

Press release



IMMEDIATE RELEASE

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PSE releases gPROMS ProcessBuilder v1.1 with full dynamics

First true equation-oriented flowsheeting environment for steady-state and dynamic simulation and optimisation

LONDON, 14 June 2016 --- Process Systems Enterprise (PSE), the Advanced Process Modelling company, today announced the release of gPROMS ProcessBuilder® v1.1, the first true equation-oriented flowsheeting environment for steady-state and dynamic simulation and optimisation.

ProcessBuilder® is an integrated environment for steady-state and dynamic modelling of oil & gas, refining, chemicals, petrochemicals, and pharmaceutical processes. It is increasingly being adopted by process industry organisations seeking to deploy a single full-capability modelling tool across the entire process lifecycle in order to reduce cost of ownership while benefiting from 21st century modelling technology.

A major new feature in v1.1 is a full dynamic simulation and optimisation capability for flowsheets involving key unit operations such as distillation columns. New unit operation models include distributed multi-stream heat exchangers, upgraded shell-and-tube and double-pipe heat exchangers, steady-state and dynamic pipelines, and pressure relief/pressure safety valve models. A set of 'starting point' templates and examples simplify the addition of custom unit operation models, allowing users to capture and deploy knowledge via their own corporate libraries. There are also numerous robustness, usability and speed enhancements.

ProcessBuilder is used for a wide range of applications from early conceptual design simulation to construction of plant models for online monitoring and real-time optimisation. A key advantage is the ability to perform large-scale optimisation, including mixed continuous and discrete decisions, using high-fidelity models. The recent PSE Advanced Process Modelling Forum in London saw numerous presentations on industrial optimisation applications that identified profit improvements of tens or hundreds of millions of Euros in areas as diverse as multi-site region-wide natural gas processing, refinery crude transition, and site-wide utility systems.

ProcessBuilder v1.1 takes advantage of many new features of the underlying gPROMS® platform, including new numerical solvers and symbolic model reduction techniques that improve robustness and significantly accelerate performance of dynamic flowsheet simulations; model initialisation procedures for hierarchical flowsheets to allow better structuring of large flowsheets; and added functionality to assist in initialising pressure-driven flowsheets.

Costas Pantelides, MD of PSE and architect of the gPROMS platform, says "ProcessBuilder is process flowsheeting for the 21st century. By leveraging the power of state-of-the-art equation-oriented technology, we are enabling companies to create new value from 'already optimised' processes, and build competitive advantage in a tight and rapidly-changing market."

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About Process Systems Enterprise Ltd

PSE (www.psenderprise.com) is the world's foremost provider of Advanced Process Modelling software and services to the process industries. Companies apply high-fidelity predictive models within an optimisation framework to explore the process decision space rapidly and effectively, in order to reduce uncertainty and make better, faster and safer design and operating decisions.

PSE provides gPROMS® family products built on its gPROMS advanced process modelling platform. These include the general-purpose gPROMS ProcessBuilder® equation-oriented flowsheeting environment for fluid processes, the gPROMS FormulatedProducts® environment for integrated design and optimisation of formulated products and their manufacturing processes, and the gPROMS ModelBuilder® mathematical modelling toolbox, plus the domain-specific gFLARE®, gOILFIELD®, gCRYSTAL®, gSOLIDS®, gCOAS®, gFUELCELL®, gUTILITIES®, gCCS® and gWATER® products. The company also provides expert consulting services based on its tools.

Use of PSE's technology and services results in faster innovation, improved designs of processes and products, enhanced operations, more effective R&D and experimental campaigns and improved capture and transfer of corporate knowledge across the organisation.

PSE's global customer base of process manufacturing companies is served by operations in the UK, USA, Switzerland, Japan and Korea, and agencies in China, Malaysia, Taiwan and Thailand, and its software is used for research and teaching in some 200 universities around the world.

The company is committed to defining, developing and driving the adoption of next-generation process modelling software and workflows, and is a recognised industry leader in areas as diverse as digital design of pharmaceutical processes, oil & gas safety, model-based reaction engineering and whole-plant optimisation of chemical processes. PSE's own ability to innovate was recognised with the award of the UK's highest engineering prize, the prestigious Royal Academy of Engineering MacRobert Award for Engineering Innovation.