



Hands-free car to take rage out of snarls

Jennifer Foreshew
Research

AUSTRALIAN researchers expect the acceptance of driver assistance technologies such as obstacle avoidance will pave the way for driverless vehicles.

Griffith University's Intelligent Control Systems Laboratory is developing sensors, electronics and control and decision-making algorithms, to enable vehicles and robots to operate independently.

"My vision is that sooner or later we will have driverless vehicles sharing the roads with vehicles driven by human beings," the lab's founding director, Ljubo Vlacic said.

Driverless vehicles would rely on a series of sensors and use a microprocessor and software to handle the signals, arrive at a decision and activate controls.

Professor Vlacic, of the School of Microelectronic Engineering, said the team had developed a laboratory prototype of a sensor that could detect moving obstacles on the road.

A range of algorithms for driving manoeuvres had been tested in indoor and outdoor environments.

Some had been tested in France as part

of a European Union research project on cyber-car systems.

"Our technology relates to control and decision-making algorithms for a variety of driving manoeuvres such as crossing an intersection, overtaking and stop-and-go traffic situations," Professor Vlacic said.

The plan was to develop driverless electrical vehicles, because they were not so noisy and more environmentally friendly, he said.

It was likely that driverless vehicles would initially be used as part of the public transport network.

"Our systems are aimed at investigating whether, and to what extent, such technology may be used for city traffic environments," Professor Vlacic said.

"If you found yourself in a traffic jam you could activate the driverless vehicle device and it would decide when to move the car and when to stop."

Other devices could park the car on a driver's behalf.

"When you believe conditions are appropriate for the device to operate, you activate it and let it do the job," he said.

European Union sources said a driverless vehicle could be made as early as 2012.

"But you could only achieve a zero road toll if you entirely replaced cars driven by human beings with those driven by robotic systems," he said.

Driverless vehicles would most likely reach Australia by 2020, he said.



Vision: Professor Ljubo Vlacic



Sensors: If these driverless vehicles replaced human-driven cars entirely, the road toll could drop to zero, researchers say