



Case Study

The University of Geneva The Wireless University



About The Wireless University

University and college campuses, with their intricate mapping and thousands of students navigating lecture halls, laboratories, leisure centers, and the numerous activities that encompass the average daily schedule of a student, are the ideal environment for the deployment of a Wi-Fi infrastructure to allow students and teachers to interact with each other and their environment.

The University of Geneva

The University of Geneva (UniGe), with its more than 13,000 students, is the second largest university in Switzerland. Since 2000, the IT department of the university has been gradually deploying a WLAN infrastructure with Appear IQ across 4 buildings, allowing hundreds of users to access the network with laptops from laboratories, libraries, lecture halls, and cafeterias.

Challenge

Students at most of today's universities have to actively search for information pertaining to courses, timetables, schedules changes, and course material on the University's Intranet and Internet.

In the case of the University of Geneva, the Software Modeling and Verification Group (SMV) investigated ways to leverage the Wi-Fi infrastructure in order to provide more interactive university courses for both student and teachers. The Appear IQ Platform allows students to smartly access all of the information they need using a context triggered approach which anticipates the needs of its users by analyzing their context and automatically providing them with tailor-made content and applications.

Solution

The SMV group's first idea was to deliver location-based services via Bluetooth access points. After evaluating appropriate technologies, they realized that Wi-Fi networks provided a much higher bandwidth as well as better positioning capabilities.

After reviewing available technologies, UniGe selected the **Appear IQ** platform and its leading edge context-aware engine, enabling services and applications to be presented automatically to a user depending on time, user profile, type of device and location with an accuracy of up to a few meters.



"Appear IQ clearly stood out as the most advanced available software, in order to distribute services over a Wi-Fi network. Not only the Appear Context Engine can position the user down to a few meters accuracy, but it can also take in account other context criteria, such as time, device type, and user profile."

Didier Buchs, responsible of the
Software Modelling Department at
University of Geneva

Key Benefits

Appear IQ offers new improvement perspectives in the education sector. By enabling better interaction between the teachers and their class, by providing students with relevant up-to-date information in any circumstances and by easing the adoption of computing technology at school, the Appear IQ platform and its context-aware services enhance the students' overall learning experience.

Using Appear IQ allows teachers to manage, in an intuitive way, their students' access to course material, the intranet, and other applications through the context-aware approach. The administration costs of intricate intranets and heterogeneous content management systems are dramatically reduced.

Appear IQ gradually limits the need of carrying around books and printed documents, paving the way to a more cost-effective paperless university.

The Appear IQ push functionality offers a new communication channel to instantly inform students and personnel about schedule modifications or other urgent matters, dramatically reducing information delays. Spending half an hour finding the right classroom in the campus when a last minute change occurs is now a thing of the past.



Appear IQ clearly stood out as the most advanced software platform on the market distributing services over IP-based networks. It's 'push' capability means that students can automatically receive alerts and updates pertinent to them and the courses they attend.

The user device calculates its position depending on signals received from the wireless access points around it. With the help of the **Appear Positioning Engine**, it can understand in which zone it is, and communicate this to the server. Depending on this position information, and on the time of the day and the type of user and device, the **Appear Provisioning Server** will send available contents to the device.

Contents can be of many types: applications, web pages, slides, documents... they will be displayed on the device as icons in a window. Clicking them will allow the user to run the application or view the document.

The SMV group regards the **Appear IQ** platform as the cornerstone to turn the standard university hotspot into an intelligent learning workspace: the **Workspot™**. In contrast with a standard hotspot, where only simple internet browsing and emailing can be performed, a **Workspot™** can smartly deliver a much wider range of applications related to student and faculty needs.

Results

In spring 2004, using the **Appear IQ** platform, UniGe reached its objective to "dramatically reduce the number of clicks per search" needed to access targeted information: down from 7 to 1 single click! UniGe and Appear Networks conducted the installation of the **Appear IQ** platform on the Cisco-based wireless network of the Unidufour building. The deployment covered 2 auditoriums, 3 leisure areas and 1 meeting room on 3 floors. Students and teachers use their own laptops running the **Appear IQ** client to access information related to study groups, class timetables, course materials or event notifications. Users no longer need to search for information, they are one click away from the information they need.



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