

CAD Viewers

Review

CAD File Identification

CAD System	Part File	Sheetmetal Part File	Assembly Document	Weldment Document	2D Drawing File
Solid Edge	.PAR	.PSM	.ASM	.PWD	.DFT
CREO	.Prt.#	.Prt.#	.ASM.#	n/a	.DRW.#
NX	.PRT (no number)	.PRT	.PRT	UNKNOWN	.PRT
E-Drawings (Solid Works)	EPRT	UNKNOWN	EASM	UNLKNOWN	EDRW
Solid Works	.SDLPRT	UNKNOWN	.SDLASM	UNKNOWN	.SLDDRW
CATIA	.MODEL .CATPART	UNKNOWN	.CATPRODUCT	UNKNOWN	UNKNOWN
AutoCAD 2D IMPORT	n/a	n/a	n/a	n/a	DWG DXF
STEP FILE	.STP	.STP	.STP	.STP	n/a
PARASOLID	.X_B .X_T	n/a	.X_B .X_T	n/a	n/a
Direct modeling JT	.JT	.JT	.JT	.JT	n/a
Stereo Lithography	.STL	.STL	.STL	.STL	n/a
IGS	.IGS	.IGS	.IGS	.IGS	n/a

CUSTOMER CAD SYSTEMS

CUSTOMER	PRO-E, WILDFIRE, OR CREO	SOLID EDGE	NX	SOLIDWORKS	CATIA
KOHLER ENGINE			X		
KOHLER GENERATOR	X				
TORO	X				
EXMARK	X				
MTD			X		
MTD-SW		X	X		
HUSQVARNA TURF CARE				X	??? CATIA
HUSQVARNA					X
SNAPPER	X				
BRIGGS AND STRATTON	X				
KAWASAKI					X (WAS CADAM)
LINCOLN ELECTRIC		X	X		
SCAG	X				
TECUMSEH			X		
MILW ELECTRIC	X		EVALUATING		
ARIENS	X			X	
RONG SHIN	X				

Useful Free Viewers

- Solid Edge Viewer (with optional 2D drafting)
- CREO (Product View)
- XpresReview (pcf, JT)
- E-DRAWINGS (Solid Works and E-drawings)
- Delcam Exchange
step, igs parasolid, & part files for CREO, Solid Edge, NX, CATIA
- Delcam PowerShape
step, igs parasolid, & part files for CREO(?), Solid Edge, NX, CATIA
- Quickstep – step, igs

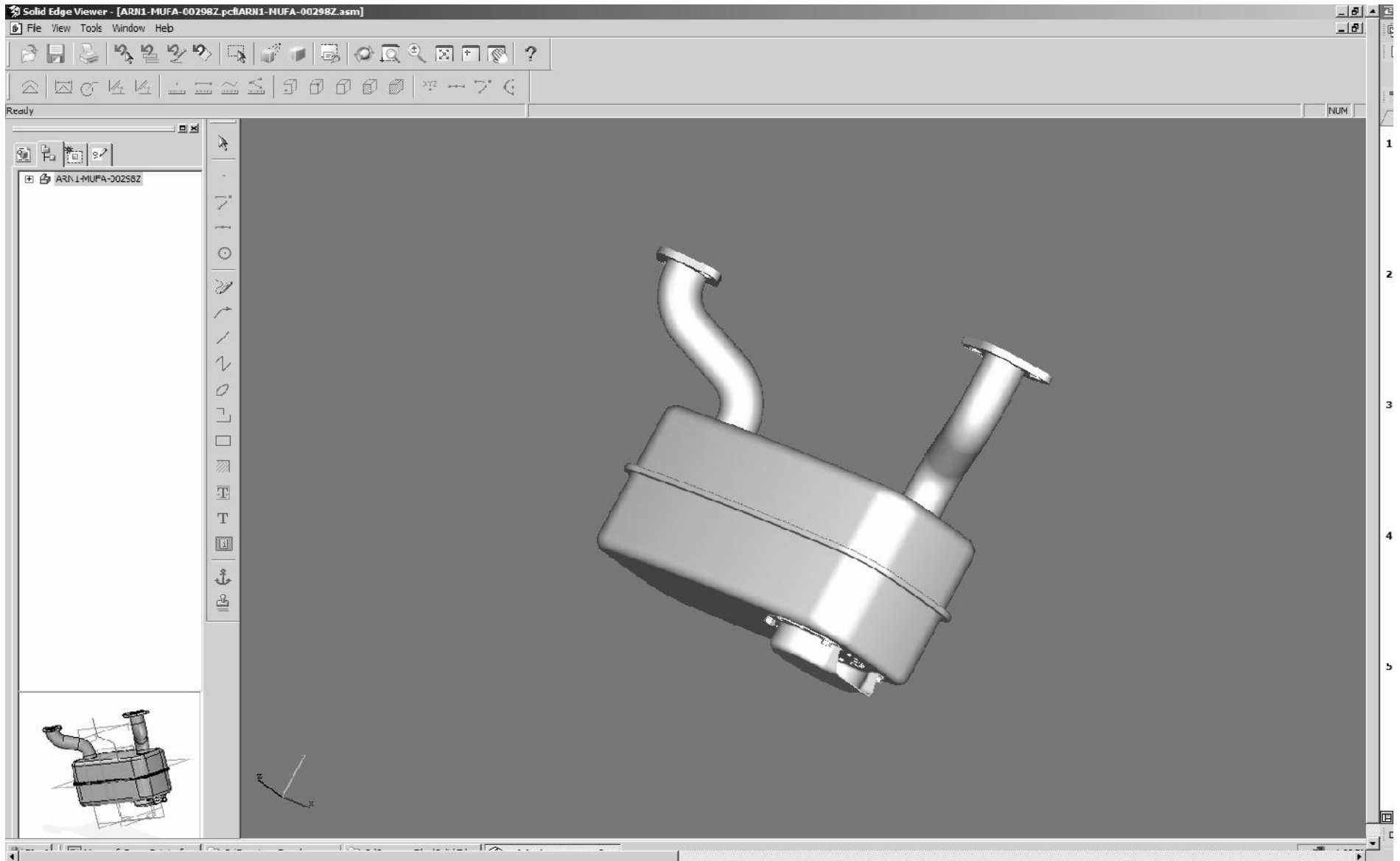
CAD VIEWERS AND FILE TYPES

	Solid Edge Viewer	CREO ProductView Express	Delcam Exchange 2011 (or) PowerShape	XpresReview	E-Drawings Viewer (Solidworks)	Quickstep
DWG, DWF	DWG ONLY	BOTH	DWG ONLY	BOTH	DWG	DWG ONLY
DXF	YES	YES	YES	YES	YES	YES
PAR	YES		YES			
ASM (S.E.)	YES		NO			
DFT (S.E.)	YES					
PRT.# (CREO)		YES	YES (Exchange only)		YES	
ASM.# (CREO)		YES	YES (Exchange only)		YES	
DRW.# (CREO)		YES				
PRT (NX)			PART FILE ONLY			
X_T (PARASOLID)			YES			
STP (STEP)			YES			YES
IGS			YES			YES
STL			YES		YES	
SLDPRT (S.W.)			YES		YES	
SLDASM (S.W.)					YES	
SLDDRW (S.W.)					YES	
JT	YES			YES		
PCF	YES			YES		
HGL (PRINT)		YES				

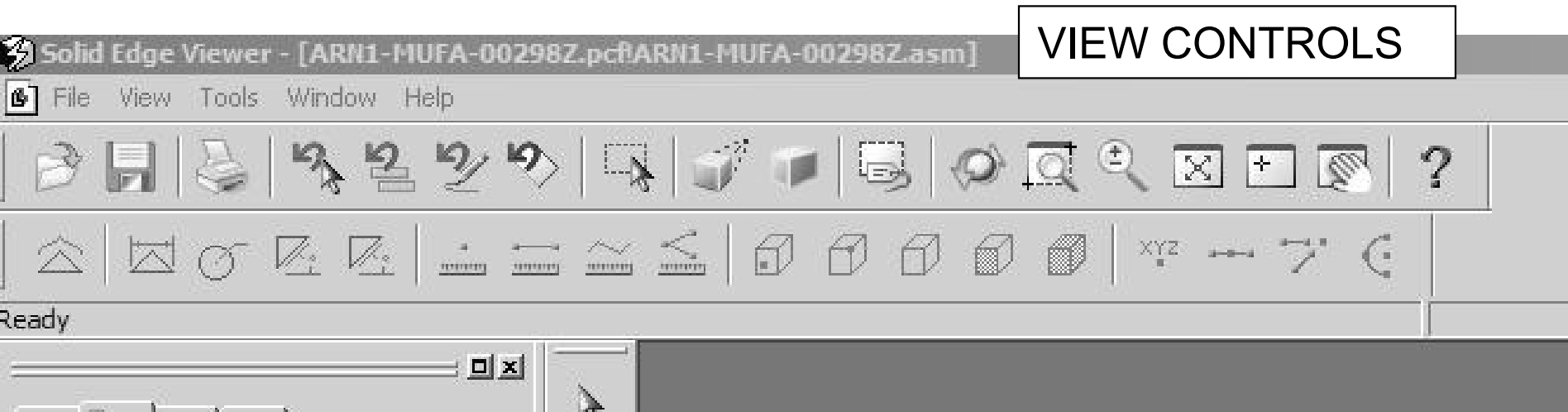
Solid Edge Viewer (SE)

- Viewer for Solid Edge CAD Files
 - part, (.par)
 - Sheet metal (.psm)
 - assembly models (.asm)
 - Weldment assemblies (pwd)
 - Draft or drawing files (.dft)
 - Drawing files (.dwg, .dft)
 - 3D viewing and file sharing CAD models (JT)
 - Packaged collaboration files (pcf) for NX and SE
 - Metafile documents (Microsoft) CGM
 - JT files

Solid Edge Viewer



Solid Edge Viewer Controls



- Rotate, size, or fit to window by selecting desired view control button from above the pressing left mouse button and dragging.
- Printing of model picture or drawings are allowed
- Cannot save files
- Cannot measure drawings or models
- Can hide or view individual components in an assembly model
- Cannot view Parasolid, IGS, or Step files

Solid Edge 2D drafting

- Stand Alone Drafting Software
- Similar to AutoCAD lite.
- Complete 2d Drafting Capabilities.
- Opens and saves documents as dft, dwg, dxf, 2D IGS
- Save documents as dwg or dxf if they are to be distributed.
- Can print drawings with included pdf printer.
(SAVE AS pdf)
- Tutorial are available

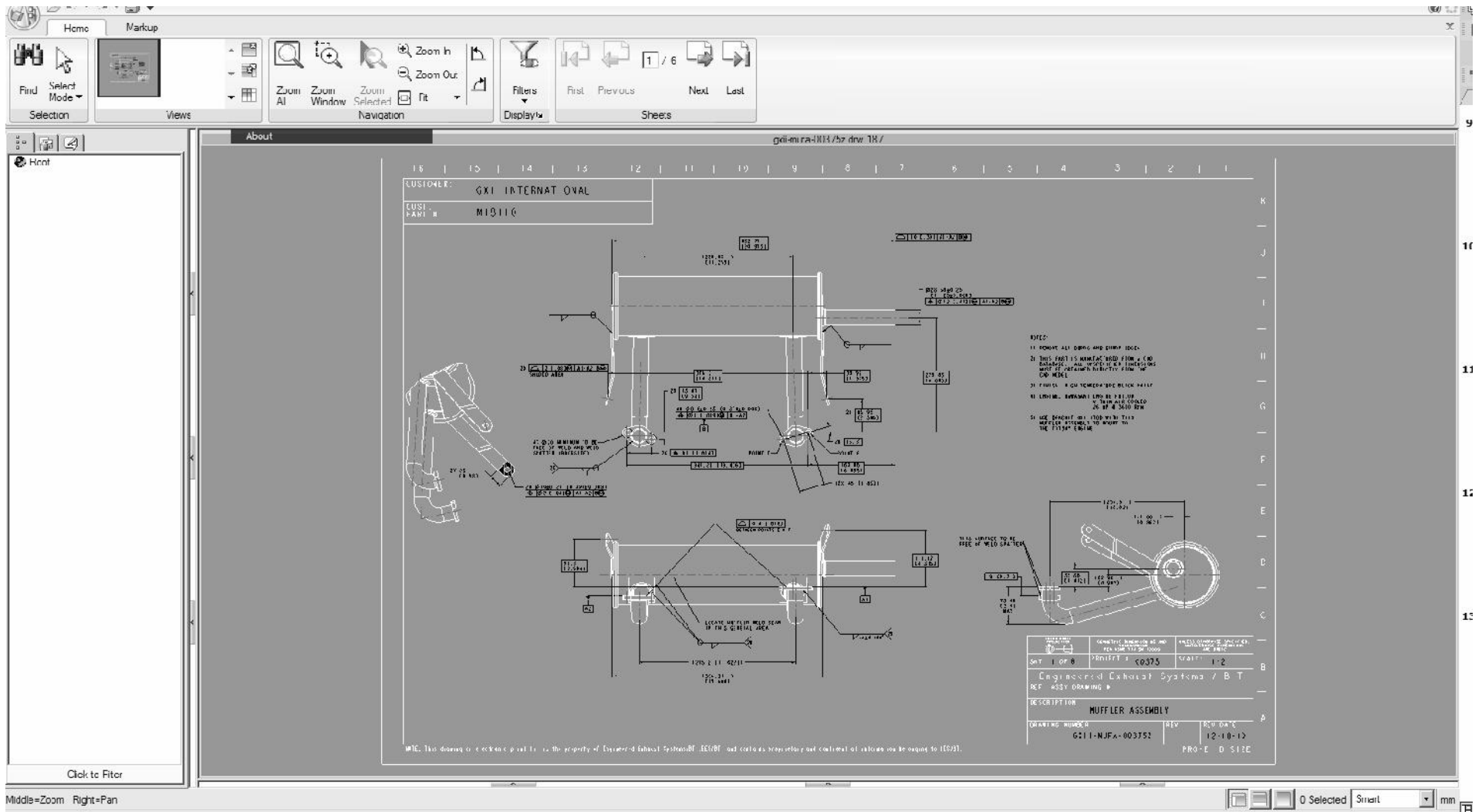
Solid Edge 2D Drafting Software (with included 2D/3D Solid Edge Viewer)

- Software should be downloaded directly from the Siemens Site
- Solid Edge Viewer Comes with the 2D software.
- If you already have an existing SE Viewer loaded on your computer, you'll need to uninstall it prior to installing the updated viewer.

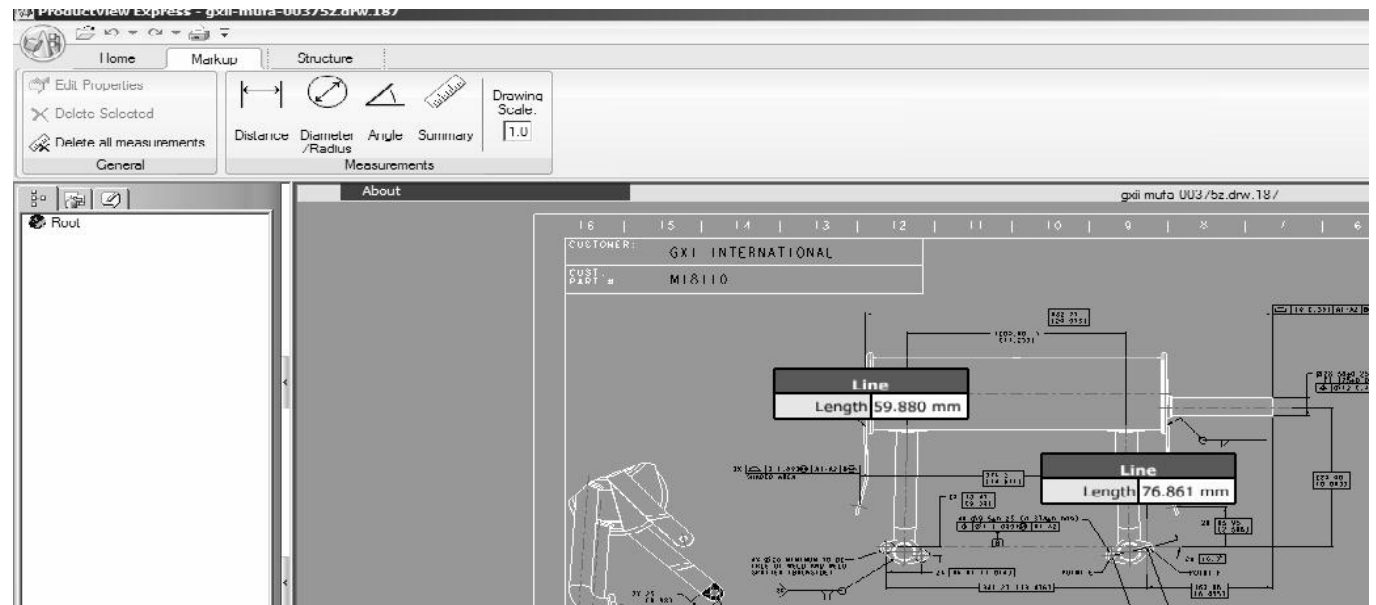
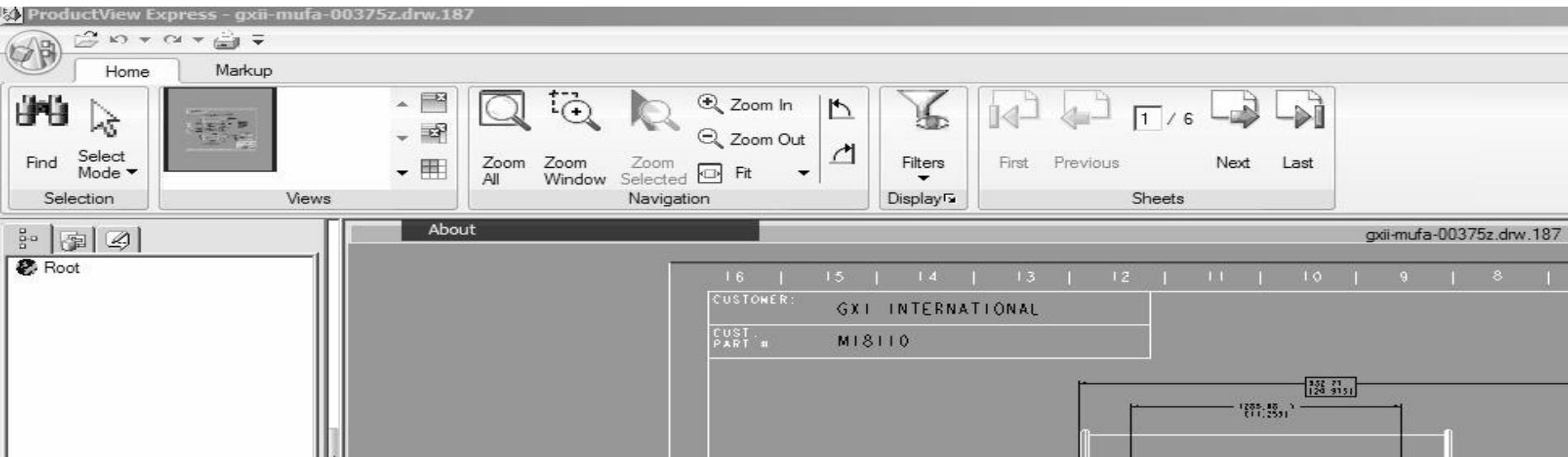
CREO Product View

- Creo Product View can open:
 - Creo Part File Prt.#,
 - CREO Assembly File ASM.#,
 - CREO drawing file DRW.#
 - AutoCAD drawing files dwg, dxf

CREO Product View



CREO PRODUCT VIEW



ALLOWS
MEASUREMENT

ROATION OF MODELS

VIEWING OF
COMPONENTS IN
ASSEMBLIES

DELCAM EXCHANGE

- NO MEASUREMENT CAPABILITIES
- ROTATE AND SIZE MODELS
- SETTINGS MAY BE ADJUSTED FOR FILE IMPORT
- SOME PROBLEMS WHEN IMPORTING CREO (PRO-E) ASSEMBLIES (MISSING PARTS) – HOWEVER, THE SOFTWARE SHOWS ERROR REPORT FOR TROUBLESHOOTING IMPORT.
- VIEW MODELS AS SOLID (NOT WIREFORM)
- *BE CAREFUL NOT TO ORDER FILE TRANSLATION FROM WEB SITE (\$\$\$).*

DELCAM POWERSHAPE

- THIS IS A VERSION OF E DRAWINGS.
- ALLOWS SOME ON SCREEN MEASUREMENT.
- REQUIRES REGISTRATION (FREE).
- USE 'IMPORT' COMMAND (UNDER FILE) TO OPEN FILES
- SAME INPUT AS DELCAM EXHCHANGE BUT HAS TROUBLE IMPORTING NATIVE MODELS
 - WON'T OPEN PRO-E,
 - PROBLEMS WITH SOME SOLID EDGE PAR FILES, ETC

Cadfaster QUICKSTEP

- OPENS STEP, IGS, DWG, DXF
- NO MEASUREMENT IN FREE VERSION
- FAILED TO OPEN AND CORRECTLY POSITION ALL COMPONENTS OF STEP AND IGS FILE ASSEMBLIES
- SETTING SET TO DIRECTX FOR BEST VIEWING.

XPRESSREVIEW

- XpresReview is an electronic design review solution that allows you to share multiple documents in a collaborative environment.
- XpresReview easily combines 3D models and other associated documents into a single package, so participants in your review process have all the information they need to communicate effectively.
- Package files, created using NX, Solid Edge or Insight Connect, can contain a broad range of documents, including:
 - 3D models,
 - 2D drawings Microsoft Office documents (e.g. Word, Excel, PowerPoint)
 - Adobe PDFs
 - Image Files (e.g. TIF, JPG, BMP)
 - AVI Movie Files (e.g. AVI, MPEG, WMV)

COLLABORATION

INTRODUCTION TO TWO NEW FILE TYPES

- 1) JT FORMAT: 3D CAD MODELS.
 - 1) ALLOWS FOR DATA EXCHANGE BETWEEN DIFFERENT CAD SYSTEMS (3D MODELS)
 - 2) CREATED BY SIEMENS (SOLID EDGE AND NX).

- 2) PCF: A COLLABORATION FILE THAT ITSELF CONTAINS COPIES OF 3D AND 2D CAD DOCUMENTATION AS WELL AS MICROSOFT OFFICE DOCUMENTS.
 - 1) ALLOWS FOR DESIGN REVIEWS AND DRAWING MARK-UPS.
 - 2) ALLOWS FOR VIEWING OF 3D JT CAD MODELS (INCLUDING REVOLVING, INTERNAL COMPONENT VIEWING, SECTIONING, AND ON SCREEN MEASUREMENTS).

File type

DIRECTMODELING OR JT

- **JT** is a 3D data format developed by Siemens PLM Software
- used for
 - product visualization,
 - collaboration, and
 - CAD data exchange.
- It can contain any combination of approximate (faceted) data, exact boundary representation surfaces (NURBS), Product and Manufacturing Information (PMI), and Metadata (textual attributes) either exported from the native CAD system or inserted by a product data management (PDM) system.
- It is probably the most widely used 3D visualization format for discrete manufacturing with over 4,000,100 JT-enabled licenses of software in use.
- On 2009 September 18 the ISO stated officially that the JT specification has been accepted for publication as an ISO Publicly Available Specification (PAS).

File Type

Packaged Collaboration File (PCF) technology

- PCF is the portable, intelligent container that packages 2D and 3D CAD files and any other document types.
- XpresReview is the established NX and Solid Edge collaboration tool.
- Suppliers and customers can download the XpresReview viewer for free (from Siemens) to interrogate and mark up the PCF contents. Then they can import modified PCF files back into Solid Edge or NX for others to review and incorporate into the design.
- Used to exchange data between NX and Solid Edge.
- Creo data can be imported as dwg, dxf, (2D); and JT models (3D).

XPRESSREVIEW

- Recipients of the package can use XpresReview to quickly and easily interrogate its contents. XpresReview includes intuitive tools for:
 - Viewing - Navigate 2D drawings and 3D models
 - Measurements - Check dimensions for 2D drawings and 3D models
 - Mark up - Use highlights to draw attention to specific areas and add text comments
 - Section Views - Create interactive clipping planes to view the interior of 3D models
- The files can then be repackaged for return to the originator or the next person in the review process
- Experience the benefits of sharing complete contextual packages of design data with your partners and suppliers. XpresReview is a stand-alone product and, for no charge, gives you the ability to view, interrogate and markup package files.
- For many customers, the ability to "publish" a package file for viewing with XpresReview is also free

-COLLABORATIVE SOFTWARE- SIEMENS' XPRESREVIEW

- PCF COLLABORATION FILES) ARE FIRST CREATED IN EITHER SOLID EDGE (VIEW AND MARK-UP), OR IN SIEMENS NX.
- FILES FROM VARIOUS SOURCES MAY THEN BE IMPORTED AND COMPILED INTO A PCF FILE (JT MODELS, DXF, DWG, MICROSOFT OFFICE DOCUMENTS) AND THEN DISTRIBUTED FOR REVIEW USING XPRESREVIEW SOFTWARE.
- USING XPRESREVIEW, DRAWINGS CAN VIEWED, MARKED UP AND SAVED FOR RETURN TO ENGINEERING DEPARTMENT.
- THE DESIGN REVIEW CAN BE COMPLETED ENTIRELY ON LINE (PAPER-LESS).
- SOID EDGE AND NX: THE PCF/ XPRESREVIEW CAPABILITY IS ALREADY BUILT INTO BOTH SOLID EDGE AND NX SOFTWARE AND COST NOTHING TO IMPLIMENT. BOTH PROGRAMS ALLOW 3D MODELS TO BE SAVED IN THE JT FORMAT AND DFT DRAWING CAN BE DIRECTLY IMPORTED INTO THE PCF FILE.
- FOR CREO: DRAWINGS MUST BE FIRST EXPORTED AS DWG/DXF FORMATS BEFORE THEY CAN BE IMPORTED INTO A PCF FILE. CREO 3D MODELS MUST BE CONVERTED TO THE JT FORMAT BEFORE BEING IMPORTED INTO THE PCF FILE. THE JT EXPORT IS NOT CURRENTLY AVAILABLE FOR STANDARD CREO SOFTWARE BUT AN EXPORT MODULE IS AVAILABLE FOR ADDED COST.

Download Sites

- ***CREO ProductView (PRT.#,ASM.#,DRW.#)**
http://www.ptc.com/appserver/wcms/forms/index.jsp?im_dbkey=93561&icg_dbkey=482
- ***Solid Edge Viewer (PART, ASM, DRT)**
http://www.plm.automation.siemens.com/en_us/products/velocity/solidedge/forms/solid_edge_free_2d_2.cfm
- ***DelcamExchange (IGS,STEP, PART FILES)**
<http://www.delcam.com/general/software/exchange.asp>
- **CADFASTER QUICKSTEP (IGS,STEP)**
Quickstep<http://www.cadfaster.com/products/quickstep.php>
- **XPRESSREVIEW (JT, pcf for NX & SE)**
http://www.plm.automation.siemens.com/en_us/campaigns/xpresreview/index.cfm
- **E-drawings (solid works, CREO models, dwg,dxf)**
http://www.solidworks.com/sw/support/edrawings/e2_downloadcheck.htm

* Recommended Viewers

ADDED 10-28-11 MANY CAD SOFTWARE PACKAGES NOW ALLOW ONE TO SAVE A COPY OF 3D MODEL PICTURES AS ADOBE 3D WHICH CAN BE VIEWED ON ADOBE VIEWERS.