

Universal Postal Union (UPU) International Postal Addressing Standards

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Abstract

Developing and maintaining an International Addressing Standard is an important prerequisite for effective postal operation and for interconnecting the global network. The Post, the end customers and the overall mailing community benefit from well defined addressing standards and the use of country-based templates.

Adopting and using address standards leads to the following benefits:

- Improves the value of mail as a means of communication
- Provides for the efficient processing of international mail that, with country-specific addressing tools, can result in international mail being processed as efficiently as addressed domestic mail
- Fosters the exchange of postal-related information between postal operators
- Promotes the compatibility of UPU and international postal initiatives
- Allows the Post to work closely with postal handling organizations, customers, suppliers and other partners, including various international organizations

A primary advantage to having access to country-specific templates reflecting a standardized address format is improved deliverability of mail. Properly formatted mail supports automation compatibility, barcode accuracy, carrier route assignments; pre-sort levels, postage payment accuracy, timely and consistent processing, and improved customer satisfaction.

From the postal administration viewpoint, the use of complete and correct address information can result in reduced operational and delivery costs. In addition, by improving the efficiency and reliability of mail, we improve the value of mail as a communications medium with the overall result being an increase in the volume of mail.

From the customer viewpoint, complete and correct address information increases the surety that a mailpiece be delivered to the intended recipient without delay. It fosters reliability – one of the most important features that customer value.

1. Introduction

This paper explains how the Universal Postal Union (UPU) and the Working Groups reporting to the Standards Board (SB)¹ took up the following tasks:

- Develop (with CEN involvement) common set of international name and address elements

¹ The Standards Board (SB) is the UPU's standards definition, approval, and maintenance authority in the area of postal standards. Its objectives are to provide strategic direction and to plan, develop and maintain technical and communications standards aimed at improving postal operational efficiency and quality of service. It also promotes the interoperability and compatibility of all UPU and international postal telematics initiatives.

- Create International Address Templates, human-readable NLT and machine-readable PATDL XML
- Develop related addressing standards for transmission and receipt of XML data

It describes key features of S42, “International Postal Address Components and Templates,” and the UPU project P14 to develop XML messages and schemas to facilitate the exchange of International Name and Address Information.

2. S42, International Postal Address Components and Templates:

The Universal Postal Union (UPU) S42-5 standard “International Postal Address Components and Templates” defines an address in a destination country, in a manner it can be used by the 191 origin member countries and their postal operators.

An address is “a set of information which, for a postal item, allows the unambiguous determination of an actual or potential delivery point, usually combined with the specification of an addressee and/or a mailee.”

S42 in itself covers the areas of name and address elements, templates, and rendition of addresses by passing data through the templates. The collateral UPU project P14 includes XML schemas and messages for transmitting and receiving name and address data along with other data that is relevant to the UPU operations and postal applications.

UPU S42 defines a list of name and address elements and instances and parts of these elements. The instances can represent levels or positions. The intent is to represent the smallest meaningful parts of addresses in terms of defining delivery points. It is necessary to take into account the granularity of database storage and the need to assemble the address through a process of rendition.

The templates are described both in a human-readable Natural Language Template (NLT) notation and a machine-readable Postal Address Template Description Language (PATDL) XML template. Data is stored using the elements and sub-elements required or allowed by the template with an appropriate granularity. Passing the data through the templates using a rendition engine enables the presentation of the address in the form most suitable for the available space on a mail piece, which is normally rectangular and may have constraints on the number and length of lines. PATDL templates support advanced rendition techniques including rearrangement of data into compact formats, customized abbreviation and punctuation, and controlled combining of components. Despite the advent of delivery point barcodes on the mail piece, addresses must still be presented in a human-readable format in order to facilitate delivery.

Countries from all parts of the world have been involved in the development and testing of the standard. As of the current version (S42–5), templates have been published for eleven countries. Work is proceeding with countries in every region of the world. The process requires approval of countries and postal services, as it in effect publishes an algorithm for all to use that defines the structure of valid postal addresses for that country; however, the templates are relatively stable and modifications generally take the form of extension of cases already represented.

S42 version 5, from February 2006, has been accepted by CEN as a standard, based on the framework of the joint memorandum of understanding between CEN and UPU. A new version adding more countries is in preparation.

3. P14, Proposal to develop XML messages and schemas “to facilitate the exchange and final presentation of International Name and Address Information.”

As proposed to the UPU Standards Board (SB) in 2001, S42 was paired with the related project P14, to develop XML schemas and messages to facilitate the transmission, receipt, and final presentation of international name and address information. This will provide for canonical S42 based representations,

including association with PATDL templates. Because of the requirements of other projects in which the UPU is involved, including customs documentation, postal financial services, and the newly granted .post top level domain, other information will have to be catered for. For example, representations of postal addresses with less than standard granularity, including lines and blocks, will have to be supported. Requirements for UPU hybrid mail standards and electronic postmarks will be accommodated, and in general, suitable external vocabularies must be able to be referenced. At the last meeting of the UPU SB in April, 2008, the need to associate standardized geographic information with postal addresses was brought up as a desired feature. Support for international change of address data communication is an objective set by the UPU Consultative Committee. Ancillary elements needed for maintaining a name and address file and auditing updating processing, as well as documentation of address hygiene performances, will be included in the P14 project. A draft standard is expected by the end of 2008.

4. Key features of addressing standards

The key difference that we see between the UPU addressing standards and other addressing standards is not the emphasis on breaking down addresses into elements. Nonetheless, we think it essential for any such standards to be element based in order to avoid customized parsing of elements for every country, language and script. For example, OASIS has a well thought out set of name and address elements defined in a way that we would claim is interoperable with the UPU standards with straightforward transformations. It is not the development of a comprehensive international list of elements, though we think this is an essential step forward. Many current software providers are still using separate national lists of elements in a way that limits their own ability to achieve broad coverage. It is not even the country based templates, which enable the standard to be tested systematically based on data supplied by the UPU member country. Using templates for assembly can provide an assurance of valid address structures, but not necessarily of valid content, reflecting the capabilities and limits of XML. Instead, it is the ability to use these building blocks to validate the addresses themselves, both domestically and across borders, using to the maximum extent possible the data made available by the universal service providers, that we think in the end will distinguish the UPU standards from many other worthy efforts.

5. Conclusion

International mail has become more prevalent in today's business environment. Foreign addresses can pose a unique challenge to address quality and automation. With the variety of address formats throughout the world, it is important to consider international address formats as they pertain to current business practices.

Without delivery point databases, users of UPU S42 templates can tell apart those addresses which are definitely invalid, because incomplete or wrongly structured, from those which may be valid. But when used in conjunction with delivery point databases, the valid addresses, in terms of the current databases, can be identified and separated from those that are incorrect in syntax or in semantics. It is a strategic goal for the UPU, supported by Quality of Service (QSF) funds in many cases, to help its members to establish databases of postal information including, where feasible, delivery point databases, and more and more countries have been following this route.

As the Foreword to S42 states, "Postal services form part of the daily life of people all over the world. The Universal Postal Union (UPU) is the specialized institution of the United Nations that regulates the universal postal service. The postal services of its [now 191] member countries form the largest physical distribution network in the world." The advantages to communication and commerce from making this network as efficient as possible, and by conjoining the physical and electronic communication networks, are of evident importance to all UPU members and to all of us.

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