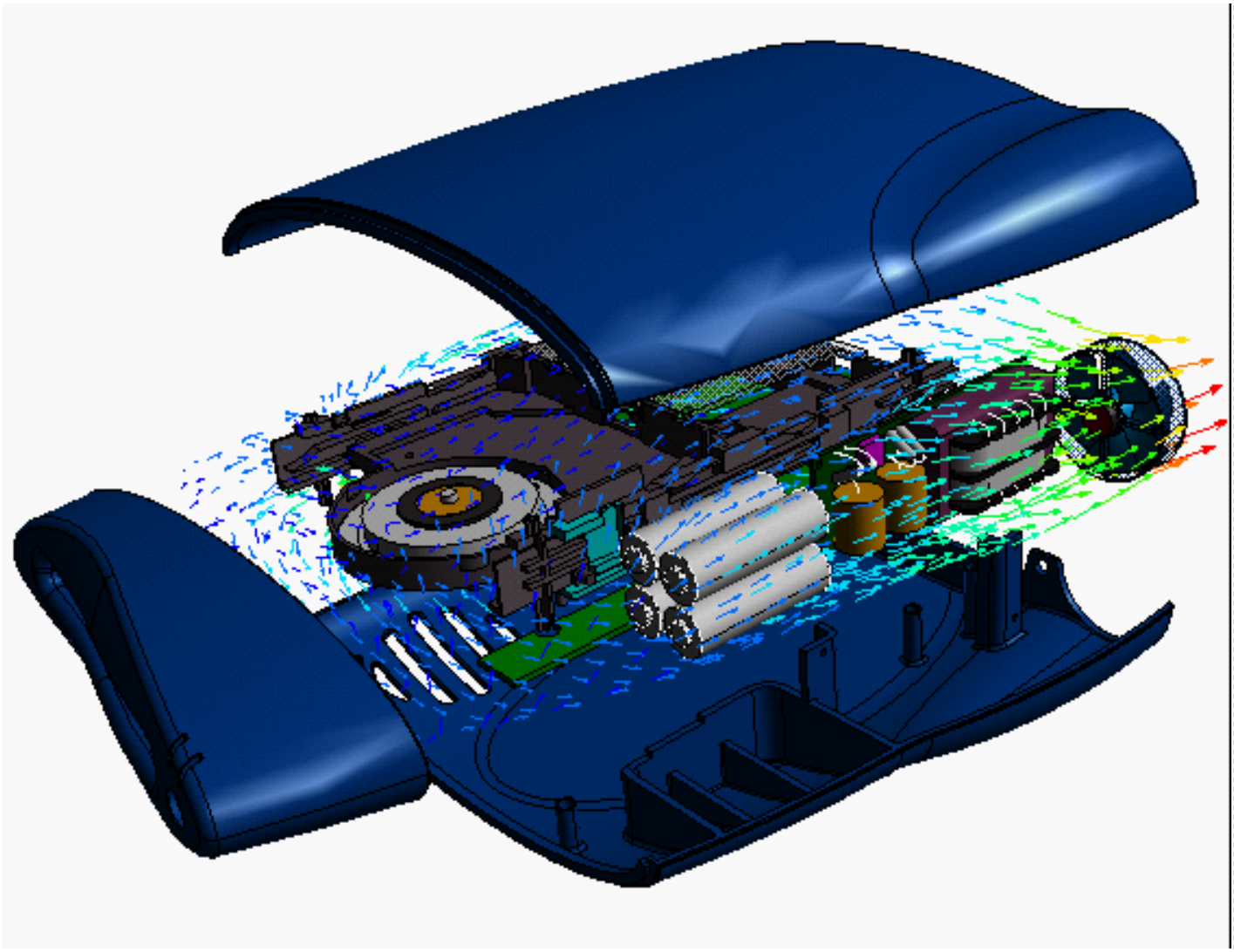
"Zip Demo"
Master Series Integrated Demonstration Workstation WS2 NT Version



Definitions

Pre–Installation Requirements
- minimum mandatory requirements for the workstation, user accounts, networking, code requirements, etc prior to demo install

Demonstration Installation
- Steps you do once after pulling the demo off of CD

Demonstration Setup
- Steps you do each time the demo is given on THAT workstation

'On Camera'
- You are working and talking

'Off Camera'
- You are working and not talking

This demonstration in intended to be run with two workstations. The checklist on the following page is intended to act as a guide for you, but is not intended to be all inclusive. If your UNIX expertise is such that some of these commands don't make sense, you should seek assistance.

The example assumes that I–DEAS is already loaded and running on all machines. It also assumes that you will use the local I–DEAS software already loaded on each of the machines. These guidelines will create projects and shared files on the team servers normal data installation. If you want your demo files and shared files to reside outside the team servers installation, you will need to learn how to define a local team data installation

CHECKLIST

ON ALL MACHINES

Step 1: Make sure both machines are networked and on the same sub–net (i.e. 146.122.104.xx)
Step 2: Use ping to check that both machines recognize each other by hostname
Step 3: Make sure the UID and GID are identical on both machines for ideasadm and all I–DEAS users.

ON THE TEAM SERVER

Step 4: Identify which machine will be the team server. Note the exact path of the team directory on the server.
Step 5: Export the team directory on the server (nfs must be loaded on the team server)
Setp 5a: **Open permissions on the team/shared directory**

ON THE SLAVE MACHINES

Step 6: Use Downdaemon to shutdown the I–DEAS daemons on the slave machine(s)
Step 7: Use Statdaemon to make sure that I–DEAS daemons are not running on the slave machine(s).
Step 8: Make a local backup copy of the sdrc_ms2.dat file* on the slave machine(s).
Step 9: Copy the sdrc_ms2.dat file from the team server to the slave(s).
Step 10: Create directories** on the slave machine(s) that match the exact path of the team directory on the team server.
Step 11: Mount the team directory from the team server on the slave machine(s).
Step 12: Copy (ftp) the ..\ideas\ideas_param5.dat from the team server to your home directory on the slave machine(s)
Step 13: Login to the slave machine as the IDEAS user.
Step 14: Define and export*** the envronment variable IDEAS_PARAM5 to point to your home directory.
Step 15: Start I–DEAS in the same window in which you defined I–DEAS_PARAM5

TO RETURN TO NORMAL ON THE SLAVE MACHINES

Step 16: When done with the shared data installation, restore the original sdrc_ms2.dat file.
Stpe 17: Reboot the slave machine(s).
Step 18: Make sure your local I–DEAS daemons have started.
Step 19: Make sure the IDEAS_PARAM5 environment variable is not defined permanently.

* copy sdrc_ms2.dat sdrc_ms2.dat_local
** If the team directory paths are already identical on both machines you will have to temporarily rename the team directory on the slave machine (rename team team_local)
*** IDEAS_PARAM5=$HOME;export IDEAS_PARAM5

(Do this once after unloading files from CD)

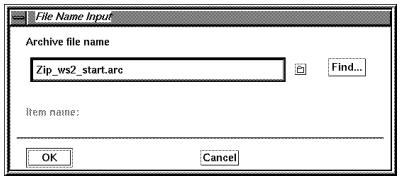
Demonstration Installation – Workstation 2 (WS2)

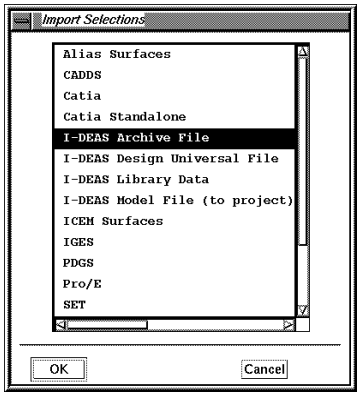
- Copy or unzip the demo files to a local directory
  ...Zip_97\html
  movies
  util
  ws1
  ws2
  docs

- cd ...\Zip_97\ws2\demo_backup

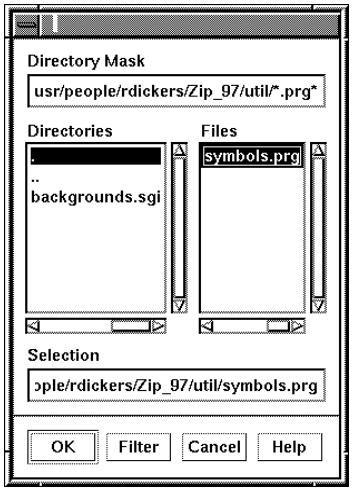
- While in ...\Zip_97\ws2\demo_backup\ directory...
  rename 'Zip_ws2_start.archive' to 'Zip_ws2_start.arc'
  ideas
  Project = **ws2_scratch** *(Create scratch project)*
  Model File = (no model file)
  Application = Simulation
  Task = Master Modeler

- File, Import, Ideas Archive File, 'Zip_ws2_start.arc'





- Do the following manually **or run 'Zip_ws2_setup.prg'**



- Options, units, mm
- Appearance, MB3, Defaults, Annotation, Units/Decimal Places, Decimal Places, 0, OK, OK
- Put Away, all
- Filters, FE models, all off
- Filters, Parts, local origin centerpoints/lines, off
- Filters, Assy, assy name (Top), off
- Filters, Workplane off
- File, program file, run, ..\..\util\symbols.prg
- Options, Background color, 17
- Move, label, workplane, MB2, done, 0 0 45, done
- Simulation ... Design
- Line options, line attributes, iso lines/tangent edges, off
- Lighting, observer off, IO_RT on
- Collapse all bins in Manage Bins Form
- File, save as, 'Zip_ws2_start'
- Exit ideas

- run dmadmin and delete the ws2_scratch project, ***keep all files***

(Do this each time you run the demonstration)

Demonstration Setup – Workstation 2 (WS2)

- cd ...\Zip_97\ws2\

Only after ws1 has created a 'Zip' project...

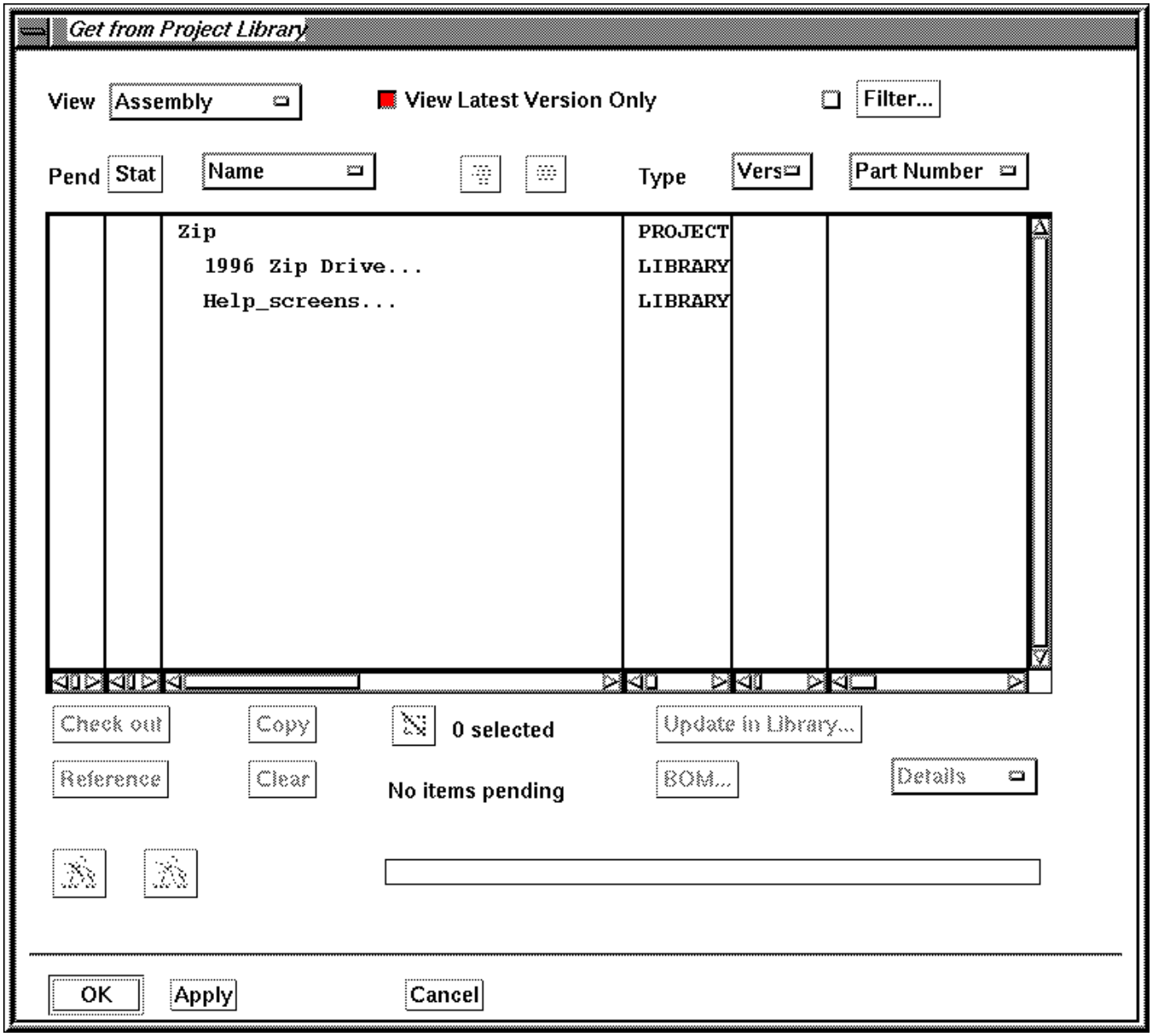
- install.cmd

- Project = **Zip** *(Project should exist)*
  Model File = Zip_ws2_start
  Application = Design
  Task = Master Modeler

Demonstration Flow Chart

Page	WS1 (setup, p1-7)	Page	WS2 (setup, p1-6)
8-13	*Create Zip IDV	7-12	>Prune
14	***Check in Zip IDV - KFR**	13	***Check out Zip IDV**
	Pause		
15-21	*Package Study *Interference Study	14-19	>Sketch >Sweep
22	>Check in Zip Assy-KTM		*Loft-intersect
	>*(busy work: BOM, assy mass props, TDM item search, advanced lighting, be creative, etc)*	22-27	*Cover Cut/Partition *Check In Zip IDV-KTM
23	***UFL-Zip IDV**	27	***UFL-Zip Assy**
	Pause		
24-27	*CWA Cover *Fillet *Shell ***Check in Cover-KTM**		>*(busy work: BOM, assy mass props, TDM item search, advanced lighting, be creative, etc)*
28-31	>Design...Sim >Midsurf	28-31	***RFL Cover**
32	*Loads & BC >Solve	29 30 31	*Cover Drawing >Partition Modify >Sweep Modification
		32	*Loft Modification
		33	*VGX
33-36	*Post FE Results *(delete FE results)* ***UFL Zip IDV** *Toggle Features *Add Ribs	33	**>Check In Zip IDV-KTM** >*(busy work: BOM, assy mass props, TDM item search, advanced lighting, be creative, etc)*
	***Check in Cover-KTM**	34	***UFL Cover (Drawing updates)**
	Pause/Recap		
37-40	*CWA Body *Add Mold Insert *Assy Cut *OPTIONAL Draft *Drag Cooling Lines (VGX)	35 36	>Design...Sim >ESC Setup
	>Simulation...NC >NC Setup stuff	36-37 38-41	*ESC BC Review *Post 2 Results
44-45	*Volume Clear 1 *Volume Clear 2	42-44	>Add/position Fan/3 circles
			*Loft, Fillet, Flat
46	>Copy Mill	45-50	*Vent, Surface offset
47	>NC Setup stuff		***Check in Zip IDV-KTM**
48-49	***UFL Zip IDV (CWA updates)** *Update Toolpaths	51	>Forced Convection Setup
50	>Get Final Assy Config	51-52	*Forced Convection Results {Temps, Flow GLobals))
	Demo Wrap up		
	1. Exploded Configuration	53	2. Optional HTML-Netscape
	3. SGI Only-Create I-DEAS Movie	54	4. Movie *Zip97.mov*
52	5. Movie *Zip96.mov*		
	X. final1, final2	55	*X. final1, final2*
	Legend		
	* - On Camera > - Off Camera UFL- Update from Library CWA-Copy with Assoc		KTM - Keep To Modify KFR - Keep For Reference RFL - Reference from Library

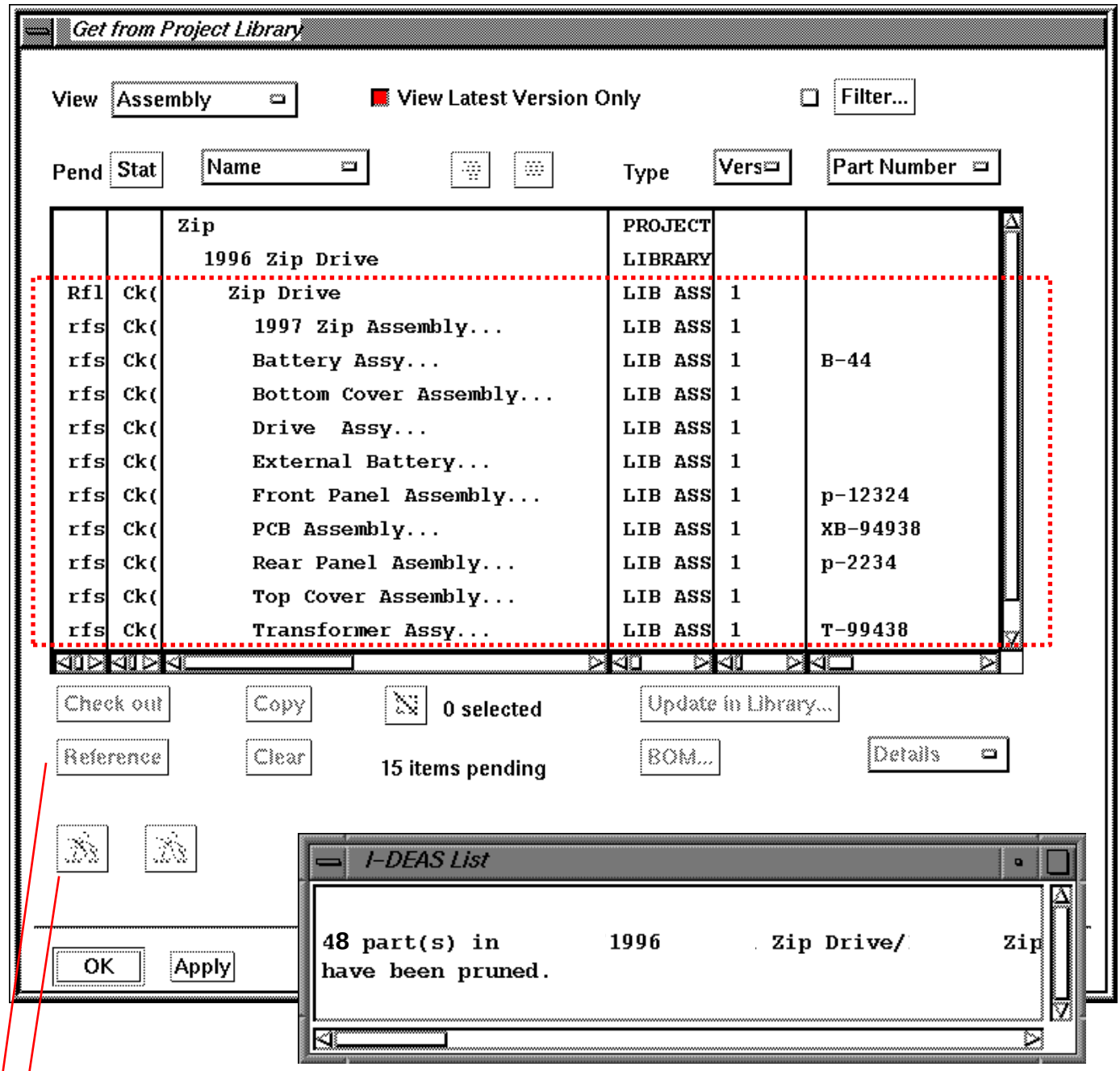
Off Camera



Master Assmebly

- ***Manage Bins (wait for ws1 to check-in)***
  Get from library, Double click ’1996 Zip Drive’

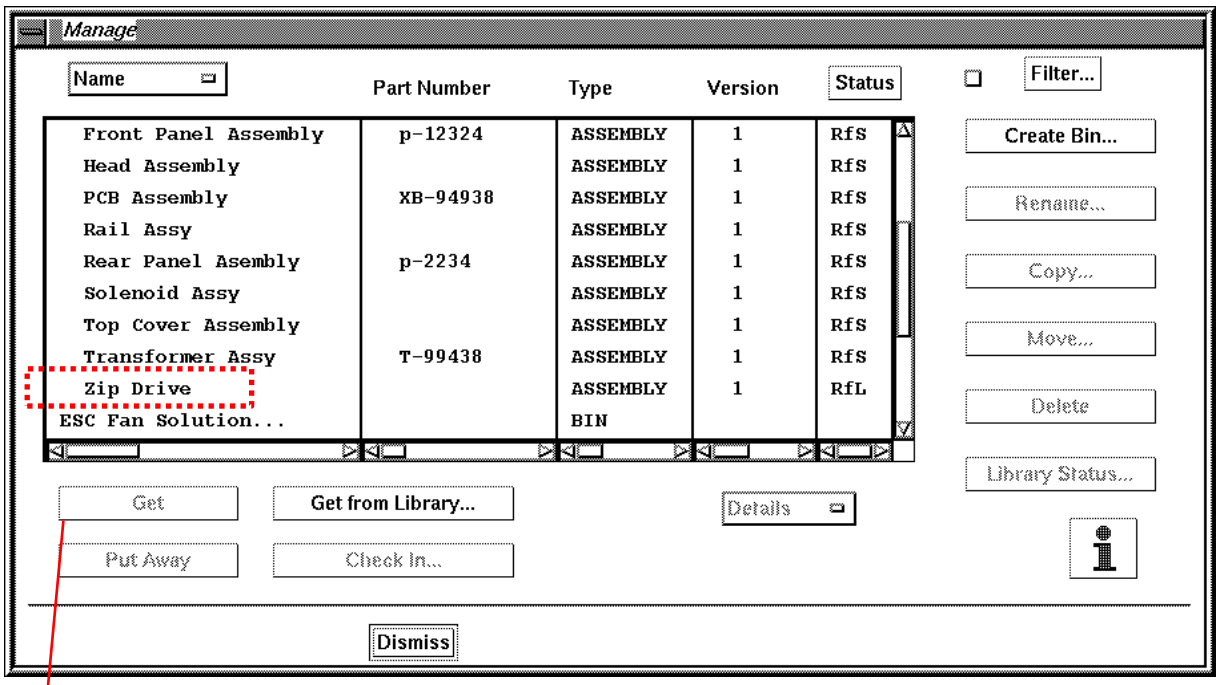
Off Camera

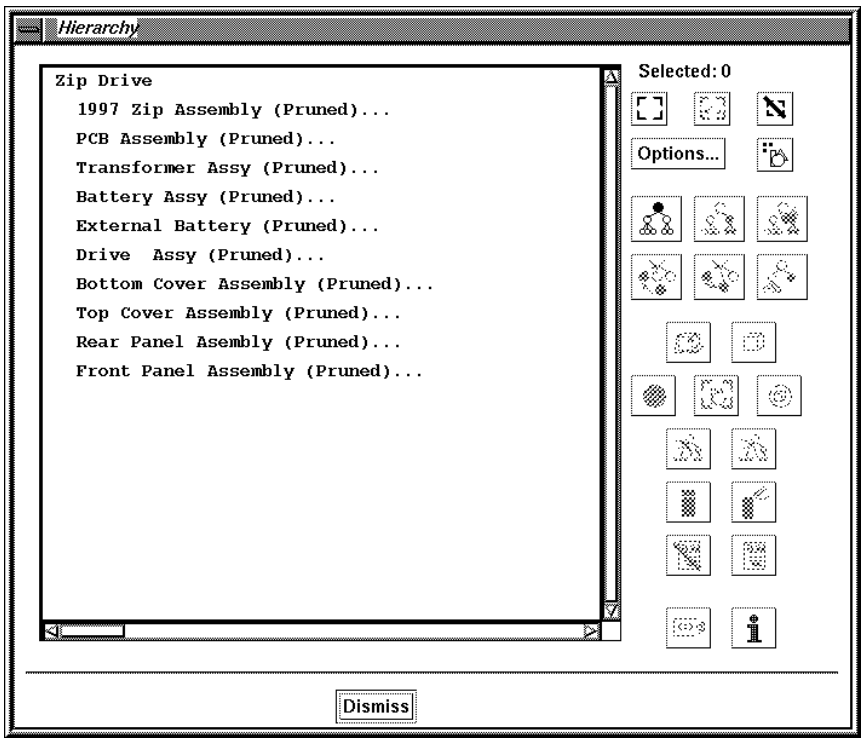


- ***Reference***
  Zip Drive
- ***Prune***
  Zip Drive

> Verify '48 parts(s)...' in List Window

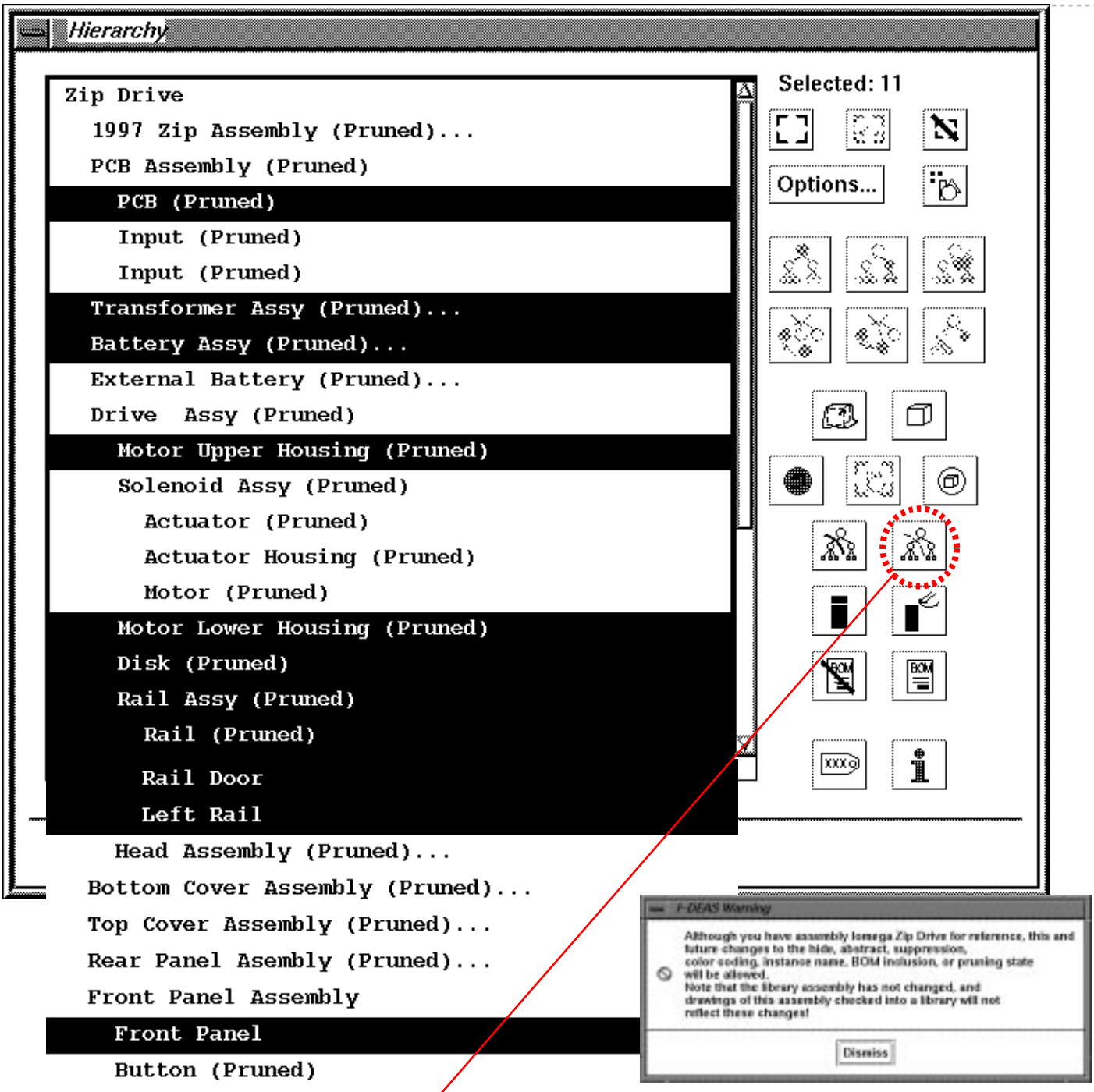
Off Camera





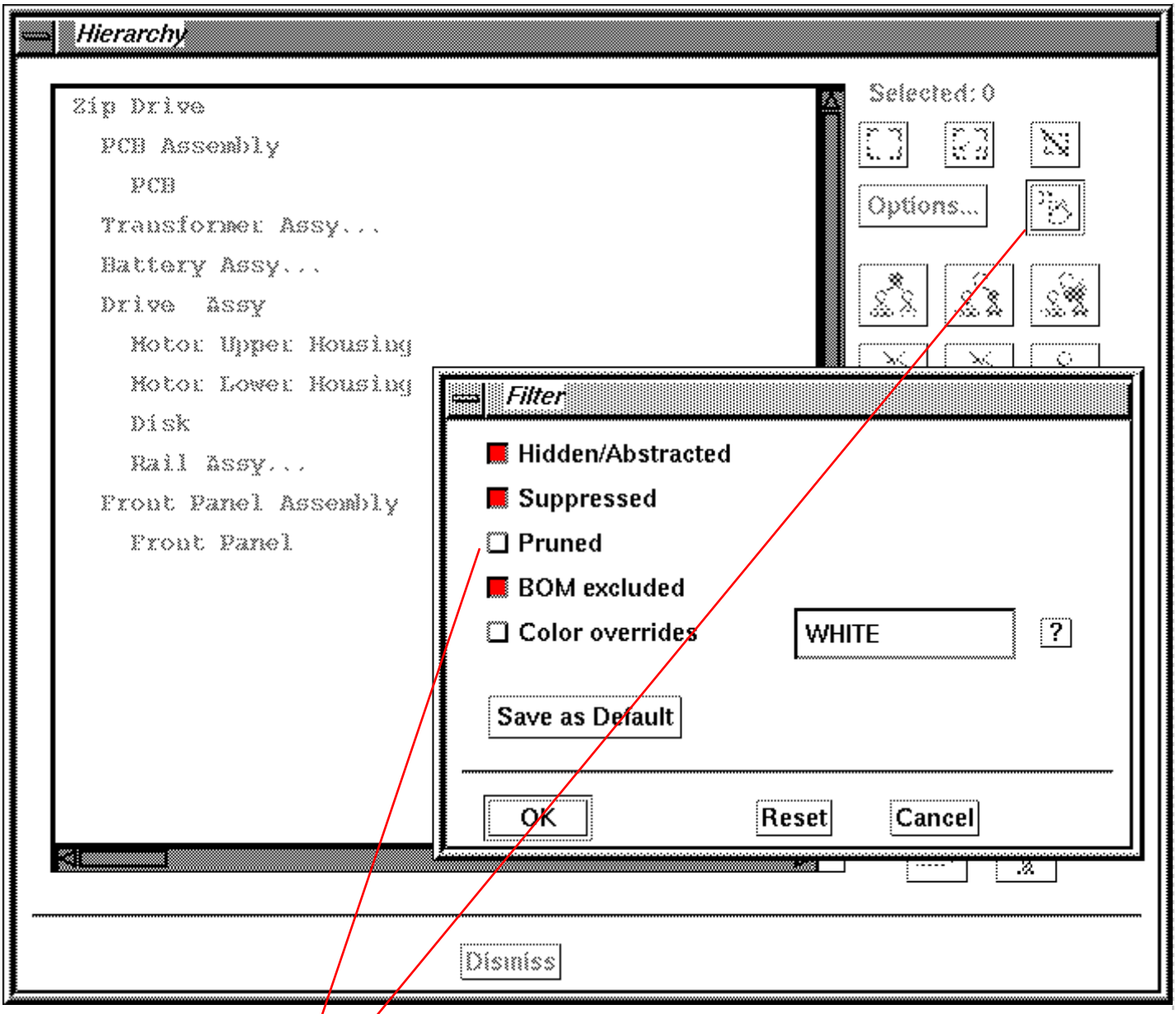
- ***Get*** **'Zip Drive'**
- ***Dismiss***
- ***Hierarchy***

Off Camera



- ***Highlight*** items in hierarchy form as shown
-  ***UnPrune***
  Returns instance's geometry to the workbench assembly
- ***Dismiss***
  dismiss warning box...
- ***Okay***
  retreive the highlighted components

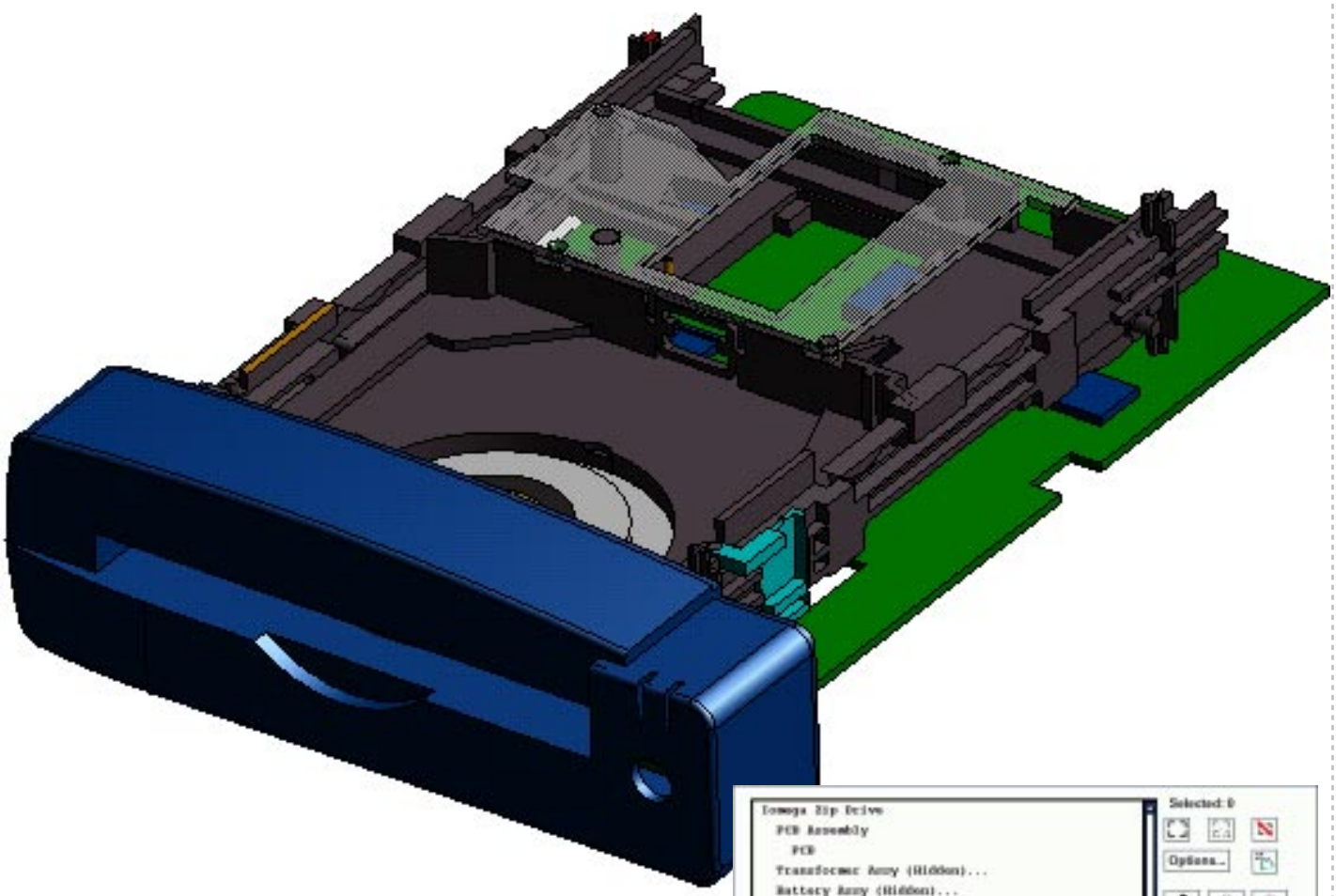
Off Camera

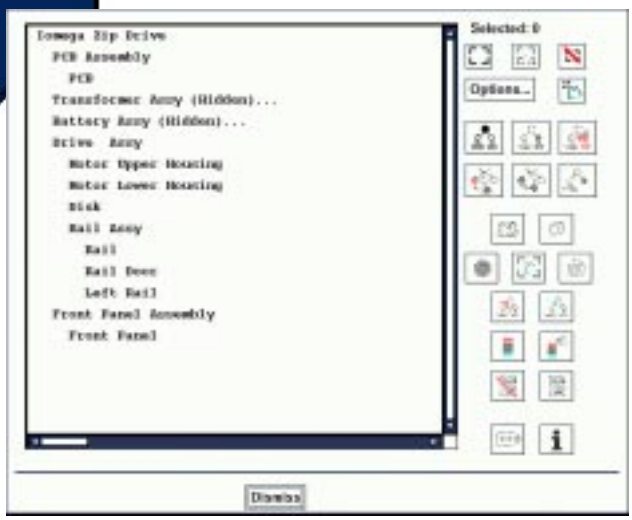


- ***Filters***

  Turn off the visiblilty of pruned instances from the hierarchy listing. Verify that your hierarchy looks like the one shown, Dismiss

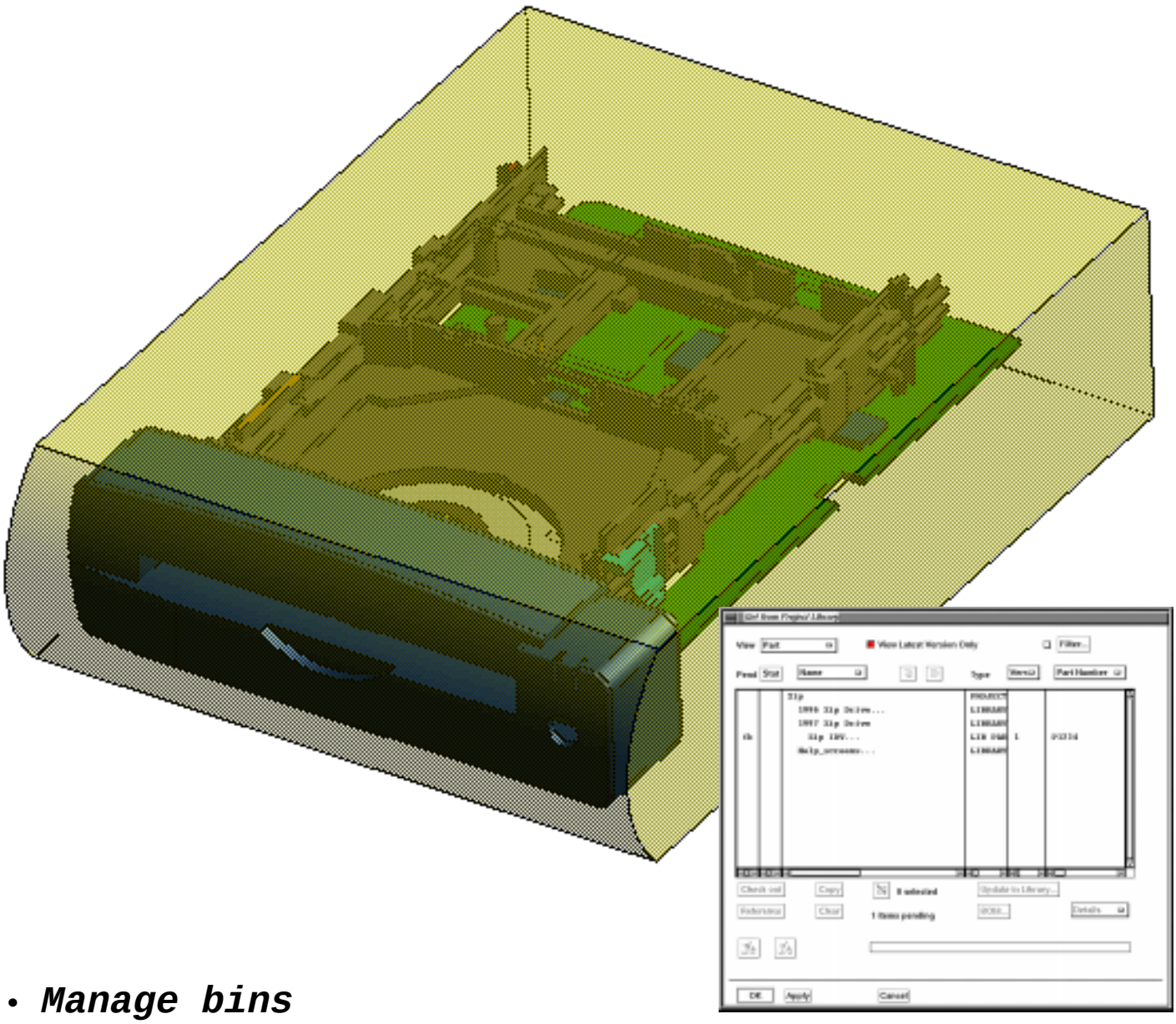
Off Camera





- ***Perspective View***
- ***Autoscale***

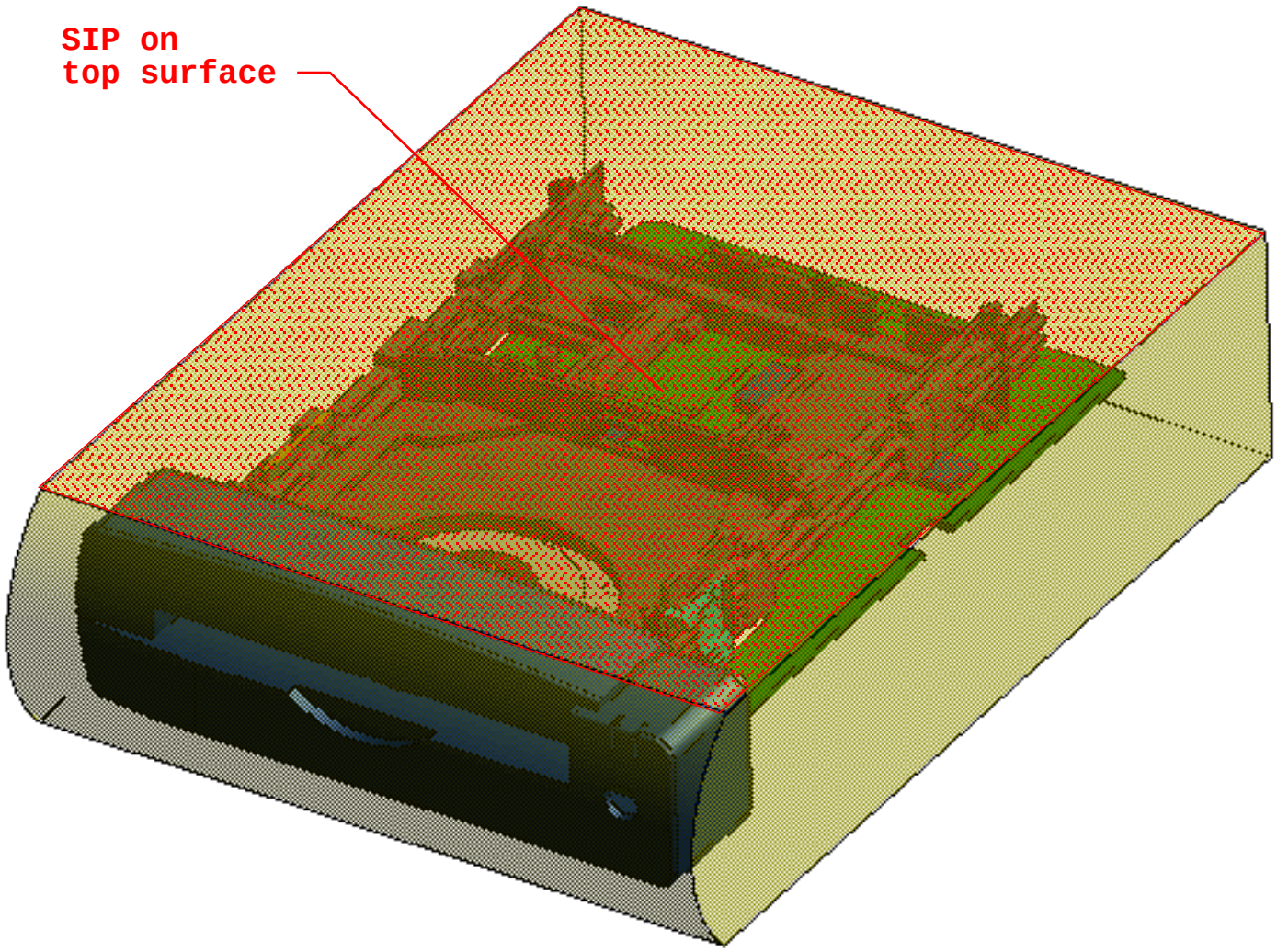
> Turn on shaded overlay if desired



- ***Manage bins***
- ***Get from library***
  1997 Zip Drive, ’Zip IDV’ (check out)
- ***Get***
  ’Zip IDV’ part to workbench
- ***Appearance***
  Select ’Zip IDV’, make 40% translucent

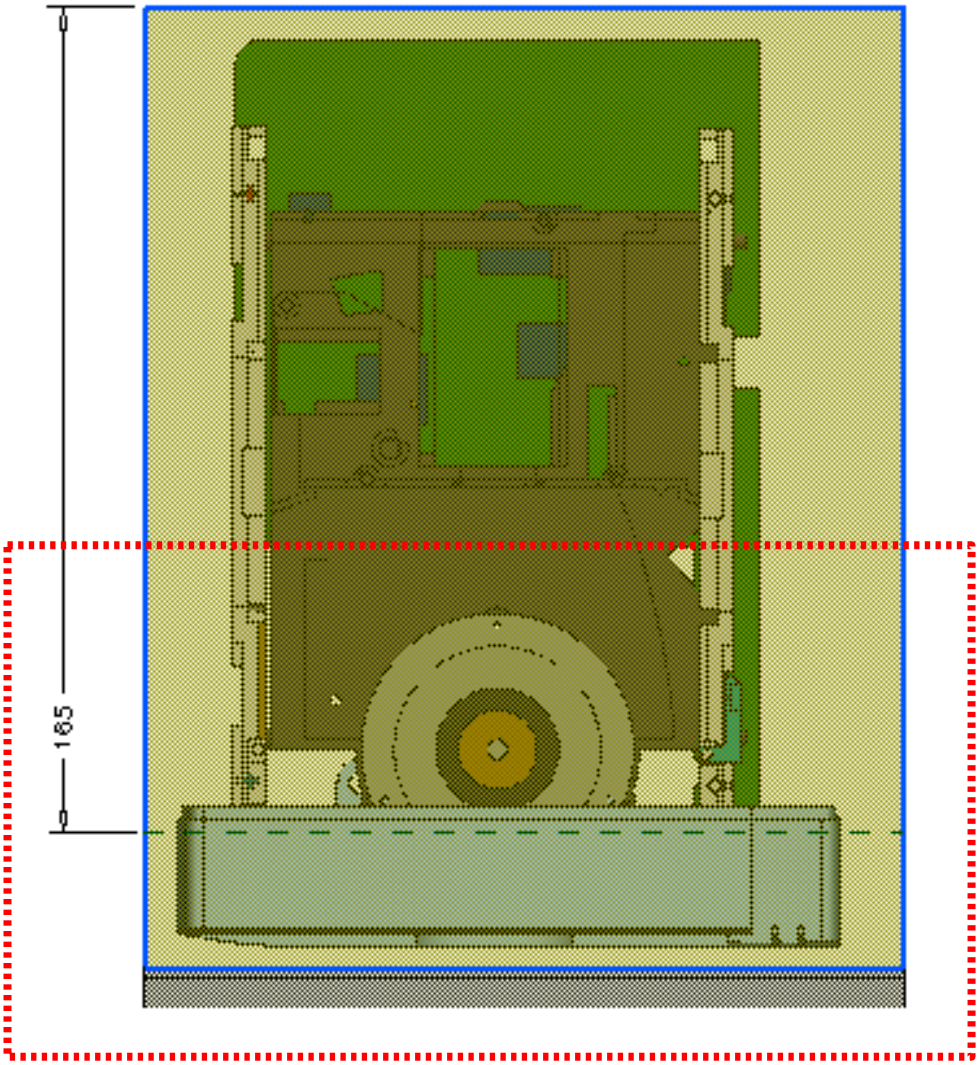
Wait – Show both Zip IDV parts on the screen
***** WS1 is on page 14 *****

Off Camera



- **Master Assembly...Master Modeler**
- ***Sketch in Place***
  On top surface

Off Camera



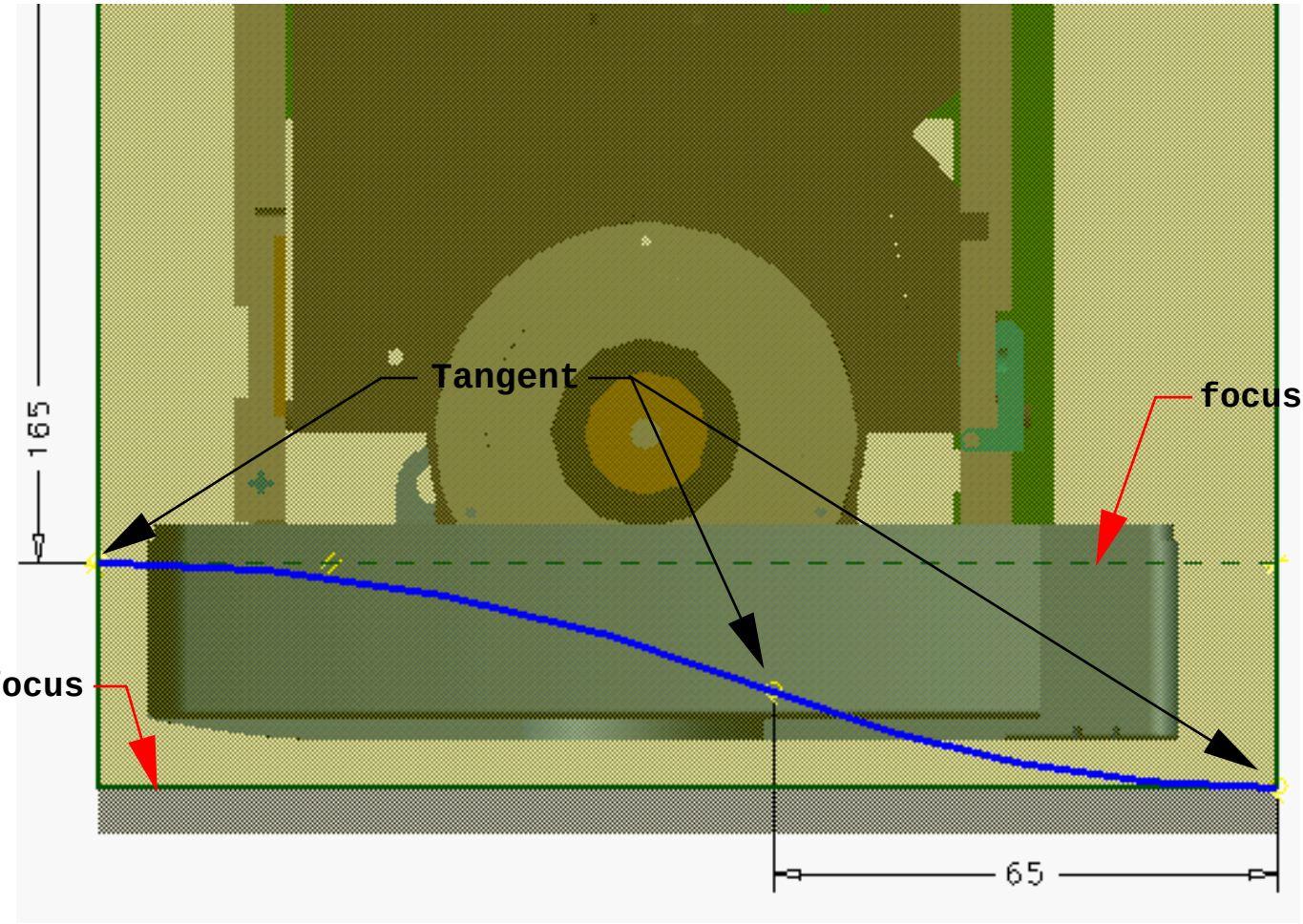
- ***Top view***
- ***Autoscale***
- ***Polyline***

  capture linear dimension off of back edge (focus if needed)
- ***CFF***

  preselect horizontal line and type '*cff*' to change font
- ***Zoom***

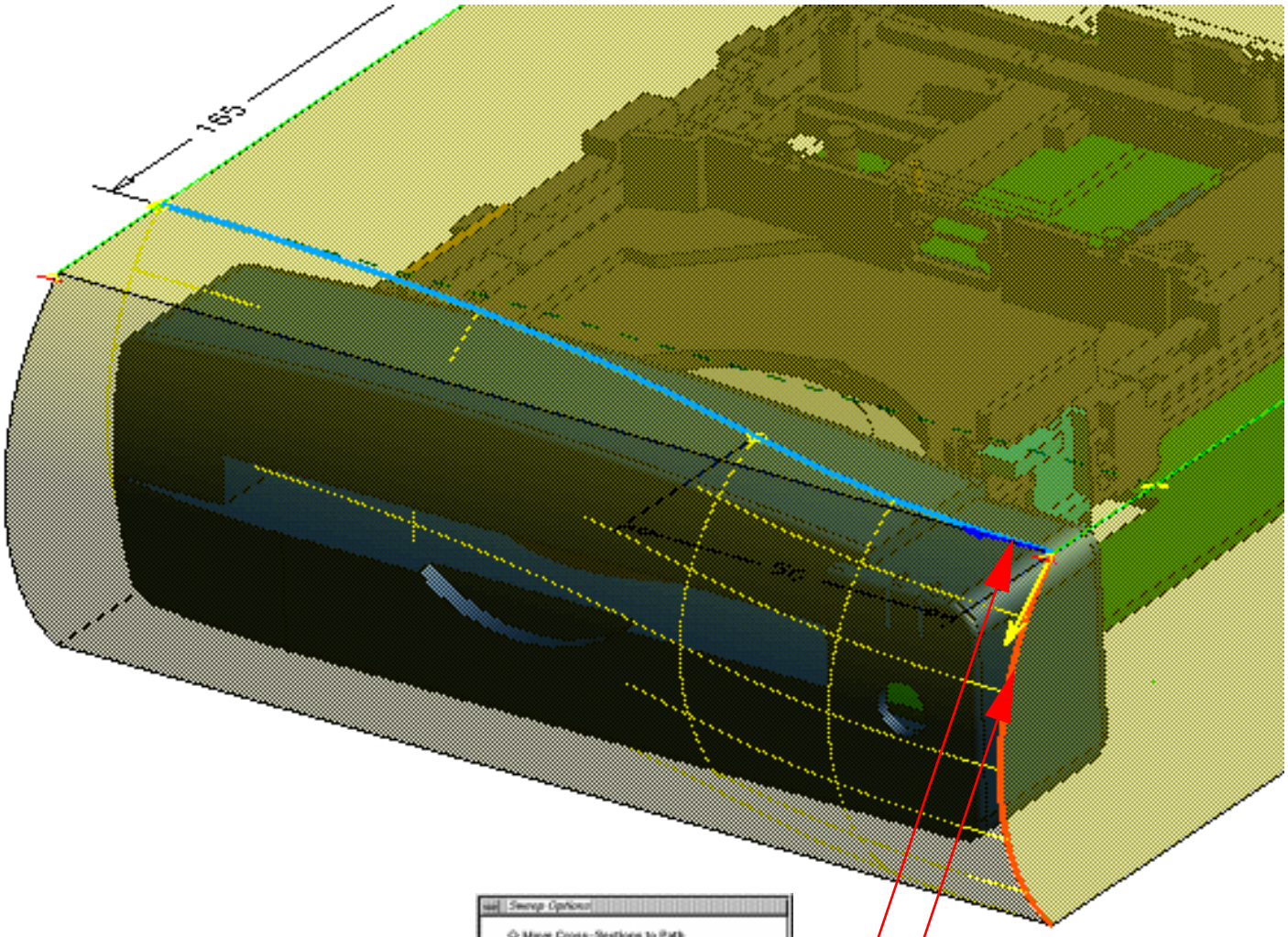
  zoom in around area shown

Off Camera



- ***Arc, Three points on*** **(twice)** (MB3, Navigator, radiak dim off)
  focus to just sketched horizontal line; focus to front edge
- ***Dimension***
  select tangency transition point & right edge
- ***Tangent***
  add 3 tangency constraints
- ***Build Section***
  build section out of two tangent arcs
- ***Appearance***
  change section color to blue to audience can see it
- ***Drag***
  165mm/65mm

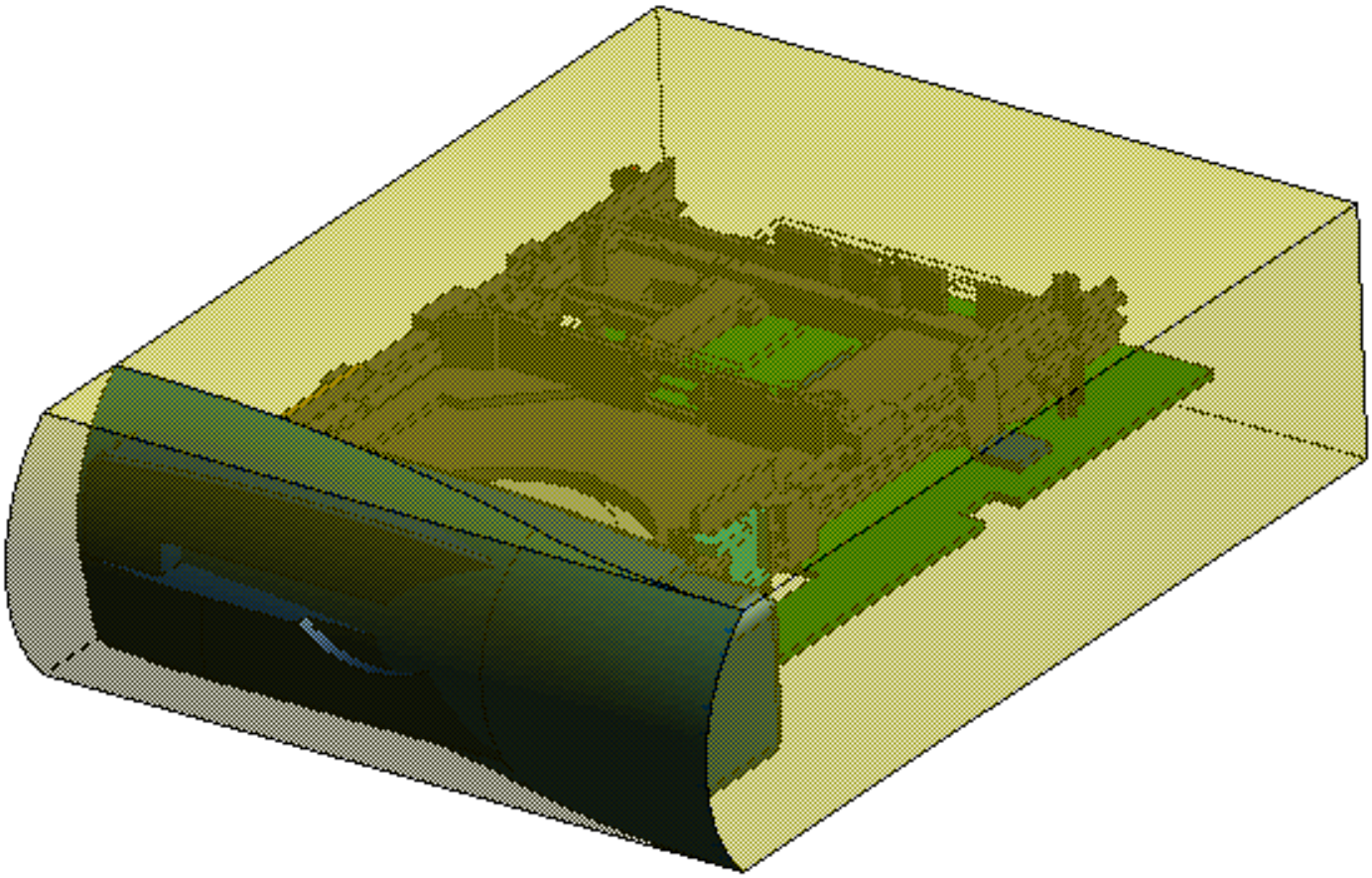
Off Camera



- ***Sweep***

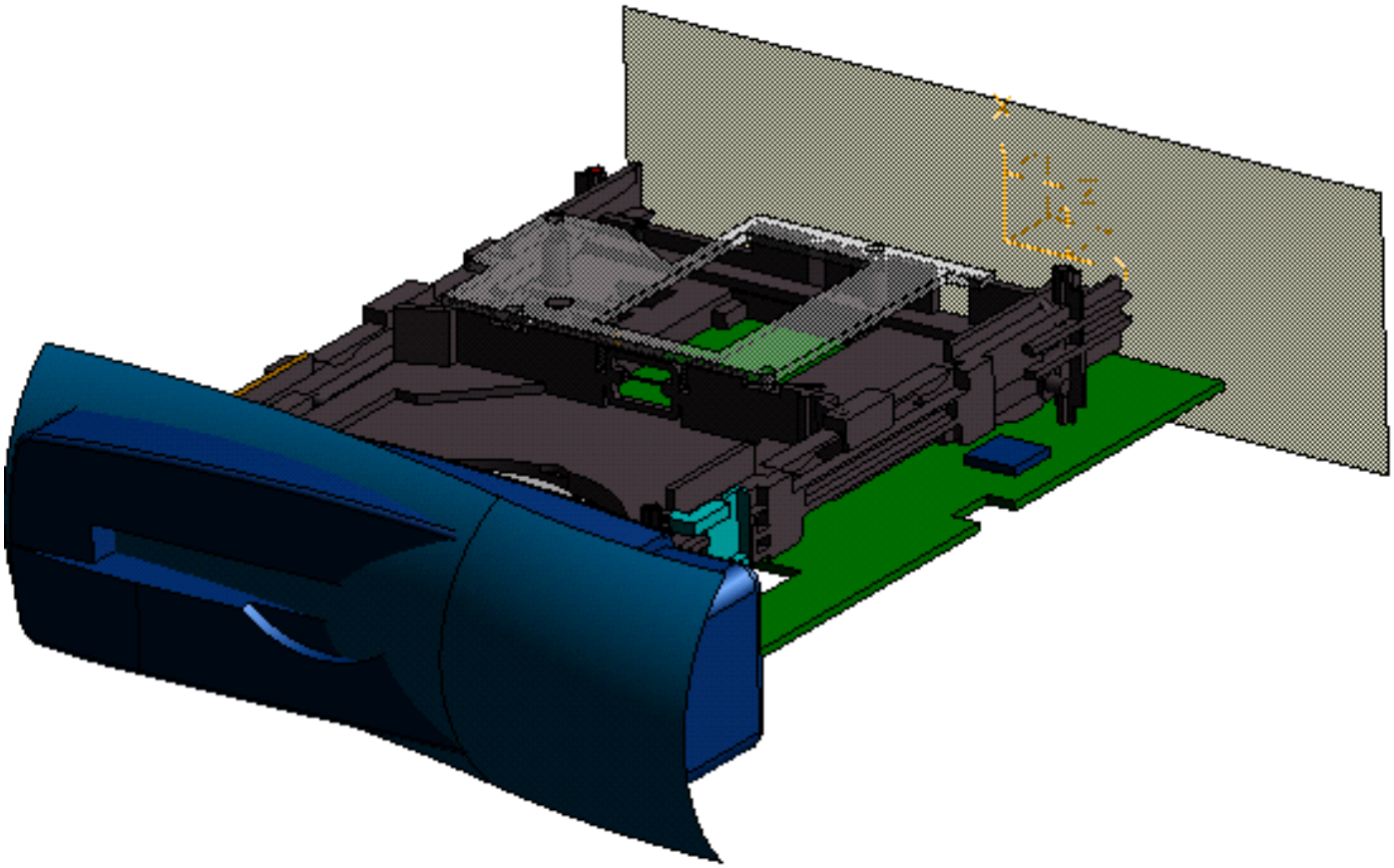
MB3, Sweep Options, Use X-Sections in Place, OK
Pick path curve (blue section)
Pick X-section curve (part edge)
Verify 'Add' option
Preview
OK

Off Camera

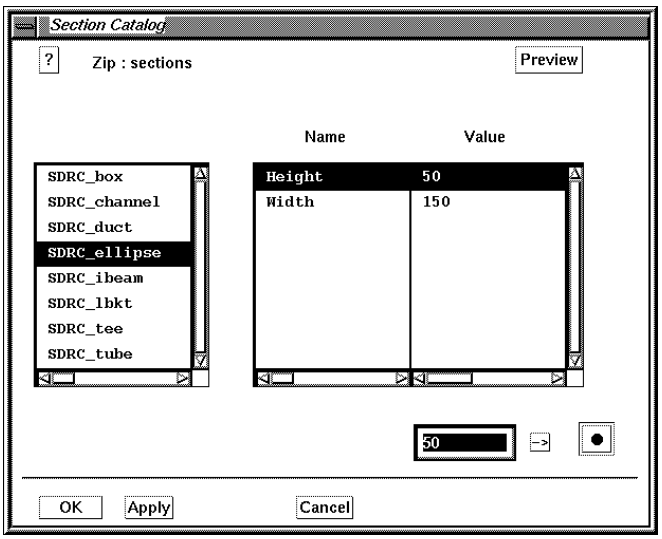


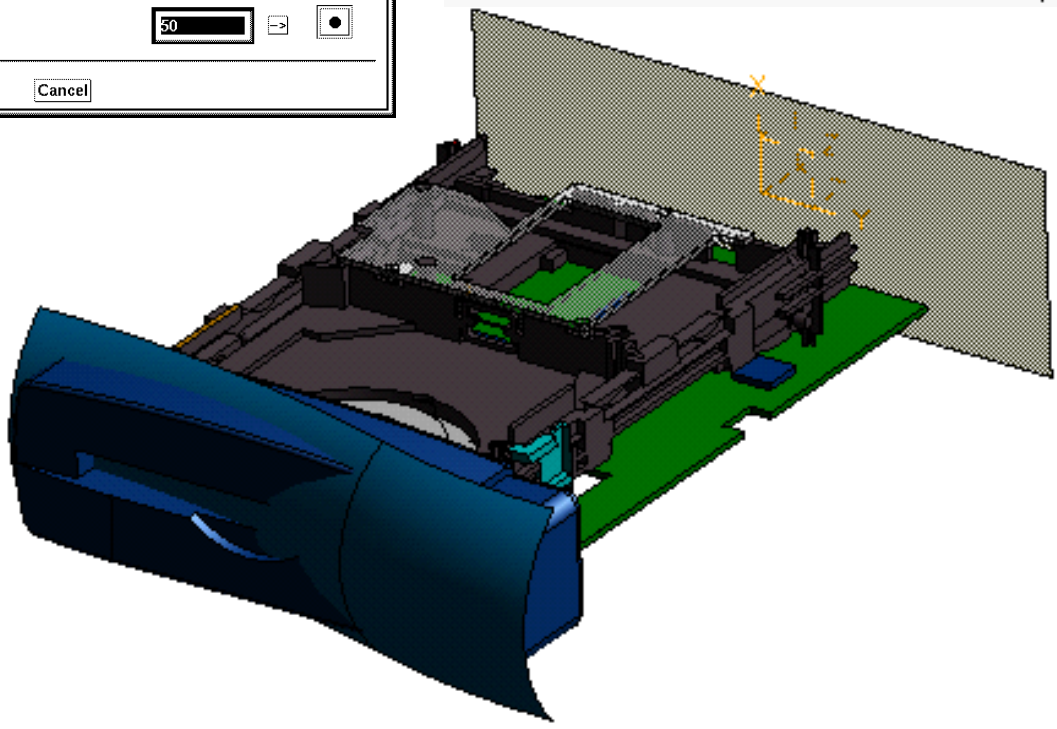
- **Save**

Off Camera



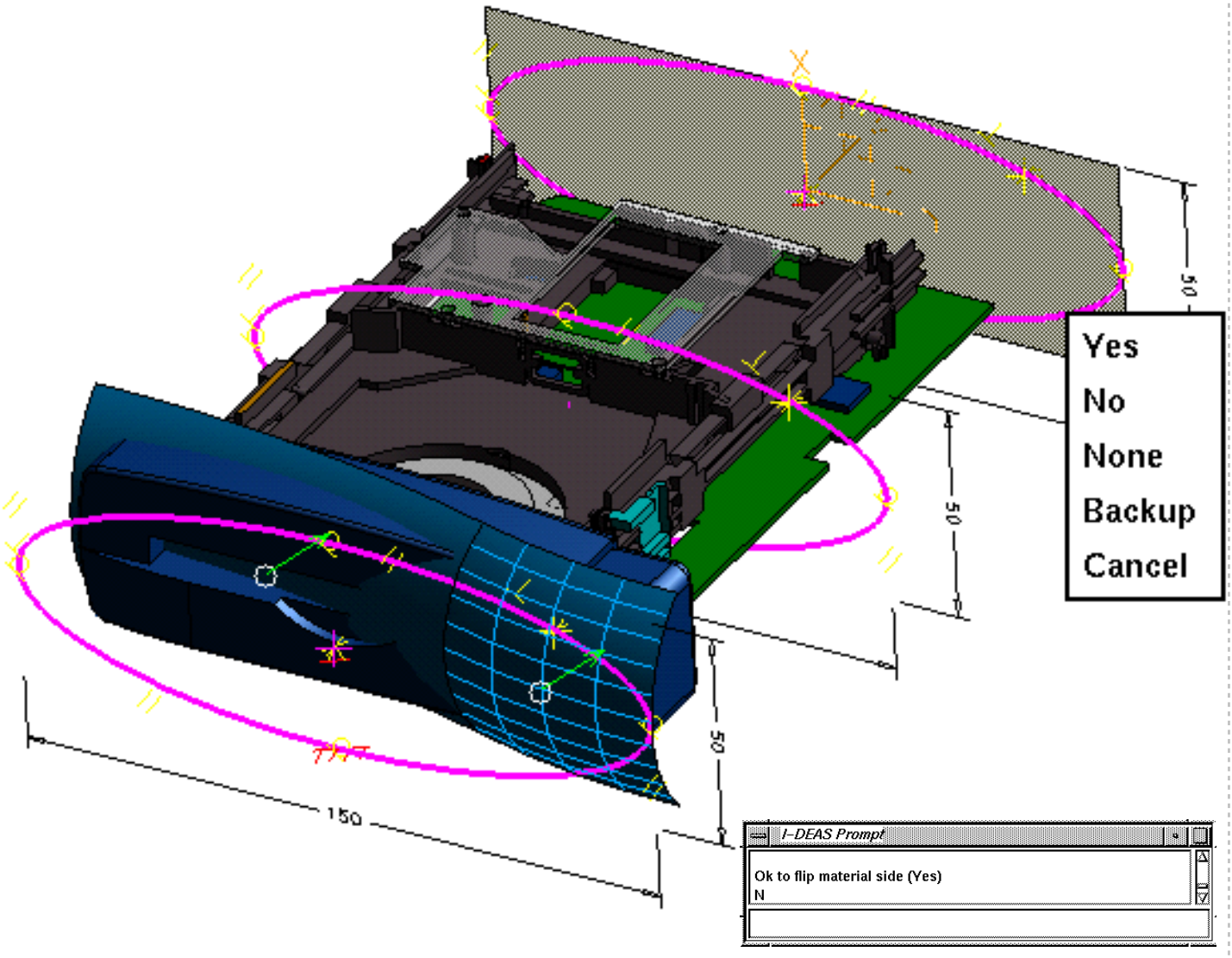
- ***Delete***
  Delete 5 faces from 'Zip IDV' as shown
- ***Coordinate System***
  Put CS on back face, take default centered location





- ***Sections*** 

Get ellipse section from Zip Project Section catalog
Preview
Customize to 150mm x 50mm

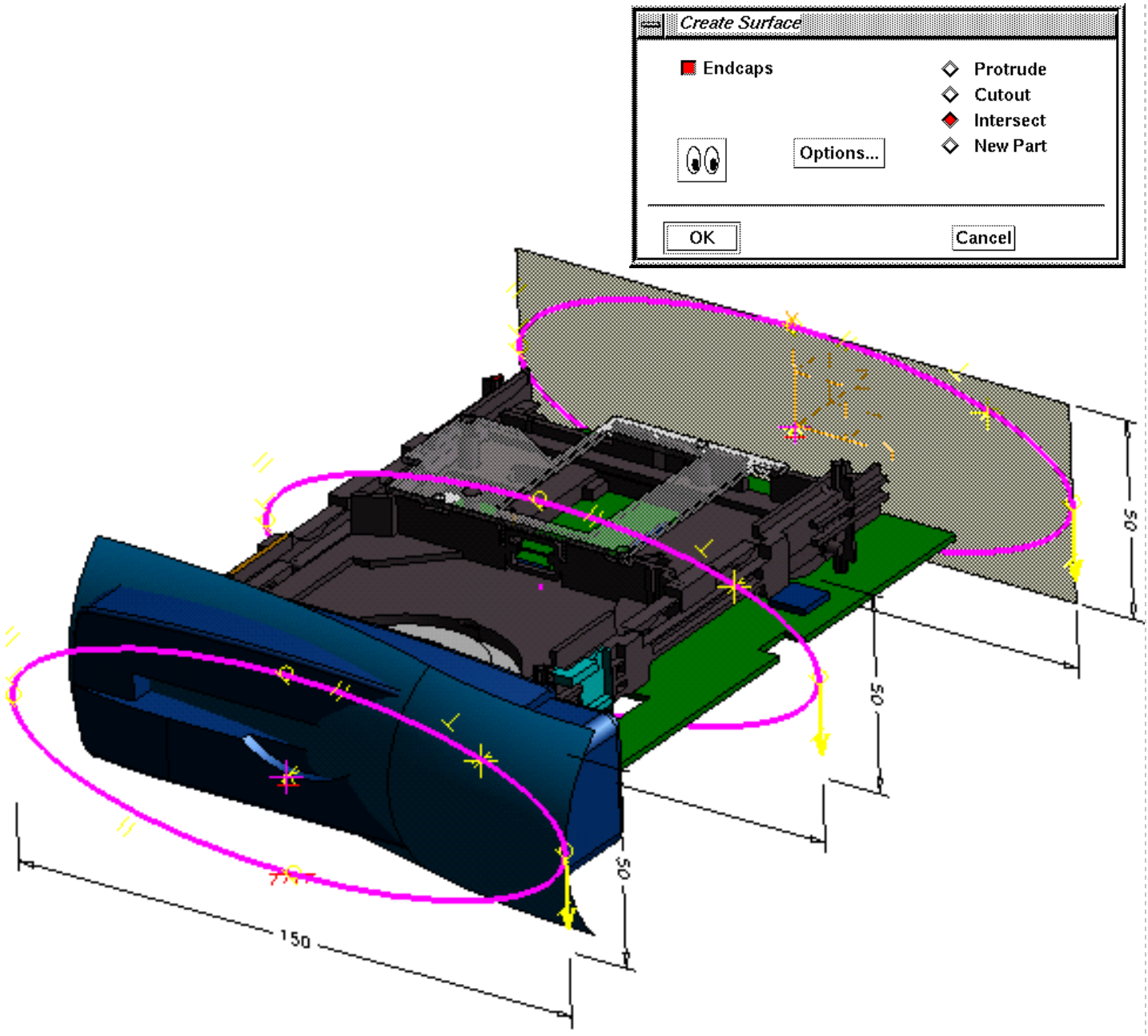


- ***Move***

  Use *'et'* global symbol, double click the ellipse to select the part
  'Move to' and place the ellipse center point on the coordinate system origin
  MB3, Previous Entities, copy switch 'on' copy forward 0 0 100 2

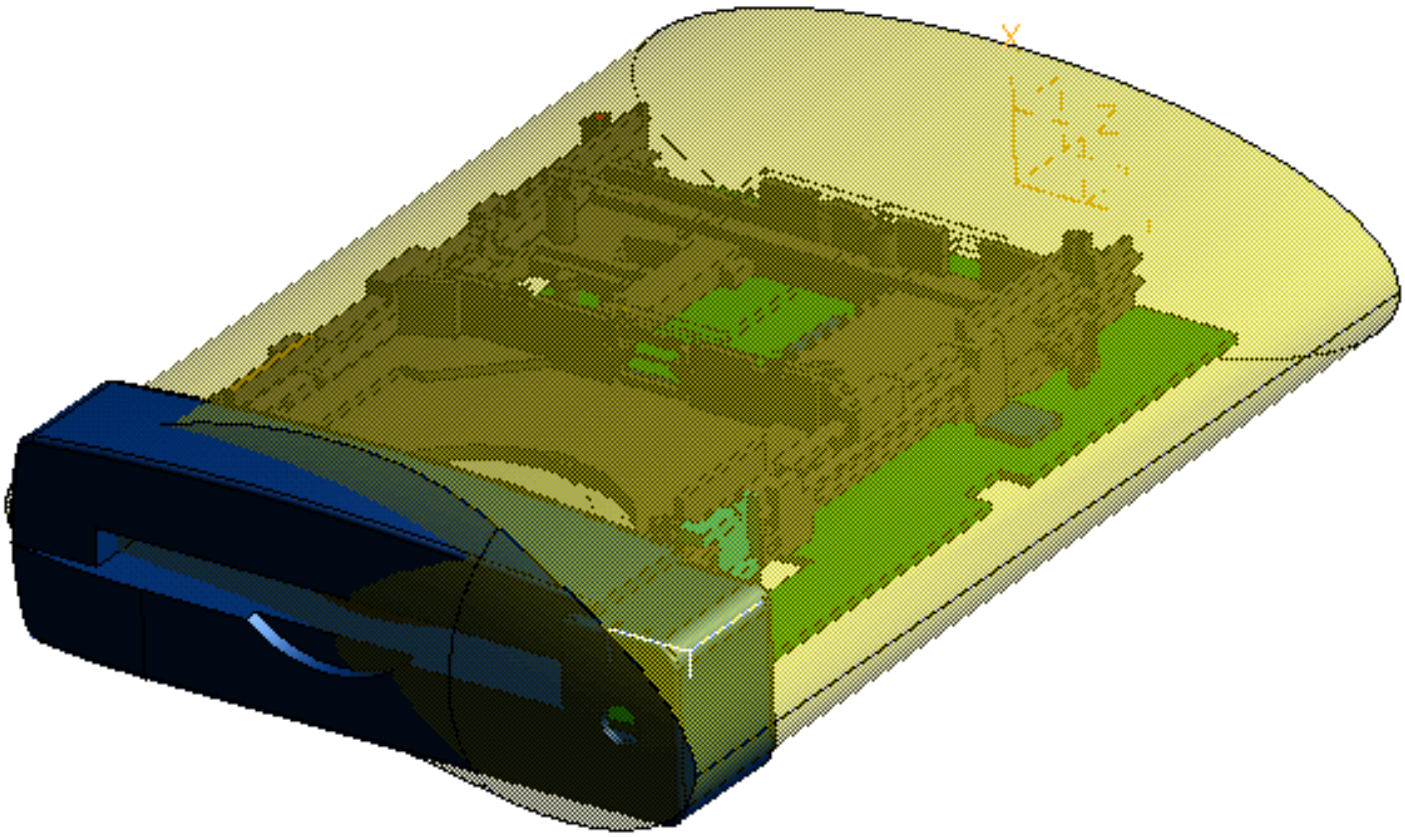
- ***Material Side***

  Set material side of front swept surface pointing back



- ***Loft***

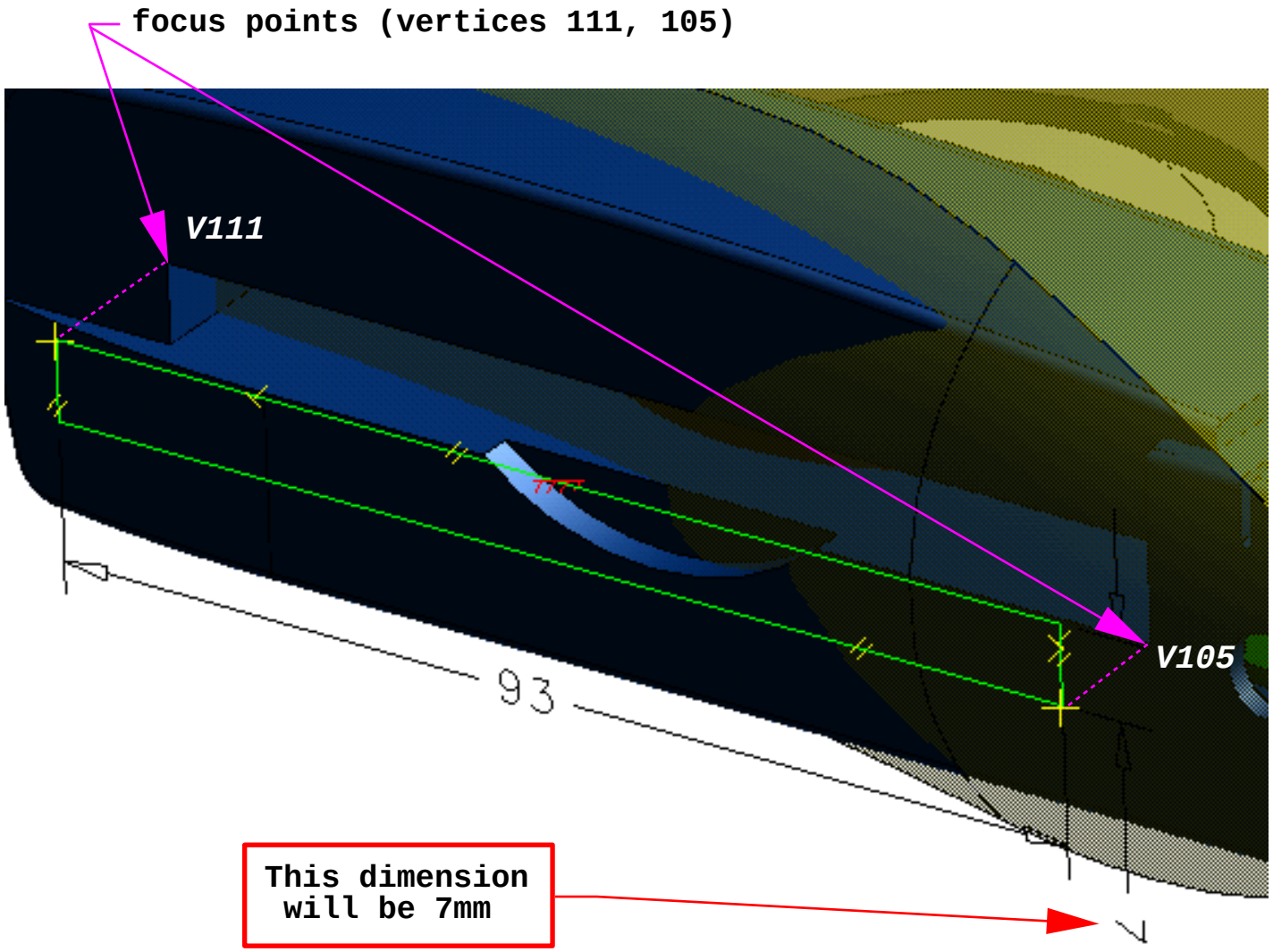
  Pick the 3 sections, verify consistent arrow direction
  Intersect with the 'Zip IDV' part by picking front sweep



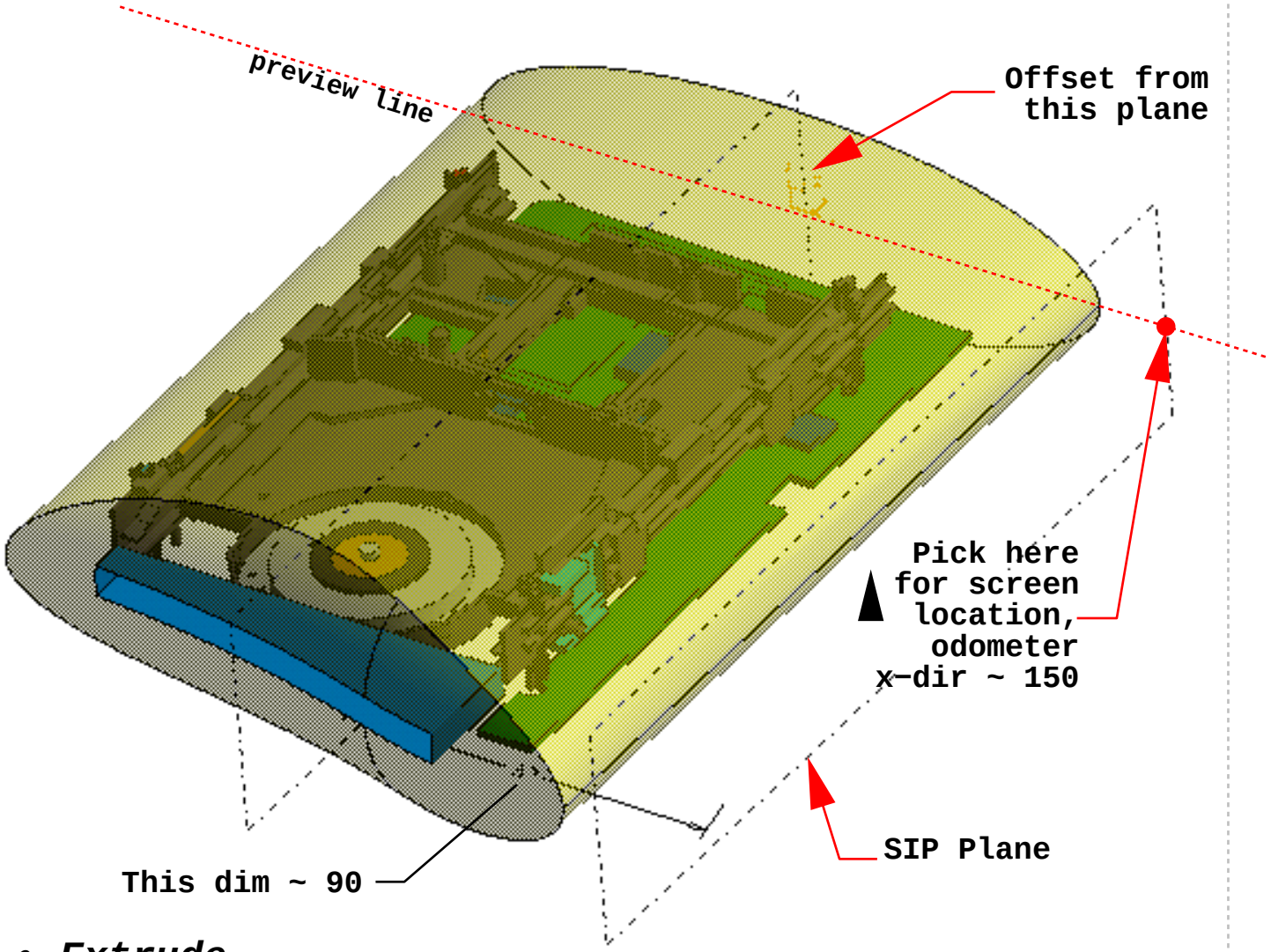
- ***Appearance***

  CCC **– preselect part and use 'ccc' to make yellow**

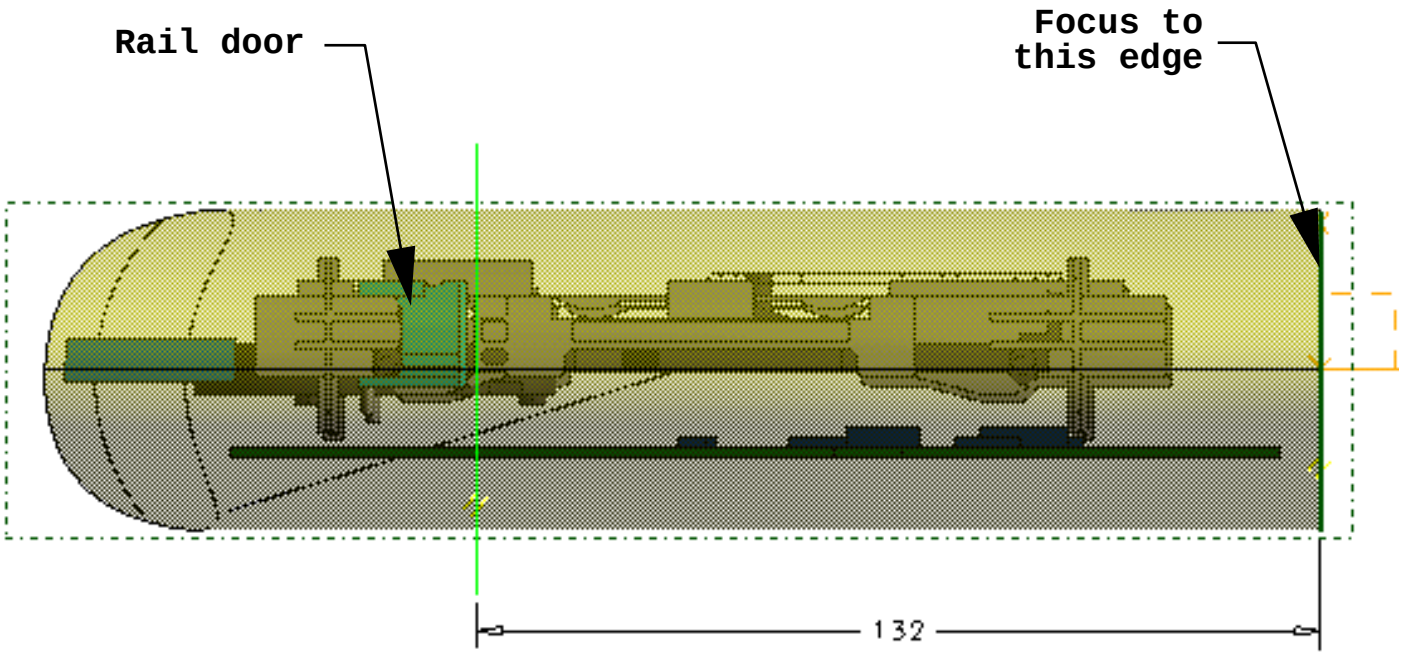
  TRR **– preselect part and use 'trr' to make translucent**

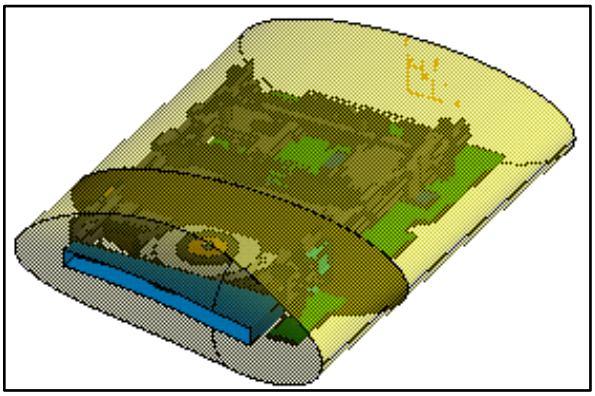


- ***Zoom***
  Zoom in as shown
- ***Rectangle***
  focus on two corners of cartidge cutout from old cover

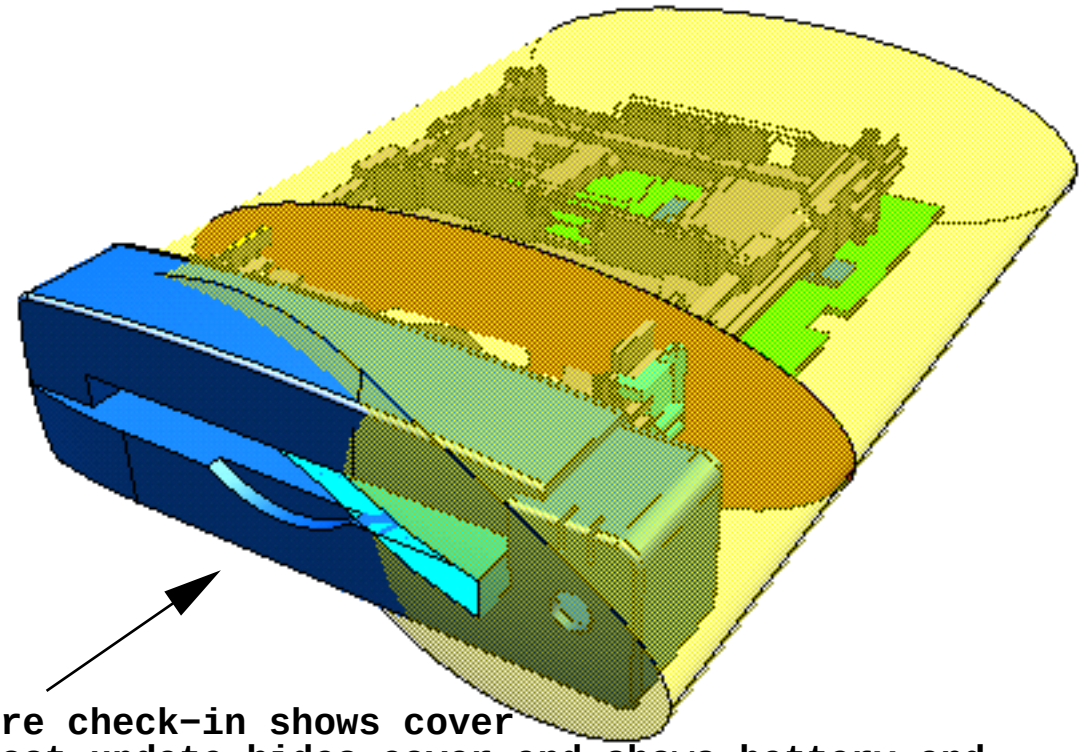


- ***Extrude***
  40mm, flip arrow direction, cut into 'Zip IDV' part
- **Master Modeler ... Master Assembly**
- **Hide**
  Hide old cover
- **Master Modeler ... Master Assembly**
- ***Ref Plane***
  Offset surface from XZ plane of back coordinate system use screen location along preview line, and pick off to the right side of the part (odometer x coordinate reads about 150, the actual offset dimension will be around 90 – make sure you clear the RHS of the part, if you miss or if you are too close, soon, life will not be festive)
- ***Sketch in Place***
  SIP on offset plane

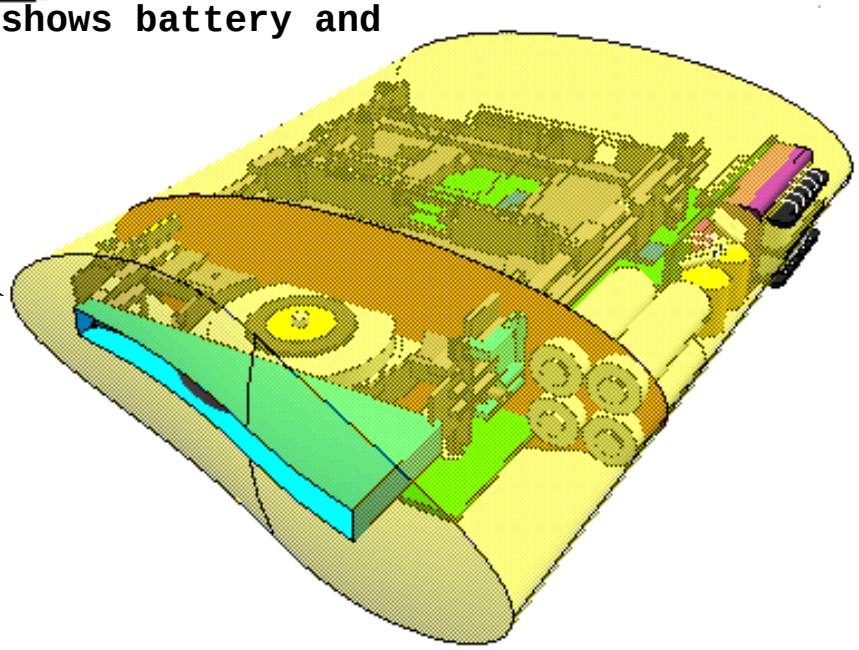




- ***Side view***
- ***Polyline***
  focus to back edge of Zip IDV, sketch
  polyline just behind cyan colored rail door
- ***Extrude***
  Partition, thru-all, OK
- ***Hide***
  Preselect both ref planes
  use *'eh'* to hide both ref planes
- ***Display Filters***
  parts...turn off coordinate system display, OK, OK
  or use *'css'* global symbol



Pre check–in shows cover
Post update hides cover and shows battery and trasformer automatically

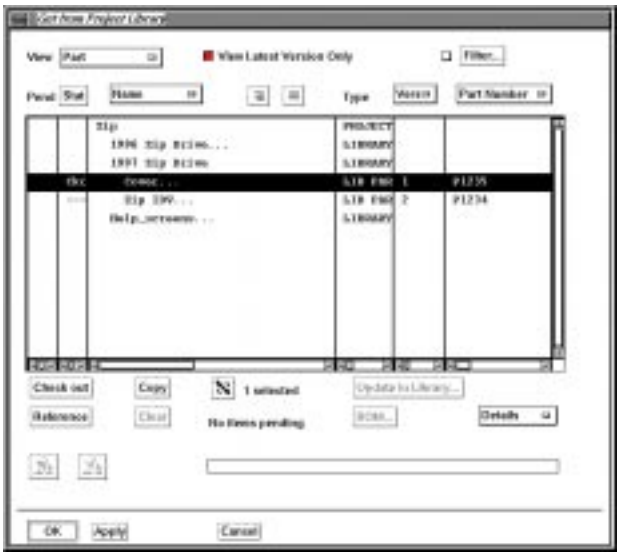


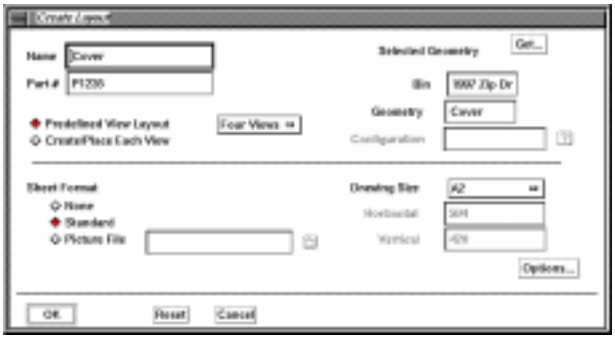
- ***Check–in***
  Keep to modify, OK

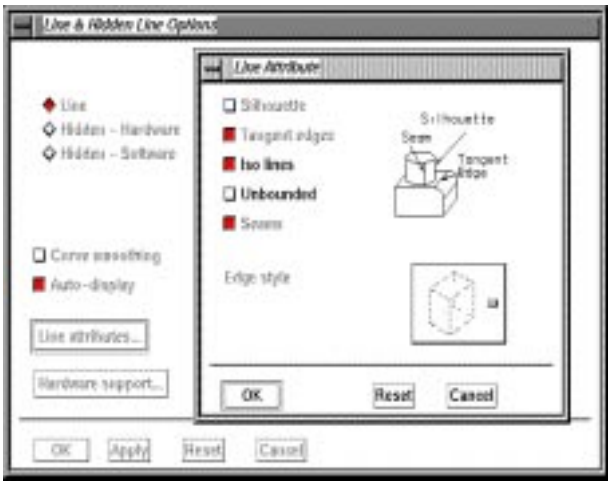
- ***Review mail message***

- ***Update From Library***
  Highlight Zip Drive Assy. The transformer and battery sub assemblies are shown automatically.

Wait – Show both assemblies on the screens
***** WS1 is on page 23 *****

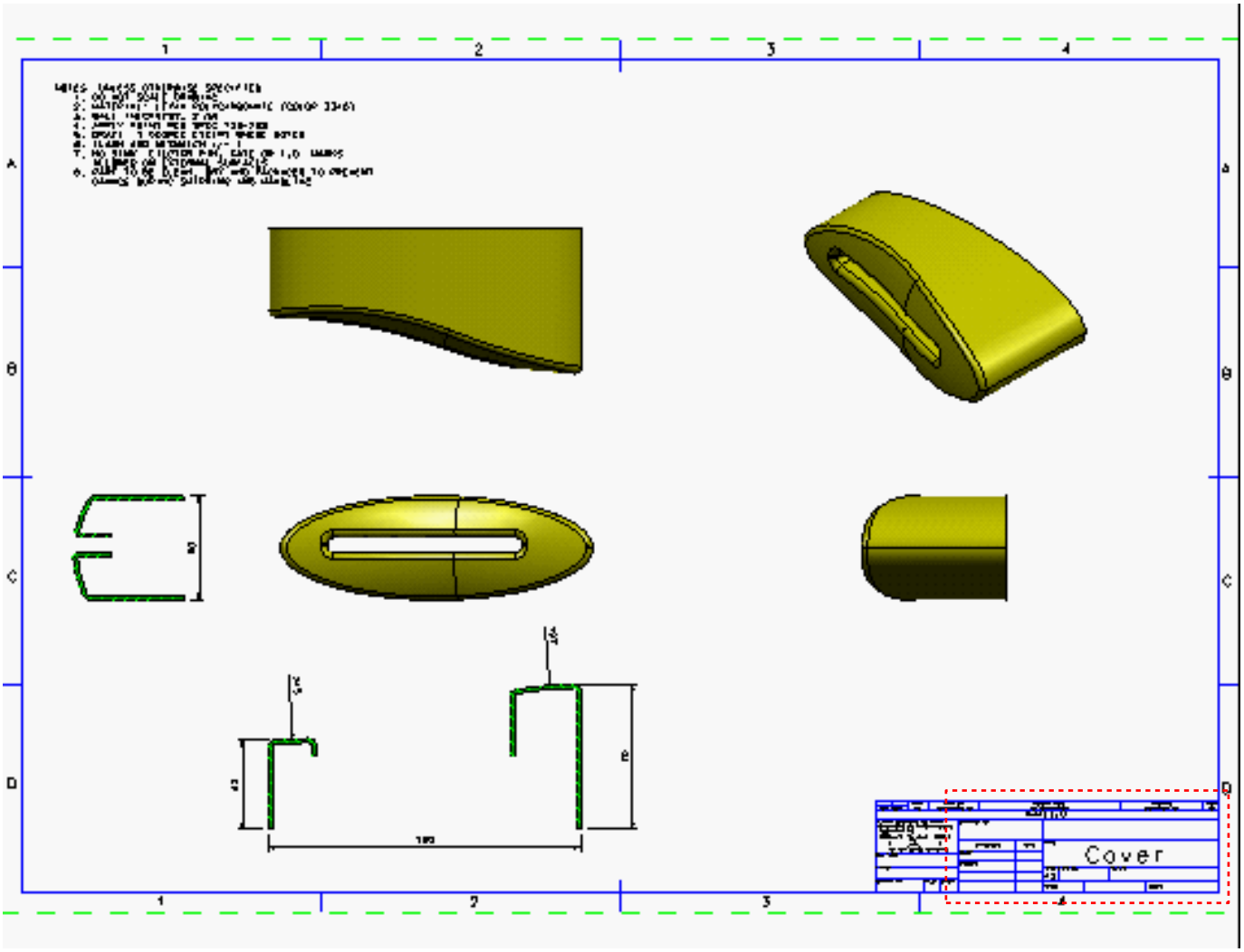




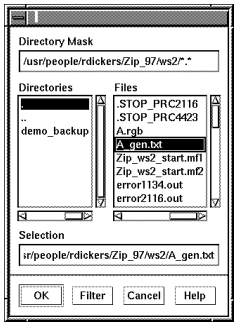


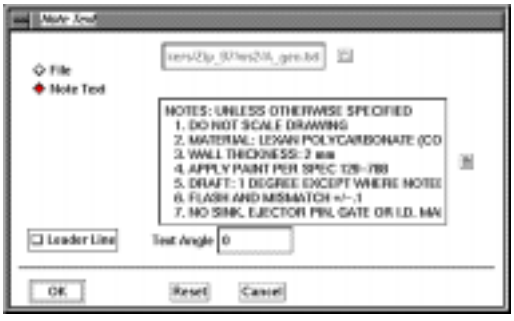
WS2 must stay on the drawing until WS1 gets FE results on the screen

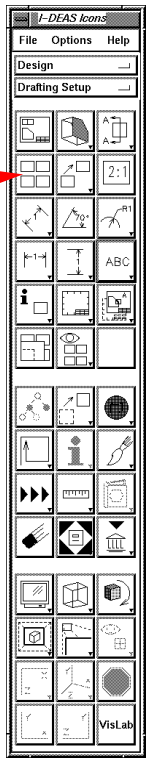
- ***Get From Library***
  Reference 'Cover', type library part, OK
- ***Master Modeler ... Drafting Setup***
- ***Create Layout***
  Get 'Cover', Drawing Size=A2, Ok, Yes
- ***Line***
  Options, Line attributes, set iso lines on



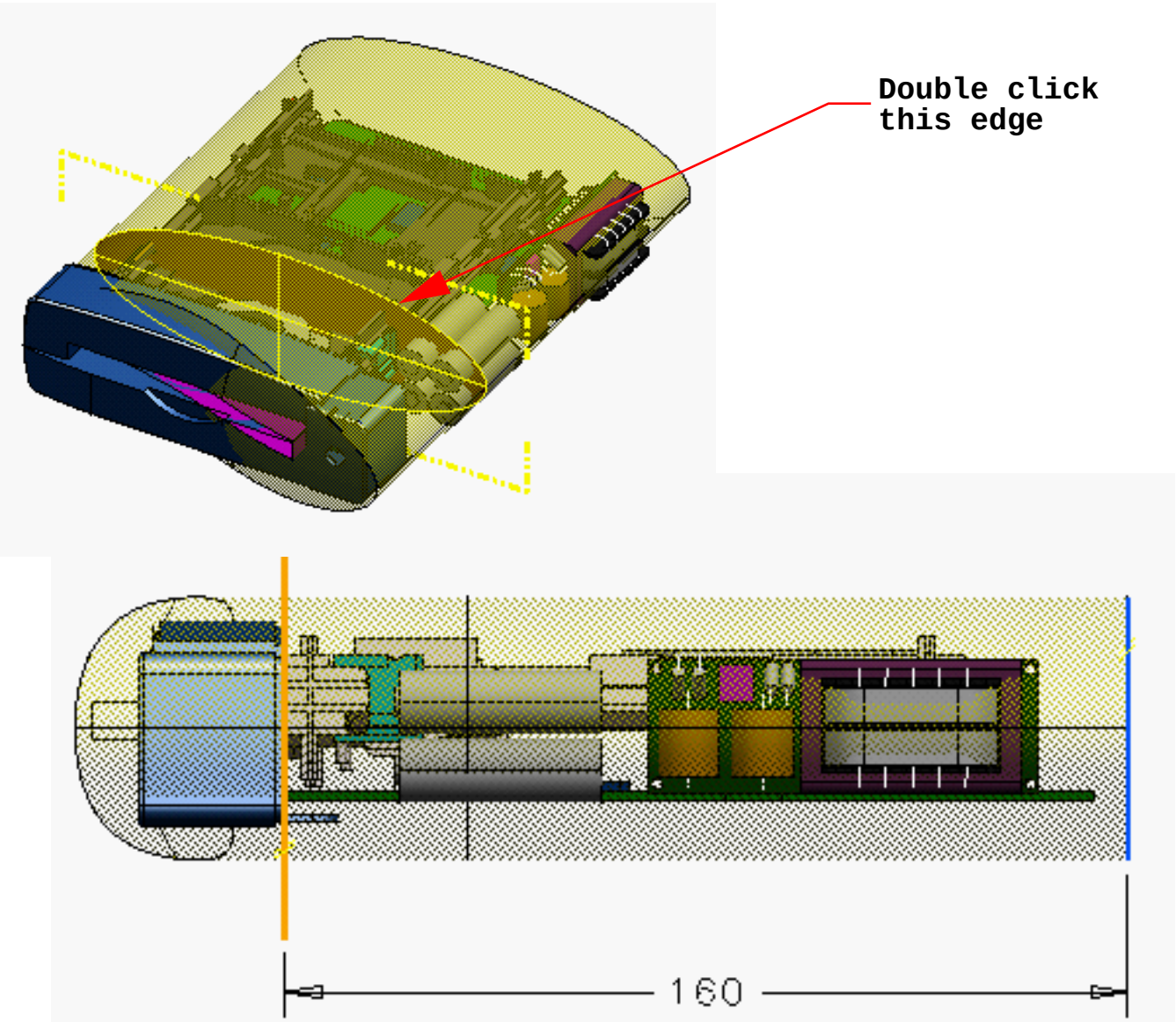
- ***Section*** **View**
  add two section views, plane only
- ***Dimension***
  add dims to section view
- ***Activate view***
  select main sheet
- ***Note...file***
  add 'A_gen.txt', no leader





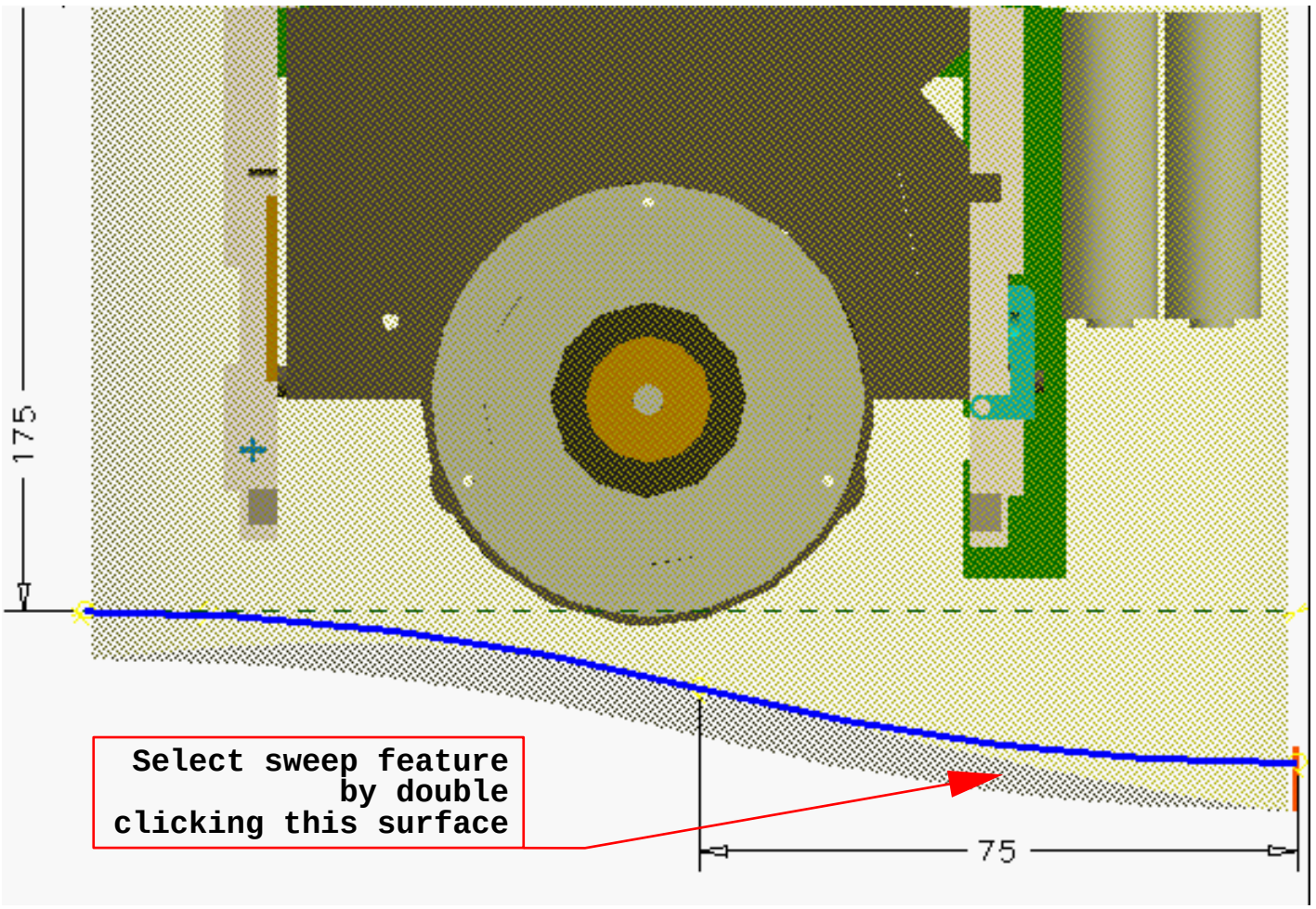


Off Camera



- ***Drafting Setup ... Master Assembly***
- ***Show***
  make the 'front panel' visible dismiss warning
- ***Modify***
  Double click top edge of partition feature to Quick Wireframe
- ***Side view***
- ***Autoscale***
- ***Drag***
  use '*ed*' and drag the dimension to 160mm. The partition should end up just behind the old cover
- ***Update***

Off Camera



- ***Top View*** – ***NOTE: Front Panel Not Shown For Clarity. Will Be On At This Point***

- ***Zoom***

  Zoom in as shown

- ***Hide***

  Hide the 'front panel' instance

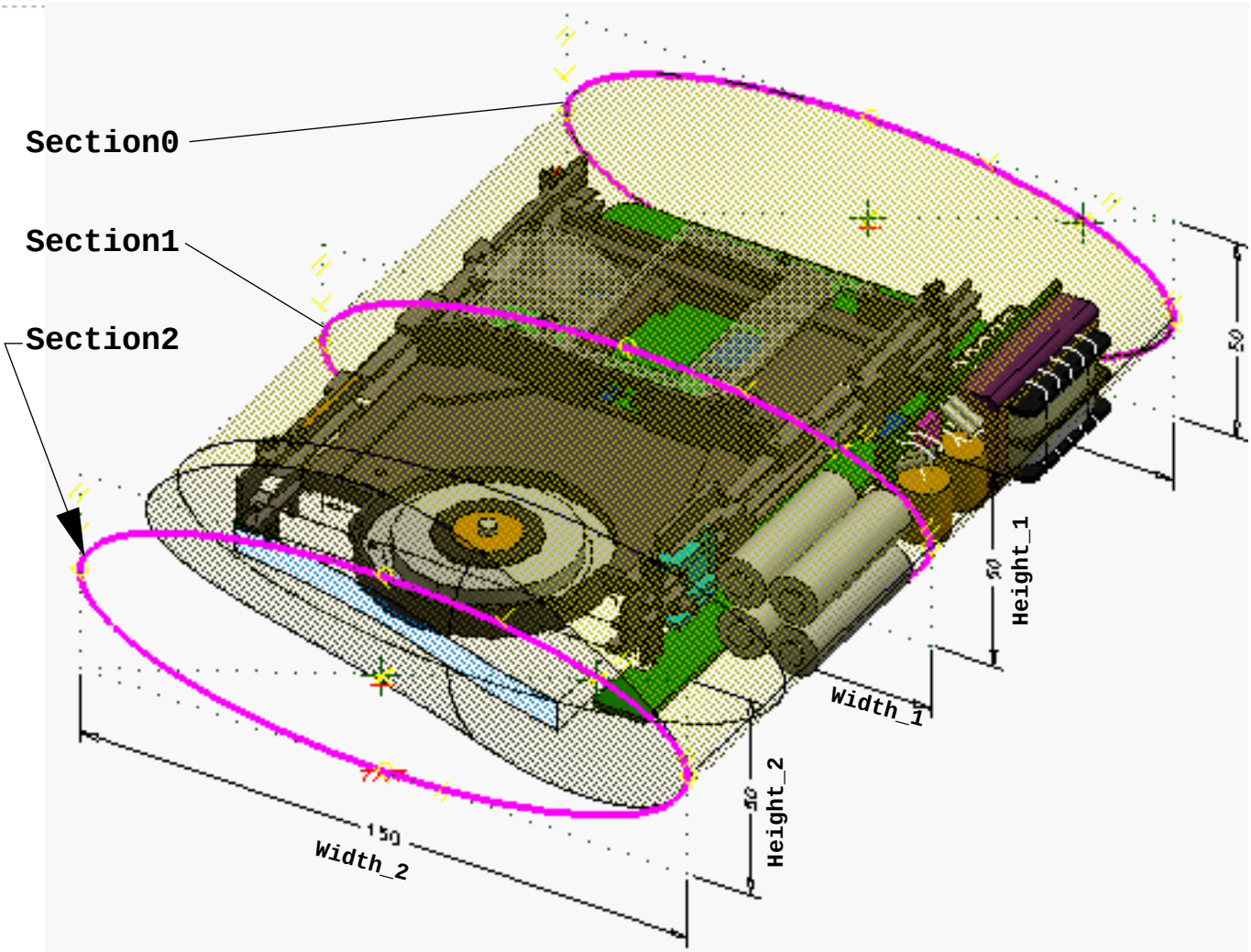
- ***Modify***

  Open the swept surface to quick wireframe

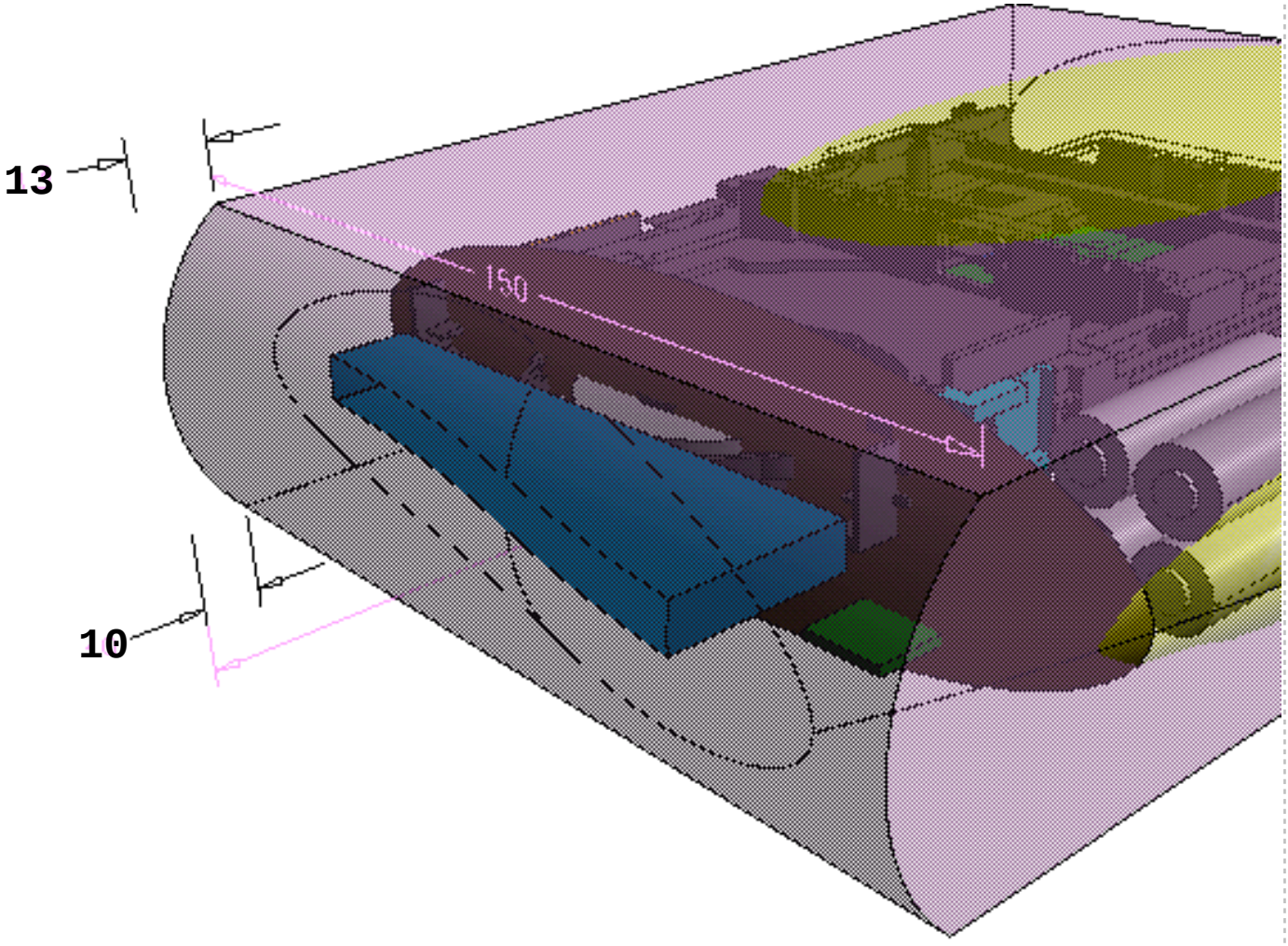
- ***Drag***

  use *'ed'* and drag the 165mm dim to 175mm
  use *'ed'* and drag the x-dir tangency transition dimension from 65mm to 75mm

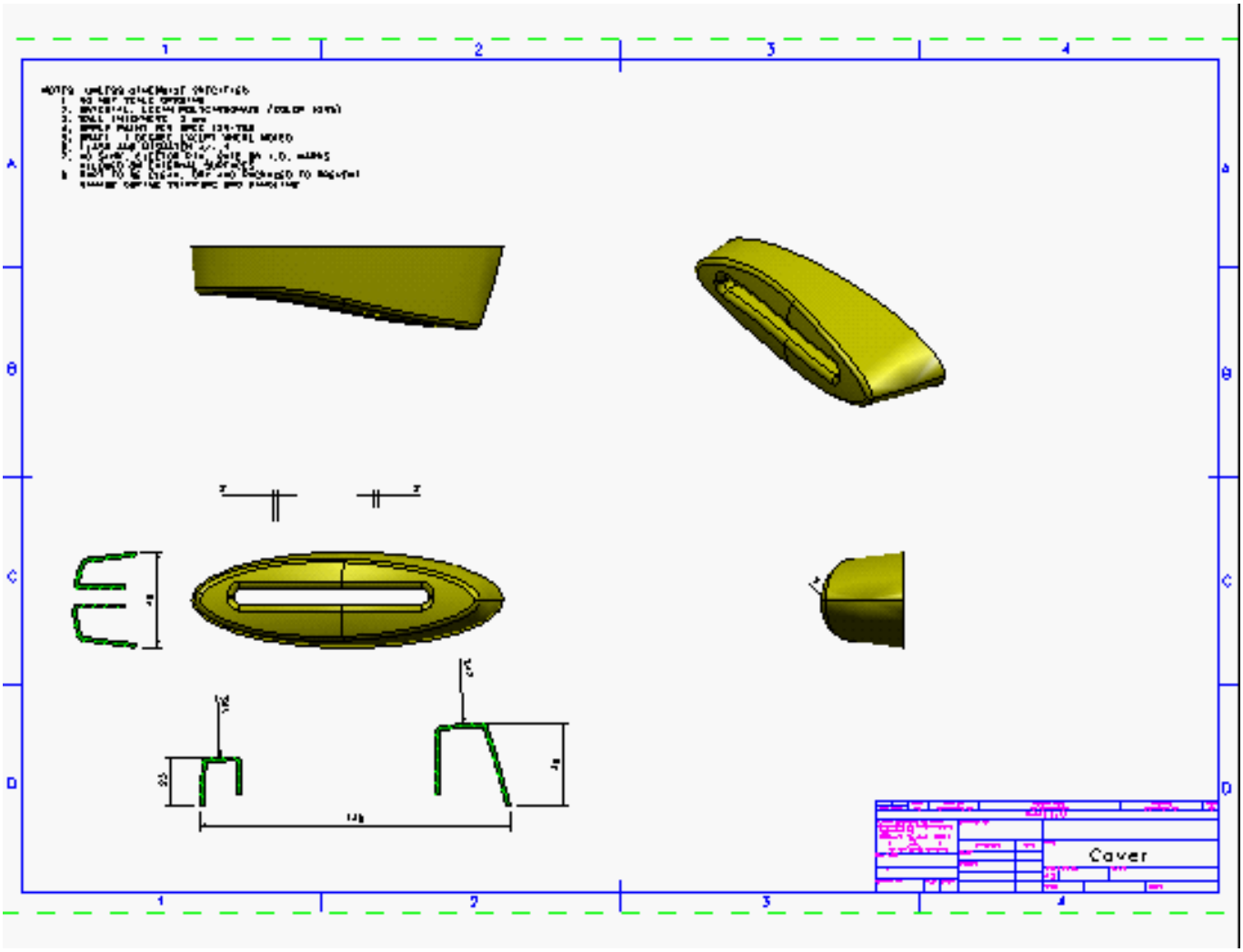
- ***Update***



- ***Perspective View*** *(Disregard Graphic of Front Panel)*
- ***Modify***
  open loft feature to quick wireframe
- ***Drag***
  use *'ed'*, drag section 1 'Height_1' dim from 50 to 55mm
  use *'ed'*, drag section 2 'Height_2' dim from 50 to 35mm
- ***Delete***
  use 'dcc', delete ground constraint on section 1
  use 'dcc', delete ground constraint on section 2
- ***Drag***
  use *'ed'*, drag RHS of 'Width_1' dim from 150 to 160mm
  use *'ed'*, drag LHS of 'Width_2' dim from 150 to 145mm
  use *'ed'*, drag RHS of 'Width_2' dim from 145 to 135mm
- ***Update***



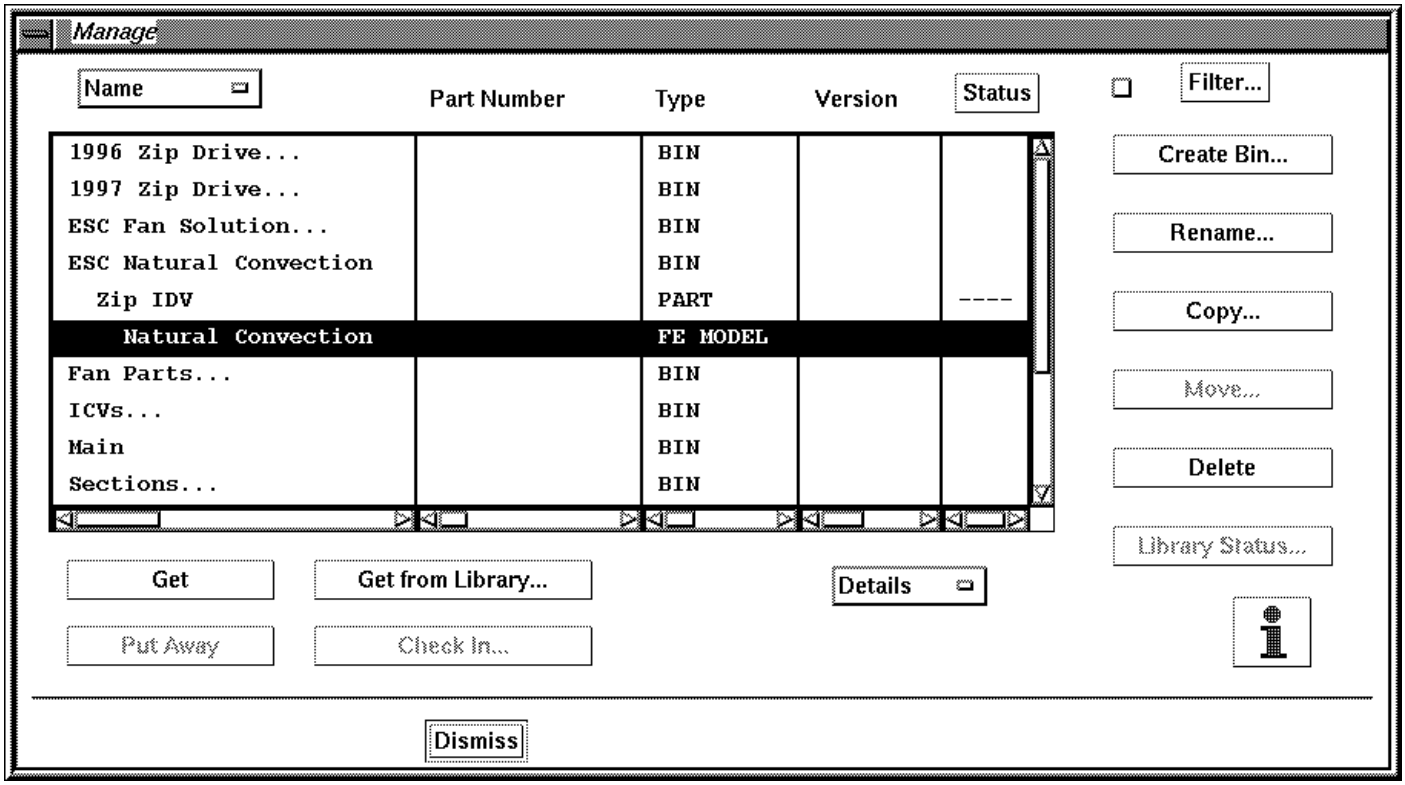
- ***VGx***
  Turn on vgx, '/mo qery vg on' global symbol
- ***Modify***
  Show dimensions of 'Zip IDV'
- ***Drag***
  Use '*ed*', drag the arc surface top dim to 13mm
  Use '*ed*', drag the arc surface bot dim to 10mm
- ***Update***
- ***TRR***
  Preselect the 'Zip IDV', use '*trr*' & make translucent
- ***Check-in***
  Keep to modify

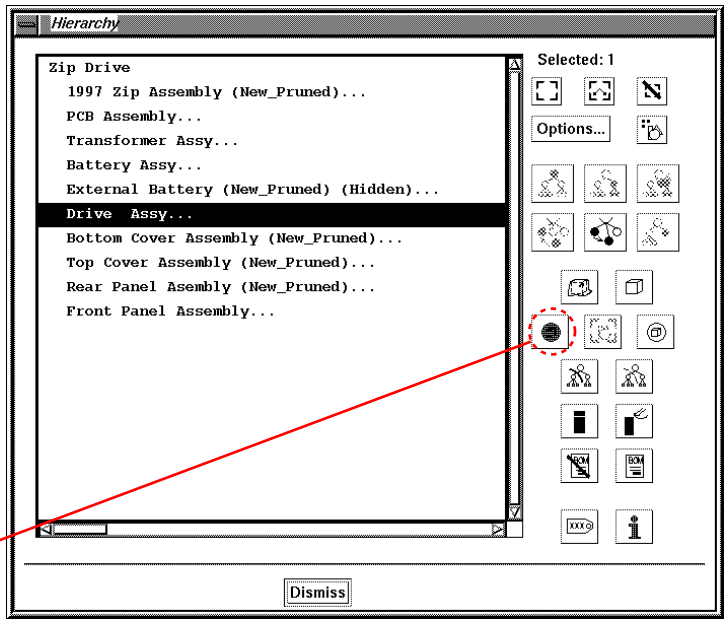


- ***Master Assembly... Drafting Setup***
- ***Update From Library***
  use *'utd'*, update from library to get new Cover version
- ***Optional***
  Clean up dimensions as necessary

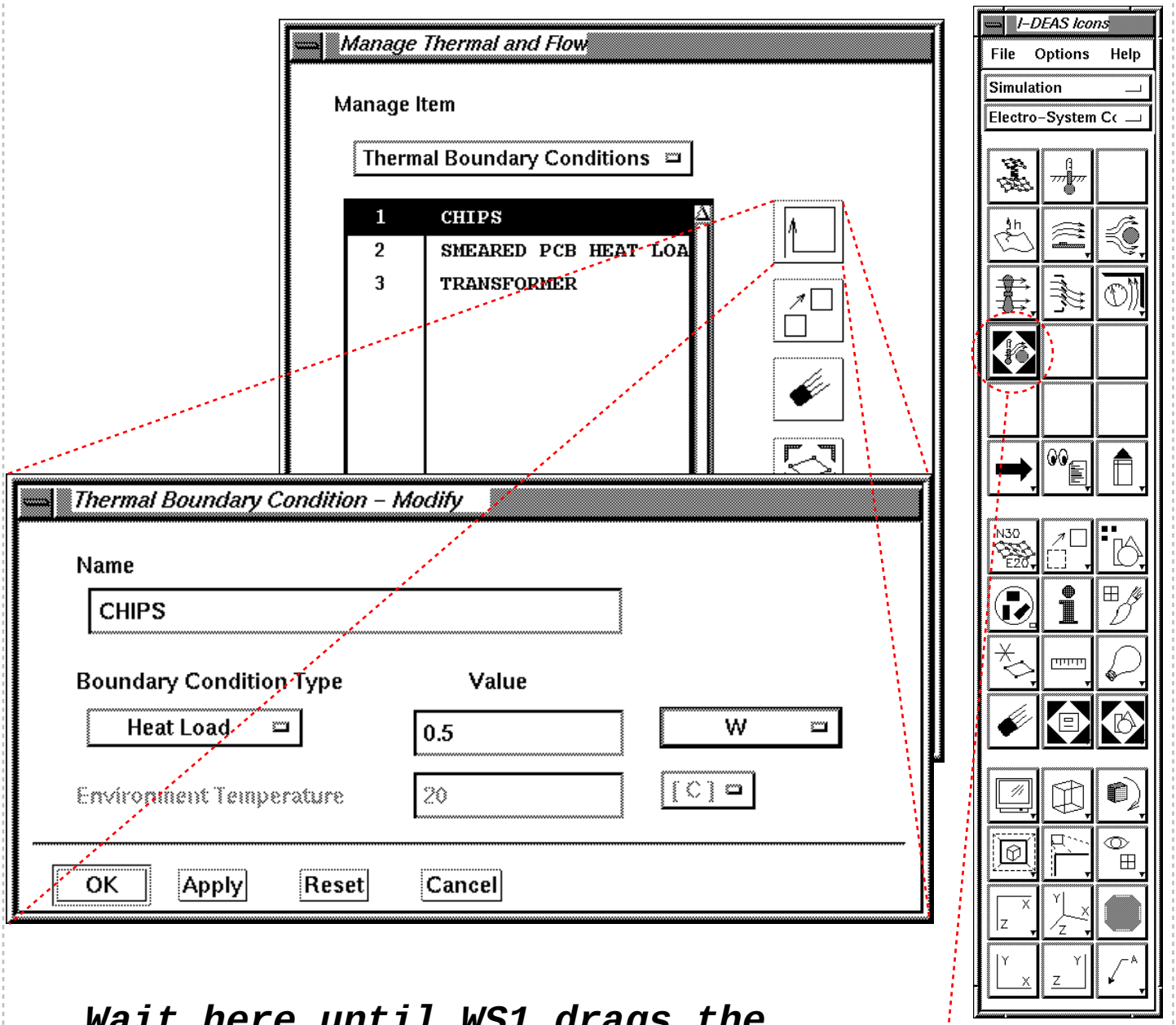
***** WS1 is on page 36 *****

Off Camera





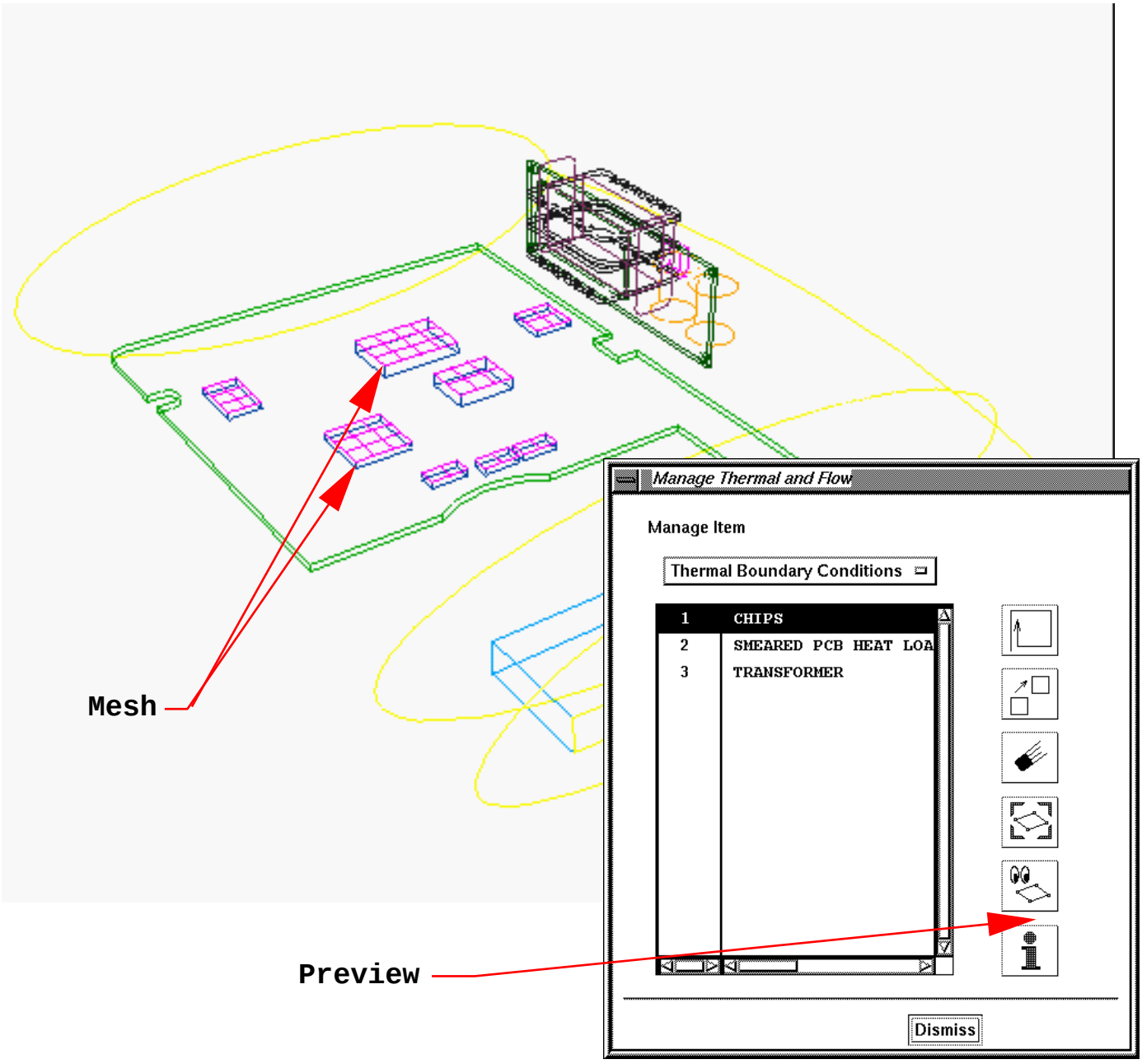
- ***Design ... Simulation***
- ***Perspective view***
- ***Autoscale***
- ***Master Assembly***
- ***Hierarchy***
  Hide the 'Drive Assy', OK
- ***Manage Bins***
  Display Attributes–verify that FE entity visibility is off)
  Get the 'Natural Convection' FE model (FE entities are off so graphics don't change), OK
- ***Master Assembly...Electro–System cooling***



Wait here until WS1 drags the cooling line dimension (page 38)

- ***Manage Thermal/Flow*** 

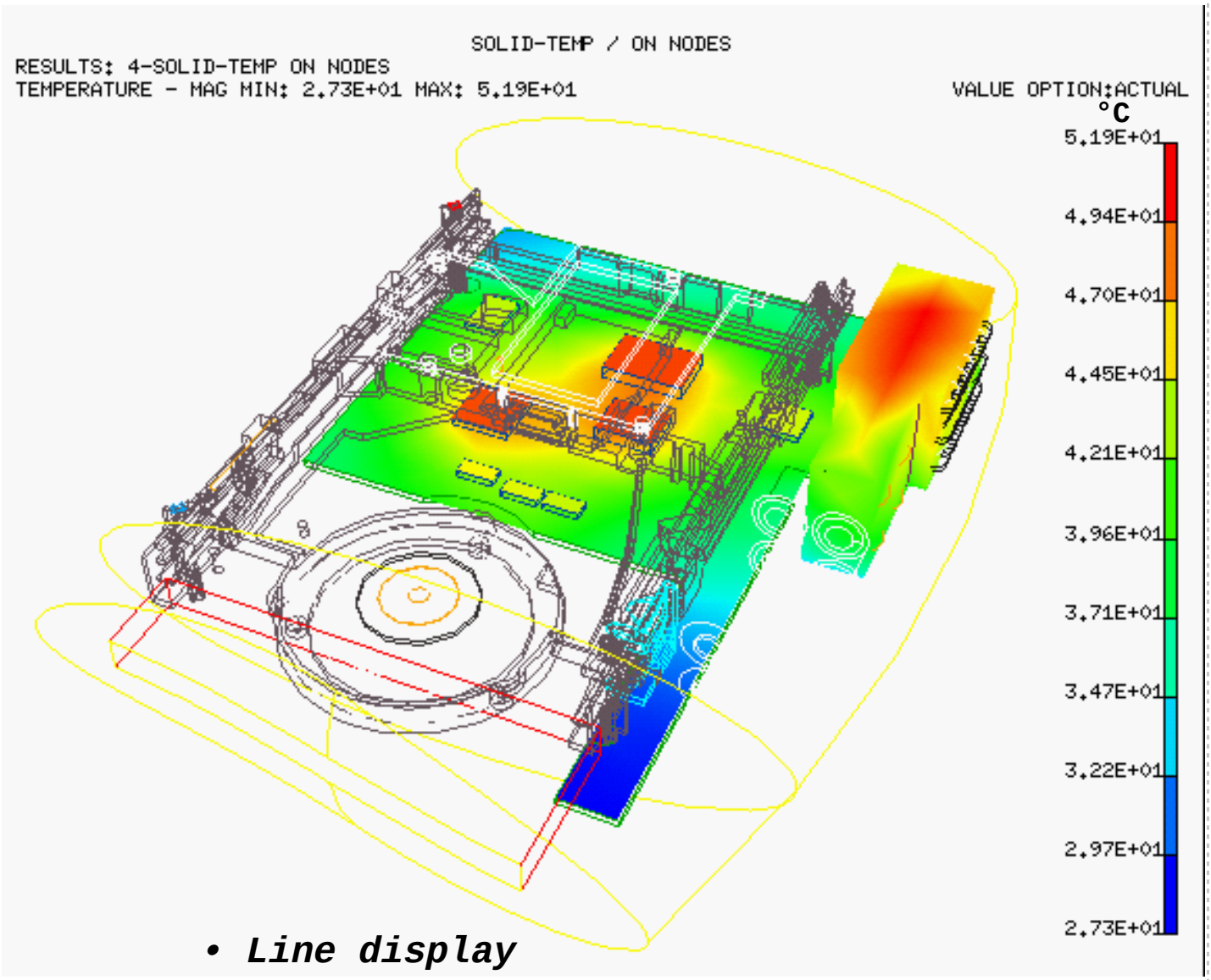
```
> Pull down 'Manage Item' to 'Thermal Boundary Conditions'
    Highlight 'CHIPS'
> Modify
    Show applied heat load in Watts
> OK
    Repeat for other BC's.
```



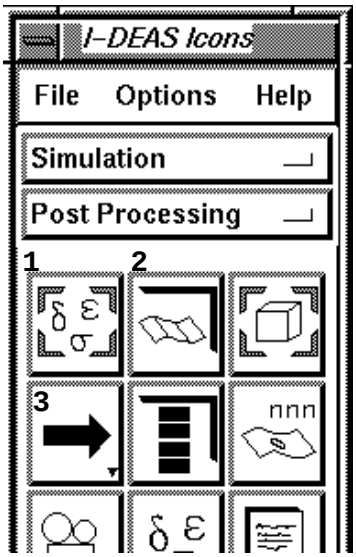
- ***Select*** **'CHIPS' again**
  Hit preview to show the mesh on the chips.
  Repeat for other BC's
  Dismiss

Electro-System cooling ... Master Assembly

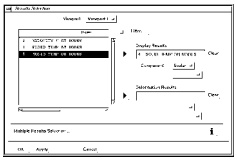
- ***Hierarchy***
  Show the 'Drive Assy', OK



- ***Line display***
- ***'Temps'***



use the '*temps*' global symbol or do the following:

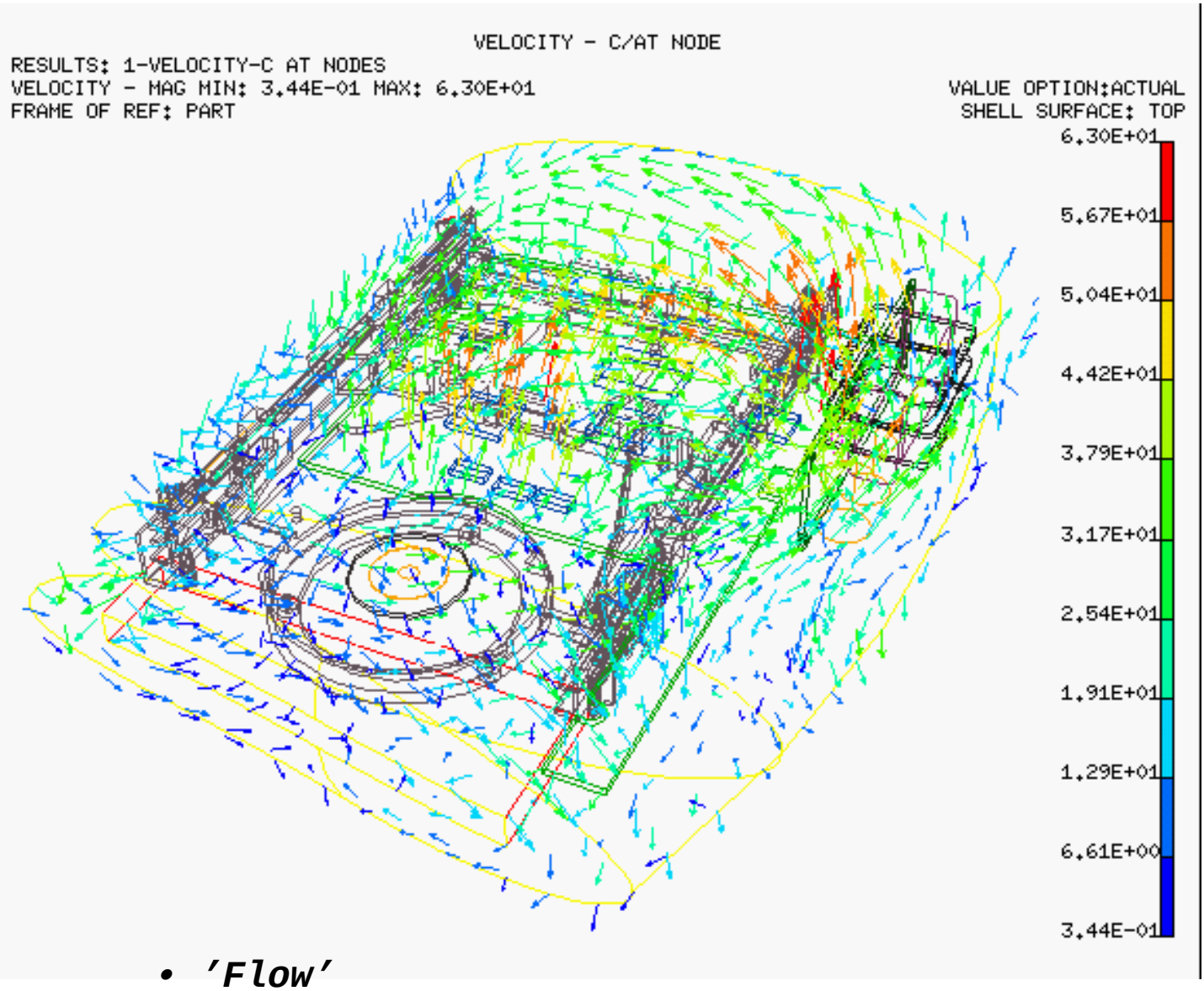


> Post Processing

> 1. Results Selection
> pick Solid Temp on Nodes

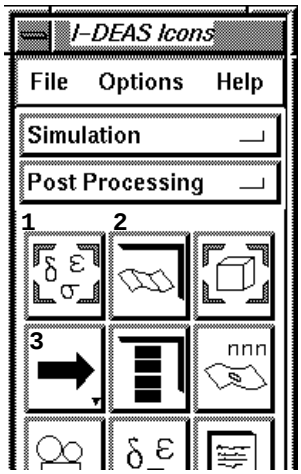
> 2. Display Template
> pick Contour, Smooth Shaded

> 3. Display
> MB2

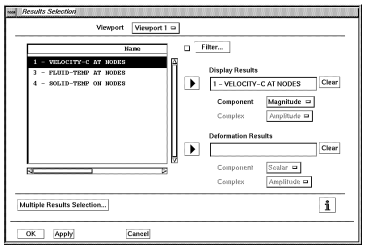


- ***'Flow'***

use the *'flow'* global symbol or do the following:



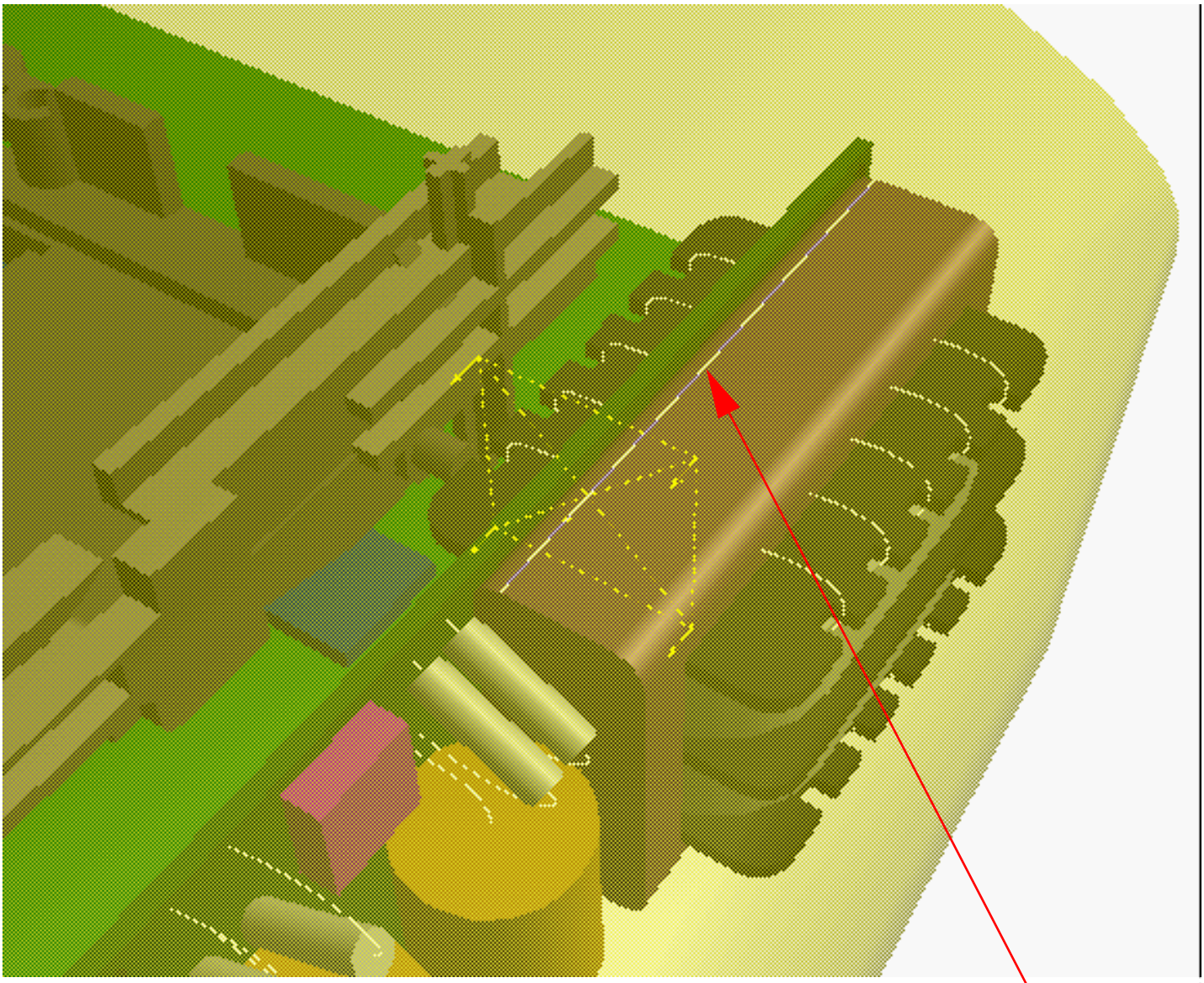
> 1. Results Selection
> pick Velocity at Nodes



> 2. Display Template
> pick Arrow

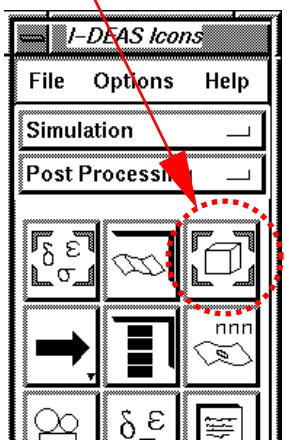
> 3. Display
> MB2

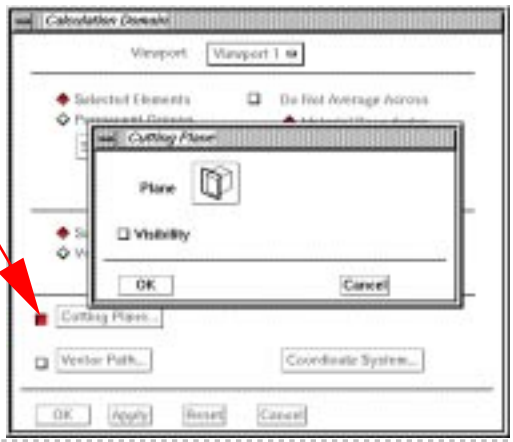
- ***Shade***

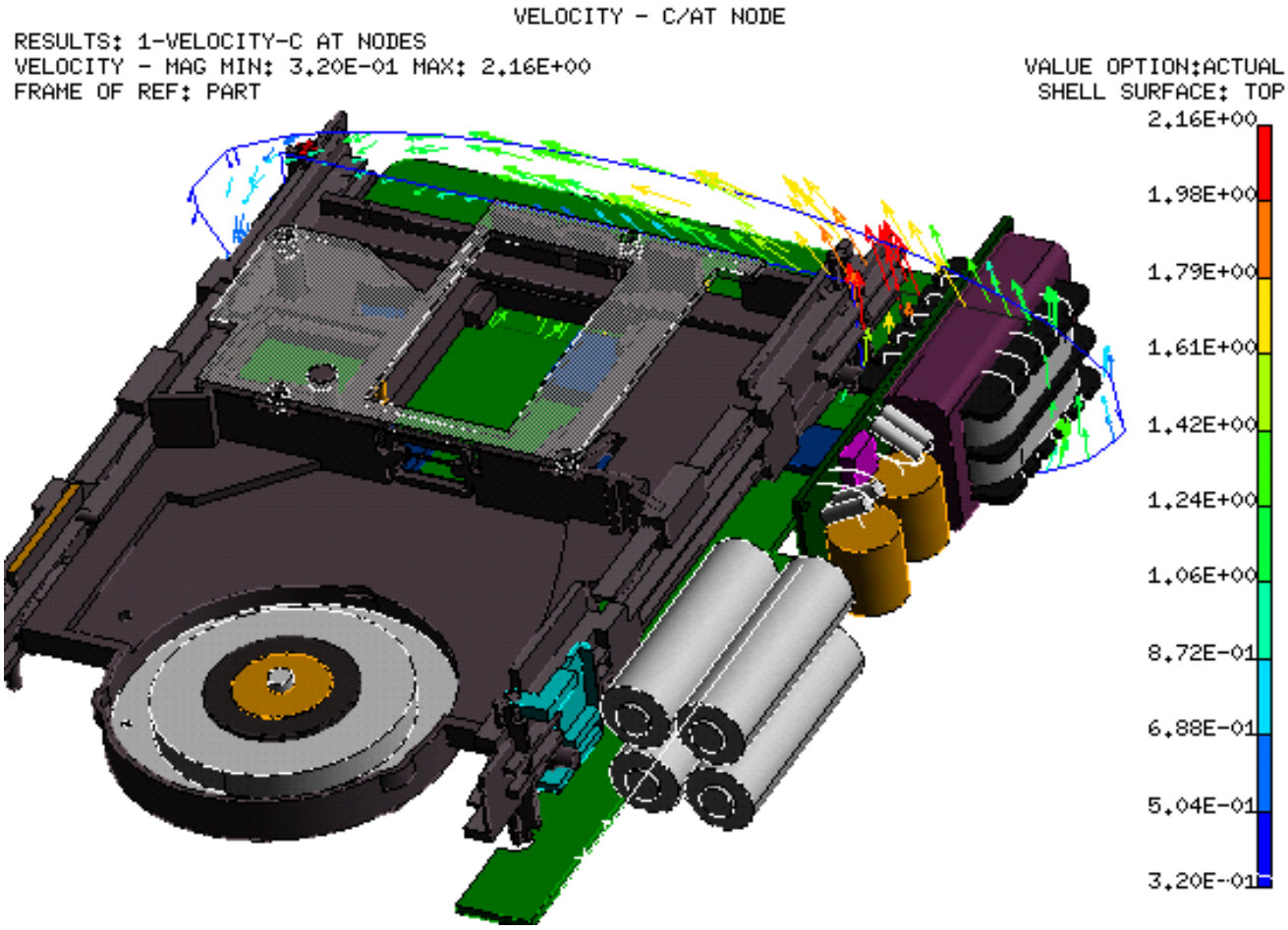


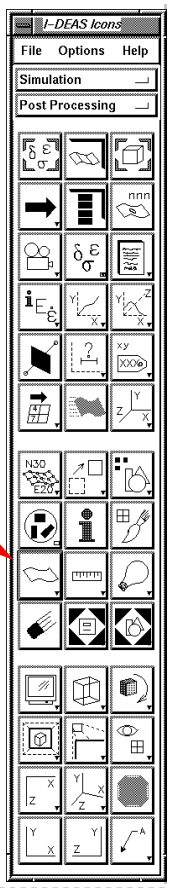
- ***Calculation Domain***

Pick cutting plane
Define the plane 'curve normal' to an edge on the transformer.
Hit okay on the form.
Toggle on the radio button



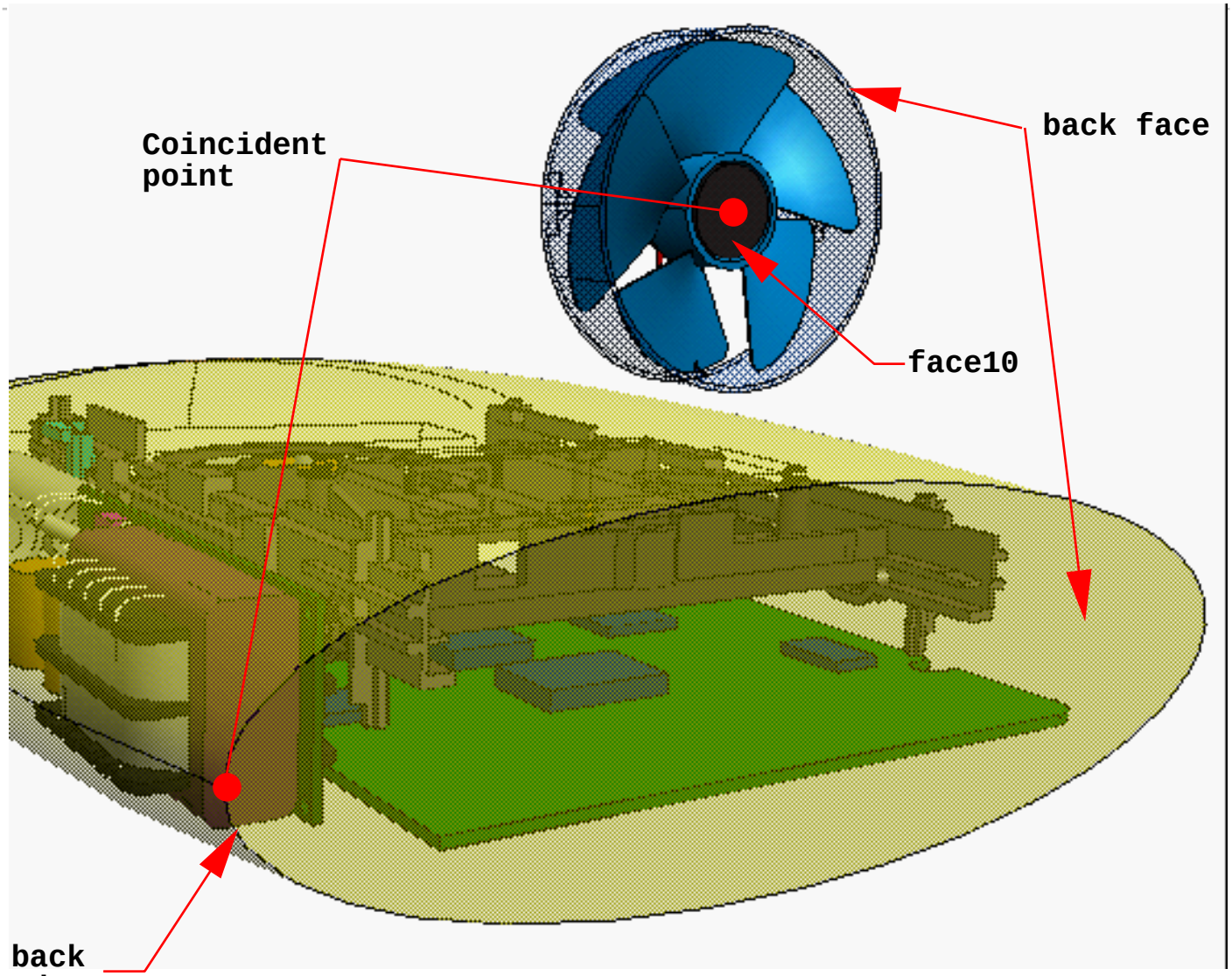




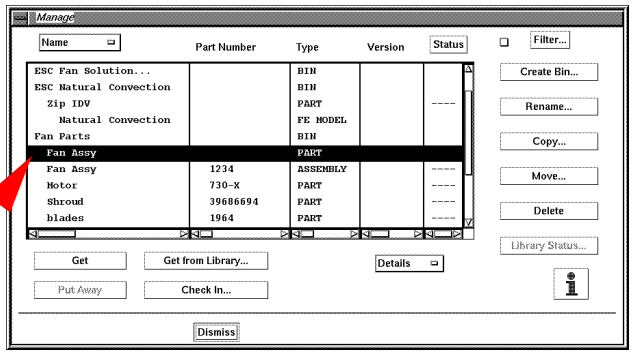


- ***Line display***
- ***Parts*** 
  Turn part visibility off
- ***Display*** 
  MB2
- ***'er of'***
  turn erase off
- ***Shade***
  tweak screen slightly with F1 dynamic view key and slight mouse movement
- ***'er on'***
  turn erase back on
- ***Front View***
  Discss recirculation pattern

Off Camera



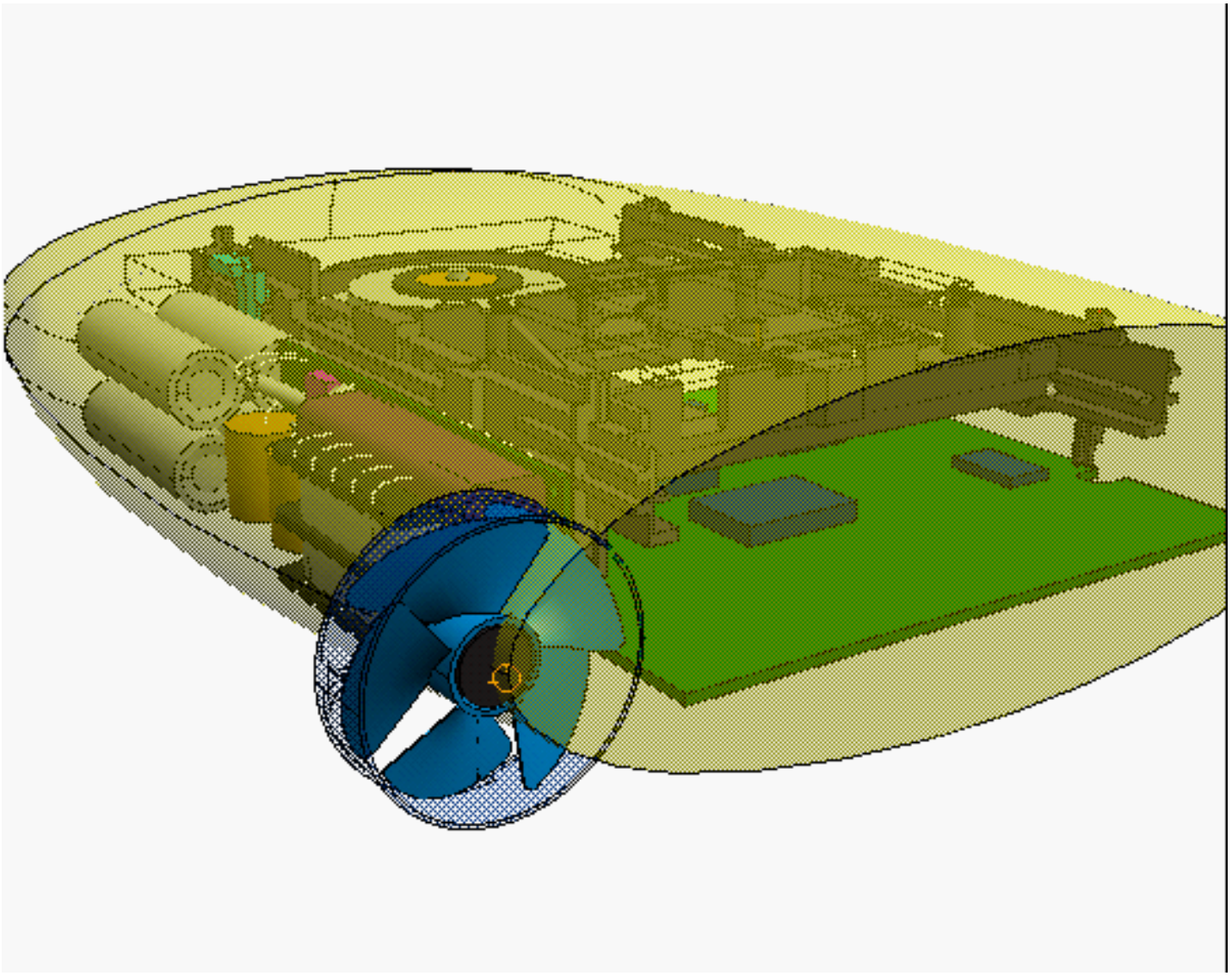
- ***Perspective View***
- ***Parts*** 
  Turn part visibility on
- ***Manage Bins***
  Get 'Fan Assy' part



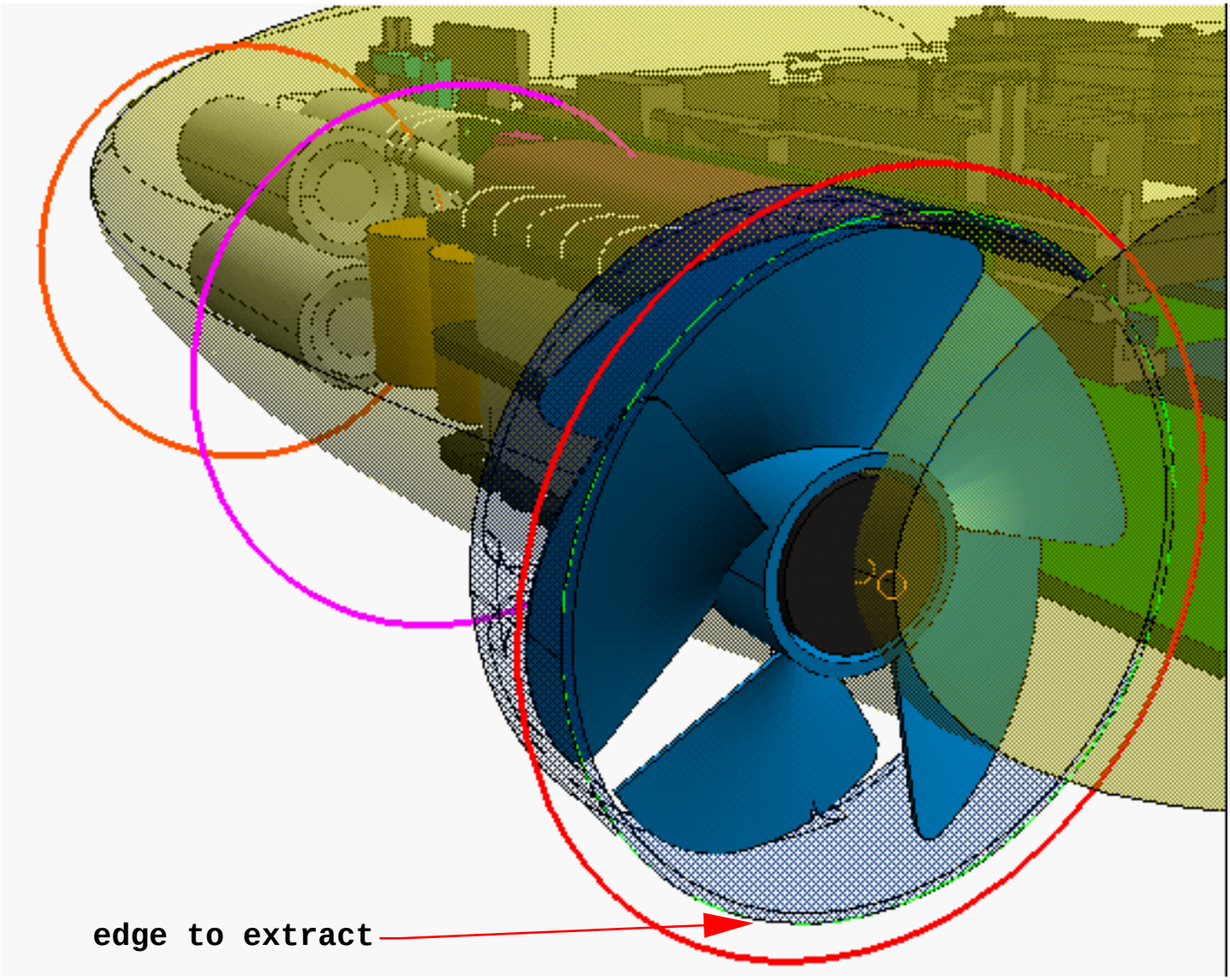
- ***Post Processing...Master Modeler***
- ***Align***

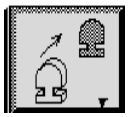
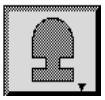
  Align back face of fan to back face of Zip IDV
  Surface Operations, flip
  Coincident Points, MB3, 'on surface', pick face 10 from fan, MB3, Key-in, MB2, MB3
  'on curve', pick back edge of Zip IDV
  Key-in 0
  Done

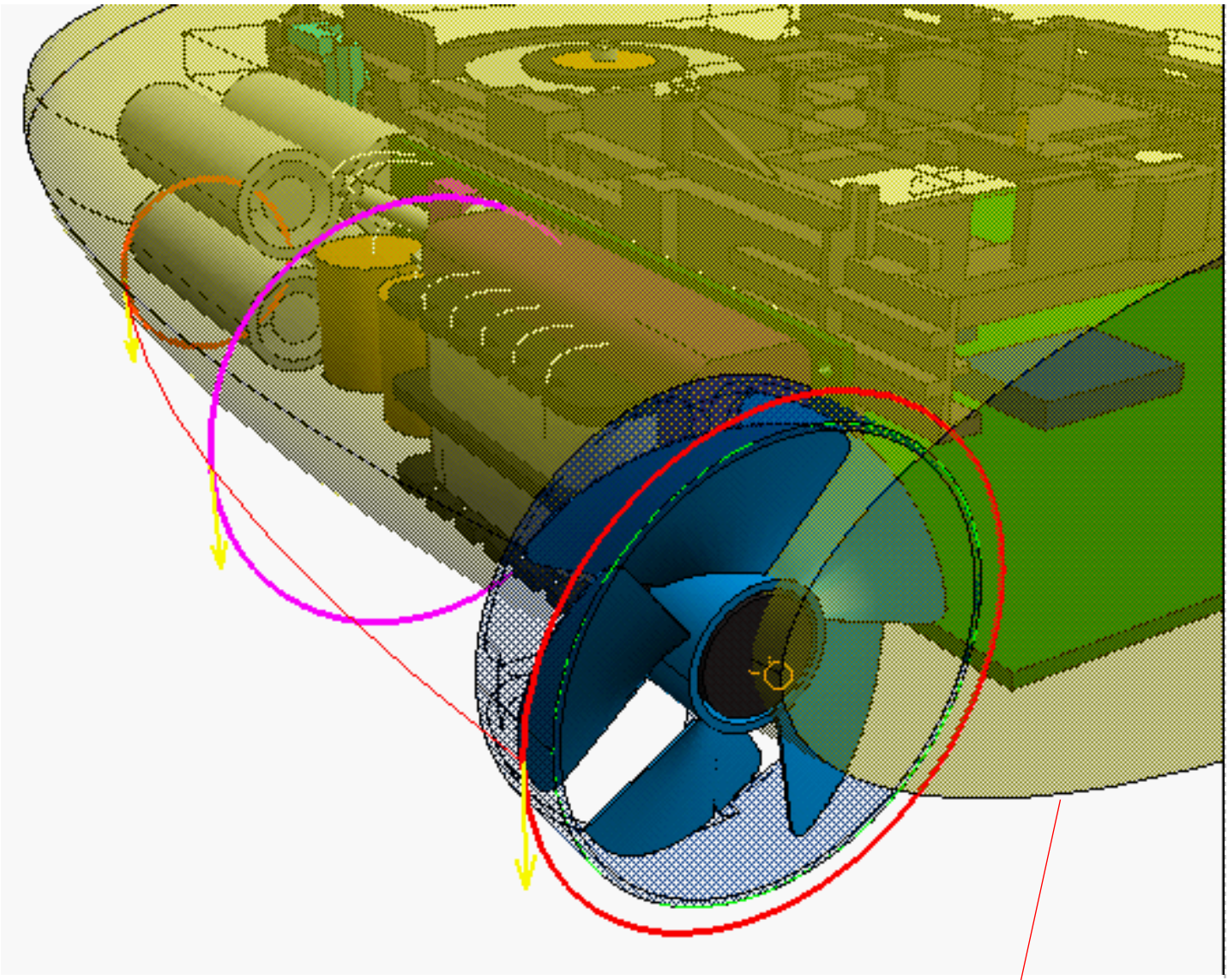
Off Camera



Off Camera



- ***Extract***
  Extract outside edge of fan shrould 
- ***Offset***
  Turn associativity off
  Offset extracted curve 2mm
- ***Delete***
  MB2, The still selected extracted curve is deleted
- ***Build Section***
  Build section on offset curve 
- ***Move***
  use ’et’ pick the section, MB2, copy on, 0 0 50 2, MB2

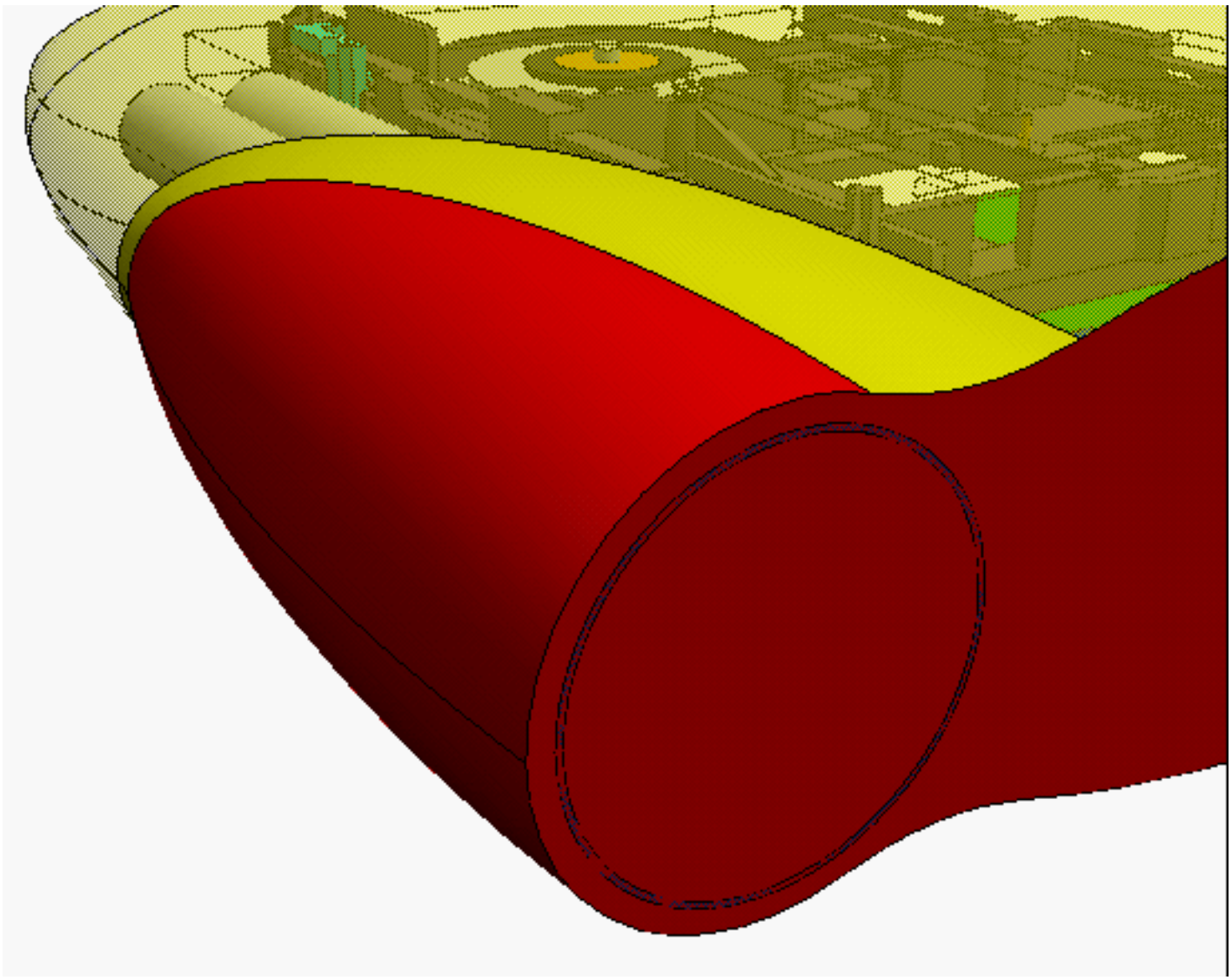


- ***Drag***

  use ’ed’ and drag the front section inside the Zip IDV

- ***Loft***

  pick the 3 sections
  verify consistent direction
  protrude, pick back edge of Zip IDV

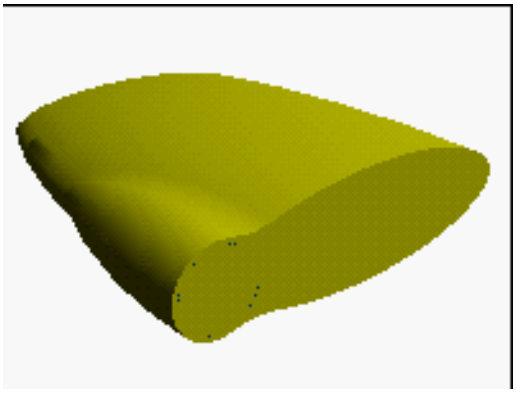


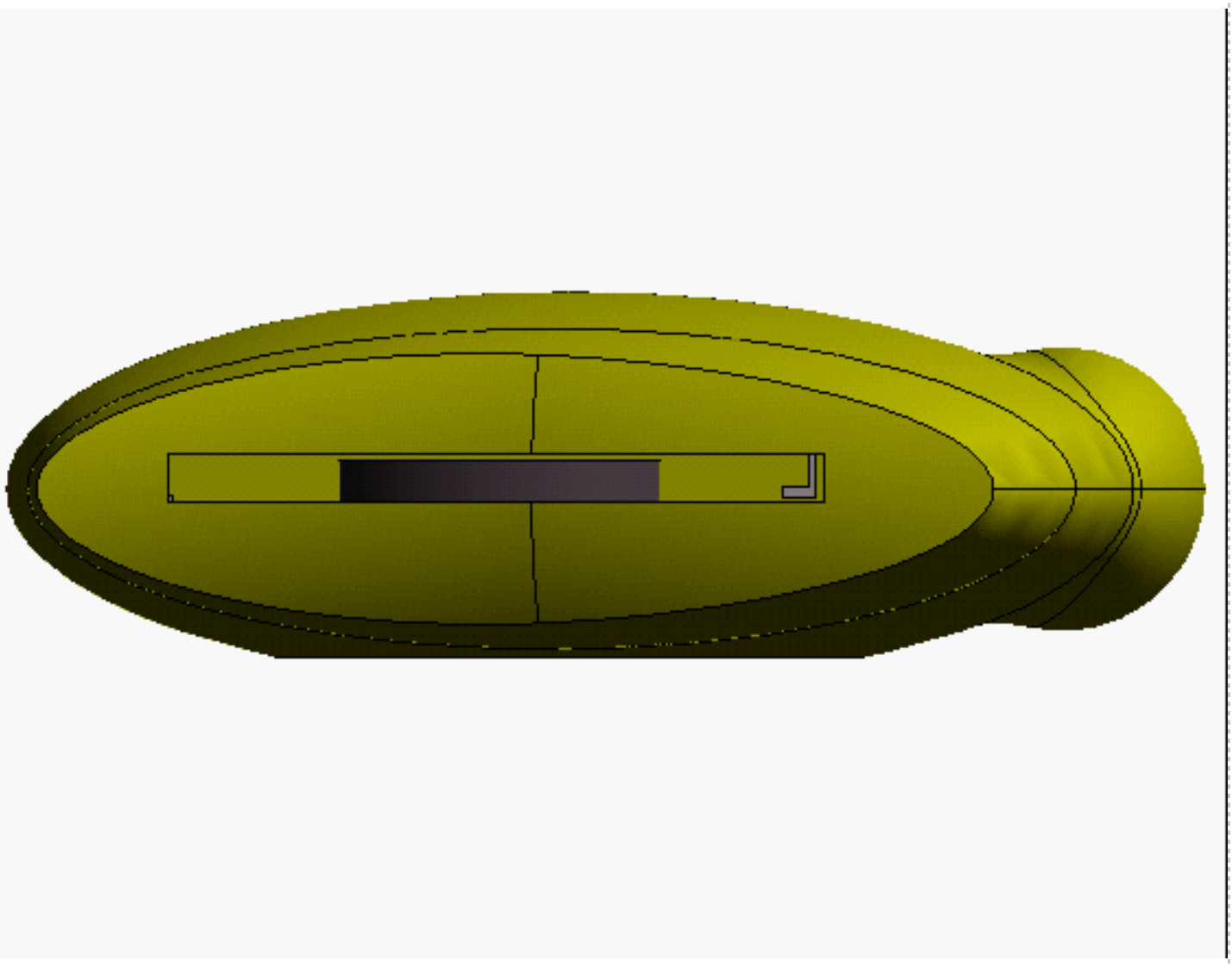
- ***Fillet*** 

  put 30mm fillet on the loft-loft intersection

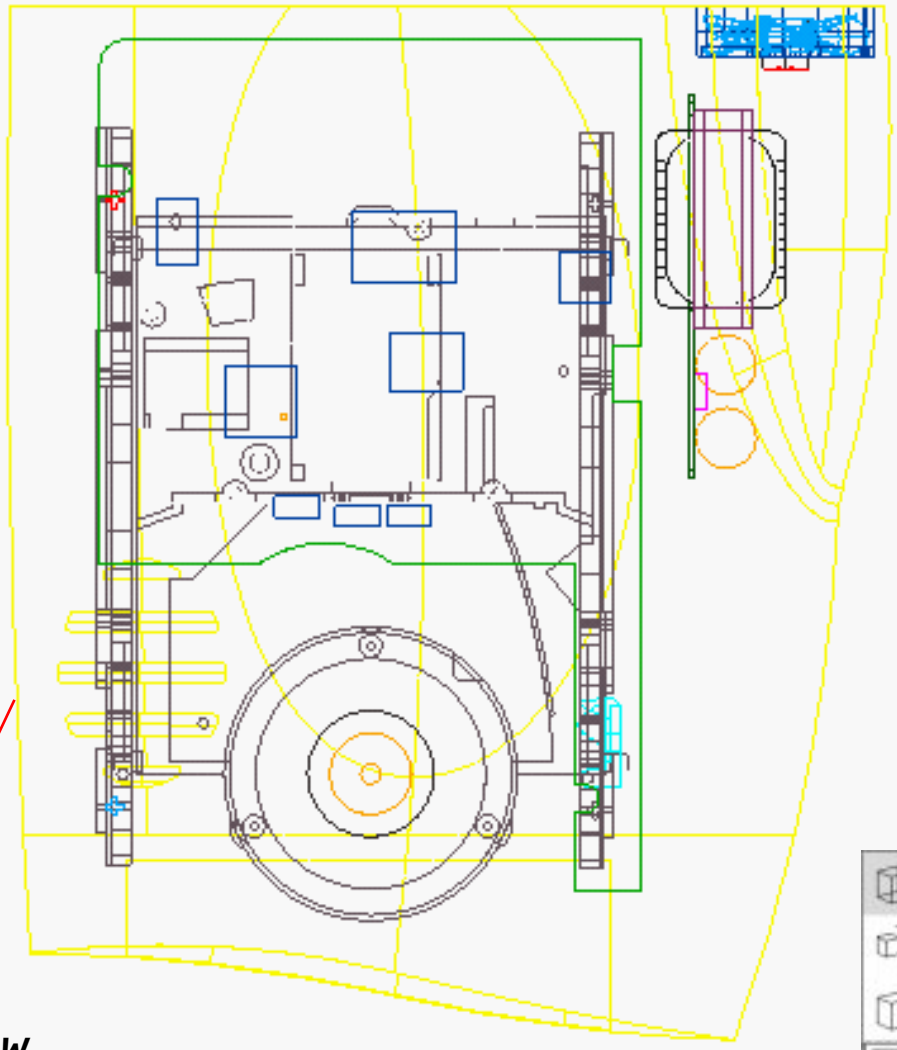
- ***Appearance***

  preselect part, use 'ccc' to reset color to yellow
  preselect part, use 'opp' to make opaque



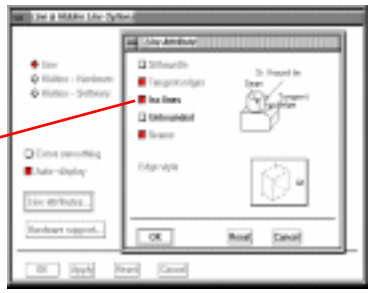


- ***Front view***
- ***Autoscale***
- ***Plane Cut***,
  pick the part, MB3, Axis Plane, ZX, −5, keep positive



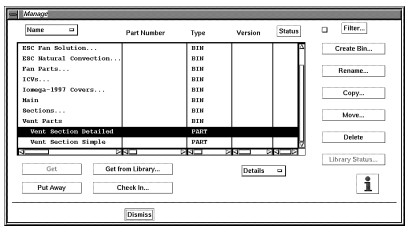
- ***Top view***
- ***Autoscale***
- ***Line Options***

  Line attributes, turn on iso lines
  OK, OK



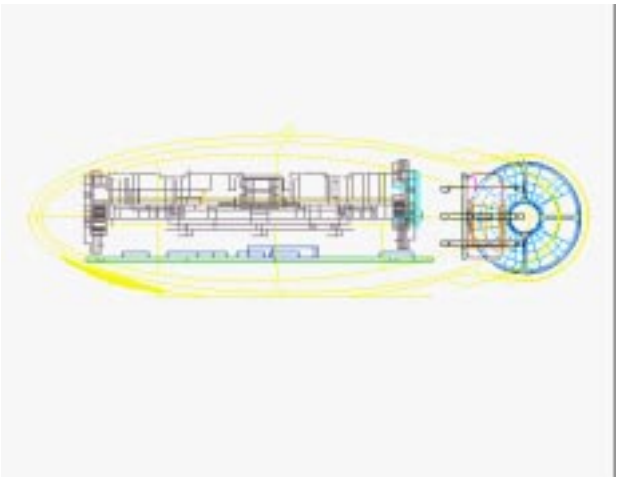
- ***Manage Bins***

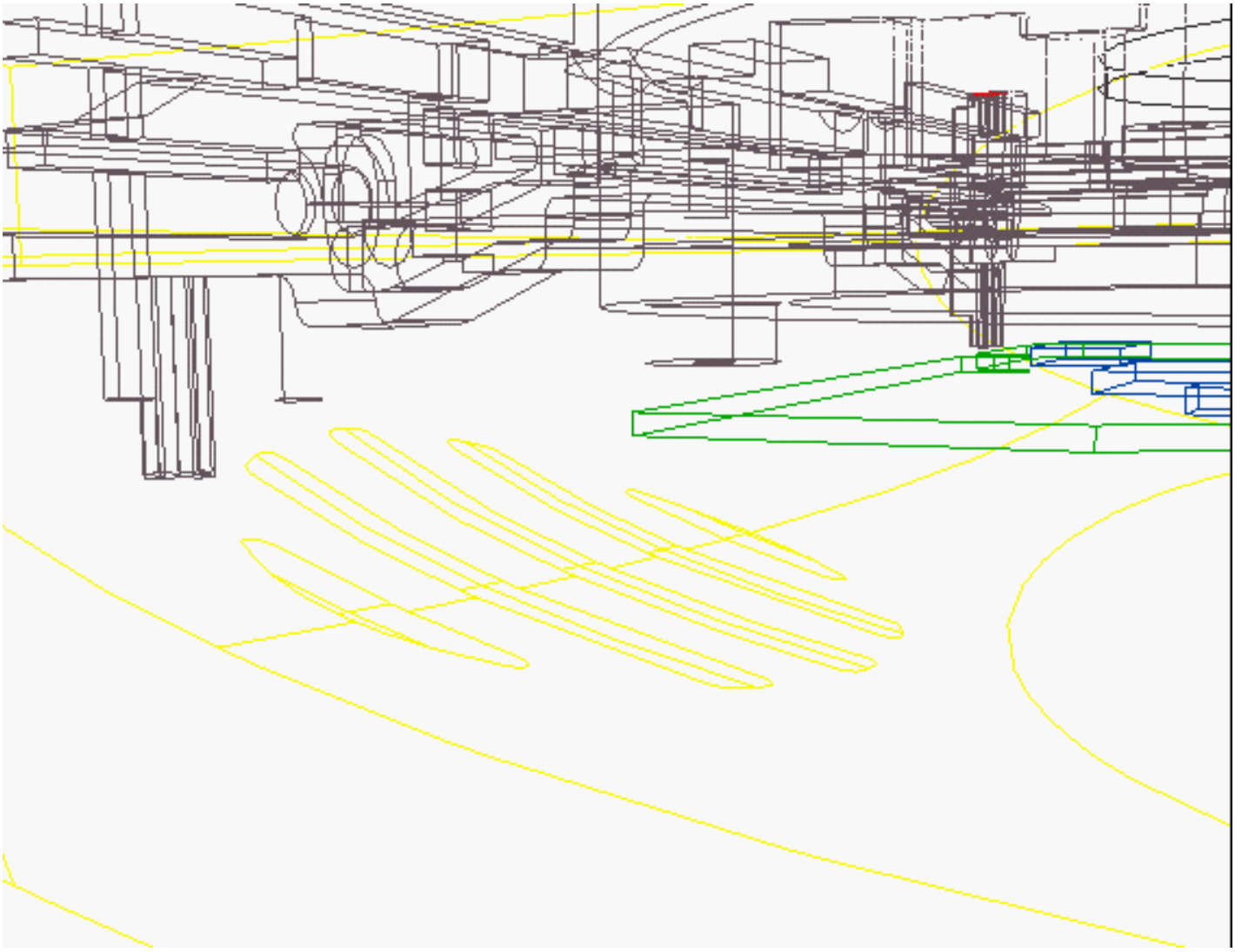
  Get 'Vent Section Detailed' from 'Vent Parts' Bin



- ***Extrude***

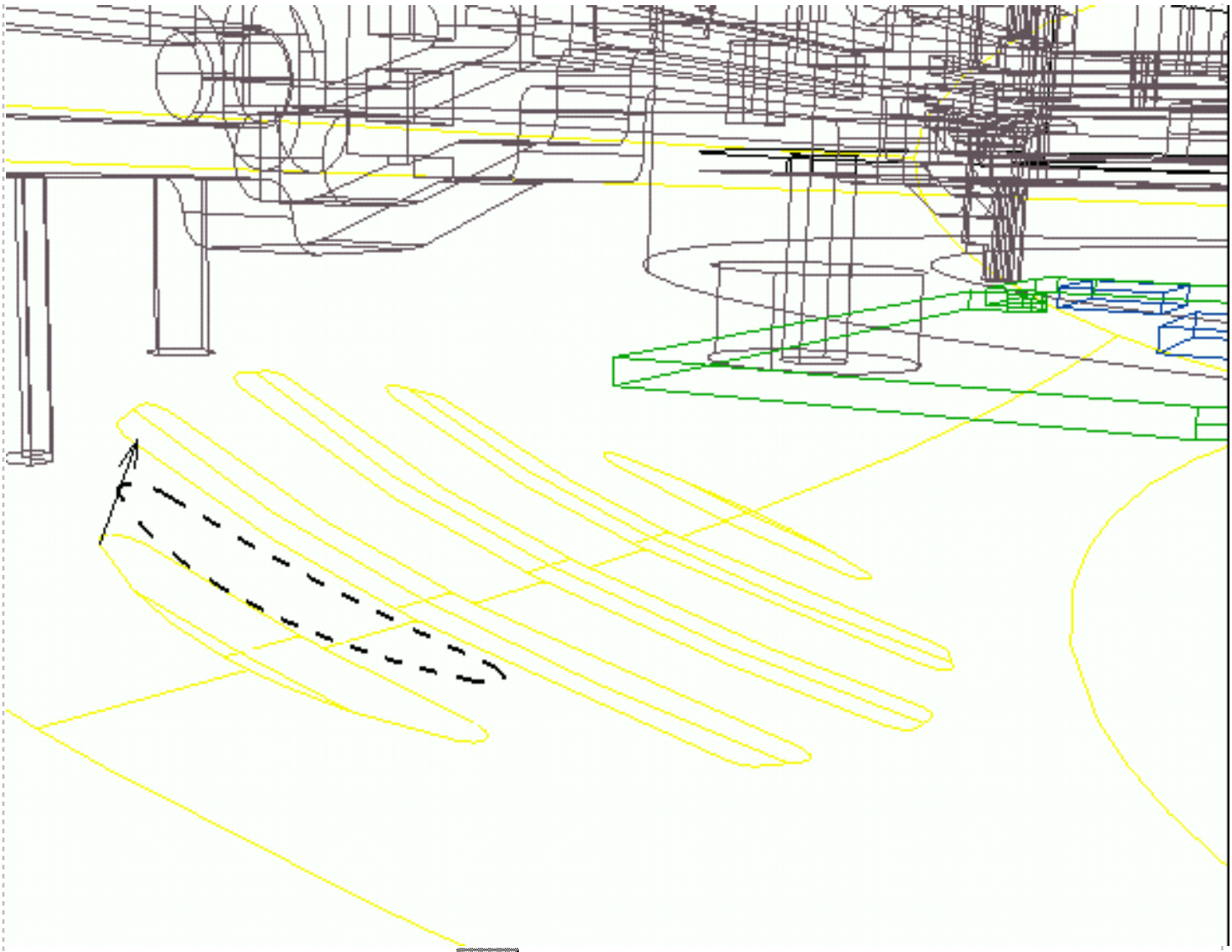
  MB3, split surface
  Pick vent section, MB2
  Depth=25, flip direction, okay
  Pick the Zip IDV as the part to be split
  Pick the loft surface as the participating surface





- ***Front View***
- ***Perspective View***

Use dynamic viewing keys F2 & F3 to get view shown

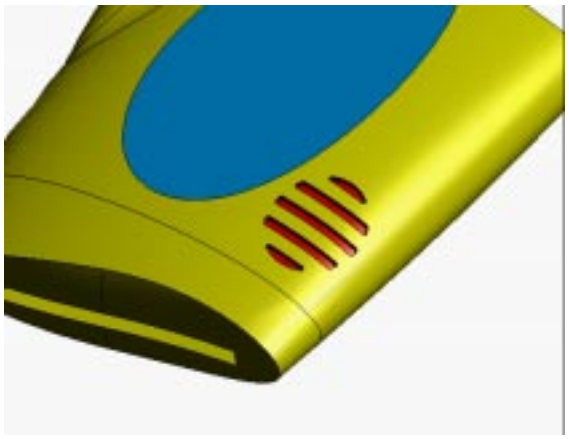


- ***Offset Surfaces*** 

  Pick the 5 vent surfaces
  Offset 2mm
  Turn off 'Keep original surfaces'
  Turn on 'Create side surfaces'

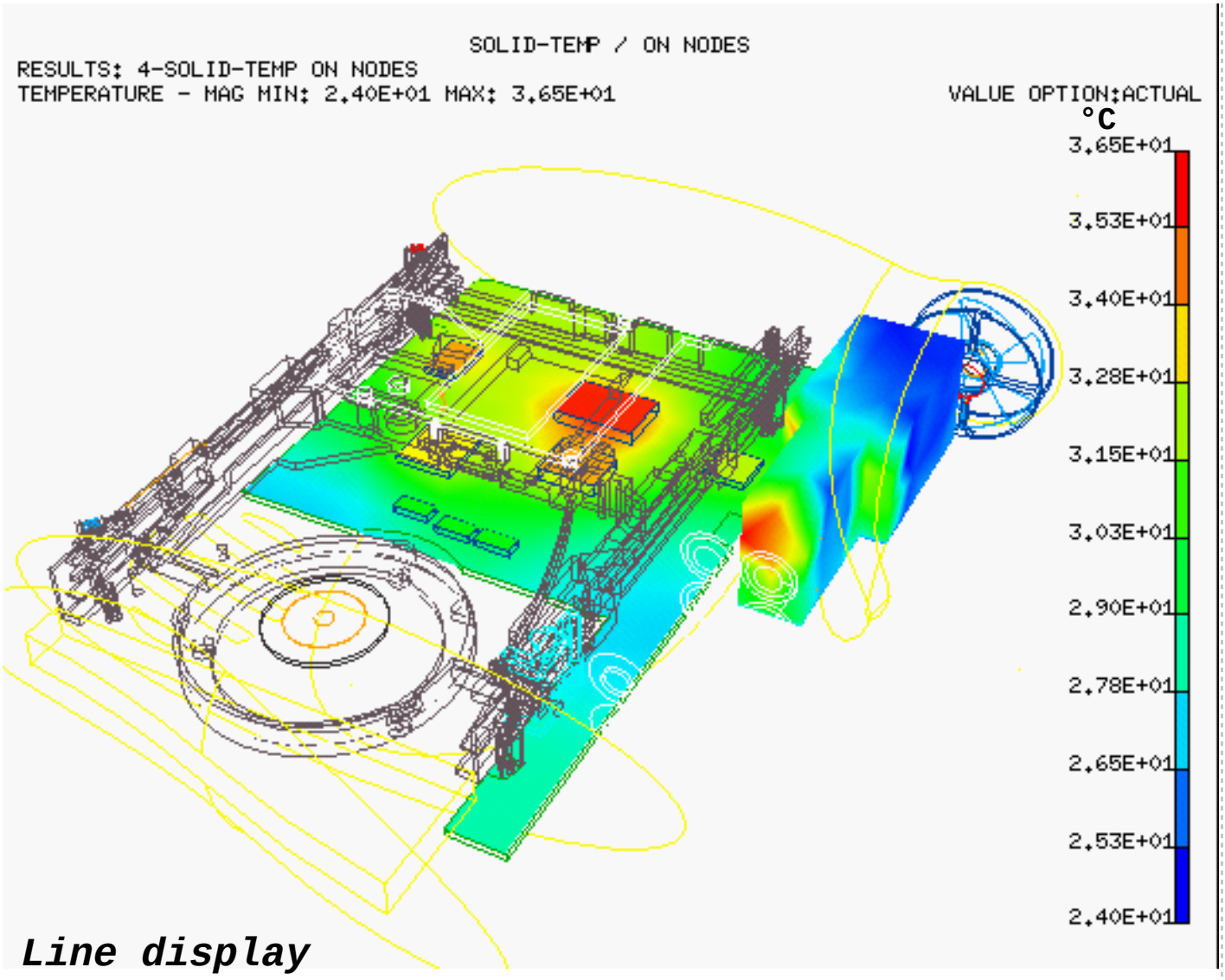
- ***Autoscale***
- ***Shade***

  Show lifted vent surfaces



- ***Perspective view*** 
- ***Autoscale***
- ***Check-in***, **keep for modify**

Off Camera **On Camera**

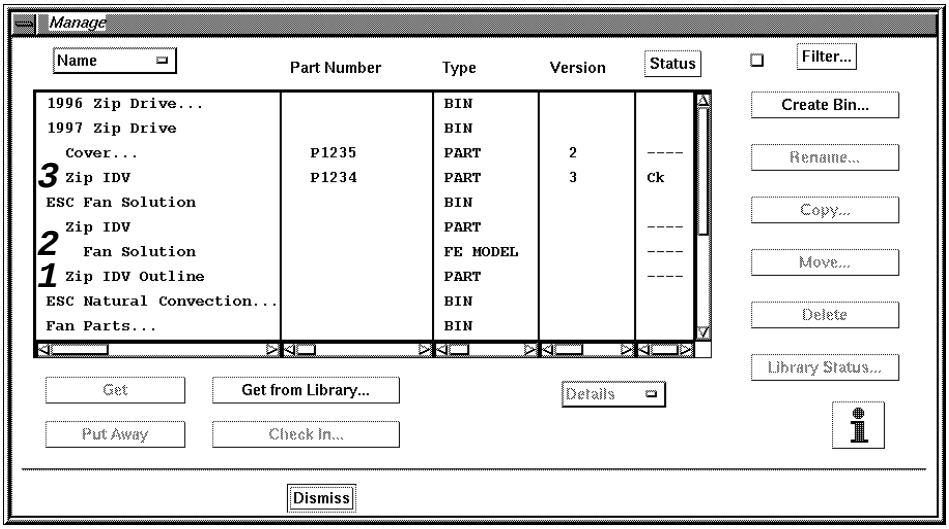


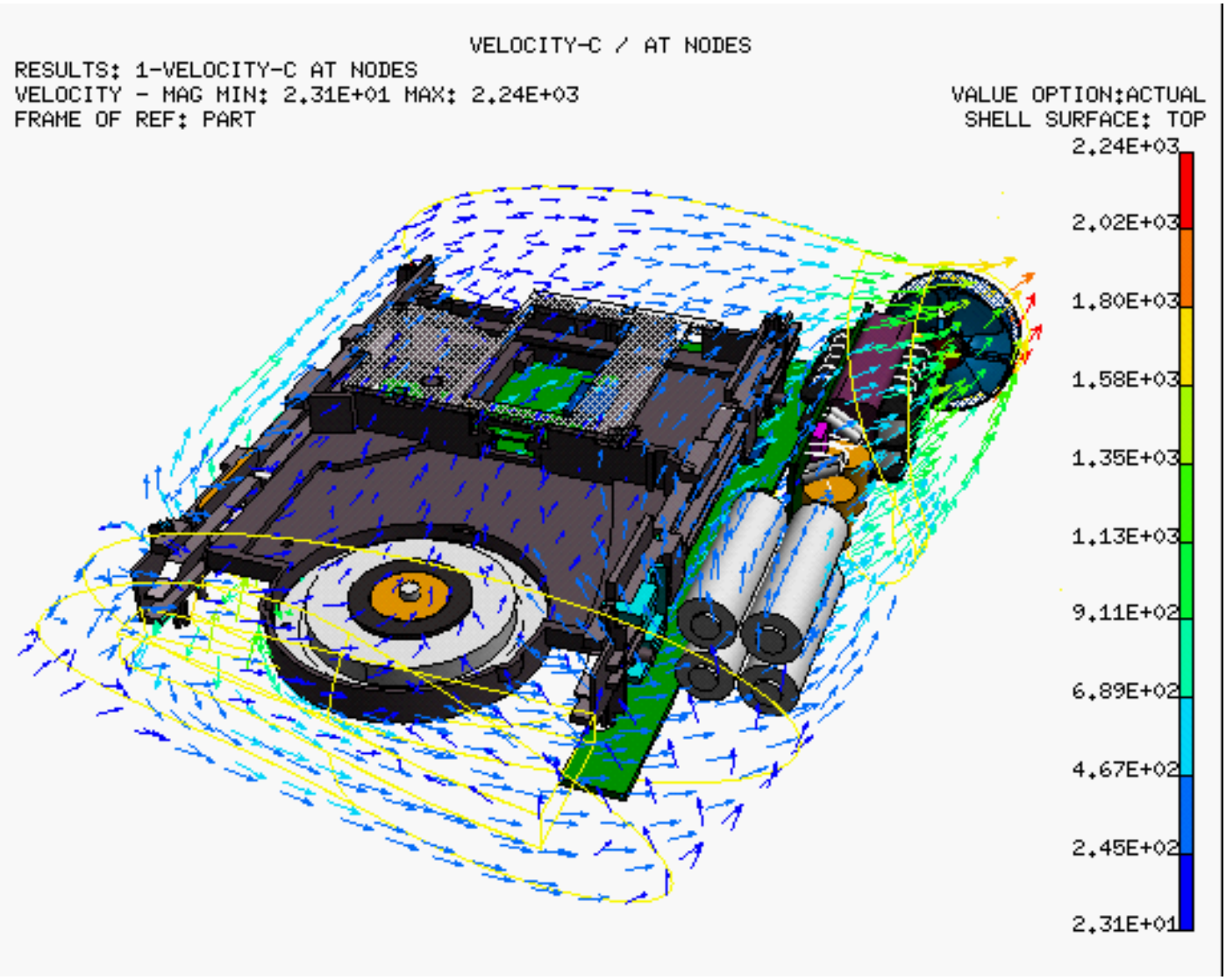
- ***Line display***

- ***Manage Bins***
  1. **Get the 'Zip IDV Outline'** **('ESC Fan Solution' bin)**
  2. **Get the 'Fan Solution' FE model** **('ESC Fan Solution' bin)**
  3. **Put away 'Zip IDV' part'** **('1997 Zip Drive' bin)**

  Dismiss

- ***'Temps'***

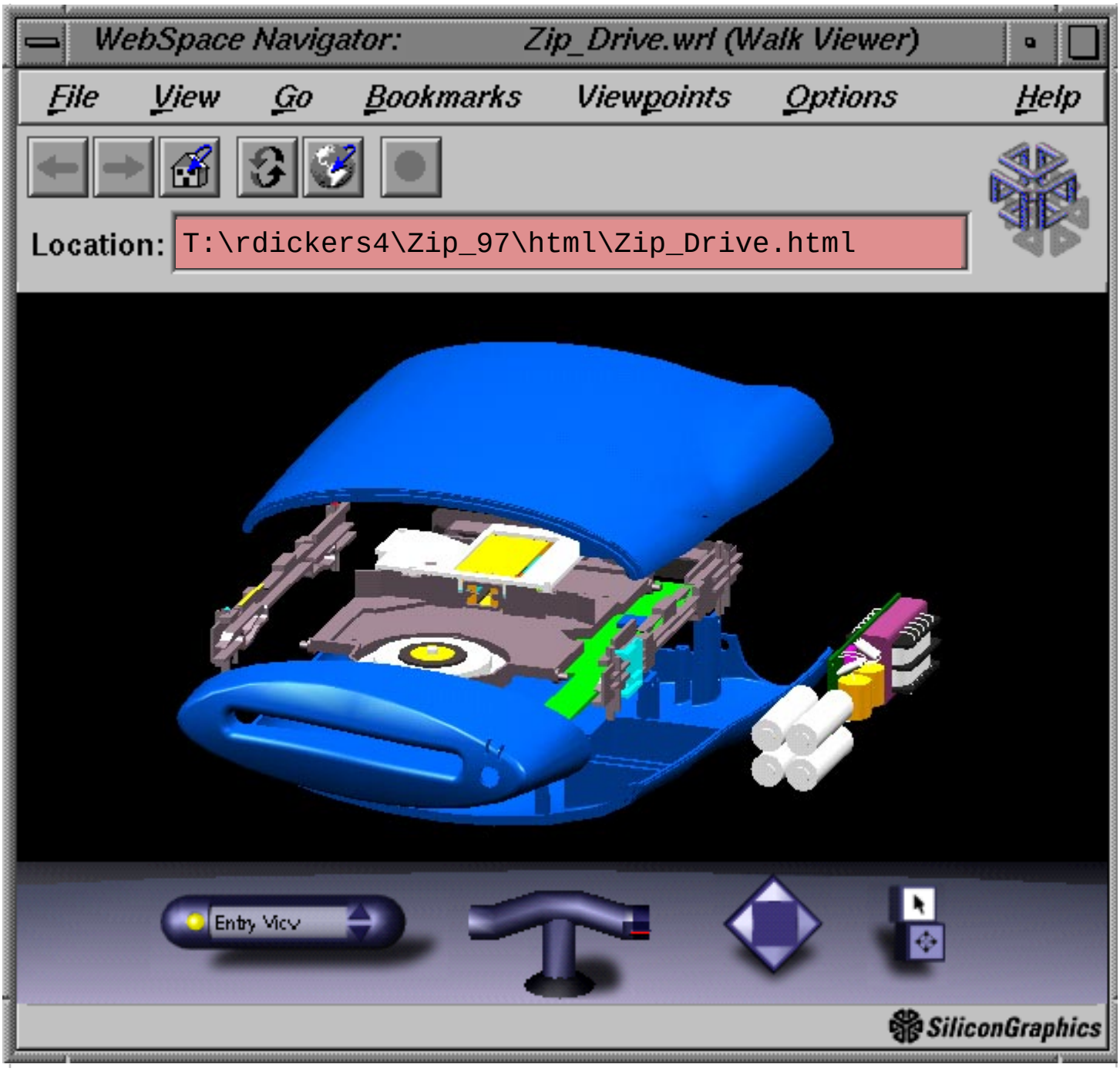




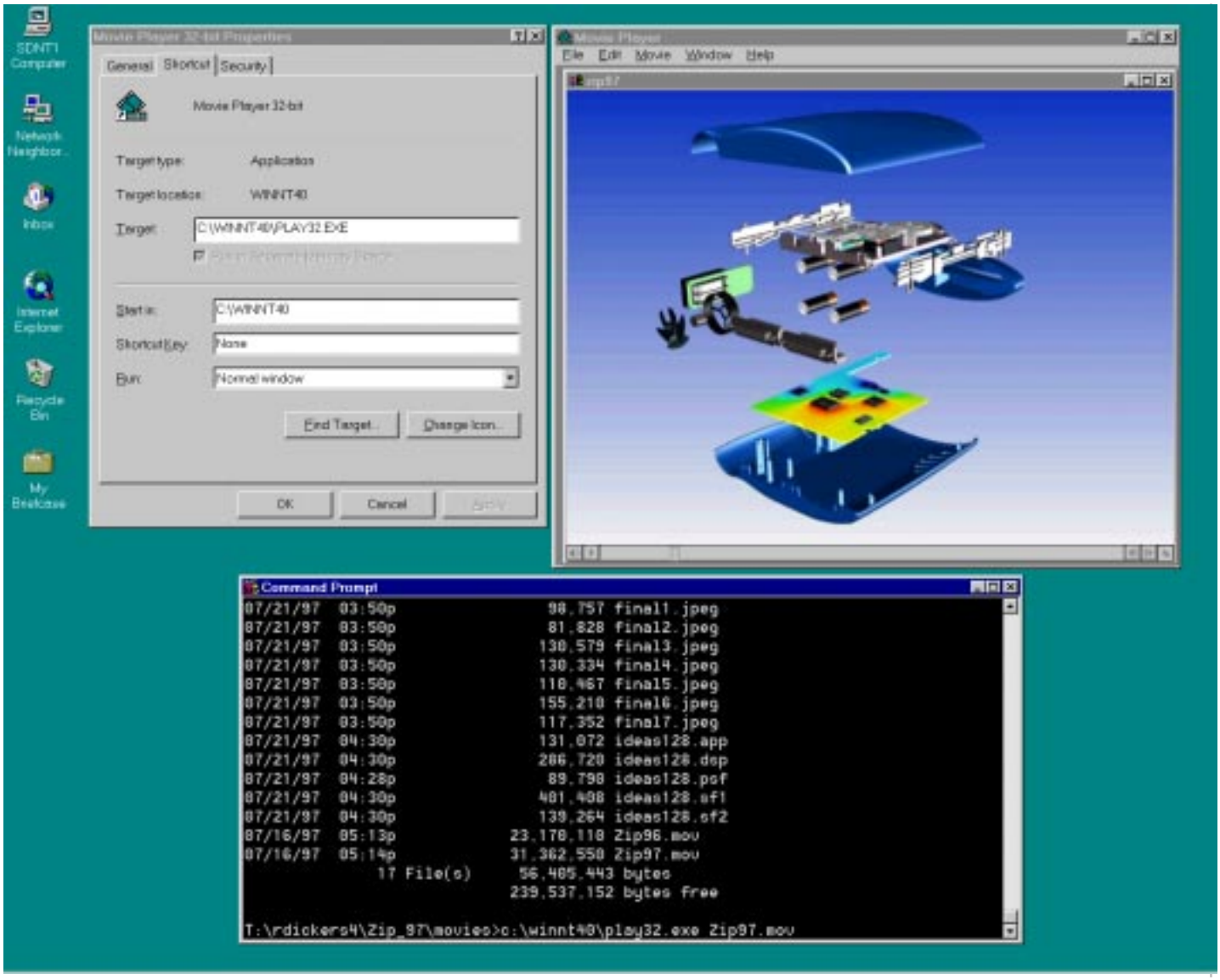
- *'Flow'*
- *er of*
- *Shade*
- *er on*
- *Tweak*

screen with F1 & slight mouse movement

OPTIONAL

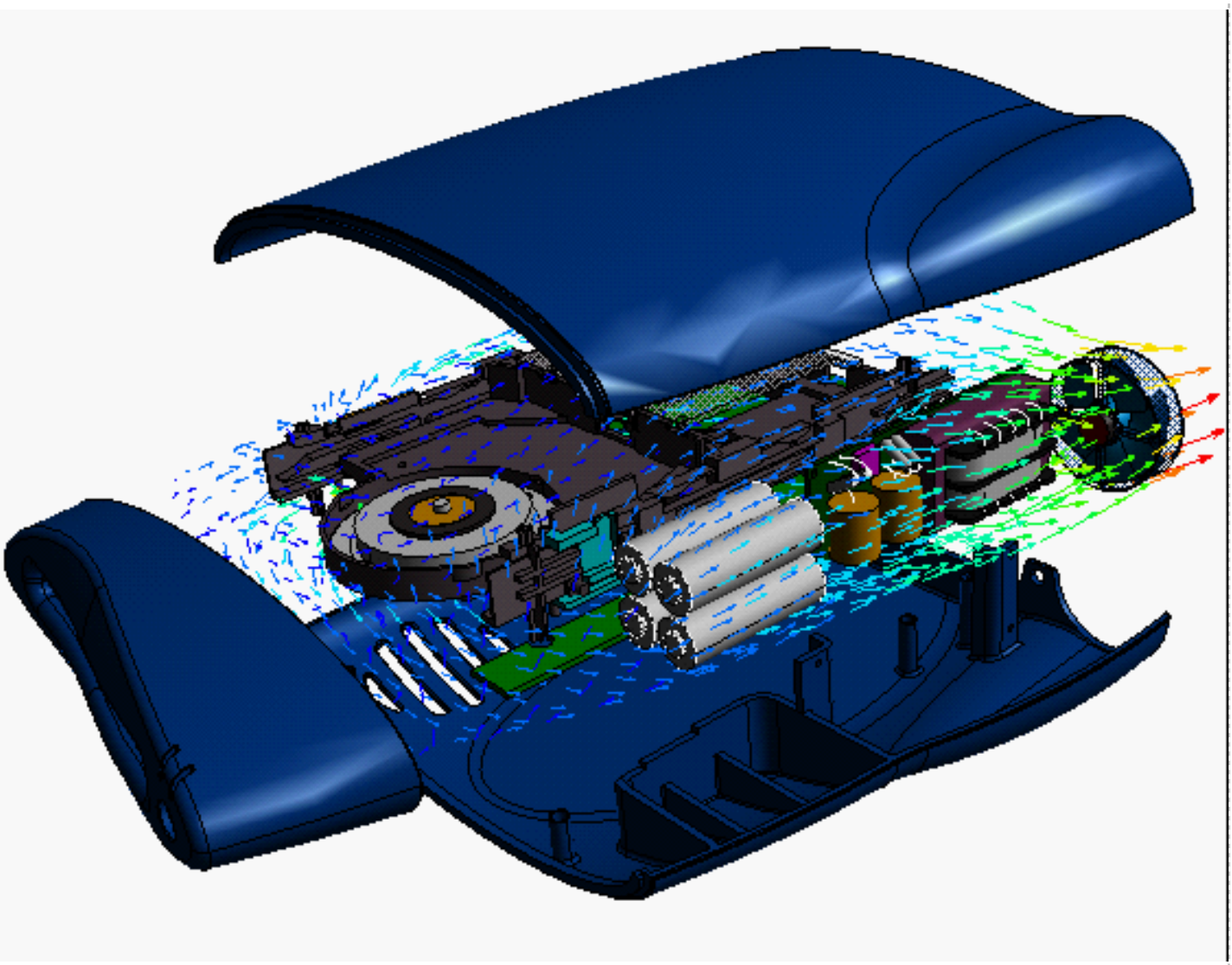



```
Command Prompt

 Directory of T:\rdickers4\Zip_97_1head\html

07/22/97  03:46p        <DIR>          .
07/22/97  03:46p        <DIR>          ..
07/16/97  11:20a                   302 Zip_Drive.html
07/16/97  11:20a               820,727 Zip_Drive.wrl
07/16/97  11:20a                 5,327 Zip_Drive_data.html
               5 File(s)        826,356 bytes
                           158,686,208 bytes free

T:\rdickers4\Zip_97_1head\html>netscape Zip_Drive.html
```



Have this pre-set in a Command Prompt window...

>Play the Zip_97.mov QuickTime movie with the QuickTime movieplayer (...\Zip_97\util\Quicktime\) or http://quicktime.apple.com/sw/qtwin32.html)



OPTIONAL: Do this for a quick wrap-up, have this done before the presentation starts.

In a Command Prompt window

•set DISPLAY=*hostname*:0 (put your hostname in)

•Put the 'ImageMagick' directory in your path

PATH= (existing path);C: ... \Zip_97\util\ImageMagick

cd ...\Zip_97\movies

>display -geometry 1069x828+0+0 final1.jpeg

Use MB3 to open remaining 6 pictures