



Software Portfolio

High-end Solutions for DMU Simulations



The Teraport software portfolio provides solutions for simulations on the digital prototype and is suited for both first-time users and experts alike. The Teraport DMU-Toolkit, which forms the basis of the Teraport software portfolio, has been developed in close collaboration with the automobile industry, as well as with the aviation and aerospace industries.

Individual modules of the DMU-Toolkit are constituent parts of each software solution. These range from a standardized entry-level solution for a supplier with ten users, to individual solutions for automobile enterprises with several thousand users; solutions for either construction engineers and designers, or for sales-related or service sectors; solutions which can either be linked to a CAD system or which can be applied as an independent solution.

Only the DMU-Toolkit's unique concept can achieve the implementation of these comprehensive application possibilities:

MODULAR and FLEXIBLE

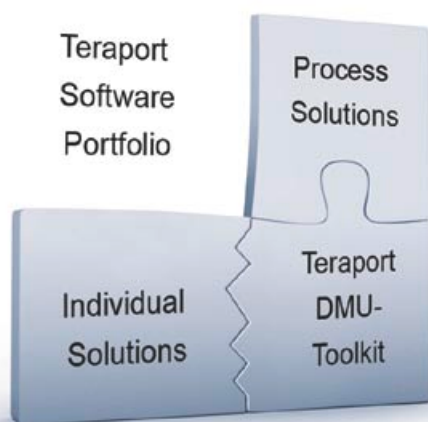
The Teraport DMU-Toolkit is a **modular** and extremely **flexible** software architecture. The software can either be employed individually or in combination with other modules at different stages of the engineering process. This facilitates the provision of customized solutions for client-specific requirements.

NEUTRAL and OPEN

The distinguishing feature of the high-end solutions is their neutrality. The individual modules are generally able to process **neutral** data formats as well as all the established proprietary data formats utilized in Industry. The solutions are hence **open** to / for diverse engineering systems (e.g. PDM, CAD or VR).

HIGHLY EFFICIENT and AUTOMATED

Highly efficient, stable and methodologically innovative algorithms ensure the very highest performance level, even on standard hardware. All the modules can also be batch-operated and thereby simplify the processing of 3D mass data. In this way it is possible to **achieve the complete automation** of virtually all DMU processes.



As previously mentioned, the basis of the Teraport software portfolio is the modular structured DMU-Toolkit. In the past 10 years a number of individual solutions have been developed for well-known clients. The number of modules in the DMU-Toolkit has continued to increase and our process know-how has also become more and more extensive. We have therefore incorporated the basic modules in standard solutions; the so-called “process solutions”.

With these “standards”, a number of practical set tasks or functions can be carried out at a favorable price and at the same time facilitate a quick and easy introduction into high-end DMU solutions.



Individual Solutions

An individual solution from Teraport is always employed when there is no solution (standard product) available on the market, or if the available performance level, stability or the functional range of a standard product is not sufficient.

We implement an individual solution based on the modules of the Teraport DMU-Toolkit following a joint analysis of the client's specific requirements. Our set objective is the smooth integration into the client's existing systems and processes, as well as a simple connection to the CAD or PDM system.

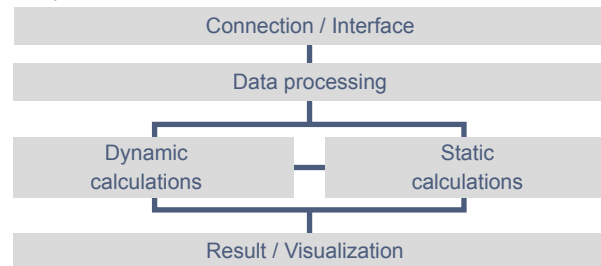
The ideal interaction of the modules of the individual groups of the DMU-Toolkit is clearly shown, for example, in the automated geometric vehicle verification. The data on the complete vehicle is collected from the PDM system via the connection/interface modules (DMU.Connect). Data processing modules (DMU.

Process Solutions

The process solutions are established workflows, tried and tested in practical operation and based on the individual modules of the Teraport DMU-Toolkit, which have been incorporated in "standards"; our so-called "process solutions". They are controlled via a flexible and intuitive user interface and are executed fully automatically. A cost-effective and straightforward introduction into the automated high-end DMU solutions is therefore made possible. To this end we provide, in particular for suppliers, solutions which ensure that the companies' product development continues to meet the very highest quality standards, and hence enable the companies to achieve competitive advantages in their collaboration with the OEMs. The adjoining process solutions are described in more detail in our additional information material.

NeighbourSearch) optimize the data for the static calculation (DMU.Check). The results, which are calculated in less than one hour, can subsequently be documented (DMU.ResMan) and visualized.

Teraport DMU-Toolkit:



Data processing	
Pro.DataReducer	Data reduction Reduction of the amount of 3D mass data
Pro.DataPatcher	Data preparation Clipping and connection of geometry models
Static calculations	
Pro.DiffAnalyzer	Differential geometries Where is the difference to be found between two components?
Pro.FluidAnalyzer	Volume and Filling capacity analysis Which filling level is reached by certain liquid volumes?
Pro.OffsetAnalyzer	Offset envelope generation How much free motion play does a model require?
Dynamic calculations	
Pro.PathFinder	Assembly and disassembly simulation Which path can be used for the disassembly of a component?
Pro.PathInspector	Dynamic geometry checking Can a dynamic component still be moved after modification?
Pro.PathFreezer	Dynamic envelope generation Which areas of motion must be kept clear?
Pro.PathSmoother	Dynamic path smoothing Which of the known disassembly paths is the optimal path?

Why High-end DMU Solutions?

We are a medium-sized company specializing in the field of DMU. As a result of the experience we have gained in our product development projects, we are well acquainted with the problems in this sector: Standard products for DMU simulations cannot meet all the client's requirements. As a niche supplier, we are in the position of being able to react to these problems by providing flexible

Further Information

All detailed functional descriptions of the available process solutions and the individual Teraport DMU-Toolkit modules can be found in our additional information mate-

and individual practical solutions which are highly efficient and of top quality.

For us – as an innovative leader in this technology – high-end means the development of new potential and hence a considerable increase in the quality standards in digital product development. To this end we support our clients in the achievement of their set goals.

rial. This information can also be accessed via our Internet site (<http://www.teraport-engineering.com>). You can also contact us direct at the following address:

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