Course and curriculum development for Creative Technology

Title: CA5: Hybrid World(s) Date: 23/5/08	Author: A. Eliens Version: 1.0

Course name	CA5: Hybrid World(s)
Study load	*6*
Semester	*4*
Contents	*The course is meant as an integrative project, with a special focus on the relation between the real world and the virtual world, not only in a metaphorical sense, but rather as expressed by the notion of* ***the internet of things.*** *Topics addressed include RFID identification, geotagging, and other sensors in combination with online monitoring, logistics. Students are encouraged to design smart systems where (wireless) sensors and feedback control, realized in micromputers play a major role. Such systems could be autonomous robots (e.g. robotics vacuum cleaners and so on), traffic control systems, but could also be partly in the real and partly in the virtual world.Dependent on specialisation and interest students are encouraged to explore issues of smart systems, logistics and traffic management, or playful applications in an urban context. In this context the phrase hybrid may also be understood as multicultural.* *Online reference(s):* - *http://www.mediamatic.net/artefact-13370-en.html* - *http://www.mediamatic.net/artefact-33888-en.html*
Prerequisites	*Completion of all first year courses, as well as most advanced courses of year`two: CS3-4, MA3-5, ST3-5, NM3-5*
Goals and attainment targets	*The integrative nature of the CA4 project will contribute to find useful and interesting ways to combine smart technology and new media in novel applications.. The course aims at providing* *- awareness of privacy and security issues in hybrid applications* *- familiarity with developing concepts relating the real to virtual world(s)* *- fluency in workflow and project managent* *- full literacy in applying learned skills to tackle problems in system development* *Students are expected to be well-motivated, and will be stimulated in problem-finding and the exploration of creative solutions..*

Course and curriculum development for Creative Technology (continued)	
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Place in curriculum	*Integrative course at the end second year.*
Application area, motivating examples	*The **internet of things** is coming into existence with RFID and GPS as key identification and localization techniques. Advanced process management systems are required that integrate planning, coordination, and control of all logistic business processes and activities in the supply chain network to deliver good consumer value at low cost to the supply chain as a whole while satisfying requirements of other stakeholders in the supply chain. Similar systems although different in character may be used to organize festivals and for playing games in an urban environment, where such technology is available for reasons of security and information.*
Teaching methods	*The course will offer a selection of topics and projects, from which students may choose on the basis of their interest and specialization. Students will be encouraged to work in small, 4-5 person groups, of an interdisciplinary character,* *And will be closely supervised in all stages of the product-development life-cycle.* *Feedback will be given in workshop sessions, and by assessing the products as made available online. Peer reviews will not only be used for feedback, but will also form part of the procedure of assessment and grading.* *Grading takes place by assessing the work in a presentation session, where students present and discuss their work and contributions to the group project..*
Nr of participants	
Special facilities	*Contacts with potential industrial or societal partners must be established, to acquire interesting projects with a sufficient degree of relevance and technical interest.*