SLOVENSKI STANDARD
oSIST prEN ISO 17573:2009

01-april-2009

Elektronsko pobiranje pristojbin - Sistemska arhitektura za cestninjenje vozil (ISO/DIS 17573:2009)

Electronic fee collection - Systems architecture for vehicle related tolling (ISO/DIS 17573:2009)

Straßenverkehrstelematik - Elektronische Gebührenerhebung - Systemarchitektur für fahrzeugbezogene Transportdienstleistungen (ISO/DIS 17573:2009)

Perception du télépéage - Architecture des systèmes pour le péage lié au véhicule (ISO/DIS 17573:2009)

Ta slovenski standard je istoveten z: **prEN ISO 17573**

ICS:

03.220.20	Cestni transport	Road transport
35.240.60	Uporabniške rešitve IT v transportu in trgovini	IT applications in transport and trade

oSIST prEN ISO 17573:2009 **en**

EUROPEAN STANDARD

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English Version

Electronic fee collection - Systems architecture for vehicle related tolling (ISO/DIS 17573:2009)

Perception du télépéage - Architecture des systèmes pour le péage lié au véhicule (ISO/DIS 17573:2009)

Straßenverkehrstelematik - Elektronische Gebührenerhebung - Systemarchitektur für fahrzeugbezogene Transportdienstleistungen (ISO/DIS 17573:2009)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 278.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (prEN ISO 17573:2009) has been prepared by Technical Committee CEN/TC 278 “Road transport and traffic telematics", the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 204 "Transport information and control systems".

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DRAFT INTERNATIONAL STANDARD ISO/DIS 17573

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Electronic fee collection — Systems architecture for vehicle related tolling

Perception du télépéage — Architecture des systèmes pour le péage lié au véhicule

(Revision of ISO/TS 17573:2003)

ICS 03.220.20; 35.240.60

ISO/CEN PARALLEL PROCESSING

This draft has been developed within the European Committee for Standardization (CEN), and processed under the **CEN-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

In accordance with the provisions of Council Resolution 15/1993 this document is circulated in the English language only.

Conformément aux dispositions de la Résolution du Conseil 15/1993, ce document est distribué en version anglaise seulement.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

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Foreword

This document **prEN ISO 17573:2008** has been prepared by Technical Committee **CEN**/TC **278** "**Road transport and traffic telematics**", the secretariat of which is held by **NEN**, in collaboration with Technical Committee **ISO**/TC **204** "**Intelligent transport systems**".

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Introduction

The widespread use of tolling also requires provisions for users of vehicles that are roaming through many different toll domains. Users should be offered a single contract for driving a vehicle through various toll domains and those vehicles require onboard equipment (OBE) that is interoperable with the toll system in the various toll domains. In Europe, for example, this need has been officially recognised and legislation on interoperability already has been adopted. See Directive 2004/52. There is a commercial and economic justification both in respect of the OBE and the toll systems for standards enabling interoperability.

In addition to other standards there is also a further a need for a system architecture that:

— provides an architectural “umbrella” for other EFC standards in terms of a common definition of terms and concepts, basic system functionalities, and structure

— provides a common terminology which enables its users

  — to improve the quality of specifications to be used in an international market,

  — to reduce the risk for different interpretations of specifications (purchaser) and descriptions (supplier),

  — to simplify the communication between experts from different continents, and

  — to enhance the potential use of other EFC standards;

— defines a common framework, that enables both:

  — identification of potential activities subject to standardization, and

  — maintaining a common and consistent view of the whole area;

— defines the boundaries between the EFC and the external world;

— identifies all architectural objects that lay inside the EFC boundaries;

— provides a basic understanding of EFC, EFC interoperability, and the EFC services being offered.

The previous edition of this Standard was based on a conceptual model defined in ENV ISO 14904. Since then ideas on conceptual models have evolved in several regional projects and implementations, e.g. in Japan and Europe. Those new models have been detailed to a further extent compared to CEN ISO/TS 17573 and are more close to real life implementations. This Standard is based on these new conceptual models and uses the associated terms and definitions. A comparison between the old edition of this standard and the current one is shown in Annex B.

Although there are many differences, collecting toll for vehicles can be to some extent compared with collecting fare for public transport. Architectural harmonisation of the collection of fee and fare may be desirable from a policy and from a user point of view. In the past EN ISO24014-*1 Interoperable Fare Management System - Part 1: Architecture (IFMSA)* prepared by CEN TC 278 WG 3 Public Transport used CEN ISO/TS 17573:2002 as a starting point for their work. This Standard has benefited from that and has also taken ISO/FDIS 24014-1 into account.

In this Standard the Open Distributed Processing (ODP) standard is used for the description of the architecture.

The ODP standard gives a vocabulary and modelling tools to see the architecture of a system from different perspectives (the viewpoints), in order to cover, e.g., hardware components as well as network protocols or interfaces or roles and general policies of the system itself. This is accomplished using different sets of concepts and terminologies, each one of those expressed as a viewpoint language. A complete description of a real system can only be achieved when all viewpoint models are designed. This allows for a clear separation of concerns and an easier way to define a system. A brief description of the ODP concepts can be found in Annex A.

This Standard gives a description of the architecture of the toll systems environment from the enterprise viewpoint. In addition, this Standard defines the foundations of the information viewpoint by defining information interactions and general information objects, and gives the basis for the computational view, by identifying needed computational objects and their interfaces.

1 Scope

This Standard defines the architecture of a toll system environment in which a customer with one contract may use a vehicle in a variety of toll domains and with a different toll charger for each domain.

Toll systems covered by this Standard may be used for various purposes including road (network) tolling, area tolling, collecting toll for bridges, tunnels, ferries, for access, for parking. From a technical point of view the considered toll systems use electronic equipments on board of a vehicle.

From a process point of view the architectural description focuses on fee determination, fee charging, and the associated enforcement measures. The actual collection of the fee, i.e. collecting payments, is not included.

The architecture in this Standard is defined with no more details than those required for an overall overview, a common language, an identification of the need for other standards, and the drafting of these standards.

This Standard provides:

— The enterprise view on the architecture, which is concerned with the purpose, scope and policies governing the activities of the specified system within the organization of which it is a part.

— Terms and definitions for common use in a toll environment

— A decomposition of the toll systems environment into its main objects

— The responsibilities of the main actors

— An identification of the main interfaces between the main objects

— An identification of the main flows of information between the main objects

— Action diagrams reflecting the co-operation between the main actors.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or