TECHNICAL REPORT

RAPPORT TECHNIQUE

TECHNISCHER BERICHT

CEN/TR 15524

October 2011

English Version

Postal services - Customer-directed information including track and trace - General concepts and definitions

Services postaux - Informations orientées client incluant le suivi et la localisation - Concepts généraux et définitions

Postalische Dienstleistungen - Kundengesteuerte Informationen einschließlich track-and-trace - Allgemeine Konzepte und Definitionen

This Technical Report was approved by CEN on 28 May 2011. It has been drawn up by the Technical Committee CEN/TC 331.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, 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.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Foreword

This document (CEN/TR 15524:2011) has been prepared by Technical Committee CEN/TC 331 "Postal Services", 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.

This document supersedes CEN/TR 15524:2006.

Introduction

Widespread proliferation of electronic, internet-based data communications provides a cost-effective platform for the effective integration of a global mail communication system. The essence of such integration is an automated exchange of computerised information between *mailer, postal and recipient 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, enhancing the overall mail system. This information is typically information *about* mail units and it allows for effective control and management of the entire mail distribution network and integration of mail communications with main business applications in postal customers IT systems. In particular, modern postal operators employ sophisticated mail processing machinery and supporting IT infrastructure. Computerised information describing mail units and sets undergoing postal processing, transportation and delivery activities that already exists within postal IT systems does have significant value for postal customers, both senders and recipients (and their authorised agents). The main purpose of the present Technical Report is to define basic concepts associated with collection and distribution of post-generated information to postal customers (framed using methodology of an entity-relationship model), and to describe the content and structure of messages that can be used by posts to communicate this information to its customers using post-mailer interface. This report, however, does not describe specific messages and protocols that could be recommended for communicating the collected information nor the methods of its use within sender or recipient environments.

Thus, the main objective of this document is a description of a standardised method of capturing by post and enabling customers to access information within the *postal environment*. The basis of the method described in this report is an entity–relationship model that is widely used in the design of modern computer databases. At the heart of this model is the notion of *mail units and their attributes,* the values of which can be captured at feasible and desirable locations and dates to form *observations*. Comparison of observations taken at different locations and dates naturally leads to the notion of *events* that are triggers for the communication of information contained in the observations to postal customers. Generalisation of the concept of observation is the concept of *expectation* that provides quite a useful way to create a forecast for the future values of mail units attributes. Together, expectations, observations and values of mail unit attributes form a basis for a formal and broad definition of the concept of *postal product or service*. It is expected that more and more postal services will be information-rich, meaning that the main added value of such services will come from computerised information (about postal distribution process applied to mail units) that will be made available to postal customers.

The methodology described in this report is also applicable to capturing a broad class of information that is encountered in mail communication systems, for example information that is important for managing data exchanges between postal operators and between postal operators and their contractors.

1 Scope

This Technical Report consists of three parts.

The first part defines, describes and explains basic concepts typical to all mail communication systems such as; domains, parties, agents and their role in the system, physical and informational objects, processes, interfaces and relationships.

The first part does not cover more detailed technical aspects of the main concepts such as:

— a detailed description of mail units and sets, their attributes and methods of collection/capture of their values;

— applications describing specific use of the information describing basic objects by mailers, postal operators and recipients;

— data elements, data constructs and message descriptions;

— communication protocols and infrastructure for message transport including transport of messages through a print-scan channel (or paper channel);

— message security issues related to individual messages: confidentiality and integrity of data, authentication and non-repudiation;

— printing symbology, physical placement of data elements and symbols, their orientation and dimensions, and inks and print quality.

The second part of this Technical Report defines the necessary and sufficient concepts for customer directed information that can be captured by post and made accessible to customers using post-mailer interface. This report explains and describes relationships between these concepts.

This report provides a comprehensive list of mail unit attributes that are involved in forming observations and events significant for postal customers. This report describes a methodology suitable for the selection of observation points within postal domain process where information collected in observations is most useful for customers. The report does not cover:

— applications describing the use of collected event information;

— messages and protocols;

— communication infrastructure.

The third part of this Technical Report describes:

— a list of specific events knowledge of which is valuable to postal customers (mail senders and recipients) and could be made available to such customers;

— underlying mail unit attributes that form corresponding observations;

— data construct supporting practical access to information collected within postal domain about events, underlying observations and expectations, and in particular information about events, observations and expectations that are valuable to postal customers.

This Technical Report also provides an example of application that demonstrates the use of specific events and data constructs.

This Technical Report makes use of XML schema in describing relevant data constructs. Actual communication messages can be built from data constructs described in this report. However, this report does not specify the structure of specific messages, nor does it preclude using mechanisms other than XML schema to describe data constructs.

2 Terms and definitions

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

2.1
address list selection
process of selecting a mailing address for the intended recipient of the message

2.2
agent
entity involved in any part of the provision of postal services in respect of a mail item

2.3
agent attribute
characteristic of the agent which is or can be represented by a data value

2.4
authorised third party
party that is authorised by the mail originator to receive information about the mail unit for the purpose of potential dispute resolution concerning the mail unit between the mail originator, postal operator, carrier or their agents and the recipient

2.5
collection (posting)
process of picking up mail units from collection boxes, postal retail facilities or the mailer domain

2.6
communication domain
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

2.7
consolidator
party that is responsible for assembling mail units from a given creator together with mail units from other creators

2.8
containerisation
process of assembling together and putting mail units into receptacles for transportation

2.9
mail creator
creator
party that is responsible for production (creation) of a mail item, a mail unit or an aggregate

2.10
customs process
series of activities comprising customs entry, customs examination, clearance, retention or refusal aimed at processing dutiable cross-border mail units according to customs regulations