

 **Press release**

FOR IMMEDIATE RELEASE

Release Date : 26 September 2001

ModelEnterprise - revolutionary technology for supply chain modelling
Modelling and management for the flexible enterprise from the architects of gPROMS®

Process Systems Enterprise (PSE) of London today announced the release of ModelEnterprise, a single integrated platform for modelling and managing vital business decisions at all stages of design, planning and operation of flexible enterprises – from multi-site capacity planning to plant design and from single-site planning to real-time schedule execution.

“We looked at what was available to the process industries and found that nowhere was there a single product capable of dealing with the many and varied requirements of flexible production within the process industries”, says Mark Matzopoulos, MD of PSE. “Instead, users have had to make do with mutually incompatible ‘point solutions’, with all the problems that this entails in terms of consistency of data and effective re-use of modelling effort across applications”.

PSE designed ModelEnterprise not to be a single tool aimed at solving all supply chain problems, but rather as a modular modelling platform that allows the construction and maintenance of complex enterprise models, and supports a wide range of tools applied to these models for solving different types of problem. The uniqueness of ModelEnterprise stems from its three-layer architecture and the open framework that allows virtually infinite extension.

Central to the framework is ModelEnterprise’s Common Data Model, a highly-structured collection of the data representing the enterprise’s supply chain, from multiple production sites, warehouses and distribution centres, all the way down to individual materials, recipes, equipment items and sensors. By making use of advanced modelling concepts such as inheritance hierarchies of generic modelling blocks, the Common Data Model allows maximum effectiveness of modelling, for example by supporting the creation of libraries of models specific to industry sectors. The Common Data Model resides in an Object Server that provides other software with complete access to all available information via an open interface.

Users construct and manipulate the model via the Enterprise Modeller tool. They also describe the tasks that need to be performed based on this common model, ranging from strategic design of supply chain networks and multi-site production and distribution scheduling down to single-site plant scheduling and real-time schedule execution. Once these tasks are specified, the users employ appropriate Enterprise Management Applications (EMAs) to perform them. The results obtained become part of the data model themselves so, for example, a real-time schedule execution EMA can take as input the results of the optimal scheduling EMA which could, in turn, take its data from an integrated demand forecasting package.

The first EMAs that PSE is releasing for the ModelEnterprise platform are the Optimum Single-Site Scheduler (OSS Scheduler) – which determines mathematically optimal production schedules for given availabilities of plant resources, recipe information and known product demands – and its counterpart, the OSS Designer which determines the optimum level of provision of equipment and other resources for a flexible plant given typical demands. Both EMAs incorporate substantial recent enhancements to solution technology, including combined detailed/aggregated scheduling techniques, rolling horizon approaches and specialised numerical solvers for mixed integer linear programming problems. The underlying technology has been proven by Dow Chemical in the planning and co-ordination of production between several European chemical sites, and PSE is already working closely with Japanese EPC company JGC and launch client Petrochem Carless.

A key benefit of ModelEnterprise is that it can incorporate EMAs from virtually any source. PSE is publishing the interface specifications for the Object Server and will supply them to third-parties under free licence. Consequently, EMAs developed by PSE, by niche or specialist solution providers, or by operating companies, can all be integrated within ModelEnterprise in a seamless manner that is completely transparent to the end user. In addition, because of the inherent openness of the software, system integrators can embed ModelEnterprise within their own applications, potentially by-passing PSE's Enterprise Modeller. This makes ModelEnterprise ideal for building customised supply chain solutions for particular industry sectors.

About Process Systems Enterprise Ltd:

PSE (<http://www.psenderprise.com>) is one of the fastest growing providers of model-based technology and services for design and decision support to the process manufacturing industries. The company was founded in 1997, originally to deliver and support in the commercial market innovative process modelling technology originating from London's Imperial College. Among its unique offerings are advanced software packages, services and expertise for modelling and simulation of manufacturing processes and optimal design, planning, scheduling and operation of flexible manufacturing facilities. PSE has established itself as a leading independent high-tech provider to a growing, global customer base that encompasses the largest process manufacturing and automation companies in the world. The company is a winner of the prestigious UK Queen's Award for Enterprise and Innovation for 2001, for its gPROMS mathematical modelling framework and dynamic optimisation technology.

For further information, please contact:

Jonathan Felton
Business Development
Process Systems Enterprise
Bridge Studios
107a Hammersmith Bridge Road
London W6 9DA, United Kingdom

Tel +44 20 8563 0888
Fax +44 20 8563 0999

Email j.felton@psenterprise.com
On-line media information is available at: <http://www.psenderprise.com/>

