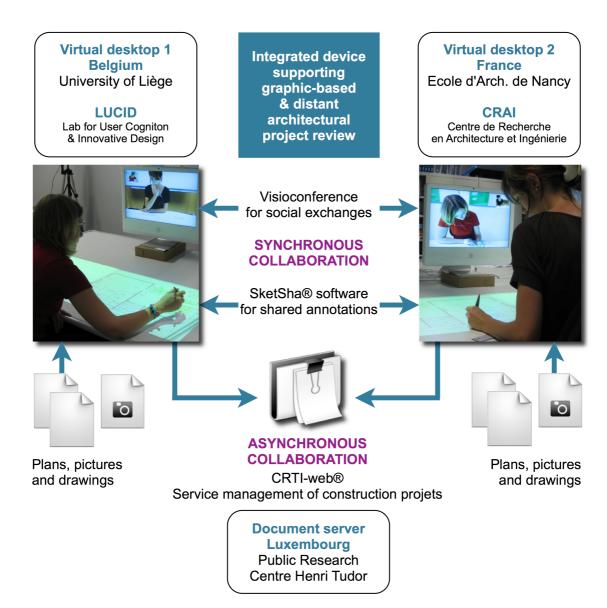
# **Distant Collaborative Studio: 4-year of practice**

**POSTER** 

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# Digital Collaborative Studio: 4 years of practice.

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### 1. Context and objectives

For the fourth time this year, the University of Liège and the National school of architecture of Nancy have organized a distant collaborative architectural studio, gathering students in architecture and building engineering from the two institutions. This workshop's assignment has teams of 3 to 5 students (made up of students from the two locations) designing a building (given a set of specification) during 3 months by collaborating remotely. The distant collaboration is supported by several tools: e-mails for asynchronous exchanges, videoconferencing, chat and phone for synchronous collaboration and two original devices: the Virtual Desktop, a collaborative multimodal environment and the CRTI-Web, a bespoke document management system dedicated to architecture

## 2. Specific tools

The **Virtual Desktop** is a remote workspace environment aiming to emulate, at a distance, the conditions of face-to-face meetings. It comprises an original pen-based device, equipped with a real-time sketch sharing software (SketSha) and completed with a generic videoconferencing system. This environment allows the users to import documents (plans, pictures, sketches,..), to share them remotely and to annotate them in real time with the electronic pen, while conversing and being able to see each other (through the videoconference system).

The **CRTI-Web** is a shared project space, available for all the participants on a Web platform. It allows the project's members to upload the documents that they produce and to share them with the others, tracing their updates and modifications. Moreover it enables also to notify users when a document is available, and to assign tasks, such as validation requests or reaction demands.

#### 3. Modalities

Each year, the schedule consists of (with variations depending on each year's specific logistical constraints): a kickoff face-to-face meeting along with a visit of the project site. The groups are constituted and each participant is assigned a specific role in the group (architecture, interior design, energetic issues, accessibility...). The students thereafter work remotely for about 10 weeks. Weekly synchronous meetings take place in each group using the Virtual Desktop, while asynchronous work is unconstrained and supported by CRTI-Web and usual email exchanges. A final face-to-face presentation in front of the jury concludes the workshop, during which students have to present their design as well as a reflection about their way of collaborating.

#### 4. Results

Overall, the outcomes are very satisfying: the productions are quite complete and sophisticated, the tools and environments work efficiently and the whole collaboration seems to be a positive experience for the students. This workshop also highlights some difficulties linked to the distance: poor social bonds between students and difficulties to work on a real collective design (but rather on different design assembled in a coherent manner). It also highlights some needs and advantages linked to the two specific collaborative environments, which constantly evolve according to those observations.

[Kubicki S., Bignon J-C., Elsen C., Lotz J., Gilles Halin G., & Leclercq P., 2008. Digital Cooperative Studio, Proceedings of ICE'08, 14th International Conference on Concurrent Enterprising, Special session ICT-supported Cooperative Design in Education, University of Nottingham, UK]