
ND1510 2007 LEAD TO CASH (L2C) WHITE PAPER PROPOSAL

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Document history

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| Draft v 0.0.1 | 17/9/07 | Initial draft for internal BT review |
| Issue V1.0.0 | 24 th September 2007 | Prepared for NICC publication by updating version number and adding NICC ND reference |

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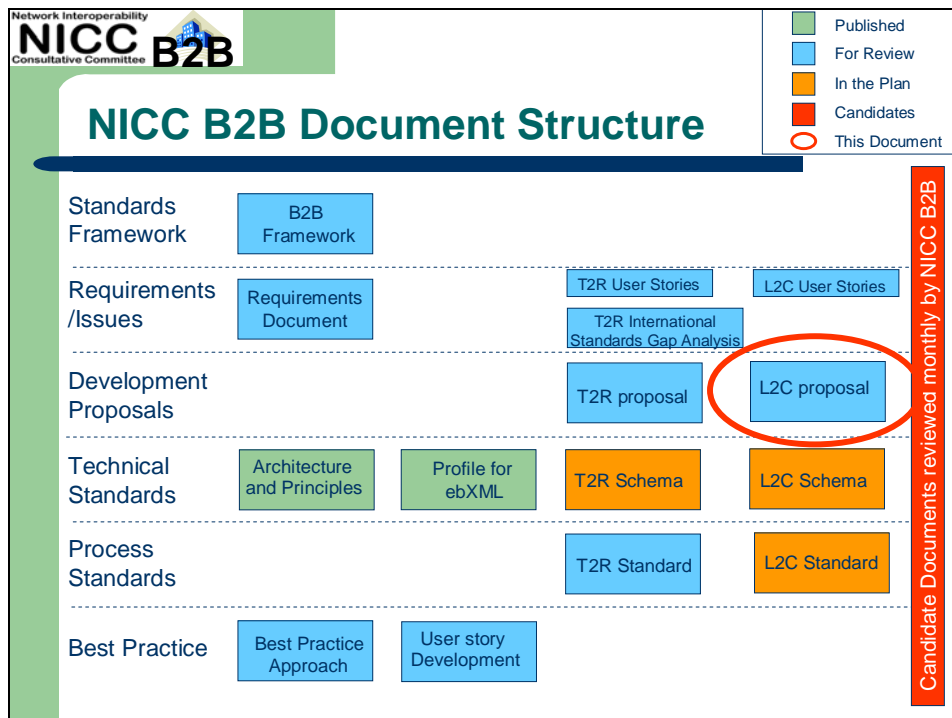
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1. Purpose & Scope

This white paper proposes the way forward for developing a standard product independent Lead to Cash (L2C)¹ process for automated business transactions between UK Communication Providers (CPs) using Business-to-Business (B2B) interfaces.

2. NICC B2B Document Structure & Further Information

This document forms part of a suite of documentation developed and maintained by NICC B2B as shown below. They can be accessed from the NICC publication web site @ <http://www.nicc.org.uk/nicc-public/publication.htm>, and if they are in development from <http://niccb2b.org.uk/>. For access and further details please contact niccb2b@niccb2b.org.uk.



3. Introduction & Background

These proposals build on the work done to date by the NICC B2B WG since it was re-established in September 2006 to agree two documents covering principles and technical standards for establishing B2B Interfaces. These are already being implemented by CPs using Openreach's B2B gateway and shortly will be by those who plan to use BT Wholesale's new strategic gateway initially being deployed for Broadband Repair and diagnostics.

The next 2 sections on "Why We Need Standards" and "Benefits" are extracted from the NICC. It Systems Interface (B2B) Framework Document as they are applicable here. These sections are followed by the method we are proposing for developing the T2R² process standard. For more details on the scope of the NICC B2B WG, how it is managed, plans, meetings, etc please see the B2B Framework Document or the NICC B2B WG website.

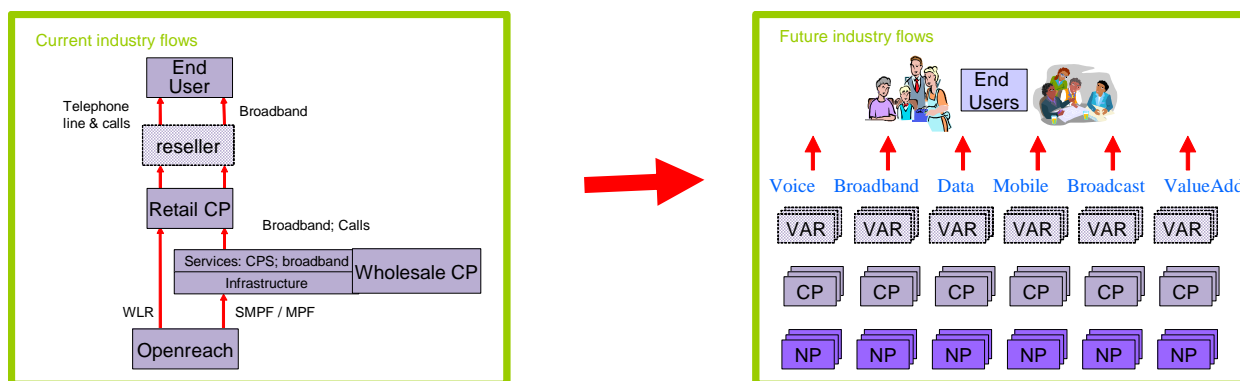
3.1 Why We Need Standards

(extracted from NICC It Systems Interface (B2B) Framework Document)

The need for cheap, reliable, fast and zero touch electronic trading between communication providers is becoming increasingly important as the market for telecommunication and associated services becomes more open and competitive. Development of the market will be hampered in terms of cost and quality of services if we rely on the current combination of diverse manual and electronic trading mechanisms.

As services from different suppliers are bundled and sold through increasingly complex supply chains the need for common B2B standards becomes greater since without them supply chains become costly and inflexible. They are needed to ensure the gateways that handle the electronic transactions required to order, bill and manage these services all work together using common processes and information formats.

If we do not establish process, information and technical standards there is a danger that the development of the electronic gateways will be much slower, more expensive and ultimately they may not meet the requirements of the emerging multi-service multi-party industry.



3.2 Benefits

(extracted from NICC It Systems Interface (B2B) Framework Document)

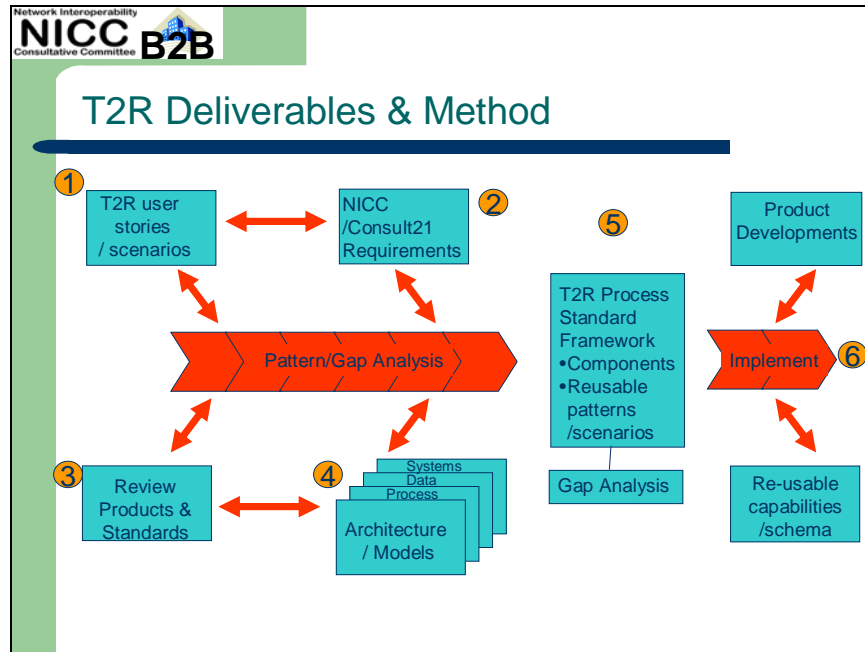
The benefits of standard interfaces, processes and information content include:

- Reducing the number and complexity of interfaces will reduce development and maintenance costs through development and reuse of standard components and capabilities;
- standard components means development times come down reducing time to market for new products and services;
- standard high quality components and capabilities should make them more able to support complex trading relationships and maintain end-to-end services for consumers;
- standard interfaces means more focus and investment on non-functional requirements such as security, resilience and scalability;
- improved and standard interfaces means less things go wrong, costly manual intervention is replaced by zero touch working;
- establishing best practice means better quality services, less reinvention and confusion;
- future-proofing and evolution of standards, for example to enable the multi-party multi-service industry that is developing, cannot be achieved on a product by product basis. It needs to be done once in one forum.

4. Method

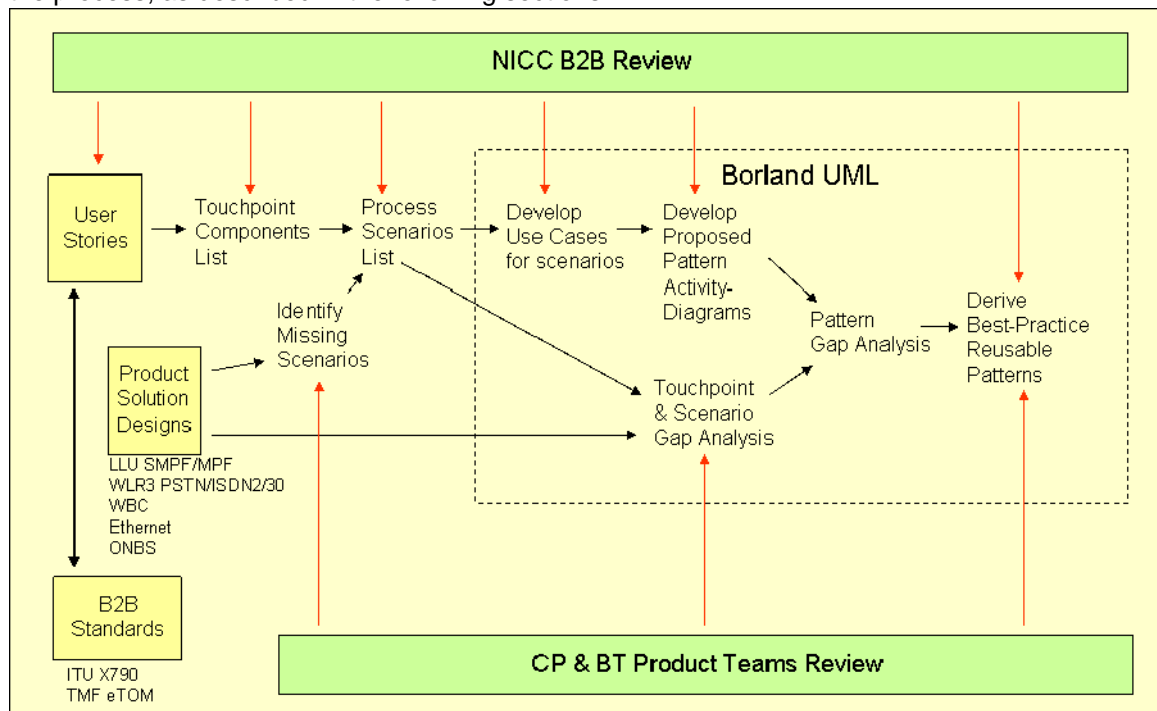
The method proposed to develop a L2C interface standard follows that used for T2R in the figure below. It will be content driven, ie by a CP or group of CPs documenting their proposals for agreement with the wider CPs, holding workshops or a combination of both. Where possible and beneficial, existing process standards and practice will be reused. This will be agreed by the NICC B2B WG.

4.1 Method Summary



1. Create or validate User stories/scenarios (US) for T2R
2. Review USs against NICC B2B requirements
3. Review existing and proposed relevant process standards work & initiatives, eg ITU Trouble ticketing
4. Review / Develop Architectures/Models.
5. Agree T2R Process Standard Framework
6. Implement via product developments and reusable capability development

The steps in the method are described in more detail in the figure below. This is the same method used for T2R, with the difference of moving the International Standards gap analysis forward in the process, as described in the following sections.



4.2 Create or Validate User Stories (US) for T2R

To develop USs we propose to use the method described in the NICC B2B User Story Approach document. This is currently being drafted and will be available from the NICC B2B WG website shortly. To quote the document:

- “The NICC B2B User Stories Approach document contains a description of the approach the NICC B2B proposes for developing business-to-business ‘User Story Scenarios’ or “User Stories” as a means of defining standards for B2B gateways in the UK telecoms industry. It is one a number of techniques designed to facilitate the rapid development of systems, processes and products to meet user and customer requirements.
- User story scenarios are end to end stories that can be easily understood by business people with requirements and systems and process development teams. Existing requirements can be aligned to business scenarios, to identify possible gaps in the requirements, which can then be filled. They enable the work to be divided up into work stream activities that can be taken forward by development teams. The scenarios can be prioritised to give a clear direction to development teams for the order of work.”

The US creation will take input from a number of sources of requirements:

- The US defined for T2R, for Sub-Processes that are applicable to L2C, e.g. Appointing, KCI etc.
- The NICC B2B requirements document
- An analysis of BT's Customer Experience Process Model
- Existing B2B designs for an exemplar set of BT's 21CN products either implemented, or in design (BT Wholesale/Openreach)
- Other Customer Experience analysis work

4.2.1 Review International Standards

A Gap Analysis will be performed against relevant international standards like ITU X790, and TMF eTOM B2B Business Operations Map. The business transactions defined in these standards will be assessed for relevance, and User Stories derived for any to be included.

4.3 Derive Touchpoint Components

From the set of User Stories, a set of Touchpoint Components will be defined, e.g. Request Order, KCI, Notify Order Complete etc. This definition will include the Business Transaction Type, (e.g. Request/Confirm, Notify etc.), success criteria in terms of Right First Time and Cycle Time, related non-functional parameters, and data – in the same format as applied to T2R previously. The scope of the Touchpoints must allow all the agreed User Story requirements to be met.

4.4 Define Business Scenarios

A set of typical Business Scenarios will then be defined. For each Scenario a standard Pattern for orchestrating the Touchpoint Components can subsequently be defined, i.e. how the Buyer and Supplier exchange messages to enact the scenario. The scenario has a title, and the pre and post conditions, and ‘alternative outcomes’ are described.

By defining a standard Pattern, we can move towards process standardisation and best practice. The scope of the Scenarios must allow Patterns to be defined for all typical Scenarios, covering all key Touchpoints.

The designs for the exemplar products will also be used to identify typical and useful Scenarios.

4.5 Define Process Patterns

The Patterns are now developed using a UML modelling tool (Borland Together 2006). This is in a number of stages:

Develop Use Cases

UML Use Cases are used to capture each Business Scenario. The pre/post conditions and alternative outcomes form the Use Case description.

Develop Pattern Activity Diagrams

UML Activity Diagrams are created for each Scenario/ Use Case which show the Buyer and Supplier process swim-lanes, and the 'pattern' of Touchpoints used.

Derive Best Practice Patterns

A gap analysis is then performed with the product design teams to identify commonality and differences with the products' processes. Where the majority of products share a common or similar Pattern, then the Activity Diagram is amended to reflect the common/best practice process. The intention is not to redefine processes unnecessarily.

The Patterns will be described in the same format as for T2R, detailing their pre/post conditions, technical flow (through the Touchpoints) and key data item flow.

4.6 Agree L2C Process Standard Framework

Once we have the User Stories, Touchpoint Components and Patterns, we can develop and agree the TL2C Interface Framework for "automated business transactions between UK Communication Providers (CPs) using Business-to-Business (B2B) interfaces".

We propose to call this a framework because while it will be as standard and product independent as possible, it needs to be flexible to cope with valid variations and new requirements as they emerge.

5. Deliverables

The following deliverables are proposed:

- 4.1 L2C user stories
- 4.2 Updated NICC B2B Requirements
- 4.3 Updated Systems interface architecture and supporting process & data models
- 4.3 L2C Interface Standard Framework

6. Timescales & Resources

With the urgent need for automation to cope with a developing and increasingly complex supply chain, we need to work quickly as resources allow. Exact target dates will be agreed by the NICC B2B WG, however it is envisaged the first issue will take 3 to 6 months subject to resource being available from the BT and CP L2C community.

7. Notes

Note 1: Lead-to-Cash

This process starts when a customer expresses a need which can be met by an existing CP service, agreeing and delivering what's required, and ends once the customer is billed and CP the receives initial payment.

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.

Note 2: Trouble-to-Resolve (T2R)

This process is defined as starting when a customer problem is identified either by the customer or pro-actively by the CP. It ends when that problem has been resolved to the customer's satisfaction.

It includes "assurance", "ticket/fault management " in the NICC B2B requirements document and "trouble administration" by the ITU. It is the NICC B2B WG's top priority to progress to the next stage.

Annex 1: Inputs

A1.1 NICC B2B

- User stories approach
- Framework document
- Requirements
 - Architecture
 - Functional & Non-Functional requirements
 - High level Data and Process models
 - Issues

A1.2 Existing standards & Development work

- NICC B2B
 - Architecture Principles
 - ebXML Profile
- ITU-T X790
- TMF eTOM B2B BOM

A1.3 Work on existing and future CP-to-CP interfaces

- Openreach
 - WLR, LLU, Backhaul Services
- BT Wholesale
 - WBC
 - Harmonised Ethernet
- BT Group Process/Customer Experience improvement initiatives
- Other CP initiatives?

- End -