



APPLYING DYNAMIC MESSAGE SIGN (DMS) STANDARDS

The U.S. DOT is working with standards development organizations (SDOs) to accelerate the development of ITS standards. ITS standards are industry-consensus standards that define how system components operate within a consistent framework known as the National ITS Architecture. By specifying how systems and components interconnect, the standards promote interoperability and facilitate the deployment of ITS projects.

Dynamic message sign (DMS) technologies provide agencies with sign and messaging devices that can help them manage their roadways more efficiently, safely, and with greater flexibility. DMS standards enhance the interoperability of DMS components and devices by making system upgrades and expansions easier to implement and more cost-efficient.

In order to help transportation professionals evaluate and deploy DMS standards, the U.S. DOT has assembled this package of informational materials. The package consists of the Application Area Matrix, the DMS Roadmap, Standards Fact Sheets, Early Deployers Profiles, and DMS Lessons Learned.

The **Application Area Matrix** lists all ITS DMS standards along with the broader applications for their implementation. The chart can be used to determine which DMS standards apply to a specific type of ITS project. (Note: The matrix does not list projects.)

The **DMS Roadmap** illustrates the activities surrounding the development of standards that relate to the DMS application area, including a timeline for when all the standards that pertain to DMS are likely to be approved and evaluated; where, and when, DMS projects may be deployed; and the time frame for when outreach and technical assistance materials will be available.

The **Standards Fact Sheets** describe ITS standards that apply to DMS devices, along with related standards that may be necessary to deploy a DMS project. Standards Fact Sheets are available on the ITS Standards Web Site and provide concise, "plain English" descriptions of the

DYNAMIC MESSAGE SIGN (DMS) is a term used interchangeably with **CHANGEABLE MESSAGE SIGN (CMS)** and **VARIABLE MESSAGE SIGN (VMS)**. Each term describes a collection of sign types that use electronics or mechanics to vary the visual word, number, or symbolic display as traffic conditions warrant.

The DMS standards highlighted in this package apply to DMSs, CMSs, and VMSs. DMS standards fall under a broader collection of ITS communications standards known as NTCIP (National Transportation Communications for ITS Protocol) standards.

For more information about NTCIP standards, including DMS standards, visit the U.S. DOT's ITS Standards Web site, www.its-standards.net or the NTCIP Web site at www.ntcip.org.

standards and how they can be used in transportation projects. Standards Fact Sheets are produced for standards that have reached a high level of stability in content and that are not expected to change substantially. Fact sheets for both approved standards and draft standards (standards soon to be formally approved by the SDO) are included.

The **Early Deployers Profiles** highlight the accomplishments of three transportation professionals who have deployed DMS standards in their local ITS projects. Read their stories, and learn from them firsthand about the benefits, as well as the costs, of using DMS standards.

Finally, the **ITS Lessons Learned: Raising ITS Standards IQ with Implementation of NTCIP-Based Dynamic Message Signs** describes the issues and challenges faced by nine state transportation agencies that were among the first to use DMS standards.



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