



Wireless Capture of Campus Audio: *Revolabs' HD™ Single Channel Wireless Microphone System Provides Audio Recording Capabilities to 140 Lecture Rooms at Queensland University of Technology*

Overview

Located in Brisbane, the Queensland University of Technology (QUT) has developed into one of Australia's leading universities. With over 45,000 enrolled students, an annual budget of more than AU\$800 million, and a practical perspective to theoretical education, the institution has positioned itself to answer the objectives of tomorrow's educational requirements. As part of a five-year institutional blueprint to transform the university's facilities into a state-of-the-art campus, QUT aspired to enhance its lecture theaters, create more collaborative learning spaces, and strengthen its online resources — turning the institution into a real-world, technology-enabled university. Within campus classrooms, this meant creating connected environments where lecturers could move freely while providing the opportunity to easily record instructors' talks with superior-sounding audio results.

Challenge

At the end of the 2013 school year, the university was looking to roll out an audio solution that would allow instructors to capture their lectures without adding additional training, cumbersome A/V components, or comprehension difficulties from users due to poor audio quality. Since the project covered 140 classrooms, scalability was another important concern. The solution had to be resistant to background noise, channel interference, and noise from the university's crowded RF spectrum to meet the campus' performance standards. To keep classes running on time, the system would need to be extremely easy to set up and use, and provide long operation times for uninterrupted lecture sessions.

Solutions/Results

In order to equip classrooms with wireless capture and recording capabilities, QUT turned to Revolabs' HD™ Single Channel wireless microphone systems. Engineered specifically for voice reinforcement and recording applications requiring a limited number of wireless microphones, the solution's small size allows for easy, non-intrusive integration with audio systems. To facilitate uninterrupted lectures, the devices' rechargeable batteries provide up to eight hours of talk time on a full charge.

"The Revolabs HD wireless microphone systems are so simple to use that our instructors picked right up on them with minimal operator errors," said John Vikstrom, AV Designer, Queensland University of Technology. "The one-time pairing of individual transmitter/receiver units during installation eliminated any issues related to interference and crosstalk, which has resulted in maximum audio recording quality that students can clearly understand."

QUT installed more than 150 HD Single systems and microphones that feed directly into each classroom's presentation PC, which acts as the sessions' recording device. The microphones' charger bases were permanently mounted into prominent positions on lecterns (making it easy for users to recharge microphones after use) while base stations were securely mounted into equipment racks. For users, operation involves simply picking up a microphone from the charger base and clipping the device onto their pocket without having to turn on or un-mute the transmitter — resulting in incredibly simple operation without the need for any support staff interventions.

"Because of the microphone system's 'get-up-and-go' functionality, user interaction with the entire system is very minimal," added Vikstrom. "As a result, our lecturers can now concentrate on their presentations to students without wasting any time distracted by the setup or operation of audio recording equipment. In only the first eight weeks of the 2014 semester, the QUT averaged approximately 900 recordings per week with less than a 1 percent failure rate. This includes all of the problems normally associated with the deployment of a completely new system. We are also extremely pleased with the HD microphone's sound quality, which allows us to integrate the lessons easily into our online offerings without the need to adjust any audio properties."

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Revolabs HD Single wireless microphones incorporate DECT technology, which uses unlicensed, dedicated RF spectrum for wireless communications. Automatic synchronization among individual microphone setups provides interference-free operation and eliminates manual interventions. This ensures that the densely-crowded RF spectrum at QUT is not further impacted. Supporting superior HD audio, the microphones apply Revolabs' "Designed for Speech" technology to deliver wideband frequency response, which improves the intelligibility and presence of speech and allows the microphones to pick up the entire spectrum of the human voice. Each lecturer's voice is recorded crisply and clearly so it sounds like the lecturer is in the same room during playback, an important requirement for QUT. Also equipped with RF Armor™ technology, the microphones operate cleanly with very low noise, even when in direct contact with mobile phones and other wireless electronic devices known to cause unwanted audio interference. In the event a lecturer walks off with a microphone, that microphone will beep as it moves out of connection range as a reminder to return it to the base station.

Reliable, easy to install and use, great for classroom audio capture – Revolabs HD Single Channel wireless microphones earn a passing with honors grade on all counts.

Benefits

- Wireless capabilities
- Freedom from interference
- Audio quality
- Ease of use
- Simple installation
- Long battery life

