Report of Working Group I
“Game Structures & Collaborative Environments”
Brussels, 12.5.2005
Moderator : Prof. Matthias Rauterberg
Cluster: JOY FACTOR
M. Rauterberg, H. Diener (& E. Leibbrand)

Social Communication

Interaction
Sense of presence

Implicit communication

Objectives: Education, Therapy, Learning, Fun, Creativity, Productivity

Create Flow – Experience in CSCW
Gaming / Working Hybrids

Intrinsic motivation
Gaming in every day life

Combining seamlessly working and gaming environments
Non-verbal communication

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Short term goals:

- Learning along the process
- Production with fun
  - e.g. Adventure game as production tool for
  - full body activation and engagement
    - e.g. shared audiospace for

- discussions during walking
- video conference
- audioconference meetings

- text documents (e.g. proposals)
- Medical applications (e.g. diagnosis)
- Cooking (e.g. inventing new recipes)

Long term goals:

- Management style
- Knowledge management
- People empowerment
- Smell technologies

extrinsic motivation

intrinsic motivation

@Work
Cluster: DEVELOPMENT
M. Masuch, H. Heinzel, M. Janusch

- Develop « soft » components of collaboration like trustbuilding and link to technology
- Scalable game development architecture
  Using the same environment for novice and professional users

Next Generation: middleware tools

Next Generation: system architecture

How to mediate functionality?
Games versus CSCW
Cluster: DEVELOPMENT

M. Masuch, H. Heinzel, M. Janusch

Short-term goals

- Rapid game prototyping
  → fostering the transformation of ideas into games
- Distributed authoring of virtual environments
- Collaboration of virtual teams in asset production process
- Game development as a collaborative game

Long-term goals

- Bring new game design ideas into the game industry
  → preserve « soft skills » in the collaboration
- Configurability / adaptability of tools by end users
  → enabling end users to become developer
Cluster : SYSTEM CHARACTERISTICS
M. Masuch, H. Heinzel, M. Janusch

Game rules definition versus working task fulfilment

Cognitive aspects of games

What can be build with an MMOG? (virtual environment)

Biology & Games
- Games training users' biology
- Nature inspiring systems

Enabling Technologies
Cluster: SYSTEM CHARACTERISTICS

M. Masuch, H. Heinzel, M. Janusch

Short-term goals

• media and content creation
  → What could be the added value of game technologies
• bio feedback from games
• flexibility of interaction with/via system

Long-term goals

• handling of increased complexity
  → Self adapting; standards for integration
• seamless integration of different technologies
• dynamic / flexible system structures
Cluster: COLLABORATION
Sergey K., Richard W., Jens E.

- Trust to increase collaboration in distance (physical and cultural)
- Multimodal Collaboration; physical agent, software agent, human
- Privacy to assure/stabilise social interaction
- Cooperative Problem Solving
- Ill-defined problems: Heterarchical Decision structures Organisational structures
- Swar & Collaboration
- Utilise game process characteristic features; How? For which workflow?
- Alienation vs Clans & Guilds

Short Term Goals
- Support for creativity and fun in collaboration

Long Term Goals
- Community Building (several heterogenous communities exist eg. Games)
- Adapting tools & interfaces from games for collaboration@work

- Elaborate architecture for inter-enterprise / inter-human collaborative behaviours (business models, performance indicators, rules, best practices, ...)
- Relate patterns of Human behaviour to organisational structures (theory, POC, ...)
- Games to understand / predict human behaviour in professional, virtual communities (www.openbc.com)
- CWE to support virtual breeding environments (industry clusters)
- Simulation of groupwork in virtual organisations
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Cluster: Context Awareness & Analysis
Christina, Boriana, Karoly, M. Chalmers

Context-awareness in real application

Awareness and adaptation with context (Chalmers)

Context capture & representation

Analysis of the gaming process
« theoretical »
« long & short term »

Record & replay fools for debriefing and analysis

Recording and reuse of the history of use (Chalmers)

Real-time rendering of one location in another location
Cluster : Context Awareness & Analysis
Christina, Boriana, Karoly, M. Chalmers

Short-term goals

• practical methods for representing and reusing people’s activity
  → reflection on play or work, learning / adapting how one uses the system

• Analysis / theory that is grounded in game play and social interaction

Long-term goals

• Rich broad models / understanding of context – more than just state … also history, subjectivity …
• Bringing understanding of all games’ application areas up to a high standard … and synthesizing framework

→ more / deeper / better