



Universidad
de Alcalá



ICT APPLICATIONS BASED ON QR CODES AND RFID IN TEACHING AND RESEARCH LABORATORIES

TECHNOLOGY OFFER

Code

TIC_UAH_02

Application areas

- Information and Communication Technologies



Type of collaboration

- Interested in companies or institutions to conform a consortium for a project proposal to make it the system real
- Manufacturing Agreement
- Services Agreement

Main researches

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CONTACT



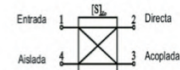
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ABSTRACT

The query of the equipment manuals, devices and instrumentation used in teaching laboratories of RF through the use of passive RFID labels on measuring devices and instruments used in each practice allows the access to document database or video tutorials in which various aspects are developed related with the practice, such as the description of the devices and the steps to follow to the measurement of its parameters (equipment calibration, wiring and sequence of the commands), allowing the performance and the interpretation of the measures.

The same functionalities can be achieved by replacing the RFID labels for QR codes, whose capture will allow to access to the same database. In this case, a cheapening is achieved since it is not necessary the use of labels or RFID reader.

The implementation of an App to read the label or the QR code, and redirect the user to the information available on the portable device itself or in an external server through an Internet connection via broadband mobile 4G or Wi-Fi -will provide students and researchers to resolve the doubts rose in the performing of their practices.

The key features of the system are based on the characteristics of the technologies used, being extended to any area of the laboratory practice of any subject. Thus, the use of ICT is favored by students and researchers, facilitating their access to user manuals of the measuring equipment and directing them to the tasks of self-learning.

ADVANTAGES AND INNOVATIONS

- Use of RFID and QR codes in educational environments or research laboratories.
- Simplification of equipment manuals use.
- Possibility of inclusion of video tutorials.
- Strengthening of ICT use in educational environments.
- Fast and efficient access to information by students or the research staff.
- Help for using the instrumentation or the device to characterize.
- Personalized guide for the performance of the activities and measures.