

Current news

CeBIT: HPI software helps business simulate the financial situation

CeBIT 2015

Potsdam/Hanover. Whether currency exchange rates change suddenly or commodities prices fluctuate drastically – in business, swift reaction often saves money. Therefore, researchers of the Hasso Plattner Institute (HPI) introduce a new kind of financial simulations software that allows managers to analyse the complete production process of their company in real time. The so-called “business simulator” is presented in hall 9 at stand D44. It allows making reliable statements on profit and loss, production costs, profit margins and forecasts swiftly. It enables decision-makers to react to changed framework conditions without delay.

“Currently, it takes many companies up to two weeks until the IT department gathered all data, based on which it becomes possible to act,” says HPI Project Manager Dr. Matthias Uflacker. His five-member research team took only three months to develop the Business Simulator. In-Memory data management, which HPI researched and co-developed forms the basis for it. SAP brought about product maturity with the platform “SAP HANA”. “This is a high-speed database. Data are solely stored in the main memory of multi-core computers. This is what enables the analyses,” explains Uflacker.

With the Business Simulator, HPI researchers developed a tool that delivers for each company precise analyses for clearly defined questions, regardless of industry and product group. “Currently, a lot of data is stored decentralized in various systems in different operating units. Our software changes this situation. All financial information is now centrally linked in Business Simulator,” says Uflacker. Therefore, the as-is condition of the company can now displayed in real time. According to Uflacker, it is now possible to calculate precise forecasts and scenarios for example how fluctuating key indicators such as energy and raw material prices affect the company's own production and finally the profit. Uflacker calls it a “swift in-depth overview”.

Uflacker and his team used real data of a pastry company to try out the innovative software. The research focused on the question how food retailers can be delivered with dough so that at the end of the day as little of the product as possible must be destroyed. The researchers fed the system four billion point-of-sale data, which came from branches of a retail chain in all of Germany.

To deal with such a great volume of data, the research laboratory at the Institute of Prof. Hasso Plattner was upgraded with a high-performance computer with 240 processors and 12 terabyte RAM. This enabled to get swift answers to questions such as: what products are purchased where, at what time, during which weather conditions, and in connection with which events. What else does someone purchase on a Friday afternoon after placing a bag of chips in the shopping cart?

“These precise analyses mean for company money because they deliver in rapid speed answers to highly flexible problems” emphasizes Uflacker. It enables steering companies more precisely. This enables direct cooperation between controlling, marketing and business management because the data flow does no longer take two weeks.

This year, the Hasso Plattner Institute is among the largest exhibitors in the area of “Research and Innovation” at the CeBIT. Information technology scientists present in this area their latest research and development results from the world of “big data” for “d!conomy” – the newly created word for “digital economy”. It should express the transformation toward a completely networked economy. On over 380 square meters, HPI shows for example how company stakeholders can use in the future novel real time data support during meetings. As HPI demonstrates, there are innovative possibilities to analyse big data in football and to contain epidemics worldwide. Furthermore, new solutions are presented for greater IT security and free online courses for anyone to take on the topics of information technology are introduced.

Information for media outlets and editorial offices:

For detailed material (texts, images, videos) consult our website on CeBIT: www.hpi.de/cebit.

Interviews with renowned CeBIT guests on the topic IT location Germany can be found during the trade fair on www.it-gipfelblog.de.

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