



RWTH Aachen
Project management
eLearning and hydrology Experts
Experimentation, validation, usability tests from the
Student point of view
Member of Sustainability committee

Polytechnico Milano
eLearning and pedagogic experts – thus leading the
pedagogic based work packages
Member of Sustainability committee

TU Vienna
Hydrology Experts and leader of dissemination Workpackage
Management of water management development
Member of Sustainability committee

HKC Cologne
Expert in in simulating flooding schemes and flooding
scenarios – thus providing necessary data about
flood management, required skills and roles.
Leading sustainability and quality control work packages
Offer contact to new users/learner via the more than 100 partners
Member of Sustainability committee

Zone 2 Connect
Development of Unity 3D based Virtual Environment and
serious Game

Lehr- und Forschungsgebiet Ingenieurhydrologie

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Play to learn





Join us at:

- 'Bologna Smart City', 16th -18th October 2013
- 'Hochwassertage Köln', 21st - 22nd November 2013
- 'SeCom2.0 Event at TU Vienna', 28th November 2013
- 'Online Educa Berlin', 4th - 6th December 2013
- 'Learntec Karlsruhe', 4th - 6th February 2014

Visit www.secom20.eu for further information.



Play to learn

Every year severe flood events cause fatalities and enormous economic damage. This trend will probably get stronger as floods and storms are expected to become more frequent and severe in the future (European Commission and UN International Strategy for Disaster Reduction, 2009).

To deal with the challenge to raise preparedness in case of flood event, in the framework of SeCom a web based learning system was developed. The core component is a problem-based simulation game which provides realistic flood scenarios whose impacts need to be managed in real time. The methodology of Serious Gameplay is expected to gain widespread attention within the next years, particularly in higher education environment.

Serious Gameplay

SeCom-V simulates different pre-defined scenarios (from flood experts) of urban flooding including hydrographs with different peak discharges, volumes and durations. The players operate as decision makers (local authorities) in flood risk management during the event. They have to react during a flood event by coordinating protection measures and considering economical, social, technical and environmental aspects during the pre-event planning phase.

SeCom-V – Serious Game Module

SeCom-V is a Serious Game that simulates urban flooding in a hypothetical city with complex and realistic infrastructure, housing areas, industrial zones at a large river. The players can choose between four different areas in the city, for which specific flood defense measures are available. During a pre-event planning phase the players have to make strategical decisions regarding human resources and flood defense utilities. The simulations are based on realistic hydraulic background and damage functions.

SeCom-V features:

- Unity3D-based Gameplay
- Management of protection measures
- Different levels of complexity and a helping system during the game
- Possibility for teachers to create specific flood scenarios
- Multiplayer mode up to 4 players – communication and interaction
- Debriefing and evaluation of the players performance

SeCom-P – Platform Module

The platform module SeCom-P brings the different components together. It connects the eLearning tools, Serious Gaming, synchronous and asynchronous communication, web conferencing, document sharing und virtual learning tools (Moodle):

- Seamless integration of SeCom-V Game Module
- Video-based lectures covering the scientific background flood risk management as well as the EU Flood Risk Directive
- Self-assessments to be solved to see improvement of flood-related knowledge
- Retrieval and analysis of SeCom-V game results
- Virtual class rooms – teacher can create individual scenarios and certificate students

