TECHNICAL REPORT

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Intelligent transport systems — Public transport user information —

Part 2: Public transport data and interface standards catalogue and cross references

Systèmes intelligents de transport — Informations destinées aux utilisateurs des transports publics —

Partie 2: Données sur les transports publics, et catalogue des normes relatives aux interfaces et références croisées

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 204, *Intelligent transport systems.*

ISO 17185 consists of the following parts, under the general title *Intelligent transport systems — Public transport user information*:

— *Part 1: Standards framework for public information*

— *Part 2: Public transport data and interface standards catalogue and cross references*

— *Part 3: Use cases for journey planning systems and their inter-operation*

Introduction

With the multiple standards that are deployed around the world to provide passenger information, ISO/TC 204 sees a need to identify the range of information provision available to the public. Some of the standards comprise messages and/or services that cover the full scope of the public transport planning and operations enterprise, while others address a narrow scope of passenger information, such as schedule information or bus arrival time prediction.

ISO/TC 204 saw a need to create a catalogue that shows the range and extent of the collection of standards and specifications available. Furthermore, the group identified a need to show the similarities and differences among these standards and specifications for several reasons, for example:

— to match like concepts and messages,

— to understand the overlaps, differences and missing requirements,

— to extend narrow-based standards using the concepts and interfaces developed by the enterprise-based standards.

This Technical Report will be beneficial for all ISO/CEN member countries, as well as non-member countries. It will be a valuable catalogue to help understand the content of the currently available national and regional standards (identified in ISO 17185 Part 1), such as Transmodel, TCIP, Korean ATIS and Japanese ATIS. The intention is that, by deploying these existing national and regional standards from other countries or regions, duplication of cost and time in developing new standards and specifications can be avoided. For those countries that do not have surface public transport information standards, this approach allows the mix and match of standards from different regions, as well as rapid development and deployment that can enhance the usability and convenience of public transport anywhere in the world.

This Technical Report is intended to be fully consistent with those currently available national and regional standards which may be related to international surface public transport. It is designed to serve as a look-up table for developers for the terminology used in different regions for the same concept. For example, the term “trip” in TCIP and GTFS is called “service journey” in Transmodel. This catalogue will expose the differences in language for developers who need to translate data from one standard to another. Principally, this Technical Report, and its scope and approach, will help lower the barriers for developers who need to mix standards; for countries that need to choose the best approach to deploy public transport systems; and, ultimately, for the public wanting a seamless public transport experience wherever they travel.

As Andrew S. Tanenbaum said, “The nice thing about standards is that you have so many to choose from”.[1)] This report fully endorses that principle.

1) *Computer Networks*, 2nd ed., p. 254

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1 Scope

This Technical Report compares and contrasts public transport standards that were developed by different regions and countries. It uses the CEN Transmodel classes as a reference to compare standard data concept descriptions of public transport user information. The purpose of this Technical Report is to understand the concepts described by existing standards and specifications that cover public transport passenger information.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

NOTE Equivalent TCIP or Transmodel term is identified for reference.

2.1
attribute
property of an entity

[SOURCE: CEN EN12896; p. 16 (ref 1), modified — Note 1 has been added.]

Note 1 to entry: Equivalent terms in TCIP / Transmodel: data element (TCIP).

2.2
class
concept within [a] system being modelled

[SOURCE: The Unified Modeling Language Reference Manual; p. 185 (ref 3), modified — Notes 1 and 2 have been added.]

Note 1 to entry: Equivalent terms in TCIP / Transmodel: data concept [US TCIP].

Note 2 to entry: Similar to entity, represents a set of objects with similar behaviour and properties.

2.3
data concept
any of a group of data dictionary structures (i.e., object class, property, value domain, data element concept, data element, data frame, message, interface dialogue, association) referring to abstractions or things in the natural world that can be identified with explicit boundaries and meaning and whose properties and behavior [sic]all follow the same rules

[SOURCE: ISO 14817, p. 3 (ref 4), modified — Note 1 has been added.]

Note 1 to entry: Equivalent terms in TCIP / Transmodel: object, class, entity (Transmodel); data element, data frame (TCIP).