

Technology in Rural Transportation



A recent study documented more than eighty proven, cost-effective, “low-tech” solutions to rural transportation needs, most developed or implemented by local transportation professionals. One of these solutions is outlined below:

Learn all about the simple solutions on the Internet at <http://inform.enterprise.prog.org>

The simple solutions report is available from Hau To at (503) 892-2533, or email: to@crc-corp.com

Emergency Vehicle Traffic Signal Pre-emption

Overall goal:

To improve emergency response by providing simple and cost-effective

Technical approach:

Traffic signals disrupt the progress of emergency vehicles by causing them to slow or stop. Since other vehicles in cross traffic often appear to have the right of way, hazardous situations often occur at intersections. This simple solution pre-empt traffic signals to give equipped emergency vehicles the right of way. Although various types of pre-emption systems are in use in urban areas across the U.S., the solution described below is an example of a low-cost siren-activated system. As it requires minimal additional equipment, it is suitable for small communities. The example described below is a product manufactured by a particular vendor.

The Sonem 2000 Digital Siren Detector detects the sirens of emergency vehicles up to half a mile away from an equipped intersection. This activates a signal pre-emption phase, giving a green light to the oncoming emergency vehicle and switching all pedestrian crossings to the "Don't Walk" message. The green light can be held for a pre-set time, of between 5 and 45 seconds. A visual verification system, consisting of a white light and a blue light is installed next to the regular traffic signal. When the white light is activated, this confirms to the driver of the emergency vehicle that it has been given right of way. The blue light indicates that an emergency vehicle approaching from another direction is controlling the intersection.

Current status:

The system is available for purchase from a variety of vendors. However, most vendors are also marketing a light- or infrared-activated pre-emption



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Location / geographic scope:

system.

To date, the system produced by this vendor has been installed in the Cities of Squamish, Nanaimo, and Whistler, and the University of British Columbia campus in the City of Vancouver, all in British Columbia, Canada.

Agencies involved:

The system is manufactured by Sonic Systems Corporation of Vancouver, Canada.

Cost information:

The cost of equipping an intersection is approximately \$4,000. Discounts for equipping multiple intersections apply. Vehicles do not need to be equipped with any additional equipment, assuming they are fitted with a siren.

Key contacts:

Robert Scragg, Sonic Systems Corporation. 1-800-33-SONIC.

Have goals been achieved?

All the cities where the system has been installed have reported that the system meets their needs very well. The City of Nanaimo has adopted a policy that all new intersections and intersection upgrades will be equipped with the system. Most of the cities refer to Sonem 2000's cost-effectiveness and reliability as their primary reason for selecting the system.

Solution timeline:

The product is being actively marketed.

