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S.R. CEN/TS 16157-5:2014

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 5: Measured and elaborated data publications

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This document is based on:	*Published:*
CEN/TS 16157-5:2014	2014-04-30

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2014-05-10	35.240.60
	NOTE: If blank see CEN/CENELEC cover page

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TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

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CEN/TS 16157-5

April 2014

ICS 35.240.60

English Version

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 5: Measured and elaborated data publications

Systèmes de transport intelligents - Spécifications Datex II d'échange de données pour la gestion du trafic et l'information routière - Partie 5 : Publication de données mesurées et de données calculées

Intelligente Transportsysteme - DATEX II Datenaustausch Spezifikationen für Verkehrsmanagement und Informationen - Teil 5: Gemessene und ausgearbeitete Datenveröffentlichungen

This Technical Specification (CEN/TS) was approved by CEN on 27 January 2014 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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Foreword

This document (CEN/TS 16157-5:2014) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

The CEN/TS 16157 series consists of the following parts, under the general title “Intelligent transport systems — DATEX II data exchange specifications for traffic management and information”:

- Part 1: Context and framework

- Part 2: Location referencing

- Part 3: Situation publication

- Part 4: VMS publication

- Part 5: Measured and Elaborated Data Publications

Other parts may be developed in the future.

As a user of the standard, attention is drawn to the resources of www.datex2.eu < http://www.datex2.eu/ > . This website contains related software tools and software resources that aid the implementation of the CEN/TS 16157 series DATEX II.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

This Technical Specification defines a common set of data exchange specifications to support the vision of a seamless interoperable exchange of traffic and travel information across boundaries, including national, urban, interurban, road administrations, infrastructure providers and service providers. Standardization in this context is a vital constituent to ensure that interoperability, reduction of risk, reduction of the cost base and promotion of open marketplace objectives are achieved that will lead to many social, economic and community benefits as a result of more informed travellers, network managers and transport operators.

Delivering European Transport Policy in line with the White Paper issued by the European Commission requires co-ordination of traffic management and the development of seamless pan European services. With the aim to support sustainable mobility in Europe, the European Commission has been supporting the development of information exchange mainly between the actors of the road traffic management domain for a number of years. In the road sector, DATEX II has been long in fruition, with the European Commission being fundamental to its development through an initial contract and subsequent co-funding through the Euro-Regional projects. With this standardization of DATEX II there is a real basis for common exchange between the actors of the traffic and travel information sector.

This Technical Specification includes the framework and context for exchanges, the modelling approach, data content, data structure and relationships and communications specification.

This Technical Specification supports a methodology that is extensible.

The fifth part of this Technical Specification deals with the one or more publication sub-model(s) within the DATEX II model that support the exchange of measured and elaborated information. These publications are intended to support the exchange of information from the organization having the measures and creating elaborated data to other organizations providing ITS services or onward information exchange. It also includes the exchange of static information about measurement sites.

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1 Scope

This Technical Specification (CEN/TS 16157-5) specifies and defines component facets supporting the exchange and shared use of data and information in the field of traffic and travel.

The component facets include the framework and context for exchanges, the modelling approach, the data content, the data structure and relationships and the communications specification.

This Technical Specification is applicable to:

— Traffic and travel information which is of relevance to road networks (non urban and urban);

— Public transport information that is of direct relevance to the use of a road network (e.g. road link via train or ferry service).

This Technical Specification establishes specifications for data exchange between any two instances of the following actors:

— Traffic Information Centres (TICs);

— Traffic Control Centres (TCCs);

— Service Providers (SPs).

Use of this Technical Specification may be applicable for use by other actors.

This Technical Specification includes the following types of information content:

— Road traffic event information – planned and unplanned occurrences both on the road network and in the surrounding environment;

— Operator initiated actions;

— Road traffic measurement data, status data and travel time data;

— Travel information relevant to road users, including weather and environmental information;

— Road traffic management information and instructions relating to use of the road network.

This part of the CEN/TS 16157 series specifies the informational structures, relationships, roles, attributes and associated data types required for publishing measured and elaborated data within the Datex II framework. This is specified in three submodels, a DATEX II Measurement Site Table Publication submodel, a DATEX II Measured Data Publication submodel and a DATEX II Elaborated Data Publication submodel.

1.1 Conformance

The platform independent sub-models defined by this Part specify a DATEX II Measurement Site Table Publication, a DATEX II Measured Data Publication and a DATEX II Elaborated Data Publication except for those elements that relate to location information which are specified in CEN/TS 16157-2. The DATEX II platform independent data model these three publication sub-models are a part of which, corresponds to the Level A model as defined in CEN/TS 16157-1.

Conformance with this Part shall require platform independent models from which platform specific models are generated to comply with the UML modelling rules defined in CEN/TS 16157-1 and with the following requirements of the sub-models which are expressed in this Part:

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