

DMU Solutions  
DMU Space Analysis 2 (SPA)

**ENOVIA V5R21**





## DMU Solutions

# DMU Space Analysis

Perform optimum DMU verification using advanced interference detection and analysis, superior sectioning analysis, measurement, distance analysis and 3D geometry comparison tools.

### Product overview

DMU Space Analysis 2 (SPA) performs optimum DMU verification using advanced interference detection and analysis, superior sectioning analysis, measurement, distance analysis and 3D geometry comparison tools. Interferences can be detected interactively or in batch mode, analyzed, and results can be saved. The user can do sectioning dynamically with mouse-based manipulation and save the section results for reuse. Tools are included in the product for distance analysis and 3D geometry comparison. Distance analysis of motion simulations and animation of sectioning results are possible through integration with other DMU products.

DMU Space Analysis 2 (SPA) allows advanced validation of designs by ensuring a better understanding of the problems for quick solving. It addresses populations involved in digital mockup review and product packaging processes and can be used all along the product life cycle: from the design in context to the maintenance review.

DMU Space Analysis 2 (SPA) is capable of handling digital mockups of all sizes from consumer goods assemblies to very large automotive, aerospace, plant, ships or heavy machinery mockups.

### Product Highlights

- ☒ Checks interferences in interactive or

batch mode for large amount of data, analyzes and stores the results

- ☒ Compares 3D geometry, visualizes the result in a dedicated viewer, saves the results for reuse, perform sectioning on the 3D comparison and take measurements on the section
- ☒ Provides distance and band analysis tools
- ☒ Provides a set of exact measurements on and between products, parts and features
- ☒ Integrates with other DMU products for distance analysis of motion simulations and animation of sectioning results
- ☒ Allows automation through VB access for Clash, Distance & Band Analysis, and Sectioning

### Product Key Customer Benefits

#### Interference checking and results'

**visualization...** The user can simply perform interference checking computations interactively for clash, clearance, and contact, and visualize conflict details (parts in conflict and intersection curves). The penetration depth or minimal distance between 2 products in conflict can be displayed at the first step of the clash computation, allowing the user to sort the list of conflicts according to their importance before beginning to do further analysis.

The user has also the ability to interrupt the computation.

**Interference analysis...** The user can define precisely parts to analyze (one versus another one, all part inside one group, etc) and display the list of interferences with associated information (conflict numbering, parts involved, etc.). He can filter this list according to multiple criteria (irrelevant, relevant, not inspected) and finally present the results through a matrix of conflicts.

**Large scale interference checking in batch mode...** A batch mode is available for large scale interference checking computation with capability to update or store results in ENOVIAVPM.

**Storage and management of the results...** The user can also print the results and output them as text file, or XML file. This file coupled with a style sheet presents the clash results in a HTML browser. The style sheet can be entirely customized by the user.

**3D geometry comparison...** The user can define two parts or assemblies to compare. The comparison can either be done in a visual comparison mode or a geometry comparison mode. Whereas the visual comparison mode offers faster and finer accuracy, the 3D geometry comparison can be performed in batch mode through VB script. Once computed, the differences between the two parts or assemblies can be visualized in a dedicated viewer. In addition, a sectioning capability is available inside the compare command, providing users with the ability to section the comparison results, browse the section, make measurements on the section, access additional information for a thorough inspection and a better assessment of the differences between the 2 objects.

**Distance and band analysis tools...** Minimal distance can be computed between two products. The user can define precisely parts to analyze (all part of one group versus an other group, versus all the other parts, etc.). Moreover, the user can check that the minimal distance between two products falls in a given range (Band analysis). The result (surfaces) can be saved as CATIA V4 model in order to be reused in a V4 design context. The results

can also be exported as CGR or VRML formats for later reuse.

**Integration with other DMU products...** Distance analysis of motion simulations can be performed when DMU Space Analysis 2 (SPA) is used with DMU Fitting Simulator 2 or DMU Kinematics Simulator 2. Moreover, sectioning results can be animated when SPA is used with ENOVIA - DMU Navigator 2.

**Automation capability...** The user can perform automation through VB access for Clash, Distance & Band Analysis, Sectioning, and 3D geometry comparison.

## ABOUT ENOVIA V5R21

ENOVIA provides companies with integrated solutions to simulate the entire product lifecycle.

**[www.3ds.com/products/enovia](http://www.3ds.com/products/enovia)**

