COVISE

A Collaborative and Distributed Software Environment for High-Performance Simulation and Visualization

COVISE, the COllaborative VIsualization and Simulation Environment is an extensible distributed software environment. It integrates simulations on supercomputers, post-processing and collaborative visualization functionalities in a seamless manner.

COVISE applications are composed of multiple tasks which are modeled as operating system processes. The corresponding work flows are configured in a graphical pipeline editor and can span different machines. COVISE allows several users to work in a collaborative synchronized session, both on desktop systems and with OpenCOVER in immersive virtual environments.

COVISE has shown its versatility with many commercial users and in research projects at the High Performance Computing Center Stuttgart (HLRS) and its partners. It fulfills the needs of diverse branches such as automotive industry, architecture, hydraulic machinery, and archeology. More than 50 file formats such as Ensight, CFX, and StarCD are supported.

The development of COVISE was initiated in European Community funded projects in cooperation with industry. COVISE is licensed under the GNU Lesser General Public License and available on GitHub. Its development is led by HLRS in a continuous effort since 1993.

Supported Platforms

• Windows  • Linux  • Mac OS X

The figure shows a COVISE session in which the airflow in an elevator shaft with two passing cabins is analyzed. The visual application builder can be seen on the left. The visualization of the simulation data is shown on the right.

Web: www.hlrs.de/covise

Contact: Dr. Uwe Wössner
Hochschulrechenzentrum Universität Stuttgart
Nobelstraße 19, 70569 Stuttgart, Germany
Phone: +49-711-685-65790
E-Mail: woessner@hlrs.de