

Memorandum

Sim-Serv Working Group: Quantitative Benefits of Simulation

Place: Frankfurt/Main

Date & time: 25.2.2004 11:30-16:10

Those present:

Johannes Krauth, SDZ GmbH, DE

Gert Zülch, ifab-Institute, University of Karlsruhe, DE

Karri Honkoila, VTT, FI

Rüdiger Nadolski, SDZ GmbH, DE

Gerhard Schreck, Fraunhofer IPK, DE

Roger Mallinson, DRD Consultants, UK

Jose Emilio Jimenez, Instituto Automatia Industrial – CSIC, ES

Yuri Merkuryev, Riga Technical University, LV

Paolo Timoni, GTEC, I

Tal Vagman, Tecnomatix Technologies, IS

Opening of the Meeting

Karri Honkoila opened the meeting.

Goals of the Working Group

Karri Honkoila presented the goals of the SIM-BENEFITS working group:

- Help Sim-Serv to promote use of simulation in industry to improve operations
- Help Members to convince customers that simulation is a profitable tool to use in improvement projects
- Enable Members to benchmark their simulation projects against the database
- Promote measurement of performance among Sim-Serv supplier group.

Therefore Sim-Serv will start collecting data of the benefits achieved in simulation projects. The administration of such a database will be suitable activity for Sim-Serv Association which is a neutral party not dependent on any single supplier.

Specification of the Project Database

Karri Honkoila presented the proposal for the database administration, use and structure. The proposal will be finally written as Sim-Serv deliverable D9.2. The members of the working group presented several comments and suggestions for improvement.

Honkoila noted that a potential problem arises if some other improvements have been done in parallel with improvements suggested and implemented due to the simulation project. In these cases it is difficult to assess how much of the improvement should be attributed to the simulation project.

Benchmarking of Simulation Projects

Gert Zülch expressed his concern about the feasibility to classify the projects in a way valid for comparison. According to his experience from earlier initiative with Siemens it was impossible to define applicable project classes. They designed a similar questionnaire to compare and benchmark projects. The outcome of the initiative was that the most important and useful piece of information was the phone number of the supplier. In Zülch's opinion it is impossible to generate meaningful statistical variables or values of quartiles for benchmarking of simulation projects.

Paolo Timoni noted that in case of power industry a very small improvement of efficiency (like 0,3%) could be worth a lot of money but in comparison to some other industry this figure looks very low. Thus the project would be ranked as a poor project even if it is very successful in reality. The conclusion is that the reference group of projects must be very carefully selected.

Timoni noted that we must distinguish between projects which produce a one off benefit and the projects which produce a benefit that is realized in a long period of time i.e. several years. If we compare these projects together the project that achieves a substantial one-off benefit will look much better than the project that result in a modest benefit for the first year but which produces this benefit in the successive years also.

Confidentiality of Data

Gert Zülch expressed his concern that no big company like Daimler-Chrysler will accept the "Delivery of Data to Sim-Serv" -document. The document will be sent to the company's legal department for handling. Showing the signed document will delay the process for a long time and maybe we will never get acceptance. This will likely be the case in all projects that have already been completed no matter if the user is a big enterprise or a SME. It will be difficult to get the agreement in retrospect. There is no clear benefit for companies to agree to the delivery of data. With smaller companies and in the beginning of project it could be possible to get the company to accept the procedure.

There is no such as "confidential data" from the point of view of user companies. The user companies see that Data going out of the company is public anyway. The delivery of Data by a user should be seen as a gift.

The participants of the group see that it is more likely to get data published by the companies on a professional/expert level rather than by relying on confidentiality agreements and legal procedures. Some companies have an expert board which can assess the confidentiality of data on a professional level and agree on the publication of data. This route should be used in appropriate cases.

The solution to the problem will be flexibility. Sim-Serv should allow alternative ways to get the customer's acceptance for Data delivery those including:

- Delivery of Data without publishing the name of the customer
- Getting agreement of Data delivery on professional/expert group basis

- Deliver confidential Data on the basis of the stipulations of the project agreement (post-project stipulations agreed by the general assembly of Sim-Serv Association) and the document “Delivery of Data to Sim-Serv”.

The Members should be able to select case by case how they ensure customer’s acceptance of data delivery. **The specification of the project database should be changed to accommodate the flexibility which is essential for success of the initiative.** Karri Honkoila will do the proposed changes and circulates the specification to the group members.

Delivery of Data by the Working Group Members

SDZ (Johannes Krauth as a private consultant) and GTEC compiled and provided one project each to the project database as a test case for the structure.

The members of the group foresee contribution of data to Sim-Serv Project Database as follows:

VTT

- VTT has searched public sources like web and conference proceedings for suitable cases. So far around 20 cases have been found where clear quantitative benefits have been published. These cases are from process sector. VTT will continue searching the public sources in the process sector.
- VTT will search potential cases inside the organization. So far one case has been entered into the database.

SDZ

- SDZ Entered one project to the database during the working session
- SDZ will enter other projects to the database after the meeting. These projects will be the projects done by SDZ but also projects done by others but published.

DRD Consultants will provide data of four projects:

- Multi-Ply Laminates – New Product
- Refinery – High Value Product Stream
- Petrochemicals Plant – Energy Saving
- Alternative Feedstocks – Increased Profit

Riga Technical University (TURIGA) will provide data from:

- Sim-Serv Test Case – Decorpart
- TURIGA will contact a local simulation supplier who is expected to have three potential projects for the database. TURIGA will invite the supplier to become a member of Sim-Serv

Fraunhofer IPK

- Three projects will be prepared for Sim-Serv Gallery of Success Stories
- Projects will be entered for project database of quantitative benefits

Tecnomatix Technologies

- Projects without customer names will be entered to the project database

GTEC

- One project was entered to the database during the working session

- Other projects are expected to be entered without mentioning customer name, location or contact person.

ifab

- Projects will be entered for project database of quantitative benefits

Next Steps

Karri Honkoila explained the actions planned until the end of the project:

Action	Responsible	Due
Database specification D9.2 ready	VTT	End-March
First set of Data from Members	Members	End-March
Public database operational on the web site	VTT	End-April
Periodic report on benchmarks D6.2.2 ready	VTT	End-April
Second set of Data from Members	Members	End-September
Final report on benchmarks	VTT	End-October
Database responsibility moved to Sim-Serv Association	VTT, Sim-Serv Association	End-October

Closing of the Meeting

Karri Honkoila thanked the participants for their valuable contributions and wished everybody a safe journey back home. The meeting was closed.