KOMPAS-3D v23 Highlights

- **3D Modeling**: Lofting cross-sections can change as they move along the path; model families based on a parameterized template and a table of variables; matching the features of the original and new operation results (e.g., after replacing the source file in the Copy operation); replacing source files for one or more components in the assembly while preserving the parametric restraints; improved representation of edges between the tangent faces; enhanced 3D part/assembly layer functionality.

- **Direct Modeling**: Replacing selected body/surface faces; editable diameter of cylindrical or spherical faces; editable constant radius fillets.

- **Wireframe/Surface Modeling**: smooth transitions between two non-adjacent surfaces; improved spiral construction and positioning; new functions for curve and intersection object creation; associative splines from objects; extended diagnostics of surface-to-surface deviations.

- **Reverse Engineering**: specifying a guide object and controlling numerical parameters when creating a surface by polygonal object similarity; analyzing polygonal object deviation from the body.

- **2D Documents**: new drawing and BOM templates with a customer representative column; new Slot and Arc Slot 2D objects with a range of construction options, centerlines, and dimensions (also available in 3D sketches); improved editing of parameterized objects; the Product Structure panel is now available during geometry editing.

- **Other**: Accelerated phantom rendering for surface creating/editing; accelerated Shaded Wireframe, No Hidden Lines model rendering; Designation, Name, and Note properties editing in the Product Structure panel, change propagation to the component files; multiple references in the Name property (e.g. for adding dimensions and material to a part without drawings).

- **Mechanical Engineering Applications**: stud connections, auto thread selection from a specified hole (Fasteners application); adding fragments of welded seams to the welded seams table (Permanent Connections application); selecting 3D models of electronic components when importing a PCB model into KOMPAS-3D (ECAD-KOMPAS Converter); notional conductors when cable grades are not specified (Equipment: Cables and Harnesses application); analysis and modeling of link belt chain sprockets (Shafts and Mechanical Transmissions application); more convenient selection of rolled profiles (Equipment: Metal Structures application), pipe/fitting schedules (Equipment: Pipelines application); new types of tees, bends, and conical spigots (Equipment: Duct Components application); new tensile spring hooks (Mechanics: Springs application).