

Outdoor Parking Demonstrator

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Thursday, 15 September 2011 12:48 - Last Updated Tuesday, 16 June 2015 16:34

The increasing growth of automotive industry demands an **intelligent parking service** to make parking easier to find so as to help public transport flow more freely and to reduce the amount of carbon dioxide spewed out by motorists in their endless searching for somewhere to park.

The current commercial intelligent parking solutions are mainly focus for indoor environments where systems put wired sensors, rather than wireless ones, at every parking space, and not only let operators boost revenue by filling every space in a garage, but provide large directional arrows that let drivers locate available spaces.

Motorists are getting used to parking easily with these intelligent parking systems at indoor car parks such as airports and, shopping malls. It is foreseen that in a close future, motorists will start demanding similar solutions at outdoor venues where it is more difficult to find a parking space because there is not fee to park.

A wireless sensor network will monitor parking slots in the car park to detect if there are available parking spaces. Several sensors will be integrated in the wireless nodes in order to enhance the vehicles detection.

All wireless sensors information will be relayed to several gateways strategically placed on streets to collect the sensor information. Wireless nodes will also send to the gateways the arrival and departure time of the vehicles. All this information will be forwarded to a central server.

Motorists will be guided to free slots by the parking application running on their GPS-capable mobile phones. This application will show the vehicle's position as well as all the surrounding free parking spaces.

Download brochure [here](#) - *Coming soon*

Location

The outdoor car parking where a wireless sensor network will monitor parking slots in the car park at the [Universidad Politécnica de Madrid \(UPM\)](#) to detect if there are available parking spaces. Several sensors such as temperature and infrared detectors will be integrated in the wireless nodes in order to enhance the vehicles detection.

Context

Between 50 and 100 wireless nodes, several gateways and other equipment will be installed in these premises in order to guide users to available parking slots as well as to guide motorists where they left their cars.

Capabilities

- User-friendly interface
- Account creation and edition
- Customization options
- Real-time parking status & Availability info (**closest free parking spaces**)
- Satellite maps &
- Free space search feature
- Parking slot booking service
- Irregularity reports system