

*A Working Group Draft Standard of the Joint Committee*

# **NTCIP 1402 v. 1.03**

## **-- DRAFT Amendment 1**

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## **Transit Communications Interface Profiles**

**Part of the National Transportation Communications for  
ITS Protocol**

## **Standard on Incident Management (IM) Objects**

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**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 Systems (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 Runcutting Objects*, 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 1406:2002 Amendment 1, *Transit Communications Interface Profile, Standard on Control Center Objects*, version 1.03 Amendment 1, August, 2002.

draft NTCIP 1407:2002 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)*

### **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) was 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) was modified to identifier (id).*

**Descriptive Name** IM\_DispatcherID\_id  
**Representation class term** identifier

#### IM\_EmployeeFunction\_cd

(1) *The error codes was 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  
transit-supervisor (39), -- Transit: supervisor/ manager  
transit-revenue-collector (40), -- Transit: revenue collector  
transit-dispatcher (41) -- Transit: dispatcher  
-- 42-149 (reserved for standard codes)  
-- 150-255 (reserved for local use)  
} (0..255)

**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  
18 Technical Specialist  
19 Logistics  
20 Service Branch  
21 Communications Unit  
22 Medical Unit  
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) was modified to identifier (id).*

<b>Descriptive Name</b>	IM_EmployeeIDSource_id
<b>Representation class term</b>	identifier

**IM\_EmployeeIDSystem\_id**

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

**Representation class term** identifier

**IM\_OtherVehicleInvolvedID\_id**

*(1) The Representative class term (in descriptive name and field) was 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) was 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) was 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) was 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)**

*-- removed from document*