



U.S. Department of
Transportation

Intelligent Transportation Systems Standards Fact Sheet



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ITE-AASHTO TM2.01 (Draft) Message Sets For External Traffic Management Center Communication (MS/ETMCC)

Overview

Well defined messages are essential components in the operation of computer-based intelligent transportation systems (ITS) systems. Messages are groups of basic items of data (called data elements) that include information about how the data elements are grouped and are used to convey information among ITS systems. A message set provides a series or set of individual messages, established in a strict format, for exchanging information on a given topic. Thus, an agreed-upon message set with unambiguous definitions is one of the essential standards required to exchange information between, for example, traffic management centers (TMCs) or between a traffic management system (TMS) and other ITS users and/or suppliers of traffic-related information.

Message set standards work in conjunction with at least two other types of standards to provide effective data exchange. The first of these other standards is a data dictionary that provides the basic definitions, or data elements (DEs), that make up the specific content of a message. In a simple analogy, messages are the sentences and DEs are the individual words. For the MS/ETMCC, the primary sources of DEs is the companion standard ITE-AASHTO TM1.03, Traffic Management Data Dictionary (TMDD). The second required type of standard provides the actual communications protocols, an example of which is the DATEX-ASN standard developed by the NTCIP. These standards describe how messages are encoded for transmission and then transmitted and received by other systems.

This standard, **ITE-AASHTO TM2.01, Message Sets for External Traffic Management Center Communications (MS/ETMCC)** includes message sets that were developed specifically for ITS traffic management systems. It consists of nineteen message sets organized into six message groups. It was developed under the oversight of a national steering committee composed of representatives of both ITE and AASHTO and is being published as a joint standard.

What is this standard for?

This standard provides formal message sets for six message groups necessary to convey key data within and between traffic management centers and other ITS centers. As a message set standard, it provides a list of specific data elements for each message plus other format information such as message name, message number, and certain other mandatory and optional message attributes. The MS/ETMCC is designed to be independent of any specific communications protocol. The MS/ETMCC, as a national ITS standard, provides a set of messages intended to be the core of individual messages implemented at specific sites.

Who uses it?

This standard should be used by transportation, traffic, and system engineers involved with the design, specification, selection procurement, installation, operation, and maintenance of traffic management systems. ITS system software designers and application developers should find this standard especially relevant to their efforts.

How is it used?

The MS/ETMCC message set provides a national standard for an agreed-upon set of messages for traffic management systems. These message sets, in conjunction with the supporting data dictionaries, become the basis for design and implementation of a set of traffic management functions for a particular location. Thus, the MS/ETMCC, along with the

To obtain a copy of this draft standard, please contact one of the following:

Institute of Transportation Engineers (ITE)

American Association of State Highway and Transportation Officials (AASHTO)

(Contact information is shown at the end of this fact sheet)

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For current information on the status of this standard, check the U.S. DOT Web site at the bottom of this page.

companion TMDD, are intended to comprise the core sets of messages used by ITS-based traffic management systems. They may be augmented in specific applications with additional messages as necessary to support additional local functions or conventions not contained in the MS/ETMCC.

Scope

The MS/ETMCC was based on the logical and physical data flows for the “manage traffic” function as described in the National ITS Architecture. The MS/ETMCC is divided into the following six message groups:

1. Roadway-Network
2. Network-State
3. Network-Events
4. Traffic-Request
5. Traffic-Control-Status
6. Traffic-Control

Related documents

[IEEE Std 1488-2000 – Trial Use Standard for Message Set Template for Intelligent Transportation Systems](#)

[ITE-AASHTO TM1.03 – Standards for Functional Level Traffic Management Data Dictionary \(TMDD\)](#)

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