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Installation and Deployment

New Functionality

Working with SDAM and FCS Integration

Starting V5-6R2022, the legacy CORBA architecture that uses Orbix implementation and the vault can be replaced with Shared Data Access Manager (SDAM) architecture (HTTP based) for the client server communication. File Collaboration Server can be used instead of the ENOVIA V5 vault for document related transactions. For more information, see SDAM and FCS Integration.

Infrastructure

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New Functionality

Accessing Marketplace Make
You can now access Marketplace Make from the 3DEXPERIENCE side panel.

Enhanced Functionality

Graphics Formats
You can now exclude detail sheets from printing when exporting a CATDrawing document with multiple sheets.

From V5-6R2022 and later, the distributed rendering capability will no longer be supported on AIX servers.

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No enhanced functionalities in this release.

No new functionalities in this release.

Enhanced Functionality

User Defined Attributes
Parameters that are within a Parameter Set are exported.
Parameters are mapped with 2 categories of attributes in STEP:
- Product Properties are mapped with STEP « Customized PDM Property » attributes.

For more information, see STEP Export and STEP Import with STEP user defined attributes

Composites Data
The support of AP242 Ed2 enables the support at import and export of new types of Composites rosettes (Cartesian and Guided by Curve), and a new way to model the ply angle representation.

Customizing Settings

AP242 Ed2
This Application Protocol is now supported and accessible in the Tools > Options.

Export also Geometrical Sets
You can select this new check box to preserve the Geometrical Sets in STEP exchange. It applies only to exact geometry, not tessellated geometry.

There are no enhancements in this release.

Enhanced Functionality

New Supported Version
Creo® Parametric™ 7.0

There are no enhancements in this release.

Enhanced Functionality

New Supported versions
NX 1953
Parasolid 33.0.

Enhanced Functionality

New Supported Version
JT 10.5

Enhanced Functionality

New supported version
SolidWorks SW2021
Parasolid 33.0

Enhanced Functionality

New Supported versions:
Parasolid 33.0
SolidEdge 2021.

Enhanced Functionality

New Supported versions
Acis 2021
AutoCAD 3D 2021
Inventor 2021.

There are no enhancements in this release.

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Photo Studio

From V5-6R2022 and later, the distributed rendering capability will no longer be supported on AIX servers.

Photo Studio Optimizer

From V5-6R2022 and later, the distributed rendering capability will no longer be supported on AIX servers.

Component Catalog Editor

No enhanced functionalities in this release.

V4 Integration

No new functionalities in this release.

Data Exchange Interfaces

Enhanced Functionality

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Product Data Filtering

There are no enhancements in this release.

MULTICAx PD Plug-in

Enhanced Functionality

New Supported Version
Creo® Parametric™ 7.0

MULTICAx ID Plug-in

There are no enhancements in this release.

MULTICAx UD Plug-in

Enhanced Functionality

New Supported versions
NX 1953
Parasolid 33.0.

MULTICAx JT Plug-in

Enhanced Functionality

New Supported Version
JT 10.5

MULTICAx SolidWorks Plug-in

Enhanced Functionality

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  SolidWorks SW2021
  Parasolid 33.0

MULTICAx SE Plug-in

Enhanced Functionality

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Parasolid 33.0
SolidEdge 2021.

MULTICAx AD Plug-in

Enhanced Functionality

New Supported versions
    Acis 2021
    AutoCAD 3D 2021
    Inventor 2021.

MULTICAx IGES Plug-in

There are no enhancements in this release.

MULTICAx STEP Plug-in

There are no enhancements in this release.

MULTICAx STEP Plug-in

Mechanical Design

Part Design

Hole Analysis

This functionality provides brief analysis of all the holes in the part.See Hole Analysis.

Pattern   Analysis

This functionality provides brief analysis of all the holes in the part.See Pattern Analysis.

Chamfer Orientation Management

You can now invert the orientation of the edges of a chamfer independently. See Creating Chamfers.

Removing Faces Using Limiting Elements

When you select a limiting element, the limiting face is now detected automatically. See Creating Remove Face Features.

Interactive Drafting

New Functionality

Edge of Undefined Shape

The Edge of Undefined Shape command lets you create annotations for undercuts and passings on internal and external edges. For more information, see Annotating the Edges of Undefined Shapes.

Global Attribute Links

You can now insert global attributes such as user, time, date, day, month, and year in a text or a table cell. For more information, see Adding Global Attributes.

Enhanced Functionality

Surface Texture Enhancements

The Surface Texture command is now enhanced with the following capabilities:

- Enhanced Surface Texture dialog box
- Availability of boxes according to the ISO/JIS/ASME standard selection
- Enhanced parameter list

For more information, see Surface Texture.

Table Cell Modification Enhancements

You can now quickly perform the following actions on the table cells:

- Add or modify content of a table cell directly using the Enter or F2 key.
- Run the Insert Attribute Link command on a table cell by pressing the Insert key.
- Clear the formatting of the selected cells either by pressing Shift+Delete or by selecting Clear Format from the context menu.

For more information, see Editing and Modifying a Table.

Enhanced Context Attributes

The Insert Attribute Link dialog box now lists new context attributes available on the selected object type (such as drawing, sheet, and layout). For more information, see Adding Attribute Links to Text.

The user interface of the Attribute Link Panel and Query Link Panel dialog boxes are now enhanced. For more information, see Querying Annotation Links.

Generative Drafting

Enhanced Functionality

Section View Creation Using Sketch

> You can now create multiple section views by selecting a 2D sketch that is copied as result with link. For more information, see Creating a Section View/Cut with Profile Defined in 3D.

Defining Depth for Breakouts

> While creating breakouts, the breakout view is now associative with the selected 3D point or 3D plane. For more information, see Creating a Breakout View.

2D Layout for 3D Design

New Functionality

Edge of Undefined Shape

The Edge of Undefined Shape command lets you annotate the undefined edges such as undercuts and passings on internal and external edges. For more information, see Annotating the Edges of Undefined Shapes.

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Sketcher

Enhanced Functionality

Adding Equivalent Dimension

You can now   add new equivalent dimension constraints to the existing equivalent dimensions group of the same type. See Applying Constraints.

Hide or Show Outputs

You can now hide or show the output elements each time you hide or show the sketch corresponding to the output elements. See Creating Output Features.

Changing Orientation of an Output Profile

You can now change the orientation of the output profiles. See Analyzing Sketched Geometry.

Curvilinear Distance Constraint Preview

See Creating Curvilinear Distance Constraints.

Structure Design

New Functionality

Replacing User Defined Features

The new command, Replace UDF, lets you replace the user defined features of endcuts and slots on the shapes.

Generative Sheetmetal Design

Enhanced Functionality

New Option for the Standard Cutout and Pocket Cutout
> You can now select the Optimize Geometry option when creating standard cutouts or pocket cutouts .
> See Creating a Cutout.

Limiting Geometry Enhancements for All Swept Walls Commands
> When creating any kind of swept wall (flanges, hems, tear drops, and user flanges), you have more options when defining relimitations:
> - Define different offsets to the left and to the right side of the input spine.
> - Swap the left and right sides of the input spine.
> - Specify one limit only.
>
> See Creating Swept Walls.

Sheetmetal Design

There are no new enhancements in this release.

Aerospace Sheetmetal Design

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- Specify one limit only.

See Creating Swept Walls.

Mold Tooling Design

There are no enhancements in this release.

What's New?

Core & Cavity Design

There are no enhancements in this release.

Die Face Design

New Functionality

Selection Tools

Three commands have been added to improve the manipulation of 3D Splines and Polylines in the work area.

- Convert a Wireframe to a 3D Spline
- Create a 3D Spline
- Create a 3D Polyline

Fillet Connect

This new command fills gaps between surface extensions. In particular, it can fill complex holes.

The command provides automatic and manual modes to fill holes, and is suitable for greater areas.

It also reduces the number of manual interactions, thus making the process quicker.

Global Unfold

This new command lets you evaluate the size of the blank of a part, by unfolding the surface on a support plane. You can freeze an edge of the surface to unfold, to become the reference of the position of the unfolded contour. Selected edges can also be transferred on the support plane. Two computation modes are proposed: Geometric or Material-Based.

Enhanced Functionality

Data Model Exposure

Several Die Face Design features have been exposed as specific types, to allow the definition of advanced knowledge expert rules to validate a method plan.

You can write your own Knowledge Expert rules to validate a complete method plan, making the process of collaborating with suppliers easier.

OEMs may delegate the concept process definition to suppliers, and when they receive it back, they can fully validate it through in-house knowledge rules.

Creation of Extension Surfaces

Several commands used in the process have been created or enhanced:

- Surface Extension has been enhanced with an auto-pilot mode, proposed by default, that uses minimum G2 and G1 lengths to compute the extensions.
  If this computation fails, you can display more parameters and edit them to create the surface extensions.
  Note that these parameters correspond to the parameters of the previous version of Surface Extension.
- Connect Surface. The selection has been simplified.
  - Select two Surface Extensions to create a Connect Surface between them (You no longer need to create two stable split curves with correct points).
  - You can still access the previous parameters, especially to connect surfaces of another type, or to adjust the tension. In this mode, you can select two edges to connect.
- Fillet Connect. This new command fills gaps between surface extensions. In particular, it can fill complex holes.
- Prehem Surface. Three commands have been added to create a Prehem Surface:
  - Boundary Partition
  - Variable Offset Curve
  - Fillet Based Projected Curve with Angle
- Boundary Analysis. This new command creates a manager feature that analyzes the boundary, and creates children features that are boundaries of different type.
- Surface Extension Manager. This new command creates a manager feature to compute extensions in a simple and effective way.

Process Design

Several commands have been enhanced or created to make the design easier.

- You can now create, store and edit several standard files corresponding to different needs.
  See Managing Standard Files and About Die Face Design Standards.
- You can select a Standard file in Process Method Plan and in Process Generator Wizard.
- Part Nesting in Part Positioning has been enhanced with two new actions to position the part on each side of the press X-Axis or Y-Axis.
- The new command Automatic Flange Boundaries analyzes a surface to identify it as a flange and creates its

boundary. The result can be used as input in Stamp Partition to automatically split the part.
- The new command Structure Generator creates a detailed design structure from a concept part.

Update after Design Change

Several commands have been enhanced or created to make the update easier.
- The Operation Planning section in the Process Generator Wizard has been enhanced with:
    - Create Blank Holder to automatically create the blank holder geometry when you select a blank holder tool.
    - Cam Swivel to lock/unlock the tool direction in case of step swiveling.
- The new command Detailed Geometry Wizard allows an easy navigation through the detailed part data model.
- The new command Computes All Unfolds quickly computes the unfolded view of all the flanges.
- In Cam Direction, Position Constraints has been renamed into Symmetry Constraints.
- The command Process Step has been enhanced:
    - The new selector Select Detailed part Axis System automatically rotates the geometries of the corresponding OP to match the axis of the selected detailed part with the global press axis specified by the method plan.
    - When you apply a part swiveling using the Part Separate option, it is now propagated to the following operation (Requires an update of existing features).
      The definition of symmetry contrainsts has been added.
- The command Create OP Design Part has been enhanced and renamed into Link Concept to Detail.
- The new command Link Detail to Detail creates a link between detailed parts, to allow the propagation of geometries directly between detailed parts.
- The new command Link Detail to Result createds a link between the process part and the detailed part to a result part.
  It creates a dynamic copy of the process, including detailed part geometries, in the result part.
  The management of intermediate geometries has been enhanced to improve computation time. When you associate an intermediate geometry to a flange
    - An independent feature is created in the Intermediate Geometry Group geometrical set.
    - A sub geometrical set is created and named after the flange. It contains the intermediate geometry.
- The new command Geometrical Link automatically fixes incorrect BREps links using geometrical criteria.
- The new command Detailed Process Part Replace runs a complete update after a replace. It also controls the features orientations to optimize the design change.
- The new command Process Part Replace helps you replace the process input part.
- The new command Bulk Replace upgrades a list of features.
- The command Chaining Edges has been enhanced with:
    - The Propagate Both Ways option.
    - The propagation through a partial edge.

Healing Assistant

There are no enhancements in this release.

Composites Design

Enhanced Functionality

Composites Parameters: Adding Laminates

You can now define a laminate using a thickness ratio, defined from a targeted thickness and a ratio for each direction of the different materials.

Composites Parameters: Defining a Main Stacking Sequence

To let you create and improve a Main Stacking Sequence directly in the dialog box, the Main Stacking Sequence tab has been enhanced with:

- Edit MSS Laminate
- Add MSS Laminate
- Add Layer
- Edit Layer
- Remove MSS

This is an alternative to exporting/importing a Main Stacking Sequence definition file.

Grid Panel: Multiple Sub-Staggerings of Reference Element

You can now select several sub-staggerings of a reference element, and edit their ramp definition in one shot, from the dialog box or from the contextual menu in the work area.

Butt joints

In Multiple Core Samples, the computation of the thickness points lying on butt joints has been corrected. In Laser Projection Export, an option has been added under Core Sample Scope to take butt joints into consideration.

Ramp Definition: Offset Customization

You can now change the ramp definition type without losing the offset customization.

Ramp Definition Preview

The preview of the centered ramp definitions, and of drop plies with same layer level on same curve has been enhanced.

Local Drop-off and Manage Drop-off

The dialog box of both commands has been enhanced for quicker and more comfortable interaction:
- The dialog box opens with the size you specified at your last access.
- Ply data information appears in a dedicated area of the dialog box, to avoid overlap between the texts and the cross section of ply drops.

In addition, several selection buttons have been added in Manage Drop-Off.

Producibility for Hand Layup: Guide Curve

Two computation options have been added to complement the existing Snap to Axes option, to define the warp angle with respect to the guide curve.
- Constant Angle: The warp angle at the seed point remains constant along the entire guide curve. This option is useful when the rosette is defined along a curve: The theoretical and actual directions along the curve are identical.
- About Curve: This option models the deposition of unsheared fabric along the guide curve. It is more efficient than using a narrow order of drape region around the curve.

Producibility for Fiber Placement: Propagation Type

Available propagation types are now:
- ATL Priority Angle
- ATL Priority Steering
- AFP Priority Angle
- AFP Priority Steering

This enhancement provides a baseline tape simulation for the main propagation methods of Priority Angle and Priority Steering. Subsequent courses are limited to paths parallel to the preceding course. The simulations support both a conventional axial material deformation model, and a sheared model supported by experimental systems supporting CTS (Continuous Tow Shearing).

Flattening

A Location Point Creation Wizard has been added to the dialog box. It creates location points from a reference point and the number of flattens per row, or from a pattern.

Splice Plies and Splice Plies from Producibility

The algorithm has been enhanced to improve the performances. Each cut-piece now has one limit contour (no intermediate limit contour).

Stacking Management and Edit Producibility Table

You can now see the estimated number of cut-pieces, provided a producibility features exist and is up-to-date. This is an estimation, that lets you know whether the material roll width covers or not the ply.

Multiple Core Samples:

- Thickness Information
  The table has been enriched with the individual thickness for impacted entities (Plies/cores/cut-pieces). A check box has been added to export the information.
- Thickness on Butt Plies
  The computation of the thickness for points lying on butt joints has been corrected.
- Identifying zones
  You can now create several Core Sample Groups and:
    - Manipulate each Core Sample group in the dialog box.
    - Hide/Show a Core Sample Group.
    - Name each Core Sample Group
    - Group the identifiers
    - Export the Core Sample Groups individually or as a whole.

  You can select an Iso-Thickness Areas Group as the reference entity, to create a Core Sample Group and its labels from the ITA Group points.

  Core Sample labels are more readable and movable.

Numerical Analysis

Two options have been added:
- Display Normals
- Refinement Factor.

When the Compute analysis with ply and core shape simulated at thickness option is selected, the computation is based on tessellating entities at surface level and elevating each triangle to the corresponding thickness. You can now display the normals used for elevating each vertex of the tessellation triangles. The normals direction and their density help you specify the refinement factor.

Material Excess

The command has been enhanced to extend plies in a staggered manner, beyond the MEOP, to create a ramp.

Iso-Thickness Junction Wizard

The command has been enhanced to:
- Quickly correct small inaccuracies in the Junction Lines Set.
- Ensure that the elevation height/offset equals the thickness specified by the ITP.
- Gather the junction lines in a Geometrical Set.
- Make the subsequent creation of a solid from Iso-Thickness Areas easier.

To do so, two check boxes and one button have been added:

- Optimize the input junction lines
- Create junction lines in new Geometrical Set
- Edit ITPs to inspect and edit ITPs

Solid From Iso-Thickness Areas

The error feedback has been enhanced for a better understanding. You can see all the locations of problems on the input junction lines.

Ply book

Until now, you had to create plies without geometry to define an empty sheet in the plybook, used to specify work instructions.

A check box Use Stacking Text as Separator has been added in the ply book creation command.

This enhancement lets you create the work instructions directly in the 3D Model, as Stacking Text.

Composites Braiding

There are no enhancements in this release.

Composites Link

There are no enhancements in this release.

Composites Forming

There are no enhancements in this release.

Shape Design & Styling

FreeStyle Shaper Optimizer & Profiler

New Functionality

Specialized Tesselation

With this new command, you can temporarily define an individual tessellation tolerance value.
See Specialized Tesselation.

Enhanced Functionality

Creating a Patch from Points

The functionality of the 4-Point Patch creation is enhanced:

- You can now select positions on STL data imported in a CATProduct.
- When no projection is required, you can now do a mixed position selection: In the work area as well as on any existing geometry.
- You can now create a patch from four points with projection without selecting any reference geometry.
- With the new Auto Plane option, you can now create a patch from four points that is fitted to a plane, which is automatically generated from the first three selected positions.

See Creating a Patch from Points.

Creating Associative Filling Surfaces

- With the new Roundness Factor, you can improve the smoothness of the result surface.
- With Free continuity, you can better control the fill surface result.

See Creating Associative Filling Surfaces.

Creating a Matching Constraint

You can now save option settings in variants.
See Creating a Matching Constraint.

Performing a Surface Curvature Analysis

You can now access new analysis types:

- The Symmetric Gaussian type allows you to perform a Gaussian analysis with a symmetrically distributed color range around Zero.
- The Flat Region type allows you to indicate areas that are too flat.
- The Curvedness type allows you to quickly see the strength of the curvature continuously distributed over a shaded surface.
- The Shape Index type allows you to get more detailed shape information compared to a simple shaded convex-concave analysis.

You can now directly access the new Specialized Tesselation command.
See Performing a Surface Curvature Analysis.

Generative Shape Design & Optimizer

Enhanced Functionality

New Types in Surfacic Curvature Analysis

You can now   access new analysis types:

- The Flat Region type lets you indicate areas that are too flat.
- The Curvedness type lets you quickly see the strength of the curvature continuously distributed over a shaded surface.
- The Shape Index type lets you get more detailed shape information compared to a simple shaded convex-concave analysis.
- The Symmetric   Gaussian shows the Gaussian curvature always centered around zero.

You can now directly access the new Specialized Tessellation command.See Performing a Surface Curvature Analysis.

Additional Options in Defeaturing

You can now defeature features using draft filter to remove drafts with two additional options, Pulling direction and Filter out thin wall drafts. See Defeaturing with Filters.

Shape Sculptor

There are no enhancements in this release.

Digitized Shape Editor

New Functionality

Quick Surface Reconstruction

There are no enhancements in this release.

Realistic Shape Optimizer

There are no enhancements in this release.

Mechanical Surface Refinement

Enhanced Functionality

Creating a Matching Constraint

You can now save option settings in variants.
See Creating a Matching Constraint.

ICEM Shape Design Center

Enhanced Functionality

Create Gap

The following enhancements are available for this command:

- You can now use the Offset Distance option also with the 'Flange-Bottom' type.
- The 'Crimp-Crimp' gap type is enhanced by the new True Distance option. If it is selected, the gap value is computed as an exact distance instead of a visible distance. That means that the fillet of the gap surface of side 1 has a specified distance from the gap surface of side 2, measured in the related moving frame plane.

See Create Gap.

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You can now directly access the new Specialized Tesselation command.

See Performing a Surface Curvature Analysis.

ICEM Shape Design AeroExpert

Enhanced Functionality

Unified Patch

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Analysis

Nonlinear Structural Analysis and Thermal Analysis

Support for Abaqus 2018 Analyses

Equipment & Systems Engineering

Circuit Board Design

There are no enhancements in this release.

Electrical Harness Installation

There are no enhancements in this release.

Machining

NC Manufacturing Infrastructure

Enhanced Functionality

Design Change

When analyzing the geometry specified on a Machining Operation, you can now use new commands to:

- reframe the main viewer on the selected geometry

These commands are available in the **Geometry Analyzer** dialog box.

Resources

When you modify the total length value (ST) of a tool assembly, you can now select the **Assembly total length linked to tool gage** check box to keep the height value of the last stage of the tool holder during modification.

Prismatic Machining Preparation Assistant

There are no new or enhanced functionalities in this release.

Prismatic Machining

New Functionality

The Strategy Tab in Drilling Deep Hole Operations
    There are new parameters available:

- DeepHole LeadIn
- DeepHole LeadOut
- NoRetract Motion

The Feedrate Tab in Drilling Deep Hole Operations
    There is a new parameter available:

- DeepHole Feed Reduction

Enhanced Functionality

Pocketing, 4-Axis Pocketing, Profile Contouring
    Concentric tool path style now supports zig-zag sequencing on a circular pattern.
Pocketing Strategy Parameters - Tool Path Styles
    In pocketing operation, you can select the Dynamic pattern explicitly; in other operations (Roughing, Cavity Roughing, Power Machining, Spiral Milling, Multi Axis Spiral Milling, Lathe Rough Turning and Groove Turning) every open pocket uses the Dynamic pattern. This pattern is optimized regarding the machining time but the computation time increases hugely with small radial engagement. The computation time has been reduced to make it acceptable for these use cases.

3 Axis Surface Machining

Enhanced Functionality

Roughing, Spiral Milling

Concentric tool path style now supports zig-zag sequencing on a circular pattern.

Roughing Parameters

Select the Dynamic pattern explicitly; in other operations (Roughing, Cavity Roughing, Power Machining, Spiral Milling, Multi Axis Spiral Milling, Lathe Rough Turning and Groove Turning) every open pocket uses the Dynamic pattern. This pattern is optimized regarding the machining time but the computation time increases hugely with small radial engagement. The computation time has been reduced to make it acceptable for these use cases.

Automatic horizontal areas

Along horizontal areas, the remaining material can reach up to the axial distance between paths, which is large compared to the part over thickness. In this context, the option Automatic horizontal areas detection is important to achieve this objective.

Improvements in the horizontal areas detection;

- Compute the exact location of the horizontal area (if the tool axis is OZ, the exact Z value),
- Compute contouring paths close to the horizontal area so as to remove the exceeding material,
- Compute the hard/soft attribute along each horizontal area,
- Manage the tool holder collision checking,
- Manage the circular interpolation,
- Manage the offset group feature,
- Iutput Helical interpolation when helix macro is defined.

Isoparametric Machining Parameters

Barrel Cutters and Lens Shape Cutter tools are now supported in isoparametric machining operations.

3 to 5 Axis Converter

New parameters to avoid collision between the cutting part of the tool and the part to machine are now available.

Spiral Milling Parameters

Helix Approach option is now availabe. It enables you to avoid collision during multi-axis spiral milling operations.

Multi-Axis Surface Machining

Enhanced Functionality

Multi-Axis Spiral Milling

Concentric tool path style now supports zig-zag sequencing on a circular pattern.

Multi-Axis Tube Machining

Barrel cutters and lens shape cutters are now supported in multi-axis tube machining operations.

Rolling and Lead Angle tool axis modes are now available.

Multi-Axis Curve Machining

Lens shape cutters are now supported in multi-axis curve machining operations.

Rolling and Lead Angle tool axis modes are now available.

Spiral Milling Parameters

Helix Approach option is now availabe. It enables you to avoid collision during multi-axis spiral milling operations.

Multi-Pocket Machining

Enhanced Functionality

Power Machining

Concentric tool path style now supports zig-zag sequencing on a circular pattern.

Power Machining Parameters

Select the Dynamic pattern explicitly; in other operations (Roughing, Cavity Roughing, Power Machining, Spiral Milling, Multi Axis Spiral Milling, Lathe Rough Turning and Groove Turning) every open pocket uses the Dynamic pattern. This pattern is optimized regarding the machining time but the computation time increases hugely with small radial engagement. Now the computation time has been reduced to make it acceptable for these use cases.

Advanced Machining

Enhanced Functionality

Cavities Roughing
> Concentric tool path style now supports zig-zag sequencing on a circular pattern.

Cavities Roughing
> Select the Dynamic pattern explicitly; in other operations (Roughing, Cavity Roughing, Power Machining, Spiral Milling, Multi Axis Spiral Milling, Lathe Rough Turning and Groove Turning) every open pocket uses the Dynamic pattern. This pattern is optimized regarding the machining time but the computation time increases hugely with small radial engagement. Now the computation time has been reduced to make it acceptable for these use cases.

Lathe Machining

Enhanced Functionality

Rough Turning

Concentric tool path style now supports zig-zag sequencing on a circular pattern.

Multi-Slide Lathe Machining

There are no new or enhanced functionalities in this release.

STL Rapid Prototyping

There are no enhancements in this release.

STL Rapid Prototyping

DPM Process and Resource Definition

Enhanced Functionality

Use the volumetric filter on a subassembly's data only

In previous releases, when you used the volumetric filter, all items that met the volumetric criteria were loaded. Now you can specify a subassembly so that only data from that subassembly that meet the criteria is loaded.

When a DPM session is linked to an ENOVIA server, you can load data from DPE into the same DPM session

Previously, a batch offered a similar functionality. Now a VB script is offered.

Progress bar provided for loading user context

Product Synthesis

DMU Fitting Simulator

There are no new or enhanced functionalities in this release.

DMU Engineering Analysis Review

Enhanced Functionality

Color Map in the Specification Tree
> The color map now appears in the Specification Tree under its corresponding image.

Image Edition
> You can select an image as group, which allows you to filter entities by values.

DMU Composites Review

There are no enhancements in this release.

Human Builder

New Functionality

XML Settings for VOA
> This describes the functionalities for XML Settings for VOA.

Enhanced Functionality

Defining the Occupant Posture Prediction Dialog box
> The Method section of the Occupant Posture Prediction Definition dialog box has been enhanced to reflect postures according to the J4004 reference.

Human Activity Analysis

There are no new or enhanced functionalities in this release.