BEINGRID

BUSINESS EXPERIMENT FACT SHEET

BUSINESS EXPERIMENTS IN GRID

Textile Grid Portal

This business experiment offers a grid infrastructure joining textile firms and technology provider, to deliver high end services such as production scheduling, global resource scheduling and virtual retailing to SMEs throughout the European textile industry. The experiment aims to increase the competitive position of SMEs in the textile industry by giving them the opportunity to use distributed IT infrastructure for collaboration and making available innovative tools for supply chain management. Production scheduling (aka Penelope) is a batch procedure that will benefit from distributed computing power to deliver better performance and accuracy. Global resource scheduling (Trame) is a database that will be served through grid services in order to give hardware and location independence. Virtual retailing (Twist) will use computing power to improve its rendering engine.

Objectives

The aim of this business experiment is to organize a common infrastructure joining the research centers with the end users in the textile industry across Europe:

- **Production scheduling** (PENELOPE): the computing intensive side will be enhanced to take advantage of the grid. This will help the textile industry to better organize their production facilities and will increase the efficiency of service in terms of final product delivery.
- **Global resource scheduling** (TRAME): a grid access to the database will help textile SMEs to collaborate and enhance their production processes, lowering their costs.

Virtual retailing (TWIST): computing power will be used for fabric rendering to give the customer a higher level of service in fabric design.

All the developments will be published via a collaborative web portal that will give the end users information about and access to all the distributed resources.

Activities

ENEA is in charge of management and dissemination. Domina is in charge of all the technical aspects of the business experiment including: design, development and testing. The DD&T process will produce improvements to the existing software and add new components. This activity will provide content to the BEinGRID repository such as documentation on how to design grid applications in the grid environment, audio/video presentations focused on end user experiences, software components or enhancements to the existing ones and a demonstrator available to all at the end of the project. Domina is also in charge of the business activities such as the business model and exploitation of the results. At the end of the business experiment, we expect a measurable improvement in the performance of production scheduling and fabric rendering, a new database access infrastructure focused at improving collaboration, and a web portal to access all the applications involved.

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Industrial sectors

- ***Textile industry***, focusing the attention on production process optimization and some retail aspects. Both fabric and yarn production are involved.

Added-value for industry

The main benefits from the experiment are:

- a reduction in the number of physical prototypes required through the use of 3D virtual garment design and prototyping;
- time gained in the garment design process by the reduction of trial-error loops before an acceptable prototype is achieved;
- more efficient supply chain management
- lower raw material stock levels due to intelligent real-time, distributed production planning and coordinating systems
- lower finished goods stock levels resulting from unsold items not required by the mass market
- more garment customization

The TEXTILE GRID PORTAL will help the partners to better organize their production facilities and will increase the level of service in terms of final product delivery. The company will have the opportunity to collaborate better and enhance their production power, lower their costs, and give the final client a higher level of service.

Partners

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