S9

Postal receptacle identifier

Data definition and encoding standards

UNIVERSAL POSTAL UNION

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Foreword

Postal services form part of the daily life of people all over the world. The Universal Postal Union (UPU) is the specialized agency of the United Nations that regulates the universal postal service. The postal services of its 192 member countries form the largest physical distribution network in the world. More than 5 million postal employees working in over 660,000 post offices all over the world handle an annual total of 434 billion letter-post items in the domestic service and 5.5 billion in the international service. More than 6 billion parcels are sent by post annually. Keeping pace with the changing communications market, postal operators are increasingly using new communication and information technologies to move beyond what is traditionally regarded as their core postal business. They are meeting higher customer expectations with an expanded range of products and value-added services.

Standards are important prerequisites for effective postal operations and for interconnecting the global network. The UPU's Standards Board develops and maintains a growing number of standards to improve the exchange of postal-related information between postal operators, and promotes the compatibility of UPU and international postal initiatives. It works closely with postal handling organisations, customers, suppliers and other partners, including various international organisations. 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 drafted in accordance with the rules set out in Part V of the "General information on UPU standards" [1], and are published by the UPU International Bureau in accordance with Part VII of that publication.

This is the ninth version of the specification. Changes to the previous version, marked by a vertical bar in the margin are made to enable, on a bilateral basis, the easy identification of receptacles containing express items.

Introduction

The unique identification of postal receptacles carries many advantages, not least the ability to:

– track, trace and reconcile the transport and handover of individual receptacles;

– support the association of electronically exchanged processing and other data with the receptacles concerned, allowing their operational processing and accounting to be automated.

The receptacle ID specified in this document was designed in the context of the business and operational objectives that need to be achieved and of the functions that the identifier performs at various points in the transport chain.

The receptacle ID is created by the origin office of exchange at the time of receptacle label creation; it is then used by the transit postal operator, if any, carriers (such as airlines) and the destination mail unit and office of exchange. The steps are shown in the diagram below:

1 Origin office of exchange	**2** Mail unit	**3** Carrier	**4** Transit mail unit	**5** Carrier	**6** Mail unit	**7** Destination office of exchange
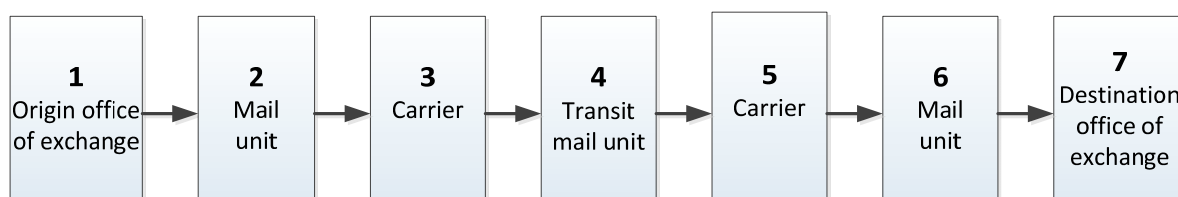
Figure 1   Usage steps of the receptacle ID

The specification is structured into two main clauses

Clause No	Description of content
5	*Identifier structure*: defines the overall structure of S9 receptacle ID and provides a detailed specification of the individual components, including that of the despatch ID specified in UPU standard S8;
6	*Usage of S9 receptacle IDs*: provides guidelines and restrictions on the usage of S9 receptacle IDs in electronic data interchange messages, in barcodes and when represented in human readable form.

Data definition and encoding standards – Postal receptacle identifier

1   Scope

This standard defines a 29-character identifier for identifying a postal receptacle (receptacle ID). It specifies the structure of the identifier, which is designed to ensure global uniqueness, within the postal industry, during a period of 10 years.

NOTE   The identifier not only identifies a receptacle uniquely, but also contains operational information about the receptacle. This information is codified in the identifier structure.

The standard also specifies how receptacle IDs should be used in electronic data interchange messages and when represented on physical media in the form of barcodes and human readable text.

2   Normative references

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.

UPU Standards glossary

UPU Technical Standard S8, Postal despatch identifier

3   Terms and definitions

The terms used in this standard are defined in the UPU standards glossary, in documents referred to in normative references and in the bibliography.

3.1
despatch ID
S8-compliant identifier of the despatch to which a receptacle belongs, it is the concatenation of the 15-character despatch series the 1-character despatch year and the 4-character despatch number

3.2
despatch series
the entity that is the basis on which despatches are consecutively numbered within a calendar year. It is identified by means of a 15-character value, consisting of the 6-character origin IMPC code, the 6-character destination IMPC code and the despatch type

3.3
despatch type
characteristic of a despatch represented by a 3-character code comprising the despatch's UPU code list 115 mail category code followed by its UPU code list 117 mail subclass code

4   Symbols and abbreviations

The symbols and abbreviations used in this document are defined in the UPU standards glossary.

5   Identifier structure

5.1   Overall structure

The S9 receptacle ID is a 29-character value. The first 20 characters of the identifier comprise the despatch ID of the despatch (see below for structure) to which the receptacle belongs. The structure of despatch IDs is documented in UPU Technical Standard S8.

The receptacle ID has the following structure:

POSITION	DATA FORMAT	MEANING	EXAMPLE
1–20	an20	Despatch ID – see 5.2	DEFRAANLAMSAAUN40027
21–23	n3	Receptacle serial number – see 5.3	002
24	n1	Highest numbered receptacle indicator – see 5.4 For letter mail, positions 24 and 25 may be combined – see 5.6	0
25	n1	Registered/insured indicator – see 5.5 For letter mail, positions 24 and 25 may be combined – see 5.6	1
26–29	n4	Gross weight – see 5.7	0258

EXAMPLE   DEFRAANLAMSAAUN40027002000258

Annex A provides a table with more details on the structure and the various components.

5.2   Despatch ID

The structure of the first 20 characters, the despatch ID structure, is as follows:

POSITION	DATA FORMAT	MEANING	EXAMPLE
1–6	a6	Origin IMPC (International Mail Processing Centre) code – see S8	DEFRAA
7–12	a6	Destination IMPC code – see S8	NLAMSA
13	a1	Mail category code – see S8	A
14–15	a2[1]	Mail subclass code – see S8	UN
16	n1	Despatch year – see S8	4
17–20	n4	Despatch number – see S8	0027

5.3   Receptacle serial number (within despatch)

Characters 21–23 comprise the serial number of the receptacle within the despatch. This is normally 001 for the first receptacle, 002 for the second, and so on up to the total number of receptacles in the despatch. The value always comprises three numeric digits; leading zeros are included if necessary. Gaps between serial numbers are allowed but not encouraged.

EXAMPLE   The receptacles in a despatch containing 23 receptacles in total would normally be numbered from 001 to 023.

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[1] Alphanumeric mail subclass codes may be used domestically and/or subject to agreement between all parties that may be called upon to handle the receptacle and thus encounter the code.

NOTE   When creating receptacles within a despatch, the origin office of exchange sequentially numbers the receptacles within the despatch with a serial number consisting of three numeric characters (001–999). Duplicate receptacle serial numbers within the same despatch are not permitted. Although gaps in receptacle serial numbers within a despatch are permitted in order to accommodate deletion of a receptacle prior to the despatch being finalized, operational processes should be established to minimize the occurrence of such gaps.

5.4   Highest numbered receptacle indicator

Character position 24 is "0", "1", or "9" as follows:

"0" – No. The receptacle is not the highest numbered receptacle in the despatch

"1" – Yes. The receptacle is the highest numbered receptacle in the despatch

"9" – No information is available in the receptacle ID

NOTE 1   One purpose of the highest numbered receptacle indicator is to enable determination of whether all the receptacles in a despatch are present at any point in the supply chain, without requiring EDI messaging. It should be noted that there may be gaps in the sequential numbering of receptacles within a despatch, but these are typically exceptional cases.

Although value "9" is permissible, it is recommended that origin operators include support of values "0" and "1" for the highest numbered receptacle indicator in their systems.

NOTE 2   Usage of value "9" should be limited to very special cases, typically when a receptacle is found with a damaged label or no label and a new label needs to be applied to it. The party applying the substitute label may use "9" here, not knowing the exact contents of the receptacle.

NOTE 3   Other values may be used based on bilateral agreement.

5.5   Registered/Insured indicator

Character position 25 is: "0", "1", or "9" as follows:

"0" –   Receptacle does not contain registered and/or insured items

"1" –   Receptacle contains registered and/or insured items and can, based on bilateral agreement, indicate the presence of express items

"9" –   No information is available in the receptacle ID

NOTE 1   The purpose of the registered/insured indicator is to assist operators in the receptacle opening process and to enable transit operators to assign transit receptacles to delivery bills by scanning the barcoded receptacle ID in the absence of the PRECON pre-advice message.

NOTE 2   Usage of value "9" should be limited to very special cases, typically when a receptacle is found with a damaged label or no label and a new label needs to be applied to it. The party applying the substitute label may use "9" here, not knowing the exact contents of the receptacle.

NOTE 3   Other values may be used based on bilateral agreement.

5.6   Aggregate mailstream segregation code

For letter mail (mail class U), based on agreement between the parties involved, characters 24–25 may be combined and represent an aggregate mailstream segregation code. This code provides information concerning the receptacle type, contents and format, as well as an indication of whether the receptacle is the highest numbered and whether or not it contains registered/insured items. Allowed values and exact meaning are provided in UPU code list 161.

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5.7 Gross weight

Characters 26–29 of the receptacle ID comprise the gross weight of the receptacle expressed in hectograms[2] or, if this weight exceeds 999,8 kg, the value 9999. The value always comprises 4 numeric digits; leading zeros are included if necessary.

EXAMPLES
0074   represents a gross weight of at least 7,35 kg but less than 7,45 kg
0138   represents a gross weight of at least 13,75 kg but less than 13,85 kg
9998   represents a gross weight of at least 999,75 kg but less than 999,85 kg
*9999   represents a gross weight **in excess of** 999,85 kg.*

NOTE 1   The weight should be measured to the nearest 0,1 kg. The decimal point is not included in the identifier.

The gross weight in the receptacle ID is that of the receptacle when it was initially created by the origin operator and remains unchanged throughout the life of the receptacle.

NOTE 2   The actual gross weight of a receptacle may change between the time a receptacle is created and the time it is received and processed by the destination operator. This may happen if, for example, the receptacle gets wet or if mail is added to, or removed from, the receptacle. It may also be that the weigh scale used by a carrier, transit operator, or destination operator is calibrated differently from that of the origin operator that created the receptacle. In such cases, if it is necessary to reprint the receptacle ID, the gross weight in the receptacle ID remains unchanged, but the actual weight can be reported electronically (e.g. in a RESDES message) or on an appropriate form such as a verification note.

6   Usage of S9 receptacle IDs

6.1   Operational usage

Characters 1–23 of the receptacle ID are theoretically sufficient to uniquely identify a receptacle. Characters 24–29 provide additional information about the receptacle and can be used for further identification.

6.2   Usage in electronic data interchange messages

The usage of S9 receptacle IDs in electronic messages is specified in the relevant messaging standard.

The receptacle ID in messages such as PREDES/RESDES, PRECON/RESCON. CARDIT/RESDIT, shall be identical to the barcoded receptacle ID on the receptacle label.

6.3   Usage on receptacle labels

The usage of receptacle IDs on receptacle labels is specified in UPU standard S47 [2].

6.4   Human readable representation of receptacle IDs

Human readable representations of S9 receptacle ID should be divided into components of length 6, 6, 3, 1, 4, 3, 2 and 4 characters, each separated by a space. The components correspond to origin IMPC code, destination IMPC code, despatch type, despatch year, despatch number, receptacle serial number, highest numbered receptacle indicator and registered/insured indicator (together), gross weight.

EXAMPLE   DEFRAA NLAMSA AUN 4 0027 002 00 0258

NOTE   This is a recommendation, not a requirement. Human readable representations of the identifier are easier to read if spaces are added between logical groups of printed characters. The position numbers given refer to the character positions in the 29-character identifier value, not to positions in the human readable representation.

This above does not mean that the spaces form part of the identifier. The identifier is still one string of 29 characters. Spaces are not inserted in barcoded representations or in identifier values used in electronic messages..

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[2] That is, units of 100 g or 0,1 kg.

Annex A
(normative)
Relationship between the entities of S9 receptacle ID, S8 despatch ID, despatch series and despatch type

Entity name and example				Data element name	UPU reference or content definition	Position Length Format	Example
S9 Receptacle ID DEFRAANLAMSAAUN40027002000258	**S8 Despatch ID** DEFRAANLAMSAAUN40027	**Despatch series** DEFRAANLAMSAAUN		IMPC of origin – code	Origin and destination IMPCs – see UPU code list 108	1–6 6 alpha	DEFRAA
				IMPC of destination – code		7–12 6 alpha	NLAMSA
			Despatch type AUN	Mail category code	Mail category code – see UPU code list 115	13 1 alpha	A
				Mail subclass code (despatch level)	Mail subclass code – see UPU code list 117	14–15 2 alpha (unless bilaterally agreed as alphanumeric)	UN
				Despatch year	Last digit of despatch year, e.g. 4 – 1994, 2004, 2014, 2024.	16 1 numeric	4
				Despatch number	Numeric (0001–9999). For each despatch series, the despatch number is initialized (typically to 0001) for the 1st despatch of the calendar year and is incremented by one for each subsequent despatch throughout the year.	17–20 4 numeric	0027
				Receptacle serial number	Numeric (001–999).This is the number of the receptacle within the despatch.	21–23 3 numeric	002
				Highest numbered receptacle indicator	The highest numbered indicator has possible values: 0 (not highest), 1 (highest) and 9 (unknown). May be combined with position 25 for letter mail – see 5.6	24 1 numeric	0
				Registered/Insured indicator	The registered/insured indicator has possible values 0 (not registered/insured), 1 (registered/insured) and 9 (unknown) May be combined with position 24 for letter mail – see 5.6	25 1 numeric	1
				Receptacle weight	Gross weight in 1/10 kilos. The decimal is not included. (If this weight exceeds 999,8 kg, then the value 9999 is included.)	26–29 4 numeric	0258
29 char	20 char	15 char	3 char				

Bibliography

This bibliography provides full reference and sourcing information for all standards and other reference sources quoted in the above text. For references that mention specific version numbers or dates, subsequent amendments to, or revisions of, any of these publications may not be relevant. However, users of this document are encouraged to investigate the existence and applicability of more recent editions. For references without a date or version number, the latest edition of the document referred to applies. It is stressed that only referenced documents are listed here.

UPU standards

NOTE   The UPU standards listed below are available by subscription from the UPU International Bureau:

P.O. Box 312, 3000 BERNE 15, SWITZERLAND
Tel: +41 31 350 3111; Fax: +41 31 350 3110; www.upu.int

[1]   General information on UPU standards, freely accessible at www.upu.int

[2]   S47, Postal receptacle labels