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NICC Document

B2B Location & Address Identification Principles

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Contents

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Foreword

This NICC Document ND1427 has been produced by NICC B2B working group

Introduction

The "NICC B2B Interface Framework document (ND1507:2007) [1]" provides the introduction and framework for all NICC B2B standards. It is important to read the Framework in conjunction with this document.

1 Scope

The scope includes automated business transactions between UK Communications Providers (CPs) using Business-to-Business (B2B) interfaces that are used to order and manage products traded between CPs in the UK telecommunications market. In particular, for high volume mass market data and voice products sold to "end user" consumer and business customers, for example voice, broadband and associated access products.

2 References

2.1 Normative references

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

[1] ND1507:2007: B2B Interface Framework Document Issue 2 @ http://www.nicc.org.uk/nicc-public/Public/interconnectstandards/reports/nd1507_2007.pdf
[2] NICC B2B Document Structure @ http://niccb2b.org.uk/wiki/index.php/Main_Page/work/documents#NICC_B2B_Document_Structure
[3] ND1627: B2B Lead-To-Cash (L2C) Interface Standard @ http://niccb2b.org.uk/wiki/images/L2C/TSG%20ND1624%20and%20ND1627%20for%2028-day%20approval.zip
[4] ND1626:2007: NICC B2B Trouble-To-Resolve (T2R) Interface Standard Issue 1.01 @ http://www.nicc.org.uk/nicc-public/Public/interconnectstandards/info/nd1626_2007.pdf
[5] ND1421:2007: NICC B2B User Story Approach Issue 1 @ http://www.nicc.org.uk/nicc-public/Public/guidelines/nd1421_2007.pdf
[6] ND1508:2007: Trouble To Resolve (T2R) white paper proposal Issue 2 @ http://www.nicc.org.uk/nicc-public/Public/interconnectstandards/reports/nd1508_2007.pdf
[7] ND1510:2007: Lead-To-Cash (L2C) White Paper Proposal Issue 1 @ http://www.nicc.org.uk/nicc-public/Public/interconnectstandards/reports/nd1510_2007.pdf
[8] http://www.govtalk.gov.uk/gdsc/html/frames/Postcode.htm @ http://www.govtalk.gov.uk/gdsc/html/frames/Postcode.htm

2.2 Informative references

[1] Location White paper @ http://niccb2b.org.uk/wiki/images/Meetings/3/18%20Briefing%20Concept%20of%20location.doc from NICC B2B meeting 21/11/06 @ http://niccb2b.org.uk/wiki/index.php/Main_Page/work/meetingsarchive

3 Definitions/Abbreviations

3.1 Abbreviations

B2B	Business to Business (electronic transactions via a gateway)
CP	Communications Provider
ebXML	Electronic Business XML
GPS	Global Positioning System
L2C	Lead to Cash
NICC	Network Interoperability Consultative Committee

3.2 Definitions

3.2.1 Lead-To-Cash (L2C)

This refers to the experience a CP customer has buying an existing product or service from another CP. It begins with a sales dialogue between the buyer and the supplier which establishes that one of their products or services meets their needs. It ends when this need is fulfilled, the service is available to use and supplier has been paid.

It includes “pre-order” or “order” management & “financial attribution” (including billing) in the NICC B2B requirements document. It is second behind T2R in NICC B2B’s priorities.

3.2.2 Trouble to Resolve (T2R)

This begins when a customer has told a CP they are not happy with either their product or service, or when the CP has proactively spotted a problem. It ends when that problem has been resolved and the customer is satisfied.

It includes “assurance”, “ticket/fault management “ in the NICC B2B requirements document and “trouble administration” by the ITU, and covers other sub-processes that are related to the T2R process, but which are not core to it.

3.2.3 Concept-to-market (C2M):

This process starts when one of several trigger events takes place, e.g., when a CP needs to

- remake a product because of high fault rates
- innovate a new service based on customer demand
- rationalise and create new self service products

C2M process spans the time from this trigger event, through product development, marketing, launch, and ready for sale/support. In addition, during the concept, specify and plan phases, C2M will determine how the product flows into in-life support and billing.

3.2.4 Postcode[8]

The Postcode is a combination of between five and seven letters / numbers which define four different levels of geographic unit. It is part of a coding system created and used by the Royal Mail across the United Kingdom for the sorting of mail. The Postcodes are an abbreviated form of address which enable a group of delivery points (a delivery point being a property or a post box) to be specifically identified. There are two types of Postcode, these being large and small user Postcodes. A large user Postcode is one that has been assigned to a single address due to the large volume of mail received at that address. A small user Postcode identifies a group of delivery points. On average there are 15 delivery points per Postcode, however this can vary between 1 and 100. Each Postcode consists of two parts called outcode and incode

3.2.5 Outcode [8]

The first part of the post code is the Outcode, or Outward Postcode.. This is separated by a single space from the second part which is the Inward Postcode, or Incode. The Outward Postcode enables mail to be sent to the correct local area for delivery. This part of the code contains the area and the district to which the mail is to be delivered..

3.2.6 Incode [8]

The incode (also called inward code). It is used to sort the mail at the local area delivery office. It consists of a numeric character followed by two alphabetic characters. The numeric character identifies the sector within the postal district. The alphabetic characters then define one or more properties within the sector

4. Purpose

This document outlines the principles for handling and sharing location and address identification information when a buying CP places end-user customer orders (L2C) (or raises faults (T2R)) with a supplying CP, for example BT Wholesale or Openreach as the supplier and Global Crossing, Cable & Wireless, etc as the buyer. The buying CP needs to be able to identify and communicate the service delivery location for the order so the supplier can deliver service to the correct customer in the correct place.

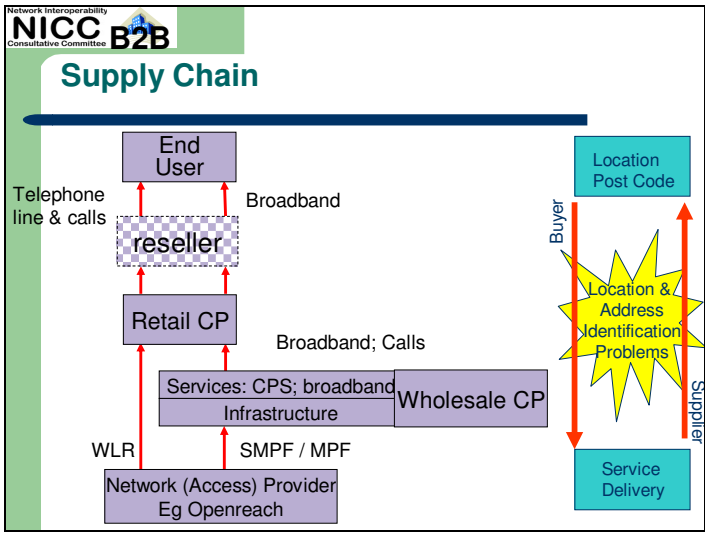
5. NICC B2B Document Structure & Further Information

This document forms part of a suite of documentation developed and maintained by NICC B2B. The structure is shown @ http://niccb2b.org.uk/wiki/index.php/Main_Page/work/documents#NICC_B2B_Document_Structure [2]. The documents can be accessed from the NICC publication web site @ http://www.nicc.org.uk/. and if they are in development from http://niccb2b.org.uk/ . For access and further details please contact niccb2b@niccb2b.org.uk .

Further details of the Lead-to-Cash (L2C) [3] and Trouble-to-Resolve (T2R) [4] processes for B2B can be found @ http://niccb2b.org.uk/wiki/index.php/Main_Page/Publications

6. Problem/requirements Statement

The example given below is between BT and its wholesale customers, as the majority of orders within the communications industry are currently placed between BT Group and other CPs . These issues, however, could apply be between any “buying” and “supplying” CP and their end user customers.



All orders need a service delivery location, which fall into 4 main groups:

1. Ones recognised by Royal Mail, who allocate a postal address including postcode
2. Those not currently recognised by Royal Mail, but will eventually be allocated a post code. For example, shopping mall developments, new housing estates and office blocks
3. Locations that will never have a Royal Mail postal address. For example railway signal boxes, temporary forestry commission shops and traffic light control boxes
4. Locations on large sites like hospitals or in high buildings where post codes or grid references would not help identify the exact location of where the service is provided

One of the first validations on orders to BT group for products like PSTN, broadband and Megastream is service location. The customer CP sends a Royal Mail post code or the best available address, if no postcode is available, to a supplying CP like BT. The service location is then validated against the address in the supplying CP’s backend systems.

At this point a number of problems can arise and orders can be rejected for example if:

- the post code supplied by the buying CP's end user customer is wrong or the CP gets it wrong in translation;
- The supplying CP's data could be incorrect or out of step if for example it has an old address stored for a Directory Number (DN) or if Royal Mail changes the post code for some reason.

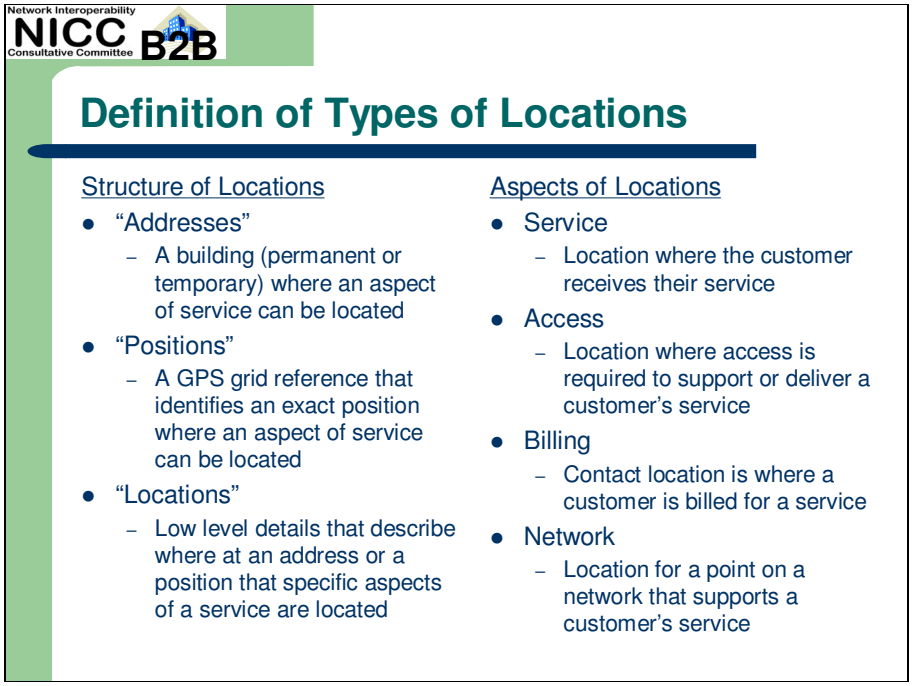
All of the following are additional issues with addresses:

1. Multi-residence building are often not identified
2. Standard locations do not consider "height" when identifying service or equipment
3. Vanity Addresses exist that provide a customer's personal view of their location
4. New build locations are often on "brown field" developments that can link them to the previous use for the site
5. Legacy details on CP systems are often not updated providing incorrect location details for historic records

A great deal of time and money is wasted, and customer experience damaging frustration generated when orders are rejected due to problems with location. The aim of this document is to agree how all types of service locations are identified and communicated between CP's, to reduce the costs, the time wasted and damage to customer experience by rejecting orders due to problems with location

7. Principles

7.1 Definition of Types of Locations

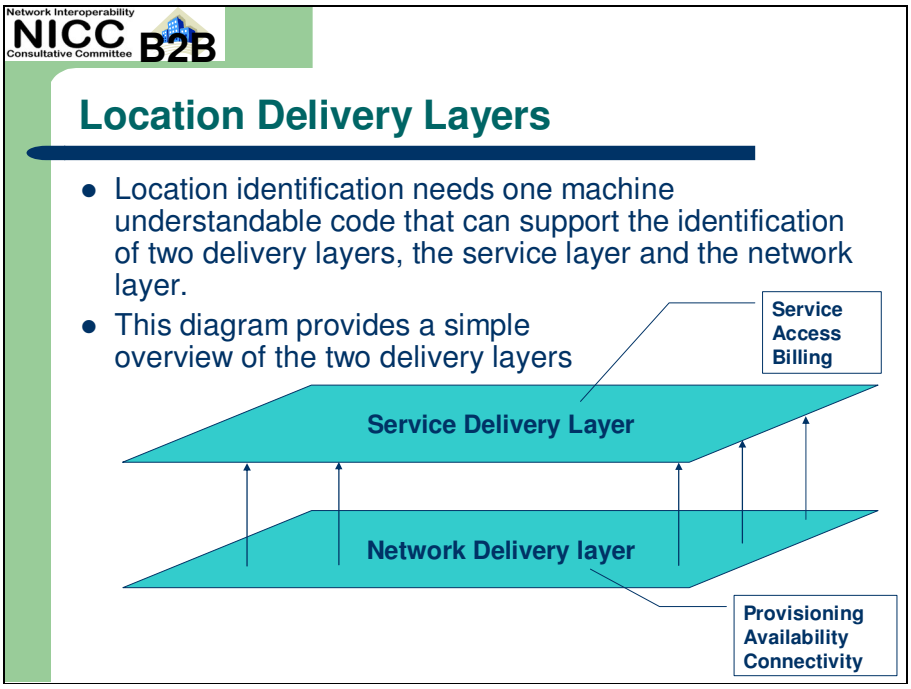


7.2 Definition of a Post Office Address

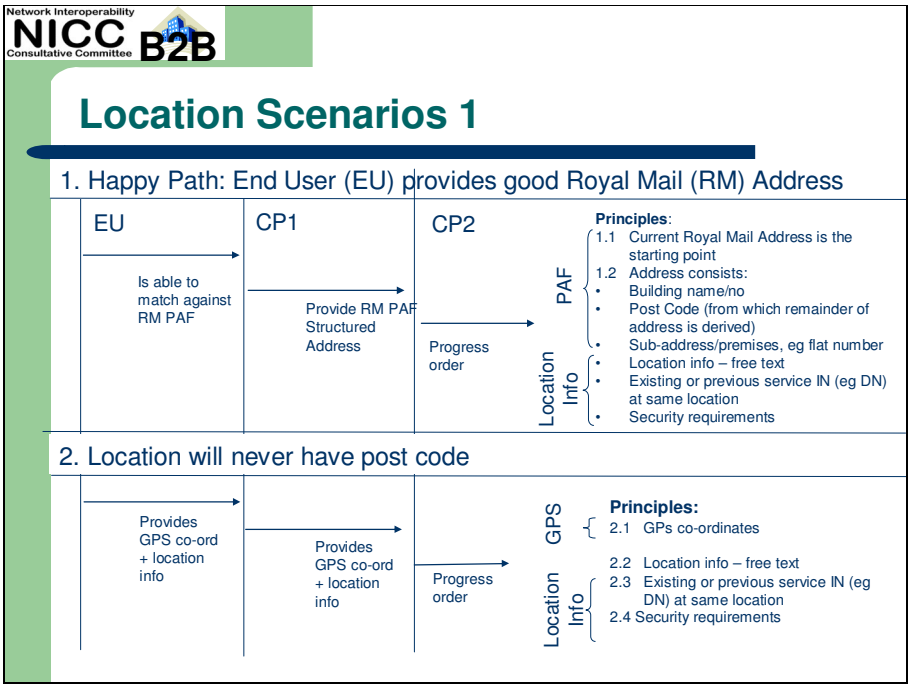
- The core of a post office address in the Postcode which is formed from two segments, an outcode and an incode
- There are two different types of Postcodes:
  - Route Code: a Postcode that identifies a number of properties
  - Large User: a Postcode that identifies one user which could be a single property, a company or a postal reference such as a marketing response address of a "return address"

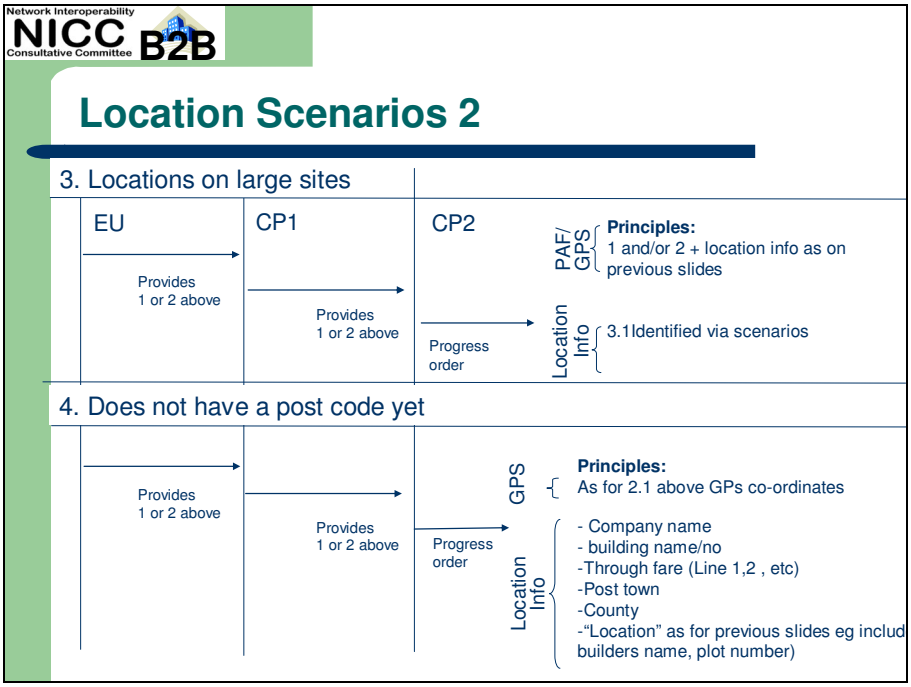
- House name or number is used to verify a specific property along a route code
- Sub-address elements such as flat numbers and company names are required in multi-occupancy addresses
- Other address aspects (street, town county) are directly associated with Postcodes and can be derived from them

7.3 Location Delivery Layers



7.4 Location Scenarios

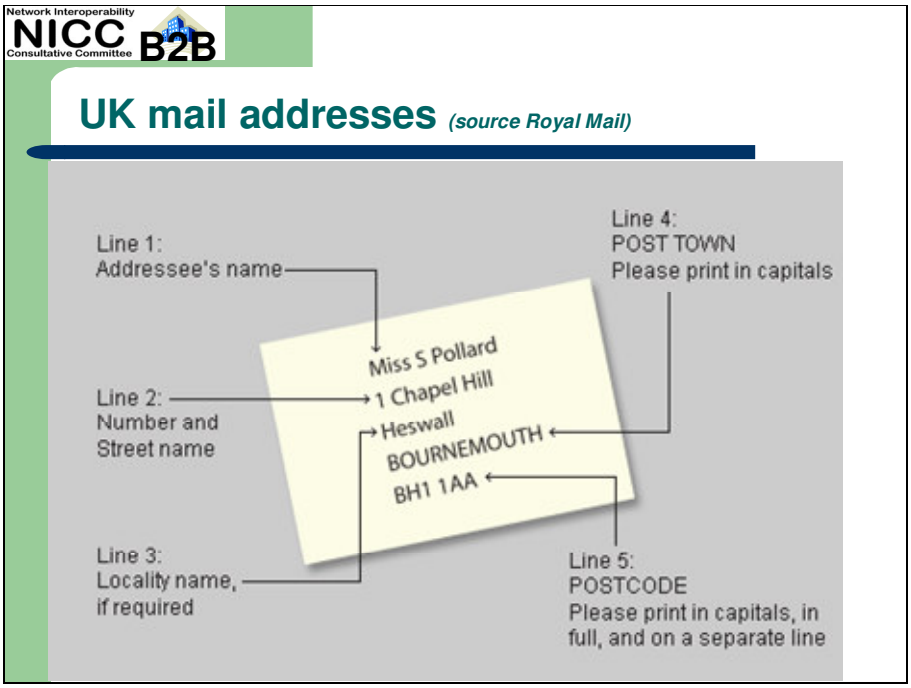


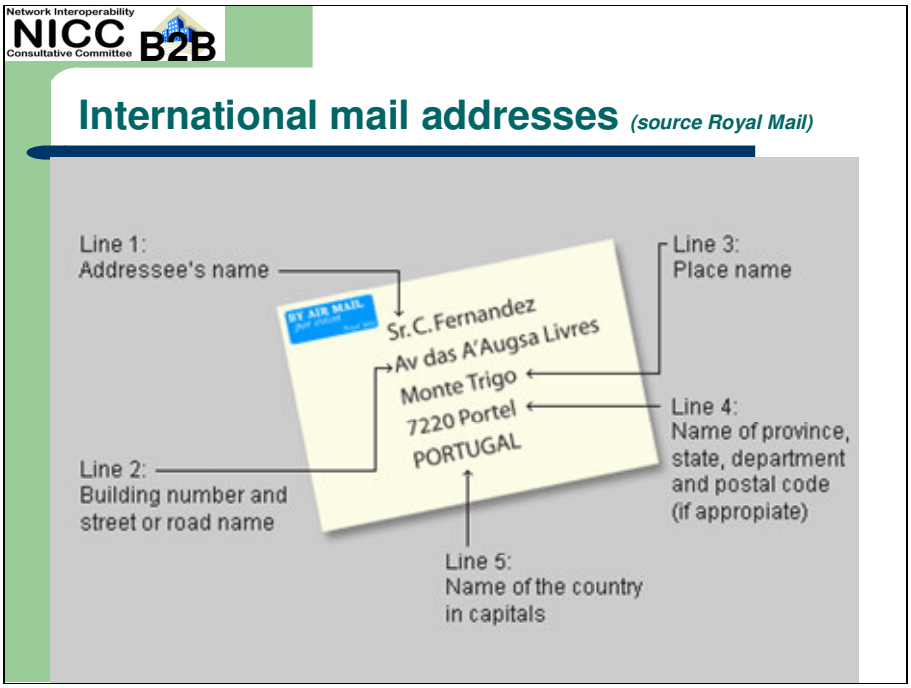


7.5 Principles Explanation

The principles described against the scenarios above contain either a PAF or GPS location ID and location information. Where a post code is exchanged it should match the current Royal Mail PAF and be validated on this basis as this is the master addresses record. The PAF or GPS location ID is machine readable and understandable for automated processing. The location information, while passed through an automated B2B gateway, is for use in manual processes, for example an engineering visit.

Addresses and address information should be expressed in standard format as specified by the post office as below. If a post code doesn't exist that line is blank.





8. Futures and Implementation

The most accurate way of locating an address is a Global Positioning System (GPS). CPs could map GPS data to address and physical location data. However, although the future may be GPS and GPS devices are widely available, most CPs still worked off of royal mail post codes in their PAF (Postcode Address File). We should therefore aim to standardise the address data exchanged by CPs, in line with the current Post Office Address File (PAF) format. The aim would be for CPs to match, accept and reject addresses based on this and allow them to sort out matching their own internal address/network records themselves.

The agreement of this principles document is the first step in agreeing the way forward for location and address information. Once agreed it will be used as a reference for future process work on, for example on L2C [7] and T2R [6].

9. Keeping this document up to date and relevant

In order to keep NICC B2B standards and best practice up to date and relevant the documents it publishes together with any new issues and requirements are reviewed on a regular basis. If you have any comments or suggestions for improvement please forward them to niccb2b@niccb2b.org.uk or place them directly on to the NICC B2B website @ http://niccb2b.org.uk/wiki/index.php/Main_Page/work/Issues

History

Document history		
Revision	Date	Notes
V 0.0.1	June 11, 2008	First draft
V0.0.2	June 23, 2008	Added ND reference & B2B to the title at NICC Secretary request and updated with comments from review meeting
V0.0.3	22 July 2008	Update with comments from review
V0.0.4	26 August 2008	Update with comments from review
V0.0.5	8th September 2008	Update with further comments from review
V1.0.0	15th September 2008	Updated to issue status ready for publication