Sydney launches the world's first e-paper traffic signs

Sydney, July 16 2015 |: Before self-driving cars hit the market, there is still some room to improve the car commute. To better the driving experience, apps are already announcing traffic updates and suggesting alternative, congestion-free routes to drivers, with some electronic road signs functioning in a similar way. To see road traffic information on the go, drivers in Sydney can now rely on unique electronic paper signs optimized for road traffic that have just been launched by the Australian Road and Maritime Services (hereinafter: the RMS).

The RMS installed e-paper traffic signs on Sydney roads, representing the first use of electronic ink, a technology best known from e-book readers and smart watches, in traffic signage.

Overcoming visibility, powering and connectivity issues

A unique Internet of Things ecosystem of digital displays has been designed to overcome the usual visibility, powering and connectivity issues of traffic signalization.

To reliably display road information, wireless signs have been built that communicate over the cellular network and don't malfunction in the sun's heat or during a power outage. The traffic signage with

highly optimized power consumption integrates displays from US manufacturer E Ink® and a platform for managing e-paper traffic signs developed by the European company Visionect.

Road signs running on sunlight, Australian natural resource

The capital of New South Wales can now boast 100% self-sustainable traffic signs powered by solar energy, a natural resource that Australia has in abundance. This is possible because electronic paper technology is extremely energy efficient, using very little power, with additional power optimizations making the e-paper signs even less dependent on traditional power sources.

Rok Zalar, Visionect's head of product development, explains how the power optimization works: "The hardware components are managed by server software programmed to 'wake up' the sign for certain pre-scheduled windows of time when the content on the sign will be changed using 3G technology. Outside of the 'waking' time, the traffic signs use no power."

Saving energy and money

In addition to saving energy, the fully customizable e-traffic signs help cities save on temporary road sign placement as well. It has been reported, for example, that the city Los Angeles puts up 558,000 temporary parking restrictions signs every year to the cost of $9.5 million (http://la.curbed.com/archives/2014/10/la_spends_95_million_on_temporary_parking_signs_every_ye

ar.php) - a strain on staff and resources that can be reduced by implementing permanent digital signs with content easily customizable via cellular networks.

To further optimize and protect the electronic traffic signs, detection of location coordinates and tamper attempts has been developed, enabling road services to react quickly should any of the signs be damaged for whatever reason. For better nighttime visibility, the signs' front panel light is triggered when it gets too dark for drivers to be able to read the signs.

About smart road signalization

Electric traffic lights have been improving road safety and bettering commute since the late 19th century (https://en.wikipedia.org/wiki/Traffic_light), when interconnected and automatically managed traffic systems began hitting the roads, reducing traveler confusion. The latest display technologies go a step further by connecting over the internet, displaying updated information and improving commuters' satisfaction and safety.

The electronic traffic signs of today can communicate with proximity or temperature sensors, support interactions through near field communication tools and connect them to the internet; this opens up a whole new horizon for innovative city services and personalized communication with users. In providing drivers and passengers with customizable real time information in traffic or public transport, smart road

signs create user-triggered content on the road signs, more than exceeding the goal of building a comprehensive road signalization system.

About Visionect

Since 2007 Visionect has been helping companies create electronic paper products with hardware components and server software carefully designed for digital signage. The intelligent platform for driving e-paper displays enables digital signs with high-readability, very low power consumption and extreme battery life. The most sought after in Visionect's portfolio are self-sufficient e-paper signs that can be mounted without cabling and communicate over cellular and Wi-Fi networks. Partnerships with leading industry players — E Ink, EPSON, Plastic Logic, STMicroelectronics — result in cutting edge signage technology for traffic and public transportation, retail, hospitality, healthcare, education, finance, automation and corporate environments. For more information about the company, please visit www.visionect.com.

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