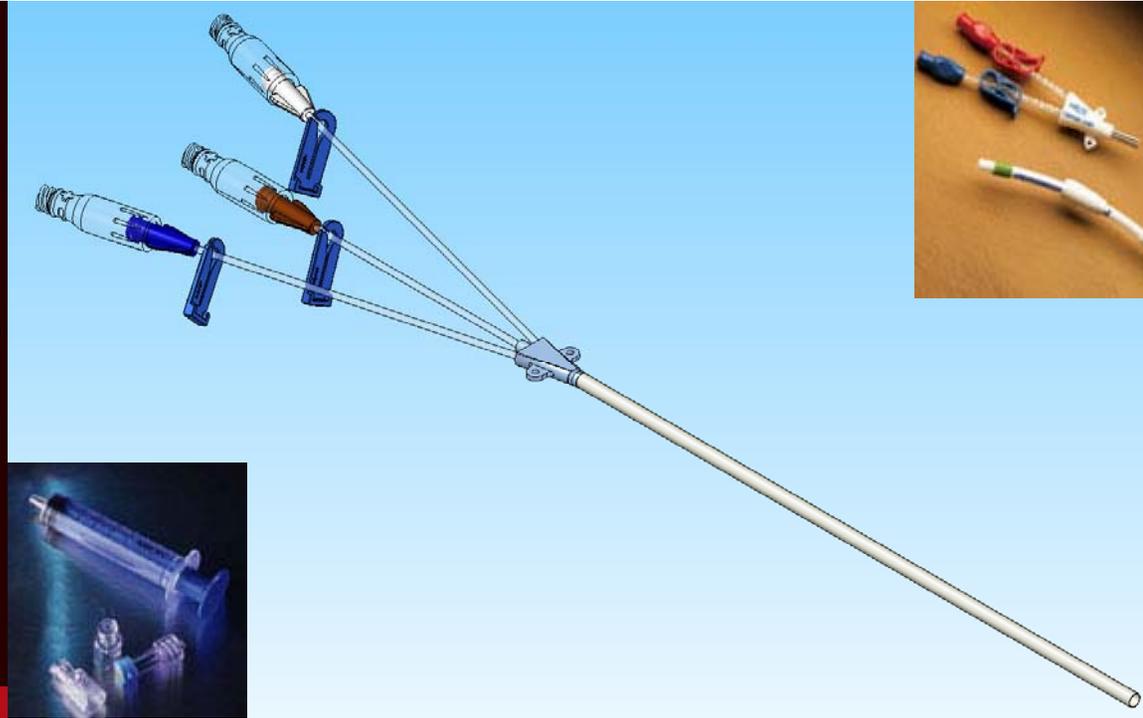
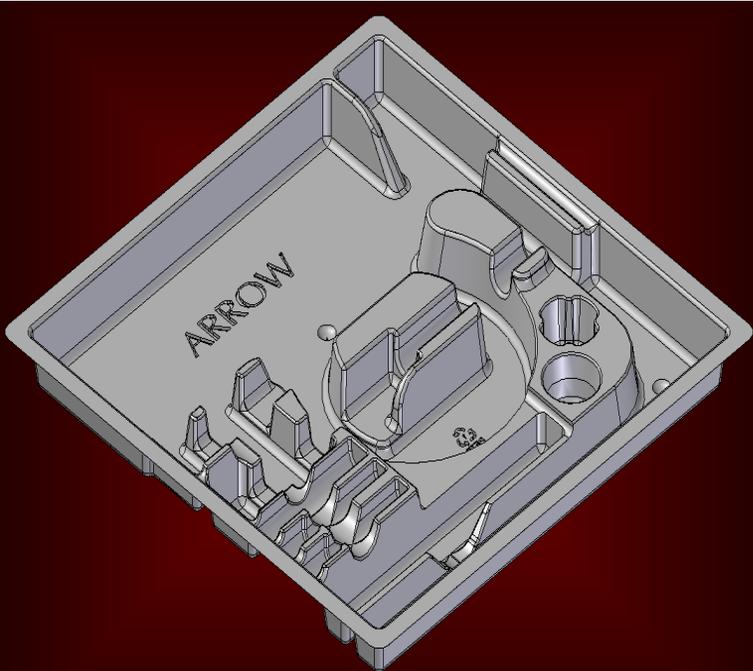
- Company Background
- Solid Edge Graphic Text Output (SEGTO)
- Solid Edge Assembly/Part set-ups
- SEGTO Demo
- Questions and Discussion

# Arrow International, Inc

- Critical-care medical device manufacturer
- Headquartered in Reading, Pennsylvania
- 3000+ Employees worldwide
- 80+ Solid Edge Users
  - US, Czech Republic, Mexico
- 30+ Intermediate to Advanced Users
- 20+ Seats of Solid Edge



# Arrow International, Inc



- “Agile Product Collaboration” at Arrow International manages the enterprise product record throughout the product lifecycle (i.e., from the “birth” through the “death”).



# Project History

- Information for our product drawings is entered by design engineers through our corporate PLM software (Agile).
- The drafting group needed an automated procedure to extract this information via text output files and paste it into Solid Edge model file properties vs. manually entering information.
- Also desired was the ability to add non-graphic files to an assembly automatically using this extracted information.

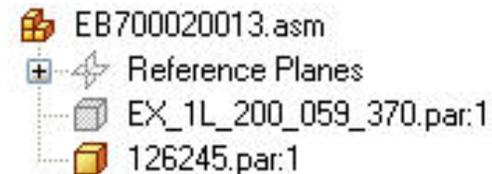
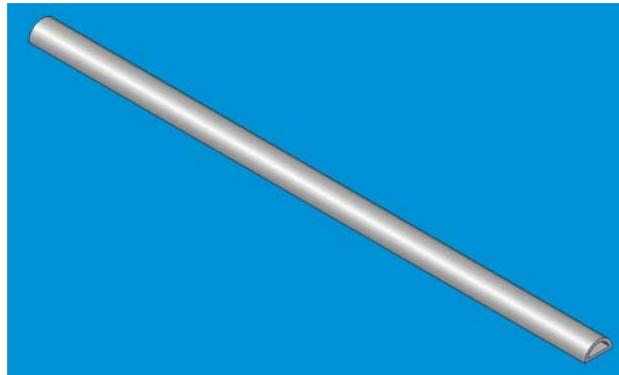
# SEGTO (Solid Edge Graphic Text Output)

- What is SEGTO?
  - A custom programmed Visual Basic macro that reads text output data from Agile and copies it to referenced File Properties in Solid Edge assembly and part files.
  - Automates placement of associative Parts List on draft sheets.
  - Automates placement of “Notes” in the form of text.
  - Updates selected draft view scale factor.



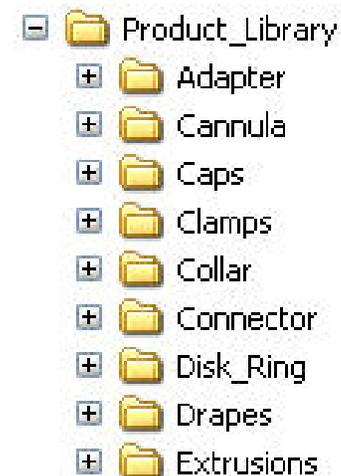
# Requirements

- All drawing views must be placed from assemblies (i.e. no part files in the draft environment).
  - This necessitates the creation of many “one part” assemblies, however due to company standards and processes we were required to abide by this condition (i.e. Resin XYZ is a part).



# Requirements

- Part and Non-Graphic files are stored in shared library folders on network.
  - Promotes re-use of models rather than recreating them. Previously, many identical models were created simply because they used a different material.



# Requirements

- Files must be named correctly, or program will not execute.
  - Error message appears on screen highlighted in red.
  - Copy of Excel file from Agile is embedded on draft sheet to indicate discrepancies.

Error:  
Item not found in the assembly. Part # EC-80854-000

ITEM	QTY	UOM	PART NUMBER	PART NAME
1	0.423	IC	125-199	RESIN
2	1	EA	EB-80854-000	EXTRUS.

# Agile Interface

**CATHETER MC-45703-006 [CATHETER 3-L]**

Title Block | Class Info | Detail Attribs | Changes | BOM | Suppliers | Where Used | Attachments | History

**PRODUCTION RELEASE**

**ARROW INTERNATIONAL**

Product Line(s): CRITICAL CARE | Description: CATHETER 3-L

Part Class: CATHETER | Part Category: N/A

Rev Release Date: 1/20/2006 4:53:28 PM | Rev Incorp Date: | Size: N/A | Number: MC-45703-006 | Rev: 1

Refresh | Save | Close

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**GRAPHIC MC-45703-006.GR [GRAPHIC FOR MC-45703-006]**

Title Block | Doc. Class Info | Detail Attribs | Changes | BOM | Where Used | Attachments | History

Graphic Notes:

- 
- 
- 
- 

Charge #: DMR

Graphic Target Date: 1/6/2006 12:00:00 AM

Designer: BLAIR SULAK

Approver: MARK SALZBERGER

Refresh | Save | Close

# Agile BOM – w/ Multiple Parts

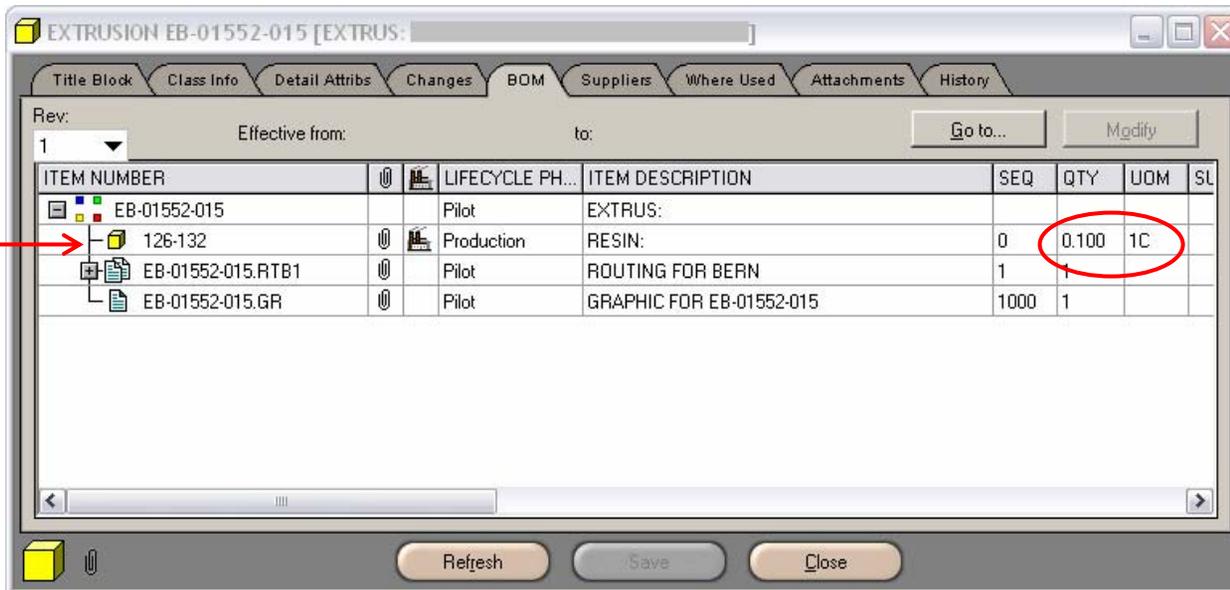
- SEGTO copies the part number, description, quantity, and UOM (resin only) that have been output in text format

The screenshot shows a software window titled 'CATHETER MC-45703-006 [CATHETER 3-L: ]'. The interface includes tabs for 'Title Block', 'Class Info', 'Detail Attrs', 'Changes', 'BOM', 'Suppliers', 'Where Used', 'Attachments', and 'History'. The 'BOM' tab is active, displaying a table with the following data:

ITEM NUMBER	LIFECYCLE PH...	ITEM DESCRIPTION	SEQ	QTY	UOM
MC-45703-006	Production	CATHETER 3-L:			
9-1-018	Production	SOLUTION:	0	A/R	EA
9-1-019C	Production	SOLUTION:	0	A/R	EA
EB-18409-000	Production	EXTRUS:	0	1.000	EA
K-14703-003	Production	CLAMP EXTENSION LINE:	0	3.000	EA
M4-45703-001	Production	CATHETER 3-L COMM:	0	1.000	EA
MC-45703-001	Substitutable	CATHETER 3-L:	0	1.000	EA
R-90920-001	Production	VALVE:	0	3.000	EA
MC-45703-006.RTR1	Production	ROUTING FOR ASHEBORO	1	1	
MC-45703-006.GR	Production	GRAPHIC FOR MC-45703-006	1000	1	

# Agile BOM – w/ Material

- In Agile, for single parts, there are no physical parts listed in this BOM.
- The item listed is the resin that makes the part.
- This item will get created as a Non-graphic file with the proper quantity and unit of measure (UOM)



EXTRUSION EB-01552-015 [EXTRUS: ]

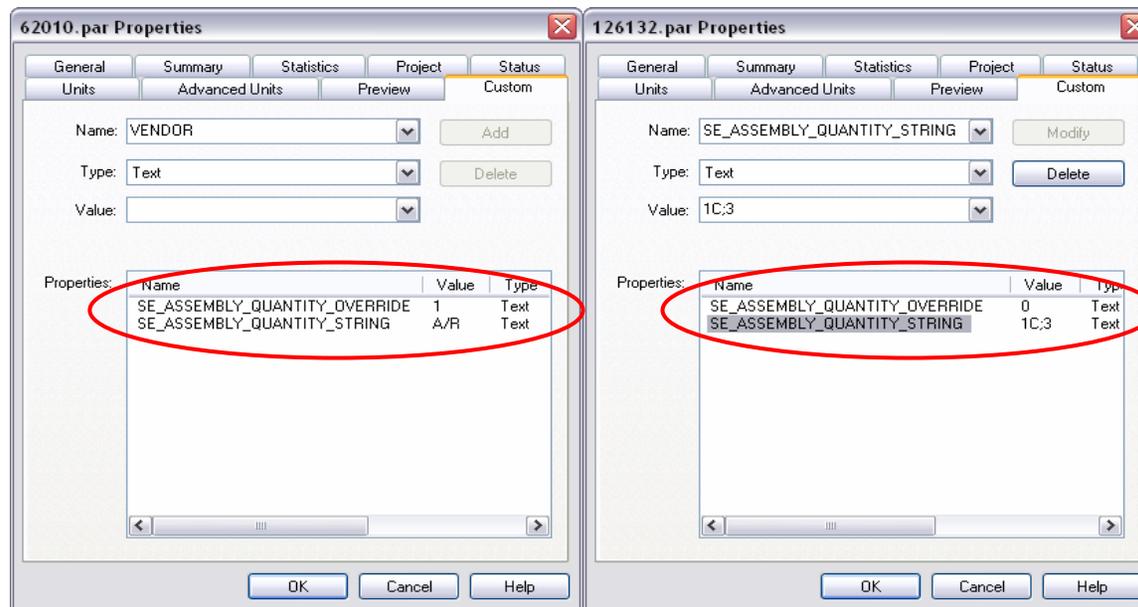
Rev: 1 Effective from: to: Go to... Modify

ITEM NUMBER	LIFECYCLE PH...	ITEM DESCRIPTION	SEQ	QTY	UOM	SL
EB-01552-015	Pilot	EXTRUS:				
126-132	Production	RESIN:	0	0.100	1C	
EB-01552-015.RTB1	Pilot	ROUTING FOR BERN	1	1		
EB-01552-015.GR	Pilot	GRAPHIC FOR EB-01552-015	1000	1		

Refresh Save Close

# Non-Graphic files

- Solid Edge part file that does not have any features
  - Used for resins or supply items\* that are listed in a parts Bill of Materials as defined in Agile



\* - Printing foils, inks, and all other items used on an A/R basis

# Assembly drawing

- BOM in Solid Edge draft imported from Agile, A/R (as required) added to quantity

Exploded view assembly drawing of a catheter. Callouts 1-6 identify various components. Lumen labels include LUMEN #1, LUMEN #2, LUMEN #3, LUMEN #1 EXIT, LUMEN #2 EXIT, and LUMEN #3 EXIT. Dimensions 1, 2, 3, and 4 are indicated on the drawing.

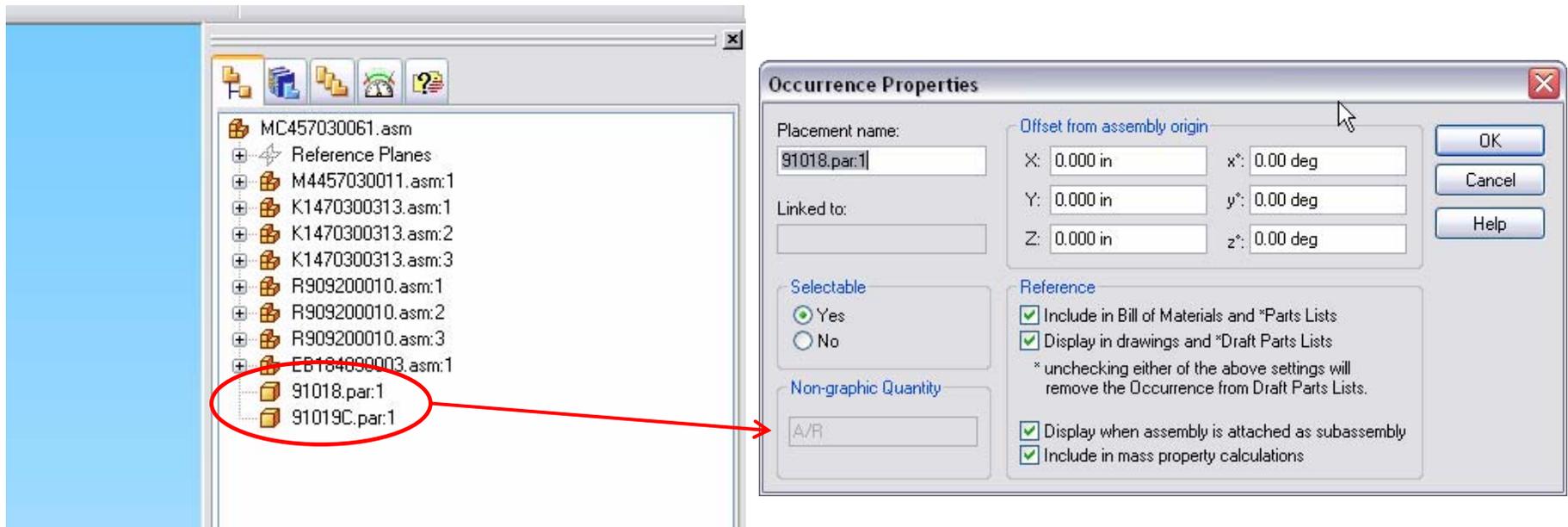
NOTES:  
 1.  
 2.  
 3.  
 4.

ITEM	QTY	PART No	DESCRIPTION
6	3	R 90920 001	VALVE
5	1	M4 45703 001	CATHETER 3 L COMM
4	3	K 14703 003	CLAMP EXTENSION LINE
3	1	EB 18409 000	EXTRUS:
2	A/R	9 1 019C	SOLUTION
1	A/R	9 1 018	SOLUTION

DRAWN MIKE BUCHTER		DESIGNED BLAIR SULAK		ARROW INTERNATIONAL		CORPORATE OFFICES READING, PA 19605 USA	
CHECKED KHANH NGUYEN		APPROVED MARK SALZBERGER		DESCRIPTION CATHETER 3 L			
INTERPRET PER ISO DRAFTING STANDARDS 129, 129, 406, 1101, 8015 ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED				SCALE 1:1	SHEET 1 OF 1	CHANGE ORDER ECO 002267	SIZE B
DEFAULT TOLERANCES LINEAR XX ± .01°    ANGULAR XXX ± .005°    XXXX ± .0005°				DWG DATE 04 Apr 2006	MC-45703-006		DWG REV 1

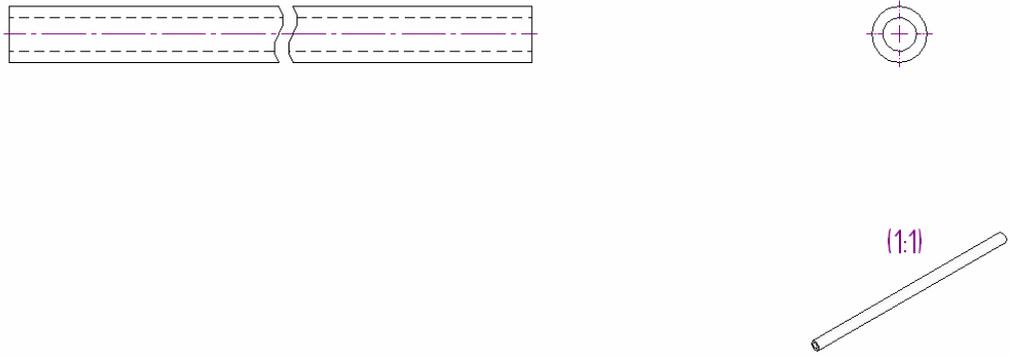
# Multiple Assembly structure

- Non-graphic files added after Macro is executed



# Single Part drawing

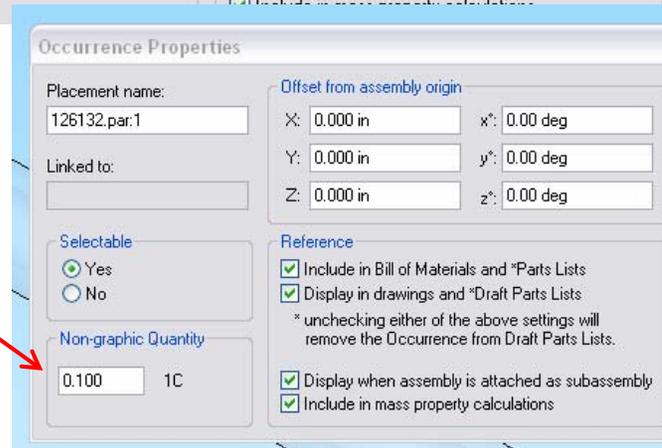
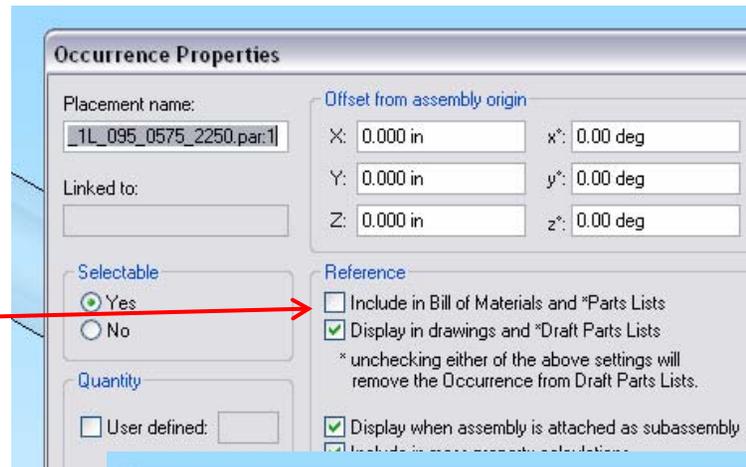
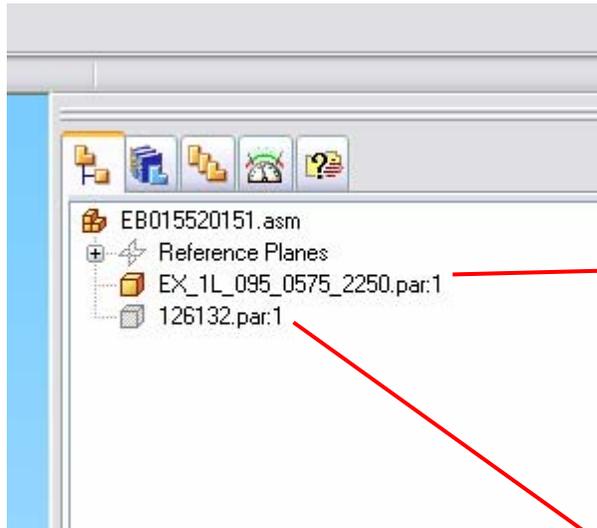
- Only the Non-graphic information is shown in the parts list



1	0.100 1C	126-132	RESIN
ITEM	QTY	PART No	DESCRIPTION
<b>DRAWN</b> MIKE BUCHTER	<b>DESIGNED</b> FRANK AMMARELL	<b>ARROW INTERNATIONAL</b> CORPORATE OFFICES READING, PA 19605 USA	
<b>CHECKED</b> STEVE KREIDER	<b>APPROVED</b> AILEEN MURPHY	<b>DESCRIPTION</b> EXTRUS.	
INTERPRET PER ISO DRAFTING STANDARDS 128, 129, 406, 1101, 8015 ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED		<b>SCALE</b> 5:1	<b>SHEET</b> 1 OF 1
<b>DEFAULT TOLERANCES</b> LINEAR .XX ± .01' .XXX ± .005' .XXXX ± .0005'		<b>DWG DATE</b> 04-Apr-2006	<b>CHANGE ORDER</b> EXP-000614
		<b>SIZE</b> A	<b>DWG REV</b> 1

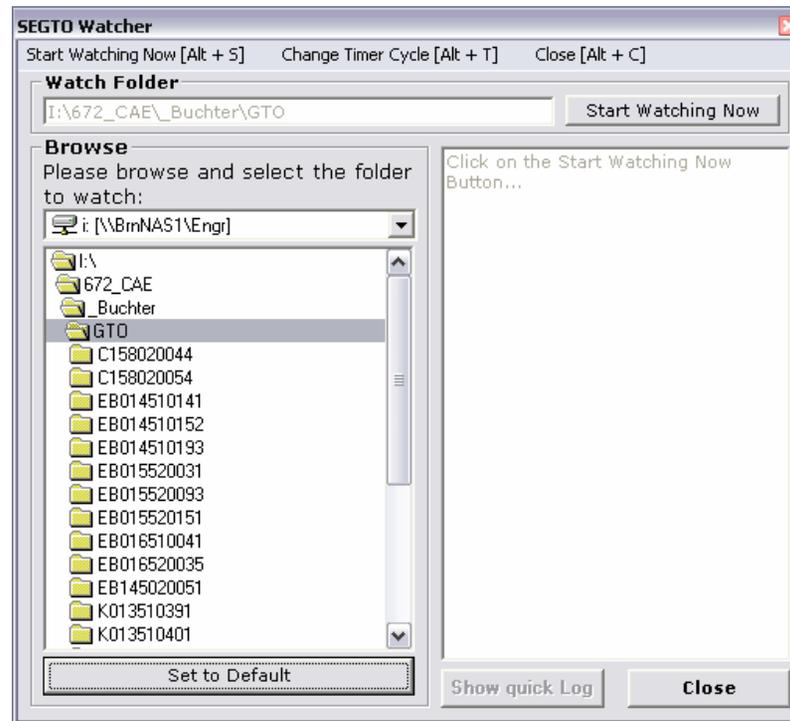
# Single Assembly structure

- Two processes occur at this stage when the macro is executed



# SEGTO Watcher

- Custom Macro used to place files from Agile into its own folder Automatically



# DEMO

- See DEMO



# RECAP

- SEGTO Program
- Requirements
- AGILE Interface
- File structure
- SEGTO Watcher
- SEGTO Demo

# Questions

