



SLOVENSKI STANDARD
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Postal services - Measurement of transit times for parcels by the use of a track and trace system

Postalische Dienstleistungen - Laufzeitmessung für Päckchen mit Hilfe eines "track and trace"- Systems

iTeh STANDARD PREVIEW

Services postaux- Mesure des temps de transit des colis postaux a l'aide d'un systeme de traçabilité

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English Version

Postal services - Measurement of transit times for parcels by the use of a track and trace system

Services postaux - Mesure des temps de transit des colis
par l'utilisation d'un système de traçabilité

Postalische Dienstleistungen - Laufzeitmessung für
Päckchen mit Hilfe eines track and trace- Systems

This Technical Report was approved by CEN on 24 June 2006. It has been drawn up by the Technical Committee CEN/TC 331.

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Foreword

This document (CEN/TR 15472:2006) 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.

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Introduction

In the Green paper on postal services in 1992 the European Commission emphasised the need to establish common rules for the development of community postal services and the improvement of quality of service. The Commission identified requirements for quality of service measurement that included the reliability of services and treatment of problems of loss, theft and damage.

CEN was asked to draw up standards related to the methodology for the measurement of quality of service of mail at reasonable cost for some mail types.

The objective of the measurement is to estimate the transit time quality of service given to the customer in each European country domestically and cross-border between the European countries.

This Technical Report refers to a number of principles and minimum requirements to be applied for the measurement of transit time of domestic and cross-border parcels using a track and trace system.

A number of standards are available for the measurement of transit time for postal services without the use of a track and trace system. EN 13850 is for use with priority single piece mail, EN 14508 with single-piece non-priority mail, and EN 14534 with bulk mail.

EN 14137 may be used to measure loss of parcels using a track and trace system.

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1 Scope

This Technical Report specifies methods for measuring the transit time results of domestic and cross-border parcels, collected, processed and delivered by postal service providers. Transit time is the time elapsed between initial and final scan of the item. The initial scan may occur at varying points within the pipeline (e.g. point of posting, entry into the first sorting centre). Similarly the final scan may occur at e.g. exit from the last sorting centre, final delivery.

Therefore there are two different categories of transit time:

1. End-to-End

A true end-to-end transit time measure may only be possible for some items recorded in the track and trace system. End-to-end is defined as from the point parcels are placed into the collection/acceptance system under the responsibility of the postal operators, to the final delivery point under the responsibility of the postal operators. In many instances postal operators do not extend track and trace to the final delivery point.

These items may not cover the total parcel flow. Generally the results of this subset cannot be taken as representative of the total flow, but this subset may represent a particular sector, e.g. single parcels sent over a post-office counter to single receivers. The transit time results of purely this subset are of public concern.

2. Non End-to-End

If initial and/or final scans occur in the sorting centres for at least some parcels, it is possible to calculate the transit time between sorting centres, e.g. first-sorting-centre-to-last-sorting-centre. This can be done to calculate transit time results for all parcels in the total flow - this may be reasonable for internal purposes. The objective of the measurement to estimate the transit time quality of service given to the customer can only be achieved, if the time elapsed between posting and first scan and between delivery and last scan respectively can be estimated (eventually by the customer).

The overall transit time quality of service result is to be expressed as the percentage of parcels delivered within $J + n$ days.

This quality of service indicator does not measure the postal operator's overall performance in a way that provides direct comparison of postal service operators, and does not include other service performance indicators than those related to transit time.

This Technical Report is applicable to those service providers which have a measurement system in place which

- records an initial scan for each item,
- records a final scan for each item and
- can, by comparing these records, calculate the transit time between initial and final scan.

Therefore for some items the transit time will be from e.g. entry into the first sorting centre to final delivery, whereas for other items the transit time will be from e.g. point of posting to exit from the last sorting centre.

If a global transit time result is required then all items included in the calculation needs to have been scanned at the two location points (e.g. entry into first sorting centre, exit from last sorting centre) within the pipeline.

This Technical Report may be used if appropriate to measure the transit time of other types of postal items for which such a measurement system is in operation.

This Technical Report specifies requirements for the design and operation of the measurement system and for other procedures to allow the transit time to be calculated.

This Technical Report does not specify the technical requirements of a track and trace system, except for purposes of measurement.

This Technical Report includes specifications for the quality control of the measurement system and for the reporting of transit time of parcels.

2 Normative references

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

EN 14137, *Postal services — Quality of service — Measurement of loss of registered mail and other types of postal service using a track and trace system*

3 Terms and definitions

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

3.1 characteristic

property which helps to identify or differentiate between items of a given population

3.2 country

territory of a nation with its own government

3.3 cross-border parcels

parcels distributed from one country to another country

3.4 date of delivery

date on which a postal item is delivered to the address or to the addressee

3.5 date of deposit (J)

day on which a postal item is posted, provided posting takes place before the last collection of that day

NOTE 1 The term date of deposit is used in relation to quality of service measurement. The definition is based on the postal Directive 97/67/EC.

NOTE 2 Last collection refers to the advertised last time for collection (not the actual time).

3.6 delivery point

physical location at which delivery of postal items by a postal operator takes place and where they leave the operator's responsibility

3.7 discriminant (characteristic)

characteristic affecting the outcome

3.8 domestic parcels

parcels sent and received within one country

3.9**end-to-end (transit time)**

from the point parcels are placed into the collection/acceptance system under the responsibility of the collecting postal operators to the final delivery point under the responsibility of the delivering postal operators

3.10**field of study**

total parcel flow or defined section of the total parcel flow between defined postal areas

NOTE 1 For example field of study could be defined as:

- Domestic – one operator in one country;
- Domestic – one operator in one part of a country;
- Domestic – a group of operators in one country;
- Cross-border – one operator to one country;
- Cross-border – one operator to a group of countries;
- Cross-border – one country to one country;
- Cross-border – one country to a group of countries.

NOTE 2 For example defined section of the total parcel flow could be defined as:

- Parcels sent over post-office counter;
- Parcels sent by one single customer;
- First sorting centre to end.

3.11**item arriving late**

postal item delivered to the recipient in a time longer than the service provider's promised service standard but within a specified period of time

3.12**location id**

identification (reference) number of the location of a scan, recorded in the track and trace system

3.13**national and regional holiday**

day with limited postal collection or delivery activities

3.14**office of exchange**

place where a postal operator accepts cross-border parcels from a postal operator of another country

3.15**on-time performance**

proportion of items with transit times meeting the specification (EN 13850)

3.16**parcel**

package containing merchandise with or without commercial value

characteristics: - general terms and conditions specified by postal operator;

- individualized item with identification of the sender and addressee

3.17

performance indicator

expression derived from postal transit time statistics and data used to characterise the performance of a postal operator

3.18

service standard

standard that specifies requirements to be fulfilled by a service to establish its fitness for purpose (EN 45020)

NOTE 1 In this Technical Report, the service standard is the number of working days within which time an item should normally be delivered.

NOTE 2 The service standard is sometimes expressed in the form $J + n$, where n is the number of working days. For example, a service standard of $J + 1$ means that an item should normally be delivered on the next working day after posting.

3.19

sorting centre

place where the main sorting of parcels is done

3.20

study domain

subpopulations for which separate results can be appropriate

NOTE Study domains could be defined for example by geographic segmentation or by product.

3.21

time of delivery

time of day when a postal item is delivered at its delivery point [15472:2007](#)

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3.22

track and trace system

system which enables the progress (travelled distance) of an item to be monitored and its location to be established at any time

3.23

transit time

number of days elapsed between initial scan and final scan of a parcel as calculated in 4.2.1

4 Transit time as a quality of service indicator

4.1 General

A monitoring system should be in operation to record an initial scan for each item and a final scan on an electronic system. It should be possible to compare the initial and final scan information for each item in order to calculate the transit time for the item. The monitoring system may be used to allow customers access to information about the posting and delivery records.

The measuring system should provide one annual figure for each relevant field of study.

There should be consistency between cross-border and domestic measuring methods.

The definition of the field of study should include the defined section of the total parcel flow. The field of study should be used consistently throughout the measuring.

If for a field of study an operator is defined as one operator or a group of co-operating operators, this group should be used consistently.

When the field of study is a group of countries, this group should be used consistently in the measurement.

Statistical checks should be made for the following types of recording errors:

- items included in the calculation of transit time with incorrect data in the monitoring system;
- items excluded from the calculation of transit time.

The level of recording errors of each type should be compared with the specified control limits and corrections shall be made to the transit time, according to the requirements of Clause 5 of this Technical Report.

The statistical control checks require a link to the complaints handling system.

4.2 Calculation and presentation of the transit time

4.2.1 Calculation of the transit time

For the purpose of this Technical Report, transit times for domestic and cross-border items may be calculated according to a five-day working week calculation rule; whereby Saturdays, Sundays, and national holidays in the country of delivery are subtracted, in accordance with A.1.

For domestic items, the transit times may, in addition, be calculated according to the weekend collection and delivery pattern provided, in accordance with one of the calculation rules of A.2, if required by the national regulatory authority.

Published regional holidays may be subtracted in the calculation of transit time, by agreement with the national regulatory authority.

The date (and time) of the first attempted delivery shall be taken as the end point for end-to-end transit time calculations. The time between the first attempted delivery and the time when the actual parcel was received by the recipient should be ignored.

The calculation of the transit time should take into account the treatment of items which cannot be delivered at the first attempt or which are waiting to be claimed.

- If an item cannot be delivered at the first attempt, the transit time should be calculated from the date of the first scan to the date when the first attempt was made to deliver the item.
- If an item is delivered via a pick-up location, e.g. a PO Box if acceptable, to await collection, the transit time should be calculated from the date of first scan to the date when the item was placed in the pick-up location to await collection.

- **Special cases**

- Items handed over to Customs. The time from handing over until release should be excluded from the transit time calculation. If items are not released by the customs authorities, then these items should be excluded from the transit time calculation.
- Damaged items. The time taken to repair or repackage damaged parcels should be included in the transit time calculation.

4.2.2 Presentation of transit time

4.2.2.1 Measurement unit

The transit time of a postal item may be measured in units of days and expressed as (J + n) days. J is the date of deposit provided posting takes place before the published last collection time at the point of induction of the parcels.

All items posted within the period of measurement should be included in the calculations.

Postal items not delivered by J + 30 may be excluded from the calculation. For the purposes of measurement, items delivered after J + 30 days may be classified as lost or substantially delayed, and will be reported via the loss calculation (see EN 14137).

4.2.2.2 Service performance indicators

The following indicators should be used in the presentation of the service performance results:

- on-time performance;
- cumulative distribution of delivery days.

The Postal Service provider should specify the service against which it is measuring.

Services that are negotiated in special contracts, and are not subject to the usual service standard should be excluded from the transit time calculation, but may be reported separately.

If the service specification includes a defined time of delivery then:

- on-time performance result should be presented as the percentage of postal items arriving by the defined time of delivery on day (J + n) whereby J represents the day of deposit and n the number of qualifying days for the service standard.
- cumulative distribution of delivery days should be calculated as the percentage of items delivered within a given period, from target day to last possible delivery time.

If the service specification does not include a defined time of delivery then:

- on-time performance result should be presented as the percentage of postal items arriving by day (J + n) whereby J represents the day of deposit and n the number of qualifying days for the service standard.
- cumulative distribution of delivery days should be calculated as the percentage of items delivered within a given period, from J + 1 to J + 10.

4.3 Information to be recorded for domestic parcels

In the logistic chain from posting a parcel to final delivery to the receiver there are several points within the pipeline where an item is scanned and the following information is recorded: