

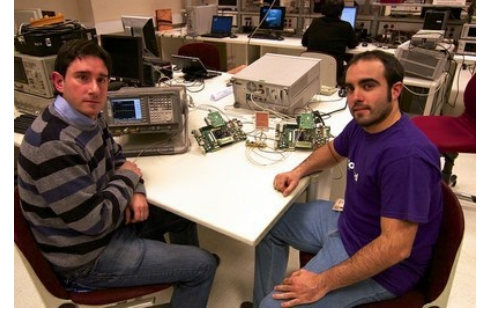
IK4-Ikerlan and MU researchers have been awarded for having created a wireless flawless data transmitter system

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The winning article describes a technological application that allows replacing wired systems with wireless systems while automatically avoiding interferences. The application developed by researchers from Ikerlan-IK4 and the Higher Polytecnic School of Mondragon University replaces the transmission of a video by cable with two devices based on 'cognitive radio' communication technologies. This technology provides a reliability that was so far not available for wireless systems. This application could be used, for example, to increase the wireless coverage of a traveler automatically by switching between carrier networks and WiFi hotspots.

Another application example is the replacement of wired closed circuit television systems. Employees in industrial enterprises are currently facing insurmountable challenges for wireless systems. They must ensure that they will not lose images in a hostile environment for wireless communications, due to the presence of many metallic elements and the inherent electromagnetic interference of these environments.

The system developed by researchers at Ikerlan-IK4 and the Higher Politecnic School of Mondragon University is able to respond to this challenge because the transmitter is programmed to automatically check whether the frequency band is free before transmitting. If it is free, the signal is transmitted, otherwise it seeks another frequency band that is free.



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