

The SESAM® 2006 January CD release contains significant improvements enabling you to work more efficiently with a higher degree of quality.

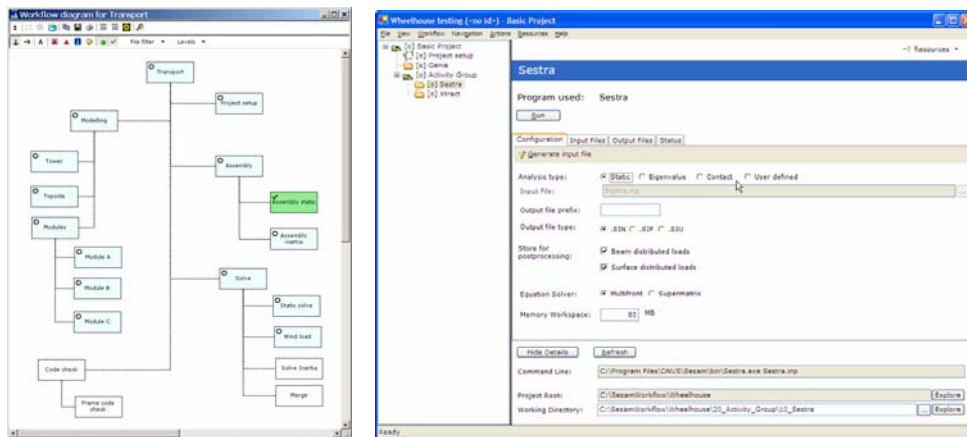
“DNV Software attaches great importance to market-driven product development and fully intends to continue with this strategy to best meet your business needs”, says SESAM product manager Ole Jan Nekstad. “Supporting this objective, a new release of SESAM® with many additional benefits and offering even greater flexibility is now available on the January 2006 CD. We are very pleased to release the BriX® Explorer for SESAM® where you can model and execute your SESAM workflow processes that will significantly improve performance and quality.”

The SESAM® 2006 January CD release contains many and significant improvements to several SESAM programs. For each program there is a detailed description of new features available in the updates section of the [SESAM support site](#). Please contact us if you require a password to access these pages. The SESAM® 2006 January CD contains both new program versions and updated user manuals. There are in particular eleven major improvements that will help our users become more productive in their daily work, each one is described in the following.

Please contact your focal point in DNV Software if you would like access or test out the new features if they are not already covered by your maintenance agreement with us.

1. BRIX® Explorer for SESAM®

This product is a replacement for the well known SESAM Manager for those having a valid maintenance contract with us. BRIX® Explorer for SESAM® is very different from the SESAM Manager in the way that it has a graphic driven user interface that improves usability and efficiency in addition to documenting quality. Compared to SESAM Manager it is now very easy to document – graphically – the work processes and the information flow. BRIX® Explorer for SESAM® comes with a practical user’s guide in how to use the program as well as 4 pre-defined workflows – we encourage you to use it in your strive to make work easier and efficient.



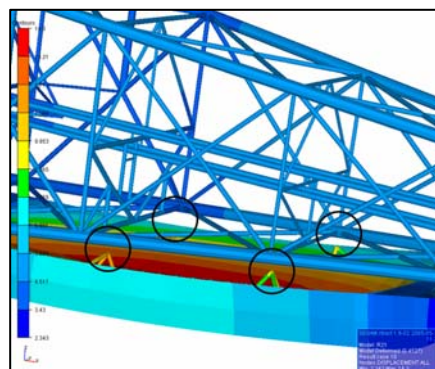
The pictures above show a graphic outline of a workflow process as well as a drill down on the activity using Sestra. For users familiar with SESAM Manager you will see that BRIX® Explorer for SESAM® comes with the same features for rapidly specifying input data for running various SESAM programs.

You start the BRIX® Explorer for SESAM® from a separate icon on your desktop or from the Start menu on your PC. The CD contains the SESAM Manager program for those who need to continue using it on existing projects; you may want to make your own desktop icon for easy access.



2. Gap and contact analysis

We have built a special module using SESTRRA to run non-linear contact formulations between specified points. To run gap analysis you need to specify which points to include (i.e. contact or non-contact) in Presel and specify gap computations in BRIX® Explorer for SESAM®. This feature is particularly of importance in e.g. transportation analysis (contact between sea fastenings and jacket/deck/module) or jack-up analysis (contact between deck and leg in the jacks). Sestra also comes with improved features for eigenvalue analysis, better check of finite elements prior to analysis and reduced sizes of temporarily file (zero loads are not stored).



The model above contains gap formulations between sea fastenings and jacket; in sagging conditions there is no contact between the two structures.

3. Handling result combinations of large models in the post processing stage

Xtract has been used with success by our users for more than five years now. For large models with many result combinations the performance has been significantly improved. Typically, for a model with 1.3 GB result file, multiple superelements (27.000 finite element nodes and 50.000 finite elements) and 21 basic loadcases we have gained a speed-up of a factor 13 (from 14.400 seconds to 1.140 seconds) when making 16 result combinations and scanning the new combinations. Furthermore, the new Xtract makes it easier for the user to work with multiple views because settings and selections from one window may be copied to another window.

4. Improving the execution of stochastic fatigue using Stofat

Stofat has been – and is – a highly acknowledged product for doing stochastic fatigue of plated structures based on results from a quasi-static analysis (using complex wave loads in a linear static analysis). We have now made the program even more efficient by implementing a database such that the user can do many fatigue computations and do the post-processing afterwards. This means that the user does not have to re-run the fatigue analyses when making different types of results presentation be it a printed report or a picture.

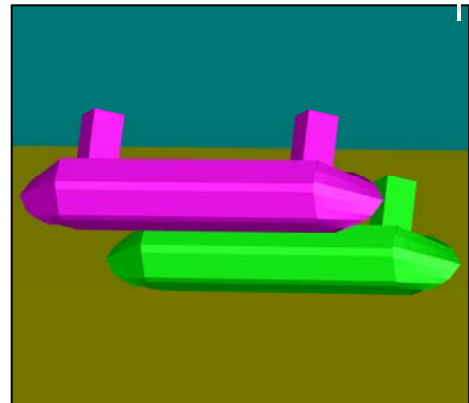
5. Mooring analysis supporting six degrees of freedom

We are also pleased to announce the release of the Mimosa 6 degrees of freedom version enabling our users to account for heave, roll and pitch when performing mooring analysis. The previous version, which we now refer to as Mimosa_5.7, was limited because it considered surge, sway and yaw only – the other degrees of freedom were neglected. The program has basically been re-written using among other finite element formulations in stead of approximates methods. Not all features have been re-implemented yet (typically calculation of transient response and distant calculations); as a consequence our users may have the need to run both versions. On the CD you will find both the new version and the previous Mimosa_5.7 (3 dof version only) accessing the same passwords you have from before.

6. Wasim

The main new feature in Wasim is increased flexibility in modelling and meshing. You can now include parts that are totally above the mean water level. Parts defined as surface piercing may be totally submerged or totally above the mean water line in a given loading condition without the need to change the geometry file. If the geometry has been modified compared to the original input in Wasim Manager this modified geometry can be exported.

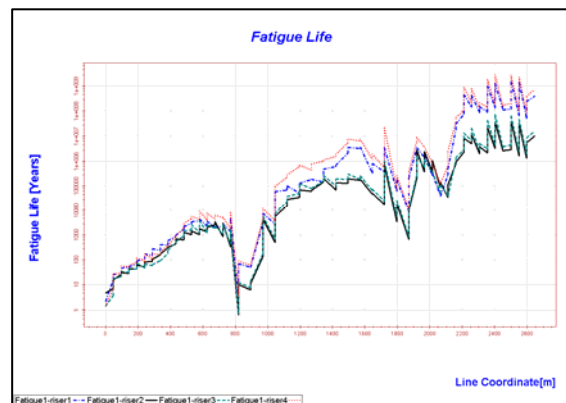
The new version also supports load transfer in finite depth. The picture to the rights shows a semi-submersible modelled in Wasim.



7. DeepC

DeepC has traditionally been used for complex coupled systems, but the most recent features for analysing single risers without coupling effects makes DeepC an attractive tool for traditional riser design also. An important new feature is fatigue analysis of steel tubular lines (e.g. risers or mooring lines). A new tutorial has also been made to help users learn how to efficiently use the program.

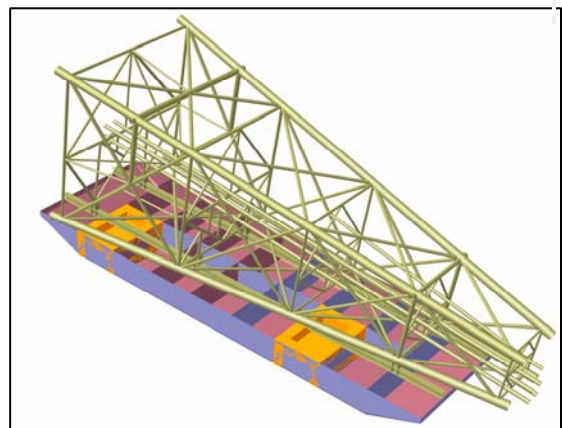
To the right is shown one way of presenting the fatigue life of lines.



8. GeniE

Main focus areas for 2005 were to enable our users to make panel models as input to HydroD as well as to create model reports using a pre-defined template. This means that our users can create one model and use it for structural, hydrostatic and hydrodynamic analyses.

The model to the right shows a jacket placed on a barge with two of the tanks highlighted. This model can be used for all three analyses as discussed above.



In addition our users will benefit from easy mass scaling (for example by specifying a target mass of a structural part), definition of harmonic wave load accelerations and import of SAT files (neutral format for ACIS used in many CAD systems).

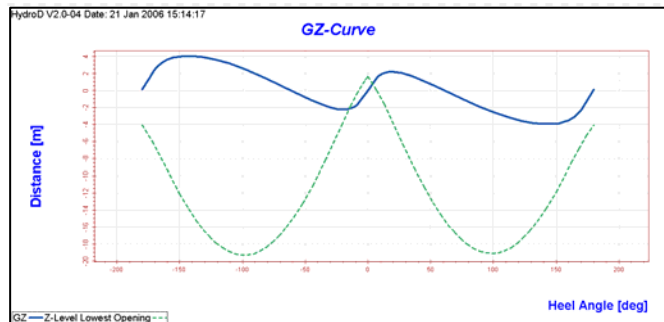
GeniE is using Framework for code checking of beams; some of the new features in this module are implementation of Lloyd's parametric stress concentration factors (SCF) for gap K and KT joints and a much more efficient gust wind analysis (reduced elapsed time).

9. HydroD

We are proud to announce that HydroD now includes equilibrium and stability analysis. It is now possible to:

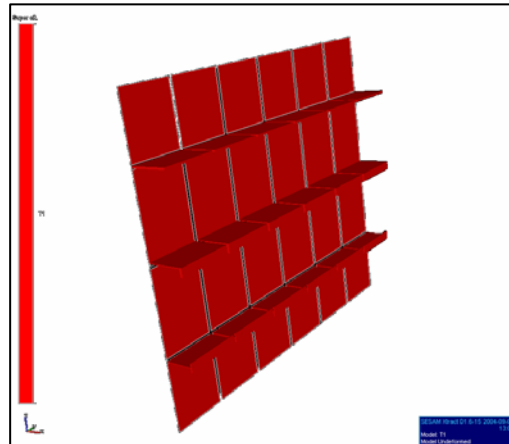
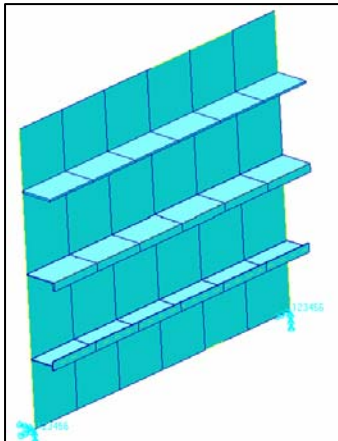
- Compute GZ curves and still water shear forces and bending moments.
- Do tank filling (specific filling or flooded tanks) and auto balance of tanks.
- Do hydrostatic balancing (sinkage, trim, heel computations) for a given panel model and mass model including tank filling.
- Do a hydrodynamic analysis running Wadam where the vessel has a trim and/or heel. This means that you can now very easy do hydrodynamic analysis of a floating vessel in damaged condition.

A typical GZ-curve and a reference point relative to the water surface are shown to the right.



10. Nastran converter

It is now possible to convert data from Nastran format to SESAM neutral format. The converter will translate both model data (of type *.bdf and *.out to T*.FEM) and result data (of type *.op2 to R*.SIN). The pictures below show the same panel in Nastran format and SESAM format (using Xtract).



11. New license service

We encourage you to install the new license service when updating your SESAM programs. The new license service supports two important features; USB dongles and “borrow” functionalities. It is not yet possible to run any of the SESAM programs using these features, but all SESAM programs that will be available for download following the SESAM 2006 January CD will support the features. You do not need to update any of the passwords to use the new license service.