



## What's New in 3DCS?!

8.2.0.0

# What's New in 3DCS!

8.2.0.0 - June 2025

Below are a list of changes, enhancements and resolved issues based on the entire 3DCS suite or a specific CAD system available with 3DCS. Please review the list of changes and don't hesitate to ask about a specific change.

Any text written with a teal highlight refers to any Simulation Output change. In other words, some calculation changes were made to either a distribution, a measurement output or DLL result. This could result in minor changes to a previous Model Simulation output.

## What's New pages:

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## Enhancements

**Mean Shift Analysis:** Displays the mean shift value for each contributor.

**Auto Point Projection:** automatically projects multiple coordinate points onto the calculated projected features in a single step.

**GeoFactor Analyzer and Critical Tolerance Identifier (CTI):** These features are now available in the Run Analysis window, along with Monte Carlo Analysis, GeoFactor Analysis, and Contributor Analysis. These were previously only available with an AAO license, but now is available with the Variation Analysis license.

**APQP Report:** Added Advanced Process Quality Control (APQP) Reporting features within the 3DCS Automated Report. (74571)

## General

- Regrouped the 3DCS tools functions under a new menu called Utilities in the Ribbon and toolbar.(75323).

- Added support for periods and other characters to be used in the part names, Alias Display, MTM and GD&T names, without changing them to underscores. (75295)
- Updated how license checks for Add-ons will be automatically checked. The user will not be prompted to activate it. (74610)
- Fixed a bug when the point selection limit says 1 of many it will not limit the selection to 100. (74496)

### **Monte Carlo Analysis**

- Resolved an issue where saving a RAW Data file during an analysis with multiple threads resulted in duplicate values appearing between samples. This is a global change and may impact Simulation Results. (74856)
- Updated the RAW Data file to use the Alias Display DCS Part Name as the Parent Part name. (74485)

### **Contributor Analysis**

- Resolved an with the Estimated Worst-Case Range (EWCR) Datum Shift calculation error. (75081)
- The Datum Shift on Combined Datum Axis will show Contributors from both datum features A(M) - B(M). (71836)
- Resolved a Contributor display with Dimension Distance measure which was showing the wrong Contributor. (74771)
- Contributors to Datum Shift and Bonus will display the correct parent part name, with Alias Display set to use the DCS Part Name. (74953).

### **Distributions**

- Fixed an issue when running a Tolerance with a User Defined Distribution (SMP) with different number of Threads. The different Threads would cause the tolerance to report addition values when running with Threads = 0 or 1. Running with anything Thread number will produce the same results. (74631)

### **GD&T**

- Added a Setting in the Preferences to control the default status of the Auto Refine option for newly created GD&T. (75129)
- Users can now use a Position tolerance to deviate points along the axis of a Feature of Size. (74275)
- Datum Shift and Feature Move results are now very similar. (71345)

- Dimensioning Location respects the first point direction even when its vector is not oriented towards the second point.(74930)

## Dialog

- All Move, Tolerance and Measure dialogs have been redesigned with a Grid-style dialog.
- An **[Add New]** button has been introduced in the Moves, Measure, and Tolerance dialogs, allowing users to create a new MTM seamlessly. This enhancement restarts the dialog for a new entry without requiring users to close and reopen it, streamlining the work-flow. (74516)
- Feature Wizard dialog is defaulted to Projection for Feature Point update. (75182)
- The Datum Target information will be displayed in the Datum feature dialog. (75095)
- Added a new menu dialog for Loading recent HST and HLM files. (75049)
- Updated the Delete Unused Data dialog to show what will be deleted in the Summary before selecting OK to delete the Features, Points or Duplicates CAD Entities. (75359)
- Updated the Feature Point dialog to allow users to switch the Material and Axis directions of a Point-Based cylindrical feature. (73007)
- Added Auto-Refine setting to the MTM On/Off dialog. (75350)
- When focused on the Feature list box in a dialog, users can use the TAB key to navigate to the key-in field effortlessly. (74967)
- Improved Mirrored or Duplicated parts/assemblies, with a Prefix or Suffix, 3DCS will add the Prefix and Suffix to both 3DCS Part Name and the CAD Part Name. (72461)
- Reintroduced the Feature clocking option with Position tolerance for both ISO and ASME standards. (74745)
- Empty Parts in the Move Part list will remain in the list, after saving, closing, and reopening. (73864)
- Simulation window will now instantly update the Measure when the Variant is switched in the Analysis Summary Dialog. (74572)
- Improved the Thermal Move temperature display to show the Analysis temperature correctly. (75029)

- Fixed the LMC and MMC value display for DRFs in the GD&T dialog. (74733)
- Fixed a bug where a newly added measure would not appear in the results if the previous run was interrupted before the measure was added. (75296)
- Fixed the Move dialog Object/Target Plane option to remain Object or Target when created or opening the dialog. (74813)
- Fixed this incorrect Variant display issue by hiding the combo box when loading the Hst or Hlm file. The combo box will appear only when running Analysis with multiple variant. (75042).
- Resolved an issue when Writing to Excel, part names with a space will be kept, instead of replacing with an underscore. (73048)
- Resolved an issue when creating a Tolerance from the right click menu, the dialog was not reflecting the default settings set in the Preferences, such as the material modifier setting. (74970)
- Resolved the issue when Linking Parts by Order from the Tree linking wizard, which was causing the parts to translate from its Nominal position. (73673).

### **Model Navigator**

- Added "Switch Axis direction" option to the tree right click menu, which will switch the vector direction of Hole/Pin Features without changing the type. Applicable only for Feature of size. (71241)
- A slow double-click on the tree group allows renaming, like how entities are renamed. (75618)
- The Model Navigator and other Windows will close and reopen when switching between models or editing parts. (75213)
- Improved the Model Navigator refresh speed on large models. (53910).

### **Tolerances**

- Circle Size tolerance creation and visibility has been changed with the "Create a size tolerance for Hole/Pin Points automatically" setting from Preferences. While Active, all Circle Tolerances will be shown in the Model Navigator, even if previously Inactive and Hidden. (75450)
- The CMM Dev files will now also include Point to Point and Point Nominal Measures. (74678)

- Added Multi-Scale back to Circular and Linear Tolerances. (75613).

### **Moves**

- Added warnings to catch if features are non-coplanar and non-coaxial when creating a move. This setting is controlled in the Preferences, based on the copy point method. (74683)
- Enhanced the Best fit routine calculation by loosening the threshold for Powell minimization function to 1e-8 from 1e-16 as 1-16 was too tight in this case. The warning for max reach will no longer display after running a Simulation. (73584)
- Iteration move will eliminate the failed assemblies when the "No Build Upon Failure" check box is activated. (72299)
- In the Best-Fit move, when the three surface pairs are set to 'hard constraints', the variation at all three surface pairs is zero. (75234)
- Resolved an issue with making slots/tabs behave the same as planes when used in the Feature move. (74098)

### **Measure**

- Changed the Spec Modes for Circle Interference, Circularity, and Virtual Clearance. These measures will be set to Absolute, but the Spec Mode Options will be hidden from the dialog. Setting Relative in the Preferences will not affect these measures. (75075)
- Fixed a bug in the Equation measure which was not calculating the measurements from the sub levels correctly. (75700)
- Fixed a bug where a newly added measure would not appear in the results if the previous run was interrupted before the measure was added. (75296)

### **Features**

- Added the Slot/Tab item to Copy Data list. Users will be able to Copy or Move Slot/Tab features from/to parts. (74778)
- A Hole/Pin Combined Feature created from coaxial holes/pins will be considered a feature of size in the Relationships dialog. (75238)
- Dynamic Point creation now picks up the type and size if the Control point is a pin or a hole, when creating point as offset using the same control point twice. (73426)
- Dynamic Point creation will now display a preview before its created. (72597).

- The exaggerated deviation, when Datum C is defined as 2 two point slots, is eliminated. (75089)
- Fixed an issue with Dynamic Points used in Feature Slots, causing the Relationship Wizard to crash on open. (75437)
- Fixed the issue where the slot/tab created using different parts was not updating the size information correctly. (74583).

### **Validate**

- Added warning to the 3DCS Log file, to indicate if the Report file path is too long, and if the image fails to generate. (74826)
- Corrected an invalid validation message for Parallelism GD&T on two planes, which incorrectly stated that the features were not parallel to the datum. (75058)
- Corrected the Validation Warning with a linear size tolerance (distance) and a diametrical size tolerance, when on the same feature. (74836)
- Points with Circle Size Tolerance in the Relationship Tree will correctly display the color of the Point, based on their usage status. (74867)
- Added a new validation message: DRF Pattern requires Material Condition (MMB or LMB) at Secondary. (73446).

### **Report**

- Changed how the PPT Report checks the report version. The Report will not require users to update to the latest template. The Template version can be viewed from the dcsTemp Directory. Users can keep their current version or update to the latest 3DCS PPT report. (75207)
- GD&Ts are no longer tied with Hide Parts (not in MTM) Report Generation setting. The GD&T images will only take pictures of the respective parts. (75152)
- Reintroduced the Animate Measure feature to the HTML Report, which had been missing since the 8.1.0.0 release. (74725)

### **User DLLs**

- Thermal Move CTE and Temperature input constants are now tied with the User Dll Constants option. Having this check box active will add input lines for CTE and Temperature for Thermal Move for DOE input file. (74981)
- Changed the Take Measure DLL (dcu\_Xform.dll) measure dialog. The Current value will now show the last value taken by the measure. (74774)

- Resolved an issue with DOE not correctly generating a UTF8 CSV file, which caused DOE to not run trials, and ignore MTMs containing Chinese characters. (74964)
- Added the "Same as Monte Carlo" checkbox to the DOE dialog. The DOE will always run the same number of simulations as Monte Carlo unless the box is unchecked. (74730)
- The Directions field in the old Segment Bend dialog is now editable. (74966)
- Removed the Joint Variance Analysis (dcu\_fjva.dll). (74909)
- Removed the Maximum Inner Diameter (dcsMsInsideVirtualClearance) and Minimum Outside Diameter (dcsMsOutsideVirtualClearance) measures from the dcu\_MTMLib2.DLL. Users can alternatively use the Virtual Clearance measure. (74692)

#### **Example Models**

- Updated the Line-Plane Angle measures example models to show how the software can report a positive and negative value.



## Issues Resolved for 3DCS in Creo:

### General

- Resolved an issue when importing files, such as DB2, DEV, MTM and others, to inadvertently hide the Points and Mesh, until the next Import file is used. (75365)

### Animation Accelerator

- The mouse controls in the Animation Acceleration window have been aligned with those of the native software window for a more consistent user experience. (71876)
- Added Reframe On support while the Animation Accelerator window is open. Reframe On from the Model Navigator will zoom to the selected point or feature. (74120)
- Added the Standard Views functionality to the Animation Accelerator. The model will now open in the ISOMETRIC View. (74027)
- Resolved the issue in the Animation Accelerator where sub-assemblies were not moving during Animation. (73712)
- Fixed the Color Contour Legend to show the Est. Range, N'STD, and % Out of Spec when a measure is selected in the Simulation window. (74117)

### Features

- Points that are not located on a surface can now be extracted. This process generates a Coordinate Point, defined by a Z-direction as default. (75311)

### Extract GD&T

- Redesigned the Replace GD&T option in Extract GD&T. When Inactive, existing GD&T will keep all parameters (Range, Offset, Modifiers, etc.) and add or remove features; and add new GD&T to the model. (66164)
- Resolved an issue with Extract GD&T, where the size GD&T was wrongly extracting as Dimensional Location. (75054)

### Display

- Fixed a bug where hidden CAD part status not saved when Compliant Models are built. (74437)
- Added a Prefix field to the Feature Point dialog. (75407)
- Improved the label display to show larger labels in the graphics. (74731)

## **Dialog**

- Added an option to the Edit Features dialog to remove the size of the feature selected. For Pins, Holes, Cones, and Spheres, this will remove the size from the surface to make it a non-feature of size. (75246)
- Moved the Animation Accelerator graphic setting to the Display section in Preferences. (73555)
- Fixed the bug where the warning dialog on invalid GD&T range was not closing. (75602)
- Removed the Create Center Point button from the Feature Point dialog. (74036).

## **Issues Resolved for 3DCS in NX:**

### **General**

- Resolved an issue when the feature direction is manually switched, the direction will now be preserved when data is imported from the Sub-Assembly to the top assembly using the "Import Sub-assembly" function (74166)
- Resolved an issue when importing files, such as DB2, DEV, MTM and others, to inadvertently hide the Points and Mesh, until the next Import file is used. (75365)

### **Animation Accelerator**

- The mouse controls in the Animation Acceleration window have been aligned with those of the native software window for a more consistent user experience. (71877)
- Added Reframe On support while the Animation Accelerator window is open. Reframe On from the Model Navigator will zoom to the selected point or feature. (74120)
- Added the Standard Views functionality to the Animation Accelerator. The model will now open in the ISOMETRIC View. (74027)
- Resolved the issue in the Animation Accelerator where sub-assemblies were not moving during Animation. (73712)
- Fixed the Color Contour Legend to show the Est. Range, N'STD, and % Out of Spec when a measure is selected in the Simulation window. (74117)

### **Features**

- Extracted points from NX will now extract the point names correctly. (72237)

- When converting a Coordinate Point or Feature point to NX, the point will now be correctly converted to a CAD point. (74850)

### **Extract GD&T**

- Redesigned the Replace GD&T option in Extract GD&T. When Inactive, existing GD&T will keep all parameters (Range, Offset, Modifiers, etc.) and add or remove features; and add new GD&T to the model. (66164)
- Resolved an issue with Search GD&T, where the size GD&T was wrongly extracting as Dimensional Location. (75054)

### **Dialog**

- Added an option to the Edit Features dialog to remove the size of the feature selected. For Pins, Holes, Cones, and Spheres, this will remove the size from the surface to make it a non-feature of size. (75246)
- Added a Prefix field to the Feature Point dialog. (75407)
- Moved the Animation Accelerator graphic setting to the Display section in Preferences. (73555)
- Removed the Create Center Point button from the Feature Point dialog. (74036).

### **Model Navigator**

- Enhanced Branch Tree to hide all other geometry, points and mesh not in the branch list. (74209)
- Fixed a bug where hidden CAD part status not saved when Compliant Models are built. (74437).

## **Issues Resolved for 3DCS in SOLIDWORKS:**

### **General**

- 3DCS is now supported in SOLIDWORKS 2025! (74855)
- Resolved issues with the Section View and Exploded View creation, which were blocked after Update Model. (75226)
- Resolved an issue when importing files, such as DB2, DEV, MTM and others, to inadvertently hide the Points and Mesh, until the next Import file is used. (75365).

### **Animation Accelerator**

- The mouse controls in the Animation Acceleration window have been aligned with those of the native software window for a more consistent user experience. (71877)

- Added Re-frame On support while the Animation Accelerator window is open. Re-frame On from the Model Navigator will zoom to the selected point or feature. (74120)
- Added the Standard Views functionality to the Animation Accelerator. The model will now open in the ISOMETRIC View. (74027)
- Resolved the issue in the Animation Accelerator where sub-assemblies were not moving during Animation. (73712)
- Fixed the Color Contour Legend to show the Est. Range, N'STD, and % Out of Spec when a measure is selected in the Simulation window. (74117)

### **Extract GD&T**

- Redesigned the Replace GD&T option in Extract GD&T. When Inactive, existing GD&T will keep all parameters (Range, Offset, Modifiers, etc.) and add or remove features; and add new GD&T to the model. (66164)
- Resolved an issue with Search GD&T, where the size GD&T was wrongly extracting as Dimensional Location. (75054)

### **GD&T**

- Resolved the issue where GD&T range values in inches were mistakenly converted to millimeters during extraction. (75217)
- Resolved an issue where the composite DRF frame was not being extracted during GD&T extraction. (75302)

### **Dialog**

- Added an option to the Edit Features dialog to remove the size of the feature selected. For Pins, Holes, Cones, and Spheres, this will remove the size from the surface to make it a non-feature of size. (75246)
- Added a Prefix field to the Feature Point dialog. (75407)
- Moved the Animation Accelerator graphic setting to the Display section in Preferences. (73555)
- Removed the Create Center Point button from the Feature Point dialog. (74036).

## **Issues Resolved for 3DCS in CATIA V5:**

## **General**

- Fixed a crash on click and drag the moved points (Points moved from one part to another using copy point). (75637)
- Fixed a crash when using Excel Export with earlier versions of CATIA V5 (R22-R28). (75482)

## **Dialog**

- Updated the Feature Point dialog to a new format. (73444)

## **Extract GD&T**

- Redesigned the Replace GD&T option in Extract GD&T. When Inactive, existing GD&T will keep all parameters (Range, Offset, Modifiers, etc.) and add or remove features; and add new GD&T to the model. (66164)
- Resolved an issue with Search GD&T, where the size GD&T was wrongly extracting as Dimensional Location. (75054)

## **Update Model**

- Resolved a Crash with Update Geometry dialog when overlapped with other dialogs. (75333)

## **Generate Report**

- Reintroduced showing FT&A from CATIA V5 when creating a report with GD&T. The GD&T will need to be linked in 3DCS to show the GD&T in the report. (74414)

## **Issues Resolved for 3DCS in 3DEXPERIENCE:**

### **Features**

- Resolved an issue with Mirror causing Points and MTMs to mirror in the wrong direction. (75488)

### **Dialog**

- Added an option to the Edit Features dialog to remove the size of the feature selected. For Pins, Holes, Cones, and Spheres, this will remove the size from the surface to make it a non-feature of size. (75246)
- Updated the Feature Point dialog to a new format. (73444)
- Fixed an issue with the Feature Linking Wizard when using Auto Link. The confirm cancel message would continuously appear while Auto Linking was working, though the user did not select the Cancel button. (74814)

**Extract GD&T**

- Redesigned the Replace GD&T option in Extract GD&T. When Inactive, existing GD&T will keep all parameters (Range, Offset, Modifiers, etc.) and add or remove features; and add new GD&T to the model. (66164)
- Resolved an issue with Search GD&T, where the size GD&T was wrongly extracting as Dimensional Location. (75054)

**Generate Report**

- Reintroduced showing FT&A from 3DEXPERIENCE when creating a report with GD&T. The GD&T will need to be linked in 3DCS to show the GD&T in the report. (74414)

**Issues Resolved 3DCS Multi-CAD:****General**

- Updated the Transmagic version to 14.20.300, allowing Multi-CAD and DCS Converter to convert up to NX 2312. (75291)

**GD&T**

- Size Tolerances from a Datum Feature will be created as a Dimensioning Location, with the Datum Feature as the Origin feature. (74690)
- Size Tolerances on two planar features will automatically create a Slot or Tab feature. (74690)

**Model Navigator**

- Resolved an issue where the graphics or HSF of a copied part would not appear when using Copy and Paste. (73972)

**Display**

- Changed the default graphics driver to Open GL from DX9. (74742)
- Improved the selected Feature label display. When the label is over the feature, the label will be visible. (71008)

**Dialog**

- Improved Mirrored or Duplicated parts/assemblies, with a Prefix or Suffix, 3DCS will add the Prefix and Suffix to both 3DCS Part Name and the CAD Part Name. (72461)
- Added a Prefix field to the Feature Point dialog. (75407)

# What's New in 3DCS?

8.2.0.0 - June 2025

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## Enhancements and Resolved Issues (8.2.0.0)

**No changes were made for Batch Processor in 8.2.0.0**

## Enhancements and Resolved Issues (8.1.0.3)

**No changes were made for Batch Processor in 8.1.0.3.**

## Enhancements and Resolved Issues (8.1.0.0)

### **Saving Files**

- Changed the DEV file to save only Point-Nominal measures from Monte Carlo Analysis and Batch Processor. (74213)

### **Script**

- Added line to Run at Median in Batch Processor. (74321)

## Enhancements and Resolved Issues (8.0.0.2)

**No changes were made for Batch Processor in 8.0.0.2.**

## Enhancements and Resolved Issues (8.0.0.1)

### **Monte Carlo**

- Fixed an issue in Batch Processor to give the same results as the Run Analysis Results. (73249)

### **Report**

- Running the Batch Processor and creating a Report will contain the MTM and GD&T icons. (73188)

## Enhancements and Resolved Issues (8.0.0.0)

### **General**

- Provisions are added to the Batch Script file to set the flag to RSS or Range Control for GD&T Deviation Command. (71182)

- The DOE function outputs HLM files as well. (70789)
- Batch Processor will support both Config files \*.INI and \*.CFG. Changed all Config files extensions to INI from CFG files. (72063)

## **Enhancements and Resolved Issues (7.10.0.2)**

### **Dialog**

- Added Regenerate Script File button in the Batch Processor dialog. (70426)

## **Enhancements and Resolved Issues (7.10.0.0)**

### **General**

- Fixed an issue when saving a DCSSSENS\_SAVE 3 output option to correctly output the current specified units. (71622)
- Fixed an issue with Batch Processor output for HST statistical results to match what was set in the Analysis Summary. (71624)
- Fixed the GeoFactor file (\*.gf2) from Batch Processor, correcting the Sum of the remaining Contributors % total value in the CSV file. (71631)



# Advanced Analyzer and Optimizer

8.2.0.0 - June 2025

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## Enhancements and Resolved Issues (8.2.0.0)

### Datum Optimizer

- In DO the Population number has to be between 2 and 20000. (75019)
- This warning message "You cannot fix more than 3 datums in the primary direction for rigid optimization." will appear if the user is trying to fix more than 3 Candidates for Primary datums.(75203)
- The Datum Optimizer now respects the model units in the graphic display of the optimized results. Also the precision is increased to 6 digits.(75201)

## Enhancements and Resolved Issues (8.1.0.3)

### Datum Optimizer

- The FEA files are loaded only once in the DO as long as the dialog stays open. (72767)
- The full factorial limitation is 2147483647 which is the largest number that a signed integer can represent, if exceeding this number, full-factorial number becomes -1. (74841)

## Enhancements and Resolved Issues (8.1.0.0)

### Simulation-Based Sensitivity

- The (PLTZF) information is added to the top call-out of the composite tolerance in the SBS. (73116)

### Validate

- Warning added for Datum Optimizer: "Considering the excess of optimizations over full-factorial simulations, it's advisable to utilize the latter to ensure finding the global optimum. Cancel the optimization?" (72769)

### Dialog

- Fixed the GeoFactor Analyzer dialog to display the Data Set display correctly, after Closing and Re-opening. (74417)

## **Enhancements and Resolved Issues (8.0.0.2)**

### **Animation Accelerator**

- Added Color Contour support for LSA. (73499)

## **Enhancements and Resolved Issues (8.0.0.1)**

**No changes were made for 3DCS Advanced Analyzer and Optimizer for 8.0.0.1.**

## **Enhancements and Resolved Issues (8.0.0.0)**

### **General**

- The auto-refinement contributors can be selected in GeoFactor Matrix. (72724)
- Fixed an issue when changing the Sigma numbers in Contributor Analysis to also apply it in all AAO dialogs. (71853)
- The composite tolerance with custom direction is showing the correct factors and contribution to variation in SBS.(71682)
- Geo Factor value for composite tolerance PLTZF callout in SBS, is now correct. (72117)

### **Datum Optimizer**

- Running Datum Optimizer with a large number of primary candidates, when the number of fixed candidates equals the number of primary datums (resulting in one simulation), runs as expected when using Full Factorial; the calculation does not take a long time anymore. (72776)
- The minimum optimization default number is now set to 160000 when the Full Factorial number exceeds 1000000. (73072)
- Candidates and Constraints remembers the 'Locked' preferences at dialog closing. (72630)
- Added protection to prevent the user from setting the Number of Primary Datums to be smaller than the Fixed Candidates.(72768)
- The Optimized Datums for CM models are displayed in the correct columns for primary, secondary, tertiary.(72467)
- Will display the model's units for its results. (72661)
- The output file has been reformatted to display the datums in separate columns in Excel. (71698)

- Candidates and Constraints can now be selected more than one at the time using the Ctrl and Shift commands. (72629)
- Candidates and Constraints does not scroll to the top anymore when checking the 'Locked' box. (72620)
- Added a warning message to Datum Optimizer: "The number of simulations exceeds the limitation (1,000,000), please consider reducing the combination."(72607)

### **Dialogs**

- The percent columns in CTI will now display the correct value when the model is set to a different unit than mm, and the filter will work as expected. (70701)
- The point selection from other parts in Datum Optimizer is now blocked. (72214)
- The GeoFactor Matrix will now display the selected measure or contributor in the graphics window.
- Removed the Show Tolerance and Show Measure buttons. (70349)

## **Enhancements and Resolved Issues (7.10.0.0)**

**No changes were made for 3DCS Advanced Analyzer and Optimizer for 7.10.0.0.**

## **Enhancements and Resolved Issues (7.9.0.2)**

**No changes were made for 3DCS Advanced Analyzer and Optimizer for 7.9.0.2.**

## **Enhancements and Resolved Issues (7.9.0.1)**

### **Datum Optimizer**

- Results in Datum Optimizer are consistent when optimizing with fixed or not fixed candidates.(71111)

## **Enhancements and Resolved Issues (7.9.0.0)**

### **Datum Optimizer**

- Datum Opt calculation is improved for flat parts to match the LockDOF/Soft Clamp results. (69680)
- Datum Opt now detects the mass matrix if it's already loaded with Load FEA move. (69602)

### **Sequence Optimizer**

- The Join or Clamp operations can be selected at the sub assembly level as well in the Sequence Optimizer. (69505)
- The user is prompted to NB when clicking Run Evaluations if the model is not built. (69524)
- Sequence Optimizer is enhanced with the new user-defined joining order option. (68843)

### **Enhancements and Resolved Issues (7.8.0.0)**

**Datum Optimizer** - a new tool designed to determine the optimal datums from a candidate set with the goal of minimizing the rigid part variation or compliant part deformation.

**Sequence Optimizer** - a new tool designed to reduce lead and launch time by eliminating or minimizing manual join/clamp sequence studies. The Sequence Optimizer determines the optimal join/clamp sequence from a candidate set of joins/clamps. Users may optimize clamp sequence or joining sequence.

#### **Critical Tolerance Identifier (CTI):**

- Enhanced CTI to function when only Contributor Analysis has been run. (68286)

### **Enhancements and Resolved Issues (7.7.1.0)**

#### **Critical Tolerance Identifier (CTI)**

- The Critical Tolerance Identifier window will apply the Factor Precision to the Range and the measure results. (68000)

### **Enhancements and Resolved Issues (7.7.0.0)**

#### **General**

- Hole/Pin Floats and Size tolerances will be locked when running Tolerance Optimizer. (65122)
- Removed Auto Generate Button from the ribbon and added this function inside GeoFactor Analyzer dialog with a button "Run Analysis". (65848)
- The Size range will be displayed correctly in the Critical Tolerance Identifier, Fixed the scaling issue.(67882)
- Datum Optimizer is now available in the AAO module to help users select the optimum datums for the part, rigid or compliant.

### **GeoFactor Analyzer**

- GeoFactor Analyzer in AAO will now create an HLM file, rather than a GF2 file. This file can also be imported into the Simulation dialog (Contributor Analysis only). (64525)

### **Sequence Optimizer**

- Inactive join moves will not be shown in the Sequence Optimizer.
- Seq Opt Travel Path can be shown [in] inches as well as [mm].
- The Sequence Optimizer Grouping window does not automatically scroll to the top anymore. (67956)
- A message is added for Sequence Optimizer when only soft clamps are selected to be optimized, warning the user that since these clamps do not over-constrain the part, their order may not matter. (67493)
- When selecting a new part the Candidates are eliminated and the user is prompted to select new points. (67893)

# FEA/Compliant Modeler

8.2.0.0 - June 2025

Any text written with a teal highlight refers to any Simulation Output change. In other words, some calculation changes were made to either a distribution, a measurement output or DLL result. This could result in minor changes to a previous Model Simulation output.

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## Enhancements and Resolved Issues (8.2.0.0)

### Dialog

- Updated the DCS Abbreviation file to consist of the latest Compliant Move name changes. (75478)

### StiffGen

- The matrices generated with [in, lbf, lb] units create ASETs at the correct location relative to the part nodes; no units transformation takes place anymore.(75188)

### Force moves

- The force value in the Force move remains as was set, it does no turn to zero anymore.(75190)

## Enhancements and Resolved Issues (8.1.0.4)

### StiffGen

- The matrices generated with [in, lbf, lb] units create ASETs at the correct location relative to the part nodes; no units transformation takes place anymore.(75188)

### Force moves

- The force value in the Force move remains as was set, it does no turn to zero anymore.(75190)

# Mechanical Modeler

8.2.0.0 - June 2025

Below are a list of changes, enhancements and resolved issues based on the entire 3DCS suite or a specific CAD system available with 3DCS. Please review the list of changes and don't hesitate to ask about a specific change.

Any text written with a teal highlight refers to any Simulation Output change. In other words, some calculation changes were made to either a distribution, a measurement output or DLL result. This could result in minor changes to a previous Model Simulation output.

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## Enhancements and Resolved Issues (8.2.0.0)

**No changes were made for 3DCS Mechanical Model for 8.2.0.0.**

## Enhancements and Resolved Issues (8.1.0.3)

### Model Navigator

- Adding a Mechanical Move to a Move Group will correctly keep the new move in the list and in the correct order. (74931)

## Enhancements and Resolved Issues (8.1.0.0)

**No changes were made for Mechanical Modeler for 8.1.0.0.**

## Enhancements and Resolved Issues (8.0.0.1)

### Dialog

- The Move dialogs with 2 Object and Target fields will correctly read from Excel. (73257).

## Enhancements and Resolved Issues (8.0.0.0)

### General

- Double clicking on DCS\_GEAR\_DATA\_MV will open the Gear Module dialog instead of opening the user dll move.

- The Gear Move is no longer editable. only be edited from the Gear Modeler Dialog. (69744).

#### **Moves**

- Selecting Fix move from the tree will highlight the Parts now instead of features in the Graphic Window. (70524)

### **Enhancements and Resolved Issues (7.10.0.2)**

**No changes were made for 3DCS Mechanical Model for 7.10.0.2.**

### **Enhancements and Resolved Issues (7.10.0.0)**

**No changes were made for 3DCS Mechanical Model for 7.10.0.0.**

### **Issues Resolved (CATIA V5)**

#### **Dialogs**

- Fixed an issue that prevented from adding (+) features in the Pattern Move and the Mechanical Move dialogs. (71558)



# **3DCS Visualization Export**

8.2.0.0 June - 2025

## ▼ **Enhancements and Resolved Issues (8.2.0.0)**

No changes were made for 3DCS Visualization Export for 8.2.0.0.

## ▼ **Enhancements and Resolved Issues (8.1.0.0)**

### **General**

- While set to Comma Delimiter settings, 3DCS will correctly export a valid WRL file to be used in other software. (73854)