

NTCIP 8005 v01

National Transportation
Communications for ITS Protocol

Procedures for Creating
Management Information
Base (MIB) Files

A Joint Standard of AASHTO, ITE, and NEMA

version 01.28

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NTCIP 8005 version v01

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ACKNOWLEDGEMENTS

NTCIP 8005 v01 was prepared by the NTCIP Base Standards and Profiles 2 (BSP2) Working Group (WG), which is a subdivision of the Joint Committee on the NTCIP. The Joint Committee is organized under a Memorandum of Understanding among the American Association of State Highway and Transportation Officials (AASHTO), the Institute of Transportation Engineers (ITE), and the National Electrical Manufacturers Association (NEMA). The Joint Committee on the NTCIP consists of six representatives from each of the standards organizations, and provides guidance for NTCIP development.

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- URS Corp.
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FOREWORD

NTCIP 8005 v01 provides the policies and procedures for development and maintenance of NTCIP Management Information Base (MIB) files. NTCIP 8005 v01 defines requirements that are applicable to all NTCIP WGs that develop NTCIP standards containing MIBs, including NTCIP device data dictionary standards. NTCIP 8005 v01 also defines requirements that are applicable to NTCIP Data Stewards in checking MIBs, in coordinating all NTCIP device data dictionaries, and in liaison with other outside groups or entities using NTCIP MIBs. NTCIP 8005 v01 uses only metric units.

NTCIP 8005 v01 is also an NTCIP Process, Control, and Information Management document, which defines the practices and policies used by the NTCIP Joint Committee in developing and maintaining NTCIP standards publications.

The following keywords apply to this document: AASHTO, ITE, NEMA, NTCIP, policies, procedures, and MIB.

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Comment:
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Approvals

NTCIP 8005 v01 was separately balloted and approved by AASHTO, ITE, and NEMA after recommendation by the Joint Committee on the NTCIP. Each organization has approved NTCIP 8005 v01 as the following standard type, as of the date:

AASHTO—Standard Specification; May 2010
ITE—Software Standard; June 2010
NEMA—Standard; December 2009

History

In 1992, the NEMA 3-TS Transportation Management Systems and Associated Control Devices Section began the effort to develop the NTCIP. The Transportation Section's purpose was to respond to user needs to include standardized systems communication in the NEMA TS 2 standard, *Traffic Controller Assemblies*. Under the guidance of the Federal Highway Administration's NTCIP Steering Group, the NEMA effort was expanded to include the development of communications standards for all transportation field devices that could be used in an Intelligent Transportation Systems (ITS) network.

In 1996, AASHTO, ITE, and NEMA executed an agreement to jointly develop, approve, and maintain the NTCIP standards. The Joint Committee on the NTCIP has directed the development of a number of standards that define device data dictionaries. During the NTCIP data dictionary development, similar efforts were underway within SAE, ASTM, and IEEE to develop data dictionaries pertinent to their domains.

In 1998, the ITS standards SDOs agreed to coordinate and develop a central repository for all ITS data concepts. NTCIP Data Stewards were appointed to coordinate the NTCIP data dictionaries and to interface the NTCIP data dictionaries with the ITS Data Registry and Functional Area Data Dictionary.

In September 2004, U.S. DOT support for the ITS Data Registry was discontinued. In February 2008, a user need could not be identified to define and maintain a Functional Area Data Dictionary, and therefore a decision was made to delete references to a Functional Area Data Dictionary.

Work on NTCIP 8005 v01 started in January 2000. Early versions addressed requirements for an IEEE ITS Data Registry based on IEEE 1488 and 1489. In 2003, reference to the IEEE ITS Data Registry was removed from NTCIP 8005. In an NTCIP 8005 second User Comment Draft, similar, but different, requirements were based on reference to ISO 14817. Subsequently, all references were removed to other data dictionaries and to ISO 14817.

NTCIP 8005 v01.09, September 2000—Accepted as a User Comment Draft by the Joint Committee on the NTCIP. NTCIP 8005 v01.10, June 2001—NTCIP Standards Bulletin B0060 sent 8005 v01.10 to AASHTO, ITE, and NEMA for review and comment.

NTCIP 8005 v01.21, May 2006—Accepted as a Second User Comment Draft, to reflect reference to ISO 14817, by the Joint Committee on the NTCIP. NTCIP 8005 v01.21, January 2007—NTCIP Standards Bulletin B0119 sent NTCIP 8005 v01.21 to AASHTO, ITE, and NEMA for second review and comment.

NTCIP 8005 v01.25, August 2008—Accepted as a Recommended Standard Policy by the Joint Committee on the NTCIP.

NTCIP 8005 v01.27, October 2009—Standards Bulletin B0135 sent Recommended Standard Policy to AASHTO, ITE, and NEMA for ballot and approval.

NTCIP 8005 v01.28, June 2010—Prepared standard for publication; edited format, front matter, and style.

Compatibility of Versions

To distinguish NTCIP 8005 v01 (as published) from previous drafts, NTCIP 8005 v01 also includes NTCIP 8005 v01.28 on each page header. All NTCIP Standards Publications have a major and minor version number for configuration management. The version number syntax is "v00.00a," with the major version number before the period, and the minor version number and edition letter (if any) after the period.

NTCIP 8005 v01 is designated, and should be cited as, NTCIP 8005 v01. Anyone using NTCIP 8005 v01 should seek information about the version number that is of interest to them in any given circumstance. The MIB, the PRL, and the PICS should all reference the version number of the standards publication that was the source of the excerpted material.

Compliant systems based on later, or higher, version numbers MAY NOT be compatible with compliant systems based on earlier, or lower, version numbers. Anyone using NTCIP 8005 v01 should also consult NTCIP 8004 v02 for specific guidelines on compatibility.

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Section 1 GENERAL

1.1 SCOPE

NTCIP 8005 v01 defines processes to verify the correctness of a Management Information Base (MIB) in NTCIP data dictionary standards, and to prepare a stand-alone version of the MIB. These processes are used by the Joint Committee on the NTCIP, its Working Groups, and NTCIP Data Stewards.

NOTE—NTCIP 8005 v01 changes the environment in which NTCIP data dictionary standards are created and MIBs are checked. MIBs created prior to NTCIP 8005 v01 may have been developed using a different syntax checker and compilation switch settings.

1.2 REFERENCES

Normative references contain provisions that, through reference in this text, constitute provisions of NTCIP 8005 v01. Other references in NTCIP 8005 v01 might provide a complete understanding of the entire protocol and the relations between all parts of the protocol. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standard listed.

1.2.1 Normative References

There are no normative references cited in NTCIP 8005 v01.

1.2.2 Other References

AASHTO / ITE / NEMA NTCIP 8004 v02	<i>Structure and Identification of Management Information (SMI)</i> published June 2010
IAB STD 16	(RFC 1155: 1990, <i>Structure and Identification of Management Information for TCP/IP-based Internets</i> , RFC 1212: 1991, <i>Concise MIB Definitions</i>)
RFC 1215	<i>Convention for defining traps for use with the SNMP</i> , March 1991

1.2.3 Contact Information

1.2.3.1 NTCIP Standards

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