

*A Working Group Draft Standard of the Joint Committee*

# **NTCIP 1407 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 Control Center (CC) Objects**

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**DRAFT -- August, 2002**

**Also referenced as TCIP-CC**

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TS 3. TCIP-CC, version 98.10.01, October 1, 1998. NTCIP Standards Bulletin B0035 reported minor changes in formatting from the previous version. Approved by AASHTO in October 1999, approved by ITE in May 2000, and approved by NEMA in April 2000. (Assigned document number NTCIP 1407.)

NTCIP 1407 v01.02, December 31, 2000. November 2001—Reformatted for printing; incremented version number and updated date; added and revised front matter; updated references to NTCIP and NEMA document numbers in Clause on References; updated references to ITE document numbers; inserted introduction text in Section on Requirements; deleted Annex A Comment Form; and inserted introduction text in Annex for the ASN.1 Script.

DRAFT NTCIP 1407 v01.03 Amendment 1, August 2002 – Changes are described in this document.

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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 On-Board Objects*, version 1.03 Amendment 1, August, 2002.

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

SAE J1587 – Joint SAE/TMC Recommended Practice for Electronic Data Interchange Between Microcomputer Systems in Heavy Duty Vehicle Applications, February 2002.

### **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

### 2.3 ACRONYMS

-- *Add the acronym for VAN*

**VAN**            Vehicle Area Network





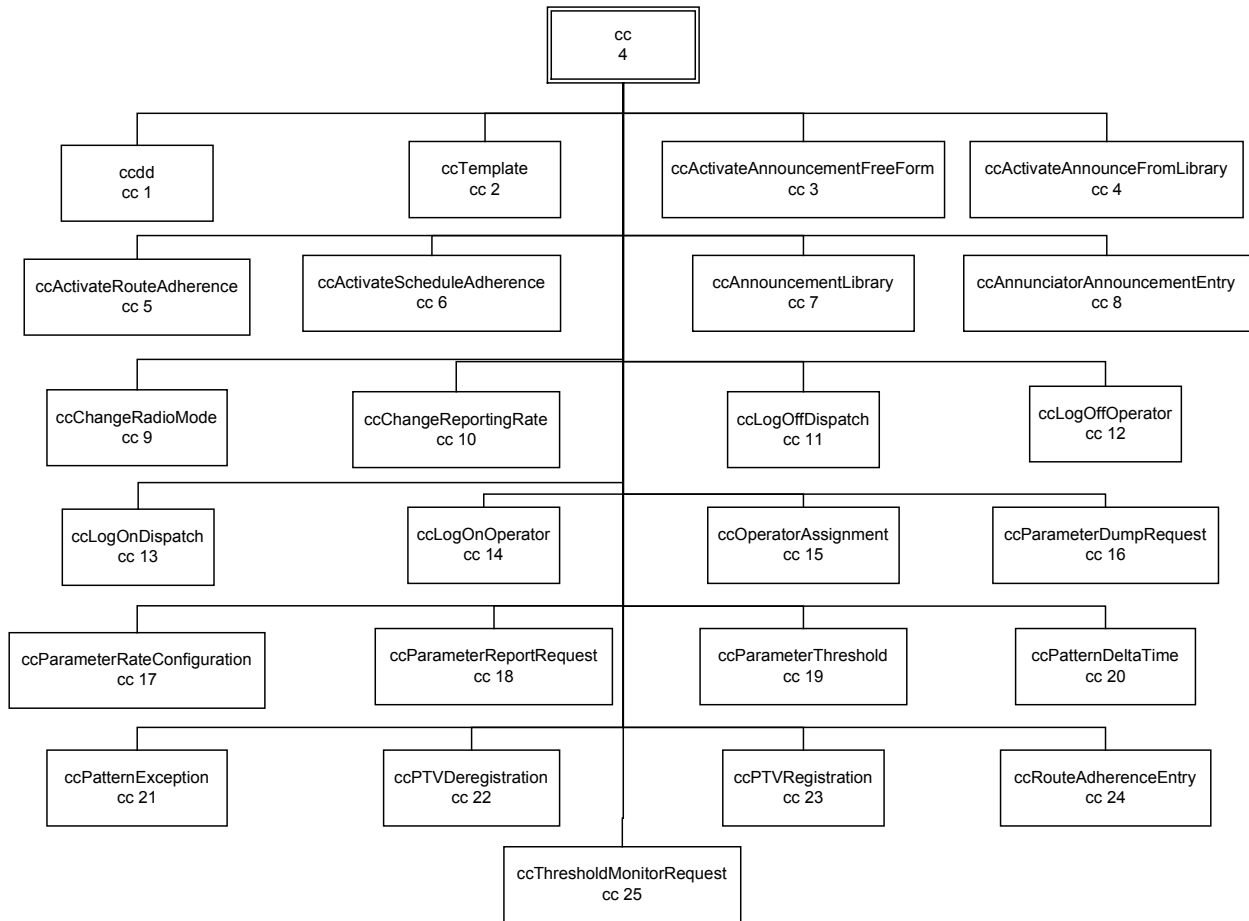
### Section 3 CONCEPT OF OPERATIONS

-- Changed title from BASIC CONCEPTS to CONCEPT OF OPERATIONS

#### 3.3.2 TCIP Classification Tree

-- Add Figure 3.2 TCIP Control Center Tree Structure

Figure 3.2 TCIP Control Center Tree Structure





## Section 4 REQUIREMENTS

### 4.1 DATA DICTIONARY

#### **CC\_ReturnToleranceEarly\_tm/IEEE/ASTM SI:time**

*(1) The definition was modified.*

**Definition** The deviation from scheduled time a transit vehicle must adhere to (once considered early) before it is considered on time (i.e., on-schedule) again.

#### **CC\_ReturnToleranceLate\_tm/IEEE/ASTM SI: time**

*(1) A typo was corrected in the definition.*

**Definition** The deviation from scheduled time a transit vehicle must adhere to (once considered late) before it is considered on time (i.e., on schedule) again.

#### **CC\_RouteIDShort\_id**

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

**Descriptive Name** CC\_RouteIDShort\_id  
**Representation class term** identifier

#### **CC\_RunIDShort\_id**

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

**Descriptive Name** CC\_RunIDShort\_id  
**Representation class term** identifier

#### **CC\_WorkstationID\_id**

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

**Descriptive Name** CC\_WorkstationID\_id  
**Representation class term** identifier

#### **CC\_AnnouncementMsgID\_id**

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

**Descriptive Name** CC\_AnnouncementMsgID\_id

**Representation class term** identifier

**CC\_BlockIDShort\_id**

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

**Descriptive Name** CC\_BlockIDShort\_id

**Representation class term** identifier

**CC\_DetourID\_id**

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

**Descriptive Name** CC\_DetourID\_id

**Representation class term** identifier

**CC\_MobileUnitID\_id**

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

**Descriptive Name** CC\_MobileUnitID\_id

**Representation class term** identifier

**CC\_PTVehicleIDShort\_id**

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

**Descriptive Name** CC\_PTVehicleIDShort\_id

**Representation class term** identifier

**CC\_AlarmCode\_cd**

*Added new data element.*

**Descriptive Name** CC\_AlarmCode\_cd

**Descriptive Name Context** Manage Transit

**Definition** The type of alarm that may occur on a revenue vehicle.

**Formula**

**Source**

**Class Name** CC

**Classification scheme name** TCIP

**Classification scheme version** NTCIP 1400

**Data concept type** Data Element

**Keyword**

**Related data concept**

**Relationship type**

**Remarks**

**Symbolic name** ccdd 31

**Symbolic name usage**

<b>ASN1 name</b>	CC-AlarmCode
<b>Representation layout</b>	CC-AlarmCode ::= INTEGER (0..255)
<b>Constraints</b>	
<b>Value Domain</b>	UBYTE
<b>Data type</b>	UNIVERSAL 2 Integer Type
<b>Representation class term</b>	code
<b>Valid value rule</b>	code    Category 0-49    General error 50-99   I/O controller error 100-149 Drive train error 150-199 Information device error 200-255 Local use code error

## 4.2 MESSAGE SET

### **CcActivateAnnouncementFromLibrary\_message**

(1) *Added new field to message body:*

*library-message-id CC-AnnouncementMsgID OPTIONAL*

**Message body** CcActivateAnnouncementFromLibrary ::=SEQUENCE {  
    components SEQUENCE OF OB-MID --combined device address and device configuration  
    sign-parameters ObBusTextMessageToDisplay OPTIONAL, --if sign announcement  
    sign-type ObBusTextMessageDisplayType OPTIONAL, --if sign announcement  
    library-message-id CC-AnnouncementMsgID OPTIONAL  
        -- this field references the message-id: CcAnnunciatorMessageEntry  
}

### **CcActivateScheduleAdherence\_message**

(1) *Corrected typo, removed OF from SEQUENCE in object construct.*

**Message body** CcActivateScheduleAdherence ::= SEQUENCE {  
    tolerance-early CC-ScheduleToleranceEarly,  
    return-tolerance-early CC-ReturnToleranceEarly OPTIONAL,  
    tolerance-late CC-ScheduleToleranceLate,  
    return-tolerance-late CC-ReturnToleranceLate OPTIONAL,  
    report-frequency CC-ExceptionFrequencyReport OPTIONAL,  
    response CC-MsgResponse  
    --indicates whether initiation of this message  
    --triggers a status/acknowledge response  
}

### **CcDataLoadTemplate\_message**

(1) *Retired this message. Redundant with CcOutboundMessageTemplate*

## CcOperatorAssignment\_message

(1) Corrected inconsistencies with referenced Type References including:  
CC-OperatorAssignmentType, SCH-TimeTableVersionID and CPT-OperatorBaseID

**Message identifier** cc 15  
**Metadata source** Direct  
**Descriptive name** CcOperatorAssignment\_message  
**Descriptive name context** Manage Transit  
**Definition** A run assigned to a particular operator. The type of operator assignment is defined by CC-OperatorAssignType. Special data elements are associated with the different assignment

types.

### Source

**Class name** CC  
**Classification scheme name** TCIP  
**Classification scheme version** NTCIP 1400  
**Data concept type** Message

### Keyword

### Related data concept

### Relationship type

### Remarks

### Symbolic name

### Symbolic name usage

**ASN1 Name** CcOperatorAssignment

### Constraints

**Message body**

```
CcOperatorAssignment ::=SEQUENCE {
employee-id CPT-EmployeeID,
run-id SCH-RunID,
activation-date CPT-ActivationDate,
--date on which Operator Assignment was made, e.g., pick date
assignment-type CC-OpeartorAssignmentType,
block-id SCH-BlockID OPTIONAL,
time-table-version SCH-TimeTableVersionID OPTIONAL,
day-type SCH-DayType OPTIONAL,
operator-base CPT-OperatorBaseID OPTIONAL
--one of the following variations of this message must be implemented
--for actual assignments
} ( WITH COMPONENTS {..., block-id PRESENT}
--for pick assignments
WITH COMPONENTS {..., time-table-version PRESENT, day-type PRESENT, operator-base
PRESENT}
--for planned assignments
WITH COMPONENTS {..., operator-base PRESENT} )
```





**Annex A**  
**ASN.1 Script**

**(Informative)**

*-- removed from document*