SLOVENSKI STANDARD
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Poštne storitve - Kakovost storitev - Merjenje časa prenosa od sprejema do vročitve za masovno pošto

Postal services - Quality of service - Measurement of the transit time of end-to-end services for bulk mail

Postalische Dienstleistungen - Dienstqualität - Laufzeitmessung 'end-to-end' für Massensendungen

Services postaux - Qualité de service - Mesure du délai d'acheminement des services de bout en bout pour le courrier en nombre

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Postal services - Quality of service - Measurement of the transit time of end-to-end services for bulk mail

Services postaux - Qualité de service - Mesure du délai d'acheminement des services de bout en bout pour le courrier en nombre

Postalische Dienstleistungen - Dienstqualität - Laufzeitmessung 'end-to-end' für Massensendungen

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

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Foreword

This document (prEN 14534:2014) has been prepared by Technical Committee CEN/TC 331 “Postal services”, the secretariat of which is held by NEN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 14534:2003+A1:2007.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association and supports essential requirements of Directive 97/67/EC, as amended by Directive 2002/39/EC and Directive 2008/6/EC.

Annex A to Annex G are normative.

Annex A to Annex C and Annex F are covering the measurement of a single bulk mail induction.

Annex D to Annex E and Annex G are covering additional requirements for the measurement of aggregated or continuous fields of study.

Annex H to Annex M are informative. They are the revised version of the Technical Report TR 15369:2006 *Postal Services – Quality of Service – Guidance for the implementation of EN 14534.* They cover both, a single bulk mailing as well as aggregated and continuous fields of study.

Introduction

The European Commission emphasises the need to have common rules for the development of community postal services and the improvement of Quality-of-Service (QoS). The Commission has identified requirements for postal QoS-Measurement systems that include:

— Independent end-to-end measurement capabilities;

— A focus on national and cross-border distribution service performance;

— A single, uniform and reliable system for monitoring distribution service performance within the Union.

The Commission has acknowledged that the different postal traditions and cultures in Europe would not allow for the establishment of one common unified European measurement system and that national systems should have sufficient freedom to reflect needs and peculiarities of national markets. On the other hand, they should fulfil a defined set of minimum requirements to satisfy the information interests of the Commission, the regulatory authorities, postal customers and postal operators themselves.

The objective of this standard is to define a modular QoS measurement system in a competitive commercial context. The measurement is designed to estimate the end-to-end transit time quality of service given to the postal customer. The measurement can be set up domestically in each European country and cross-border between the European countries.

This European Standard refers to a number of principles and minimum requirements to be applied for the measurement of the end-to-end transit time service-level of bulk-mail services. It is widely applicable for single-induction as well as continuous measurement applications. It provides recommendations on the comparability of different bulk mail transit-time QoS measurement results and their use as key performance indicators.

This bulk mail standard has been developed from the requirements of EN 13850 *Postal services – Quality of service - Measurement of the transit time of end-to-end services for single piece priority mail and first class mail*. Both European Standards consider methods using a representative end-to-end sample of all types of addressed mail appropriate for their coverage. For the measurement of bulk mail services a separate standard is required for the following reasons:

— **Senders**: Members of the public posting single items are replaced by businesses, small in number – posting large volumes of mail. Third party agents (consolidators, mailing houses, letter shops) may also act on behalf of posting customers.

— **Contracted Services**: Mail posted in bulk will often be mailed under a contract between the customer and the postal operator. Typically, bulk services require customers to standardize format and weight of their mailing, undertake a level of pre-sortation or to present mail in different ways according to the contract conditions.

— **Volumes of mailings**: Bulk mailings are large. They may contain thousands or millions of items.

— **Performance Measures**: On-time performance measures are expanded to provide different types of (i) *on*, (ii) *by* or (iii) *between* specific-dates performance depending on what is agreed with the postal customers or is specified for this service.

— **Discriminant Characteristics**: Test items have to match the characteristics of customer mailings. The range of characteristics relevant for the performance varies by type of mail service, and a wider set of potential characteristics should be considered. Greater flexibility is required to define for what part of the real mail logistics the results are representative for.

— **Production of Test Mail:** For the inclusion of test mail in the customers bulk mailings a variety of methods may be appropriate. They include database-seeding methods used in different stages of the customer's mail production process as well as methods to include pre-produced test items in the customer's bulk mailing between production and induction of the customers' real mail.

— **Dates of induction**: The rules and requirements for bulk mail induction are more complex and may be specific to the contract between customer and postal operator.

1. Scope

This European Standard specifies methods for measuring the end-to-end transit-time of *domestic* and *cross-border* bulk mail, collected, processed and delivered by postal service operators. It considers methods using representative end-to-end samples for all types of bulk-mail services with defined transit-time service-levels as offered to the postal customer. It specifies a set of minimum requirements for the design of a quality-of-service measurement system for bulk mail, involving the selection and distribution of test mail sent by business senders and received by selected panellists.

This standard is applicable to the measurement of end-to-end *priority* and *non-priority* bulk-mail services. For the purpose of this European Standard, bulk mail services can include all types of addressed bulk mail including, but not limited to letter mail, direct mail, magazines and newspapers and encombrant-format mailings.

This standard relates to the measurement of bulk-mail services offered to businesses that have pick-ups at their offices or give their mail to postal service operators. If a third party agent acts for the postal operator, then the time the mail is handed over to the agent shall form part of the measurement. Where a third party agent acts for the sending customer, the measurement shall be from the point when mail is handed over to the postal operator.

This European Standard is of *modular structure*. It is designed to assess the service performance of postal operators for bulk mail services on the level of a single *bulk mailing* as defined by the postal customer or any aggregations thereof, including the performance of an individual customer / operator or the performance of a group of customers / operators or the performance at national level.

The standardized QoS measurement-method provides a uniform way for measuring the end-to-end transit time of postal items. Using a standardized measurement-method will assure that the measurement will be done in an objective and equal way for all operators in accordance with the requirements of the Directive 97/67/EC and its amendments.

The end-to-end service measured may be provided by one operator or by a group of operators working either together in the same distribution chain or parallel in different distribution chains. The method for end-to-end measurement specified in this European standard is not designed to provide results for the measurement of parts of the distribution chain.

This standard does not include other service performance indicators than those related to end-to-end transit time. In particular this Standard does not measure whether the timings of collections meet customers' requirements.

The transit-time quality-of-service result shall be expressed as percentage of mail delivered *by, on* or *between* expected dates. These dates can be defined absolute as calendar-days or relative to the date of induction. The transit time calculation rule shall be in whole days.

This quality of service indicator does not measure the postal operator's overall performance in a way, which provides direct comparison of postal service operators. This European Standard nevertheless provides minimum requirements for the comparability of end-to-end transit-time measurement results of specific bulk mailings.

This European standard is not applicable for the measurement of end-to-end transit-times of single-piece mail services and hybrid mail, which require different measurement systems and methodologies (see, for example, EN 13850 *Measurement of the transit time of end-to-end services of single piece priority mail*).

In certain circumstances, this standard allows a choice between alternatives to be made subject to the approval of the regulator. This approval is only necessary if the service is within the universal service obligation.

This European standard includes specifications for the quality control and auditing of the measurement system.

2. Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13850:2012, Postal services – Quality of service – Measurement of the transit time of end-to-end services for single piece priority mail and first class mail

EN-ISO 9001, Quality management systems – Requirements (ISO 9001:2008).

EN-ISO 9004, Quality management systems – Guidelines for performance improvements (ISO 9004:2009).

ISO 1901:2002, Statistics - Vocabulary and symbols – Part 1: Probability and general statistical terms.

ISO 1901:2002, Statistics - Vocabulary and symbols – Part 2: Statistical quality control.

ISO 10005, Quality management – Guidelines for quality plans.

ISO 10007, Quality management – Guidelines for configuration management.

ISO 10011-1, Guidelines for auditing quality systems – Part 1: Auditing.

ISO 10011-2, Guidelines for auditing quality systems – Part 2: Qualification criteria for quality systems auditors.

ISO 10011-3, Guidelines for auditing quality systems – Part 3: Management of audit programmes.

ISO 11180, Postal addressing

ICC/ESOMAR, International Code of Marketing and Social Research Practice (1995 revision)

3. Terms and definitions

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

3.1
Accuracy
Closeness of agreement between a test result and the accepted reference value

Note 1 to entry: The term accuracy, when applied to a set of test results, involves a combination of random components and a common systematic error or bias component. [ISO 1901:2002]

Note 2 to entry: In this standard the accuracy is expressed as $\pm\varepsilon$, where 2ε is the length of the confidence interval at the confidence level 95% for the parameter being estimated, namely the probability of attaining the transit time target.

3.2
Aggregation
Compounding of primary data into an aggregate for the purpose of expressing them in a summary form

3.3
Audit
Systematic and independent examination to determine whether activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives

Note 1 to entry: The organisation carrying out the audit is called the *auditor.*

Note 2 to entry: A (full) audit may be carried out as an *initial audit* of a new or substantially changed system or as an initial audit by a new auditor. It may also be carried out as a *re-audit* of the same system by the same auditor in the next audit cycle.

Note 3 to entry: If an audit results in objections, then the auditor may require corrective actions until a defined deadline. A final check of these corrective actions is called *corrective audit.*

3.4
Average (arithmetic mean)
Sum of values divided by the number of values [ISO 1901:2002]

3.5
Bulk mail
Large volume of mail having similar mail and induction characteristics

Note 1 to entry: Bulk mail items are usually from the same weight group and share the same size or shape characteristics.

Note 2 to entry: Bulk mail items have usually a common sender and share the same point(s) of induction.

Note 3 to entry: Bulk mail senders often share the outward processing of bulk mail by pre-sorting or segregating the mail to enable the postal operator to by-pass the first sortation stages.

Note 4 to entry: Regarding the volume and/or requirements of the induction process, bulk mail does not qualify as single piece mail.

3.6
Bulk mailing
Bulk mail posted by a single postal customer at the same induction point(s)

Note 1 to entry: A bulk mailing is defined by the postal customer, usually being a business.

Note 2 to entry: A bulk mailing usually covers one induction date or, in some cases, a small number of consecutive days of operation.

Note 3 to entry: Large bulk mailings may be inducted at more than one postal operator, depending on the areas of destination.

Note 4 to entry: Large bulk mailings may be inducted at two or three induction points, depending on the areas of destination.

3.7
Bulk mail campaign
Finite set of bulk mailings following a defined pattern

Note 1 to entry: A bulk mail campaign is defined by the postal customer, usually being a business.

Note 2 to entry: A bulk mail campaign may comprise bulk mailings with different types of bulk mail.

Note 3 to entry: A bulk mail campaign may consist of cycles or waves in time of bulk mailings of similar nature.

3.8
(Bulk mail) Sender
Organisation sending bulk mail, usually being a business

Note 1 to entry: The bulk mail sender can be the postal customer or his agent.

Note 2 to entry: The postal customer or the customer's agent can be a consolidator or a mailing house / letter shop

3.9
Business panellist
Panellist with an address other than a household address such as a company or an organisation

3.10
Characteristic
Property, which helps to identify or differentiate between items of a given population

Note 1 to entry: The characteristics may be either quantitative - by variables, or qualitative - by attributes [ISO 1901:2002].

Note 2 to entry: In this standard the population is bulk mail items and the characteristics are related to type of senders, type of receivers, times and types of induction or delivery, physical aspects of test items, type of franking, etc.

3.11
Continuous Measurement
Measurement with mail allocated to all months of the year, and within the months to all weekdays of operation of the postal operator ('strictly continuous measurement'). A measurement is also continuous in the context of this standard if bulk mailings are measured regularly with the same methodology for at least a calendar year ('continuous measurement').

Note 1 to entry: Relevant weekdays of operation are all possible weekdays of posting in accordance with the field of study and the chosen transit-time calculation rule (see Annex B)

3.12
Corrective action
Action taken to eliminate the causes of an existing non-fulfilment of specified requirements, defect or other undesirable situation in order to prevent recurrence

3.13
Country
Territory of a nation with its own government

3.14
Cross-border mail
Mail distributed from one country to another country

3.15
Customer
Natural or legal person purchasing a postal service from a postal operator

3.16
Date of delivery
Date on which a postal item is delivered to the address or to the addressee

3.17
Date of induction (*J*)
Starting date J for the transit-time calculation according to clause 5.2.2

Note 1 to entry: The term *date of induction* has the same meaning as the term *date of deposit* in the Directive 97/67/EC.

3.18
Date of posting
Date on which a postal item is posted (irrespective of whether it is posted before the advertised last collection of that day)

3.19
Delivery point
Physical location at which delivery of a postal item by a postal operator takes place and where it leaves the operator's responsibility

3.20
Design basis
Structure in the field of study for which the design of the measurement is representative. The design basis shall be defined before the start of the measurement

Note 1 to entry: If a design basis other than measured real mail flows is selected, then statements regarding the representativity of the measurement shall be made in relation to the chosen design basis.

3.21
Design factor
Ratio of the variance of the estimator of the QoS indicator in the given sample design by the variance of the estimator in an elementary sample design of the same size. The design factor is always related to a given sample design and estimator

3.22
Dimension
Mail characteristic with at least two modes, used to form subgroups of mail flows whose quality of service is to be compared

3.23
Discriminant characteristic
Characteristic affecting the outcome

Note 1 to entry: In this standard, a characteristic is discriminant when the transit time significantly differs according to the different modes of the characteristic (see clause 6.4)

3.24
Distribution
Process from collecting mail at collecting points through processing at the mail centre(s) to the delivery of mail items to the addressee

3.25
Domestic mail
Mail items sent and received within one country

3.26
Effective sample size
Total sample size divided by the design factor

3.27
End-to-end
Routing from the access point thru the postal operators network up to the point of delivery to the addressee

3.28
Estimate
Value of an estimator obtained as result of an estimation [ISO 1901:2002]

3.29
Estimator
Statistic used to estimate a population parameter [ISO 1901:2002]

Note 1 to entry: In this European standard, an estimator is a function of the observed values of test-item transit times allowing the estimation of the probability of attaining the transit time target.

3.30
Field of study
Total bulk mail flow between defined postal areas

Note 1 to entry: Some examples for field of study could be:

- Domestic – one mailing
- Domestic – one induction operator in one country for an individual customer or group of customers
- Domestic – one induction operator in one country
- Domestic – a group of operators in one country
- Cross-border – one mailing
- Cross-border – one induction operator on a country-to-country link
- Cross-border – one induction operator to an individual delivery operator or group of delivery operators
- Cross-border – one induction operator to one country
- Cross-border – one induction operator to a group of countries
- Cross-border – a group of countries to one delivery operator
- Cross-border – one country to one country

3.31
Fixed date of induction
Contracted date, on which mail items that have been collected and put on hold, are to be distributed from their point of storage.

Note 1 to entry: Contracted fixed dates of induction are to be accompanied by a last date of collection and a last collection time.

3.32
Geographical coverage
Spread of postal services within a pre-defined geographical area

3.33
Independent performance monitoring organisation
Body charged with the monitoring of the QoS according to the methodology specified in this standard, which is external to, and having no links of ownership or control with the postal operator(s) thus monitored

3.34
Induction
Takeover of the responsibility concerning a postal item and its distribution by a postal service provider

Note 1 to entry: 'Induction' is equivalent to 'Posting' when the posting is done before the last collection time.

3.35
Induction point
Physical location at which postal items are placed into the collection / acceptance system that is under the responsibility of the induction postal operator

3.36
Last collection time
Advertised last time for collection or contracted latest time for collection

Note 1 to entry: The last collection time is often also called *last acceptance time* for which the postal operator states the transit-time target.

Note 2 to entry: This is often not equal to the actual collection time, because from the postal work-organisation point of view, the collection usually happens some time later than the advertised last collection time (e.g. the collection routing timetable can only be defined with some tolerance).

3.37
Last date of collection
Contracted latest date for posting / collection for bulk mailings with a fixed date of induction

3.38
Measurement period
Period under which measurement has been carried out and for which the results are presented in a separate report

3.39
Metered mail
Mail franked by franking machines

3.40
Office of exchange
Place where a postal operator accepts cross-border mail from a postal operator of another country and prepares mail for the transfer to other countries

3.41
On-time performance
Proportion of postal items within a given period-of-time with transit times meeting the specification

3.42
On-time probability
Probability of the event that the transit time *T* of a mail item meets the transit time target

3.43
One-Operator field of study
Field of study with exactly one induction operator

Note 1 to entry: A one-operator field of study may be defined in a multi-operator postal environment.