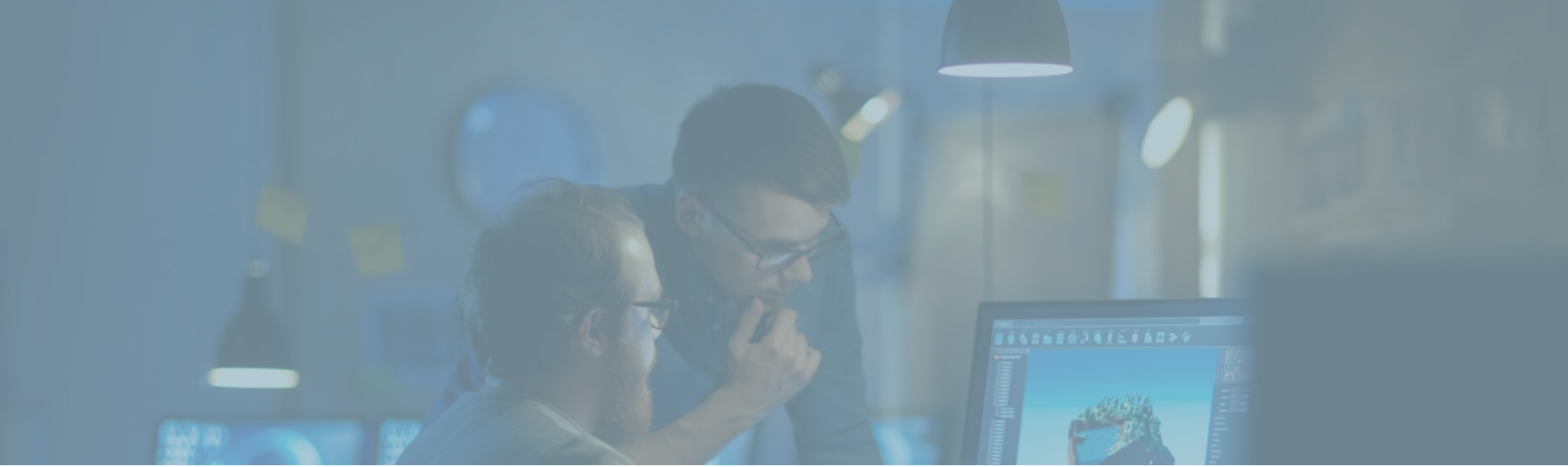


What is New in VCollab 25.1

VCOLLAB

Visual Collaboration Technologies Inc.

VCollab 25.1 Enhancements

VCollabPro

- 'Auto Resize' option is added for Image and Rich Text Labels
- Option is introduced to measure the Polygon Area in Measurements
- Option is introduced to get only visible label IDs in XY Plot
- Fixed the issues related to RichText Label feature
- Section Update - The display of the plane equation has been made consistent with the section equation display in VMoveCAE
- CreateResult - User can use NoR as a constant variable in the formula
- CompareMesh - Visibility Flag is introduced in the API to control the list of parts considered in comparison of models
- Bug Fix: Scale factor issue with large deformation result is handled
- Bug Fix: Transparency issue with xSetCAELegendColors API is handled
- Bug Fix: Issue with duplicate element Indices in hotspot finding is handled
- Bug Fix: Issue with Result Transformation using User Coordinate Systems is handled
- Big Fix: Issue with CompareMesh option while comparing the CAD models is handled
- Third-party libraries are upgraded to latest version to handle the security vulnerabilities

VCollabPro

- New Python APIs
  - xCompareMeshEx
  - xComparePartGeom
  - xComparePartGeomEx
  - xDeletePointSet
  - xSetPartColorEx
  - pxGetPartColorEx
  - xSetPartDisplayModeEx
  - xGetPartDisplayModeEx
  - xSetPartTransparency
  - xGetPartTransparency
  - xSetPartTransparencyEx
  - xGetPartTransparencyEx
  - xShowPartsIDEx
  - xGetPartIDVisibility
  - xSetPartRandomColor
  - xIsSamePartName
  - pxGetPartBoundsEx
  - pxGetPartSphericalBounds
  - xGetNoResultValue

VCollab 25.1 Enhancements

VMoveCAE

- Support for Multiple Abaqus ODB Versions
  - Usage: VMoveCAE.exe --odb_version=2017
- Introduced new part grouping options under ‘Part Grouping Preferences’.
- Various bug fixes and stability improvements.
- Third-party libraries are upgraded to latest version to handle the security vulnerabilities

VMoveX

1. Supported FileFormats:
   - CGNS (.cgns) - Steady State/Transient State
   - Converge (.h5) - Steady State
   - Ensight (.case) - Steady State
   - VTK (.vtk/.vtm/.vtp/.vtu) - Steady State
   - OpenFoam (controlDict) - Steady State/Transient State
   - Fluent (.cas.h5 and .dat.h5)- Steady State/Transient State
2. Parts Filtering
3. Results Filtering
4. Instance Filtering
5. Features:
   - Cutsections for steady and transient models
   - Flowlines for steady and transient models Flow line creation by Source point (considers a default source radius of 0.25 - user option will be provided in later version) and Source component.
   - Stream Animation for steady flows illustrates the flow lines traced through specified integration points, representing the flow field behavior.
   - Iso Surfaces for steady and transient models Iso surfaces can be created for available derived components of any results and scalar results. For example, in the case of Velocity, iso surface can be created for X, Y and Z components. Tensor results XX,YY,ZZ,XY,YZ,XZ.
6. Saving the translational Parameters.
7. VMoveCfdSubmit.exe

VCollab 25.1 Enhancements

VMoveCAD

- Catia V6 is supported up to R2025x
- UG NX is supported up to UGNX2406 (until 2406.7000)
- SolidWorks is supported up to 2025
- SolidEdge is supported up to 2025
- Third-party libraries are upgraded to latest version to handle the security vulnerabilities
- Bug Fix: Unwanted nodes are removed in CAD Scene Tree

VCollabWeb

- Multiprobe feature is enabled
- Added support for probing XY Plot labels.
- Enabled part selection by clicking on associated labels.
- Fixed color rendering issue for line geometries.
- Fixed issues related to image and rich text label issues
- Enhanced the product tree for better Filter and Search options
- Added deep probing functionality through transparent surfaces.
- Added support for measurement labels.
- Added model size and model center information in the frame info panel.
- Fixed the issue where section caps were not properly closed.
- Fixed XY plot issue when in full-screen mode.
- Fixed a probing glitch in CaxViewer that caused the model to appear black.

VCollab 24.3 Enhancements

VCollabPro

- Probe Settings
  - Interface for instance selection for ‘Probe - All Instance table’ is provided
- Image Label
  - 'Model Only' interface is provided in ‘Add Image Label’ . This helps to capture model only, filtering labels, legend, etc.
- CAE Legend and Label
  - Numeric Format options for International, European and Indian are supported along with scientific and standard formats
- Vector Plot
  - Result component with NoResult value is considered as zero for vector generation. i.e. (12,NoR, 2) => (12,0,2)
    - It was ignored earlier if any of the components has NoResult value.
- XY Plot
  - Multiple selection of results in history plot dialog is supported
- Create Result
  - Enhanced ‘Create Result’ module to use 'NoR' for 'NoResult' constant in the formulas. Ex, To set zero in place of NoResult, following formula can be used.if(A=NoR, 0,A)
- Export WCAX/HTML
  - Option is provided to export Feature Edges
- Labels
  - Fixed the label’s overlapping issue

VCollabPro

- Python APIs Updates
  - CAE Result Manager python module is provided to read and write CAE result instances.
  - xCompareMesh API is enhanced to support feature edge and sign flags
  - xCreateNewCAEInstance
  - xCreateFilterResult – Creates a new result from an existing one by applying a contour filter to the top and bottom percentage.
  - xCreateResultFromNodesets – Creates a new result from list of nodesets.
  - xSetConstantResultValue - Ability to set constant value to all nodes in multiple parts
  - xCreateElementalResult – Ability to create an elemental result from existing nodal result
  - xShowPartFeatureEdge – Ability to set the Feature Edge for the required parts
  - API is provided to change the mouse mode

VCollab 24.3 Enhancements

VMoveCAE

- Enhanced Hypermesh Component Reading issues
- Improved performance with no-averaging across materials
- Added support for handling the envelop results from VMoveCAE
- Added Support for Optistruct generated H5 files

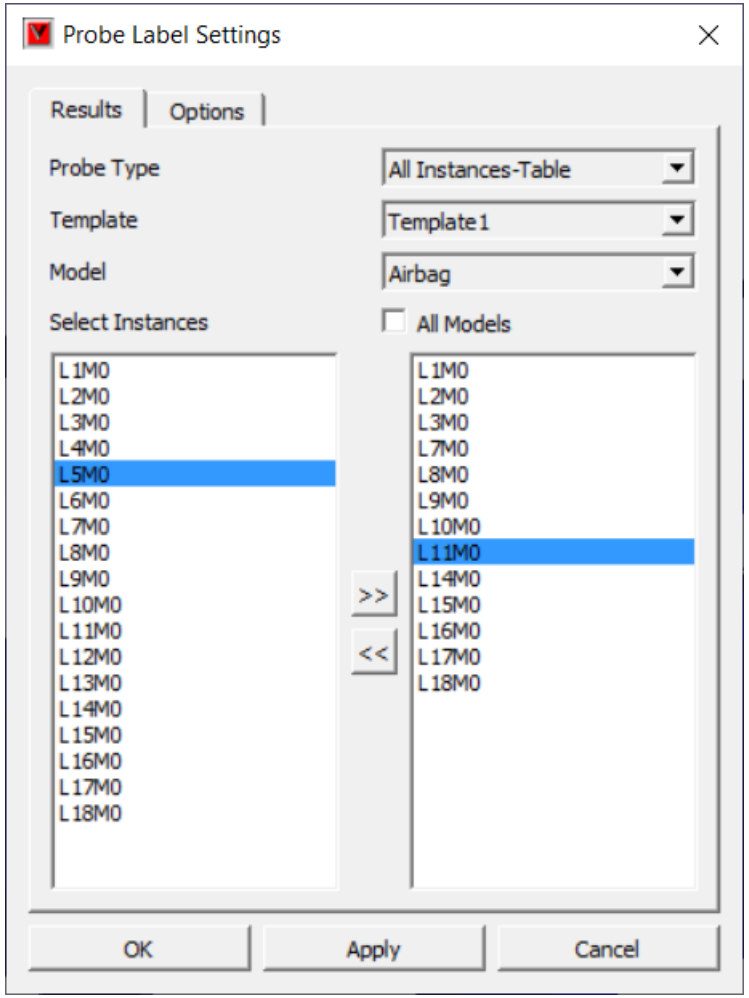
VMoveCAD

- Catia V5 is supported up to R34(V5-6R2024)
- UG NX is supported up to UGNX2406
- Pro/E is supported up to Creo Parametric 11.0
- Inventor is supported up to 2025
- Parasolid is supported up to v37.0
- SolidEdge is supported up to 2023

VCollabWeb

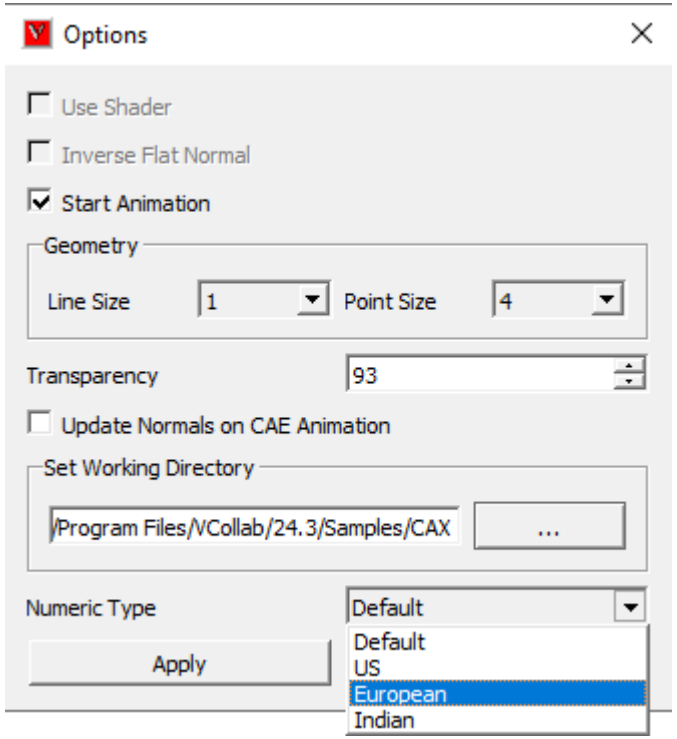
- Added support for all feature edge options.
- Added support for cull and transparent mode in nodeset manager.
- Added support for additional number formatting for legend values.
- Fixed symbol plot issue with reverse.
- Fixed transient interpolation animation with reverse play issue.
- Fixed the legend transparency issue.
- Disabled the hidden parts(viewpoint) in product tree.

- Interface for instance selection for ‘Probe - All Instance table’ is provided

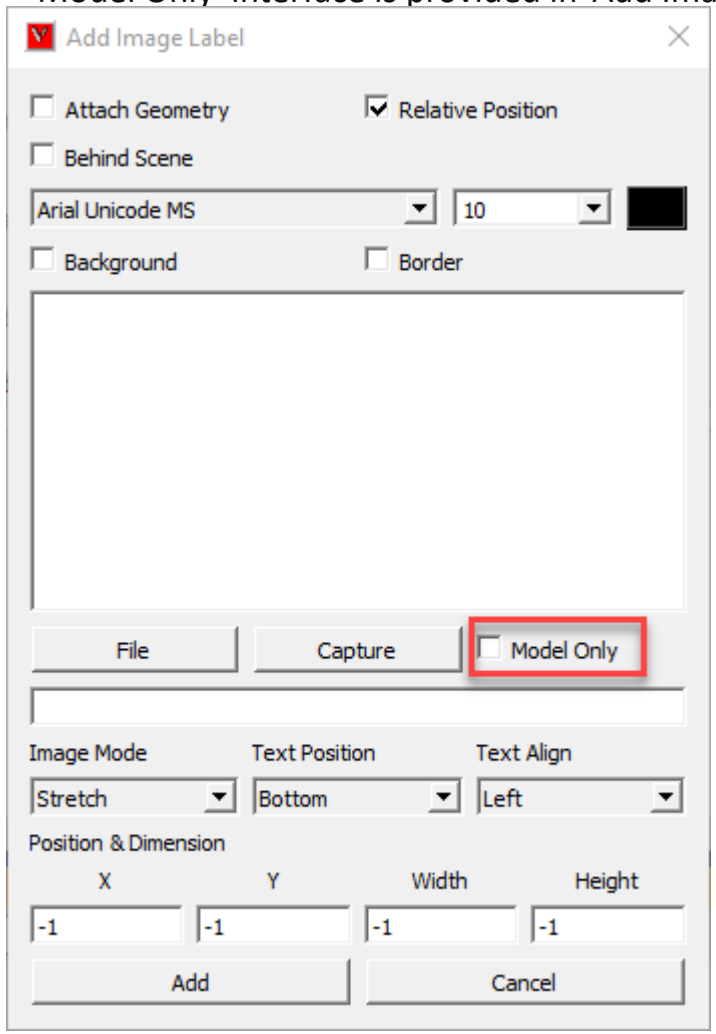


VCollabPro 24.3

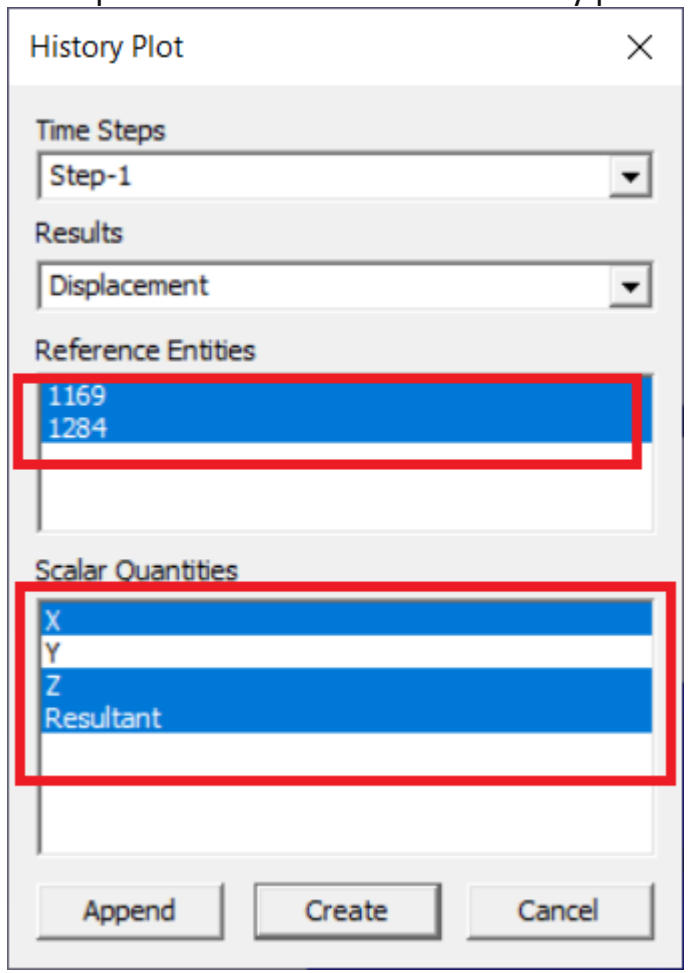
- Numeric Format options for International, European and Indian are supported along with scientific and standard formats in Legend and Label



- 'Model Only' interface is provided in ‘Add Image Label’. This helps filtering labels, legend, etc. and captures only model



- Multiple selection of results in history plot dialog is supported



VCollab 24.2 Enhancements

VCollabPro

- Cutaway
  - Interface is provided to have Cylindrical, Sphere and Box section
- Export HTML
  - Retain WCAX option is provided
  - Option is provided to add/remove the mesh modes in HTML/WCAX
- Adams Support
  - Enhanced to synchronize the Adams Animation and Adams Plot
  - Enhanced to load multiple results into Adams Plot
  - Enhanced to do Arithmetic operations on Adams curves in Adams Plot
  - Enhanced to add Annotations to Adams Plot
- Nodeset Manager
  - Enhanced with ProbeMask, ShowMaskInfo and User Info features
- Vector Plot
  - Invert option is introduced
- Symbol Plot
  - Reverse option is introduced

VCollabPro

- Python version is upgraded to 3.8.19
- Python APIs Updates
  - Video Creation issue with cut-section in viewpoint is fixed

VCollab 24.2 Enhancements

VMoveCAE

- Enhanced LS-Dyna key file interface to read i10 format files
- Fixed a bug that is assigning wrong names to parts
- Enhanced support for loading ds.dat files
- Support for ANSYS-bodies part grouping for ds.dat files
- Support for no averaging across zones for Nastran input and op2 results
- Fixes for Ansys 23R2 reading crash

VMoveCAD

- Supported saving cax with Unicode path
- Fixed the issue with relative input and output path with VMoveCADBatch
- Fixed --tess-tolerance option issue with VMoveCADBatch
- Handled the duplicate data in metadata in CadInfo

VCollabWeb

- Fixed the display mode issue with hidden lines.
- Fixed transient interpolation animation with reverse play issue.
- Fixed the legend transparency issue.

VMoveAdams

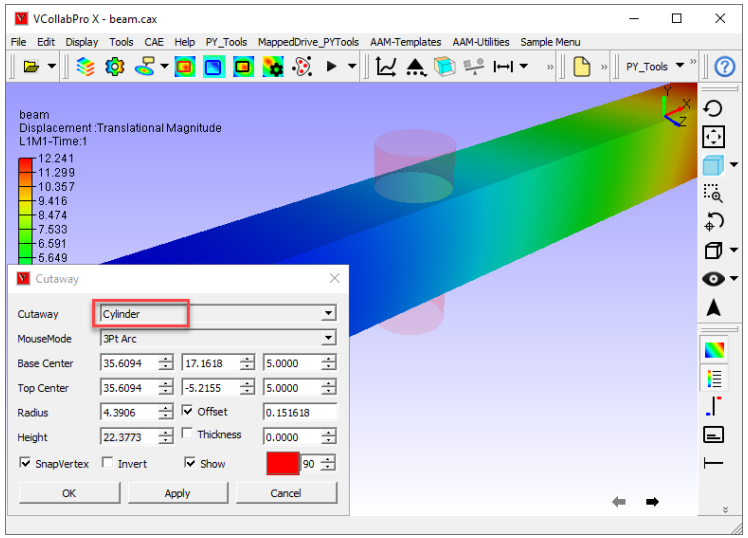
- Added the missing FLEX body curve data.

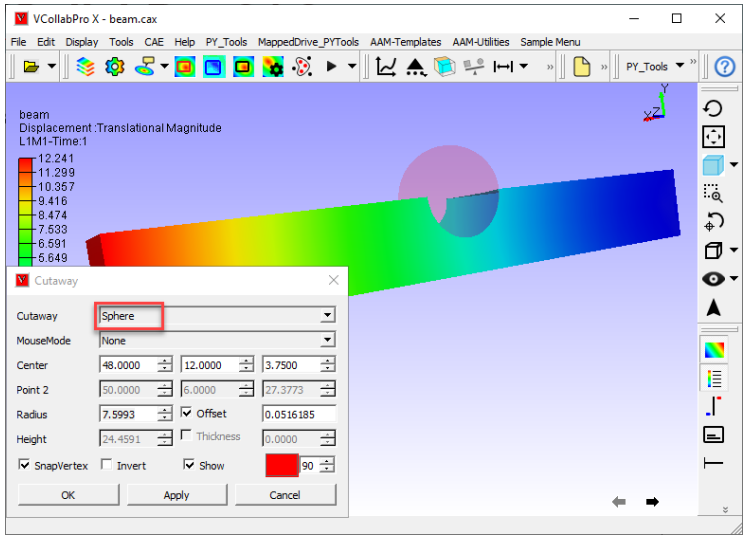
VMoveCST

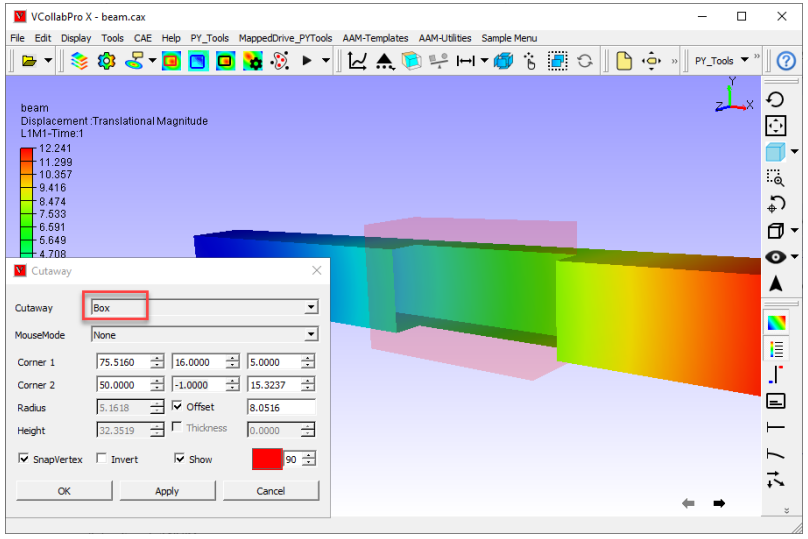
- Fixed the results name issue

Cutaway

- Interface is provided to have Cylindrical, Sphere and Box section

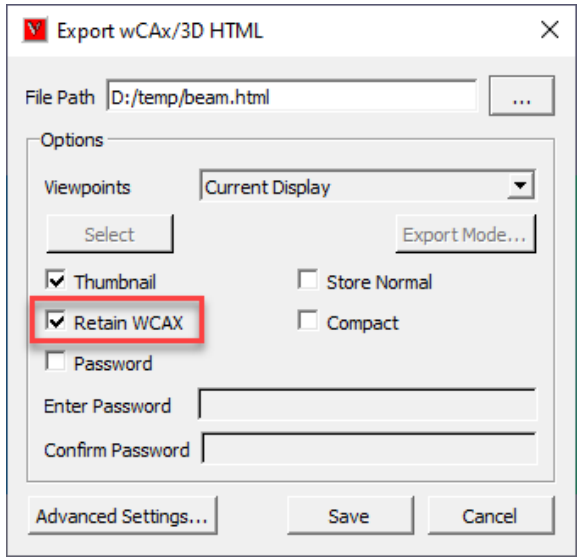


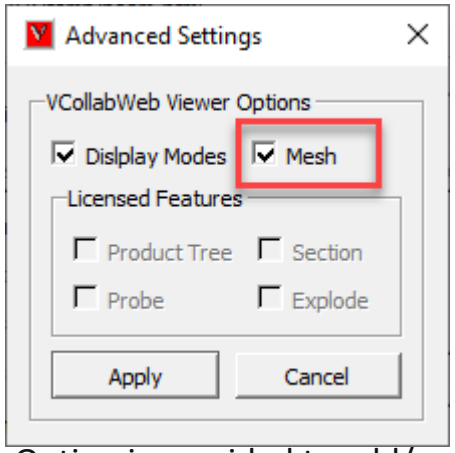




Export HTML

- Retain WCAX option is provided





-Option is provided to add/remove the mesh modes in HTML/WCAX

VCollab 24.1 Enhancements

VCollabPro

- Vector Plot
  - Filtering option is introduced to control distribution of vectors
  - Uniform Length options is added
  - Exporting vector plots to Web Viewer is supported (recommended to reduce number of vectors using filter option)
- Symbol Plot
  - User Color option is added
- Axis in Viewpoint: Axis position is saved into Viewpoint and CAX
- Import csv file Result: Overwrite option is supported
- Hotspot compare dialog is provided with new options in Compare field : Position Min and Position Max. This will help to create compare labels with simple probe.
- Display enhancements:
  - Flat color check box is provided in Part color material editor to get actual color plot without any shading effect based on light position.
  - Display (shading) brightness is enhanced (for certain orientations)
- New Python APIs added to support new vector plot and symbol plot options

VCollab 24.1 Enhancements

VMoveCAE

- Support for Abaqus 2024
- Support for CFX 2024
- Enhanced Hypermesh components support for Abaqus .INP and Nastran .BDF files
- Enhanced Ansys component support while reading ds.dat files
- Fixed the LS-Dyna key file issues with a large integer format
- Fixed the Abaqus input file loading issues with Latin characters
- Fixed the Nastran OP2 issue with the mixing of Bearing and Solid stresses
- Fixed the file loading issue with cdb files
- Provided functionality to the user to specify temporary files folder through VMoveCAESubmit
- Fixed the LS-Dyna strain extraction issue that is resulting in zero strains.
- Fixed the LS-Dyna issue that is ignoring the data from d3plot99 files.

VMoveCAE (contd.)

- Fixed the Stress computations issue related to the mixed solid, shell and bearing stress.
- Fixed the issue related to the missing contact names while reading Ansys RST and ds.dat files.
- Added support to extract prescribed velocities from VELX, VELY and VELZ SPC constraints for Ansys input files.
- Fixed the bug related to reporting of zero frequency values for real datasets of complex results.

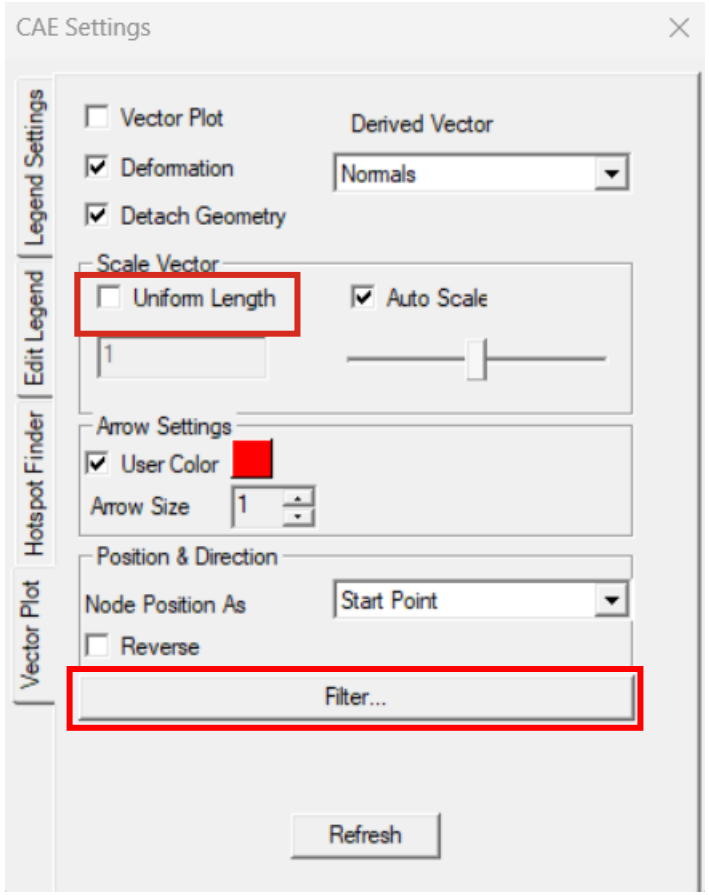
VCollabWeb

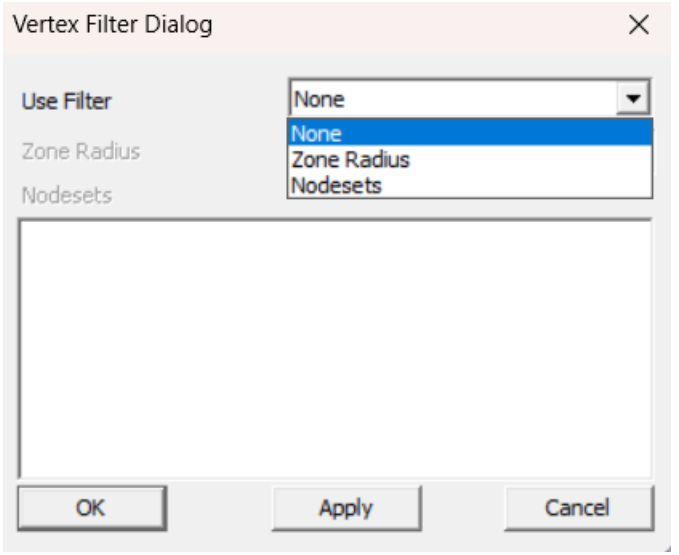
- Support for Visualizing the Vector Plot
- Enhanced probed label value (precision) display option

VCollab Presenter

Fixed the loading issue with the CAX file that contains Unicode information

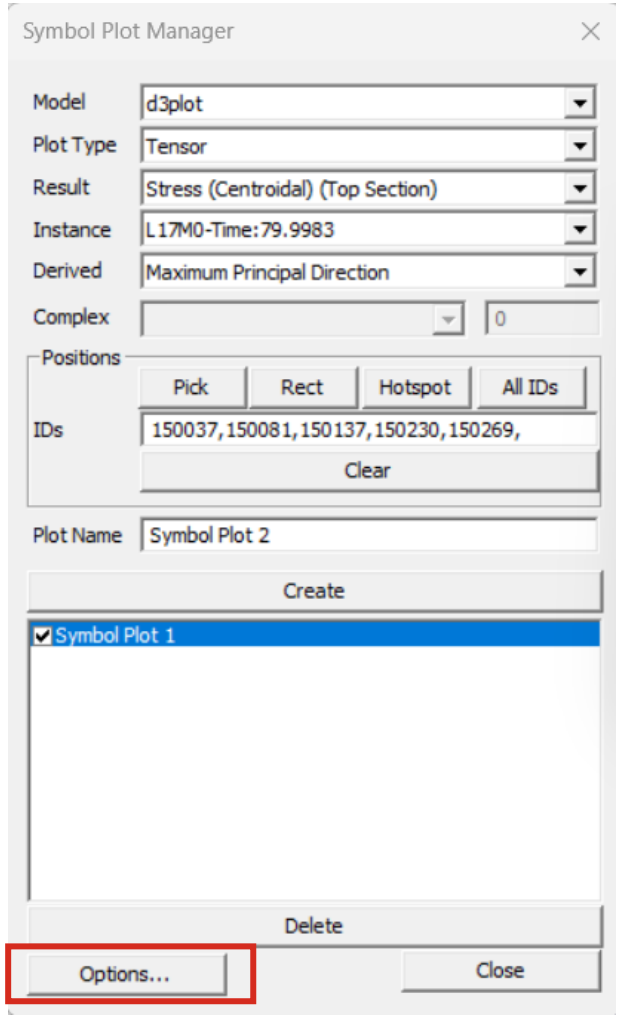
- Vector Plot
  - Uniform Length : Allows user to specify uniform length of the vector symbol
  - Vertex filtering options are included to exclude the nodes for which vector plot is not plotted

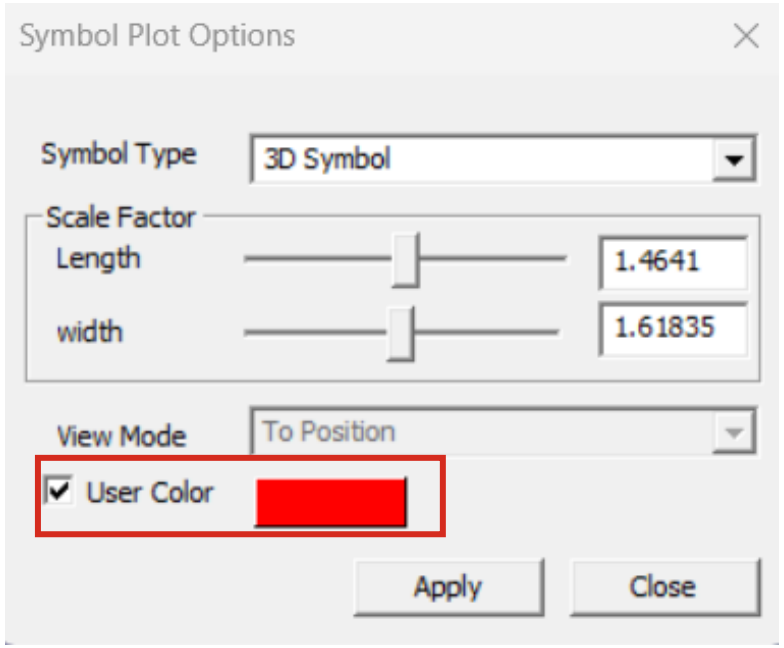




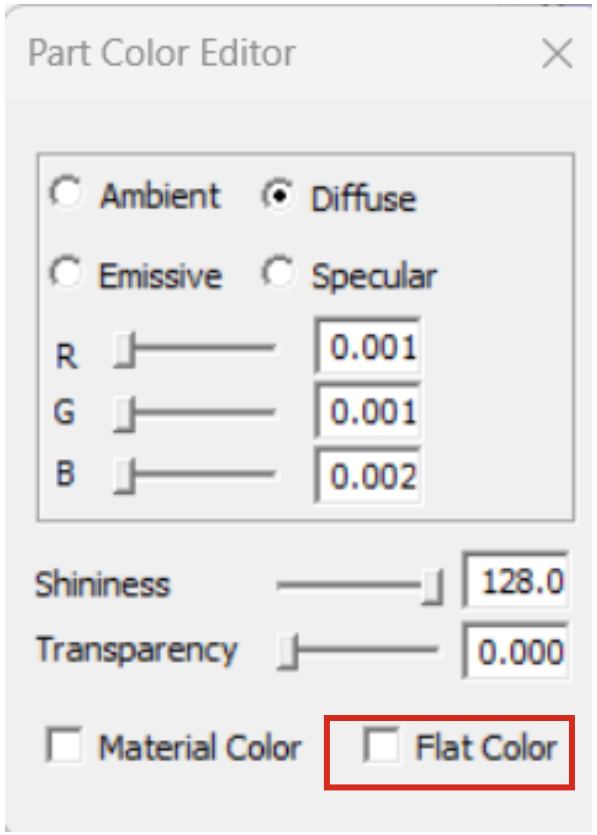
VCollabPro 24.1

- Symbol plot user colour interface



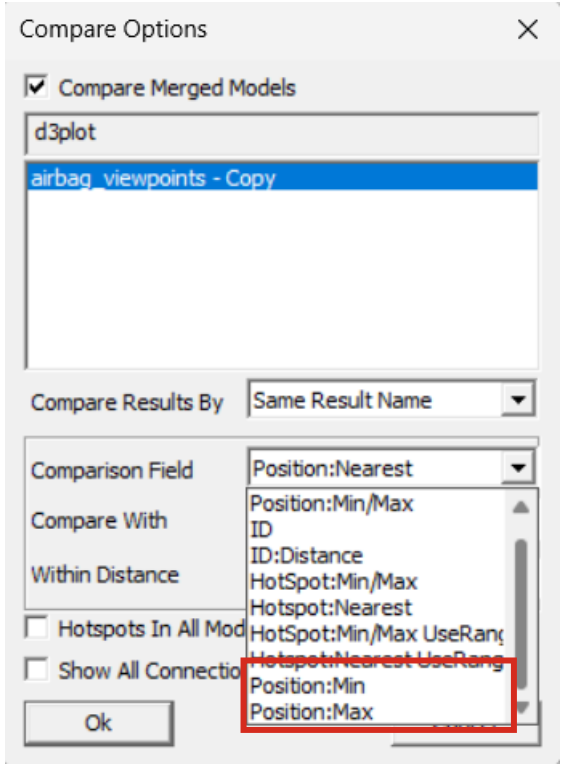


- Flat color check box is provided in Part color material editor to get actual color plot without any shading (black) effect based on light position



VCollabPro 24.1

- Hotspot compare dialog is provided with new options to Compare field :
  - Position Min : Min value with in the sphere
  - Position Max : Max value with in the sphere
  - Position Min/Max : Max or Min is based on Top/Bottom hotspot. Will not work for simple probe.



VCollabPro 24.1: PythonAPI Enhancements

- xSetSymbolPlotUserColorMode : Sets user color or contour color the plot.
- xGetSymbolPlotUserColorMode : Gets User Color mode of symbol plot.
- xSetCAEVectorPlotUniformLength : Sets unform length for all vectors.
- xGetCAEVectorPlotUniformLength : Gets the true or False if all vectors are with uniform.

VCollab 23.3 Enhancements

VCollabPro

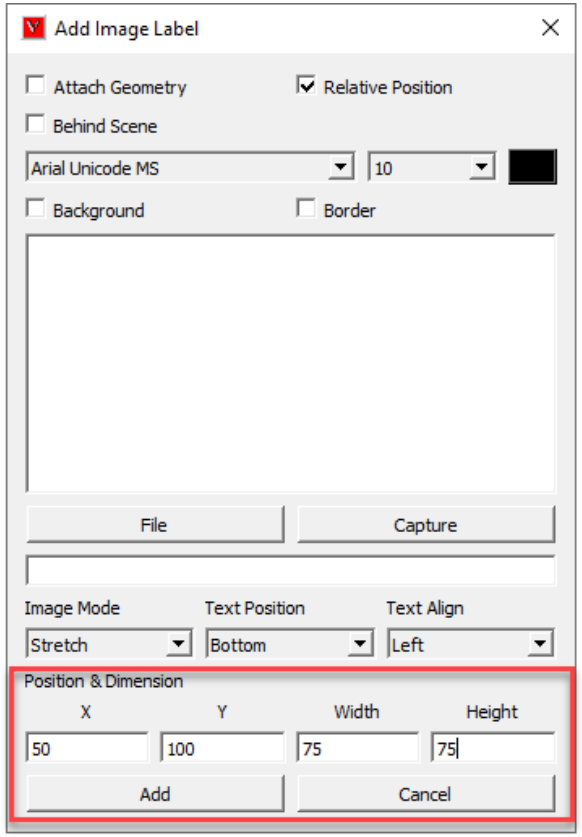
- Rich text Label Functionality is enhanced
- Added option to set the position and dimension for
  - Image and Rich Text Labels
- Enhancements in Adams History Plot capabilities
  - Option to merge plot data from multiple Adams iterations
- Pivot state of CAE Animation settings is saved in viewpoint
- Header Name of legend is saved in Profile
- Measurement Labels are updated based on deformation (need to use snap vertex)
- More APIs are included
- PyTools Enhancements
  - Import Image Views : option to select specific images
  - Export CSV: Dump Option to support duplicate nodes
  - Blank View: option to set white background
  - - PPTExport => Option to Add Editable 2D labels/Tables, Select Viewpoints,
  - Multiple VPs per Page, GUI Change

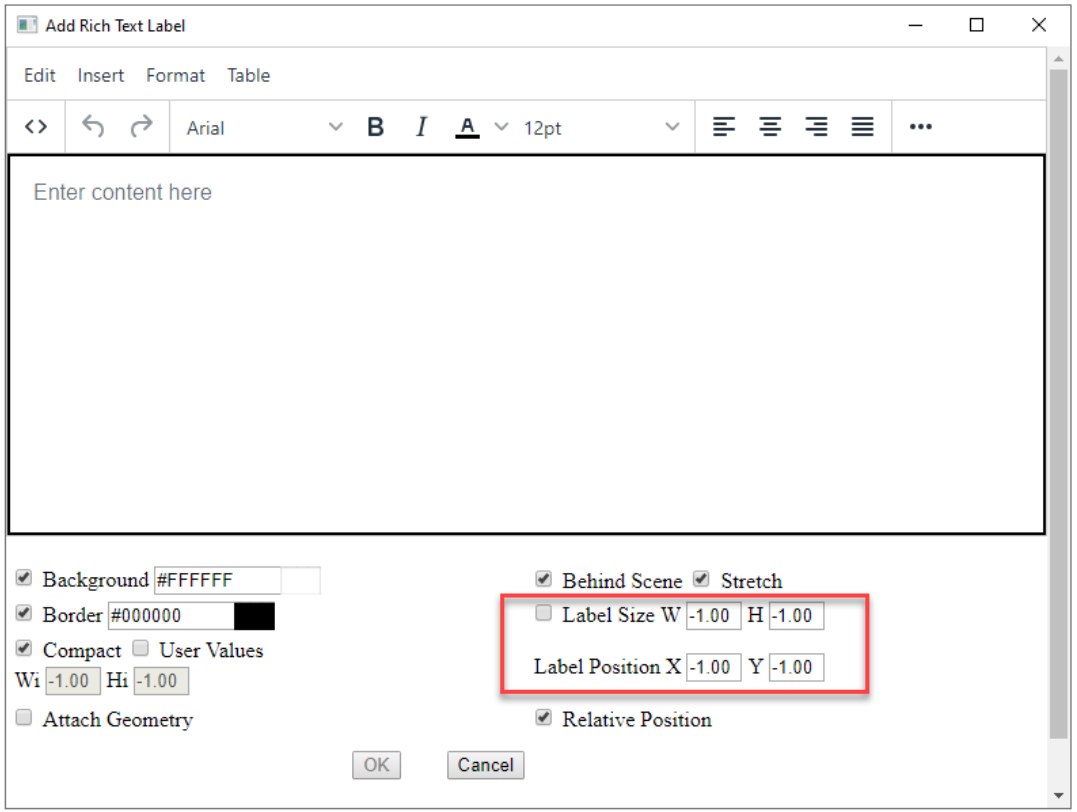
VMoveAdams

- Batch mode is enhanced to convert the multiple iterations of data in a folder to multiple CAX files

VCollabPro 23.3

- Added option to set the position and dimension for
  - Image Labels
  - Rich Text Labels

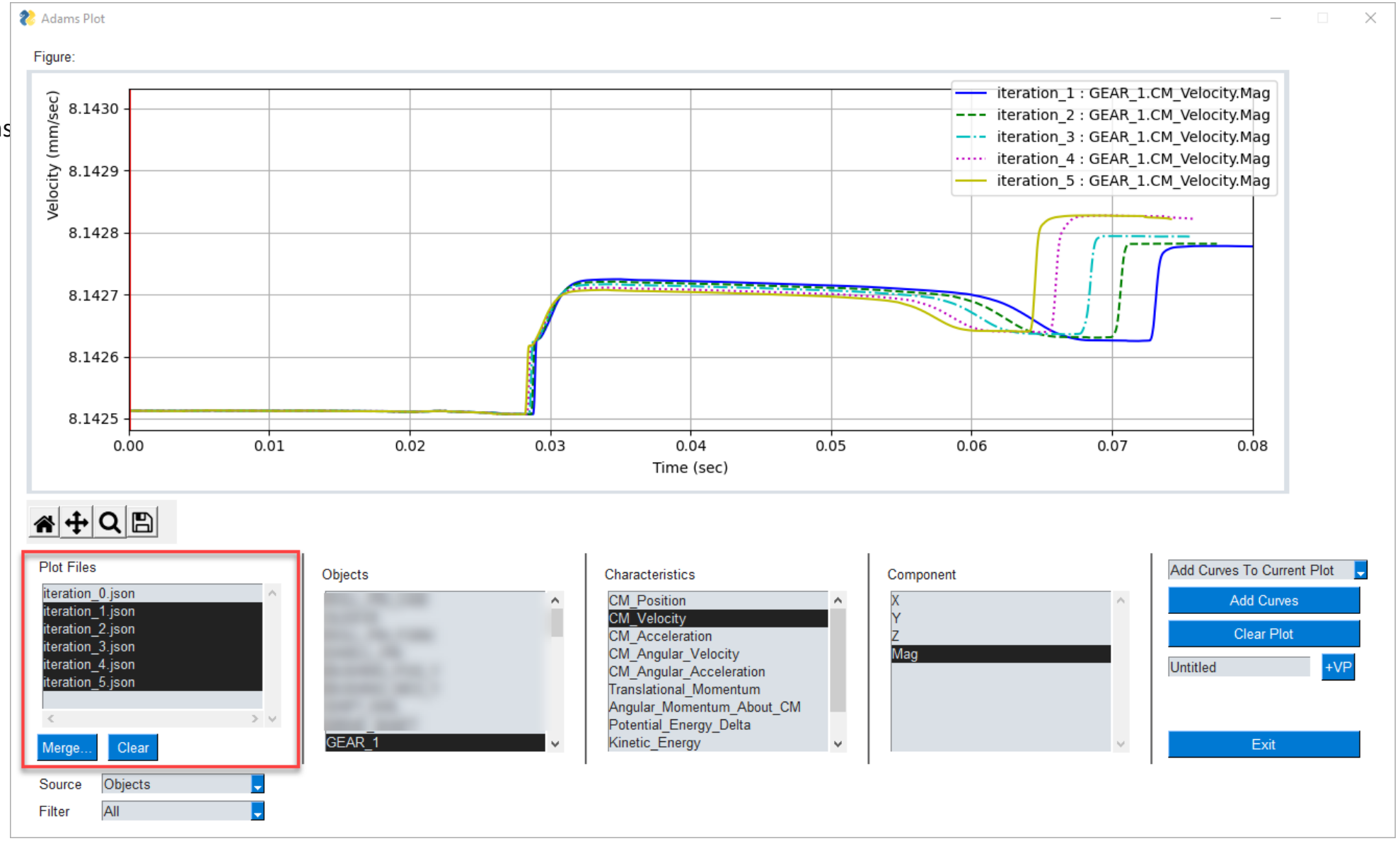




VCollabPro 23.3

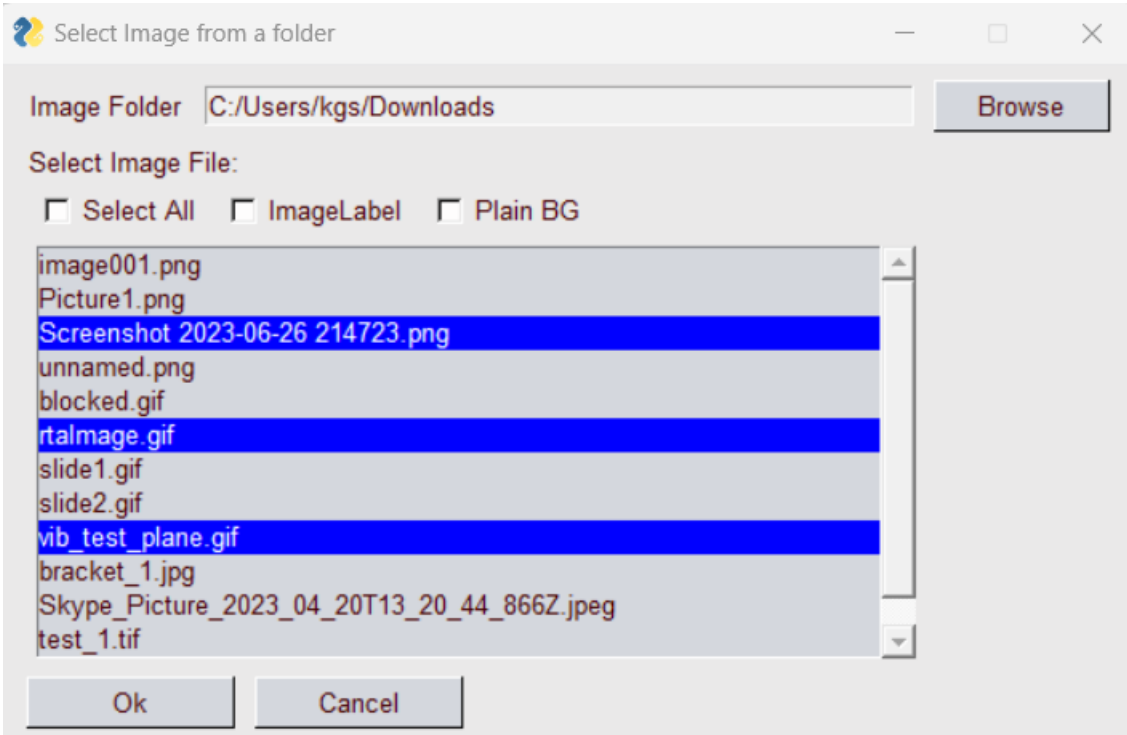
Enhancements in Adams History Plot capabilities -

Option to merge plot data from multiple Adams iterations



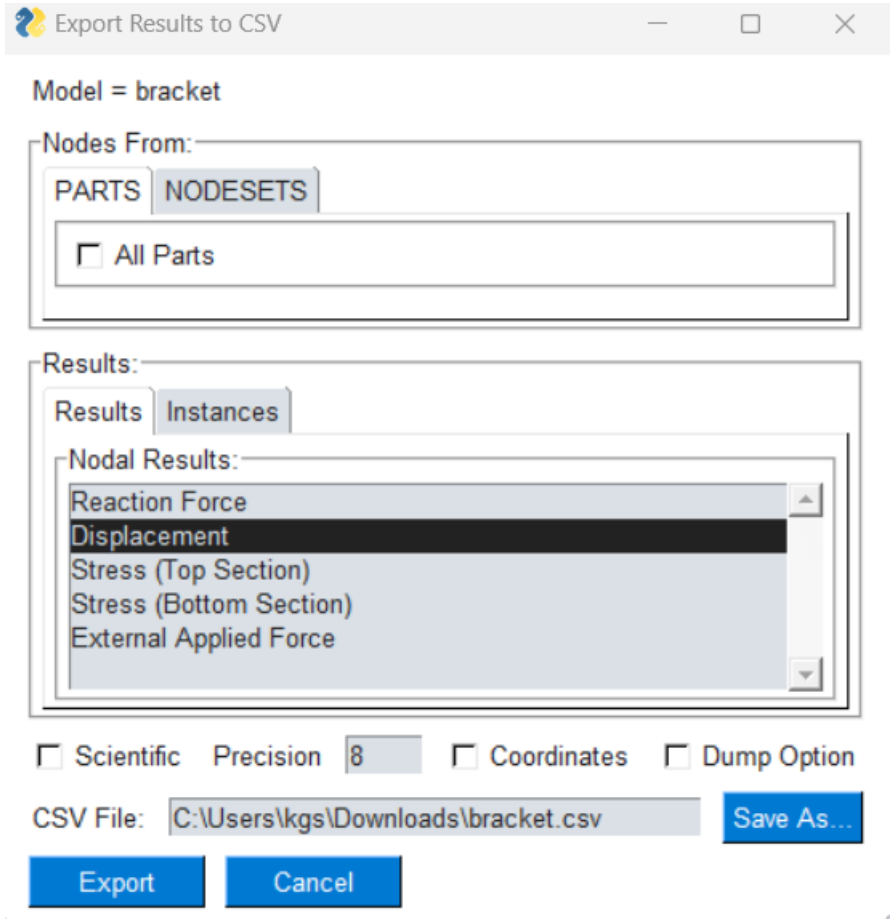
PyTools: Import Image Views

- All the images in the folder is displayed in a dialog
- User can select required images to be imported
- Image can be inserted as background or as image label



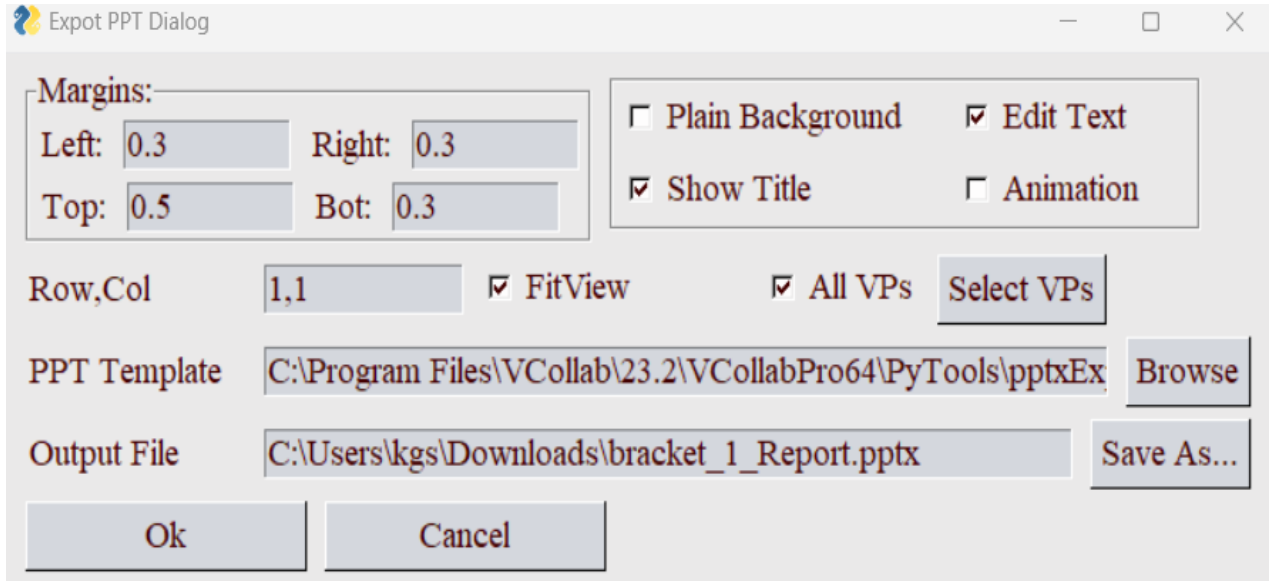
PyTools: Export CSV

- Added Dump Option to support same node id in multiple parts



PPTx Export

- *Edit Text Option*: 2D labels will be exported as editable text in PPT
- *Row,Col*: Multiple viewpoints in same slide
  - 1,2 => 1 row, 2 column arrange ment of two viewpoints
- FitView => Aspect ratio is not critical
- Select VPs => select viewpoint to be exported



- *Note: To append slides to existing PPT, specifi existing PPT as template file*

VCollab 23.2 Enhancements

VCollabPro

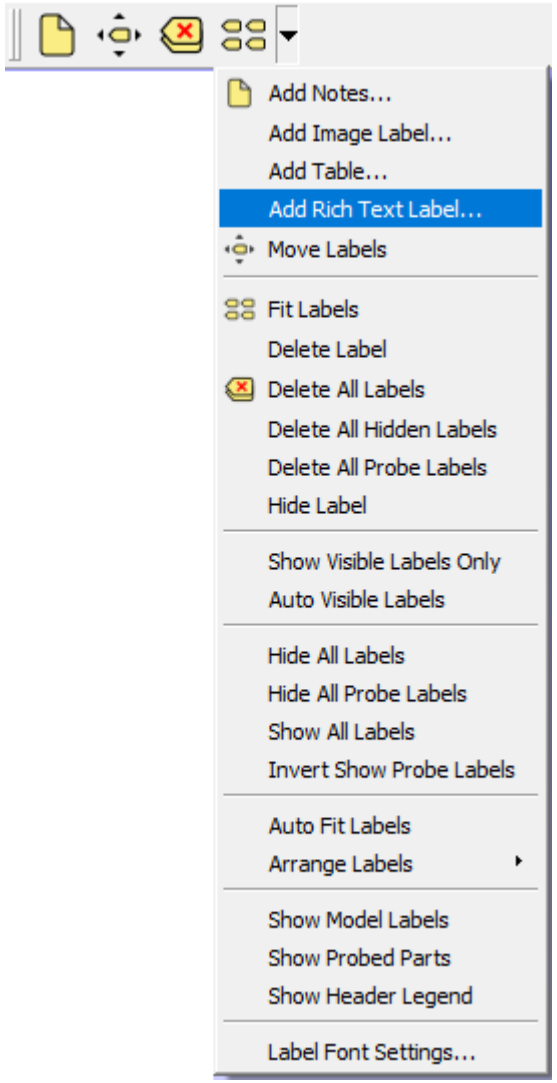
- Option is provided to add Rich Text Labels
- ‘Exclude Section’ option is enabled in Product Explorer to exclude the selected part from the cut-section
- Enhancements in Adams History Plot capabilities

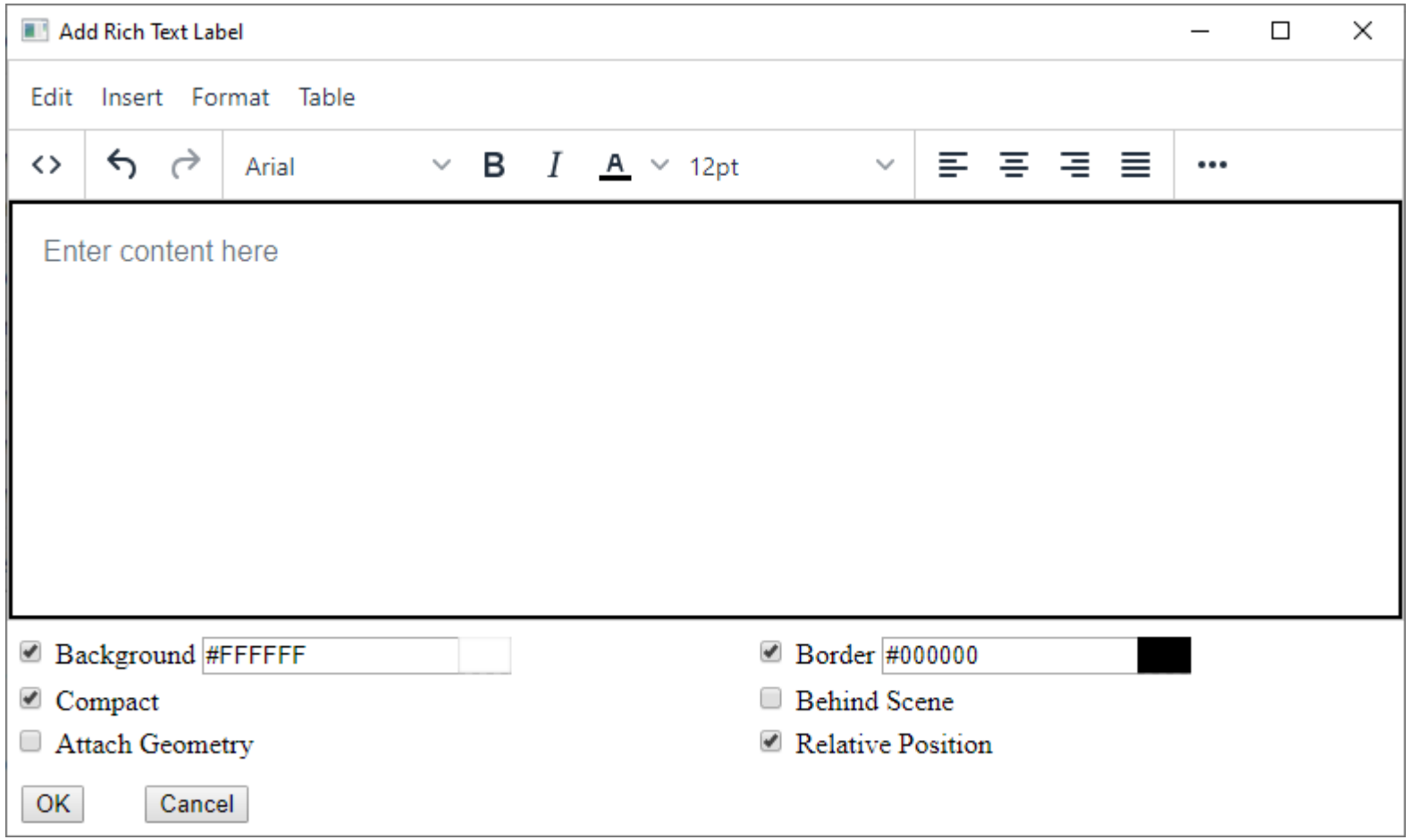
VMoveCAE

- Added support for NPZ files
- The input file format of VMoveCAESubmit is enhanced

VCollab 23.2 Enhancements

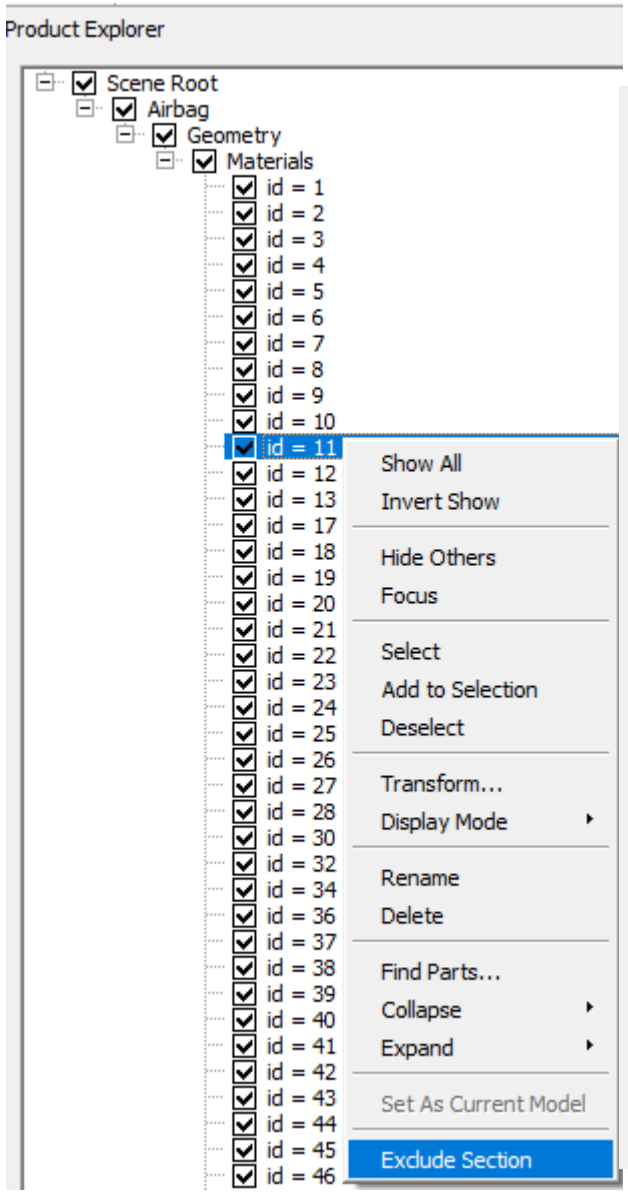
Rich Text Label

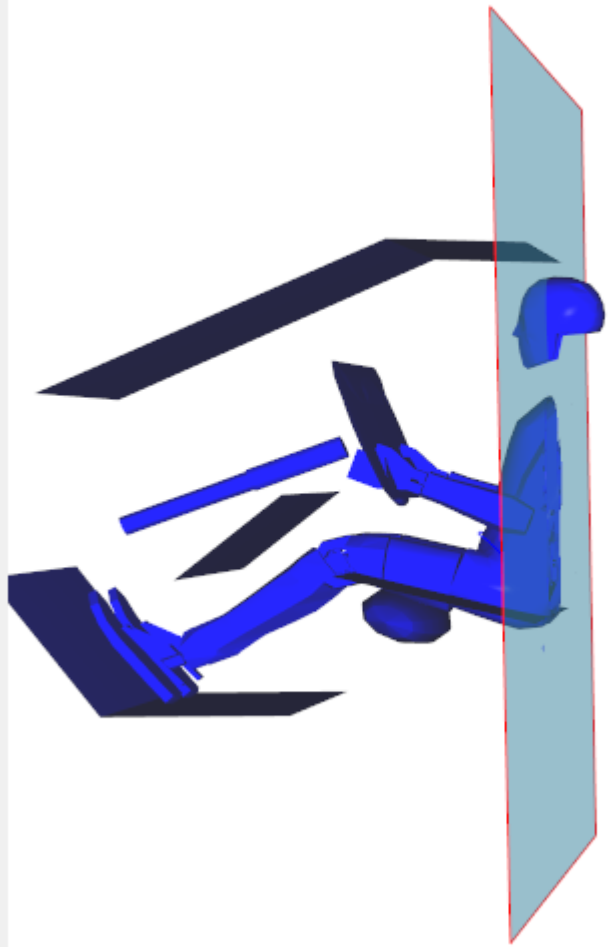




VCollab 23.2 Enhancements

Exclude Section





VCollab 23.1 Enhancements

VCollabPro

- Behind Scene option for 2D Labels
- Python Menus Customization
- Enhancements to MSC.Adams Support
  - Performance Improvement in Adams Animation
  - Option to draw the 2D Plots for Adams History data
- WCAX/3D HTML Export – Option to export the CAE animations as movie
- Unicode support for all file operations
  - Default Font is set as ‘Arial Uniocode MS’
- New APIs are provided

PyTools

- Instance Bowser tool
  - Option to delete instances
- Set Legend tool
  - Option to save and load legends

VCollab 23.1 Enhancements (contd…)

VMoveCAE

- Support for Abaqus 2023
- Support for CFX 2023

VCollabWeb

- Product Tree Enhancements
- Support to view the CAE animation as movie

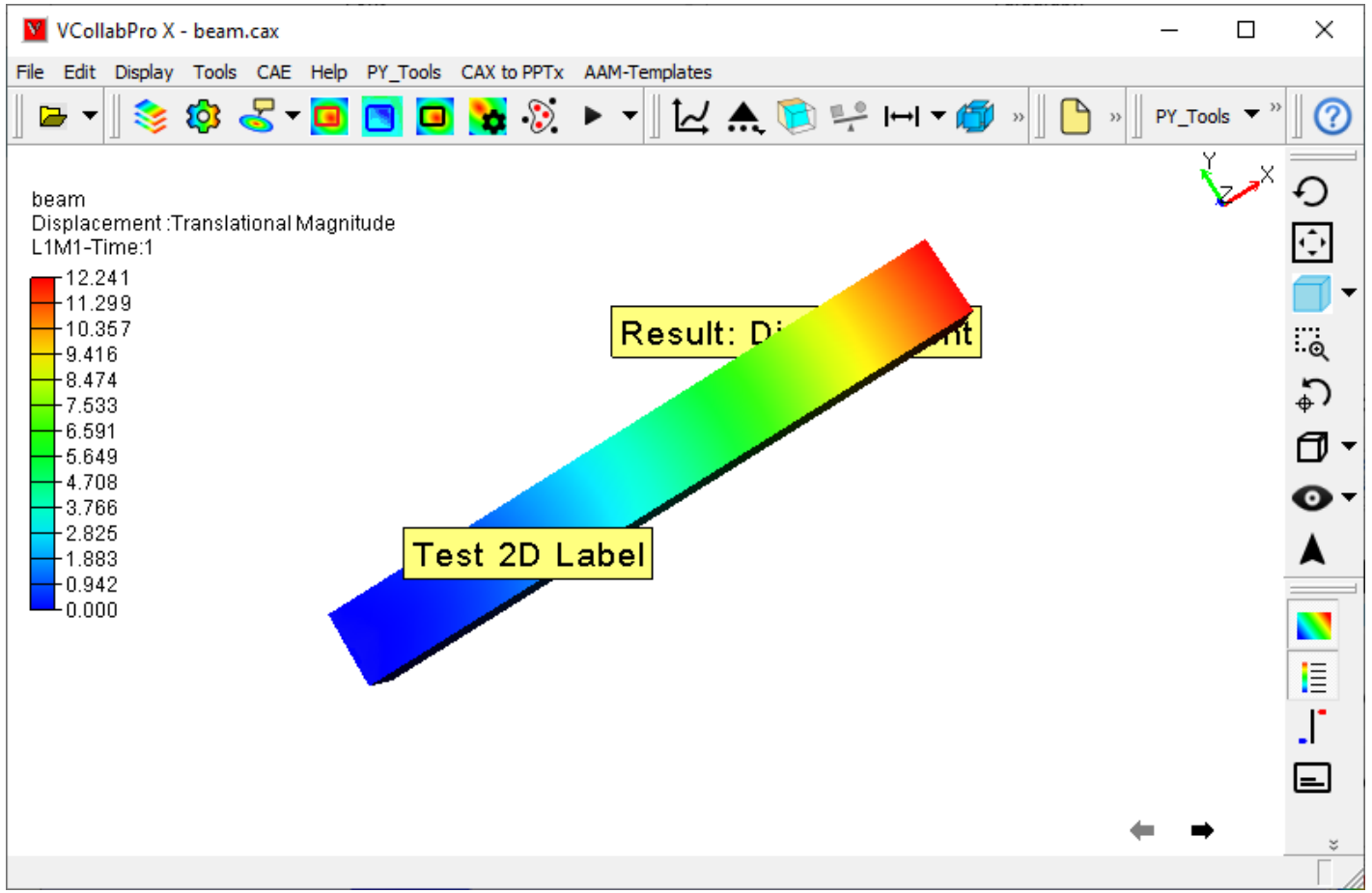
VMoveAdams

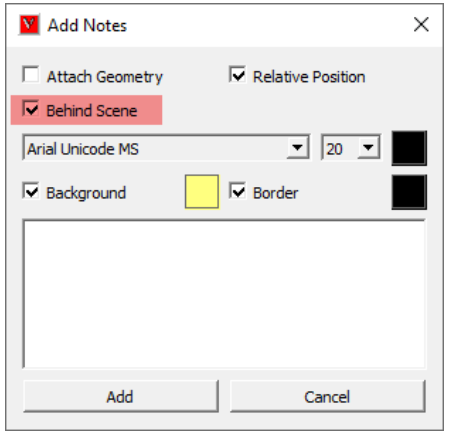
- Optimized to reduce the CAX file size for FLEX data
- Enhanced to read the History data
- GUI application is provided for VMoveAdams

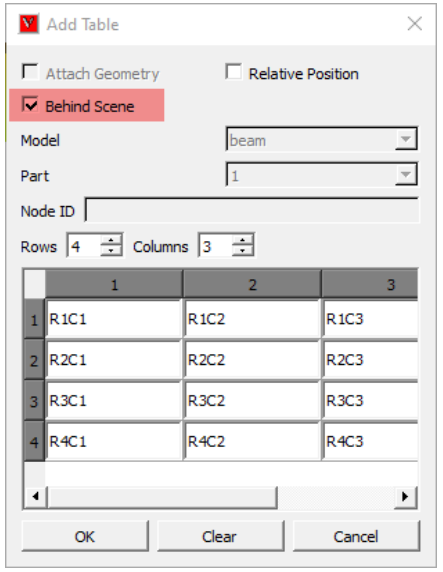
VCollabPro 23.1 Enhancements

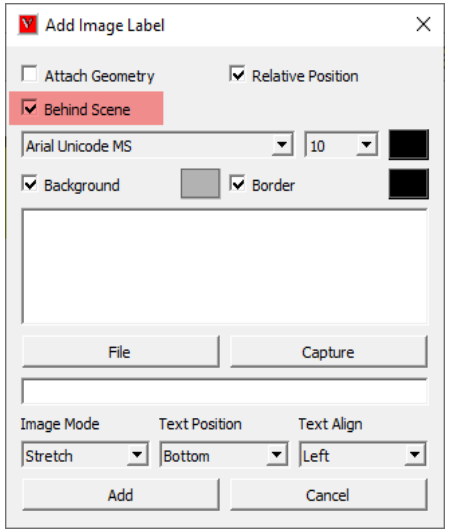
Behind Scene

- Option is provided to move the 2D labels behind the scene





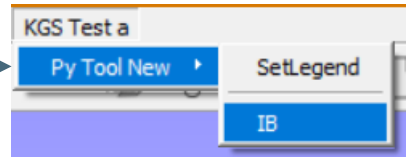


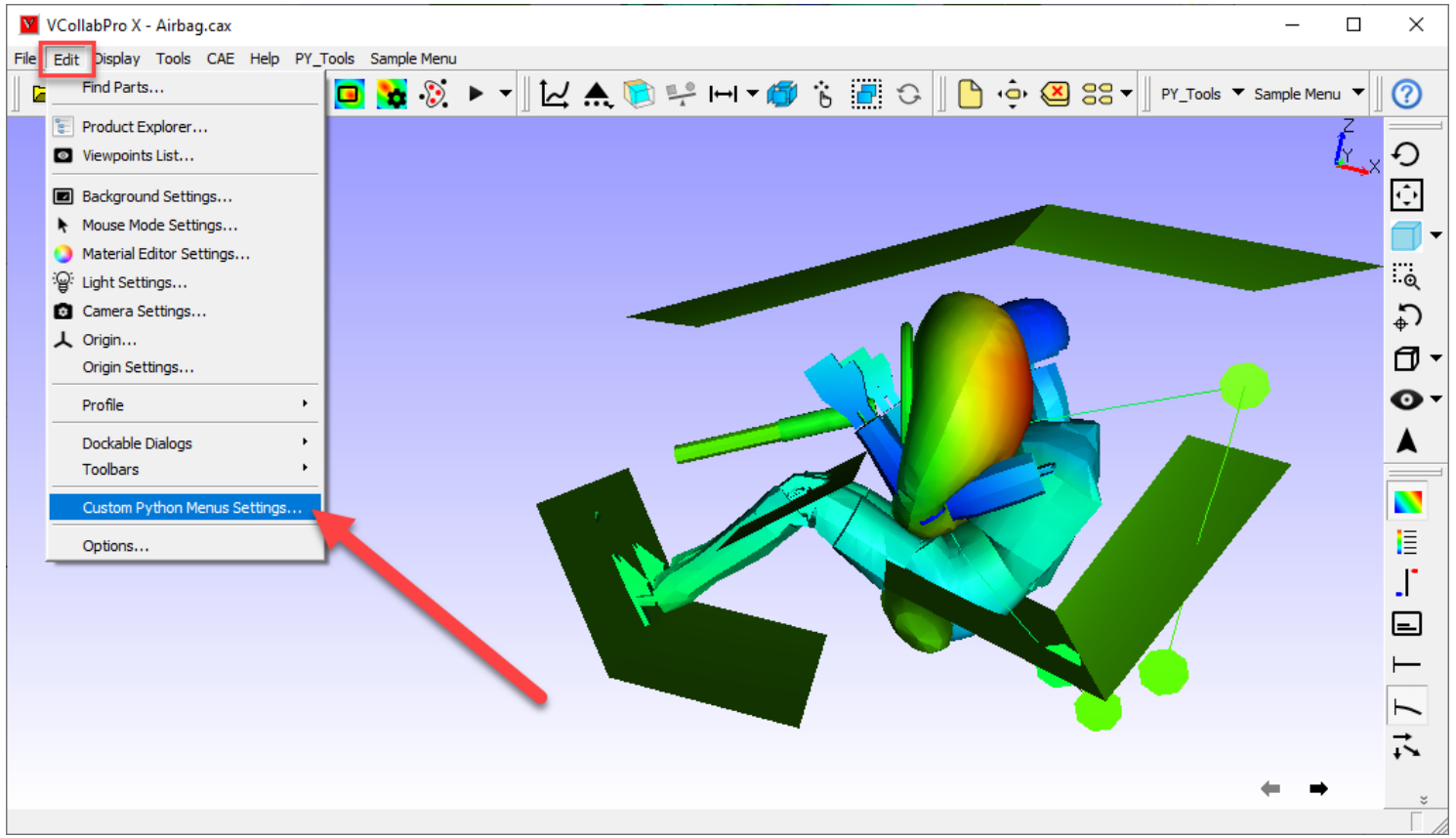


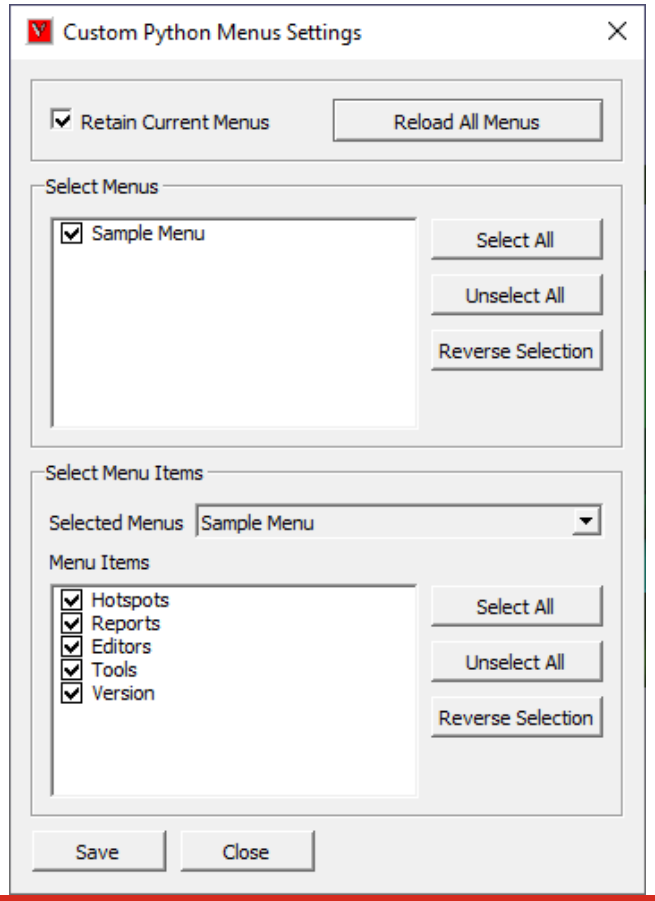
VCollabPro 23.1 Enhancements

Python Menus Customization (option supported only in ProX)

- The custom Python menus are loaded from JSON files that are placed in the folder referred to by the environment variable VCOLLAB_PLUGIN_PATH.
- Support sub menus
- Allows users to dynamically load and unload the custom Python menus.



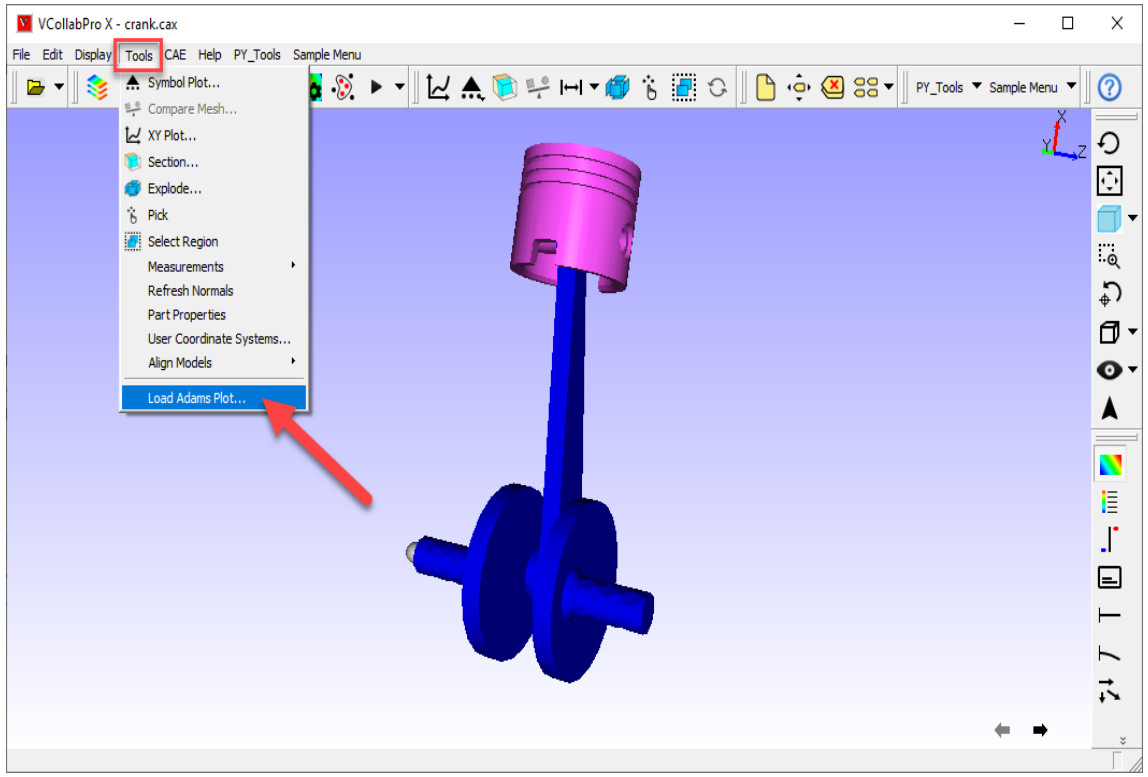


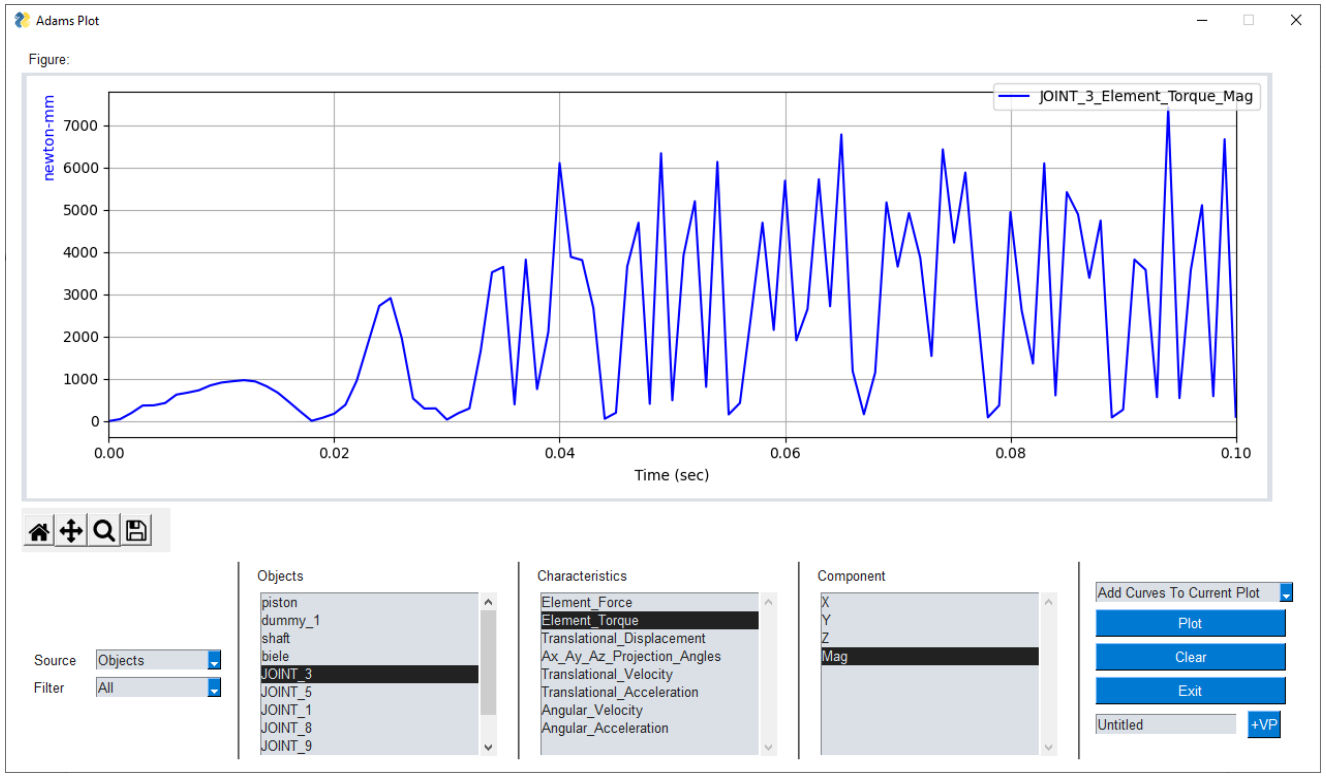


VCollabPro 23.1 Enhancements

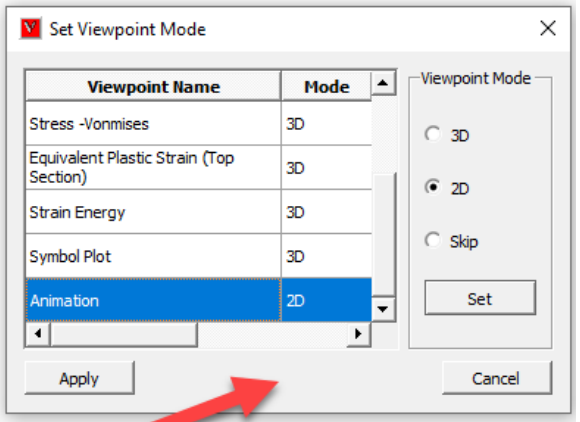
Support for Adams History data (option supported only in ProX)

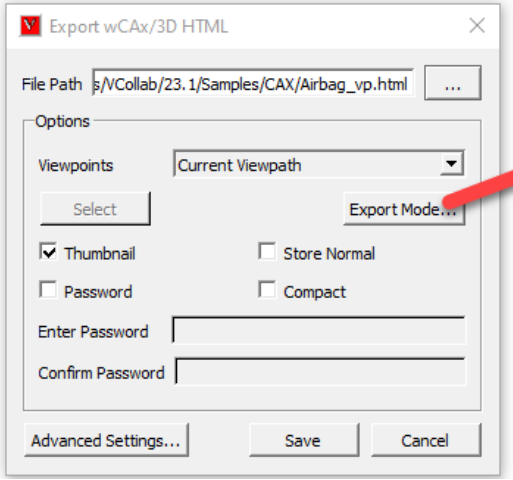
- VCollabProX is enhanced to draw the curves for Adams History Data
- Performance improved while loading and playing the Adams simulation





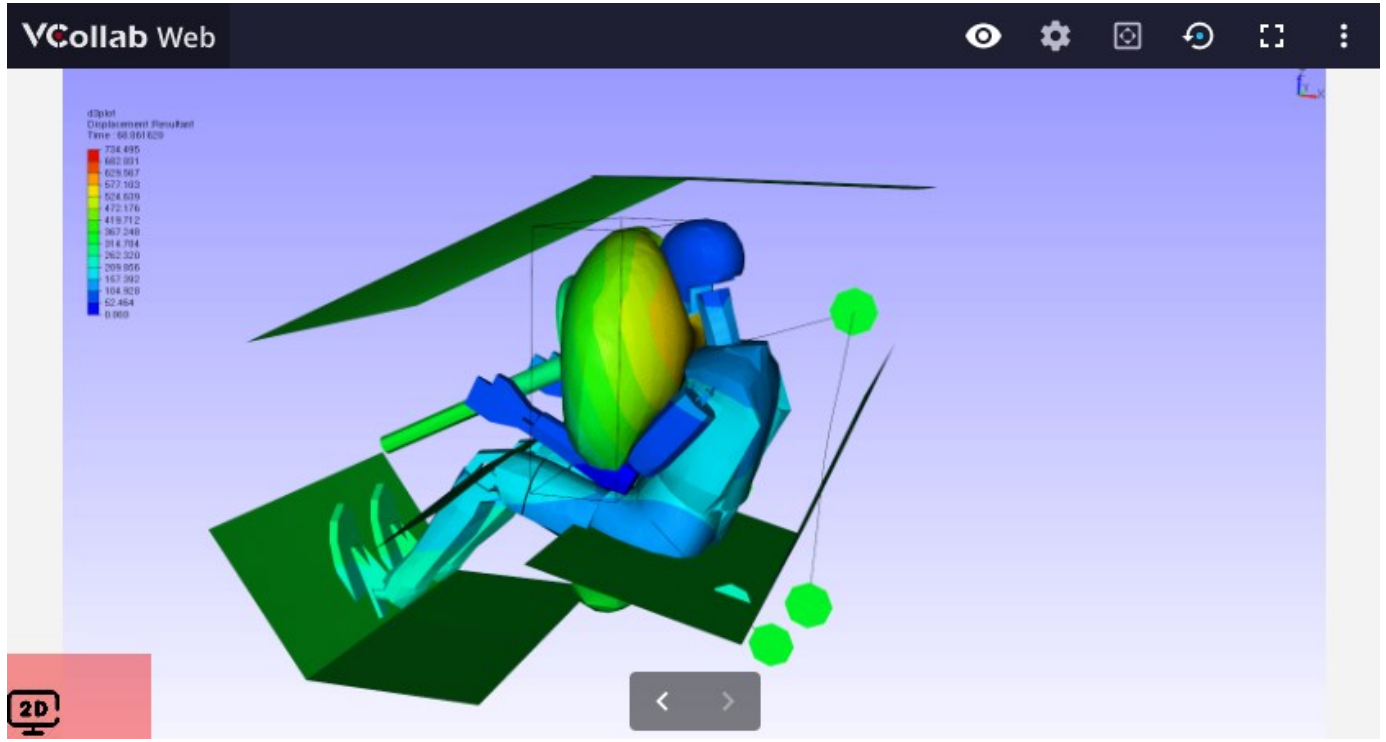
VCollabPro 23.1 Enhancements





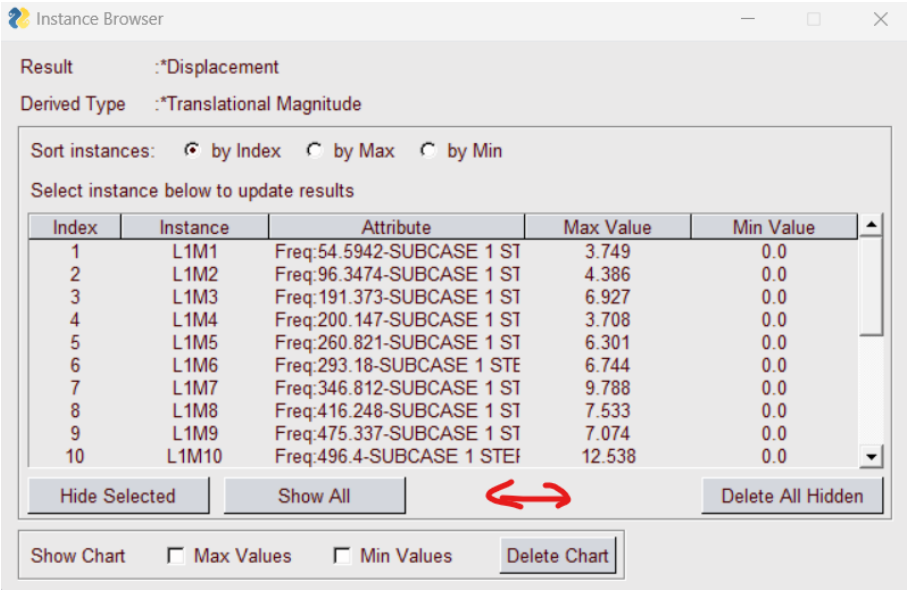
Export HTML

- WCAX/3D HTML Export – Option to export the CAE animations as movie
- This option can be used to reduce html file size
  - (when viewpoint with transient animation is present)

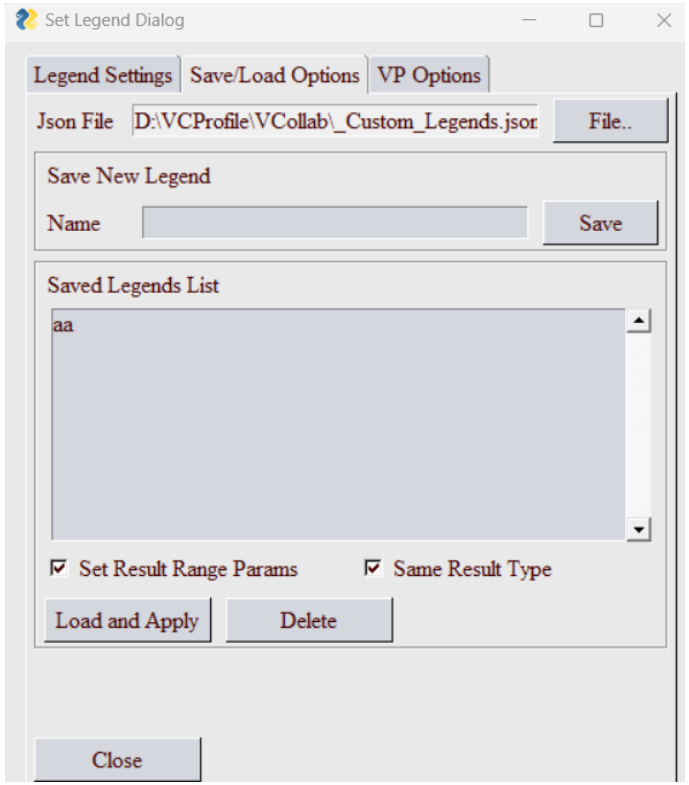


VCollabPro 23.1 – PY-Tools Enhancements

- Instance Browser tool
  - Option to delete instances



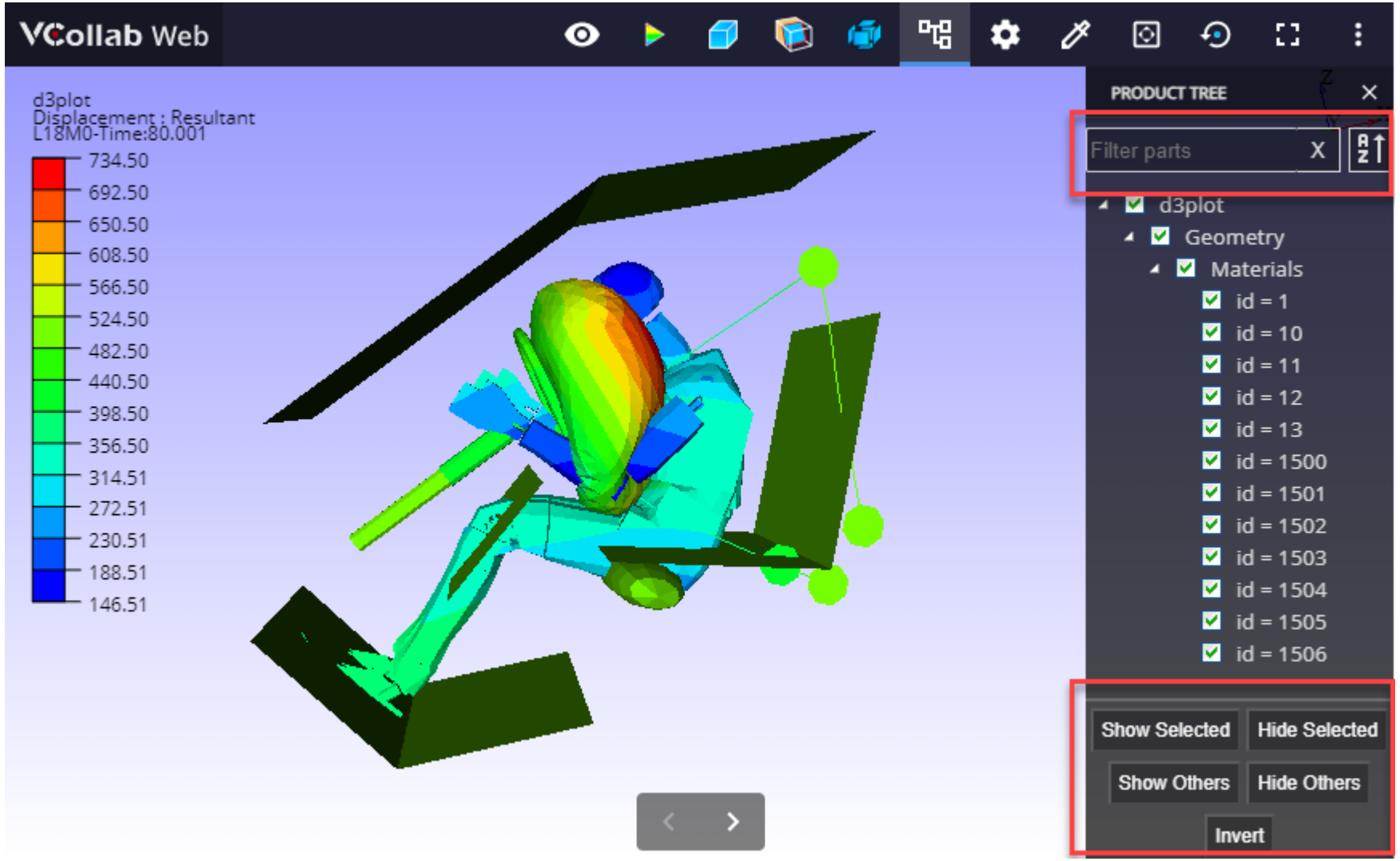
- Set Legend tool
  - Option to save and load legends
  - Option to apply a lagend settings to multiple viewpoints



VCollabWeb 23.1 Enhancements

Product Tree Enhancement in VCollabWeb Viewer

'Filter Parts' option is provided in the Product Tree



VCollab 22.x Enhancements

VCollab 22.x Enhancements

VCollabPro

- WCAX Export – Premium Features
- Mouse Settings: Reversing Mouse Wheel Zoom-in and Zoom-out
- Exporting the results of Nodesets into CSV
- NodeSet manager: Show & Hide Parts
- Compare Mesh: Sign Option is introduced in Compare Mesh dialog
- Find Dialog: Wild Card option is autodetected
- Probe ID – Multiple probe labels when multiple parts have same id
- Merge : If viewpath names are same, new suffix will be added
- Set Working Directory (for all save dialogs)
- Prompting user with warning message to save modified CAX with viewpoints while reloading and closing the application.

- XYPlot : Minor Grid option, Display enhanced
  - Titles supported in CSV import/export,
  - Plots for Rigid Body Transformation (Adams Data) Results
- Image Label: Function is enhanced. Default texture mode is set to Actual/FitView
- Python version upgraded to 3.8
- Envelop for selected instances using Python API
- Key (name) is added to Labels/Tables , which can be used to search for a specific type of labels (only using API)

PyTools

- Set Legend => Enhanced GUI
- Instance Browser => New Function
- Export CSV Results => Nodesets Option
- CreateCAX (VMoveSubmit)

VCollab 22.x Enhancements (contd…)

VMoveCAE

- Abaqus history plot extraction enhancements
- VMoveCAESubmit functionality is enhanced
- Dev scripts updated / enhanced
- Support for Abaqus 2022
- Support for CFX 2022
- Support for ANSYS 2022
- Gasket element result transformations bug is fixed
- Issues related to Ansys 2021 format changes are fixed

VCollabWeb

- Advanced Viewer: Support provided for ProductTree, Explode, Section and Probe
- Bug fixes and Enhancements

VMoveCAD

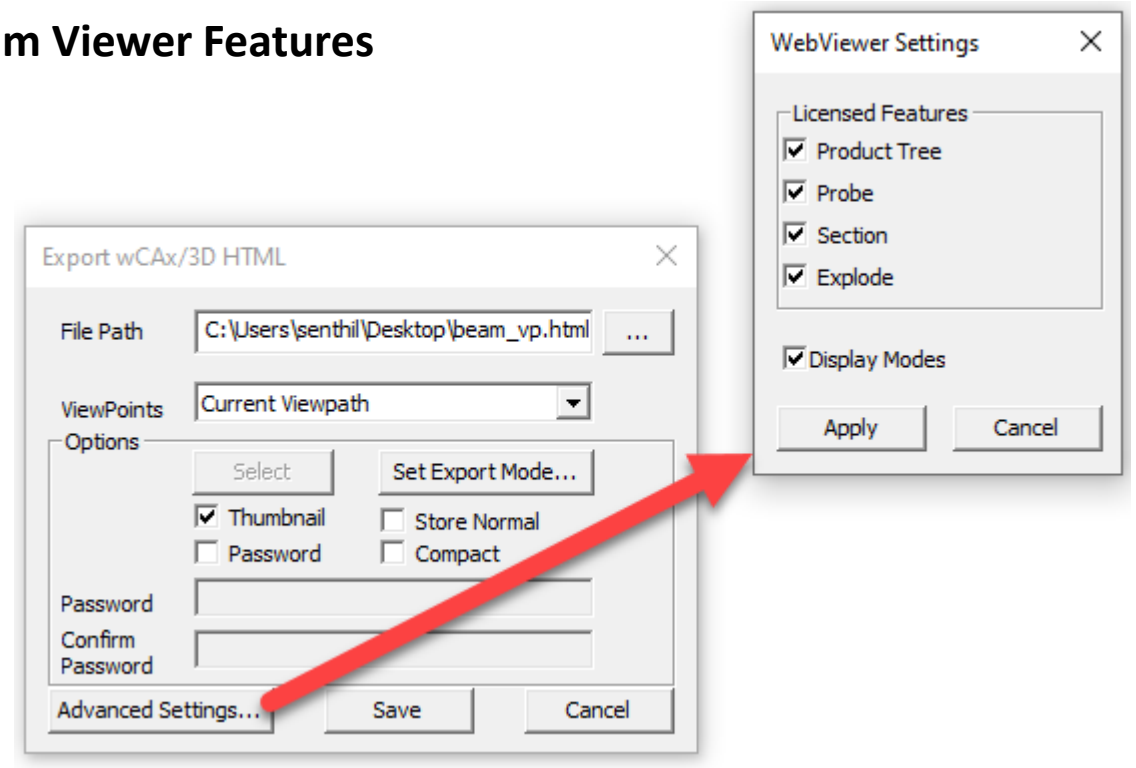
- 3D Experience (Catia V6) is supported up to 2022x
- Catia V5 is supported up to R32(V5-6R2022)
- Pro/E is supported up to Creo Parametric 9.0
- Inventor is supported up to 2023
- UG NX is supported up to UGNX2206
- ACIS is supported up to 2021 1.0
- Parasolid is supported up to v34.1
- SolidWorks is supported up to 2022
- SolidEdge is supported up to 2022

VCollabPro Enhancements

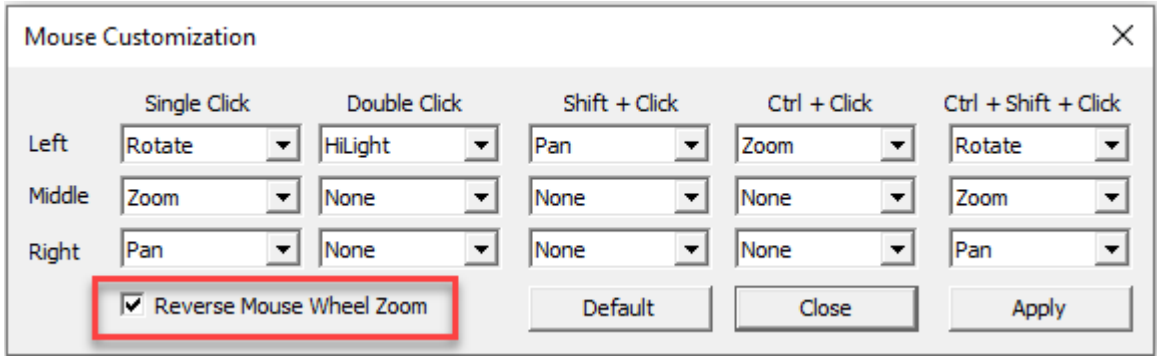
WCAX/HTML Export – Premium Viewer Features

- Option is provided in VCollabPro to export the WCAX data with
  - Product Tree
  - Probe
  - Section
  - Explode
- VCollabWeb Viewer is supported to view these data

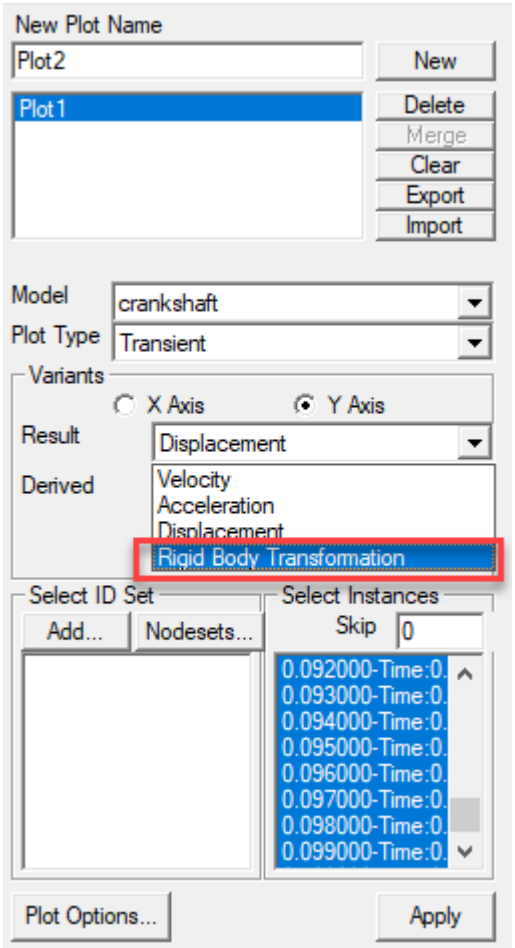
Note: These 4 options are premium features and need license to export it.



VCollabPro Enhancements



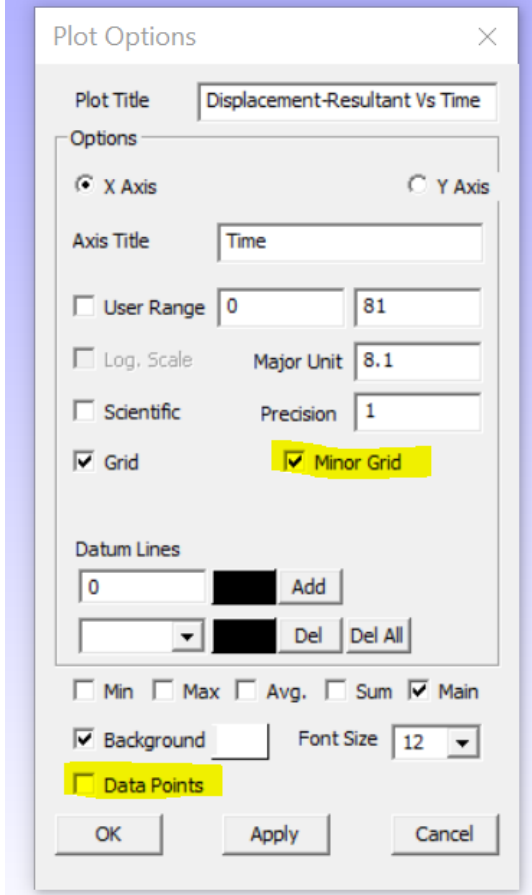
Reverse Mouse Wheel Zoom: Zooming direction can be customized for forward as well as backward scroll

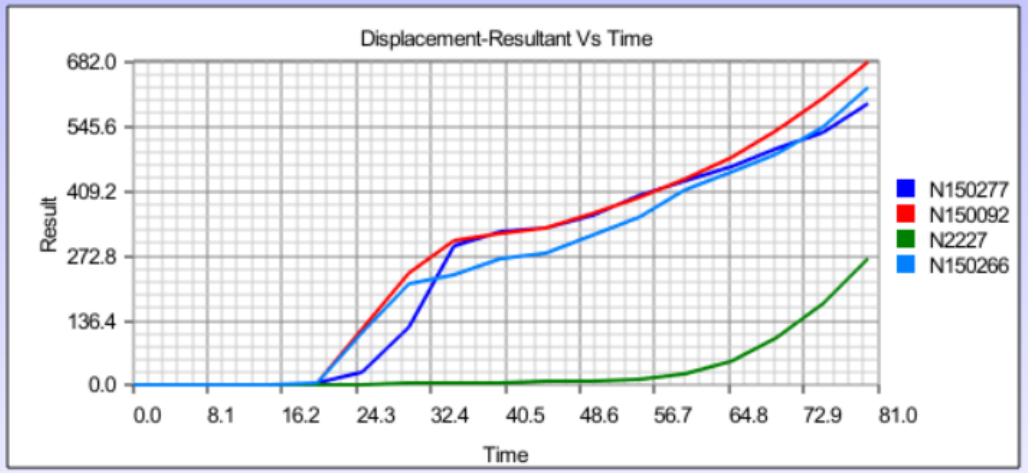


XYPlot: Supported for RigidBodyTransformation (Adams Data) Results

VCollabPro Enhancements

- **XY Plot Enhancements**
  - **Minor Grid option**
  - **Enhanced Display**
    - **Option to suppress markers for Data points**
    - **Line thickness based on line size in options dialog**
  - **Titles supported in CSV import/export**
    - **Format changed**



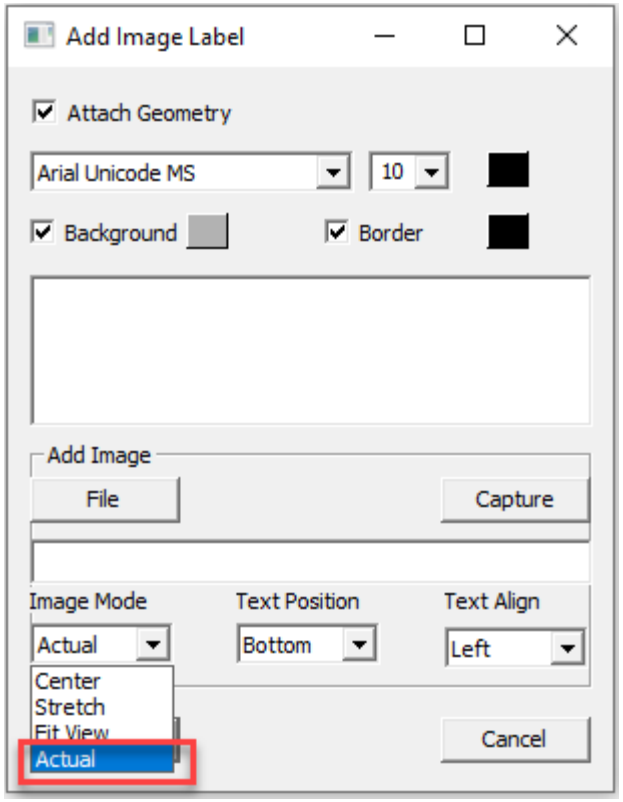


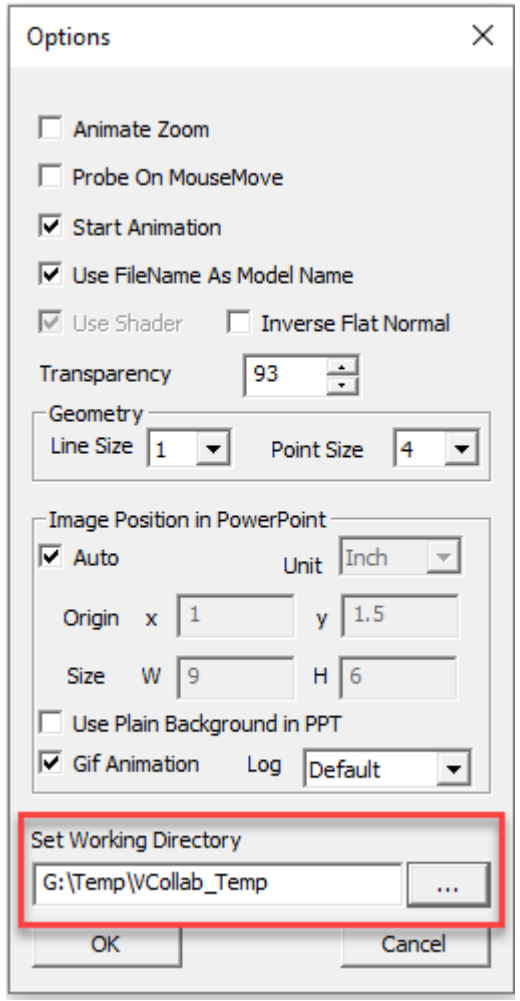
	A	B	C	D	E	F
1	VCOLLAB_XYPLOT_FILE_CSV_X_SINGLE_ATTRIBUTE					
2	#Titles	Displacem	Time	Result		
3	Time	Time	N150277	N150092	N2227	N150266
4	0	0	0	0	0	0
5	4.99443	4.99443	0.000252	0.000261	0.124359	0.000311
6	9.99323	9.99323	0.002075	0.001531	0.534401	0.001549
7	14.9916	14.9916	0.048939	0.067748	1.28159	0.071102

VCollabPro Enhancements

Add Image Label :

- Functionality is enhanced
- Option is introduced to attach the image with actual size





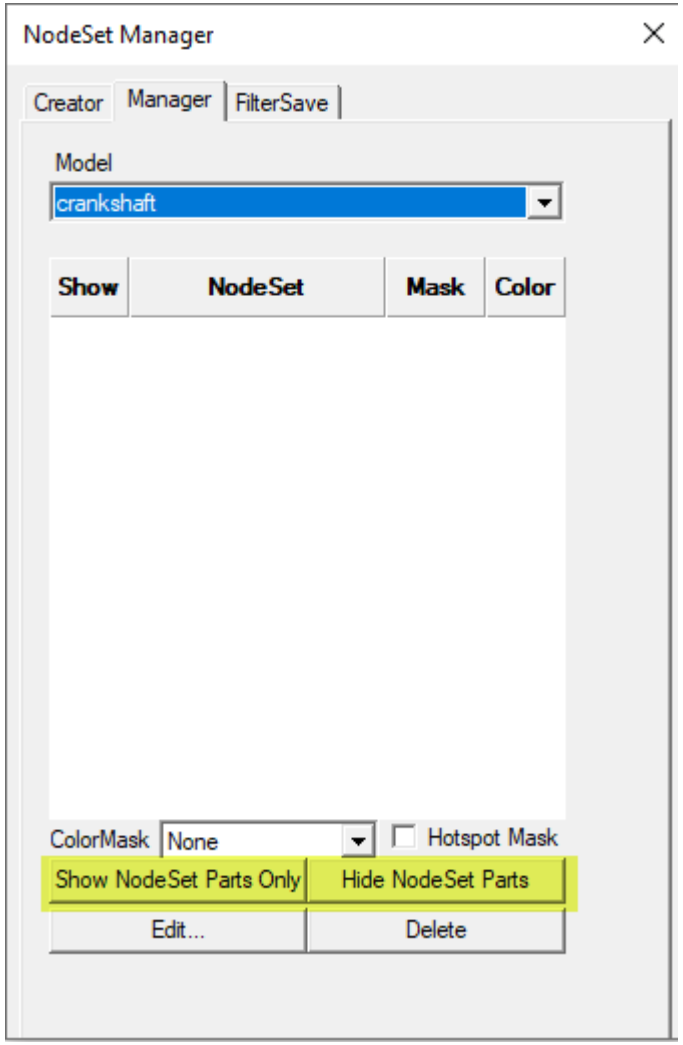
Set Working Directory:

- The directory from which the CAX file was loaded is the default working directory. The working directory can be edited and set by the user. All file dialogs will pop with the working directory that is set.

VCollabPro Enhancements

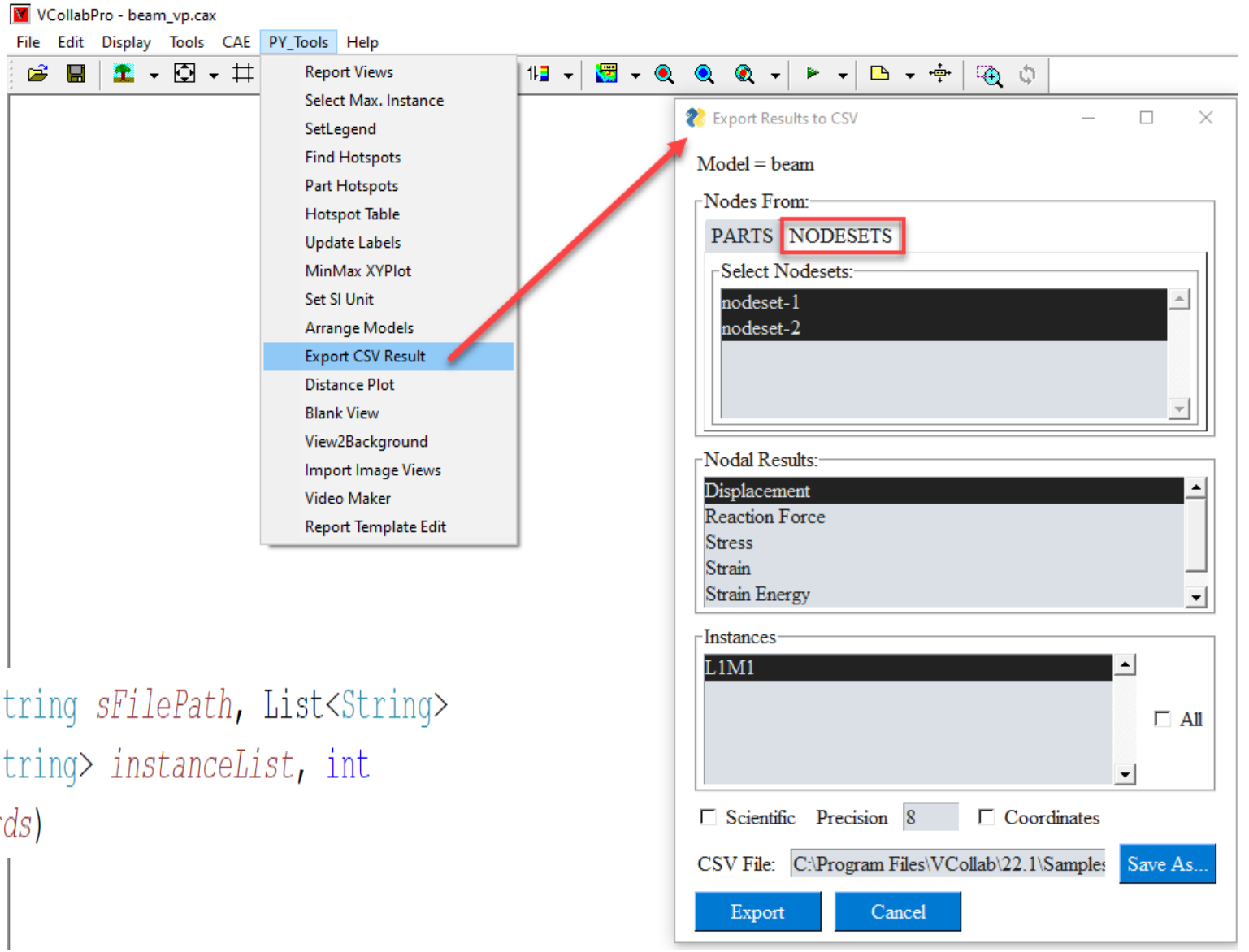
Nodeset Manager:

- Displays or Hides parts associated with the nodesets



PyTools => Export CSV Results => Nodesets Option

Interface for exporting the results of Nodesets into CSV

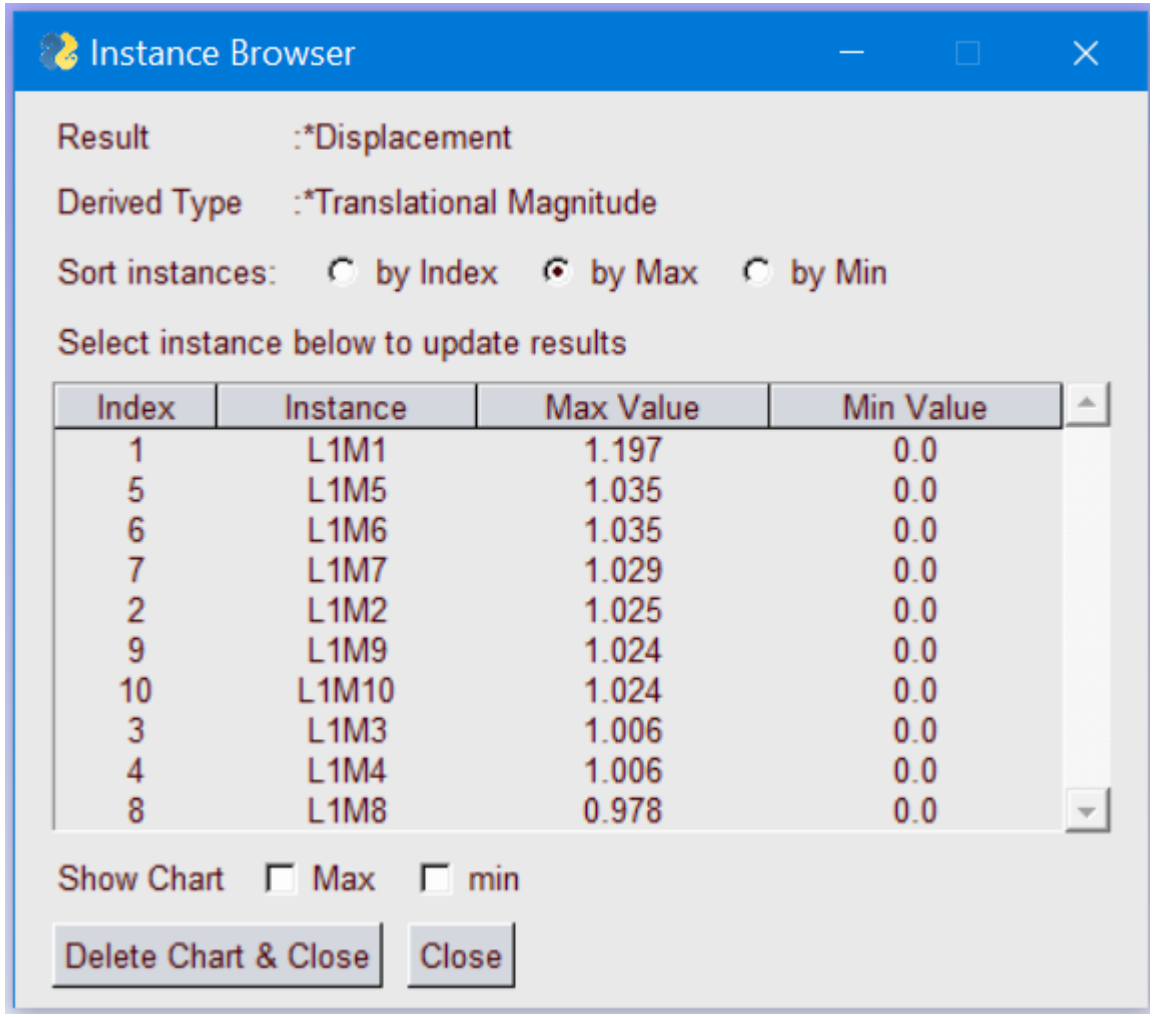


Exporting the results of Nodesets into CSV using Python API

```
bool xExportCAENodeSetResults(String sModel,String sFilePath, List<String>
NodeSetNames, List<String> resultList, List<String> instanceList, int
iPrecision, bool bScientific, bool bPrintCoords)
```

PyTools => Instance Browser

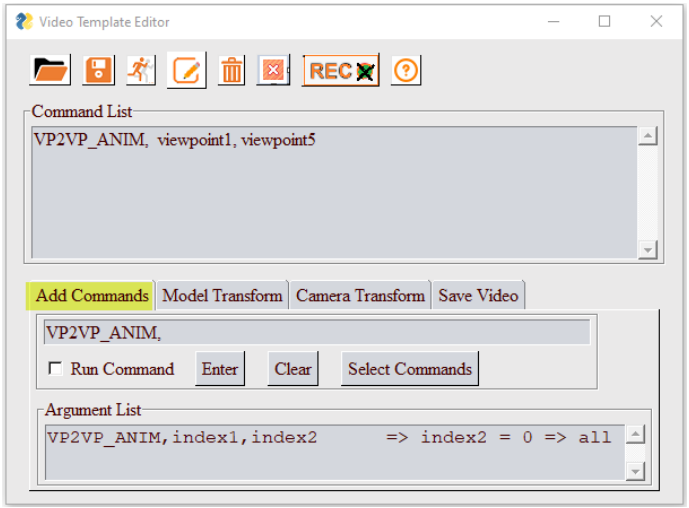
- Display List of instances and Max/Min Value
- User can select specific instance from list
  - CAE display will be updated to this instance
- User can create Max or Min XY plot



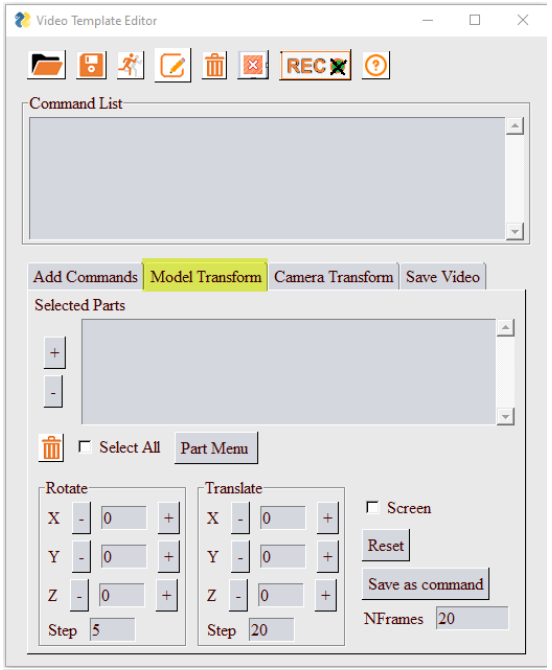
PYTools: Video Maker

Animations can help to communicate complex geometric feature (Shape/Assembly/Joint/Connections), specific deformations or relative motion between parts and critical hotspot locations in a model. In general, a video should capture part movements, rotation of models or camera, sectional views and CAE animations. High quality animations are created by capturing many frames (images) and then stitching them together. Select "PyTools=> Video Maker " menu option to lunch the following GUI. The GUI can be used to load , Edit and run a set of commands. Help option in this dialog will give details for all the commands. Python Source code for the commands as also available in Pytools/VideoMaker folder.

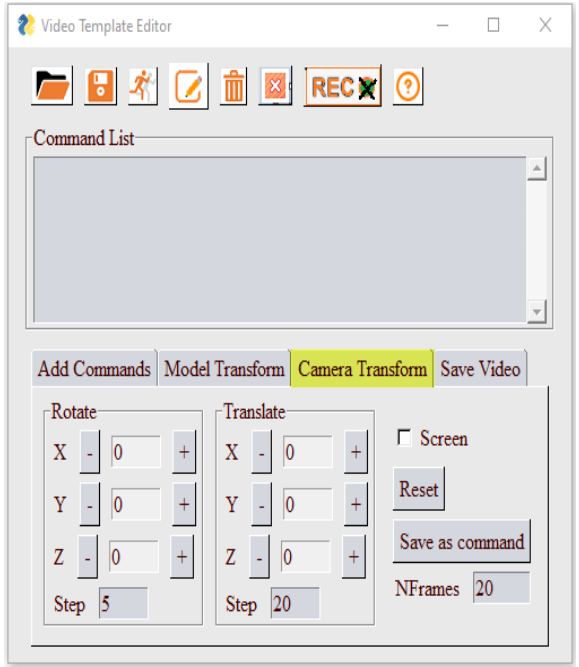
Video Template Editor GUI



To add a command to define video action



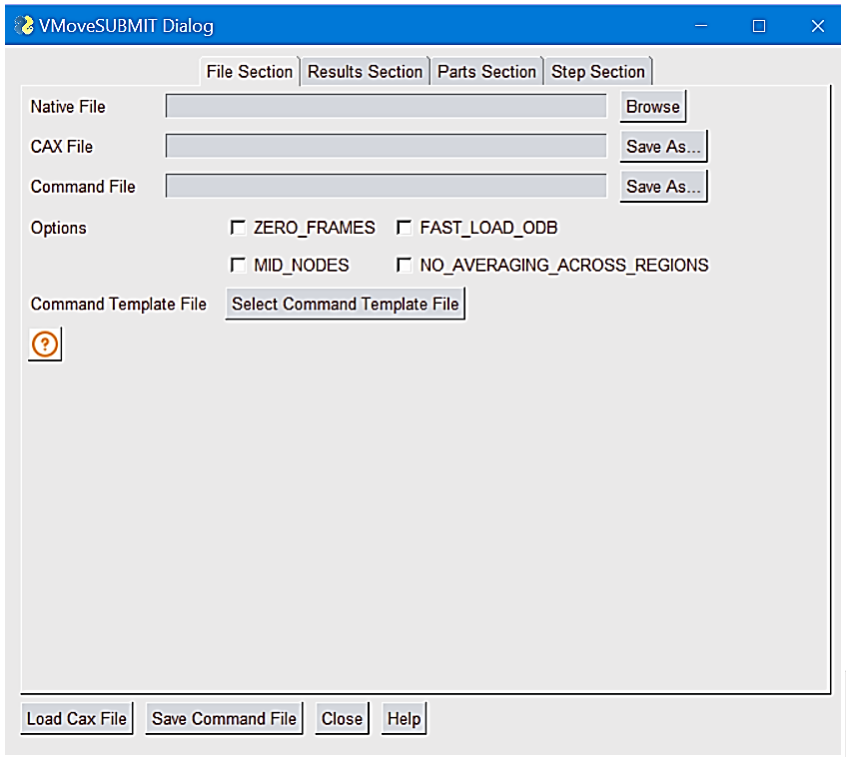
To define model transformation

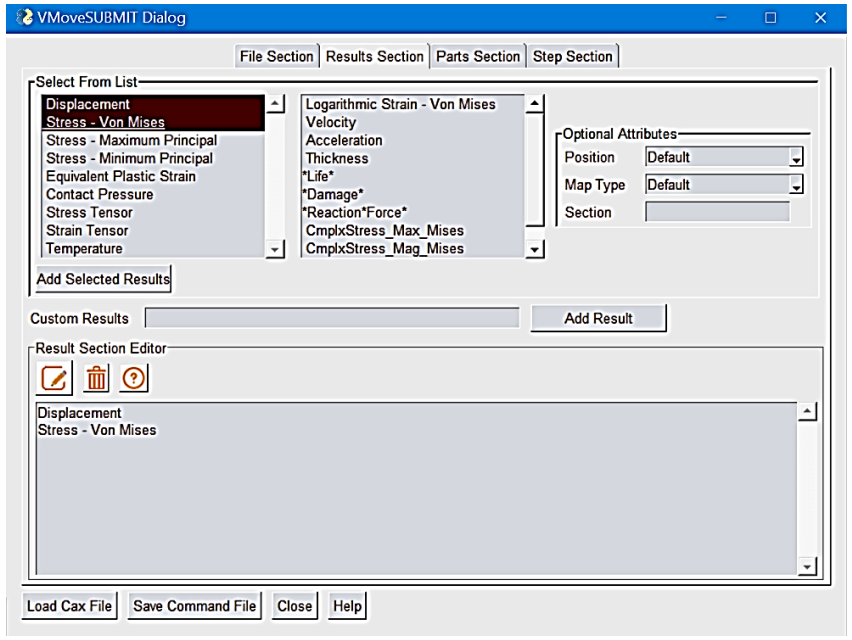


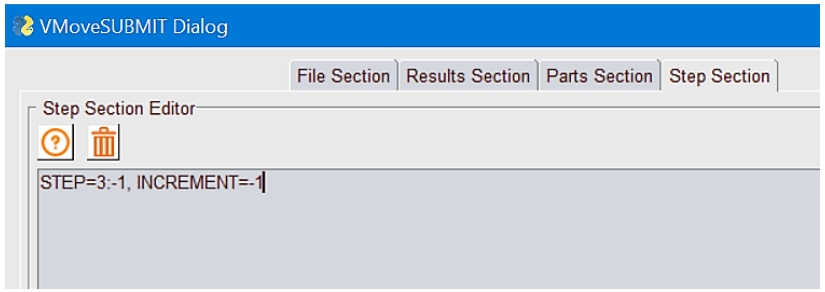
To define Camera Transformation

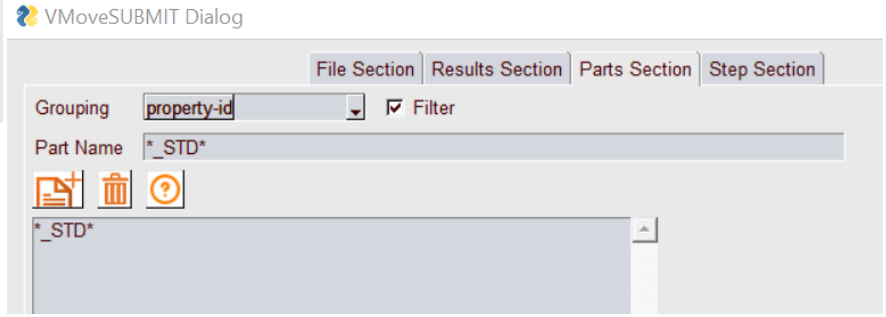
PyTools => CreateCAX (VMoveSubmit)

- GUI to select Native files, Results, Parts and Steps/Instances
- Create CAX using VMoveSubmit and load into VCollabPro
- Or Save VMoveSubmit command text file and run in batch mode









VCollabWeb Viewer Enhancement

Premium Viewer Features

Support provided for

- Product Tree
- Explode
- Section
- Probe