

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

Public Service Weather Radio

Overall goal:

To improve safety for the general public by providing current and forecasted weather conditions.

Technical approach:

Information on road and weather conditions is of interest to all travelers. In extreme conditions, such as winter snowstorms, the timely receipt of accurate information enables maintenance personnel to proactively treat road surfaces, to remove ice or snow, or even to close roads where conditions are most hazardous. Access to appropriate weather information has the potential to improve operations, prevent damage to property and save lives. Increasingly, agencies are looking to improve the sophistication of weather and road condition information collection and dissemination, and to provide reports specific to local areas. This solution is an existing service, which could form the basis of added-value services provided by local agencies to broadcast weather information to travelers and other interested users in a cost-effective manner. The National Oceanic and Atmospheric Administration (NOAA) Weather Radio information is broadcast from 400 FM transmitters operating on seven frequencies in VHF range, ranging from 162.400 to 162.550 megahertz (MHz). The broadcasts are provided on a continual basis, with information being supplied from local National Weather Service (NWS) offices. The information contained in the broadcasts is tailored to local user needs in the transmitter area. Routine weather updates can be interrupted by NWS personnel to insert special warning messages.

Current status:

The system is active, with NOAA Weather Radio available to approximately 70 to 80 percent of the U.S. population. A new alerting system, Weather Radio Specific Area Message Encoding (SAME), is currently being deployed. SAME will use digital coding to activate special receivers which have been programmed for emergency conditions in a specific area, usually a



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Location / geographic scope:

county. As the frequencies are outside the range of normal radio receivers, special radios are required to obtain the information.

The system is operational in fifty states, Puerto Rico, the Virgin Islands, and Guam. It was designed to limit coverage to within 40 miles of a transmitter. This allows for more site specific information to be provided. For example, in coastal areas, information of interest to mariners is provided.

Agencies involved:

The National Weather Service is the primary support agency, with responsibilities for system operations and maintenance.

Cost information:

No information is available regarding system development and deployment costs. However, weather radios are commonly available. Residential radios cost between \$20 and \$200 depending on the model, while industrial radios range from \$100's to \$1000's.

Key contacts:

The National Weather Service, Warning and Forecast Branch (attn: W/OM11) 1325 East-West Highway, Silver Spring, MD 20910. Web Site: www.nws.noaa.gov

NOAA Public Affairs (301) 713-0622

Have goals been achieved?

The system is fully operational. SAME deployments are continuing, and this will be the primary activator for the new Emergency Alert System planned by the Federal Communication Commission.

Solution timeline:

The NWS is currently working on a White House mandated resolution to increase system coverage to 95 percent of the population in the U.S. Innovative partnerships between the Weather Service, private sector organizations and state and local governments are fueling this expansion.

The goal is to one day have a NOAA Weather Radio in every home, just like a smoke detector, and in all schools, hospitals and other public gathering places.

