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## **Emerson Launches Roxar Tempest™ 6.6 Reservoir Simulation Suite**

*Full field reservoir simulation comes with advanced processing, intuitive visualization capabilities, and an integrated workflow*

BARCELONA, SPAIN (June 16 2010). Emerson Process Management has launched Roxar Tempest™ 6.6, a modern integrated solution for full field reservoir simulation. The announcement was made at the 72<sup>nd</sup> EAGE Conference & Exhibition being held in Barcelona.

Tempest 6.6, the latest version of the Tempest reservoir simulation suite used in hundreds of installations worldwide, guides users through the entire reservoir simulation process. The software covers the preparation and analysis of original data, compositional and black-oil simulation, results study and visualization, and economic evaluation.

Specific features of Tempest 6.6 include advanced processing capabilities, intuitive visualization through a consistent and powerful graphical interface, and an integrated workflow. The result is increased productivity and accessibility within reservoir asset teams.

“At a time when operators are looking to optimize production from increasingly marginal assets and make effective decisions over the allocation of capital and resources, the models and analytical processes that define modern reservoir simulation have never been more important,” said Ordin Husa, managing director of Roxar Software Solutions. “With Emerson’s Roxar Tempest 6.6, we believe we have a modern, full field simulator which not only meets these challenges but surpasses them. Faster and more detailed models, increased accessibility, productivity across the asset team, and a streamlined and integrated workflow mean one thing for operators - reliable production forecasts leading to maximum reservoir performance.”

Key developments of Tempest 6.6 include:

- **Advanced Simulation Capabilities.** Tempest 6.6 provides full parallel simulation on the latest multi-core workstations and clusters, allowing users to conduct faster simulation runs in greater levels of detail and maximize their returns from hardware investments.

Tempest's MORE engine supports a wide range of advanced options within a single program including black-oil, steam, polymer, dual porosity, equation of state and coal bed methane. A new segmented well approach also allows for a detailed well model which represents the underlying physics more realistically. Fractured wells can also be simulated in this new release.

Historical measurements may be entered as a table and well trajectories directly as 3D xyz files within Tempest 6.6, with no need for additional pre-processing tools. Jobs can be submitted locally or to remote clusters and the progress monitored interactively. Tempest 6.6's algebraic multi-grid solver also significantly speeds up models with high permeability contrast channels, such as the SPE 10 benchmark problem.

- **Scalable Post Processing.** Tempest 6.6 includes the View module. This is a fast and powerful pre and post processing tool for a range of simulators. View provides integrated 3D visualization with powerful 2D line graphs which increases productivity across the asset teams. This ease of use and accessibility also encourages more asset team members to engage in the simulation process.

Multiple simulation runs can be loaded and managed together with observed data. Comparisons between runs and with historical data are natural and greatly speed up history matching and sensitivity studies as well as helping with understanding the model and the underlying physical processes.

This release of Tempest View has benefited from the close involvement of one of the world's biggest oil companies during development, leading to a fast, easy to use tool which scales to very large models. Many new features can be tailored to the working practices of the customer including company standard graphs and non-standard calculator expressions.

- **Easy Model Set Up.** A prototype simulation data deck for MORE can be easily created and run, with resulting data edited inside or outside the Tempest environment. Data, such as PVT (Pressure, Volume, Temperature), relative permeability curves, and well lift curves, can also be graphically edited. In addition, dynamic data can be entered in tables as 'events', which can then

be interactively edited, sorted, filtered and viewed on a timeline. Full, interactive help is also available to provide a fast and powerful search facility.

- ***A Seamless and Integrated Workflow.*** Tempest 6.6 provides tools to assist operators display results from other 3<sup>rd</sup> party simulation engines and also interfaces with Emerson's reservoir modeling software, Roxar RMS and history matching solution, Roxar *EnABLE*. The result is a complete reservoir management solution.

Tempest 6.6 runs on Windows and Linux desktop machines with multi-core CPUs, clusters and Windows HPC servers. Tempest results have also been validated against other simulators and SPE benchmarks for a wide range of models.

### **About Emerson Process Management**

Emerson Process Management ([www.emersonprocess.com](http://www.emersonprocess.com)), an Emerson business, is a leader in helping businesses automate their production, processing and distribution in the chemical, oil and gas, refining, pulp and paper, power, water and wastewater treatment, mining and metals, food and beverage, life sciences and other industries. The company combines superior products and technology with industry-specific engineering, consulting, project management and maintenance services. Its brands include PlantWeb™, Syncade™, DeltaV™, Fisher®, Micro Motion®, Rosemount®, Daniel®, Ovation®, AMSSuite, and Roxar.

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