Reusable solutions for Remote Laboratories

The Special Session "Reusable solutions for Remote Laboratories" is Co-Located with 13th International Conference on Remote Engineering and Virtual Instrumentation (REV2016).

Focus:

Remote Laboratories are software and hardware solutions that enable users to access real equipment located somewhere else on the Internet. These are typically applied in education, in various fields (including electronics, physics, biology, robotics, chemistry, etc.), and there is ongoing research on many of its aspects: laboratories in each field, user perception by students or teachers, management systems and integration in external technologies, etc.

In this special session we are seeking innovative solutions that are reusable (so they can be applied in other contexts), which can show a demo of how they work, and that work in an end-to-end basis (i.e., that can show something running somewhere else on the Internet, even if the focus of the contribution is one part of the overall system).

Conditions:
- Contributions must be reusable (either software -Open Source- or hardware -explaining the blueprints-)
- Contributions must be related to connecting real equipment through the Internet and reused by multiple users during the time (e.g., a domotic system where a single user manages a single device at home is not acceptable)
- No need to be necessarily connected to education (Maker community developments or industry solutions are also welcome)
- End-to-end solution will be highly valued (e.g., a solution for a particular device without its connection to the final user on the Internet is not acceptable; a end-to-end network mechanism with an example deployed in a real device is acceptable)
- Demo or die!

Target audience:
- Maker communities, IoT hackers
- Companies supporting remote solutions
- Researchers on the field of remote experimentation

Topics of interest:
The topics of interest includes the following and other ones related to reusable remote laboratories:
- Novel interaction approaches with remote equipment (including Oculus Rift, VR devices, Leap Motion, novel interaction models, novel HTML5 libraries or components, etc.)

- Communication frameworks (including HTML5 solutions that enable a higher scalability, partial Cloud deployments, systems to make it easy to surpass NAT networks, system that enable the orchestration of components deployed in different locations, etc.)
- Management frameworks (including Remote Laboratory Management Systems, Remote Access Laboratories, interoperability solutions on remote labs and pedagogic ecosystems -LMS, PLE-)
- IoT solutions to remote experimentation (including Arduino / Raspberry Pi / Beaglebone, own designs, etc.)
- Innovative online laboratories (e.g., Biology laboratories, DNA laboratories, Health laboratories)
- Innovative hardware solutions (highly scalable solutions supporting concurrence, low cost solutions, IoT solutions)

Important Dates:

15 Nov 2015   Submission deadline for complete papers for the Special Session

15 Dec 2015   Notification of Acceptance

15 Jan 2016   Author registration and camera-ready due

24 Feb 2016   Conference Opening

Program Committee:
- Pablo Orduña (co-chair) <pablo.orduna@deusto.es>
- Elio Sancristobal (co-chair)
- Danilo Garbi-Zutin (co-chair)
- Bogdan Deaky (co-chair)
- Tiago Faustino Andrade (co-chair)

Publications
All accepted papers will appear in the REV2016 proceedings, published by IEEE and listed in IEEE Xplorer.