Festival of Learning Showcase Session

Facilitator(s): Dr Iain Murray, Department of Electrical and Computer Engineering

Strategic themes: Leading in innovative education and providing a rich, interactive learning experience

Subject Title: Building the Infrastructure for remotely accessible engineering laboratories

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Brief Description:

Engineering education requires a significant amount of hands on laboratory experimentation and experience on equipment that is often extremely expensive. Due to cost and security/safety issues, the labs must be supervised leading to limited availability. Simulations are commonly used to increase the exposure to equipment but these often lack realism or have a limited functionality. The Department of Electrical and Computer Engineering has implemented a system that allows students to access physical devices (such as routers and embedded systems) over the Internet 24/7.

This session will demonstrate a design and configuration scenario network laboratory, conducted collaboratively by students in Sri Lanka, Bentley and Miri campuses.

Benefits: The installed system includes the facilities to book “pods” of equipment either individually or in teams. This allows students to collaborate on laboratories or assignments. On completion of the lab, configurations and results may be automatically sent to the tutor for assessment. Equipment is configured based on the task students undertake and power down and are reset on completion of the lab, thus are ready for the next group.

This system will offer the full “in person” laboratory experience to students who cannot attend a campus or just wishes to get some extra practice on specialist equipment.

Time/Day: Wednesday 18 March 1:00 – 1:30 pm

Duration: 30 mins

No. of Sessions: One

Venue: Building 300: Room 214

Special Requirements: No special requirements needed