A Working Group Draft Standard of the Joint Committee

NTCIP 1402 v. 1.03
-- DRAFT Amendment 1

Transit Communications Interface Profiles

Part of the National Transportation Communications for ITS Protocol

Standard on Incident Management (IM) Objects

Draft August 2002

Also referenced as TCIP-IM

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FOREWORD

This document uses only metric units.

This document is an NTCIP Information Data Dictionary Standard. Information Data Dictionaries Standards formally express management information in terms of objects (data elements, data frames, and messages) for use within TCIP and NTCIP systems.

The TCIP family of standards addresses Advanced Public Transportation Systms (APTS) data interfaces and related automated transit tools and data. The standards address the business requirements of these APTS data interfaces. In some cases, specialized terms were needed to define general classes of information. For example, different business areas needed to define data elements related to time, date and footnotes. Special, constrained data types were developed so that the transit domain data concepts were consistent across business areas, while specific needs were met. These data types are defined within the TCIP family of standards and in this document.

For more information about NTCIP standards, visit the NTCIP Web Site at http://www.ntcip.org. For a hardcopy summary of NTCIP information, contact the NTCIP Coordinator at the address below.

In preparation of this NTCIP document, input of users and other interested parties was sought and evaluated. Inquires, comments, and proposed or recommended revisions should be submitted to:

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Approvals

This document will be separately balloted and approved by AASHTO, ITE, and NEMA after recommendation by the Joint Committee on the NTCIP. Each organization is expected to approve this NTCIP Information Data Dictionary Standard as the following standard type, as of the date:

> AASHTO – Standard Specification; Month YYYY
> ITE – Software Standard; Month YYYY
> NEMA – Standard; Month YYYY

History

From 1997 to 1999, this document was referenced as ITE ST-ITS-TCIP-IM and/or NEMA TS 3.TCIP-IM. However, to provide an organized numbering scheme for the NTCIP, this document is now referenced as NTCIP 1402. The technical specification of NTCIP 1402 is identical to the former reference, except as noted in the development history:

> TCIP documents version 0.1. Distributed in September 1997 for public review.

> TCIP-PI Recommended Standard version 1.0, February 20, 1998, changed to version 1.1, July 31, 1998. Revisions included: Sections 2.1, 2.3, 4.3, 5.1, 5.2, and 6.0.

> NTCIP 1402 version 97.01.01, July 31, 1998. Approved by AASHTO in July 1999, approved by ITE in October 1999, and approved by NEMA in February 2000.

NTCIP 1402 v01.02, December 1, 2000. Incremented version number and updated date; added and revised front matter; updated references to NTCIP and NEMA document numbers in References Clause; updated references to ITE document numbers; inserted introduction text in Section on Requirements; deleted Annex A Comment Form; and inserted introduction text in Annex on the ASN.1 Script.

Draft NTCIP 1402 v01.03 Amendment 1, August 2002. Updated references, corrected typographic errors and printing errors.

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**Section 1
GENERAL**

1.2.1 Normative References

-- Updated the publications information for Normative References

draft NTCIP 1400:2002 Amendment 1, *Transit Communications Interface Profile Framework*, version 1.05 Amendment 1.

draft NTCIP 1401:2002 Amendment 1, *Transit Communications Interface Profile*, *Standard on Common Public Transportation Objects*, version 1.03 Amendment 1, August, 2002.

draft NTCIP 1404:2002 Amendment 1, *Transit Communications Interface Profile, Standard on Scheduling and RuncuttingObjects*, version 1.03 Amendment 1, August, 2002.

draft NTCIP 1405:2002 Amendment 1, *Transit Communications Interface Profile, Standard on Spatial Representation Objects*, version 1.03 Amendment 1, August, 2002.

draft NTCIP 1406:200x Amendment 1, *Transit Communications Interface Profile, Standard on Control Center Objects*, version 1.03 Amendment 1, August, 2002.

draft NTCIP 1407:200x Amendment 1, *Transit Communications Interface Profile, Standard on On-Board Objects*, version 1.03 Amendment 1, August, 2002.

ISO/IEC 8824:1998, *Abstract Syntax Notation One* (ASN.1)

<<Update reference for TMDD>>

1.2.2 Informative References

-- Updated the publications information for Informative References

IEEE Std 1489-1999, *IEEE Standard for Data Dictionaries for Intelligent Transportation Systems.* 27 October 1999.

IEEE Std 1488-2000, *IEEE Trial-Use Standard for Message Set Template for Intelligent Transportation Systems*. 13 July 2000.

Section 2
TERMINOLOGY

-- no change

Section 3
CONCEPT OF OPERATIONS

-- *Revised Section title to Concept of Operations*

Section 4
REQUIREMENTS

4.1 INCIDENT MANAGEMENT DATA DICTIONARY

IM_DestinationAgencyID_id

(1) The Representative class term (in descriptive name and field) shall be modified to identifier (id).

Descriptive Name	IM_DestinationAgencyID_id
Representation class term	identifier

IM_DispatcherID_id

(1) The Representative class term (in descriptive name and field) shall be modified to identifier (id).

Descriptive Name	IM_DispatcherID_id
Representation class term	identifier

IM_EmployeeFunction_cd

(1) The error codes shall be removed from the code list.

Representation layout

```
IM-EmployeeFunction    ::=    INTEGER
{
 command (1),  -- command
 safety (2),  -- safety
 information (3),  -- information
 liaison (4),  -- liaison
 operations (5),  -- operations
 staging (6),  -- staging
 branch (7),  -- branch
 division (8),  -- division
 strike-team (9),  -- strike team
 company (10),  --  company
 task-force (11),  --  task force
 group (12),  --  group
 planning (13),  --  planning
 resource-unit (14),  -- resource unit
 situation-unit (15),  --  situation unit
 documentation-unit (16),  --  documentation unit
 demobilization (17),  -- demobilization unit
 technical-specialist (18),  --  technical specialist
 logistics (19),  -- logistics
 service-branch (20),  --  service branch
 communications (21),  --  communications unit
 medical-unit (22),  --  medical unit
 rehabilitation (23),  --  rehabilitation
 food-unit (24),  --  food unit
 support-branch (25),  --  support branch
 supply-unit (26),  --  supply unit
 facilities-unit (27),  --  facilities unit
 ground-support-unit (28),  --  ground support unit
 administration (29),  --  finance/administration
 time-unit (30),  --  time unit
 procurement-unit (31),  --  procurement unit
 claims-unit (32),  --  compensations claims unit
 cost-unit (33),  --  cost unit
```

                                      transit-ft-operator (34), -- Transit: full time operator
                                 transit-pt-operator (35), -- Transit: part time operator
                                 transit-conductor (36), -- Transit: conductor
                                 transit-engineer (37), -- Transit: engineer
                                 transit-maintenance (38), -- Transit: maintenance

Valid value rule   1 Command
                                 2 Safety
                                 3 Information
                                 4 Liaison
                                 5 Operations
                                 6 Staging
                                 7 Branch
                                 8 Division
                                 9 Strike Team
                                 10 Company
                                 11 Task Force
                                 12 Group
                                 13 Planning
                                 14 Resource Unit
                                 15 Situation Unit
                                 16 Documentation Unit
                                 17 Demobilization Unit
                                 transit-supervisor (39), -- Transit: supervisor/ manager   18 Technical Specialist
                                 transit-revenue-collector (40), -- Transit: revenue collector   19 Logistics
                                 transit-dispatcher (41) -- Transit: dispatcher   20 Service Branch
                                    -- 42-149 (reserved for standard codes)   21 Communications Unit
                                    -- 150-255 (reserved for local use)   22 Medical Unit
                                 } (0..255) 23 Rehabilitation
                                 24 Food Unit
                                 25 Support Branch
                                 26 Supply Unit
                                 27 Facilities Unit
                                 28 Ground Support Unit
                                 29 Finance/Administration
                                 30 Time Unit
                                 31 Procurement Unit
                                 32 Compensations Claims Unit
                                 33 Cost Unit
                                 34 Transit: full time operator
                                 35 Transit: part time operator
                                 36 Transit: conductor
                                 37 Transit: engineer
                                 38 Transit: maintenance
                                 39 Transit: supervisor/manager
                                 40 Transit: revenue collector
                                 41 Transit: dispatcher
                                 42-149 (reserved for standard codes)
                                 150-255 (reserved for local use)

IM_EmployeeIDSource_id
(1) The Representative class term (in descriptive name and field) shall be modified to identifier (id).

Descriptive Name   IM_EmployeeIDSource_id
Representation class term   identifier

IM_EmployeeIDSystem_id
(1) The Representative class term (in descriptive name and field) shall be modified to identifier (id).

Descriptive Name   IM_EmployeeIDSystem_id
Representation class term   identifier

IM_EventIDSource_id
(1) The Representative class term (in descriptive name and field) shall be   *modified to identifier (id).*

Descriptive Name	IM_EventIDSource_id
Representation class term	identifier

IM_EventIDSystem_id
(1) The Representative class term (in descriptive name and field) shall be   *modified to identifier (id).*

Descriptive Name	IM_EventIDSystem_id
Representation class term	identifier

IM_IncidentID_id
(1) The Representative class term (in descriptive name and field) shall be   *modified to identifier (id).*

Representation class term	identifier

IM_OtherVehicleInvolvedID_id
(1) The Representative class term (in descriptive name and field) shall be modified to identifier (id).

Descriptive Name	IM_OtherVehicleInvolvedID_id
Representation class term	identifier

IM_ResponseEmployeeID_id
(1) The Representative class term (in descriptive name and field) shall be   *modified to identifier (id).*

Descriptive Name	IM_ResponseEmployeeID_id
Representation class term	identifier

IM_ResponseUnitID_id
(1) The Representative class term (in descriptive name and field) shall be modified to identifier (id).

Descriptive Name	IM_ResponseUnitID_id
Representation class term	identifier

IM_SourceID_id
(1) The Representative class term (in descriptive name and field) shall be modified to identifier (id).

Descriptive Name	IM_SourceID_id
Representation class term	identifier

4.2   MESSAGE SET

ImEventSystem_message
(1) Last version included the wrong message. This is the correct message for   ImEventSystem

Message body   ImEventSystem ::= SEQUENCE {
                                           event-system-id IM-EventIDSystem,
                                           source-type IM-SourceType,
                                           source-id   IM-SourceID,
                                           type   SEQUENCE OF IM-IncidentType,
                                           subtype   SEQUENCE OF IM-IncidentSubtype   OPTIONAL,
                                           incidentSeverity CPT-SeverityLevel   OPTIONAL, -- range (1..10)
                                           employee-system-id IM-EmployeeIDSystem OPTIONAL,
                                           workstationID   CC-WorkstationID,
                                           event-desc-short   IM-IncidentDescShort OPTIONAL,
                                           event-desc-long   IM-IncidentDescLong OPTIONAL,
                                           event-location   SpLocationclass   OPTIONAL,
                                           ptv-id   CPT-PTVehicleID   OPTIONAL,
                                              -- if the source event is on-board a vehicle, data element is mandatory
                                           transit-facility   CPT-TransitFacilityID   OPTIONAL,
                                           response-agencyID IM-ResponseAgencyID   OPTIONAL,
                                           response-employeeID IM-ResponseEmployeeID   OPTIONAL
                                           } (WITH COMPONENTS{..., event-desc-short PRESENT}|
                                             WITH COMPONENTS{..., event-desc-long PRESENT})

**Annex B
ASN.1 Script**

(Informative)

TBD