

Case Study



The Future of Presence: Electronic Attendance Monitoring at the University of Central Lancashire

- **University of Central Lancashire** has introduced an innovative Student Attendance Monitoring System
- **Gemini 2000 Ltd** manufactures the NFC technology that powers the solution
- The device deployed for this project is **Orbit IP**, a sophisticated Power-over-Ethernet smart card reader

Overview

University of Central Lancashire (UCLan) is trying to ensure that its students attend all mandatory lectures in order to promote academic engagement. To monitor attendance, UCLan has developed an innovative Student Attendance Monitoring System that employs Orbit IP smart card readers. The system allows electronic self-registration at teaching rooms and securely keeps detailed attendance records of all students. UCLan is one of the first universities in the UK to employ such technology and use it to try to improve student engagement and attainment.

About UCLan

Based in Preston, UCLan is one of UK's most prestigious academic establishments for study and research. It is a modern university focusing on innovation that has grown to be the eighth largest in the country. A truly global institution with strong international ties, it caters for over 32,000 students of 120 nationalities studying at the university.

Why Monitor Attendance?

UCLan identified a close link between consistent attendance and academic achievement. An attendance monitoring system provides visibility of attendance data to students, as well as their tutors and administrative staff. This means that individual students in need of support are identified early, and can be supported appropriately.

Reports of attendance are often required by external bodies, such as the Student Loan Company, and a range of professional bodies. What's more, all universities in Britain are required by the UK Border Agency to confirm the attendance of some international students on a regular basis in order to comply with immigration rules.

The UCLan Solution

The university developed an electronic solution called the Student Attendance Monitoring System (SAMS). It utilises the UCLan smart card, which is issued to all enrolled students for access to a variety of services, including self-registration at lectures. An intelligent back office system links students' personal timetables to the rooms they should be present in.

UCLan's lecture theatres and rooms are equipped with Orbit IP readers which students tap with their smart cards to verify attendance. Registration starts from 20 minutes prior to a session and 10 minutes after the start of a session to allow flexibility for arrival at different times. Records of student tap-ins are electronically logged in a secure central database that generates and stores reports and statistics.

Powering SAMS

UCLan's IT team tested a number of hardware solutions before identifying the Orbit IP smart card reader as its favourite. After a successful pilot project, the university went on to acquire 465 readers for installing in over 95 percent of its teaching spaces.

Orbit IP incorporates 13.56 MHz NFC technology for wireless communication with UCLan student smart cards. The reader is an innovative standalone Power over Ethernet (PoE) solution that uses the university's local area network for both power and communication.

The Student Attendance Monitoring System (SAMS), developed by the UCLan's IT team, utilises standard web interface to interact with all smart card readers. The design of Orbit IP allows sophisticated systems like SAMS to be developed using common web languages, removing the need for low level programming. UCLan found the C# web service as the most suitable for their system and uses this for ongoing development.



“ At UCLan we found Gemini 2000's smart card readers easy and straightforward to implement . ”

- Keith Gray

Senior Project Manager at UCLan

Results

The reliability and ease of use of the smart card system has led to an adoption across all of UCLan's teaching facilities. Since introducing SAMS, the university has seen a significant improvement in the quality of attendance data recorded. UCLan is now working on a project to use attendance data to drive improved follow up and support offered to students with less than optimal attendance. From a legal point of view, SAMS has helped UCLan, with its large contingent of international students, to fulfil its obligations to the Government. The university currently holds a Highly Trusted Sponsor status thanks to its efforts.

About us

Gemini 2000 is a United Kingdom based manufacturer of NFC solutions. We develop systems for contactless payments, smart ticketing, access control, membership management and more.

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