

Road Traffic RFID Pedestrians Detecting System for Vehicles

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Abstract

Safe road traffic, clean environment, environmentally friendly vehicles and eco-buildings are components of the world's vision of immediate future supported by scientists and statesmen. Aspiration for healthy environment and sustainable development of technologies give life for idea of smart cities which consist of all these visions towards modern world. The aim of research was connection pedestrians and alarm system of the vehicle to prevent road incidents with the help of RFID technology. There were proposed vehicle RFID system and tags for pedestrians. System was designed on the basis of scientists' research in this area. The main factors influencing the construction of proposed system were working range of the system and coverage width of the reading devices. Further were compared existent subsidiary systems for drivers versus designed system. The study represents the expected effectiveness of the proposed RFID system as well as the ability to implement it even in old vehicle control systems.

Keywords: RFID, smart city, vehicles, detecting systems, accidents, pedestrians, road traffic.

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1. Urban traffic in SMART cities

1.1. Visions of the urban traffic safety

New or innovative visions need to brand new solutions, like a conception of information and communication technologies, IoT and other smart technologies. The concept of a smart city dates back to the year 2006, but the most widely used has become in the last years. The idea of such cities is on track thanks to the modern state of environment and due to development of new technologies. The smart city strategy combines several basic aims are to move information technologies, to provide efficient traffic, to supply sustainable energy consumption and clean environment. Modern view on the smart city concept is based on connection of the objects

with the IoT technologies, design and construction the smart buildings, modernization of the urban network and global collection data for establishment new real-time city logistic system. This concept has gained international support from a variety of international organizations, such as World Health Organization (WHO), United Nations (UN), The European Innovation Partnership on Smart Cities and Communities (EIP-SCC), government, city and regional organizations, also by another projects and entities. In 2015 the United Nations Economic Commission for Europe began development of road safety model "Safe Future Inland Transport Systems (SafeFITS)" to support knowledge based on transport policy decisions related to road casualty reduction. The primary objective is to assist governments and policy makers in tailoring road safety policies in order to achieve more tangible results, in both developed and developing countries. SafeFITS comprises a database with global data

