

Meeting Minutes

1. Meeting of Working Group „Open Digital Factory”

Date & Time: 06 of June 2003
Start: 9:00
Close: 15:30

Location: SDZ GmbH, Hauert 20, 44227 Dortmund, Germany

Participants: Barton (Uni-Hannover)
Masurat (TU-Clausthal)
Grieger (Uni-Karlsruhe)
Vasilu (CIMRU)
Druyen (Uni-Duisburg/Essen)
Housein (Uni-Duisburg/Essen)
Aldarrat (Uni-Duisburg/Essen)
Schnorfeil (SDZ)
Bös (SDZ)
Nadolski (SDZ)

Agenda :

1. Welcome all participant
2. Introduction of SDZ profile and its software tools (Bös)
3. Introduction of the working group “open digital factory
4. Short self introduction of each participants
5. Open Discussion about the objectives of this working group
6. Fixing the objectives

Minutes:

Presentation of participants:

CIMRU

- Fractal theory
- Simulation models of suppliers and customers networks
- Considering selection of the best in class supplier (price Negotiation)
- Cost forecast is included in this supplier network (based on game theory)

IFAB (Uni Karlsruhe)

- Main objectives are the working conditions at a certain (health, emissions, pollution)

Uni Hanover

- Petri Net and distributed simulation technology

TU Clausthal

- Virtual Reality
- Idea of Digital Factory
 - o DF could be customized by the user
 - o Cherry picking of the best in case modules
 - o Modular concept

General discussion:

After the introduction of this working group all participant have discussed about the definition of “open digital factory”:

- A clear definition of Virtual Reality (VR) / (open) digital factory (ODF) is still missing in common
- VR/ODF will not replace engineers
- VR/ODF could define the interface between several software tools to exchange data
- VR/ODF could be a knowledge database
- ODF should offer the possibility to create an user defined solution package for their special problems (preconfigured scenarios for the main application)
- Therefore meta classes of production have to be defined
 - Line process
 - Shop floor
 - Customer / Market production

Discussion about “OPEN”

- Platform of definition rules for using digital factory components
- SME will have different definition of ODF as automotive
- SME will create other applications for ODF
- Open architecture where everyone can include his solution/tool
- Integration of all planning and operational functionalities

Definition of Open Digital Enterprise (OPE)

- It is a network out of Open digital factories
- OPE is the bigger circle

Definition of SME

- Few engineer are responsible for optimization
- No experts
- No high budget to analyse the current problems
- Certain problems looking for certain solution
- Number of employee (average 500, between 10 and 2.000 depends on the business)

Activities of the participants

TU-Clausthal:	DHA Integration, Coupling Simulation & Visualisation, Scheduling & Costs
Duisburg:	Scheduling & Simulation, Human Resources Allocation, Cost
Hannover.	Optimisation, distributed and sequential Simulation, Validation, Petri Net, Queuing Nets
Karlsruhe:	Personal Structure environment Stress, Human Resources Model
Galway:	Global Architecture Fractal model, Simulation
SDZ:	Scheduling, Simulation, Data integration

TO DOs

- For the text meeting
 - o Information about start up a new EU project
 - o Information about the HLA standard
- Minute of this meeting
- List of participants
- Set up a download site at the Sim-Serv website
- Update Working group description

Goals

- Find out the most important combination and methods data
- Interfaces
 - o Bidirectional
 - o Feedback
 - o Communication rules
- Definition what kind of data have to exchange in the certain combinations (Start with $n=2$)
- Complete the matrix (image 1)
- Find more (commercial) participant for this working group

Images:

Image 1: Problems x Representations

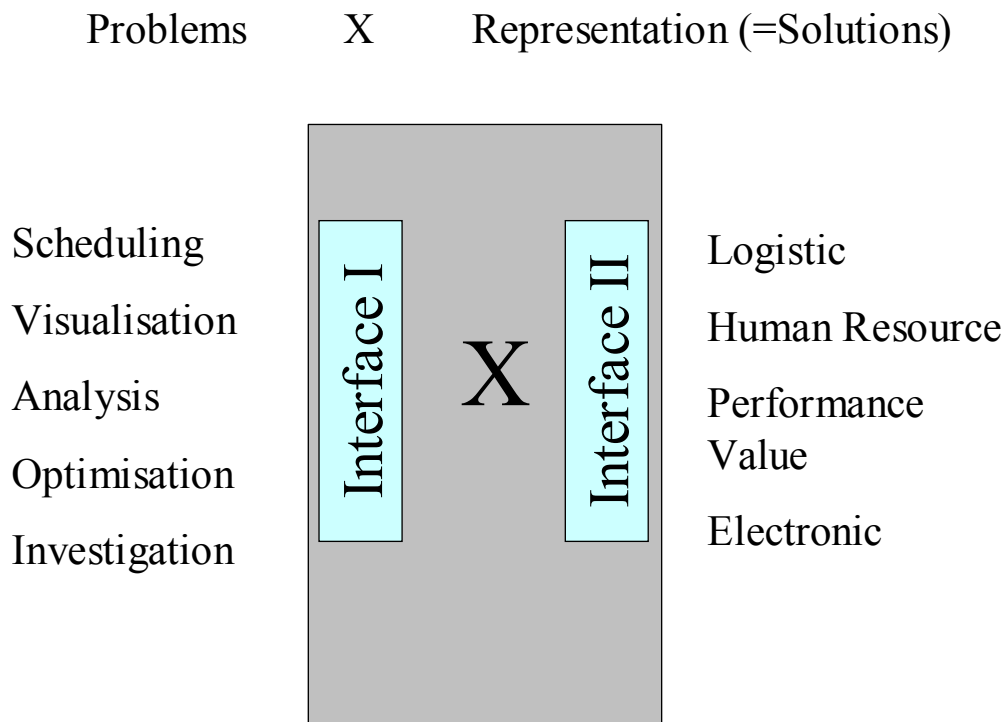
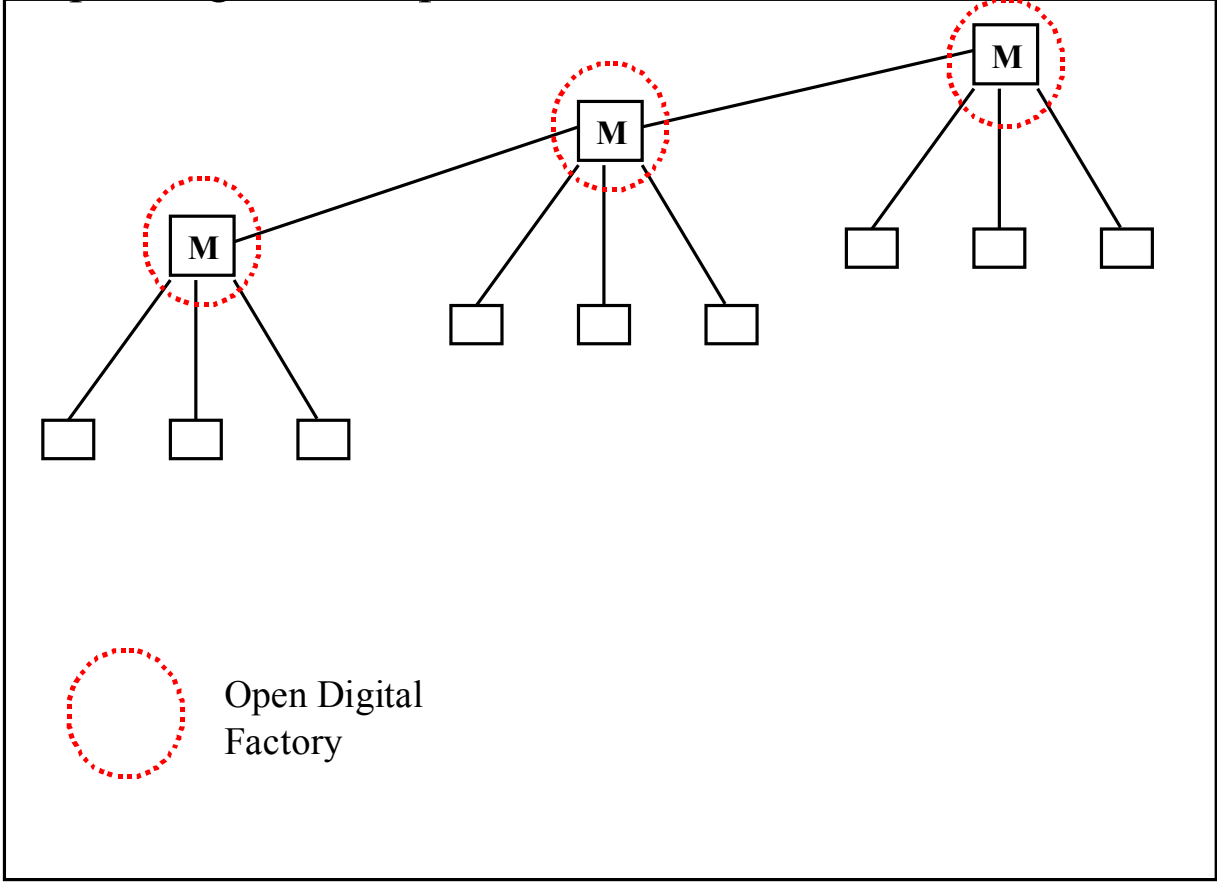


Image 2 :Open Digital Enterprise

Open Digital Enterprise



Next meeting is planned to held at the 22nd of october. Location will be published later.