

Delivery of an efficient GPL Switching Process

Fixed Line Copper/Cable/Fibre/Pay TV/Mobile

Presentation for FCS

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Introduction

We firmly endorse the FCS view that GPL switching processes are best for customers and deliver a competitive marketplace for the longer term.

By using our experience from other markets (electricity, gas, water), we are seeking to draw the Regulator's attention to the way that GPL consumer switching has been implemented elsewhere.

We have discussed our approach with TTG, who also support GPL switching, incorporating insights from them into the proposed model.

All the GPL options in the Ofcom consultation appear to make use of a database. This is necessary – and used elsewhere – in order to:

- keep track of who is providing what services at what network termination points
- provide equal access by GPs to the relevant technical data about what services can be supported at a prospective customer's NTP

In the slides that follow, the main item presented is a GPL switching model that uses such a database – other considerations relevant to the development of surrounding systems and processes are also noted.

Basic Features of GPL switching model

What the model does do ...

1. The model is based upon a robust & flexible **data model**, which is easy to apply to both the Openreach copper network and, in due course, to other networks e.g. cable, fibre, mobile, Pay TV or other emerging networks – bringing the benefits of GP switching at the earliest opportunity to these further areas.
2. Uses a **database** – similar in concept to a title registry
3. Uses a unique reference code for communications network termination point (NTP)
4. Provides an enduring view of NTP status – location, technical options for service delivery, participants involved, actual services provided.
5. Allows actual behind-the-scenes switching process to happen as at present using Openreach EMP
6. Independently governed messaging systems keep the database updated so that a ‘single source of truth’ is available to authorised users
7. Customer interacts with their chosen GP, who can enquire into relevant characteristics of customer’s NTP in order to provide good advice on switching.

Basic Features of GPL switching model

What the model does NOT do ...

1. It does not deal with up-front customer consent validation.
2. It does not deal with providing protection against 'rogue traders', an issue which might be linked with the approach to consent validation. However, it does provide detailed transaction history to facilitate identification of any issues.
3. It could operate with a range of customer cancel options, as required.

These matters would be addressed by the systems and processes surrounding implementation of the model described. Approaches to these issues taken in other industries include:

- Accreditation requirements for participants;
- Application of sanctions by switching authorities, including suspension of further registration activity;
- Documented customer transfer protocols that require equitable treatment of customers wishing to cancel, which are coordinated centrally

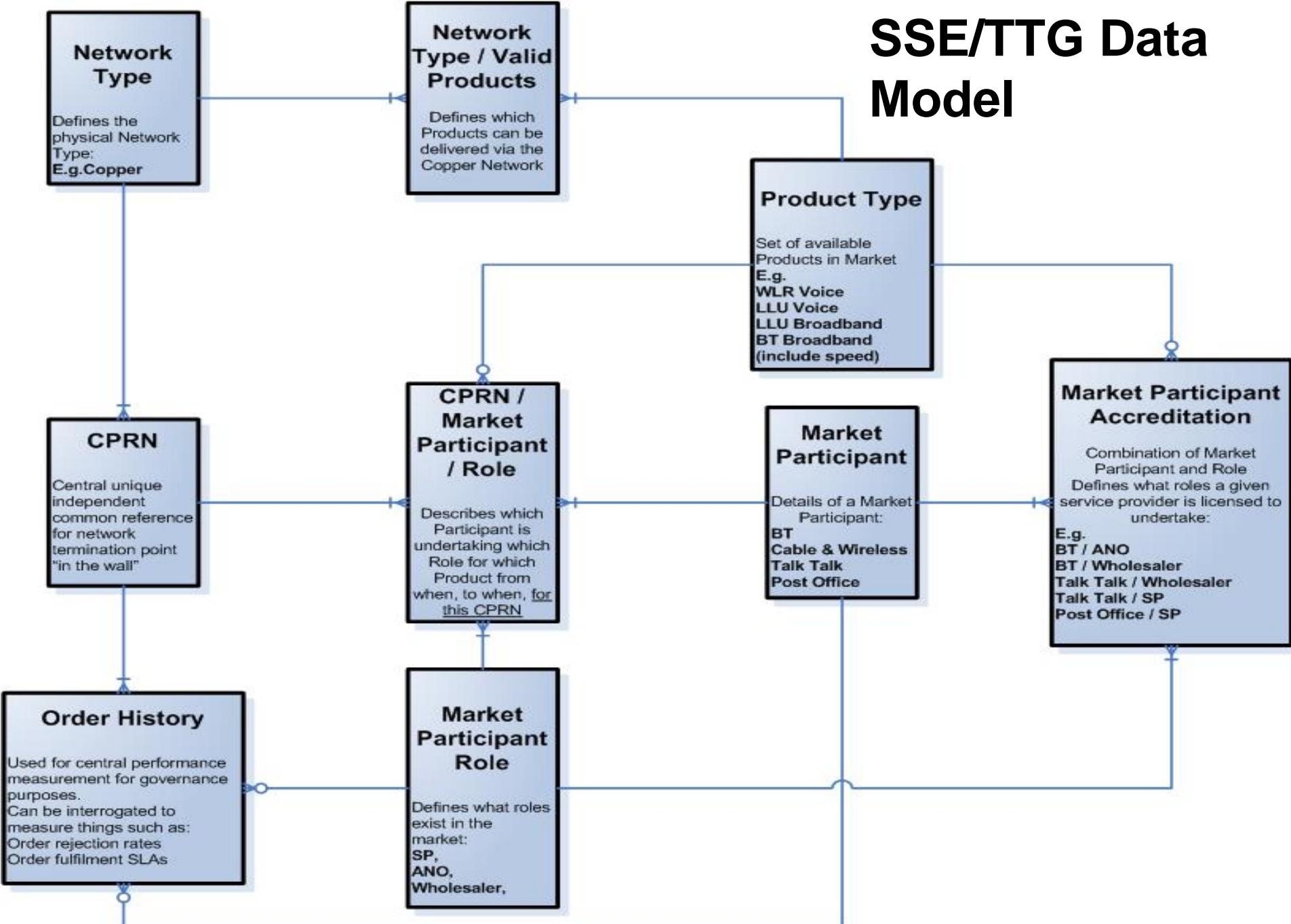
What is the Data Model?

The **data model** describes the logical organisation of how data can be used and represented.

If you get it right, the model can be long lived and can cater for different market situations and developments - it will be flexible enough to apply to other network arrangements.

Our data model is organised around a unique reference for the comms NTP in the property. We have used the generic acronym Comms Point Reference Number (CPRN). For copper, this is equivalent to the BT Openreach Access Line ID (ALID)

SSE/TTG Data Model



Description of the Database

The **database** in our model has the following key features:

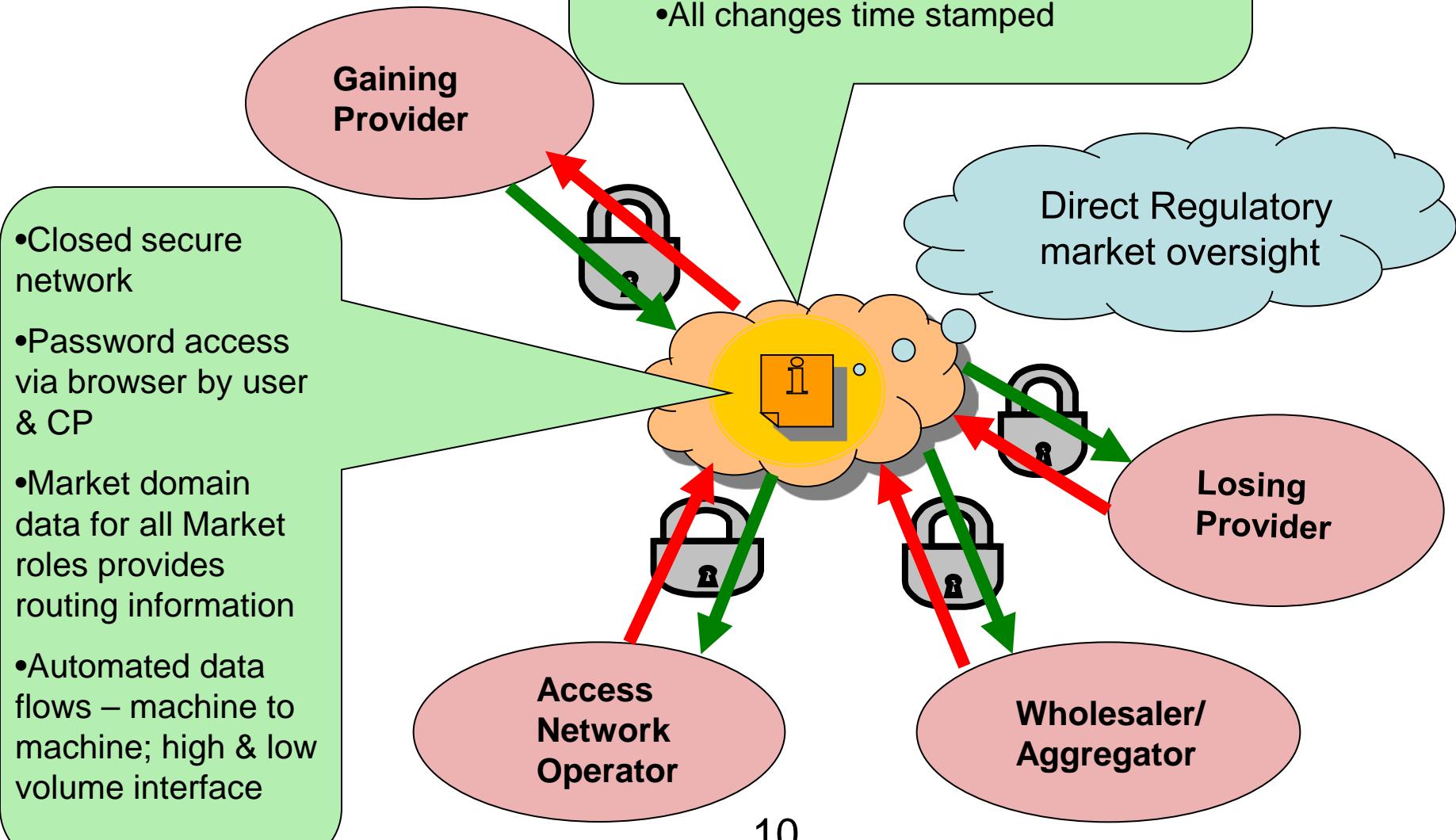
- An inventory of all CPRNs in the UK for all participating networks
- Contains regularly updated Market Participant details for all participants and roles in scope
- Stores relevant service details against CPRNs for all market participants
- Uses a closed, secure data transfer mechanism
- Uses defined, standard data flows, where all participants use the same language to communicate with the database
- Provides web browser access for all market participants to see details for which they are authorised
 - Logon credentials identify the individual agent, the participant and the market role.
 - An audit trail of use is maintained for all transactions and enquiries
- Thus provides a regulatory/governance “eye” on the entire marketplace
- Forms a central ‘hub’ linking all players in the communications market

Central Database table – example schematic

CPRN	Role	Service Type	Market Participant
1234567890001	SP	WLR Voice	SSE
1234567890001	Wholesaler	WLR Voice	BTW
1234567890001	ANO		Openreach
1234567890001	SP	Broadband 10Mb	Tesco
1234567890001	Wholesaler	Broadband 10Mb	Pipex
1234567890002	SP	LLU Voice	Talk Talk
1234567890002	Wholesaler	LLU Voice	Talk Talk
1234567890002	ANO		Openreach
1234567890002	SP	Broadband 10Mb	SSE
1234567890002	Wholesaler	Broadband 10Mb	Thus
1745678930001	SP	LLU Voice	Talk Talk
1745678930001	Wholesaler	LLU Voice	Talk Talk
1745678930001	ANO		Kingston
1745678930001	SP	Broadband 10Mb	SSE
1745678930001	Wholesaler	Broadband 10Mb	Thus

Red and Blue show how CPRN number ranges can be allocated to ANOs

How does data transfer ?



How does this GPL model work? - background

Each customer's NTP on a particular ANO has a universal, unique reference number. Any ANO must have unique coding for this to allow safe and efficient working of the network – in the example of Openreach's copper network we believe this is known as the Access Line Identifier (ALID).

For the general case, the model calls this unique reference number a Comms Point Reference Number (CPRN). **However, with the existing availability of the ALID for the Openreach copper network, it would be intended to make use of this existing coding initially**

This ALID (more generally, the CPRN) is maintained by the ANO as the unique identifier in the Hub database through the network take-on process – subsequent new physical installation of an NTP is assigned a new CPRN by the ANO.

The CPRN could be communicated to the customer by their current SP and printed on bills for easy reference. CPRNs could even be provided along with property details in property transfer scenarios. In any event, a customer should be able to obtain the CPRN from their SP on request.

How Does this GPL model work? - process

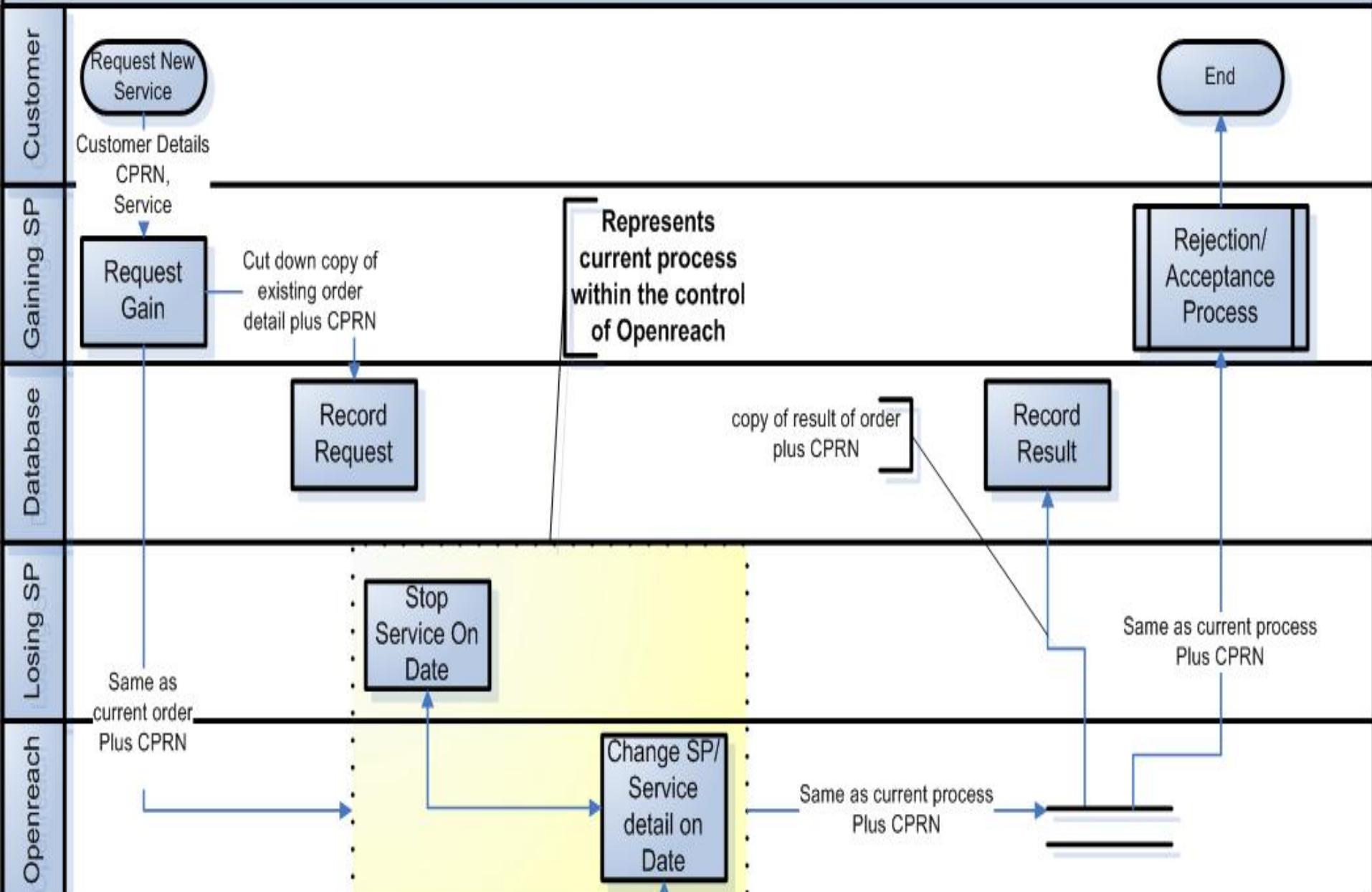
A customer wishing to switch a service would provide the CPRN to the GP, or address/service details that allows the GP to identify the CPRN on the database, thus uniquely identifying the point at which the service(s) to be switched are located. CLI will also provide help in identifying the CPRN – but not in the longer term.

Views onto the database allow the technical details and capability of the NTP to be assessed by the GP agent for compatibility with the service he can provide. Once the GP agent has then had the discussion with the customer to establish that the customer wishes to switch service X to the GP, he puts a “service gain” request through normal ordering processes - the CPRN is added to this

Back End Process

- Relevant data flows are sent to the database in parallel with normal ordering processes, containing only necessary data items such as future switching date.
- The database records the pending date and other relevant information.
- Once the physical service switch is confirmed by the ANO, the Hub updates its stored reference information, such as services and participants, against the CPRN.
- Transaction history is maintained by the Hub and can be used for various reports on SP activity and order fulfilment performance over the market as a whole.

Summary Migration Process



Other Considerations

1. Independent running of the database and ownership of the model
 - This is seen as important for market confidence, allowing the switching system to be run equitably by the industry for the industry
 - It provides transparent market control of market systems
 - It allows democratic control of future developments
2. Governance is needed to cover administration, funding, representation and change control
 - Different models for this exist in other utilities
 - Funding could be proportionate to market share of NTPs in scope in order to be competitively neutral

Future Development

Cable/Fibre/Pay TV/Mobile or new entrants

The strengths of this proposal are the Hub and the flexibility of the underlying Data Model.

Having established a standardised central architecture which provides a single view of all telecoms services on the BT Openreach copper network, using CPRN as the universal unique reference, the model can be extended to handle specific entities in other networks – for example the IMSI for mobile networks.

There will no longer be a case for introducing bespoke migration processes as and when new networks emerge – there will be one standard interface to the marketplace and the data model can be adapted to cope.

Once a premises can have more than one CPRN from different networks, the need for a robust property referencing becomes essential and this will need to feature in the adapted Data Model, along with other network specific entities such as IMSI.

To extend this model to Fibre, the CPRN would represent a unique combination of ALI/Port/VLAN. It may be feasible to consider labelling CPRNs on the NTE in customers' premises to assist in identification of the correct comms socket – in much the same way as electricity or gas meter numbers can act as a useful additional co-ordinate to confirm the identity of the relevant supplies.

Conclusion

Key aspects of the GPL switching model we have outlined:

- A flexible data model, which is capable of simplified use for immediate application to the Openreach copper network ***but is also future proof*** in its detailed form, especially for inter network operation and the proliferation of fibre ports/VLANs
- Would be independently controlled at the centre on behalf of the market
- Would have transparent Governance
- Use would be audited and visible to the Regulator and/or Governance Authorities
- Has been done before e.g. water, gas, electricity
- Has the potential to complement other market processes such as Number Porting