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Poštne storitve - Izjava o dostavi pisemske pošiljke

Postal service - Statement of mailing submission

Postalische Dienstleistungen - Übertragung von Daten für Briefanlieferungen

Service postal - Déclaration de dépôt du courrier

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This Technical Specification (CEN/TS) was approved by CEN on 23 October 2006 for provisional application.

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Cont	ents	Page
Forewo	ord	4
Introdu	uction	
1	Scope	
-	•	
2	Normative references	
3	Terms and definitions	9
4	Symbols and Abbreviations	13
5	General Concepts	
5.1	Mail communication system domains	
5.2	Parties, agents and their roles	
5.2.1	Party attribute	
5.2.2	Agent attribute	
5.3	Physical objects	
5.3.1	Mail item	
5.3.2	Mail entity	
5.3.3	Mail receptacle	17
5.3.4	Mail set 11eh STANDARD PREVIEW	18
5.3.5	Mailing submission, acceptance and submission group	18
5.4	Informational objects	20
5.4.1	Mail entity attribute	
5.4.2	Mail receptacle attributesist-TS-CEN/TS-13523:2007	21
5.4.3	Mail entity set attribute	22
5.4.4	Mail entity set catalogue	22
5.4.5	Mail entity set catalogue	22
5.4.6	Electronically exchanged message	
5.4.7	Observation	
5.4.8	Observation attribute	23
5.4.9	Expectation	24
5.4.10	Postal product/service	24
5.4.11	Postal product/service attribute	26
5.4.12	Contract and contract attributes	26
5.5	Mailer domain process	
5.5.1	Message/content preparation	27
5.5.2	List selection	
5.5.3	List preparation	28
5.5.4	Electronic sortation	28
5.5.5	Printing	28
5.5.6	Insertion	
5.5.7	Finishing	28
5.5.8	Physical sortation	28
5.5.9	Containerisation	28
5.5.10	Transportation	28
5.5.11	Induction	29
5.6	Interfaces	
6	Statement of mailing submission (SMS)	24
6.1		
-	SMS structure	
6.2	Message Content	
6.2.1	SMS.Header	
6.2.2	SMS.Submission	
6.2.3	SMS Handover	38

6.2.5	SMS.MailEntitySets	42
6.2.6	SMS.MailEntities	45
6.3	Message Format	50
6.4	Communication Protocol	51
6.5	Communication channel security	51
7	Application Security	
7.1	Introduction	
7.2	Threats and Vulnerabilities	52
7.3	Applications and Message Level Security	
7.4	Security Services and Message-level Countermeasures	59
7.5	Application-level Countermeasures	60
7.5.1	Access and Usage Controls	61
7.5.2	Countermeasures against Counterfeiting	
7.5.3	Countermeasures against Duplication (copying)	
7.5.4	Countermeasures against Inappropriate Induction	
7.5.5	Countermeasures against Miss-Application	
7.5.6	Countermeasures against Collusion	
7.5.7	Countermeasures against Impersonation	
7.5.8	Obliteration countermeasures	
7.5.9	Countermeasures against inappropriate Refund Request	66
Annex	x A (informative) Examples of SMS documents	67
Annex	x B (informative) Text of the XML Schema for SMS	81
Annex	x C (informative) Example of a protocol for secure communication of EEM	89
Biblio	ography iTeh STANDARD PREVIEW	92
	(standards.iteh.ai)	

SIST-TS CEN/TS 15523;2007 https://standards.iteh.ai/catalog/standards/sist/ee44cb8d-eda0-4063-a13f-36185f3150bf/sist-ts-cen-ts-15523-2007 CEN/TS 15523:2006 (E)

Foreword

This document (CEN/TS 15523:2006) has been prepared by Technical Committee CEN/TC 331 "Postal service", the secretariat of which is held by NEN, in collaboration with UPU.

NOTE This document has been prepared by experts coming from the Technical Committee CEN/TC 331 "Postal Services" and UPU, under the frame of the Memorandum of Understanding between UPU and CEN.

The UPU's contribution to the specification was made, by the UPU Standards Board¹⁾ and its subgroups, in accordance with the rules given in Part V of the "General information on UPU standards".

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

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¹⁾ The UPU's Standards Board develops and maintains a growing number of standards to improve the exchange of postal-related information between posts, and promotes the compatibility of UPU and international postal initiatives. It works closely with posts, customers, suppliers and other partners, including various international organizations. The Standards Board ensures that coherent standards are developed in areas such as electronic data interchange (EDI), mail encoding, postal forms and meters. UPU standards are published in accordance with the rules given in Part VII of the General information on UPU standards, which can be freely downloaded from the UPU world-wide web site (www.upu.int).

Introduction

Widespread proliferation of electronic, internet-based data communications provides a cost-effective platform for integrating a global mail communication system. The essence of such an integration is an automated exchange of computerised information between mailer's, postal and recipient's domains. Within each of these domains there is a wealth of information that has been or could be collected, computerised and subsequently communicated to other domains to enhance the overall mail system. This information is typically information about mail entities and it allows for effective control and management of the entire mail distribution network.

Most commercial-purpose mail is created and finished with the help or under control of computer-driven equipment. Mail-descriptive computerised data is a by-product of the mail creation/finishing process and it has significant value for both postal operators and their agents and frequently for mail recipients. Specifically, when a plurality of mail items (designated as a *mailing submission*) are prepared for induction into a postal distribution network by a mailer, it is only natural that the mailing submission should be accompanied by an electronic document (or computer file) that is commonly referred to as a *statement of mailing submission*. The main goal of the statement of mailing submission (SMS) is to provide support information for mission-critical applications in the mail communication system, and specifically for applications in the postal domain. The most important applications in the postal domain come from operations (mail entry/induction, processing/sorting, transportation and delivery), postal marketing (maintenance of existing products and services, design of new postal products and services, customer relationship management and management of quality of service), and finance (revenue management including collection and protection of revenue).

The main purpose of the present Technical Specification is to define basic concepts associated with the statement of mailing submission (framed using methodology of an entity-relationship model), and then to define the content, message structure and protocol that can be used by mailers or their agents to communicate to posts information supporting major postal applications, and also to provide a detailed analysis of application-level securitytandards.iteh.ai/catalog/standards/sist/ee44cb8d-eda0-4063-a13f-

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The following section describes information requirements supporting major postal processes.

Postal operations information requirements

Mail entry/induction process is a controlled acceptance process that is designed to enable transfer of typically medium or large size mailings (e. g. mailings containing more than several hundred mail items) from mailers or their agents to postal operators. *Mail entry* process involves verification of mail make-up (i.e. check of the information present on mail entities for its postal process friendliness) and verification of payment. The process is based on comparison of information created or otherwise known to postal acceptance personnel against information supplied by mailer. Critical data elements supporting mailing submission entry are:

- Mailing submission composition such as number of mail entities of various kind contained in the submission;
- Type and identities of mail entities included into submission;
- Gross and net weight of mail entities included into submission and gross and net weight of the submission itself;
- Worksharing information if mailing submission has been pre-sorted or contains mail pre-barcoded by mailer or its agents. This information includes geographic distribution (number and type of mail entities for each postal code), postal codes assigned to and marked on each mail entity as well as information concerning quantity, location and markings for all non-qualified (or residual) entities;
- Payment information including accounting information and postage information for various categories of postal products included in the mailing and totals for each category;

CEN/TS 15523:2006 (E)

- Identity of the SMS associated with the mailing submission;
- Security information such as key certificates as described in the present specification (Annex D).

Mail processing information requirements support cost-effective mail sorting. In addition to the information identified above, the mail sort-supporting electronic information may include identities of all mail entities included in the submission linked with their associated address information including postal codes.

Mail transportation information requirements support cost-effective transportation of mail entities and aggregates between postal processing and delivery offices. Thus, in addition to the information identified in the previous sections, mail transportation-supporting information may include (if they are known during mail preparation process) identities and scheduling data for various transportation vehicles (trucks, railroad cars, aircrafts and boats) that will be used for transporting mailing submission.

Mail delivery process information requirements support cost-effective delivery of mail. In addition to the information described above mail delivery-supporting information may include number, identity and type of mail entities that require special delivery or handling (e.g. proof of delivery or return receipt).

Postal marketing information requirements

Marketing information is mainly concerned with a detailed description of a mailer's use of various postal products and services offered by a postal operator. These may include:

- Number of first class mail items included in the submission:
- Number of second class mail items included in the submission REVIEW
- Number of special rate mail items (e.g. overweight or oversize); 1.21)
- Number of mail items that require special <u>delivery(e.g. registered)</u> certified, time-specific delivery etc.);

https://standards.iteh.ai/catalog/standards/sist/ee44cb8d-eda0-4063-a13f-

- Number of items that require forwarding services or address correction;
- Preferred delivery instructions, redirection and address services (e.g. address hygiene).

Postal finance information requirements

Postal financial applications require an effective payment mechanism for the services by mailers or their agents. These include automatic generation of all required accounting and funds transfer data and its supporting documentation for billing and remittance processing. Finance information should include as a minimum data elements that allow to:

- Create, delete and update customer accounts (e.g. unique account IDs);
- Identify products and services used by the mailer together with their current tariffs;
- Identify mail attributes (e.g. item count, weight, volume) for specific postal products and services;
- Support payment for Business Reply and other recipient-paid services;
- Automate the receipt and processing of payments (e.g. by using Electronic Funds Transfer);
- Automate the processing of all legitimate refunds to mailers;
- All required management and control supporting reports.

Methodology

The methodology adopted for the organisation of SMS begins with a data structure describing all practical knowable information about mailing submission. This data structure containing all-inclusive information is a sort of a "super" file or "super" message. The specification describes how to collapse (or cluster) this super message into new data structures suitable for particular postal applications. This is done by eliminating the non-essential information depending on the informational needs and requirements of postal applications.

Selection (or adaptation) of data elements, their formats and communication protocols for various specific applications and environments for the SMS from the ones described in the present specification are left to postal operators and their customers. It was felt that no group of experts would have sufficiently detailed knowledge of a broad variety of existing and future postal applications and technical environments in order to accommodate even the most common ones. For this reason, it was decided that providing a definition of a super, all-inclusive and adaptable message and the methodology of collapsing it into application-specific messages (statements) would be the best choice. Similarly, timing considerations for various possible messages that could be exchanged between mailer and postal domains are outside of the scope of the present specification. Messages that are defined and described here can be arranged to be created by mailers and communicated to postal operators before, during or after the actual induction process takes place, depending on the value and the intended use of the communicated information. The specification leaves the choice of timing considerations to postal operators and their customers.

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1 Scope

This document specifies a methodology that allows postal operators to define specific statements of mailing submission customised according to their environment and applications.

The document defines information requirements for existing generic postal information processing applications related to major postal functions, namely operations, finance and marketing by specifically identifying the information that could be collected within the mailer's domain and transmitted to the postal domain.

In addition, this document defines the organisation of data into messages by describing data content, format and communication protocol suitable for communication of data originating in the mailer's domain.

The specification also provides a detailed analysis and recommendations for implementing application-level security threats and countermeasures particularly relevant for postal revenue protection in controlled mail entry settings.

Finally, this document provides several examples of concrete statements of mailing submissions and an example of a secure communication protocol recommended for transmission of such statements.

NOTE The SMS describes letter mail or flats that are submitted for distribution and would not deal explicitly with content of letters or flats whether it concerns customs or any other party that could in principle be interested in knowing the content of these mail entities.

2 Normative references Teh STANDARD PREVIEW

The following referenced documents are indispensable for the application of this document. For dated references, or references to a version number, only the edition cited applies. For undated references and where there is no reference to a version number, the latest edition of the referenced document (including any amendments) applies.

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EN 14615:2005, Postal services - Digital postage marks - Applications, security and design

ISO 10126-2:1991, Banking – Procedures for message encipherment (wholesale) – Part 2: DEA algorithm

ISO/IEC 9798-3:1998, Information technology -- Security techniques -- Entity authentication -- Part 3: Mechanisms using digital signature techniques

ISO/IEC 15418, Information technology -- EAN/UCC Application Identifiers and Fact Data Identifiers and Maintenance

ISO/IEC 15434, Information technology -- Automatic identification and data capture techniques -- Syntax for high-capacity ADC media

ISO/IEC 15459-1, Information technology -- Unique identifiers -- Part 1: Unique identifiers for transport units

UPU S25, Data constructs for the communication of information on postal items, batches and receptacles

UPU S27, Framework for communication of information about postal items, batches and receptacles

UPU S36-4, Digital Postage Marks (DPM) - Applications, Security& Design

UPU M33, Postal item attributes and the communication of item information

UPU M34, Mail aggregate attributes and the communication of aggregate information - Part A: General concepts and attribute definitions

3 Terms and definitions

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

3.1

address list selection

process of selecting a mailing address for the intended recipient of the message

3.2

agent

entity involved in a mail communication process that does not have a legal status

3.3

agent attribute

characteristic of the agent which is or can be represented by a data value

3.4

bank

party that facilitates payment (exchange of funds) between parties for mail entity creation, finishing, consolidation, transportation and delivery

3.5

communication domain

set of parties, agents, and processes that together play a specific functional role (such as sender, channel or recipient) in a mail communication system

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3.6

consolidator

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36185f3150bf/sist-ts-cen-ts-15523-2007

party that is responsible for consolidating mail entities from a given creator together with mail entities from other creators

SIST-TS CEN/TS 15523:2007

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3.7 containerisation

process of assembling together and putting mail entities into receptacles for transportation

3.8

contract

agreement between two or more parties, normally enforceable by law. In the context of the statement of mailing submission one party to the contract is the mail originator (or a party or agent authorised by the mail originator) and another is a postal operator (or a party or agent authorised by the postal operator)

3.9

contract attribute

characteristic of a contract which is or can be represented by a data value

3.10

controlled acceptance/entry mail (CAM/CEM)

mail entity or mail aggregate that is examined by postal personnel before being accepted for processing for the purpose of compliance with postal regulations concerning proper payment (accounting) and mail make up

3.11

creator

party that is responsible for production (creation) of a mail item, a mail entity or a mail entity set

3.12

delivery clerk (letter carrier, mail carrier)

human agent in a mail communication system who is responsible for delivering mail entities into recipient mail box (receptacle) or directly into the hands of the mail recipient

CEN/TS 15523:2006 (E)

3.13

electronic sortation

process of sorting a list of mailing addresses into groups having common characteristics (such as identical postal codes)

3.14

electronically exchanged message (EEM)

electronic message sent or received by a mailer or postal operator during the process of mail creation, preparation, submission, acceptance, processing and delivery

3.15

expectation

set of mail entity attribute name-value pairs predicted for a future date or a date range

3.16

finishina

process of direct printing of information on (or applying labels containing information to) assembled mail entities, said information concerning payment evidence and endorsements required for the entry of finished mail entities into the postal distribution network

3.17

insertion

process of folding printed message(s), assembling the content (that includes the message and optional additional enclosures) and inserting the entire content into a mailing envelope

3.18 <u>iTeh STANDARD PREVIEW</u>

list preparation (address cleansing)

process of comparing between mailing (postal) addresses in the selected address list and a standardised list containing corrected and up-to-date postal addresses for the purpose of finding and correcting erroneous entries in the selected list

SIST-TS CEN/TS 15523:2007

3.19

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mail entity

mail item or collection of mail items which are constrained to form a physical unit

3.20

mail entity attribute

characteristic of a mail entity which is or can be represented by a data value

3.21

mail induction/entry

process whereby mail entities are handed over to a postal operator and which results in either the postal operator taking responsibility for the mail entities concerned or rejecting all or some of the mail entities presented for hand over

3.22

mail item

single mailable object that cannot be further broken up into other mailable objects

3.23

mail receptacle

physical device which may be used to contain or carry mail so as to assist in its handling, transportation, storage or delivery as a unit

Mailbags, trays, recipient mailbox, wheeled containers (roller cages), pallet and pallet-based containers **EXAMPLE** and airfreight containers (ULDs).

NOTE Receptacles may contain mail which is housed in other (lower level) receptacles. For example, a roller cage may contain trays and/or bags of mail as well as individual (loose loaded) mail items and bundles. Some types of postal receptacle (e.g. roller cages and ULDs) have a residual value; others need not (e.g. disposable trays).

3.24

mail receptacle attribute

characteristic of a mail receptacle which is or can be represented by a data value

3.25

mail set

collection of mail entities that form a logical unit in the context of a specific application (e.g. sorting, transportation, accounting, payment, hand-over)

3.26

mail set attribute

characteristic of a mail entity set which is or can be represented by a data value

3 27

mail set catalogue

collection of attribute names for mail entities included in a mail entity set

3.28

mail sorting machine

mechanical agent in a mail communication system designed to organise mail entities into groups of items having identical characteristics

3.29

mailing submission

mail set which has a unique identification and is presented or handed over for processing to a postal operator, as part of a single hand-over transaction NDARD PREVIEW

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message preparation

process of preparing data that is designed to be sent as a message (content of a mail item) to the intended recipient

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3.31

observation

set of mail entity attribute name-value pairs captured at a given date

3 32

observation attribute

set of name-value pairs related to or characterising the observation process

3.33

originator

party that controls a mail entity's content (i.e. the message to the recipient) and the mail entity's destination address and has the overall legal control and responsibility for the mail entity

3.34

party

legal entity involved in a mail communication process

3.35

party attribute

characteristic of the party which is or can be represented by a data value

3.36

payer

party responsible for payment of postal/carrier charges for processing and delivering a mail entity

3.37

physical sortation

process of sorting mail entities into groups having common characteristics (such as identical postal codes)

3.38

postal product/service

agreed-upon set of rules operating on the values of mail entity attributes governing both actions to be taken on the mail entity and communication of observations to all authorised parties

3.39

postal product/service attribute

characteristic of a postal product which is or can be represented by a data value

3.40

post/carrier domain

domain of the mail entity acceptance, processing, transportation and delivery that includes all parties, agents, processes and their relationships that are involved in these activities

3.41

printing

process of printing messages or envelopes (or both) that are to be assembled into sealed and unfinished mail entities

3.42

process in the mailer domain

series of sequential functional activities (or sub-processes) within the mailer domain resulting in a finished mail entity being ready for entry into a postal/carrier distribution network

3.43

process in the postal domain Teh STANDARD PREVIEW series of sequential functional activities (or sub-processes) within the postal domain including collection, facility entry, acceptance, processing (culling, facing, sorting), container sation and transportation resulting in a mail entity being delivered to a recipient, discarded or returned to the mail originator (or a party authorised by the mail originator)

SIST-TS CEN/TS 15523:2007

3.44 recipient domain

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36185f3150bf/sist-ts-cen-ts-15523-2007

domain of the mail entity receipt and after receipt processing including activities when the mail entity has been received by a party or an agent other than the party specifically indicated by the sender as a recipient. It includes all parties, agents, processes and their relationships that are involved in these activities

3.45

sender/mailer domain

domain of the mail entity creation, finishing and submission for delivery that includes all parties, agents, processes and their relationships that are involved in these activities

3.46

statement of mail entity set

collection of mail entity set attribute name-value pairs assembled for the purpose of a specific application in the context of which the mail entity set forms a logical unit

3.47

statement of mailing submission

collection of mail entity set attribute name-value pairs assembled for the purpose of a single hand-over transaction

3.48

submission group

mail entity set consisting of a collection of mailing submissions that share an explicitly specified common attribute or attributes

3.49

submitter

party responsible for submitting (induction) a mail entity into postal/carrier distribution network

3.50

transportation

process of carrying mail entities from one location to another that may involve carrier reception, transport vehicle assignment, loading, unloading and carrier hand-over

4 Symbols and Abbreviations

CAM controlled acceptance mail

CEM controlled entry mail

DPM digital postage mark

EEM electronically exchanged message

ID (identifier for) identity

ME mail entity

mailing submission STANDARD PREVIEW

MS-ID mailing submission identifier (standards.iteh.ai)

PSD postal security device.

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NOTE Throughout this document the following notation is used entity attribute. For example, the mail entity identifier is designated as "mailentity.ID". 361856150bf/sist-ts-cen-ts-15523-2007

5 General Concepts

This section provides a detailed explanation for the basic concepts defined in the previous section and the motivation behind introducing these concepts and their definitions. The general concepts that are used to describe the purpose, content and communication mechanism for the SMS are in turn a subset of concepts defined in the general conceptual framework described in the UPU draft standard "Mail Communication System Reference Model".

This section provides the background, motivation and an explanation for all concepts and objects defined in Section 3.

General concepts are described referring to a mail communication system diagram presented in Figure 1.