Abstract: Drive-by-wire technology has been gradually adopted by the car companies in recent years to integrate active assistance systems in vehicles to increase comfort and safety. To push the technologies for the electronic control systems of vehicles to extreme, we investigate the so-called drive-by-wireless, i.e., using wireless network to control steering, braking, accelerating, and other functions within an automobile. We use commercial off-the-shelf ZigBee MSP-EXP430F5438 Development Board for wireless communication and demonstrate our drive-by-wireless prototype on a 4-wheel steering/drive electric vehicle.

Stichworte: Drive-by-Wireless, Electric Vehicles, Safety, Latency, tu9

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