Pedestrian Safety: How Innovative Tech Could Save Your Life

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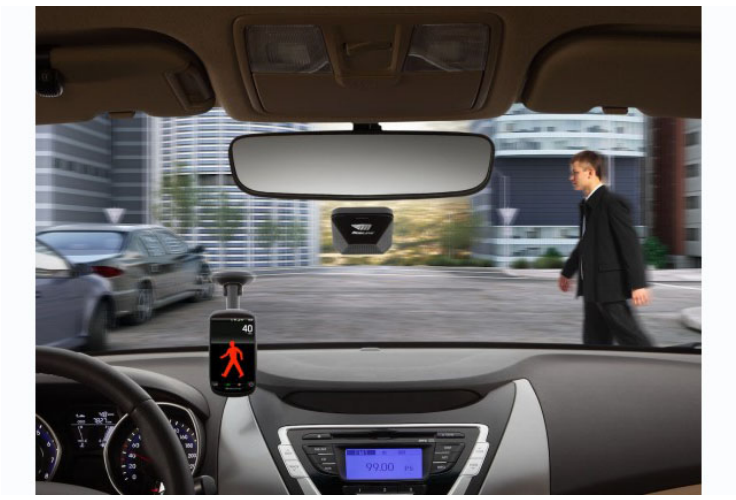
 When it comes to pedestrian traffic, safety should be the number one concern, but transportation infrastructure in the United States is built to accommodate cars, not people. This focus is putting lives at risks and the data shows it — in 2010, pedestrian fatalities rose 4.2%, and pedestrian injuries due to motor vehicle crashes increased by 19% from the previous year, according to data from the National Highway Traffic Safety Administration. With 4,280 pedestrians killed and 70,000 injured in 2010 in the U.S. alone, cities are installing technologies that will improve pedestrian safety on busy streets.

Here are four technologies on the market today that are helping save pedestrian lives. Let us know about pedestrian technologies that you're following in the comments below.

1. Mobileye Advanced Driver Assistance System



There are a number of cross-walk-focused technologies, but we're starting this list off with a driver-focused technology from Mobileye.

Mobileye makes advanced driver assistance systems that help drivers avoid accidents. In short, these systems warn drivers when pedestrians, bicyclists and other cars are dangerously close. Some of these technologies can even read traffic signs and alert drivers when they veer out of their lane.

The latest Mobileye 5-Series technology was unveiled at CES 2012. Deemed "the World's first Smartphone-connected Driver Assistance System," the 5-Series is a smartphone-connected, in-car safety device that gives drivers a little extra warning when danger is approaching.

The 5-Series line consists of a camera that mounts to the windshield, an Android app that operates via Bluetooth and an optional dash-mounted display.

Mobileye's technology has been implemented as both optional accessories and standard fits by car manufacturers.

2. Traficon Pedestrian Detectors

While crosswalks make it easier for drivers to identify where pedestrians are (or should be) crossing the street, they aren't perfect. Distracted drivers can completely miss signage and flashing lights

that denote crosswalks.

Belgium-based Traficon manufactures several traffic technologies, including a number of cameras that also detect the presence of pedestrians and dynamically control traffic lights.

Traficon's SafeWalk detects waiting pedestrians within a defined detection zone and manages traffic lights so that they are optimized for keeping vehicle and pedestrian traffic moving in harmony. When it detects waiting pedestrians, it activates the green time for the pedestrian, and when no pedestrians are present, it maintains a steady flow of vehicle traffic and holds the red time for pedestrian traffic.

Likewise, Traficon's C-Walk pedestrian detector focuses on detecting pedestrians already in the crosswalk — it then extends the green time for the pedestrian and delays the green time for vehicles, maintaining a safer environment for everyone.

3. Traffic Tech Pedestrian Switch Pads

Cameras are one way to detect pedestrians, and Australia-based Traffic Tech has another solution: pressure-sensitive pedestrian switch pads.

The tactile pads are super thin — just 3.5 mm tall with a 1.5 mm lip — and ideal for adhering to existing pedestrian ramps. The pad is meant to act as a supplemental call button and also works to cancel a call request if the pad is vacated, thus keeping auto traffic moving.

This same technology can be used to determine the presence of bicycles or cars, and it has been used in drive-through windows at restaurants to detect approaching cars.

Because each bump on the pad contains a high-sensitivity switch, the pedestrian's direction of movement can be determined. In the case of its usage for pedestrian crosswalks, the switch pad can determine whether a person is entering or exiting the crosswalk.

The downfall with this technology, though, is that it depends on pedestrians stepping on the switch pad. Cities looking to install this technology should make sure that they are optimally placed so that pedestrians so indeed step on them and trigger the signal.

4. Kapten Plus Pedestrian GPS

Those who are blind or visually-impaired are even more at-risk for pedestrian accidents, having the added complication of walking on the streets without the ability to read signs or see traffic signals.

Kapten Plus is a voice-controlled GPS unit specifically designed for blind or visually-impaired pedestrians. It helps users locate themselves or navigate cities, locating intersections and giving directions, based on the final destination. For large cities, it also integrates public transportation routes, including train, subway and bus directions.

The GPS unit can also be used as a discovery tool — when a user doesn't have a specific destination in mind, he or she can use it to freely navigate streets.

The device also has the ability to save a user's favorite or key locations — such as home, work, bus station and doctor's office.

When the user is not navigating the streets, he or she can also use the MP3 player or FM radio for entertainment. It's a nifty device for pedestrians with limited or no sight.

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Posted by Janine E. Mooney, Editor

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