



# Group-Awareness in Online Work, Learning & Games

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## ABSTRACT

With the rapid advance of Web 2.0 technologies online group collaboration has become increasingly popular. Groupware applications and technologies are now accessible to all branches of academia and industry with leaders and visionaries embracing them in diverse fields including work, learning and games. Group collaboration and awareness offer the opportunity and challenge for shared experience, creation and discovery. This multidisciplinary workshop presented studies in: serious games to support training; guidelines for group awareness in Computer Supported Collaborative Work and Games; identification of temporal patterns used to organize students' time-on-task and team work using the EuroCAT collaborative tool; and the role of motivation in project management courses in relation to certification and tools to support it. The workshop was funded by EuroCAT, a Collaboration Awareness Tool (CAT). EuroCAT was evaluated at the end of the workshop.

## Categories and Subject Descriptors

K.8.0 [General]: Games. K.3.1 [Computer Uses in Education]: Collaborative learning. H.5.3 [Group and Organization Interfaces]: Collaborative computing, Evaluation/methodology, Organizational design, Synchronous interaction, Theory and models, Web-based interaction.

## Keywords

Online Group Awareness, Collaboration, CSCW, CSCL, Games.

## 1. SERIOUS GAMES FOR INTERPROFESSIONAL EDUCATION FOR CRITICAL CARE RESPONSE TEAMS

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Interprofessional education is a pedagogical approach which allows health care practitioners to develop a clear understanding and appreciation of the roles, expertise, and unique contributions of their disciplines as well as those of the other participating health care providers. Interprofessional education and training for critical care response teams (CCRTs) training is complex and expensive. A more cost-effective alternative is the use of interactive virtual environments or serious games that offer a feasible alternative to traditional methods as multiple team members may participate in the simulation simultaneously regardless of their physical location or time of day. Here we provide an overview of a serious game whose purpose is to augment learning of skills, knowledge, and attitudes requisite in interprofessional education for CCRTs.

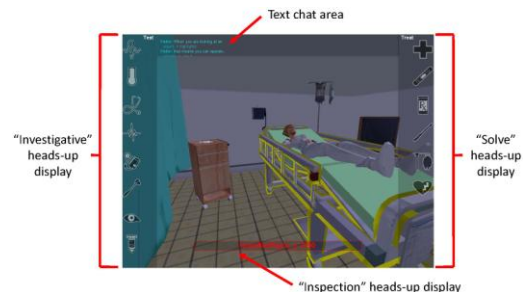


Fig. 1. Critical care response team serious game sample screenshot and GUI layout.

## 2. GROUP AWARENESS GUIDELINES FOR ONLINE COLLABORATION IN CSCW-L

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As ubiquitous computing is now part of everyday life, the borders of work and learning are merging. Being in different locations requires more flexible timetables, especially in group activities. This creates difficulties in perceiving the coherency of collaborative tasks in relation to the other group-members and thus, awareness of collaboration patterns is limited. As the borders of Computer Supported Collaborative Work and Learning (CSCL-W) are the presentation suggested seven guidelines for e-collaboration tools, implemented in EuroCAT, a

Collaboration Awareness Tool (CAT). These are: presence & co-presence, time continuum, context continuum, situation experience, continuum experience, convergence, and motivation and enjoyment.

### 3. STUDENTS' TEMPORAL PATTERN IDENTIFICATION WITH EUROCAT

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E-learners benefit from a high temporal flexibility. However, in the context of collaborative learning they need to develop a perception, understanding and anticipation of other members' temporal patterns in order to organize their time-on-task in the individual and collective level. Because of the reduction of group awareness in distance learning contexts, we propose the introduction of the EuroCAT Collaboration Awareness Tools to facilitate the individual declaration of the time use in EuroCAT and create a collective vision of the group temporal availabilities in THIS group awareness tool.

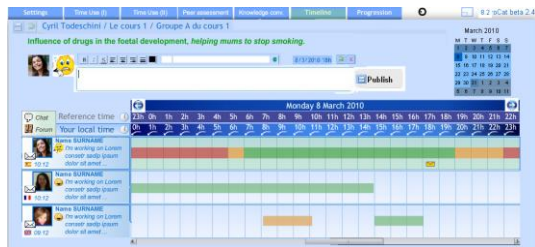


Fig 2. Collective vision of group temporal availabilities in EuroCAT

### 4. TEAMWORK ANALYSIS IN CSCL

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Individual traits of the group members could affect their group dynamics and learning, in case of collaborative learning teams. In this presentation we highlight the importance of the assessment of the students' beliefs and conceptions on the teamwork in order to understand their behaviour and their learning process during the Computer Supported Collaborative Learning tasks. We introduce the Conceptions About the Teamwork Questionnaire developed under the EVACOOP project and the way this assessment will be considered during the EuroCAT Tool experimentations.

### 5. EXPLORING THE RELATIONSHIP BETWEEN LEARNING MOTIVATION AND TEAM COLLABORATION IN CSCL

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Distance learning techniques and experiences have changed rapidly in the Internet age. Most distance learning programmes concern specific, isolated topics or skills. According to recent studies and publications, there is a growing need for cross-disciplinary, managerial and collaborative skills. The present paper explains the direction that will be taken for a research project that will focus on project management courses including collaborative tasks for virtual multi-media teams that are composed of people with different backgrounds (software programmes, graphic designers, managers, etc.).

### 6. DISCUSSION & EuroCAT EVALUATION

In the workshop discussions the participants raised difficulties in the use of tools in collaborative work. In online groups, self- and group- collaboration requires self- and group regulation that affects group dynamics and interdependency. Engagement and success in such environments depend on extrinsic and intrinsic motivation. Such motivational types can be increased by positive and negative feedback. Consequently design needs to support it. For example, game design principles embedded in collaborative tools used for work and education can enhance the motivational and enjoyment aspect.

Lastly, two groups of 5 users onsite and 4 users online from 4 European countries, Canada and the US evaluated EuroCAT. They worked on a collaborative task, this was to create a name and vision statement for a new budget airline. There was also an ergonomics online questionnaire. The difficulties the users suggested were: because EuroCAT is built on multidisciplinary approaches there was too much data entry; due to multiple data entry many full screens were needed so fewer screens are better to consider; it would be easier if an incorporated excel data extraction tool; there should be more optional sections for the user; time is too generalised and it needs to break down in days and weeks rather than months; game like mechanisms can provide easier ways to input data.

### 7. ACKNOWLEDGEMENT

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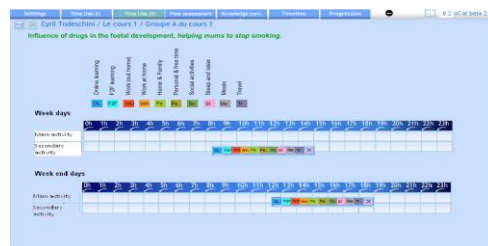


Fig 2. Individual declaration of the time use in EuroCAT