

## **Minutes of Working Group for Business and Enterprise Modelling/Simulation, March 10<sup>th</sup> 2004.**

### **Present**

The meeting was attended by 10 industrialists and academics representing nine different organizations. Interest had been expressed from two other organizations which were not able to make the date. Details are attached to the minutes.

### **Proceedings**

The meeting followed the agenda, shown here as an attachment, with Professor Karcanias appointed as the Chairman.

After welcomes and introductions, David Boland placed the context of the meeting within the theme of the SIM-SERV project, explaining that one of the main aims of the virtual institute was to provide a network in support of rapid transfer of leading edge, modeling and simulation R&D results into industrial take-up. Further, it had been identified that business and enterprise modeling was an important area where strong results could strengthen the competitive performance of European industrialists. It was hoped that creation of a white paper in this area would provide guidance to those in government and strategic positions (etc) to facilitate future development programs.

NK explained that the purpose was to bring together experts in the areas and to define the R&D needs which would have to be satisfied to reach this goal. He pointed out that the central timeframe was the next 5 years but that views on the longer term would not be excluded. He referred to the original overview document (attached here) as a further guide as to intent.

Individual experts were then encouraged to explain and present on their particular areas of expertise and this led into a general discussion on the essential elements required for creation of a worthwhile white paper. In fact, a series of four interrelated areas were identified where complementary contributions would be required in order to achieve an overall, comprehensive document (these areas are defined in more detail in an attachment to the present document) and a methodology was agreed for their creation. This was based on the assignment of lead responsibilities for two white paper to individuals - the first addressing business drivers, paradigms and their implications on European competitiveness – the second addressing technical issues surrounding the specific modeling needs in the business area. In addition, it was recognized that other exploitation investigations being carried out for a Roadmap initiative, could be modified for reuse here.

Lead responsibilities are shown in the attachment, but it was agreed that other group participants would also be encouraged to contribute to the development of the drafts, where qualified to do so. Allocation of the time of individuals within the 40 hours maximum for each white paper would be agreed off line.

## **Forward Programme**

The group considered that two further events would be required to achieve a worthwhile conclusion;

1. Second meeting in May (17, 18 or 19th) to review individual white papers produced.
2. Concluding meeting in July (12, 13 or 14th) to confirm their consolidation in a Roadmap Document with a Workshop event to disseminate the results to a wider group of simulation specialists and users.

## **Attendees at Working Group for Business and Enterprise Modelling/Simulation**

### **Prof Nick Karcnias**

Schools of Engineering  
City University  
London  
[N.Karcnias@city.ac.uk](mailto:N.Karcnias@city.ac.uk)

### **Calum Forsyth**

Webaspx  
Runcorn  
Cheshire  
[calum.forsyth@webaspx.com](mailto:calum.forsyth@webaspx.com)

### **Prof Antonis Kokossis**

Dept of Chemical Engineering  
[A.Kokossis@surrey.ac.uk](mailto:A.Kokossis@surrey.ac.uk)

### **Prof Heikki Koivo**

University of Helsinki  
[heikki.koivo@hut.fi](mailto:heikki.koivo@hut.fi)

### **David R Clegg,**

Sheffield and Hallam University  
[D.R.Clegg@shu.ac.uk](mailto:D.R.Clegg@shu.ac.uk)

### **Roger Moore**

UK Dept of Trade and Industry  
[fangio@postmaster.co.uk](mailto:fangio@postmaster.co.uk)

### **Allyson Kilbrai**

Thesues Institute  
France  
[kilbrai@theseus.fr](mailto:kilbrai@theseus.fr)



**Steve Williamson**

SJW Associates

Mould

N Wales

[steve@sjwassociates.co.uk](mailto:steve@sjwassociates.co.uk)

**Dia Miloti**

Schools of Engineering

City University

London

[K.Miloti@city.ac.uk](mailto:K.Miloti@city.ac.uk)

**Kostas Karaoulis**

Schools of Engineering

City University

London

[K.Karaoulis@city.ac.uk](mailto:K.Karaoulis@city.ac.uk)

**Dave Boland**

Process Industries Centre for Manufacturing Excellence

Wilton

Cleveland

[dave@menza.co.uk](mailto:dave@menza.co.uk)

**Non attendees expressing interest in future activities;**

**Feargal Timon**

CIM Ireland Ltd.

+353-87-2558183

[WWW.Simulation.IE](http://WWW.Simulation.IE)

[Feargal.Timon@Simulation.IE](mailto:Feargal.Timon@Simulation.IE)

**Professor Berc Rustem**

Centre for Process Systems Engineering

Department of Chemical Engineering

Imperial College London

tel - +44-20-75946620 (direct)

+44-20-75946627

[br@doc.ic.ac.uk](mailto:br@doc.ic.ac.uk)

**Prof George Papavasiliopoulos**

Electrical Engin/ Control

National Technical University of Athens,

Greece

[yorgos@netmode.ntua.gr](mailto:yorgos@netmode.ntua.gr)

**Prof Dave Stupples**

School of Engineering

City University

[d.w.stupples@city.ac.uk](mailto:d.w.stupples@city.ac.uk)

## Working Group for Business and Enterprise Modelling/Simulation

City University 10<sup>th</sup> March

### Agenda

- **Welcome with round table introductions**  
NK plus all.
- **Overview of SIM-SERV**  
DB
- **Objectives of Working Group**  
NK with general discussion
- **Presentations of Specialists**  
Opportunity for all to make 5 minute presentation on State-of-art issues
- **Defining Key Development Areas – scope and contributions**  
All
- **Actions Arising**  
All
- **Next Meeting**
- **Close**

The meeting will be held in the CM 396 in the Schools of Engineering, commencing at 11.00 hrs. OHP and lap top projection facilities will be available for those wishing to present .

### **Working Group for Business and Enterprise Modelling**

Investment in ICT support systems has become a key, enabling strategy of many manufacturers in their migration towards lean manufacturing into well-integrated value chains. Highly successful as this has already been, the emphasis has so far tended to be on supporting localized functionalities (eg scheduling, planning, customer support systems, human resources) rather than addressing the overall issue of creating lean, effective business processes which may be brought together into a total system for overall optimization.

The EU has now asked the SIM-SERV partners to take a look at the state-of-art surrounding modeling, simulation and optimization of total businesses, or enterprises with a view to creating a perspective on future simulation developments needed. This challenge will be met by forming an expert working group to discuss the issues involved and to move towards a written position statement.

### **SUMMARY OF KEY ISSUES**

1. Business Drivers and New Business Paradigms  
**Theseus**
2. Business Modelling: Simulation, Decision Making etc. IT  
**Imperial College (Berc Rustem?)**
3. Exploitation – Technology and Implications on European Competitiveness  
**Webaspx ex Roadmap** (this will be linked with the corresponding activity of the technical working group).

Every area above was discussed in detail and a list of contents has been produced as indicated below:

### **THEME (B.1) : BUSINESS DRIVERS AND IMPLICATIONS**

- B.1.1 Listing of Business Drivers
- B.1.2 Identification of Business Areas where Modelling can contribute
- B.1.3 Dynamic Strategy Development (Scenario development)
- B.1.4 Global Model of the Business
- B.1.5 Investment decisions in a broadest sense
- B.1.6 Risk Assessment
- B.1.7 Forecasting
- B.1.8 Optimisation of resources
- B.1.9 Policy Alliances
- B.1.10 Business and Market Diagnostics
- B.1.11 Key Performance Indicators
- B.1.12 Re-Engineering
- B.1.13 Business Merging
- B.1.14 Analyst's Modeling: Models for Stake-holders

- B.1.15 Competitiveness Models: Competitiveness of EU Businesses versus Rest of World
- B.1.16 Knowledge Management
- B.1.17 Virtual Supply Chain
- B.1.18 Virtual Manufacturing
- B.1.19 Business Processes and Capital Outsource
- B.1.20 Integration
- B.1.21 Collaboration/Competition – Organisational Issues

**THEME (B.2): BUSINESS MODELLING: SIM, OPTIM, DECISION SUPPORT**

- B.2.1 System Definition
- B.2.2 Modelling of particular Processes
- B.2.3 Complexity and Modelling
- B.2.4 Model Simplification without loss of relevance
- B.2.5 Organisation of Information and Control systems
- B.2.6 Automated Solution for well-defined problems
- B.2.7 Diagnostics/Data mining
- B.2.8 Decision Making
- B.2.9 IT issues/Decision support

**THEME (B.3): EXPLOITATION OF RESULTS**

- B.3.1 Portability of Models
- B.3.2 Barriers to Exploitation and Soft Issues
- B.3.3 Data from Roadmapping

The above activity will be linked with the corresponding technical activity of the previous working group.

**TIMETABLE OF ACTIVITIES:**

1. Agreeing the minutes and proposals by 22<sup>nd</sup> March 2004.
2. Expression of interest to contribute in the particular tasks of the main themes by 26<sup>th</sup> March 2004 (communication of intention to theme leader and to DB,NK)
3. Contributions sent to theme leader by 26<sup>th</sup> April 2004.
4. First draft of white papers to be circulated before the second meeting (middle May)
5. Final draft of white papers to be submitted by 7<sup>th</sup> June 2004.
6. First draft of Road Map to be circulated by 28<sup>th</sup> June 2004.
7. Road Map and White Papers to be presented in the Patras Workshop (middle July).