

KOMVOS – SDM Console Explained

KOMVOS – SDM Console is a Simulation Data Management platform that helps engineers interact, browse, visualize, and handle all data related to CAE analysis, from PDM extractions to simulation runs, key results, and reports. With a user friendly and intuitive interface, KOMVOS makes it possible to visualize the CAE models, get information about them, and initiate data processing tasks.

Data management takes a front place in simulation

Every day, engineers consume precious time preparing, communicating, handling, and updating model data and information. This is the result of the continuous upsurge in simulation capabilities and modelling detail that has increased CAE processes' data intensiveness.

Different subsystems and simulation models are simultaneously prepared for several analyses disciplines, for different product models and configurations. Model parts are continuously corrected and optimized during the successive production phases. Meanwhile, required information resides in numerous different data systems. The above, amongst other issues, create a number of bottlenecks for engineering teams when preparing the data for analyses, working on them, communicating updates, and monitoring the progress of the process.

The place where data meet with their stakeholders in simulation

With a new software product, named KOMVOS – SDM console, BETA CAE Systems now addresses those issues. KOMVOS has been developed after carefully mapping the data processes of customers, to become the central tool for seamless data flow.



KOMVOS hosts all necessary data processes plugins and serves as a powerful front end for data search, navigation, and information on meta data. It deploys a friendly user interface that integrates a powerful 3D-viewer, and single click actions execution, such as running a batch mesh.

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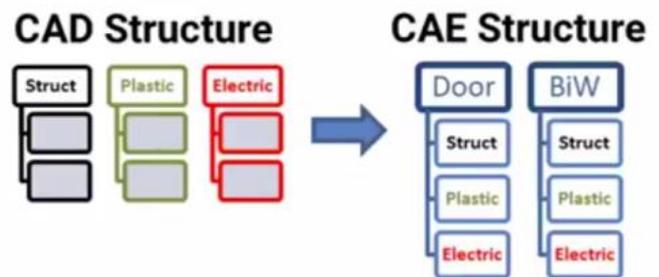
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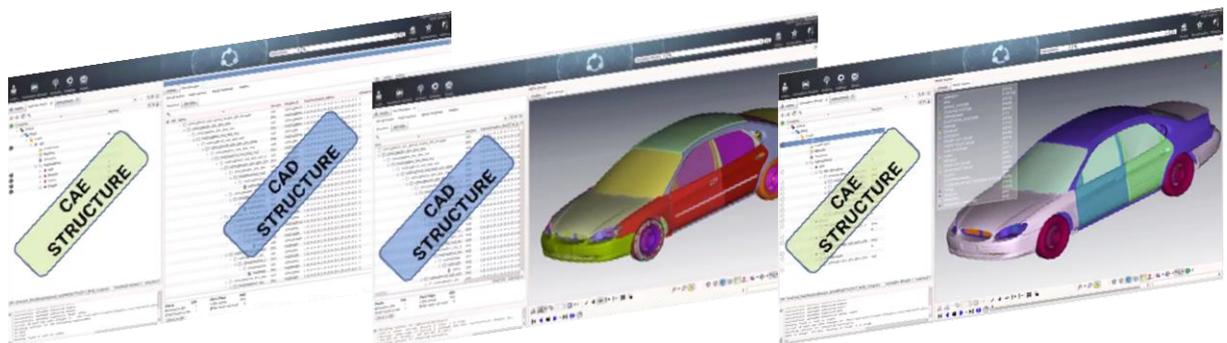
How KOMVOS facilitates a simulation analysis process

Such a process starts with a simulation department, for example the crash department, requesting a specific configuration for an impact analysis. Same time, other departments also request data for different analyses. The teams that prepare the subsystems and models then define the contents of the model.

Here, the CAE structure is defined from the CAD structure. The problem is that CAE and CAD structure are different. For example, in the CAD department, the structural parts are placed in a separate container, the plastic parts in another and so are the electronic parts. In the CAE world, to create a subsystem we need all the parts of the system placed together. Generating this CAE structure is a demanding and error prone task for which the CAD data are properly gathered, placed, and the proper materials are defined, along with the proper connectivity information.



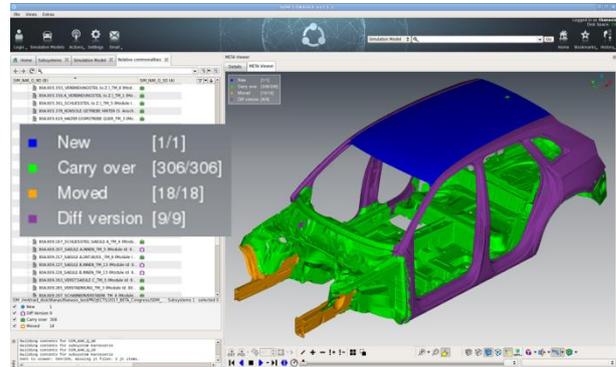
Using KOMVOS, you can easily create the CAE structure from a CAD structure having on the one side the full structure and on the other side the view of the model. With the CAE structure defined, you can easily colour the model according to the defined subsystems and thus have a visual inspection on the result.



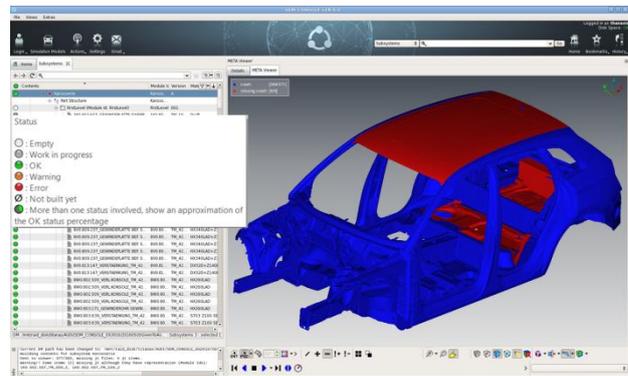


To further facilitate data structuring, KOMVOS offers the capability to identify the common parts in the different variants of the model. This allows you to work on these parts only once.

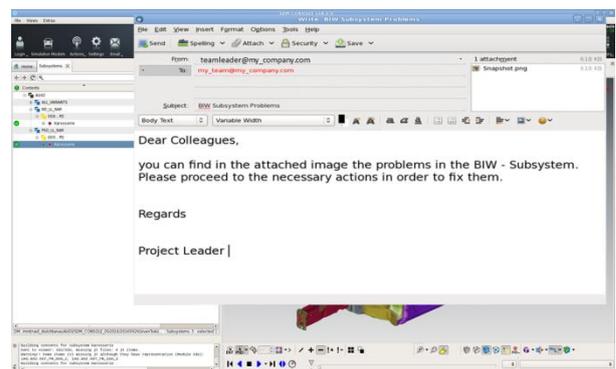
To properly assign the correct materials and avoid mistakes, KOMVOS also supports the visual inspection of the material used in each part.



Moving further down the process and having collected the required data, you can trigger several actions such as create the representations (mid surface, mesh). This step should be easily monitored while the results should also be easily evaluated. With KOMVOS, you can monitor the progress of your process list. KOMVOS also offers a visual inspection of the status of the model readiness. For example, parts that do not have the crash representation can be highlighted in a different colour.



The created files are then sent to the external suppliers for further treatment. Thus, the correct packages have to be created (files, scripts, parameters), and the required tasks for the given data described while avoiding sending double work. We then have to check the deliverables and place the validated parts in the proper place in the SDM System and communicate to all departments that their parts are now available.



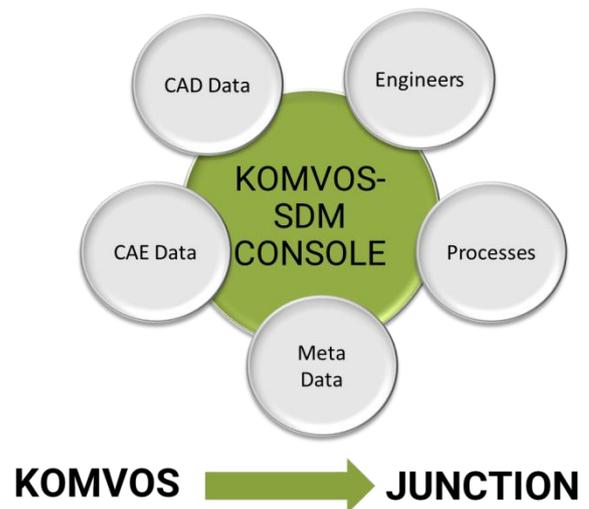


KOMVOS offers a build in mechanics to send emails, share information, images, results, reports, and progress updates. This communication can be set up following your communication protocols.

As these steps have to be performed also by users who are not experts in CAE modelling, KOMVOS, has been developed in such a way that allows even novice users to handle these complex procedures being also flexible and adaptable. It can be integrated in all CAE environments since it performs equally well with all CAE data management systems, and offers a scalable solution ranging from individual engineer to corporate level.

The Junction point for simulation data management

KOMVOS runs as the central point of all necessary data and Stakeholders to complete all needed actions for the interactive browsing, visualization, handling and communicating all CAE data. Thus from the Greek word for junction, KOMVOS takes its name.



Benefits

- Powerful model browsing and visualization
- Direct communication with any data management back-end
- Fully customizable
- Quick reports and statistics
- Ability to view simulation results.
- No expertise needed

Find out more at
www.beta-cae.com