

Classification: CONFIDENTIAL



Office of the  
Telecommunications  
Adjudicator

# One Touch Switch

## Industry Process


Authors:	Niall Gillespie (BT), Dave Stubbs (VirginO2), James Eddolls (Sky), Steve Cockerell (City Fibre)
Issue:	2.0
Status:	Second draft from OTS-DDG for review by the wider OTS working group
Last Update Date:	23/02/2022

Classification: CONFIDENTIAL

**Contents**

<b>1</b>	<b>INTRODUCTION</b> .....	<b>6</b>
1.1	OFCOM CONSULTATION AND STATEMENT DOCUMENTS.....	6
1.2	SECOND DRAFT .....	6
1.3	CHANGE LOG .....	7
<b>2</b>	<b>OVERVIEW OF ONE TOUCH SWITCH PROCESS</b> .....	<b>8</b>
2.1	COMMUNICATIONS PROVIDERS IMPACTED BY ONE TOUCH SWITCH .....	9
2.1.1	<i>Terminology: "Order"</i> .....	9
2.2	POSITIONING OF ONE TOUCH SWITCH RELATIVE TO OTHER GRCP PROCESSES .....	10
2.3	CONCEPT OF "SWITCHING INFORMATION" .....	10
<b>3</b>	<b>COMMUNICATIONS INDUSTRY HUB</b> .....	<b>11</b>
3.1	INTERACTIONS BETWEEN GRCP S AND LRCPs VIA THE HUB WILL ALL BE ASYNCHRONOUS .....	11
3.2	INDUSTRY HUB DATA FORMAT .....	11
3.3	USE OF RID TO ROUTE REQUESTS AND RESPONSES.....	11
3.4	HUB SUPPORTING SERVICES.....	12
3.5	SUPPORT FOR TESTING .....	12
<b>4</b>	<b>PROCESS FLOW DIAGRAMS</b> .....	<b>13</b>
<b>5</b>	<b>MATCH REQUEST AND RESPONSE</b> .....	<b>14</b>
5.1	SW1.1 CUSTOMER WANTS TO SWITCH .....	14
5.2	SW1.2 CUSTOMER CONTACTS GRCP VIA SALES CHANNEL .....	14
5.3	SW1.3 CUSTOMER PROVIDES DETAILS REQUIRED FOR INITIAL MATCH REQUEST .....	14
5.4	SW1.4 GAINING RETAIL PROVIDER TAKES DETAILS.....	14
5.4.1	<i>Identity of the losing retail provider</i> .....	15
5.4.2	<i>Location of services to be switched / ceased</i> .....	15
5.4.3	<i>Customer surname</i> .....	15
5.4.4	<i>Services to be switched or ceased</i> .....	16
5.5	SW1.5 GAINING RETAIL PROVIDER SENDS MATCH REQUEST TO HUB .....	17
5.6	SW1.6 HUB LOGS MATCH REQUEST AND ROUTES TO LOSING RETAIL PROVIDER .....	17
5.7	SW1.7 LOSING RETAIL PROVIDER PROCESSES MATCH REQUEST .....	18
5.8	SW1.8 LOSING RETAIL PROVIDER REPLIES WITH FAILURE TO MATCH.....	18
5.9	SW1.9 HUB LOGS MATCH RESPONSE AND ROUTES TO GAINING RETAIL PROVIDER .....	18
5.10	SW1.10 GAINING RETAIL PROVIDER RECEIVES FAILED MATCH RESPONSE .....	18
5.11	SW1.11 LOSING RETAIL PROVIDER FINDS A MATCH .....	19
5.11.1	<i>List of impacted services</i> .....	19
5.11.2	<i>Method of communication to customer of the switching information from the LRCP</i> .....	19
5.12	SW1.12 SUPPLY CHAIN PROVISION OF INFORMATION TO SUPPORT LRCP .....	20
5.13	SW1.13 LOSING RETAIL PROVIDER SENDS SWITCHING INFORMATION TO THEIR CUSTOMER .....	20
5.14	SW1.14 HUB LOGS MATCH RESPONSE AND ROUTES TO GAINING RETAIL PROVIDER .....	20
5.15	SW1.15 GAINING RETAIL PROVIDER CONFIRMS SUCCESSFUL RESULT TO THE CUSTOMER .....	20
5.16	END OF OVERALL STEP 1.....	20
<b>6</b>	<b>FURTHER DETAIL ON MATCH REQUEST AND RESPONSE</b> .....	<b>21</b>
6.1	SELECTION OF LOSING RETAIL PROVIDER AND LRCP RID .....	21
6.1.1	<i>Consumer v Business</i> .....	21
6.2	LOCATION DETAILS .....	22
6.3	ADDITIONAL (OPTIONAL) INFORMATION IN MATCH REQUEST.....	23
6.3.1	<i>LRCP account number / reference</i> .....	23
6.3.2	<i>LRCP matching using LRCP account number</i> .....	23
6.4	INFORMATION IN MATCH REQUEST ON SERVICES TO BE SWITCHED / CEASED.....	23
6.5	GENERATION OF SWITCH ORDER REFERENCE (SOR) BY LOSING RETAIL PROVIDER .....	25
6.6	INFORMATION IN MATCH RESPONSE ON SERVICES TO BE CEASED .....	26
6.7	IMPORTANCE OF SWITCHING IMPLICATIONS .....	27
6.8	OPTIONAL INFORMATION ON ADDITIONAL SERVICES .....	28
6.9	OPTIONAL INDICATION OF EARLY TERMINATION CHARGES.....	28
6.10	OPTIONAL INFORMATION, 3 APRIL 2023, AND TEST LRCP .....	28
<b>7</b>	<b>PROVISION OF SWITCHING INFORMATION TO THE CUSTOMER BY THE LOSING RETAIL PROVIDER</b> .....	<b>29</b>
7.1	INFORMATION SHOULD BE DISPATCHED BY THE LOSING PROVIDER .....	29

## Classification: CONFIDENTIAL

7.2	UPDATE OF CONTACT DETAILS AND RE-SENDING OF SWITCHING INFORMATION .....	29
7.3	FREQUENCY OF SENDING SWITCHING INFORMATION.....	29
<b>8</b>	<b>GAINING RETAIL PROVIDER SALES PROCESS AND ORDER CAPTURE .....</b>	<b>31</b>
8.1	SW1.16 REST OF GAINING RETAIL PROVIDER SALES PROCESS.....	31
8.2	SW1.17 GAINING RETAIL PROVIDER CAPTURES EXPRESS CONSENT.....	31
8.3	SW1.18 CUSTOMER DOES NOT PROVIDE CONSENT – CANCEL ORDER .....	31
8.4	SW1.19 CUSTOMER PROVIDES CONSENT – GAINING RETAIL PROVIDER RECORDS CONSENT.....	32
8.5	SW1.20 GAINING RETAIL PROVIDER PLACES ORDER.....	32
<b>9</b>	<b>ORDER PROCESSING.....</b>	<b>33</b>
9.1	SW1.21 CUSTOMER RECEIVES ORDER CONFIRMATION FROM GRCP.....	33
9.2	SW1.22 HUB LOGS SWITCH ORDER REQUEST AND ROUTES TO THE LOSING RETAIL PROVIDER .....	33
9.3	SW1.23 LOSING RETAIL PROVIDER RECEIVES SWITCH ORDER AND CONFIRMS ACCEPTANCE OR REJECTION.....	33
9.4	SW1.24 LOSING RETAIL PROVIDER SENDS NOTIFICATION TO CUSTOMER .....	33
9.5	SW1.25 HUB LOGS RESPONSE TO SWITCH ORDER AND ROUTES TO GAINING RETAIL PROVIDER .....	34
9.6	SW1.26 GAINING RETAIL PROVIDER RECEIVES RESPONSE FROM THE LRCP .....	34
9.7	SW1.27 GRCP HANDLING OF REJECTED SWITCH ORDER .....	34
9.8	SW1.28 GAINING SUPPLY CHAIN RECEIVES ORDER FROM GRCP .....	34
9.9	SW1.29 GAINING SUPPLY CHAIN RAISES NUMBER PORT ORDER(S) .....	35
9.10	SW1.30 GAINING SUPPLY CHAIN PROGRESSES ORDER(S).....	35
9.11	SW1.31 GAINING SUPPLY CHAIN COMPLETES ORDER(S).....	35
9.12	SW1.32 GAINING SUPPLY CHAIN COMPLETES NUMBER PORT ORDER(S).....	35
9.13	SW1.33 RECEIPT OF NOTIFICATIONS OF UNSOLICITED CEASE(S) BY LRCP .....	35
9.14	SW1.34 GAINING RETAIL PROVIDER RECEIVES ORDER(S) COMPLETION FROM SUPPLY CHAIN .....	36
9.15	SW1.35 CUSTOMER RECEIVES CONFIRMATION OF ORDER COMPLETION .....	36
9.16	SW1.36 HUB LOGS SWITCH ORDER TRIGGER MESSAGE AND ROUTES TO THE LOSING RETAIL PROVIDER .....	36
9.17	SW1.37 COMPLETION OF SWITCH ORDER BY LRCP.....	36
9.18	SW1.38 CEASE OF SERVICE(S) BY LOSING SUPPLY CHAIN .....	36
9.19	SW1.39 LOSING RETAIL PROVIDER NOTIFIES GRCP THAT SWITCH IS COMPLETE .....	37
9.20	SW1.40 HUB LOGS SWITCH ORDER COMPLETION AND ROUTES TO GAINING RETAIL PROVIDER.....	37
9.21	SW1.41 GAINING RETAIL PROVIDER RECEIVES NOTIFICATION THAT THE SWITCH IS COMPLETE .....	37
<b>10</b>	<b>MANUAL RESOLUTION OF SWITCH MATCH FAILURE – BACK OFFICE .....</b>	<b>38</b>
10.1	SW4.1 GRCP RAISES A TICKET FOR ASSISTANCE FROM LRCP .....	38
10.2	SW4.2 HUB TICKETING SYSTEM STORES THE TICKET AND NOTIFIES LRCP OF NEW COMMUNICATION .....	38
10.3	SW4.3 LRCP ACTIONS TICKET.....	38
10.4	SW4.4 HUB TICKETING SYSTEM - LOG AND FORWARD RESPONSE TO GRCP .....	38
10.5	SW4.4 GRCP ACTIONS TICKET.....	38
10.6	SW4.5 GRCP CLOSES TICKET.....	39
10.7	SW4.6 GRCP CONTACTS CUSTOMER .....	39
10.8	SW4.7 CUSTOMER RECEIVES PROMPT TO CONTACT GRCP .....	39
10.9	SW4.8 CUSTOMER PROVIDES DETAILS AS REQUESTED BY GRCP .....	39
10.10	CAPTURE OF THE SWITCH ORDER REQUEST CONTINUES AS PER SW1.....	39
10.11	SW4.10. HUB TICKETING SYSTEM UPDATES TICKET STATUS .....	39
<b>11</b>	<b>CANCEL OWN .....</b>	<b>40</b>
11.1	SW3.1 CUSTOMER WISHES TO CANCEL THE SWITCH .....	40
11.2	SW3.2 GRCP CANCELS THE PROVISION / TRANSFER ORDER(S) AND SWITCH ORDER.....	40
11.3	SW3.3 GAINING SUPPLY CHAIN CANCELS PROVISION / TRANSFER ORDER(S) .....	40
11.4	SW3.4 GAINING SUPPLY CHAIN NOTIFIES LOSING RETAIL PROVIDER OF CANCELLATION OF UNSOLICITED CEASE .....	40
11.5	SW3.5 LRCP RECEIVES NOTIFICATION OF CANCELLATION OF UNSOLICITED CEASE(S) .....	40
11.6	SW3.6 GRCP CREATES A SWITCH ORDER CANCELLATION REQUEST .....	40
11.7	SW3.7 HUB LOGS SWITCH ORDER CANCELLATION MESSAGE AND ROUTES TO THE LOSING RETAIL PROVIDER .....	40
11.8	SW3.8 LRCP RECEIVES SWITCH ORDER CANCELLATION REQUEST .....	41
11.9	SW3.9 LOSING SUPPLY CHAIN CANCELS CEASE ORDER.....	41
11.10	SW3.10 LRCP RESPONDS TO SWITCH ORDER CANCELLATION .....	41
11.11	SW3.11 HUB LOGS RESPONSE TO SWITCH ORDER CANCELLATION AND ROUTE TO GAINING RETAIL PROVIDER .....	41
11.12	SW3.12 GRCP – NO ACTION .....	41
<b>12</b>	<b>CANCEL OTHER.....</b>	<b>42</b>

## Classification: CONFIDENTIAL

12.1	SW2.1 CUSTOMER WISHES TO CANCEL SWITCH .....	42
12.2	SW2.2 LRCP CANCELS PENDING SWITCH ORDER .....	42
12.3	SW2.3 LRCP RAISES A REQUEST TO CANCEL UNSOLICITED CEASE(S) TO SUPPLY CHAIN.....	42
12.4	SW2.4 SHARED SUPPLY CHAIN RECEIVES CANCELLATION REQUEST .....	42
12.5	SW2.5 SHARED SUPPLY CHAIN INFORMS GRCP OF CANCELLATION OF PROVIDE ORDER .....	42
12.6	SW2.6 GRCP RECEIVES CANCELLATION NOTIFICATIONS .....	43
12.7	SW2.7 LRCP SEND A SWITCH ORDER CANCELLATION REQUEST .....	43
12.8	SW2.8 LRCP SEND A SWITCH ORDER CANCELLATION REQUEST .....	43
12.9	SW2.9 GRCP RECEIVES SWITCH ORDER CANCELLATION REQUEST.....	43
12.10	SW2.10 GAINING SUPPLY CHAIN CANCELS PROVISION ORDER(S).....	43
12.11	SW2.11 GRCP INFORMS LRCP THAT THE SWITCH ORDER HAS BEEN CANCELLED .....	43
12.12	SW2.12 HUB LOGS CONFIRMATION OF CANCELLATION AND ROUTES TO LOSING RETAIL PROVIDER .....	43
12.13	SW2.13 LRCP FINISHED.....	43
12.14	SW2.14 CANCEL OTHER REJECTION SENT TO LOSING RETAIL PROVIDER.....	43
12.15	SW2.15 HUB LOGS REJECTION OF CANCEL OTHER REQUEST AND ROUTES TO LOSING RETAIL PROVIDER .....	44
12.16	SW2.16 REJECTED CANCEL OTHER RESOLUTION .....	44
<b>13</b>	<b>LRCP RE-SEND OF SWITCHING INFORMATION (CHANGE OF COMMS METHOD/DETAILS) .....</b>	<b>45</b>
13.1	SW5.1 CUSTOMER – CHANGE TO CONTACT INFORMATION AND REQUEST RESEND OF SWITCHING IMPLICATIONS.....	45
13.2	SW5.2 LRCP – PROCESS REQUEST TO UPDATE COMMUNICATION METHOD AND RESEND IMPLICATIONS OF SWITCHING.....	45
<b>14</b>	<b>INTERACTION WITH NUMBER PORT .....</b>	<b>46</b>
14.1	GAINING SUPPLY CHAIN RESPONSIBILITIES .....	47
14.2	RIGHT TO PORT FOR ONE MONTH AFTER TERMINATION .....	47
14.3	HOME MOVE WITH NUMBER IMPORT .....	48
14.4	SUMMARY OF IMPACTS ON RCPs FROM THE COMBINATION OF OTS AND NUMBER PORTING .....	49
<b>15</b>	<b>SWITCH FROM MULTIPLE LRCPs TO ONE GRCP .....</b>	<b>50</b>
<b>16</b>	<b>UNHAPPY PATHS / FAILURE SCENARIOS.....</b>	<b>51</b>
<b>17</b>	<b>SUPPORT FOR SMALL RESELLERS.....</b>	<b>52</b>
17.1	SMALL RESELLER PORTAL.....	52
17.2	SMALL RESELLER PORTAL AS THE LRCP .....	52
17.3	SMALL RESELLER PORTAL AS THE GRCP .....	53
17.4	SMALL RESELLER PORTAL AS A TEST RCP .....	53
<b>18</b>	<b>TICKETING SYSTEM.....</b>	<b>54</b>
<b>19</b>	<b>APPENDIX 1: INPUT NEEDED FROM WIDER OTS COMMUNITY .....</b>	<b>55</b>
19.1	SLAs AND RESPONSE TIMES.....	55
<b>20</b>	<b>APPENDIX 2: DEFINITION OF COMMUNICATIONS PROVIDER. ....</b>	<b>56</b>
20.1	COMMUNICATIONS PROVIDERS IN THE CONTEXT OF THE ONE TOUCH SWITCH PROCESS .....	57
<b>21</b>	<b>APPENDIX 3: UNIQUE PROPERTY REFERENCE NUMBER (UPRN) .....</b>	<b>58</b>
21.1	UPRNs ARE AVAILABLE FOR ALL OF UK, INCLUDING NORTHERN IRELAND.....	58
21.2	DO ALL ADDRESSES HAVE UPRNs?.....	58
21.3	BUSINESS MATCHING .....	59
<b>22</b>	<b>APPENDIX 4: ASYNCHRONOUS COMMUNICATIONS PROCESSES VIA THE INDUSTRY HUB .....</b>	<b>60</b>
<b>23</b>	<b>APPENDIX 5: INDUSTRY HUB DATA FORMAT (JSON V XML) .....</b>	<b>62</b>
<b>24</b>	<b>APPENDIX 6: OBLIGATIONS ON LOSING RETAIL PROVIDER AROUND DELIVERY OF SWITCH INFORMATION .....</b>	<b>63</b>
<b>25</b>	<b>APPENDIX 7: OBLIGATION ON LOSING RETAIL PROVIDERS AROUND “NOTIFICATIONS” .....</b>	<b>64</b>
<b>26</b>	<b>APPENDIX 8: MIGRATION ON A WORKING DAY .....</b>	<b>68</b>
<b>27</b>	<b>APPENDIX 9: RESTRICTION ON USE OF CANCEL OTHER .....</b>	<b>69</b>
<b>28</b>	<b>APPENDIX 10: IMPACTS ON WHOLESALERS IN THE SUPPLY CHAIN.....</b>	<b>70</b>
<b>29</b>	<b>APPENDIX 11: NUMBERING PLAN DEFINITION OF RID.....</b>	<b>71</b>
<b>30</b>	<b>APPENDIX 12: HUB ONE TOUCH SWITCH MESSAGES .....</b>	<b>72</b>
30.1	SWITCH MATCH REQUEST .....	72
30.2	SWITCH MATCH SUCCESS .....	72
30.3	SWITCH MATCH FAILURE.....	72
30.4	SWITCH ORDER CREATE .....	72
30.5	SWITCH ORDER UPDATE.....	72

Classification: CONFIDENTIAL

30.6	SWITCH ORDER ACCEPTED.....	72
30.7	SWITCH ORDER FAILURE.....	72
30.8	SWITCH ORDER TRIGGER REQUEST.....	72
30.9	SWITCH ORDER CEASE SUCCESS.....	72
30.10	SWITCH ORDER CEASE FAILURE .....	72
30.11	CANCEL OTHER REQUEST.....	73
30.12	CANCEL OTHER SUCCESS .....	73
30.13	CANCEL OTHER FAILURE.....	73
30.14	CANCEL OWN REQUEST .....	73
30.15	CANCEL OWN SUCCESS .....	73
30.16	CANCEL OWN FAILURE.....	73
30.17	INVALID REQUEST .....	73

Classification: CONFIDENTIAL

## 1 Introduction

In February 2021, Ofcom “consulted on proposals for a new switching process for residential landline and broadband customers”.<sup>1</sup> In September 2021, they “published [their] final decisions on these changes, including [their] requirement for a new ‘One Touch Switch’ process where landline and broadband customers will only need to contact their new provider to switch”.<sup>2</sup>

Ofcom asked the Office of the Telecommunications Adjudicator (OTA) to kick start appropriate industry discussions. OTA convened cross-industry sessions which led to the formation of a Steering Group (OTS-SG) and a “Process Design Drafting Group” (OTS-DDG). This document is part of the output of OTS-DDG.

### 1.1 Ofcom consultation and statement documents

Ofcom have published a number of consultation and statement documents:

- The initial consultation on EECC began with a consultation on 17 December 2019, further statement and consultation on 27 October 2020 and final statement on 17 December 2020.  
<https://www.ofcom.org.uk/consultations-and-statements/category-1/proposals-to-implement-new-eecc>
- On 3 February 2021, Ofcom published a consultation on switching, with a further consultation and statement on 28 September 2021 and final statement on 3 February 2022.  
<https://www.ofcom.org.uk/consultations-and-statements/category-2/simpler-broadband-switching>
- This document makes references to the following Ofcom documents:
  - February 2021 Consultation<sup>1</sup>
  - September 2021 Consultation and Statement<sup>2</sup>
  - February 2022 Statement<sup>3</sup>
  - Revised General Conditions 3 April 2023<sup>4</sup>

### 1.2 Second Draft

In the OTS Design News – January 2022, OTA confirmed the formation of the OTS-SG (Steering Group) and announced the formation of the OTS-DDG (Design drafting group).

This is the second draft output from the OTS-DDG. This draft will be circulated by OTA to their wide distribution list of industry reps.

This draft may be shared within CPs impacted by Ofcom’s new EECC switching rules, and within industry bodies that represent the interest of CPs. It is not for public consumption at this stage.

The OTS-DDG members have continued to hold regular calls since the since the circulation of the first draft, and have put in many more hours to produce this second draft. We hope that it will be well received by the wider industry, and will welcome constructive feedback.

Appendix 1 lists a number of areas where the OTS-DDG is seeking input from the wider industry.

<sup>1</sup> Ofcom, February 2021. [Quick, easy and reliable switching: Proposals for a new landline and broadband switching process and to improve information for mobile switching](#) (February 2021 Consultation)

<sup>2</sup> Ofcom, September 2021. [Quick, easy and reliable switching: Statement and consultation on a new landline and broadband switching process and improved information for mobile switching](#) (September 2021 Statement and Consultation)

<sup>3</sup> Ofcom, February 2022. [Quick, easy and reliable switching: Statement on changes to the General Conditions](#)

<sup>4</sup> Ofcom, [General Conditions of Entitlement \(Unofficial Consolidated Version\)](#) with effect from: 3 April 2023 (General Conditions April 2023)

Classification: CONFIDENTIAL

**1.3 Change Log**

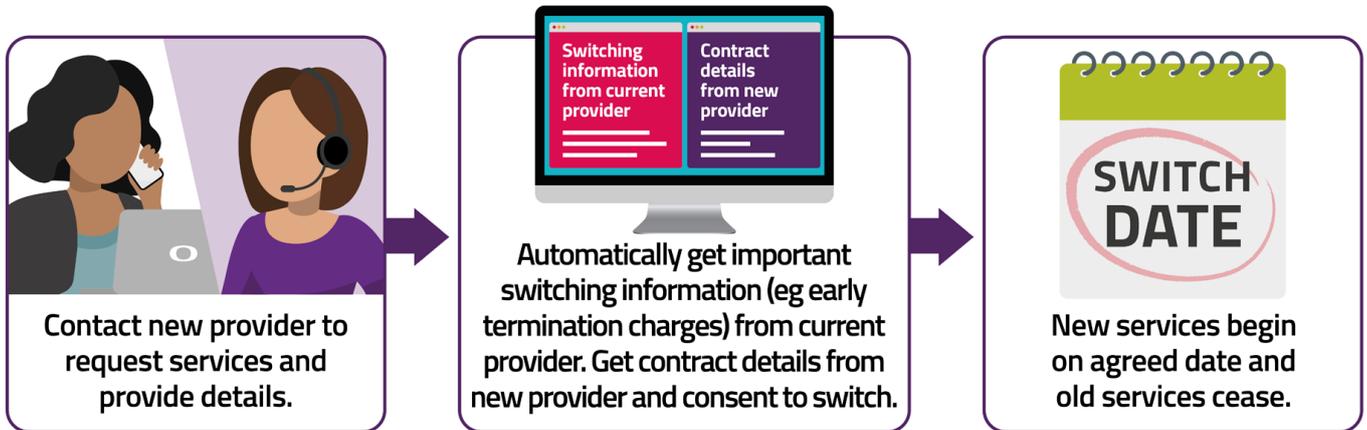
<b>Version Date Changed By</b>	<b>Reason for change</b>
Initial working drafts January 2022 OTS-DDG	Initial series of working draft only circulated within the OTS-DDG.
v1.0 First draft 24/01/2022 OTS-DDG	First draft output from the OTS-DDG (design drafting group) established by OTA and OTA-SG (steering group). This draft will be circulated by OTA to their wide distribution list of industry reps.
v1.x working drafts February 2022 OTS-DDG	Various working drafts circulated within the OTS-DDG and shared with respondent to v1.0 to gain their agreement on corrections / improvements to workings and explanations.
v2.0 Second draft 23/02/2022 OTS-DDG	Second draft output from the OTS-DDG. This draft incorporates all the feedback on v1.0, plus addition of proposals for small resellers.

Classification: CONFIDENTIAL

## 2 Overview of One Touch Switch process

This section provides an overview of the “One Touch Switch” (OTS) process, especially for those who may not have read Ofcom’s Consultation and Statement documents, or their General Conditions. (Readers are very strongly encouraged to also read those documents.)

The following figure (taken from Ofcom’s September 2021 Statement) gives an overview of the One Touch Switch process:



The following steps were documented in Ofcom’s September 2021 Statement (but step 2 has been updated to refer to Ofcom’s changes around the contact method and details used by the losing provider, and we’ve clarified a few points):

Step	Description
<b>Step 1: Customer contacts the gaining provider and provides details</b>	<ul style="list-style-type: none"> <li>The customer contacts their chosen gaining provider (in store, online or by phone) and requests to switch their services.</li> <li>The customer shares their: <ul style="list-style-type: none"> <li>name;</li> <li>address and postcode;</li> <li>contact details;</li> <li>losing provider’s name; and</li> <li>the services they want to switch.</li> </ul> </li> <li>The customer chooses the new services, confirms if they want to keep their phone number and agrees a switch date (this can be as soon as the next day, but can take longer). The gaining provider confirms whether any engineer visits are necessary.</li> <li>The gaining provider identifies the correct customer and services to switch. If this is unsuccessful (i.e. there is no match against the losing provider’s records), the gaining provider asks the customer for more details (e.g. losing provider account number, phone number or serial number on their equipment).</li> </ul>
<b>Step 2: Losing provider automatically gives customer switching information and customer gives the gaining provider their consent to the switch</b>	<ul style="list-style-type: none"> <li>The losing provider automatically gives the customer switching information (e.g. early termination charges, impact on other services) without the need for the customer to request it. The information is provided by the quickest communication method available (unless the customer has requested otherwise) and the losing provider will notify the gaining provider of the method by which the switching information has been sent, so they can tell the customer.</li> <li>The gaining provider gives the customer information about their new contract.</li> <li>After having the opportunity to consider the information, if the customer is happy to proceed, they give the gaining provider their consent to switch (who retains a record of consent). This can happen in real time during their phone or online conversation.</li> <li>The gaining provider confirms the start date and the services being provided.</li> </ul>
<b>Step 3: Customer’s new services begin on agreed date</b>	<ul style="list-style-type: none"> <li>On the agreed date the new services will start and the old services will end. If requested, the customer’s phone number is transferred.</li> <li>The customer does not have to pay any notice period charges beyond the switch date.</li> <li>Note that early termination charges may apply.</li> </ul>

Subsequent sections of this document will describe the One Touch Switch process in greater detail.

Classification: CONFIDENTIAL

## 2.1 Communications Providers impacted by One Touch Switch

Throughout their September 2021 Statement, Ofcom uses the terms “losing provider” and “gaining provider” (and only uses the term “retailer” in reference to switching by energy customers).

In the “Revised General Conditions 3 April 2023”<sup>4</sup>, Ofcom provides the following definitions:

**‘Losing Provider’** means the **Communications Provider** from whom a **Switching Customer** is or is considering transferring;

**‘Gaining Provider’** means:

- (a) the **Communications Provider** to whom a **Switching Customer** is or is considering transferring; or
- (b) the **Communications Provider** to whom an **Inbound Switching Customer** makes a **Home-Move Request**;

**‘Communications Provider’** means a person who (within the meaning of section 32(4) of the **Act**) provides an **Electronic Communications Network** or an **Electronic Communications Service**;

Ofcom’s definition of a CP therefore covers every organisation from access or infrastructure providers at one extreme to the smallest retailer at the opposite extreme. Given the target audience, this Industry Process uses the following terminology:

- “Retail Communications Provider” (RCP, LRCP, GRCP). Retail providers sell directly to end customers. We sometime refer to this provider as “the name on the bill”.
- “Communications Network Provider” (CNP) - (See Appendix 2 for an example of where Ofcom use this terminology and abbreviations.) The term “network” covers both physical copper / fibre, and any form of communications network. For the purposes of OTS, it is more useful to distinguish:
  - “Access Communications Provider” (ACP, LACP, GACP). – may also be known as the “infrastructure provider”. This is the most upstream CP that owns the “kit in the ground”, e.g. Openreach, Virgin, full-fibre alt-net.
  - “Voice Communications Provider” (VCP, LVCP, GVCP). Voice providers (or voice operators) operate voice services, and typically hold (one or more) CUPIDs used in number porting. E.g. Sky and TalkTalk rent LLU (MPF) lines from Openreach, but operate their own voice services over these lines.
- Some wholesalers also operate communications network (e.g. BT Wholesale), and other may act as an interface between multiple retailers and multiple network / access / voice providers, but not operate any network of their own.
- Some CPs are often described as “vertically integrated”, and may operate as all the types of CP listed above. In reading this industry process, such CPs may need to consider their responsibilities as e.g. a retail CP or an access CP.
  - Note that some vertical CPs (e.g. Virgin) in reality have internal divisions and systems that separate network/voice and retail operations.
- Third Party Integrators (TPIs) were originally established to support small retailers interacting with Openreach. It is not clear if Ofcom would consider a TPI as a CP, but some TPIs may choose to offer services in support of OTS.

The One Touch Switch rules and process apply primarily to retail providers, although there are ripple effects on network / access providers, voice operators and wholesalers.

### 2.1.1 Terminology: “Order”

In the review comments on draft version 1.0 of this document, there was some confusion around the use of “order” which it might be useful to address. Many CPs have the concept of an order, but the content of that order differs depending on the role of the CP:

- The retail CP will have a “sales order” or a “customer order”, typically held in their CRM system. They may create this order before the customer provides express consent to proceed with a switch, e.g. it may sit in a “Pending” state until the customer give their consent.
- Network / access CPs also typically refer to orders. E.g. for a simultaneous provide of WLR and broadband, Openreach will have two linked orders. It is not expected that GRCPs will raise orders into their supply chain / ACP until the customer has given their express consent to the switch.
- The Number Port Provisioning Core Processes refers to number port request as “orders”. Again these orders will only be raised after customer gives consent.
  - Note that some RCPs use a supply chain which isolates them from the true geo number porting order. E.g. Openreach supports number port requests as part of a WLR order, and Openreach generate the geo number porting order behind the scenes.

**Classification: CONFIDENTIAL**

- Once the customer gives consent to a switch, there will a “switch order” from the GRCP (via the Hub) to the LRCP.
  - Openreach referred to their orders under the former NOT+ process as “transfer orders”. This document retains that use of “transfer order” when talking about ACP orders to support a customer switch, and uses “switch order” for the retailer → retailer order that goes via the Hub.

**2.2 Positioning of One Touch Switch relative to other GRCP processes**

In capturing a switch request from a customer, a gaining retail provider is also capturing a provision order from the customer.

It is important to note that other provisions of EECC and resultant Ofcom General Conditions also apply to this provision order. These include (but are not limited to):

- Condition B3 (Obligation to enable number portability) – where the switch involves number porting.
- Condition C1 (Contract requirements), including Contract Information and Contract Summary.
- Condition C5 (Measure to meet the needs of vulnerable consumers and end-users with disabilities).

A customer approaching a potential gaining retail provider, particularly via an on-line channel, may pass through several steps such as providing their address, retrieving service availability at that location (e.g. is full-fibre available?), presentation and choice of options/packages/offers, and choice of whether they want optional services (such as a VoIP service). Many of these steps may happen before the customer is given the opportunity to assert that they are a switching customer.

The set and sequence of steps may vary from one provider to another, and from one sales channel to another of the same provider.

It is strongly recommended that GRCPs do not start the OTS matching process until they have a level of confidence that the customer intends to take the GRCP services. See §5.2 below for more explanation of this point.

This document and the accompanying process flow diagrams concentrate on the steps and interactions that are specific to switching, and should be read in that context. They do not attempt to identify all the steps that the gaining retail provider may take, nor do they fully specify the steps necessary for compliance with Condition C1 – providers are advised to make themselves familiar with the full set of General Conditions published by Ofcom.

**2.3 Concept of “Switching Information”**

In their September 2021 Statement, Ofcom stated that a customer must give express consent to a switch, meaning the express agreement of the customer obtained in such a manner which has enabled the customer to make an informed choice

They reiterated that the decision on the part of a customer to switch services involves both:

- a decision to accept a contract for new services with a gaining provider; and
- a decision to cancel a contract for services with the losing provider.

It follows that in order for a customer to make an informed choice about whether to switch their services, and therefore to be in a position to give their express consent to a switch, the customer needs to have been given information about both:

- the new services they are taking with the gaining provider; and
- the consequences of their decision to cancel their services with the losing provider.

Footnote 42 of the Statement states that the switching information rules are set out in GCs C7.10-13 – these rules cover Regulated Providers, both in the gaining and losing position.

So in most general terms, “switching information” covers information provided by both providers. When we talk about losing providers sending switching information, they can only provide the information known to them, e.g. early termination charges and impacts on other services provided by that provider.

Classification: CONFIDENTIAL

### 3 Communications Industry Hub

Ofcom have determined that the One Touch Switch process will “apply to residential customers who are switching Fixed Communications Services at the same location”. Many of Ofcom’s “switching rules” also apply to businesses, and it is very likely that business switching will use a variant of the One Touch Switch process.

It is estimated that there may be 2,000 Communications Providers (CPs) in the UK. Even considering only those retail CPs who service residential customers, there are still too many for “point to point” communication. So One Touch Switch will use a “hub and spoke” arrangement, where all CPs interact via an Industry Hub.

In the industry submissions to Ofcom, the proposed Hub was termed the Retail Service Switching Hub (RSSH). There are emerging proposals that the same Hub may be used for messaging between network/voice providers (notably messages related to number porting in relation to a future centralised database). So it makes sense to adopt a name that does not imply restriction to use only by CPs who are retailers. This document mostly use the term “Industry Hub” or the simpler term “the Hub”.

The OTS-SG announced on 10 January 2022 the appointment of Gemserv who would undertake the investigation into Governance [of the Hub] and produce a report for the OTS-SG. This report was delivered on 31/01/2022.

For the purposes of One Touch Switch, the Hub (or the Hub Service Provider) will provide the following facilities:

- Mechanisms for “on boarding” of new RCPs, and for existing RCPs to update information such as their RID(s).
- Publication of a centralised list of RIDs and RCP brand names (“name on the bill”).
- Support for match requests and responses.
- Support for switch order requests and responses.
- Support for switch order updates and cancellations.
- Support for auditing of switching transactions, and for MIS, primarily to support any Ofcom investigations, but also for use by CPs connected to the Hub.
- Support for testing, including simulation of a test RCP that RCPs can interact with to verify their processes and implementation.

It is also likely that the Hub Service Provider will facilitate “back channel” communication between RCPs for resolution of issues. This might take the form of a ticket system.

#### 3.1 Interactions between GRCPs and LRCPs via the Hub will all be asynchronous

See Appendix 4 for a full explanation as to why all the communication processes via the Hub will be asynchronous.

#### 3.2 Industry Hub data format

See Appendix 5 for a full explanation of why JSON has been specified as the messaging format for all transactions passing through the Hub.

Note that the Hub will act primarily as a “post office”, routing messages from one part to another, but doing no processing on those messages, other than storing them for audit and MIS purposes.

#### 3.3 Use of RID to route requests and responses

There is an existing concept of a “reseller identification” code, usually abbreviated to RID. RIDs are managed by Ofcom and published in the numbering section of their website.<sup>5</sup> (§6.1 goes into more detail on use of RIDs, including by those CPs who hold multiples RIDs.)

RCPs will require a RID to take part in the One Touch Switch process. Most RCPs had a RID before One Touch Switch, and those that don’t can apply to Ofcom for allocation of a RID.

All messages sent via the Hub will require both:

1. RID of the sender – the Hub will validate that the message is originating from a source point that is authorised to use that RID.

<sup>5</sup> <https://www.ofcom.org.uk/phones-telecoms-and-internet/information-for-industry/numbering>

Classification: CONFIDENTIAL

2. RID of the target – the Hub will look up the end point to deliver the message to.

Any updates to end points would be via processes exposed by the Hub Service Provider – the sending RCP sends to the Hub, and does not need to know the end point that the Hub will route to for the target RCP.

Note that a response message will use the sender of the original request as the target of the response message.

### **3.4 Hub supporting services**

In addition to inter provider asynchronous communications, the Hub will also provide a number of synchronous convenience services.

The first such service will provide the ability to request (via an API exposed by the Hub) a current list of the RIDs supported for switching with a view that GRCPs will regularly (e.g. daily) refresh the list they present in their sales channels when selecting the LRCP.

The Hub may be expanded with other convenience services as they are identified. The selection of synchronous vs asynchronous protocols for the messaging protocols comes down to a single principal: if the interaction is point to point between two parties, then synchronous is appropriate; if the interaction requires 3 or more parties, then the protocols will be asynchronous as previously described.

### **3.5 Support for testing**

The Hub Service Provider will be required to support cross-industry testing.

It is likely that the Hub Service Provider will support a testing environment similar to the concept of Openreach's "Customer Verification Facility" (CVF) – an environment which accepts requests and produces responses in valid formats, but where the testers working for a CP can control the timing and content of messages (e.g. simulate either a successful match or any variation of failed match).

The Hub Service Provider may also support a "Test RCP" for live verification testing (but see the issue described in §21.2 around UPRNs for Openreach's CP Test Facility in Swansea).

Classification: CONFIDENTIAL

## 4 Process flow diagrams

This version of this document is accompanied by a separate set of process flow diagrams, with swim-lanes for customer, GRCP, Hub, LRCP and supply chain.

Each step in the process flows is numbered, as follows:

- “SW” prefix (short for “switching”)
- Process flow number
- Step number

E.g. “SW1.2” is the 2<sup>nd</sup> step of process flow 1 (the main switching process). These step numbers are used for cross-reference with this document.

The process flow diagrams have been prepared in Visio, and will be shared as a PDF alongside this document.

In time, we will likely embed snippets of the process flow diagram at relevant points in this document, but for January / February 2022 that is not on the critical path.

Classification: CONFIDENTIAL

## 5 Match request and response

Step 1 of the overall One Touch Switch process (see §2 above) is when the customer contacts the gaining retail provider and provides details which can be used by the gaining retail provider to consult the losing retail provider<sup>6</sup> (via the Hub).

Throughout this document we refer to the interactions between the GRCP and LRCP at this overall step as the “match request” and “match response”.

This section takes the reader through the steps in sequence, to establish an understanding of the main process flow. §6 below provides greater detail on different variants, but needs the reader to first understand the basic flow in this section.

### 5.1 SW1.1 Customer wants to switch

This step represents the state of mind of the customer. It may be prompted by receipt of an End-of-contract Notification from their current provider, or by changes in contractual terms or pricing, but customers are in control of the timing. At this stage, the customer may only be considering switching, and may approach several potential gaining retail providers to compare their offers. The consideration to switch may also be promoted by outbound marketing by retail providers who are trying to gain customers.

### 5.2 SW1.2 Customer contacts GRCP via sales channel

As a reminder of §2.2 above, capturing the information needed for a match request should not be the first step for a gaining retail provider. At this step in the customer journey, the gaining retail provider should ascertain service availability at the customer’s address and pitch offers to the customer, possibly to the extent of deciding on broadband only (no voice) or switching of voice with retention of existing number.

Communications retail providers are encouraged to create sales processes that allow customers to explore the available options when considering switching, and only start the matching process when there is some indication that the customer wants to explore the full impacts of switching. This will minimise the load placed on losing retail providers, and reduce worries about receipt of repeated switching information from their current provider being regarded by customers as a nuisance.<sup>7</sup>

See also §7.3 for a discussion around the frequency of sending switching information, and Appendix 7 for further detail.

### 5.3 SW1.3 Customer provides details required for initial match request

A customer considering switching (beyond a high level exploration of service availability and offers) will need to provide details for the GRCP to attempt a match with the LRCP.

### 5.4 SW1.4 Gaining retail provider takes details

Condition C7.10 requires that “Regulated Providers must [...] provide guidance on the Communications Provider Migration process, including the right to compensation in accordance with Condition C7.47...” Retail providers will thus need to provide customers with some guidance on the switching process at this point (if not already provided).

If the customer advises that they wish to switch services from another provider, the gaining retail provider will need to follow a matching process via the Hub with the losing retail provider. There are several key pieces of information needed to attempt an initial match:

- Identify of the losing retail provider.
- Location of services to be switched.
- Surname of customer.
- Services to be switched / ceased (including any telephone number that the customer wishes to retain).

---

<sup>6</sup> This document uses the term “losing retail provider” to refer to the RCP who would be the LRCP if a switch order were to be placed, and only uses the term “current retail provider” where it makes linguistic sense (e.g. the phrase “the customer will not know the RID of their current retail provider” reads more easily than “... the RID of their losing retail provider”).

<sup>7</sup> E.g. a customer may use the public websites of a number of communications retail providers to check service availability at their address, and to explore and compare the available offers. The customer is unlikely to welcome multiple provisions of switching information by their current retail provider, especially if there is no or little difference.

**Classification: CONFIDENTIAL**

There is other optional information that can be provided. If the initial attempt to match fails, the GRCP can ask the customer to provide e.g. their account number with the losing retail provider. This extra information cannot be mandatory for an initial attempt at matching, though a customer may choose to proactively provide extra information. §6 below documents the other optional information that can be provided.

At this point the GRCP is also gaining the customer's consent to interact with the LRCP (via the Hub) to attempt a match and trigger dispatch of switching information by the LRCP.

**5.4.1 Identity of the losing retail provider**

This is a key piece of information to attempt a match – without this, the Hub would not know where to route the match request.

See §6.1 below for more detail on RID selection – this section continues to give an overview of the matching process for readers that are new to One Touch Switch concepts.

**5.4.2 Location of services to be switched / ceased**

This is another key piece of information to attempt a match – losing retail providers are likely to use location as the primary search within their asset data.

Matching will be based on the GRCP providing the customer address including a matching UPRN – see Appendix 3 for some background to and discussion of UPRN. Note that the request message will include all of the elements of the address (not just the UPRN) – this is to assist in creating an audit trail that can be more easily read by humans.

Many provider journeys will already have ascertained the service availability, and by implication will have captured the customer's address, including the GRCP's matched UPRN.

**Question for wider OTS community:**

BT Consumer currently support a customer moving home, wanting to port DN from LRCP at old address, and wanting BT service (WLR or Digital Voice) at new address – currently this is just optional capture of old postcode for the number port validation. It is likely that other RCPs also support such a customer interaction.

Should we continue to support an equivalent of this process as part of OTS?

Or will retail providers such as BT Consumer consider this as a provision with number import as per the (unchanged) geo number porting industry process? The new "right to port" rules should make this easier, as we don't need to worry about service being ceased at old address before provision at new address.

**Update from feedback on v1.0**

See §14.3 for a full discussion.

**5.4.3 Customer surname**

For clarity, provision of customer surname only applies to switching by Consumers.

This document does not yet cover business switching, where business name is likely to be needed instead of surname.

The choice of customer surname only was based on a number of factors:

- Ofcom wanted a switching process that was quick, easy and reliable.
- Some losing retail providers might only record initials and not full first name / given name, e.g. customers who had been with BT for many years.

The GRCP and LCRP will both apply the following conversions to the surname:

- Any accented characters will be replaced by the equivalent non-accented character.
- All characters will be converted to upper case.
- Any characters outside of A-Z will be removed.

The GRCP will send the ALL CAPS A-Z version of the surname in the match request.

**Classification: CONFIDENTIAL**

Note that a customer should be permitted to provide a different surname to the one used for credit checking or establishment of potential contract with GRCP:

- The LRCP might have an incorrect spelling, or a different format of name.
- The LRCP might hold a former name, e.g. a name before marriage or civil partnership or deed poll.

**Update from feedback on v1.0**

OTA organised a call on 02/02 and the output of that call is incorporated in the bullet points above.

**5.4.4 Services to be switched or ceased**

The Ofcom documents (and the original industry submissions) mostly refer to the “services to be switched”. However this Industry Process more accurately acknowledges that voice might be ceased instead of being switched, as per the following explanation.

The One Touch Switch rules in the revised General Conditions apply only to Internet Access Service (IAS) and Number-based Interpersonal Communications Service (NBICS) (more commonly referred to as “broadband”<sup>8</sup> and “voice”).

In many networks, the broadband and voice are technically linked, e.g:

- In the Openreach network, ADSL and FTTC broadband require an underlying WLR or MPF service (although SOGEA and FTTP do not).
- VoIP services are commonly dependent on the underlying broadband service.

Even where not technically linked, they are often strongly linked by contracts and bundles.

Today, most customers who have broadband also have a voice service, due to the historical technical need to have WLR/MPF or equivalents in other networks. Many customers no longer use their “landline”, relying entirely on mobile and services such as WhatsApp, FaceTime or Facebook Messenger for voice connectivity.

Increasingly, many providers are offering “broadband only” services, e.g. using Openreach’s SOGEA or full-fibre services, and do not force the customer to take a VoIP service that they will not use.

Taking all of the above into account, a customer switching from voice and broadband with an LRCP to broadband only with a GRCP may want one of two things:

1. We believe that the majority of customers requesting broadband only will want to end up with only broadband, and thus want their former “landline” service to be ceased – and they will expect a gainer provider led process to trigger the cease.
2. A very small numbers of customers will want to only switch broadband, and positively retain voice with their LRCP – but increasingly we do not expect this to be technically feasible.
3. (For the avoidance of any doubt, the customer will also have the option of switching both broadband and voice, as long as the GRCP offer voice services.)

**Question for wider OTS community:**

Given the expected small numbers, are GRCPs obliged to offer option 2? Especially with forthcoming switch-off of WLR and move to full-fibre. Increasingly GRCPs are ordering SOGEA, which forces cessation of any underlying WLR. And FTTC cannot be provided by a different CP from the CP owning any MPF.

**Update from feedback on v1.0**

Unfortunately the scenario was misunderstood by many respondents – so I’ve clarified that option 1 was intended to cover when the customer explicitly wanted to end up with only broadband and no voice (and added option 3 to make clear that switching voice is an option for the customer.

Option 2 mainly applies when the voice is WLR. The WLR PSTN network will be shut down by 2025, “stop sell” is already active in some areas, and national “stop sell” is September 2023. A customer initiated switch is an excellent point to ensure that the customer is not left with a WLR service that will have to be forcibly ceased at a later date.

<sup>8</sup> In the September 2021 Consultation the stakeholder comments included “Three said that its home broadband product, where customers can use a Three mobile data SIM in a mobile router device, should be out of scope of any fixed switching GC requirements...” and later “In response to Three’s question, we confirm that the new process must be available for use by all residential customers switching fixed voice and broadband services (those services within scope of the new switching rules provided at the same location) regardless of the technology or network the provider uses.” So please be aware that Internet Access Service is the term used by Ofcom in their General Conditions.

Classification: CONFIDENTIAL

It seems therefore that few GRCPs will want to support option 2. They will want to purchase services from their supply chain that have a long-term life (e.g. SOGEA(VDSL) rather than FTTC(VDSL)) and force the customer to make a positive decision to either switch voice to the GRCP's VoIP service or cease it with the LRCP.

Supporting option 1 as the default behaviour for most customers has several impacts:

- The match request should include both broadband and voice, so that switching information provided by the LRCP includes loss of voice (even where the LRCP might have a technical ability to retain their voice service), and the match response confirms to the GRCP that there is voice to be ceased. The GRCP can then inform the customer of the loss of voice service if they proceed with the switch.
- The switch order should positively ask for both broadband and voice to be ceased, even when the GRCP is providing broadband only.

Supporting option 2 also has several impacts:

- If the GRCP is proposing to only switch broadband, their match request will include only broadband.
- But the LRCP has voice service which is dependent on their broadband, their response must include voice, with an indication that the voice will be ceased if the broadband is switched. The GRCP can then inform the customer that the LRCP has indicated that the former voice service cannot continue.

There are some problems with supporting the above:

- Consider that LRCP has WLR + SMPF. If the GRCP is going to use SOGEA, WLR must die. But if the GRCP is going to use FTTP, the WLR could stay. And the LRCP won't know. Plus Openreach want to strip out copper from FTTP Brownfields installs.
- Rate limiting of impacts of switching could be harder.
- Do we take an industry stance that customers wanting option 2 need to do cease and provide themselves – OTS is for mass-market standard switches only?
- Or do we say that matches always include voice, but LRCP match response indicates if the voice can survive the cessation/switch of BB? See last bullet point of §6.6.

So this document will typically refer to the “services to be ceased by the LRCP”, with an assumption that one or more corresponding services will also be provided by the GRCP, meaning the overall interaction will be considered a switch from the point of view of the customer (and Ofcom).

See §6.3 below for further details on service information within a match request – this section continues to give an overview of the matching process for readers that are new to One Touch Switch concepts.

### **5.5 SW1.5 Gaining retail provider sends match request to Hub**

As interactions between RCPs and the Hub will be asynchronous, it will be necessary for the gaining retail provider to generate a correlation identifier to include in the match request. When the losing retail provider sends a match response (via the Hub), it will include the correlation identifier (to enable the GRCP to correlate the response with their request).

A successful match response will also include a Switch Order Reference (SOR) (i.e. correlation identifier and SOR are different concepts and data values.)

We need to agree format. The combination of GRCP RID and correlation identifier should be unique. E.g. GUID.

#### **Update from feedback on v1.0**

The few respondents who commented were in favour of GUID.

### **5.6 SW1.6 Hub logs match request and routes to losing retail provider**

The Hub will log the match request message (for audit trail purposes) and route the request to an end point as defined by the RCP that owns the losing retail provider RID.

The losing retail provider could nominate another CP (e.g. their upstream reseller or wholesaler) to receive and process their match requests.

Classification: CONFIDENTIAL

### **5.7 SW1.7 Losing retail provider processes match request**

The losing retail provider will receive the match request from the Hub, and will attempt to find a match. The algorithm adopted by the losing retail provider will have the following elements

- Does the losing retail provider recognise the address, keyed primarily by the UPRN?
- Does the losing retail provider have any customers with active service at that location?
- If so, do any of those customers match on surname? The LRCP should apply the same conversion as documented in §5.4.3 before checking for an exact match with the value supplied by the GRCP.

If the LRCP finds a single matching customer, they will return a match response with an indication of success and a Switch Order Reference (SOR) (see §5.11 on step SW1.11 below for details).

Note that the LRCP does not need to search for any former customers with former services at that location. This means that OTS match request do not support verification of customer who are asserting that they have a “right to port” – see §14.2 for details on “right to port”.

### **5.8 SW1.8 Losing retail provider replies with failure to match**

If the LRCP does not find a single matching customer, they will return a match response with an indication of failure (step SW 1.8). The failures (and possible GRCP responses) could be:

- No customers found with service at that location.
  - The GRCP could check that the customer has provided the correct LRCP and location.
- One or more customers found, but no exact match on surname.
  - The GRCP could check with the customer the spelling of the surname as held by the LRCP.
- Multiple customers found, with multiple customers matching on surname (e.g. two family members with same surname have services at the same address).
  - The GRCP could ask the customer to provide their account number with the LRCP.
- Customer found with matching surname, but they have multiple services at the same address.
  - Adding account number may result in the same response, but the GRCP could ask the customer to provide extra service information (this could be as simple as the telephone number), or invoke back-channel processes for the LRCP to provide extra service information.
- Location not found
  - E.g. the UPRN does not exist, or is outside the LRCP’s coverage area.

For the avoidance of any doubt, in these scenarios the losing retail provider will not send any switching information to the customer, and will not generate a Switch Order Reference.

### **5.9 SW1.9 Hub logs match response and routes to gaining retail provider**

The Hub will log the match response message (for audit trail purposes) and route the request to an end point as defined by the RCP that owns the gaining retail provider RID.

Any updates to end points would be via processes exposed by the Hub Service Provider – the LRCP sends to the Hub, and does not need to know the end point that the Hub will route to for the GRCP.

### **5.10 SW1.10 Gaining retail provider receives failed match response**

The gaining retail provider will inform the customer of the failed response, and may attempt to resolve the non-match. Resolutions could include:

- Correction to information already provided, such as correction of spelling of surname to match the variant held by the LRCP.
- Addition of extra information, such as the LRCP account number, or additional service identifiers.

Note that the customer could drop off and return later (e.g. when they find their LRCP account number). When they return, they may be able to provide the extra information in the initial steps of their second interaction with the GRCP (e.g. they complete optional fields that they skipped on their first interaction), or the GRCP implementation (especially for on-line) may force them to repeat a simple match (with the same failure) and only then permit them to supply extra information.

The customer may also choose to abandon their attempt to switch services.

**Classification: CONFIDENTIAL**

The GRCP may also use back-channel processes to interact with the LRCP, who may provide corrected information (e.g. the spelling of surname as held by the LRCP) or additional information (e.g. service reference as used by the LRCP). Note that these back-channel processes will not be real-time, and a successful match (via the Hub) with return of Switch Order Reference is needed to proceed with a switch order. See §10 for more details of these manual processes.

If the GRCP is able to correct or add information, they send a fresh match request to the Hub. The GRCP may re-use the original correlation identifier, or create a new identifier, depending upon their own internal implementation.

**5.11 SW1.11 Losing retail provider finds a match**

If the losing retail provider finds a customer at the address, where there is a match on surname (or an alternative match such as LRCP account number – see §6.3.1 below), and at least one of the requested services is matched, the LRCP should return a positive match response to the GRCP (via the Hub).

There are several key pieces of information that the LRCP must include in the response message that it generates to be sent to the GRCP (via the Hub):

- Correlation identifier – the LRCP must reflect the identifier generated by the GRCP (so that the GRCP can correlate this response with their earlier request).
- List of impacted services – mandatory with optional elements.
- Indication of whether or not any early termination charges apply<sup>9</sup> – optional (see §6.9 below).
- Method of communication to customer of the switching information from the LRCP – mandatory.

**5.11.1 List of impacted services**

The match response message must include a response for each service that was included in the match request – e.g. if the match request included voice, but no voice service was found, the response must provide that information.

The LRCP may include information on other significant services that are impacted, e.g. that TV service will be ceased as it can no longer be technically supported. See §6.8 below for more details.

**5.11.2 Method of communication to customer of the switching information from the LRCP**

GC C7.27(b) is explicit that the losing retail provider must “inform the **Gaining Provider** of the means by which this [switching] information has been made available to the **Fixed Switching Customer**”.<sup>10</sup>

Note the requirement is to provide only the method, e.g. email or letter, and the LRCP does not need to include details such as the email address used.

The LRCP may choose to send the switching information by multiple means, and should indicate all the means which would constitute a durable medium. E.g. if the full information is sent by letter, and the LRCP chooses to also send an SMS message advising only that an important letter is on its way (but the SMS does not replicate all the switching information), then letter is the only means which should be reported.

GRCPs must be able to handle a potential list, and advise the customer which means have been used.

Should we support a list, e.g. if LRCP chooses to send email and letter along with an SMS warning?

**Update from feedback on v1.0**

One respondent noted that the GC C7.27(b) reads “the means by which this information has been made available” and “means” is no way a singular word. Another respondent noted that Ofcom had only asked for the information to be sent via the quickest communications method, and that the most important thing was to know if it was letter only.

See full proposal above.

<sup>9</sup> It is assumed that most providers would regard the value of the ETC’s as somewhat confidential. The intent here is that an LRCP can choose to return a warning that ETCs are likely to apply (depending e.g. on the chosen migration date), so that the customer is encouraged to pay attention to the switching information that the LRCP will send them. The LRCP may choose to provide this information in order to avoid potential negative brand impacts if customers proceed with switching on an erroneous assumption that there are no applicable ETCs.

<sup>10</sup> The September 2021 Statement also covers this at paragraphs 4.199, 5.35 and 7.47-7.56.

Classification: CONFIDENTIAL

**5.12 SW1.12 Supply chain provision of information to support LRCP**

The LRCP may need to invoke real-time automated query services<sup>11</sup> provided by their supply chain (and the supply chain CPs may need to implement these services in response to Ofcom's decisions on EECC and One Touch Switch). Notable examples include:

- Mapping from a supply chain service identifier (e.g. the identifier used by a wholesaler CP and known to the LRCP) to a service identifier used by the underlying network provider (and an indication of the network provider in supply chains where the LRCP does already know this information).
- Information to support potential porting, such as the CUPID of the current voice CP, and the porting mechanisms supported by that voice CP.
- WLR operators with no record of broadband service will need to invoke Openreach's EMLC service to check if there is broadband on the line, perhaps with a different CP<sup>12</sup>.

It is also open to RCPs to work with their supply chains to do bulk updates to their service asset information to add the above information, so that they do not need to rely on real-time responses from their supply chain.

**5.13 SW1.13 Losing retail provider sends switching information to their customer**

GCs C7.12 and C7.25 document the switching information that must be sent by the losing retail provider to their customer – see §2.3 for an introduction to the concept of “switching information”.

**5.14 SW1.14 Hub logs match response and routes to gaining retail provider**

The Hub will log the match response message (for audit trail purposes) and route the request to an end point as defined by the RCP that owns the gaining retail provider RID.

§7 below provides more detail, and some other impacts on losing providers.

**5.15 SW1.15 Gaining retail provider confirms successful result to the customer**

The GRCP will advise the customer of the successful match, including the means by which the switching information has been sent by the LRCP to the customer.

If the match response includes information that ETCs are applicable, or significant impacts on other services (e.g. loss of TV service), the GRCP will inform the customer of these impacts. See §6.7 and §6.8 for more details.

**5.16 End of overall Step 1**

This marks the end of Step 1 of the overall One Touch Switch process (see §2 above).

§6 below provides greater detail on different variants of matching, now that the reader understands the basic flow.

§7 below documents the switching information sent to the customer by the losing provider.

---

<sup>11</sup> Openreach term these as “dialogue services”, but other network/access providers may not use this terminology.

<sup>12</sup> Openreach EMLC service returns the CP who is directly paying for the broadband service (e.g. BT Wholesale), and do not expose the RID of the retail CP. Hence the use of “CP” rather than “RCP” in this paragraph.

Classification: CONFIDENTIAL

## 6 Further detail on match request and response

The previous section listed the steps, using the same step references as the process flows. This section provides more detail on variants of match request information, processing and responses.

### 6.1 Selection of losing retail provider and LRCP RID

§5.4.1 above specified that the GRCP will need to identify the LRCP by RID to submit a match request to the Hub. Obviously customers do not know the RID of their current retail provider, and are only aware of the “name on the bill”.

Over the years, there have been many mergers and acquisitions of CPs.<sup>13</sup> Some current RCPs may thus hold and perhaps use multiple RIDs<sup>14</sup>. RCPs in this position are required to nominate a “master RID”, and accept match requests from GRCPs with the Hub routing to a single end-point for that master RID. The LRCP may need to attempt matching across multiple internal systems or “stacks” (e.g. if the RCP has multiple system stacks inherited from their M&A), but that should be hidden from the Hub, GRCP and customer, where the LRCP now uses a single brand.

However, if the RCP still operates multiple brands, they may publish multiple RIDs.<sup>15</sup>

Additionally all RCPs will need to provide information on their brand name. Where complexity may arise identifying the RCP, some RCPs may provide multiple brand names.<sup>16</sup>

The Hub Service Provider will support mechanisms for RCPs to update their RID data, including brand names and the end-points to which requests and responses should be sent.

The Hub Service Provider will publish a regularly updated list of RIDs and corresponding RCP brand name(s) (“name on the bill”).

RCPs will download this list on e.g. a daily basis, and will then cache that download for use in their sales systems.

We expect to provide algorithms and code snippets for a “type ahead” matching process – e.g. typing “v” might give several matches but “vir” might give only “Virgin” as a match. So the customer / sales agent will not need to scroll down a long list, but will simply need to type a few characters.

Also note my suggestion in §6.4 that the LRCP might provide a URL for a help page, primarily aimed at GRCP sales agents / back office advising what service identifiers to use, e.g. ONT Reference for Openreach FTTP.

#### 6.1.1 Consumer v Business

Many RCPs have both consumer and business brands, but consumer customers are not necessarily aware of the business brand. E.g. a bill for a customer of BT Consumer does not include the word “Consumer” anywhere and gives the legal name as British Telecommunications plc. Equally many consumer customers of Virgin Media may not have much awareness of Virgin Business.

##### **Question for wider OTS community:**

Should we allow RCPs to specify brand names that include “Consumer” and “Business”?

Should the Hub RID list include a Consumer/Business classification, so that a GRCP’s Consumer facing channels can prioritise consumer matches, and vice versa for their business facing channels.

##### **Update from feedback on v1.0**

The view from BT brand team is that “BT” and “BT for business” are their brand names, and consumer customers are unlikely to be confused as to which to pick.

<sup>13</sup> E.g. [https://en.wikipedia.org/wiki/NTL\\_Incorporated](https://en.wikipedia.org/wiki/NTL_Incorporated): “In March 2006, NTL merged with fellow cable telecom company Telewest, and created 'NTL:Telewest', which then also merged with Virgin Mobile UK and Virgin.net in June 2006 [...] In February 2007, NTL:Telewest was rebranded as Virgin Media.”

<sup>14</sup> E.g. BT Consumer use both DFQ and EYQ – they will need to decide which to nominate as their master RID (e.g. EYQ), and return a positive match response against EYQ even if the customer data is internally classified as DFQ.

<sup>15</sup> E.g. EE was acquired by BT, but is still positioned as a separate brand alongside BT and Plusnet. So BT/EE may choose to publish a separate RID for customer with EE branded bills, particularly if their stacks for BT, EE and Plusnet are separate.

<sup>16</sup> At the point when NTL:Telewest was rebranding to Virgin Media, they would need to have supported customer who were still using the old brand, and customers who had rapidly adopted the new brand.

Classification: CONFIDENTIAL

Other comments were around the need for some RID tidy up (agreed, but something that will probably fall to the Hub service provider).

## 6.2 Location details

The gaining retail provider will need to capture the address of the customer as held with the losing retail provider. In most cases, this should be the same address as where the gaining retail provider is expecting to provide service. Exceptions may include:

- The losing retail provider has recorded an incorrect address, with a different UPRN to the one that the GRCP needs to use with their network provider.
  - E.g. in a back-channel communication a losing retail provider may advise the gaining retail provider to use a specific address and UPRN to achieve a match.
- Is my example of porting from old address in scope? See §5.4.2.

It is expected that communications retail providers will use authoritative sources of quality address data, such as:

- Ordnance Survey's AddressBase products, covering addresses in GB.
- Ordnance Survey's AddressBase Islands products (which includes Northern Ireland).
- Ordnance Survey NI's Pointer products, covering addresses in Northern Ireland.
- Royal Mail's PAF products, covering all of the UK.
- Or a commercial provider who aggregates all the above data.

It is also expected that communications retail providers will understand the structure of a UK address, including sub building name, building name, building number, dependent thoroughfare, thoroughfare, double dependent locality, dependent locality, post town and postcode (and not just "line 1", "line 2").<sup>17</sup>

By using AddressBase and ABP Islands/Pointer, communications retail providers should be able to map the addresses of all of their existing Consumer customers to a UPRN. Retail CPs might seek the assistance of their supply chain in achieving this (and supply chains may need to build facilities to support retail CPs in validating and updating their mapping of customer services to an address).

There are circumstances where network providers (and thus their retail CPs) record residential address that are more detailed than an official address with UPRN. Examples include:

- A large house where the owner rents out part of the property (e.g. top floor) which is somewhat self-contained (e.g. has its own kitchen or bathroom) and is commonly referred to as "the upstairs flat" or "the flat".
- In the past, it was common for a tenant to have their own landline, and Openreach would record a sub-premises<sup>18</sup> with a name such as "The flat" or "Flat 1".
- These days, the house owner is more likely to include wi-fi access to their broadband service within the rent.
- For a house in multiple occupation (HMO)<sup>19</sup> (e.g. student house), it is also likely that either the landlord includes wi-fi access, the occupants club together for a single broadband services, or the tenants all use personal mobile services.
- Openreach also use sub building name for "Alarm line" and "Lift line" – these indicate where the line terminates, and apply both to multi dwelling residential units and to business premises.
- We need a technique to handle these scenarios.

If removing the value of sub building name leads to an address which has a UPRN, then losing RCPs can consider that UPRN to apply to the address with the sub building name (and might choose to store it as the parent UPRN)

Openreach data shows a Site Classification with one value as "Property Shell" – does this come from ABP? (Confirmed answer as Yes.) If so, dropping sub building name and finding UPRN for a property shell is invalid – except for things like lift line, alarm line, etc.

<sup>17</sup> Readers unfamiliar with the structure of a UK may wish to consult the Royal Mail PAF Programmers' Guide at <https://www.royalmail.com/marketing-services/address-management-unit/address-data-products/programmers-guide>. (Note that most modern addressing products do not split thoroughfare into name and description – PAF started in the days of exchanging data by tapes, and needing to save every byte! But this Guide remains a definitive starting point.)

<sup>18</sup> BT's CSS (Customer Service System) uses the terms "Sub premises" and "Premises name". Openreach's address matching dialogue service uses the terms subBuildingName and buildingName (as per Royal Mail)

<sup>19</sup> See <https://www.gov.uk/private-renting/houses-in-multiple-occupation> for a definition of HMO.

**Classification: CONFIDENTIAL**

When a RCP is in the position of a losing retail provider processing a match request, they will need a mechanism to rapidly search for potentially matching customers at an address. It is expected that most RCPs will use UPRN as an efficient search key, but it is open for them to use alternative search algorithms (using other elements of the address) which effectively provide the same result.

Thus the gaining retail provider must include all the address elements relevant to the address (not just UPRN), and must ensure that the UPRN and the set of other address elements refer to the same address.

**6.3 Additional (optional) information in match request**

§5.4 above listed the key pieces of information needed to attempt an initial match request – most customers should be able to achieve a match using those pieces of information (perhaps with several matching attempts with corrections to the spelling of their surname as held by the LRCP).

To limit the use of back-channel processes, there are other pieces of information that a GRCP could ask for, and a customer could reasonably provide without the need to contact their LRCP.

**6.3.1 LRCP account number / reference**

It is assumed that all RCPs have the concept of an account number or account reference<sup>20</sup> (even if they use terms such as “customer id”). Most RCPs ask customers to treat this value with some confidence, and use it as one element of their caller validation processes.<sup>21</sup>

If a GRCP cannot get a successful match using surname (perhaps after several attempts), it is reasonable to ask the customer if they can provide their LRCP account number / reference. Customers may be able to provide this value from a recent bill, an end of contract notification, or by logging into their online account with the LRCP. It cannot be mandatory for an initial match, but for many customers it is not a high barrier to provide this information

**6.3.2 LRCP matching using LRCP account number**

We need to agree the priority:

- E.g. If match found on account number, is surname ignored?
- E.g. if match found on account number, but address is not correct? Do we allow fuzzy address match – e.g. postcode is correct, but LRCP has different UPRN or no UPRN.
- Account number will often be provided instead of service identifiers. But if both are supplied, I think both should match. Simplest example is number port – account number shouldn't override an incorrect telephone number for porting.

**Update from feedback on v1.0**

BT Consumer is in support of ignoring surname, and matching only on the postcode of the postcode when account number is supplied.

Seems to make sense that any phone number must be correct, especially if the customer wants to retain that number.

**6.4 Information in match request on services to be switched / ceased**

The match request will include a list of one or more services to be switched or ceased.

For each service, the following information can be provided:

- Service type – this is mandatory.
  - The initial set of values will be “IAS” and “NBICS”.<sup>22</sup>

<sup>20</sup> The format of account number or reference varies between RCPs. E.g. BT account references are two letters followed by eight numbers, and are commonly termed the “account number” even though they are not purely numeric!! The Ofcom consultation and statement exclusively used the term “account number”. References in this document to “account number” do not imply a purely numeric value.

<sup>21</sup> E.g. in the event of bereavement, many RCPs will accept contact from a family member to cease services, where that family member can quote the account number.

<sup>22</sup> See §5.4.4 for an explanation of these terms.

## Classification: CONFIDENTIAL

- This set could be extended in the future, e.g. "TV".
- LRCP service identifier.
  - Optional for IAS. Only likely to be provided when initial matching fails, and perhaps only when advised by the LRCP in response to a back-channel process.
  - For NBICS, this will be the telephone number. Also optional.
  - E.164 format +44xxxxxxxx or UK format 0xxxxxxxx ?
- 1. Number retention / port indicator.
  - Optional, and only valid for NBICS. See below for explanation.

**Question for wider OTS community:**

An Openreach FTTP service has an ONT Reference, an ONT serial number and a port, e.g:

ONT					Port			
Reference	Location	Serial number	FTTP L2S	BBU Status	Number	Type	Status	VW Status
ONT0000600377	Room living room, Floor first floor, Position wall	485754437C002D9E	BAAHJS	Supplied	1	Data	Working	
					1	Voice	Spare	Not Installed

For example, BT Consumer store the ONT Reference concatenated with the port number as the ServiceId for their Broadband (e.g. ONT00006003771 for the above example). BT Wholesale store the ONT Reference as the "Directory Number". Customers do not know their ONT Reference.

The serial number is visible to the customer on the front of the ONT, and in the EMLC result (screenshot above). I don't think Openreach support it as a search input. (Openreach confirmed that they do not support search using serial number.)

In Republic of Ireland, RCP bills show a Circuit Reference Number (CRN). Might RCPs be obliged to include service information in the bills / online channels? Or would that require Ofcom mandate?

Should the LRCP service identifier be a list of type/value pairs? E.g:

```
"serviceIdentifiers": [
  {
    "serviceIdentifierType": "ONT Reference",
    "serviceIdentifierValue": "ONT0000600377"
  },
  {
    "serviceIdentifierType": "Port Number",
    "serviceIdentifierValue": "1"
  }
],
```

The problem with the above is: how will the GRCP know what serviceIdentifierType values are recognised by the LRCP?

If we think that service identifiers for IAS are most likely to be provided by back-channel processes, we might want a simple "serviceIdentifier" key, where the value is populated as per the LRCP guidance, e.g. BT Consumer may match either:

```
"serviceIdentifiers": {
  "serviceIdentifier": "ONT0000600377",
  "portNumber": "1"
},
or
"serviceIdentifiers": {
  "serviceIdentifier": "ONT00006003771"
},
```

I.e. "serviceIdentifier" is used by every LRCP, and "portNumber" is common to any full-fibre LRCP that uses devices such as an ONT with multiple ports.

**Classification: CONFIDENTIAL**

We could also consider that the RID list served by the Hub Service Provider includes a URL for an LRCP “help page for successful matching” (possibly only for use by sales agents, and not via self-service online channel).

For NBICS, we should probably standardise on a simple “directoryNumber” key, along with an indication of intention to port:

```
"serviceIdentifiers": {
  "directoryNumber": "+44xxxxxxxxxx",
  "numberPorting": true
},
```

**Update from feedback on v1.0**

It was unfortunate that I used an example where BT Consumer store an Openreach reference as their retail service reference. This example was intended to talk about the optional input to a match request, most likely based on feedback from the LRCP via back-channel.

Numerous people spotted the above typo on LP v GP!! Doh!! It was meant to indicate that a GRCP who does not purchase Openreach services is unlikely to know that Openreach have a data value known as “ONT Reference”. But if the response to a back-channel query is “enter the serviceIdentifier as ‘ABC123’” any GRCP should be able to copy and paste.

With that proper explanation, anyone we have spoken to has agreed that a simple “serviceIdentifier” is the best way to go for the optional input to a match request.

To understand the next bit, it is useful to remember that there are three main scenarios around voice telephone number:

1. The customer knows their number, and wants to retain it on a voice service supplied by the GRCP.
2. The customer does not want to retain their number, but there are multiple lines, and they can provide the number to help achieve a single match.
3. The customer does not want to retain their number, and may not remember the number, or perhaps may not realise that they have a landline service at all.

For an NBICS (voice) service, the directory number would be interpreted as follows:

1. If a number is provided along with an indication of number retention / port, the match request is asking whether that particular number is found, and also indicating that the customer wants to retain it, so the GRCP needs information for porting purposes, and the LRCP should return that information (see §6.6 below).
2. If a number is provided along with no indication of number retention / port, the match request is asking whether that particular number is found:
  - E.g. customer has multiple voice services, and this is the one to be ceased.
  - E.g. customer has multiple voice and broadband services, and providing the number enables a single match.
3. If no number is provided, the match request is asking whether or not there is a voice service, and if there is, to assume it will be ceased when producing the switch information for the customer.
  - By positively including NBICS in the match request, the GRCP is asserting that customer positively wants to cease any voice service (even if the LRCP could technically retain it).
  - The customer is probably not taking a voice service with their GRCP (e.g. broadband only), but could be taking a voice service with a new number – the LRCP does not need to know which – they just need to know that the customer is proposing that their voice service and number will be ceased.

Note also that for switching from an LRCP using Openreach WLR to a GRCP who also uses Openreach, there may not be a full number port. Openreach support processes that they call “integrated transfer” and “integrated port” when BT is the range holder of the number, and the number is to be hosted on a GP VoIP service.<sup>23</sup>

**6.5 Generation of Switch Order Reference (SOR) by losing retail provider**

If the LRCP finds a match, they need to generate and include a Switch Order Reference (SOR) in the response. The SOR will be a UUID as defined by IETF RFC4122.

<sup>23</sup> Technically, the number is marked as ported on CSS, and the number is configured on the DLE (digital local exchange) with a routing prefix pointing to the VoIP call server. But the gaining number provider remains as 001 (BT), and there is no geo number porting NPOR process (Openreach integrate the updates into their processing).

If the number has been imported into BT, then the RH will need to be sent a geo number porting PXC order to update the routing prefix held at their end – the GRCP is then responsible for raising a “standalone port” (i.e. not managed by Openreach).

## Classification: CONFIDENTIAL

(Note that the original industry submissions had suggested that the Hub might generate the SOR. But this would require the Hub to process either the match request or match response message, and we have a goal to keep the Hub as a message routing platform with auditing and MIS.)

### 6.6 Information in match response on services to be ceased

The gaining retail provider will include a list of services in the match request. For the initial implementation, this will be restricted to IAS and NBICS. (Extension to TV may happen in the future.)

The LRCP must provide a response for each service in the match request, even if that response indicates that the customer does not have that service with the LRCP.

For each service, the following pieces of information must be included in the response:

- Service type – mandatory.
  - Whether the service has been found – mandatory
    - This can be true or false.
    - But there are also other scenarios, e.g. a broadband provider who knows they are consuming an SMPF service from Openreach, but do not have the underlying WLR or MPF service should indicate that in their response.
- Two possible scenarios:
    1. WLR is with another CP.
    2. WLR or MPF is with the same CP but a different customer (and thus not matched).
- LRCP service identifier – mandatory. If the customer proceeds with the switch, the GRCP will include this value in the switch order request, and the LRCP can use this to identify the service to be ceased (and not have to repeat matching with the risk of identifying a different service, or failing to get a match).
    - E.g. TalkTalk expose a “CASR ref” to their retail CPs.
- **Question for wider OTS community:**  
For a WLR service, the LRCP service identifier may be the telephone number. Is there any concern that a match request will expose the number, even if not provided in the input? Could the LRCP address this by using a simple reversible hash algorithm, seeded with a private key known only to the LRCP?
  - **Update from feedback on v1.0**  
It has been noted that when Openreach developed MLPA, they decided not to expose the full DN to any CP owning that the CP owning the line, and instead expose partial DN (last 2 digits only) and ALID. It is understood that this was done for security / data protection reasons, and GDPR has strengthened the regime since then.

Note also that LRCP might use the same value of service identifier for voice and broadband, e.g. SMPF broadband service on top of WLR often use the DN of the WLR as the identifier of the broadband service.
- Access provider – mandatory
    - The access provider may also be known as the infrastructure provider – it is the most upstream CP that owns the “kit in the ground”, e.g. Openreach, Virgin, full-fibre alt-net.
      - Sky and TalkTalk are both voice operators, but where they use an underlying Openreach MPF service, Openreach would be the correct access provider.
    - For some RCPs, the access provider will be known (e.g. they only use Openreach, or they explicitly record which access provider is used for each retail service).
    - Other RCPs may need to query their supply chain (e.g. if they use a wholesaler, and that wholesaler uses a number of network/access providers, but hides the network from the retail CP, or the retail CP does not record the information).
    - For IAS, there will always be a physical access provider, so this value is mandatory.
    - For NBICS, there may or may not be a physical access provider:
      - For WLR and MPF, Openreach provide the physical access, so this value is mandatory.
      - For a VoIP NBICS, the physical network supports the IAS, and the LRCP may omit this value, or return a value that makes sense for their supply chain.
    - The network/access provider will be represented by a new identifier mastered by Ofcom (and not by CUPID<sup>24</sup> or RID).
  - Access provider service identifier – mandatory for IAS.

<sup>24</sup> CUPID (Communications Provider Identity Code) is a 3 digit code allocated by Ofcom to identify CPs, notably the network providers and voice operators. CUPIDs are used in number porting processes to identify the range holder and the losing and gaining CPs.

## Classification: CONFIDENTIAL

- Access provider service identifier type – mandatory for some access providers, e.g. Openreach.
  - If the GRCP uses the same access provider, they will be able to place an order with their supply chain targeting the existing infrastructure for transfer<sup>25</sup>.
  - Note that the technology may change. E.g:
    - A WLR or MPF service identifier can be used as the starting point for a transfer to SOGEA – the copper pair will be re-used.
    - A WLR, MPF or SOGEA service identifier can be used in an order for provision of new FTTP in a brownfield location – providing the identifier of the copper service permits Openreach to manage the cease, and perhaps recover the copper.
  - Some RCPs will know the service identifier used by the access provider (e.g. for WLR based services, it is the directory number).
  - Same security issue around telephone number as above. Do Openreach provide any facility to map from DN to ALID, other than MLPA which might be a bit slow to use for an OTS match? (Openreach confirmed MLPA is the only current operation.)
 

**Update from feedback on v1.0**  
Call with Openreach on 22/02. Identified that EMLC returns ALID when invoked with ServiceId. But when invoked with a WLR DN, only the DN is returned.
  - Other RCPs may need to query their supply chain (e.g. if they use a wholesaler, and that wholesaler exposes their own service identifier, e.g. TalkTalk expose a “CASR ref” to their retail CPs, and do not expose the LLU ServiceId or ALID used by Openreach).
  - Some access providers support a number of types of service identifier, e.g. Openreach support DN, ServiceId, ALID and ONT Reference. If the access provider supports different types, it is mandatory for the LRCP to return both the value and the type.
  - For some RCPs the LRCP and access provider service identifiers will be the same value – they should both be returned in the match response.
- Voice provider – mandatory for NBICS
  - This is the CUPID of the current voice provider (as required on a valid number port request).
  - For WLR, this will be 001 (BT).
  - For MPF, this will be the CUPID of e.g. Sky or TalkTalk.
  - For VoIP, this will be the CUPID of the voice operator, e.g. BT, Virgin, Sky, TalkTalk, Gamma.
- Should we have some mechanism to return e.g. that voice is dependent on the broadband, and cannot survive if the broadband is switched? Or that the voice is a true OTT service that should work over any broadband?

## 6.7 Importance of Switching Implications

**The following proposals are being debated by OTS-SG, and are included here in the interest of transparency, and to permit feedback of stakeholder view to the SG.**

Subsequent to feedback received, the sections on optional implications for switching on other services and ETCs have been consolidated and further anonymised, while still enforcing strong advocacy for reading the implications of switching. We feel it is extremely important for the GRCP to ensure the customer reads the implications of switching and not bypass them completely, and the wording to be presented should reflect the level of those implications.

To ensure customers are adequately protected against loss of other primary services or unexpected early termination charges the LRCP will indicate on the matching response with a simple Yes or No if there are significant implications the customer should be strongly encouraged to read before continuing with their switch.

Items constituting a Yes response may be the presence of early termination charges or other primary services such as Television or Mobile that would also cease when switching. Other non-critical services such as Netflix or eMail would not constitute a significant service to set this value to Yes. The response will not specify any details of the charges or services in any way.

On receipt of the matching response from the LRCP, the GRCP will either present or read a set of industry agreed wording with the express aim of ensuring the customer reads the Implications of Switching letter before proceeding to provide of consent.

<sup>25</sup> Openreach use the term “transfer order” rather than “switch order” and given their plan to make minimal changes, they are likely to continue with this term. This document uses “switch” at the retail CP level, and “transfer” at the network/access CP level.

**Classification: CONFIDENTIAL**

It is recommended there to be no more than two versions of the wording of this communication depending on whether switching implications are indicated as yes or no.

If the switching implications are no, then the following message will be given to the customer.

This is a very rudimentary example of the type of wording we could standardise on, subject to full industry consultation.

“We have received a match from your current provider who has sent to you a copy of the implications of switching by email | post. You are advised to read these implications carefully before proceeding with your order.”

If the switching implications are yes, then the following message will be given to the customer.

This is again, very rudimentary example of the type of wording we could standardise on, subject to full industry consultation.

“We have received a match from your current provider who has sent to you a copy of the implications of switching by email | post. It is very important for you to read these implications carefully before proceeding with your order.”

### **6.8 Optional information on additional services**

**This section is the original wording, incorporating the feedback from v1.0. As mentioned above, these proposals are being debated by the OTS-SG.**

Optionally, the LRCP may return information on additional services that are significantly impacted by the proposed switch, notably if they will be ceased by the LRCP.

E.g. if a losing retail provider provides TV service which is dependent on the broadband service that the customer is considering switching, then the LRCP is obliged to advise the customer of this significant impact on their TV service, as part of the switching information that the LRCP must send to the customer. The LRCP may additionally choose to include this significant impact in the match response.

In order to make this of use, there will be a 2-way expectation:

- The GRCP will be expected to advise inform the customer of any significant impacts to other primary services included by the LRCP in the match response.
- The LRCP will be expected to constrain their response to significant impacts to primary service (e.g. loss of TV or mobile service, but not loss of Netflix).
- We will need to agree (and document in this Industry Design) the form of words to be used in a self-service order journey, or read out by a sales agent in a call centre.

### **6.9 Optional indication of early termination charges**

The LRCP is obliged to advise the customer of any early termination charges that will apply, as part of the switching information.

The LRCP may additionally choose to include an indication that ETCs apply, in the match response.

Should we oblige the LRCP to also return an end of min commitment period date, after which ETCs no longer apply? Or is this just a boolean based on today's date?

#### **Update from feedback on v1.0**

Community Fibre and toob agree with returning the end date. VMO2 disagreed with retuning the date. One compromise might be to return an indication to whether the end date is inside the next 31 days – this would help the GRCP guide the conversation with the customer.

### **6.10 Optional information, 3 April 2023, and test LRCP**

It is quite likely that no RCP will include optional information on additional services or ETCs for the initial launch on 3 April 2023. However, any RCP could introduce such information at any point in time.

We will likely need a test RCP for live testing of GRCP processes. This test RCP must be capable of returning sample optional information, to enable RCPs to test their systems with representative responses.

Classification: CONFIDENTIAL

## 7 Provision of switching information to the customer by the losing retail provider

GCs C7.12 and C7.25 document the information that must be sent by the losing retail provider to their customer – in the September 2021 Statement, Ofcom refer to the LRCP sending “switching information” to their customer.<sup>26</sup>

### 7.1 Information should be dispatched by the losing provider

General Condition C7.27 reads as follows:

C7.27 The Regulated Provider [losing provider] must:

- (a) ensure that the information referred to at Condition C7.25 is made available to the Fixed Switching Customer promptly in accordance with any applicable industry agreed processes and via the quickest communications method, unless the Fixed Switching Customer requests an alternative communications method; and
- (b) inform the Gaining Provider of the means by which this information has been made available to the Fixed Switching Customer.

Therefore the losing retail provider will send the switching information directly to their customer. E.g:

- If the provider holds an email address for the customer (and the customer has not previously asked for all future communications by letter), the provider will send an email using their existing smtp infrastructure, including any SPF, DKIM or DMARC implementation that they may use for other email communications to their customers. The losing provider should ensure that this email is sent without any un-necessary delay.
- If the provider does not hold an email address (or the customer has previously opted out of email communication), the provider will send a letter using their print and dispatch mechanisms.
  - For Consumer customers, their contact address will most likely be the address at which they have service, but if they have previously provided an alternative address for all communication, the provider can use that address.
  - The letter should be sent without any un-necessary delay. However, providers are likely to run their print and dispatch mechanisms on a batch basis, tied in to their contracts for collection of postal items. So the dispatch may take several days, especially at weekends and bank holiday periods.
- Providers may also send an SMS to their customer, if they have suitable contact details. This may constitute all of the switching information, or may just advise the customer to expect an email or letter with the information.
  - Providers may also choose to use SMS as the method to deliver the switching information (as for Auto-switch for mobile). However some RCPs may feel that their record of mobile contact numbers for their fixed customer base is not sufficiently reliable / up-to-date to use for such an important communication
- Providers may also deliver information via other available mechanisms, such as a push to a mobile app, but should remain aware of the need to send the information on a durable medium. Providers may also choose to deliver information via multiple methods, e.g. email and letter.

### 7.2 Update of contact details and re-sending of switching information

Appendix 6 quotes statements that Ofcom included in their September 2021 Statement – in summary, if the customer doesn't receive their switching information from the losing retail provider, the customer can contact the losing retail provider to update their contact details, and ask for the switching information to be re-sent to the new contact details.

In practice, retail providers will need to support:

- Customers updating details such as email address or contact address for letters.
- Customers changing their preferred contact mechanism, e.g. providing an email address for the first time, and asking for switching information to be re-sent via email.
- Triggering the re-sending of switching information.
- Possible access to switching information via online account.

Process flow SW5 covers this topic.

### 7.3 Frequency of sending switching information

Gaining retail providers should be able to offer basic information to a customer considering switching to them, without needing to invoke a match request. E.g. a potential gaining retail provider should be able to check service availability at the customer's

<sup>26</sup> See §2.1 for an introduction to the concept of switching information.

**Classification: CONFIDENTIAL**

address (e.g. does their supply chain offer full-fibre service at that location), pitch offers to the prospective customer, and ascertain if the customer is interested in broadband only, or want to switch voice service and retain their existing number.

However, there is a legitimate worry about whether a malicious actor could use (maybe multiple) GRCP sales journeys to trigger dispatch of multiple switching information with the intent of causing nuisance to an individual, or of causing embarrassment to the UK telecoms industry (including Ofcom).

Appendix 7 goes into detail on what Ofcom have written around “notification” and “information”, and how it can reasonably be interpreted for an agreed industry process.

This industry process permits LRCP to “rate limit” their dispatch of notifications with switching information, triggered by successful match requests:

- **Question for wider OTS community:**

We need to agree the permissible rate limiting. E.g. no more than once a week, fortnight, or month? Same for email and letter? Same for all RCPs, or just a max? Ofcom permission to extend max in response to an incident of widespread attack?

- **Update from feedback on v1.0**

Some agreement that if rate limiting is permitted, the match response should give some indication of when SI was last sent.

VMO2 were worried that any rate limiting would not be acceptable to Ofcom.

Otherwise there was not much consensus on this point.

- Most customers will only trigger a single successful match, so the notification(s) which are sent should include the identity of the GRCP which sent the match request which triggered that notification.
  - It is likely that switching information which is suppressed during the rate limit period after an initial notification only differs in the identity of the GRCP.
- The guidance in §5.4.4 that match requests should generally include both broadband and voice should limit instances where the suppressed notification(s) contain information that differs from the notification(s) sent to the customer.
  - I.e. a customer is unlikely to have received switching information stating that voice service will continue (since first GRCP asks only about broadband), and then misses a suppressed notification stating that voice service will be ceased (since second GRCP asks about both broadband and voice).
- If a RCP decides to implement a rate limit, in their match response, they should indicate the date of last dispatch of switching information, where the current request will be suppressed by the rate limiting.
  - Does also imply an expected future date for a letter? Match on a Saturday, expected dispatch on Monday.
- It is expected that as time passes, any ETCs would reduce in value.
  - Thus any ETCs in a suppressed notification should have ETCs which are either the same or smaller than the notification that was last sent.
  - Additionally the switching information should include information about the commitment period (in addition to a simple total amount).<sup>27</sup>
- RCPs should keep their own audit trail of successful matches and whether switching information was sent to the customer or suppressed by the rate limiting.
  - RCPs may make this information available to their customer service advisors (e.g. to assist with a customer enquiry), or only available to staff with specialised access (e.g. to support a statutory request from Ofcom under section 135 of the Communications Act 2003).
  - If RCPs choose to give customers visibility of switching information via their online account, they are encouraged to give visibility of all successful matches, including those where the switching information was suppressed by the rate limiting.

<sup>27</sup> September 2021 Statement, paragraph 4.208.

Classification: CONFIDENTIAL

## 8 Gaining retail provider sales process and order capture

After getting a successful match response, the gaining retail provider can proceed with the rest of their sales process. They must obtain the customer's express consent before they can submit a switch order to the Hub (and corresponding processes with their supply chain).

### 8.1 SW1.16 Rest of gaining retail provider sales process

This step represents the rest of the gaining retail provider sales process, and could include:

- Credit check by gaining retail provider (some GRCP s may perform the credit check earlier in the journey).
- Final configuration of the services the customer is ordering (e.g. optional extras) (again some GRCP s may have captured this information before triggering the match request).
- Provision of contract summary and contract information to the customer.

### 8.2 SW1.17 Gaining retail provider captures express consent

In the General Conditions, Ofcom define express consent as:

**'Express Consent'** means the express agreement of a **Customer** to contract with a **Communications Provider**, or to transfer their **Public Electronic Communications Service(s)** or port their **Telephone Number(s)**, where the **Communications Provider** has obtained such consent in a manner which has enabled the **Customer** to make an informed choice;

The September Statement included the following paragraphs:

- 7.95 Express consent means the express agreement of the customer obtained in such a manner which has enabled the customer to make an informed choice (see the definition of 'Express Consent' in the GCs).
- 7.96 As noted in our October Statement, the decision on the part of a customer to switch services involves both:
- a decision to accept a contract for new services with a gaining provider; and
  - a decision to cancel a contract for services with the losing provider.
- 7.97 It follows that in order for a customer to make an informed choice about whether to switch their services, and therefore to be in a position to give their express consent to a switch, the customer needs to have been given information about both:
- the new services they are taking with the gaining provider; and
  - the consequences of their decision to cancel their services with the losing provider.
- 7.98 Given the obligations in GC C7.9 and the new obligations on the gaining provider in proposed GCs C7.21-7.24 [...], we consider that in order to ensure they do not switch customers without their express consent, a gaining provider must take the following steps:
- a) request that the losing provider make the switching information available to the customer;
  - b) notify the customer that the switching information has been made available and how it has been made available;
  - c) expressly draw the customer's attention to the importance of the information; and
  - d) provide contract information in accordance with GCs C7.11 and C1.

The customer can give their consent at the point of sale:

- The customer may have a recent end of contract notification, and already understand the impacts of switching.
- The customer may have checked their contract position via their online account with the LRCP.
- The customer may have completed a match request via a different GRCP (or even the same GRCP) at an earlier date, and have received switching information from that earlier match request.
- The customer may simply wish to proceed without delay.

However, the GRCP must give the customer the option to consider either the switching information from the LRCP or the contract information from the GRCP, or both.

### 8.3 SW1.18 Customer does not provide consent – cancel order

If the customer does not provide their express consent (at point of sale, at a later point, or after some period of time of no contact from the customer), the GRCP will need to cancel any order (or other record of the potential switch) where they are awaiting customer consent.

Classification: CONFIDENTIAL

Note for clarity: there should not be any order submitted into the GRCP's supply chain before the customer provides express consent. So the above paragraph is referring to a possible order or sales lead within the GRCP systems.

#### **8.4 SW1.19 Customer provides consent – gaining retail provider records consent**

The GRCP must capture a record of the customer's consent as per GC7.15:

- C7.15 For each contract entered into with a **Switching Customer** who is a **Consumer**, in relation to all **Relevant Communications Services**, the **Regulated Provider** that is the **Gaining Provider** must create and keep individually retrievable records of the following, for a period of no less than twelve months:
- a direct record of consent, as provided by the **Switching Customer**, to migrate from the **Relevant Communications Services** supplied by the **Losing Provider** to the **Relevant Communications Services** supplied by the **Gaining Provider**;
  - a record of the explanation from the **Gaining Provider** that they are required to create a record of the **Switching Customer's** consent;
  - the name and address of the **Switching Customer**;
  - the time, date and means by which the consent in sub-section (a) above was given;
  - where appropriate, the place where the consent in sub-section (a) above was given and the salesperson(s) involved;
  - where relevant, a direct record of consent to begin acquiring the **Relevant Communications Services** over the **Target Line**, the **Target Address**; and where appropriate, the **Calling Line Identification** of the **Target Line**; and
  - all available records regarding the sale of its **Relevant Communications Services**, including the date and approximate time of the contact with the **Switching Customer**, the means through which the contract was entered into, the place where the contract was entered into, where relevant, and sufficient information to allow subsequent identification of the salesperson(s) involved and to assist in dealing with any complaint or query.

#### **8.5 SW1.20 Gaining retail provider places order**

After gaining and recording express consent from the customer, the gaining retail provider will complete any steps required for their own order that have not yet been completed. This includes agreeing a migration date with the customer:

- The customer may want a delay, e.g. to line up with the end of a commitment period with the LRCP.
- The provision of service via the GRCP's supply chain may have a lead time.
- The provision of service may require an engineering appointment, and if this is for a customer facing visit, the customer will need to pick an available slot when they can arrange to be at home.
- The gaining supply chain may use a model where they reply with a committed date<sup>28</sup>, and any date quoted to the customer at the point of sale is aspirational.

For many RCPs, at this point the sales order is "submitted" (by sales agent in call centre or retail store, or by customer in online self-serve journeys). Typically a sales agent would complete any "call wrap-up" and then move on to helping the next customer in the queue.

The next section describes what happens in the GRCP's sales order processing stage, including placing of order(s) into the gaining supply chain.

---

<sup>28</sup> E.g. in brownfield locations, Openreach sometimes need to complete survey work before they can commit to a date for FTTP installation (known as "KCI2 Assure process"). The GRCP may quote an aspirational date to the customer, but the committed date may turn out to be later.

Classification: CONFIDENTIAL

## 9 Order processing

In the previous section a customer order has been captured and submitted. For many RCPs this represents a transition from order capture to order processing.

A “customer order” in a typical RCP’s systems will result in multiple “supplier orders” (or “fulfilment strands”), including:

- One or more orders into the RCP’s supply chain (e.g. a SIM2 provision with Openreach requires two orders: one for the WLR or MPF, and the other for the broadband (which is via BT Wholesale for many RCPs); number port is often a separate order into the supply chain (Openreach sometimes term these as a “standalone port”).
- An order for delivery of equipment, such any hub/router needed for broadband access.
- An order to set up the customer and their services on the RCP’s billing systems.

In order to progress the switch from the LRCP, the GRCP will send a “switch order” request to the Hub for onward routing to the LRCP. For many RCPs, the OTS switch order will be considered as another “supplier order” to be managed alongside all the other supplier orders.

The switch order effectively allows the GRCP to tell the LRCP that the customer has given express consent to the switch. It informs the LRCP of the proposed migration date (though there could be subsequent supply chain delays), and which LRCP services must be ceased (either because they are being switched, or e.g. the customer no longer wants any voice service and is taking a broadband only service from the GRCP). Note that is in addition to any of the following existing order types:

- Number porting request (from voice provider in gaining supply chain to voice provider in losing supply chain).
- Order for intra network transfers (e.g. “transfer orders” into Openreach).

### 9.1 *SW1.21 Customer receives order confirmation from GRCP*

The step represents the receipt by the customer of all the information sent by the GRCP after the customer gives their express consent to the switch, and the GRCP starts processing their “customer order”.

### 9.2 *SW1.22 Hub logs switch order request and routes to the losing retail provider*

The Hub will log the switch order message (for audit trail purposes) and route the request to an end point as defined by the RCP that owns the losing retail provider RID.

### 9.3 *SW1.23 Losing retail provider receives switch order and confirms acceptance or rejection*

This step represents the receipt of the switch order by the LRCP. The LRCP must respond to the switch order with either an acceptance or a rejection.<sup>29</sup>

If the LRCP already has an open switch order against some or all of the services requested for cessation (whether from another GRCP or the same GRCP), they would reject the switch order.

However, if their customer has placed a cease order, the LRCP should make every effort to accept the switch order, taking the migration date in the switch order as higher priority. RCPs may choose to cancel the customer’s pending cease order, and replace it completely with the details from the switch order<sup>30</sup>, but they must inform the customer of the impacts.

Other possible reasons for rejection include:

- Invalid switch order reference.
- Services already ceased.

### 9.4 *SW1.24 Losing retail provider sends notification to customer*

If the LRCP accepts the switch order, they must send a notification to the customer:

<sup>29</sup> It was not thought that having multiple responses analogous to Openreach’s KCI0 (order pending), KCI1 (acknowledged), KCI2 (committed) would add any benefit. The LRCP is effectively responding to a cease request, so they should be able to provide the equivalent of commitment inside a few hours processing.

<sup>30</sup> If a RCP has an open cease order with Openreach, and a GRCP places a transfer order targeting the same line, Openreach cancel the RCP’s original cease, and replace it with their managed cease. So this suggestion is consistent for RCPs that use Openreach.

**Classification: CONFIDENTIAL**

- If all of the customer's services are being ceased (whether explicitly in the switch order, or implicitly by the LRCP, e.g. TV will be ceased as a result of cessation of broadband), this will be a "sorry to see you go" (STSYG) notification.
- If any services are being retained or changed, the notification may be partly STSYG and partly notification of the impacts on the other services.
- In both cases, the notification must include confirmation of the identity of the GRCP.

**9.5 SW1.25 Hub logs response to switch order and routes to gaining retail provider**

The Hub will log the switch order response message (for audit trail purposes) and route the request to an end point as defined by the RCP that owns the gaining retail provider RID.

**9.6 SW1.26 Gaining retail provider receives response from the LRCP**

This step represents the receipt of the LRCP response to the switch order.

**9.7 SW1.27 GRCP handling of rejected switch order**

If the LRCP sends a rejection of the switch order (see SW1.237 above for possible reasons for rejection), the GRCP will be responsible for resolution of this rejection.

The GRCP may need to consult with the customer, and will need to cancel their order with their supply chain if they cannot fix the issue with the switch order.

E.g. if the LRCP rejects a switch order as it has another open switch order, the possible resolutions include:

- Full cancellation of the GRCP's "customer order" if the customer advises that they are proceeding with another GRCP. In this case, the GRCP must cancel their order with their supply chain.
  - Note that for an intra network switch, the gaining supply chain may have already rejected the "transfer order" from the GRCP for the same reason, i.e. the asset is already being transferred to the other GRCP.
- If the customer advises that they have cancelled the order with another GRCP, this could be a timing issue, and a re-submission of the switch may be accepted (once the LRCP has received and processed the cancellation of the first switch order). In this case, the order with the supply chain would not be cancelled.

**9.8 SW1.28 Gaining supply chain receives order from GRCP**

The GRCP will also send an order request to their supply chain. This may be before, after, or in parallel with, the GRCP sending the OTS switch order to the Hub.<sup>31</sup>

The supply chain will progress this order according to the specific order type and scenario.

If the GRCP uses a different network/access provider to the LRCP, this is an "inter network switch":

- The order may be a request for full provision of new service.
- It could also be re-use of existing infrastructure, e.g. a start of a stopped line, or activation of a spare port on an existing ONT<sup>32</sup>.

If the GRCP and LRCP use the same network/access provider, this is an "intra network switch":

- Openreach refer to this as a transfer order – other supply chains may have their own terminology.
- The order is likely to target the same infrastructure, e.g. same copper pair or ONT port.
- Note that Openreach support provision of new FTTP (fibre and ONT) in a brownfield location, with co-ordinated cessation of former copper service, and they still classify this as a transfer order.
  - Openreach have also stated that they prefer the GRCP to raise a transfer order with co-ordinated cessation, since this allows Openreach to remove the copper if appropriate. They also make it cheaper for a GRCP, to encourage this behaviour.

<sup>31</sup> This is analogous to a SIM2 order into Openreach, where there is both a WLR/MPF order and a broadband order, and no requirement on which comes first. If number porting is a separate supplier order, there is no requirement on whether it comes before or after the line order(s). So the OTS switch order is joining a set of order types that can be placed in any sequence into the supply chain(s).

<sup>32</sup> Optical Network Termination – the unit which terminates a full-fibre service. Some providers use the term ONU.

**Classification: CONFIDENTIAL**

There may be multiple orders with the supply chain. E.g. Openreach require separate orders for the WLR/MPF and for the broadband (often linked as a pair of orders for a “SIM (simultaneous) provide).

Note also that the order may include a request for number porting:

- For WLR, Openreach supported request for number porting as part of their provision orders.<sup>33</sup>
- For MPF, Openreach is not the voice operator, and e.g. Sky or TalkTalk will raise the porting request.<sup>34</sup>
- With the forthcoming demise of WLR and use of VoIP, there can be a complex arrangement between Openreach and the CP as to who handles what element of porting – but this is existing complexity for CPs working in this space.

**9.9 SW1.29 Gaining supply chain raises number port order(s)**

If the switch contains a number port, the GRCP via their supply chain<sup>35</sup> will raise a port order with the losing voice provider, and also with the range holder if different, using the most efficient method available as identified during the matching process.

The porting process itself remains relatively unchanged, with the possible exception of skipping the initial call to RH if the gaining supply chain is able to utilise the information on the losing voice provider returned in the match request and passed on by the GRCP.

**9.10 SW1.30 Gaining supply chain progresses order(s)**

If the order is an intra network switch, the supply chain will typically generate an unsolicited cease<sup>36</sup> notification(s) to the LRCP.

The order(s) will progress as per the standard processes for the supply chain, with their standard order updates to the GRCP.

**9.11 SW1.31 Gaining supply chain completes order(s)**

The supply chain will complete provision or transfer of service(s), and inform the GRCP of completion.

If the order is an intra network switch, the supply chain will disconnect the service(s) provided to the LRCP and then connect the new service(s) for the GRCP (“break just before make”). The supply chain will inform the LRCP of completion of the unsolicited cease(s) – quite likely before they inform the GRCP of completion of their order(s) (though not guaranteed).

If the voice order involves number porting, that may be a separate supply chain, and the completion for the porting may come from a different source and at a different time.

**9.12 SW1.32 Gaining supply chain completes number port order(s)**

The gaining supply chain on providing the new voice service notifies the losing voice provider (and range holder if different) to execute the port out order immediately. The losing voice provider (and range holder) must perform the port out activities in line with porting guidelines to ensure the routing is correct.

**9.13 SW1.33 Receipt of notifications of unsolicited cease(s) by LRCP**

This step represents the receipt by the LRCP of various notifications around the unsolicited cease(s), from initial notification to final completion. Again the supply chain may generate separate unsolicited ceases for the voice and broadband, and number port may result in a separate unsolicited receipt.<sup>37</sup>

Openreach have advised that they are not changing their managed cease notifications, and they will continue unchanged for an intra network switch (e.g. KCI1, KCI2, KCI3)

---

<sup>33</sup> Given the plans to withdraw WLR, it is likely that Openreach will make no changes to WLR ordering, including maintaining a 7 working day lead time on ports (7 days is to allow for a possible subsequent port).

<sup>34</sup> Note that Openreach may trigger the port on completion of the frames activity in the exchange, but that is as losing voice provider.

<sup>35</sup> E.g. for WLR any number port request is included with the “transfer order” raised in Openreach, and Openreach raise any required NPOR/NPAR in the background. In other cases, the GRCP will raise a port request into their voice provider who will raise the NPOR/NPAR. In other cases, the GRCP may raise the NPOR/NPAR themselves.

<sup>36</sup> Openreach use the term “managed cease”, but some of their CP customers refer to them as unsolicited ceases.

<sup>37</sup> Openreach will consolidate transfer of WLR and any associated number port into a single managed cease notification for the downstream LP. The network functions of Sky and TalkTalk may do similar for their downstream retail divisions or retail CPs. With the move to VoIP, CPs are increasingly required to handle porting separately from Openreach.

Classification: CONFIDENTIAL

#### **9.14 SW1.34 Gaining retail provider receives order(s) completion from supply chain**

The GRCP will receive notification from their supply chain of completion of their provision or transfer order(s). There may be several notifications, e.g. if their supply chain has separate orders for voice and broadband, or the order involves number porting via a different supply chain (e.g. for a VoIP service).

The GRCP will send confirmation to the customer of completion of the switch and activation of their new service(s).

The GRCP will also send the Hub a “trigger message” for the switch order, to trigger the LRCP to cease their service(s) and complete the switch order – see SW1.37 below for the LRCP handling of this trigger message..

#### **9.15 SW1.35 Customer receives confirmation of order completion**

The customer will receive confirmation from the GRCP, e.g. “welcome to service” messages.

The customer will also receive confirmation from the LRCP, and a final bill – for some LRCPs, the final bill may act as confirmation of cessation of services.

#### **9.16 SW1.36 Hub logs switch order trigger message and routes to the losing retail provider**

The Hub will log the switch order trigger message (for audit trail purposes) and route the request to an end point as defined by the RCP that owns the losing retail provider RID.

#### **9.17 SW1.37 Completion of switch order by LRCP**

The LRCP will receive the switch order trigger message.

Note that the original switch order will have included an intended migration date. But the provision of service by the GRCP’s supply chain may have been delayed (e.g. customer missed their original appointment and the engineer visit was re-scheduled for a later date). The LRCP must not trigger any cessation activities until they receive the switch order trigger message, even if the original migration date has passed. The switch order trigger message effectively provides a final migration date.

For an inter network switch, the LRCP must send a cease request(s) to their supply chain.

For an intra network switch, the handling will depend on their supply chain. E.g. Openreach will reject a cease request if their managed cease order is open or complete, so the LRCP should not send a cease request to Openreach.

In both cases, the LRCP will need to cease other services as appropriate (e.g. TV service which was dependent on their broadband), and trigger other actions, such as prompting the customer to return equipment.

The LRCP will also need to update their billing systems. If they did not process the switch order trigger message on the day it was sent, they may need to back-date the cessation date on their billing systems, ensuring that rental liability and relevant contractual obligations did not extend past the final migration date. The LRCP will then send a final bill to the customer.

Some terms and conditions of the LRCP contract may continue to apply. E.g. if the customer does not return the equipment, the LRCP may be entitled to charge the customer a penalty for the non-return (possibly some time after the supposed “final bill”).

#### **9.18 SW1.38 Cease of service(s) by losing supply chain**

When the LRCP receives the switch order completion message, for an inter network switch, they will ask their supply chain to cease service(s).

This may be the first notification(s) that the losing supply chain receives for the overall switch process, and the cessation request(s) will have no lead time.

Supply chain processing may not be able to cease the service(s) until the next day or next working day.<sup>38</sup> E.g. the GRCP supply chain may support late evening and/or weekend working, so the switch order trigger message may arrive with the LRCP out of normal working hours, and they may immediately send a cessation request(s) to their supply chain.

---

<sup>38</sup> Note that it is expected that “hard ceases” (e.g. removal of a temporary line) will be very rare for the LRCP when the customer is switching to another provider.

Classification: CONFIDENTIAL

The GCs prohibit the LRCP from charging beyond the final migration date. The arrangement between RCPs and their supply chains is a commercial matter, but supply chains that do not support cessations with no lead time may find themselves under pressure to change their commercial arrangements.<sup>39</sup>

### **9.19 SW1.39 Losing retail provider notifies GRCP that switch is complete**

The losing retail provider will send a response to the switch order trigger message to the GRCP via the Hub – effectively this message represents completion of the switch order by the LRCP.

The sending of this message might be delayed by processing either by the LRCP or their supply chain, e.g. if cessations are only processed on a working day.

However, the LRCP must not delay the response for things such as payment of the final bill or return of equipment by the customer.

### **9.20 SW1.40 Hub logs switch order completion and routes to gaining retail provider**

The Hub will log the switch order completion message (for audit trail purposes) and route the request to an end point as defined by the RCP that owns the gaining retail provider RID.

### **9.21 SW1.41 Gaining retail provider receives notification that the switch is complete**

The GRCP will receive notification that the LRCP has completed all their steps to cease service(s) and billing.

Note that this response may be delayed by processing either by the LRCP or their supply chain.

GRCP s may choose to close their customer order when they have received completion from their supply chain (e.g. if having an open order prevents the new customer from raising any fresh orders). However, the GRCP should be able to handle the LRCP response as a late update to their customer order.

GRCP s should also monitor for lack of receipt of confirmation from the LRCP, and treat this similar to other order failures.

---

<sup>39</sup> Openreach have already identified one cessation lead time that they plan to remove, and are reviewing all of their lead time for impacts from One Touch Switch.

Classification: CONFIDENTIAL

## **10 Manual resolution of switch match failure – back office**

It is expected that there will be instances where the response to the match request will be a non-match response that cannot be reconciled during the OTS (One Touch Switch) customer journey in real-time.

In this case where there is a failure to gather the necessary details from the customer to ensure a “full match” and continue the switch, a manual resolution process of communication between GRCP and LRCP is proposed.

Examples include:

- Failure to match on surname, and customer cannot provide LRCP account number (or account number is not recognised).
- Failure to match on address, and checks with customer do not resolve the issue.
- Multiple lines / services detected, and customer cannot provide service identifiers (e.g. customer has multiple broadband only services on a single billing account).

The following steps outline the process, which can also be found in the accompanying process flow documentation.

As mentioned in §3, the Hub Service Provider will operate a ticket system to facilitate back-channel communication between multiple RCPs, in a manner that leads to efficient communication, and can be monitored by Ofcom for compliance. This is likely to be a commercial ticket system, possibly cloud hosted, and with web portals that can be used by any RCP (“swivel chair”) and an integration layer to allow RCPs to link with any internal ticketing processes.

### **10.1 SW4.1 GRCP raises a ticket for assistance from LRCP**

Gaining retail provider will raise a (back-channel) request to clarify details of the customer’s information / services. It is not expected that this is a real-time process where the customer waits online / on a call / in-store. The GRCP will inform the customer that the switching process will not continue until the request has resulted in a successful match with the LRCP.

The ticket sent will contain information supplied by the customer for identification to switch and sufficient information from the GRCP, so that it can be linked back to the initial customer enquiry on return.

Note: The ticketing solution will offer a web portal for online case management, as well as providing an integration layer to allow linking with GRCP /LRCP existing ticketing processes.

### **10.2 SW4.2 Hub Ticketing System stores the ticket and notifies LRCP of new communication**

The ticket raised by the GRCP will be stored on the ticketing system. A notification will be sent to the target LRCP advising of the new ticket/communication or ticket status.

### **10.3 SW4.3 LRCP actions ticket**

The LRCP will investigate and obtain the information requested to support the switch request. Most likely the LRCP will provide corrected information (e.g. the exact spelling of surname as held in their records; account number; service identifier). It is also possible that the LRCP may correct information in their systems (e.g. they might check the service address as held by their network provider, and then correct an erroneous address in their records). It is also possible that the LRCP cannot find any matching customer (e.g. the customer has selected the wrong LRCP).

Once the request for information has been completed, the LRCP will deliver the response to the GRCP via the Hub ticketing system. This ticket response will be forwarded to the GRCP to enable the switch request to be completed.

Note: The losing retail provider will receive the ticket and within a specified SLA identify the account the customer is trying to switch and then return accurate and sufficient information to allow the customer to proceed with the switching process.

### **10.4 SW4.4 Hub Ticketing System - log and forward response to GRCP**

Once the ticket is updated with a response from the LRCP it can be logged and forwarded to the GRCP.

### **10.5 SW4.4 GRCP actions ticket**

GRCP will receive and act upon the successful / unsuccessful resolution of requested information from the LRCP.

**Classification: CONFIDENTIAL**

- The GRCP will have obtained customer consent to attempt matching with the LRCP. This consent effectively also authorised the back channel communication with the LRCP, and remains valid when the LRCP responds. So the GRCP can re-try the match request (and then close the ticket if successful), before contacting the customer with the good news of a known successful match.
- On successful receipt of information / match, the GRCP will contact the customer to continue with the switch request – they will at least need to gain express consent from the customer, even if the GRCP has verified a successful match – the failure to match (and thus no triggering of switch information from the LRCP) means that consent to switch could not previously have been given.
- On receipt of an unsuccessful resolution from the LRCP the GRCP has the option to review the information received and request clarification to reduce the likelihood of repeated customer interactions on false information and then repeated manual resolutions via Back Office.

**10.6 SW4.5 GRCP closes ticket**

GRCP will manually / automatically close the ticket once the supplementary information has been successfully accepted so that the switch request process can continue.

Note that the GRCP should close the ticket as soon as the LRCP has provided a meaningful response, and should not delay closing the ticket whilst they await contacting the customer to gain express consent.

**10.7 SW4.6 GRCP contacts customer**

The GRCP will provide the guidance or assistance for the customer to complete the switching request.

Note: The method of contact with the customer is up to the individual GRCP. Some GRCP s may only offer an assisted channel. Others may support online self-service – instructions would be provided on what to enter on the switch pages of the order to successfully proceed.

**10.8 SW4.7 Customer receives prompt to contact GRCP**

Customer is contacted via their preferred method (telephone / email / SMS), or prompted to contact GRCP to enable them to continue the switch journey.

**10.9 SW4.8 Customer provides details as requested by GRCP**

Customer will pick up the switch request journey and provide any information required to complete the switch if the information is delivered to them, or the GRCP will guide the customer through the updated information to enable the journey to continue.

**10.10 Capture of the switch order request continues as per SW1**

The capture of the customer switch request now continues as per SW1:

- SW1.4 (Gaining retail provider takes details) – those details may now be supplemented by the information returned by the LRCP in the ticket.
- SW1.5-7, SW1.11-15 – if the information provided by the LRCP is correct (or they made a correction to their records), the match should now be successful. (If not, the GRCP can continue to engage with the LRCP via the ticket).
- SW1.16-17, SW1.19 – the GRCP will need to capture the express consent of the customer to continue.
- SW1.20 – the GRCP will need to agree a migration date with the customer (possibly now later than the customer's original aspiration due to the time needed to engage with the LRCP).

**10.11 SW4.10. Hub Ticketing System updates ticket status**

Ticket details and outcome will be stored to enable tracking and reporting of any supplementary information.

Classification: CONFIDENTIAL

## 11 Cancel Own

Having successfully placed the switch order and with that switch order being 'in-flight' with both GRCP and LRCP, the customer may for whatever reason choose to cancel that order. Where the customer chooses to cancel the switch order via the GRCP with whom they placed the original switch order, this will be referred to in this document as a "Cancel Own"<sup>40</sup>. Such cancellations will be subject to the standard PONR restrictions imposed by the gaining supply chain.

### 11.1 SW3.1 Customer wishes to cancel the switch

After placing their order and providing their express consent to proceed with the process the customer is within their rights to cancel the order with the GRCP.

Where the switch order is either complete or has passed the point of no return (PONR) as defined by the GRCP a Cancel Own request would not be processed.

The GRCP should be in a position to understand the PONR timing imposed by their supply chain (e.g. for Openreach, it is typically 4pm on the day before the commitment date), and how much extra safety margin they apply (e.g. many RCPs using Openreach apply a 3pm cut-off for capture of a cancellation request, so that they can get it to Openreach before 4pm).

### 11.2 SW3.2 GRCP cancels the provision / transfer order(s) and switch order

Once the customer has requested that the order be cancelled, the GRCP must:

- Notify the LRCP of the switch order cancellation via the Hub (see §SW3.6 for more detail)
- Send an order cancellation request to the gaining supply chain to initiate cancellation of the provision / transfer order (see §SW3.3 for more detail)

### 11.3 SW3.3 Gaining supply chain cancels provision / transfer order(s)

Once the switch order cancellation has been initiated the gaining supply chain should cancel down the provision / transfer order(s). It is expected that GRCP's and their supply chains will follow their existing Cancel Own processes.

### 11.4 SW3.4 Gaining supply chain notifies losing retail provider of cancellation of unsolicited cease

In an intra network switch, the supply chain will have notified the losing retail provider of unsolicited cease(s) triggered by the GRCP placing transfer order(s) for the switch.

As per the existing cancel own process in place the gaining supply chain will notify the losing retail provider that those unsolicited cease(s) have been cancelled.

### 11.5 SW3.5 LRCP receives notification of cancellation of unsolicited cease(s)

In an intra network switch, the LRCP will receive the notification of cancellation of the unsolicited cease(s). The LRCP will take the appropriate steps to clean up their records of the unsolicited cease(s)<sup>41</sup>.

### 11.6 SW3.6 GRCP creates a switch order cancellation request

Alongside sending an order cancellation request into the gaining supply chain the GRCP will also need to create a switch order cancellation request message and send it to the LRCP via the Hub. This request message should include:

- The switch order reference
- A cancellation reason code as appropriate (enum list to be defined)

### 11.7 SW3.7 Hub logs switch order cancellation message and routes to the losing retail provider

The Hub will log the switch order cancellation request (for audit trail purposes) and route the request to an end point as defined by the RID owned by the LRCP.

---

<sup>40</sup> The terminology of "cancel own" and "cancel other" was used in the former NOT+ process and rules, and is thus recognised by many in the industry, and retained in this industry process.

<sup>41</sup> The LRCP may delay creation of a "customer order" until they receive notification of triggering of the switch order. So we're being careful not to use the term "order" where for some RCPs, there may not be an "order" at this point in time.

Classification: CONFIDENTIAL

### **11.8 SW3.8 LRCP receives switch order cancellation request**

Once routed correctly the LRCP will receive the switch order cancellation request from the GRCP as defined at §SW3.6.

Note that in an intra network switch, the LRCP will also receive notification of cancellation of the unsolicited cease(s) from their supply chain. The notifications from the Hub and from the supply chain may arrive in either sequence and the LRCP must be able to handle this.

In most cases, the LRCP will not need to cancel with their supply chain:

- For an intra network switch, the LRCP should receive notification from their supply chain of cancellation of the unsolicited cease(s). So the LRCP does not need to initiate cancellation.
- For an inter network switch, the LRCP is very unlikely to have yet told their supply chain about the expectation of a cease on the future migration date, so there would be no pending order with their supply chain to cancel.

But in some scenarios, they may need to inform their supply chain, depending on the processes used by their supply chain.

### **11.9 SW3.9 Losing supply chain cancels cease order**

Upon instruction from the LRCP, the losing supply chain will cancel the in-flight cease order where one exists. As mentioned in SW3.8 above, there may be no need for this step.

### **11.10 SW3.10 LRCP responds to switch order cancellation**

When the LRCP received the original switch order request they will have created some record of this.<sup>41</sup>

The LRCP will need to update their record of the switch order (e.g. record it as cancelled), wait for a response from their supply chain (if appropriate, and expected to be unlikely as per SW3.8 above), and then send a response to the GRCP (via the Hub) to confirm that they have received the switch order cancellation and completed their processing.

### **11.11 SW3.11 Hub logs response to switch order cancellation and route to gaining retail provider**

The Hub will log the switch order cancelled notification (for audit trail purposes) and route the request to an end point as defined by the RID owned by the GRCP.

### **11.12 SW3.12 GRCP – no action**

Here the GRCP receives the confirmation from the LRCP that the switch order has been successfully cancelled. The GRCP should log this for audit purposes.

Classification: CONFIDENTIAL

## 12 Cancel Other

Having successfully placed a switch order and with that switch order being 'in-flight' with both GRCP and LRCP, the customer may for whatever reason choose to cancel that order. If the customer has simply changed their mind, they should be encouraged to cancel via the GRCP. But there are circumstances where cancellation via the LRCP is appropriate:

- Customer is claiming that the switch order is slamming, and has no contact with the GRCP.
- Customer cannot reach the GRCP to ask for a cancellation.
- Customer has asked the GRCP to cancel the switch, but the cancellation does not appear to have been actioned.

Where the customer chooses to cancel the switch order via the LRCP, this will be referred to in this document as a "Cancel Other". The terms "Cancel Other" (and "Cancel Own") have been inherited from the former NOT+ process, and are re-used as they are well understood by many in the industry.

However, with the removal of the NOT+ rules from the GCs, there may be less restrictions<sup>42</sup> on when cancellation via the LRCP is permitted. This is analogous to the industry process for geographic number porting which has no restrictions on the circumstances in which the LRCP can cancel a number port at the customer's request. However, we will also re-use the reason codes associated with NOT+ Cancel Other, as again they are well understood by many.

### 12.1 SW2.1 Customer wishes to cancel switch

It may be that the customer has simply changed their mind or, upon receiving the switch impacts notification from the LRCP determines they never raised the switch request and formally instructs the LRCP to cancel said request on their behalf.

Where the switch order has passed the point of no return (PONR) as defined by the LRCP a Cancel Other request would not be processed.

For an intra network switch, the LRCP should understand any point of no return (PONR) imposed by their supply chain, and can assume that if their supply chain would accept the cancellation, then so will the GRCP.

For an inter network switch, the LRCP is unlikely to understand the PONR imposed by the GRCP or their supply chain. LRCPs may capture a Cancel Other request at any point. They should advise the customer of increasing risk of rejection by the GRCP as the time of attempted cancellation approaches the migration date.

The GRCP may reject the cancellation if it has passed the PONR imposed by their supply chain. It would be good practice for a GRCP to contact the customer if they reject a Cancel Other.

### 12.2 SW2.2 LRCP cancels pending switch order

At this point the LRCP will need complete any necessary steps to cancel the switch order and associated internal orders pertinent the cessation of the customer's services. These steps may include:

- Identify and cancel any record of the switch order request (within LRCP systems)
- Identify any supply chain unsolicited cease order(s) received as part of the switching process and issue a cancellation request for those unsolicited cease(s) (see §SW2.3 for more detail)
- Create and send a switch order cancellation notification to the GRCP via the Hub (see §SW2.7 for more detail)

### 12.3 SW2.3 LRCP raises a request to cancel unsolicited cease(s) to supply chain

In the case of an intra as opposed to inter network switch the LRCP at this point will need to raise a cancellation request into their supply chain for the unsolicited cease order(s) associated with the switch.

### 12.4 SW2.4 Shared supply chain receives cancellation request

Upon receipt of the cancellation request(s), the supply chain will cancel the order(s) accordingly as per the existing cancel other process.

### 12.5 SW2.5 Shared supply chain informs GRCP of cancellation of provide order

Once the order cancellation(s) are complete the supply chain will notify the GRCP as per the existing cancel other process.

---

<sup>42</sup> See Appendix 9 for a more detailed discussion on this point.

Classification: CONFIDENTIAL

### **12.6 SW2.6 GRCP receives cancellation notifications**

The GRCP will receive and process the order cancellation progress and completion notifications, again as per the existing cancel other process.

### **12.7 SW2.7 LRCP send a switch order cancellation request**

After identifying the switch order in their internal systems (at §SW2.2) the LRCP will send a switch order cancellation request to the GRCP via the Hub. This message will need to include:

- The switch order reference (see §X.X.XX for definition)
- The cancellation reason (enum list to be defined)

### **12.8 SW2.8 LRCP send a switch order cancellation request**

The Hub will log the switch order cancellation request message (for audit trail purposes) and route the request to an end point as defined by the RID owned by the GRCP.

### **12.9 SW2.9 GRCP receives switch order cancellation request**

Once routed correctly the GRCP will receive the switch order cancellation request from the LRCP (via the Hub) as defined at §SW2.7.

If the gaining supply chain has not yet passed its point of no return, then the switch must be cancelled. If the point of no return has been passed then processing will continue at §SW2.14.

Note that in an intra network switch, the GRCP will also receive notification of cancellation of their transfer order(s) from their supply chain. The notifications from the Hub and from the supply chain may arrive in either sequence and the GRCP must be able to handle this.

For an intra network switch, the GRCP should receive notification from their supply chain of cancellation of their transfer order(s). So the GRCP does not need to initiate cancellation.

For an inter network switch, upon receipt of the notification from the LRCP (via the Hub) that the switch order is being cancelled, the GRCP will need to contact their supply chain to cancel the provision order(s) associated with the switch.

The GRCP will also need to cancel the customer order in their internal systems. At this point whilst there is no obligation for the GRCP to contact the customer to inform them of the cancellation of the provision order, they may choose to do so.

### **12.10 SW2.10 Gaining supply chain cancels provision order(s)**

The gaining supply chain will cancel the provision order(s) as requested by the GRCP, thereby terminating the switch order in their systems.

### **12.11 SW2.11 GRCP informs LRCP that the switch order has been cancelled**

After cancelling the supply chain and internal customer orders associated with the switch, the GRCP will inform the LRCP via the Hub that the switch order has been cancelled. This message will need to include the switch order reference for the LRCP to correlate the message in their internal systems.

### **12.12 SW2.12 Hub logs confirmation of cancellation and routes to losing retail provider**

The Hub will log the order cancelled notification (for audit trail purposes) and route the request to an end point as defined by the RID owned by the LRCP.

### **12.13 SW2.13 LRCP finished**

Upon receipt of the switch order cancellation message from the Hub the LRCP should log the message.

### **12.14 SW2.14 Cancel Other Rejection sent to losing retail provider**

If the gaining provider's point of no return has been reached in the order process upon receipt of the cancel other request, this can be rejected by the gaining provider specifying the reason.

Classification: CONFIDENTIAL

**12.15SW2.15 Hub logs rejection of cancel other request and routes to losing retail provider**

The Hub will log the cancel other rejection notification (for audit trail purposes) and route the response to an end point as defined by the RID owned by the LRCP.

**12.16SW2.16 Rejected Cancel Other Resolution**

Upon receipt of the rejection message from the Hub the LRCP should contact the customer to agree a resolution.

Classification: CONFIDENTIAL

### **13 LRCP re-send of switching information (change of comms method/details)**

In paragraph 4.199 of the September 2021 Statement, Ofcom wrote:

“In our view, the losing provider switching information should only be sent to the contact details already registered with the losing provider. However, we think losing providers should ensure a customer can subsequently contact them to update their contact details and ask for the information to be re-sent to the new contact details.

#### ***13.1 SW5.1 Customer – Change to contact information and request resend of switching implications***

In the event a customer does not receive switching implications, or perhaps is informed they will be sent by letter but wants them sooner, they can contact their LRCP and change their contact preferences and request the implications are sent to them again by the same or an alternative medium.

If a copy of the printed implications is re-requested, the LRCP can impose a lead time before this can be requested again thereby implementing rate limiting according to their policy.

#### ***13.2 SW5.2 LRCP – Process request to update communication method and resend implications of switching.***

Upon request by the customer to update their communication preferences and/or resend the implications of switching notification the LP should process and honour this request according to the customer’s preferences. The customer could, for example, change or add an email address to their account, and/or request the implications be sent to them using a different method or to a different destination to that previously used.

Classification: CONFIDENTIAL

## 14 Interaction with number port

Number porting and OTS are on the surface two separate processes. OTS is an interaction between retail providers while number porting is an interaction between NBICS providers (who provide voice services to the retail providers). However, the current number porting processes, and especially the lead times involved, prohibit the goals of OTS and must be addressed to support it.

Over 90% of all porting errors today are encountered during the validation phase of porting, for example sending the initial porting request to the range holder only to find the number has been ported out to a different voice provider and then initiate a subsequent port request with them.<sup>43</sup>

The OTS process requires that where a number port is required the LRCP should, when responding to the customer matching request, return all details required to raise a successful port request directly with the losing NBICS provider sufficient to support an automated porting process capable of being executed on the next day<sup>44</sup>.

Key to meeting this goal is obtaining the CUPID of the losing NBICS provider. Knowing the CUPID from where to request a port and understanding from the losing supply chain that the port is going to be valid at the time the order is placed with the GRCP are key to eliminating most consumer porting errors.

Note that we believe that the majority of RCPs either use a single voice supplier (with a single CUPID) or explicitly record the voice supplier against each voice service. Some RCPs might need to work with their voice supplier to get a bulk refresh of the mappings, but we think it is unlikely that any RCP will need to make a real-time query to ascertain the CUPID. In addition, voice providers with multiple CUPIDs (e.g. due to mergers and acquisitions) may use OTS as a justification to move to a single CUPID.

A significant proportion of porting requests, at least 90% of consumer ports, are performed between BT, Sky, TalkTalk and Virgin Media using an automated porting process. By identifying the correct CUPID(s) and utilising the automated switching processes, OTS might remove all artificial lead times from the switching and porting process and will be capable of being performed next day where the supply chains are also able to meet those timescales.

The number port working group have previously considered a real time activation request as recently as 2018<sup>45</sup>, however this has never been implemented, but it is the recommendation of the OTS-DDG that the number porting processes be consulted to determine if the existing NPOR/NPAR process is sufficient to support next day porting, or whether changes to the existing processes are required to meet that requirement. However, at the time of writing (February 2022), it is looking unlikely that porting lead times will be reduced by the time of introduction of OTS.

It is also recommended that the current automated porting processes (described above) be expanded to become an industry standard requirement to provide 100% coverage for all providers.

For OTS the changes required are as follows:

- All NBICS providers must expose an API, or expand on existing integrations, where on request to provide porting information for a number they will provide the following as a minimum.
  - The CUPID that must be used to obtain that number.
- All NBICS providers should implement the ability to support automated porting transactions to ensure numbers are ported the same day as the port activation is requested.<sup>46</sup>
- RCPs may need support from their wholesalers, e.g. to understand what CUPID is used by their wholesale voice provider.
- All wholesalers must support placing orders containing the porting information (CUPID of current voice provider) obtained from the losing NBICS provider as provided by the GRCP.

<sup>43</sup> The Number Port Provisioning Core Processes states: "It is the GCPs responsibility to establish who the RH and LCP are before the order can be placed. If the GCP is unable to confirm who the LCP is then they will submit a provide request to the RH. The RH will then reject the order using rejection code 30 and supply the CUPID of the LCP." Response code 30 has become the only legitimate way to determine a sub-port – but it is still a rejection code, and it slows down the porting process / increases the lead time.

<sup>44</sup> Ofcom have aimed OTA at next day switching (and not at same day switching). Number porting order(s) currently have minimum lead times longer than next day.

<sup>45</sup> December 2018 [Geographic Number Portability Process Automation](#)

<sup>46</sup> The current SLAs are 95% within 15 mins and 99% within 20 mins.

Classification: CONFIDENTIAL

Improvements to the number porting process generally, including standardisation on communications methods would significantly improve the reliability and speed of porting processes, but are beyond the remit of the OTS process.

### 14.1 Gaining supply chain responsibilities

#### Question for wider OTS community:

OTS-DDG has carefully considered how number porting will interact with OTS. There have also been parallel discussions within the number porting groups.

This section outlines some further possible detail around reducing the lead time in a manner that is controlled by the impacted parties (the smaller numbers of voice providers who support automation).

#### Update from feedback on v1.0

We've removed any suggestion of the LRCP needing to ascertain RH, whether porting might be automated or not, and any indication of lead time – instead the gaining supply chain will do this (as it does today). The only impact on LRCP is to provide the CUPID of the current voice provider.

We have proposed above that the LRCP include the CUPID of the current voice provider in the match response (when the match request indicates that the customer wants to retain their current DN).

We think that many LRCPs will know the voice provider (e.g. their supply chain only involves a single voice provider). But we don't think that many retail CPs will know the RH, and few will know the level of porting automation – and that level might change over time (hopefully towards more automation and shorter lead times!).

We don't want to force LRCPs to make an extra check with their supply chain, especially when we are considering an SLA of 60 seconds.

In contract, the gaining supply chain is in the best position to know the lead time.

- (Note that porting processes refer to GCP and LCP – these are the voice providers.)
- They must have existing mechanisms to look up the RH (to handle today's porting orders).
- With the LCP returned in the match response, the gaining supply chain will know RH, GCP and LCP. So they can derive whether the port request will be a provide (export from RH to GCP), return to range holder, or sub-port (number is already exported from RH to LCP, and needs to be moved to GCP).
- Gaining supply chain will also know the current state of automation between them and RH/LCP (which might change over time).
- The gaining supply chain may need to offer a service availability check for the DN, checking several things:
  - Can they host the number at all? E.g. Openreach has geo restrictions on System X and AXE10 exchanges, but there are none on VoIP.
  - Is it a port at all – think of switches between providers using Openreach.
  - Are there porting arrangement in place with both LCP and RH.
  - Given the current state of automation between GCP, LCP and RH, what is the min lead time for a number port.
- Alternatively the gaining supply might stick with current number porting arrangements. E.g. Openreach will not be changing porting arrangements for WLR provision orders, given the national "stop sell" of WLR in September 2023.

So there are several impacts on LRCPs and their supply chains:

- As described above, the LRCP must return the CUPID of the losing voice provider. For many LRCPs, this CUPID will be a fixed value, but it is not expected that LRCP's will need a real-time lookup with their supply chain.
- The LRCP does not need to return the RH.
- The previous proposals for LRCP to return any information about the number porting automation levels or lead times supported by their supply have been scrapped – the gaining supply chain is in a better position to know this information.

### 14.2 Right to port for one month after termination

The 3 April 2023 GCs include the "right to port" as follows:

C7.6 All **Regulated Providers** shall ensure that:

Classification: CONFIDENTIAL

- (a) [...]
- (b) they provide **Number Portability** for a minimum of one month after the date of termination by the **Switching Customer** of the contract for the provision of the **Relevant Communications Service(s)**, unless the **Switching Customer** expressly agrees otherwise at the point when they terminate the contract; and [...]

At the time of writing (February 2021), the number porting processes have not been updated, but the following are the expected changes to support “right to port”:

- Voice providers will need to retain a record of ceased numbers linked to the last working postcode, for a period of at least 31 days after cessation of the number. This applies both to numbers for which they are the RH, and also for imported numbers.
- When an imported number is ceased, the current process is that the voice provider should raise a cease request within 2 weeks – this order returns the number to the range holder (who will likely quarantine the number for some period of time). To support “right to port”, the cease order must be delayed for at least 31 days (and probably then the cease order should be raised in the 2 weeks after that).
- Most Consumer / single number ports do not involve a “customer letter of authority” (CLOA) and are generally accepted by the losing voice provider as long as the number and postcode match:
  - If the number is active the losing retail provider is sent an unsolicited cease notification by the voice provider.
  - If the number is already ceased, it is expected that the voice provider will not inform the former retail provider of the port request.
- Business / multi number ports generally require a CLOA, which is typically sent to the losing retail provider to verify the customer / business name, and to notify the customer of the port request.
  - It is expected that a CLOA will continue to be needed for all multi number ports, and for ceased numbers, the former retail provider will need to accept the port request as if they were the current retail provider.

The OTS match processing described earlier in this document only requires the LRCP to identify customers with active broadband or voice service at the location identified by the UPRN. They do not require the LRCP to identify customers with recently cease services.

Thus it is not necessary for the GRCP to raise an OTS matching request when they are in a known “right to port” scenario. However, it is recognised that a GRCP might raise an OTS matching request, and use the failure to further question the customer and ascertain that it is a “right to port” scenario.

### 14.3 Home move with number import

The current number porting processes permits number import for a customer who is moving to a new address. A typical scenario is:

- Customer has active voice service (and possibly broadband as well) with RCP1 at their old address.
- Customer is about to move home. They decide to approach RCP2 for voice service (and possibly broadband as well) at their new address – this could simply be a customer choice, or perhaps RCP1 does not cover their new address.
- The customer wishes to retain their existing phone number, and it can technically be hosted by RCP2’s supply chain at their new address.

RCP2 can raise a provision order (new installation, working service takeover, start of stopped service) at the new address, and include a request to port the customer’s DN from the voice provider serving RCP1 at the old address to the voice provider serving RCP2 at the new address. A number of RCPs (including at least BT Consumer) have order capture journeys (assisted and self-service) which can capture such an order.

Note that the port order must indicate that the customer is moving, and provide the postcode of the old address.

In relation to customer’s right to retain a telephone number, Ofcom have made several recent decisions:

- In their second consultation on the future of telephone numbers<sup>47</sup>, they proposed “to maintain the requirement for landline numbers to include an area code which corresponds to the customer’s location, unless the telephone user requests to use a number out-of-area (i.e. use a number with an area code different from where they are located)”. This was intended to allow customers to move home within the UK and retain their 01/02 number.

<sup>47</sup> Ofcom, April 2021. Future of telephone numbers: Second consultation

**Classification: CONFIDENTIAL**

- EECC includes a mandatory provision concerning the right to port for one month after the date of termination, and Ofcom have enshrined this right in the revised GCs which come into effect on 3 April 2023.

So it is clear that Ofcom place importance on the rights of a customer to retain their number, including when they are moving home. (And it seems disingenuous to interpret Ofcom's consultations and statements on EECC switching as being any obligation for RCPs to stop supporting this scenario, given that that would be at odds with Ofcom's other statements on the customer's right to retain their number.)

The current number porting processes only permit a customer to request number port when the number is currently working, but the EECC right to port will extend this to numbers which have been ceased, and remove any ambiguity around numbers which are working at the time of the initial port request, but ceased at the time of activation of the port (which can easily arise in the home move scenario described above).

However, Ofcom's September 2021 Statement has somewhat muddied the waters:

- OTS only applies to "residential customers who are switching Fixed Communications Services at the same location".
- The GCs on home moves cover a confusing mixture of home moves and working line takeover.

So that leaves the question of how RCPs continue to service customers in the scenario described above:

- Given that Ofcom have constrained OTS to exclude home moves, this scenario appears to be outside OTS.
- Additionally, the customer needs to be in explicit control of the cease date at the old address:
  - The customer knows the date on which they are moving out, and will want to ensure they are not liable for any calls made after they move out.
  - The provision date at their new address may be delayed (due to lead times or engineering appointment availability). I.e. the provision date cannot be considered to be a "migration date".
- RCPs may choose to use an OTS match request to verify the customer's ownership of the number, and if matched, to advise the customer of the need to cease with their retail provider at their old address.
- However an OTS switch order must not be raised for the scenario where the customer is moving home, and wanting to port their number.

#### ***14.4 Summary of impacts on RCPs from the combination of OTS and number porting***

In summary:

- When processing a match request, LRCPs need only look for matching active service. They do not need to look for recently ceased service, and OTS matching is not a support mechanism for "right to port" after cessation.
- For a successful match, when number porting is requested, the LRCP must return the CUPID of the current voice provider. This may be used by the gaining supply chain to pre-determine a sub-port scenario.
- When processing a number port request associated with a home move (old postcode is populated), the LRCP should not expect any corresponding OTS switch order.

Classification: CONFIDENTIAL

## 15 Switch from multiple LRCPs to one GRCP

Again, we have not had time to write up this section.

We've talked through an example of a customer with WLR service with Post Office (now Shell) and FTTC broadband from Zen.

Two match requests would be needed.

E.g. consider customer gives Zen first, and GRCP send match request for IAS and NBICS:

- Zen should reply to say the IAS is found, and give its service identifier, LACP as Openreach, and probably DN as Openreach service identifier.
- As Zen should know that its BB is SMPF, and it can't find a WLR service, it should reply on NBICS to say "not found, so another CP must have the WLR"

GRCP would then query the customer, and send a match request to Post Office, possibly for IAS and NBICS:

- Post Office will find their WLR, and reply to say the NBICS is found, give its service identifier, LACP as Openreach, and DN as Openreach service identifier.
- When PO can't find any BB, it should call Openreach's EMLC service which will show G (for GEA service, i.e. the FTTC with Zen). PO should then reply on IAS to say "not found, but another CP has SMPF service".

There were then be 2 x SOR, and 2 x switch orders, one to Zen and one to PO.

The GRCP order could be for SOGEA, or WLR+FTTC, or MPF+FTTC, or FTTP.

Classification: CONFIDENTIAL

## **16 Unhappy paths / failure scenarios**

We've started to consider failure points and unhappy paths, but not had time to document them in detail.

One area that will need consideration is slam restoration.

Switching back should be quick (LACP infrastructure would still be in place), but number porting may delay. Also is the LRCP responsible for interacting with the GRCP to inform them of slamming and not to charge ETCs (e.g. via the ticket system.)

Classification: CONFIDENTIAL

## 17 Support for Small Resellers

The switching process as designed is completely dependent on an automated process to support quick responses to messages and the best customer experience. However, the OTS-DDG recognise that smaller resellers may not have the means to automate some, or all the processes required, and that a technical solution is required.

It was also recognised that it would not be appropriate to impose special working practices for all the automated resellers to accommodate the non-automated ones.

The major problem area is at the point of matching where a response is required from the LRCP within 60 seconds, and to achieve this it would be necessary for the small resellers records to be accessible in a form that can be used to perform the matching process, generating SOR GUIDS and responding the GRCPs on behalf of the LRCP.

The result will be that a small reseller portal will be provided, either by the hub provider, or a third party integrator to provide this capability.

### 17.1 Small Reseller Portal

The reseller portal will be connected to the hub, and for those resellers that do not have their own automation, the messages for their RID and some or all of the different transactions will be routed to the Small Reseller Portal instead.

Each small reseller will be required to load a CSV file on a regular basis, no less than once a month, containing the surname, address, contract end date, any service identifiers and indicators of whether that customer has a phone line (including its number) or broadband. A further indicator will specify if they have any other impacted services that losing broadband or voice would impact. A final indicator will specify if the reseller will generate matching communications via email or letter.

As the UPRN is the principal form of address matching used in OTS transactions, if that can be supplied by the reseller then it should be. If not, then the reseller portal will attempt to obtain that UPRN and store it with the address on behalf of the reseller.

With all of the address and service information loaded, then the SRP can perform automated service matching on behalf of the LRCP.

The data held within the SRP will be completely secured from any direct access other than the owner of that data and will comply fully with all GDPR and security regulations.

It will be the responsibility of the reseller to ensure the data published to the SRP is accurate and suitable to support the switching process.

### 17.2 Small Reseller Portal as the LRCP

When the SRP receives a matching request, it will attempt the match following all standard matching rules, and if one is found then it will respond to the GRCP with the matching information and generate the SOR GUID representing that switch. The portal will also generate an automated email to the LRCP with the switch information in it to instruct them to generate and supply the implications of switching letter.

If the LRCP finds the customer is no longer in service, due to the age of the data, they need not take any direct action and should treat any subsequent request to perform the switch as if they were still active. The only time the GRCP should take further action is if the circuit or phone number being switched has already been transferred to another address or provider. In this case the LRCP should use the SRP or ticketing portal to generate a ticket to the GRCP indicating that the SOR has been revoked due to the service no longer being available to switch.

As the switch progresses, and the GRCP generates the switch order create request, this will again be routed if required to the SRP which will again generate an outbound email to the LRCP to indicate the service is being transferred and to generate any "sorry to see you go" communications. The LRCP will log in to the portal to acknowledge this against the SOR, this could be streamlined by a link in the email sent to the LRCP to the transaction requiring the response.

And finally, when the switch order trigger request is sent by the GRCP, this will again be routed if required via the SRP and generate an email to the LRCP to terminate service and stop billing from the point that communication was generated. The LRCP

Classification: CONFIDENTIAL

will again log in to the portal to acknowledge this against the SOR, this could also be streamlined by a link in the email sent to the LRCP to the transaction requiring the response.

The SRP will hold a transaction history against the SOR, and the LRCP will be able to view all messages sent and received via the portal, as well as be able to trigger the responses to messages from the GRCP when required.

In addition, in support of cancel other, the LRCP will be able to raise a cancel other request via the SRP to the GRCP.

### ***17.3 Small Reseller Portal as the GRCP***

As a gaining provider, the GRCP will provide the means to enter a matching request on behalf of a customer. Addresses will generate a UPRN where possible and the SRP will construct the switch matching request on their behalf. The messages will be sent via the hub the same as all messages are to the LRCP who will be expected to respond within 60 seconds.

The SRP will be able to generate an email on receipt of the response if required, or simply display the result of a match with the accompanying detail in the portal.

In the same way, the GRCP can raise the switch order request and subsequently the switch order trigger as well when it is appropriate to do so as their service is progressed.

Finally, the GRCP will be able to raise a cancel own request through the portal in the same way.

### ***17.4 Small Reseller Portal as a test RCP***

The small reseller portal provides all the tools and mechanisms to perform the actions of either a gaining or a losing reseller in a switching process, and is therefore also the perfect candidate system to use as a RCP emulator for testing switching.

While the production industry hub will not be permitted for such a purpose, a second testing hub would allow for every provider to have multiple RIDs they can use to test their own processes, as well as configuring one or more secondary RIDs to emulate other RCPs as either the gaining or losing RCP and use the portal to test the message handling or provide the mechanisms for generating messages to test against.

The hub, the reseller portal and ticketing system provide enough infrastructure to test the entire end to end switching process before connecting any live RCPs if required.

Classification: CONFIDENTIAL

## 18 Ticketing System

To support problem resolution, a ticketing system will be provided to support the OTS process. This may take the form of an existing cloud based ticketing product, or something built by a third party integrator or hub provider.

The ticketing system will provide both a human interface as well as an integration capability, ideally via the hub, so that individual RCPs can log in, view and manage tickets in the ticketing system itself, or if they have their own ticketing systems they can be integrated from their own ticketing systems instead.

Consider for example a failed switch match where a customer is unable to obtain an exact match result. The GRCP will wish to raise a ticket to the LRCP providing the information supplied by the customer with a request to obtain the necessary information to permit a full match to be achieved.

The GRCP may perform this action in a completely automated way, they may raise a case in their own case management systems, which identifies itself as requiring to raise a ticket to the LRCP. The case tool can then send an automated message to the Ticketing system, with a ticket reference, a request type (for example OTS match assistance) and the customer's details.

The ticketing system will log the case, and if the LRCP uses the ticketing system manually, it will send them an email with a link to the ticket for them to progress, or if they have an automated integration as well, then the Ticketing system will generate a message for ticket to the LRCP who will progress within their own IT systems.

Response messages will flow in the exact same way in return.

The Industry hub could be used as the integration mechanism depending on the ticketing system selected and provides all of the communications support necessary to provide a full integration experience for those RCPs that can support it, or a human accessible portal for those that do not. Other integrations though may be necessary if the ticketing system cannot be integrated with the hub.

Classification: CONFIDENTIAL

## 19 Appendix 1: Input needed from wider OTS community

Throughout this document, there are a number of items labelled with:

**Question for wider OTS community:**

OTS-DDG would welcome feedback on any of these points, plus the point below:

### 19.1 SLAs and response times

Ofcom's goal is "quick, easy and reliable switching" and they have an expectation that the larger RCPs selling to Consumers (if not all RCPs selling to Consumers) will implement automated solutions to respond to matching requests.

We will need to discuss things like:

- Typical response times for a match response, e.g. within 60 seconds as per mobile switching?
- Hours of operation, e.g. 24 hours, just working hours, or extended daytime hours?
- Days of operation, e.g. 7 days / week.
- Allowable downtime, e.g. overnight processing, release weekends, outages.
- Responses during downtime, e.g. response to indicate time of expected return to full service.

Classification: CONFIDENTIAL

## 20 Appendix 2: Definition of Communications Provider.

Throughout their September 2021 Statement, Ofcom uses the terms “losing provider” and “gaining provider” (and only uses the term “retailer” in reference to switching by energy customers).

In the “Proposed revised General Conditions 3 April 2023”<sup>4</sup>, Ofcom provides the following definitions:

‘**Losing Provider**’ means the **Communications Provider** from whom a **Switching Customer** is or is considering transferring;

‘**Gaining Provider**’ means:

- (a) the **Communications Provider** to whom a **Switching Customer** is or is considering transferring; or
- (b) the **Communications Provider** to whom an **Inbound Switching Customer** makes a **Home-Move Request**;

‘**Communications Provider**’ means a person who (within the meaning of section 32(4) of the **Act**) provides an **Electronic Communications Network** or an **Electronic Communications Service**;

‘**Electronic Communications Service**’ means any of the following types of service provided by means of an **Electronic Communications Network**, except so far as it is a **Content Service**:

- (a) an **Internet Access Service**;
- (b) a **Number-based Interpersonal Communications Service**; and
- (c) any other service consisting in, or having as its principal feature, the conveyance of **Signals**, such as a **Machine-to-Machine Transmission Service** or a transmission service used for broadcasting;

‘**Internet Access Service**’ means a service made available to the public that provides access to the internet, and thereby connectivity to virtually all end points of the internet, irrespective of the network technology and terminal equipment used;

‘**Number-based Interpersonal Communications Service**’ means an **Interpersonal Communications Service** made available to the public which:

- (a) connects with publicly assigned numbering resources, namely, a number or numbers in a national or international numbering plan; or
- (b) enables communication with a number or numbers in a national or international numbering plan;

The earlier October 2020 Statement and Consultation<sup>48</sup> included a reference to an enforcement case<sup>49</sup>, which includes some interesting insight into Ofcom’s use of terminology:

- In the enforcement case document, Ofcom make a distinction between a Communications Network Providers (parties that own the networks that carry the telephone service) and other Communications Providers. (We have not spotted this use of CNP in any other Ofcom documents – it seems to match well with the concept of holders of CUPID’s for number porting.)
- Section 5 goes to significant lengths to assess that Cloud M is a Communications Provider.
- Paragraph 5.62 includes “The Order Validation part of the process as set out in the Manual can only be completed by the Losing Provider – i.e. the party with the contractual relationship with the Subscriber – which in this case is Cloud M. This is because it requires knowledge of the installation address (the address to which the telephone line is provided) and the Subscriber’s billing address and these are matters that only the Losing Provider would know.”

For clarity, this Industry Process document uses the terms “losing retail provider” and “gaining retail provider” to refer to the parties which have the former and prospective/new contractual relationships with the customer. Note that this does not preclude any retail provider from contracting with another CP (or other competent body, such as a TPI or the Hub Service Provider) to discharge some or all of its obligations as a losing retail provider.

<sup>48</sup> Ofcom, October 2020, [Fair treatment and easier switching for broadband and mobile customers: Implementation of the new European Electronic Communications Code](#) (October 2020 Statement and Consultation)

<sup>49</sup> Ofcom, November 2018. [Notifications under s96C and s139A of the Communications Act 2003 served on Cloud M](#)

Classification: CONFIDENTIAL

### **20.1 Communications Providers in the context of the One Touch Switch process**

There are potentially CPs at different points in the supply chain, impacted in different ways by One Touch Switch:

- At one extreme are the CPs with the contractual relationship with the customer – both losing provider and gaining provider. These CPs are sometimes termed the retailers, and this document refers to them as retail providers.
- At the other extreme are the CPs who own/operate the infrastructure and networks. These include Openreach, Virgin, full-fibre providers (sometimes termed “alt nets”, and sometimes using Openreach’s Physical infrastructure access (PIA) (pole and duct sharing)). This document refers to these CPs as access providers.
  - Openreach are largely not impacted by One Touch Switch. Although the NOT+ rules are being removed by Ofcom, Openreach will maintain their “managed cease” processes, with the main change being reduced lead times.
- In between, there may be zero, one or more CPs. E.g:
  - Many CPs who directly consume Openreach’s WLR products use BT Wholesale for provision of Broadband, e.g. BT Consumer, EE Home, Plusnet and others.
  - Shell (formerly Post Office) are a reseller of TalkTalk services – TalkTalk use Openreach’s MPF products, but operate their own voice service.
- Some CPs are also the voice operators – typically these CPs hold a CUPID (allocated by Ofcom) and participate directly in the geographic number portability processes.
  - E.g. BT<sup>50</sup>, Virgin, Sky, TalkTalk and Gamma all hold CUPIDs and operate voice networks.
- Some CPs (e.g. Virgin) are often described as “vertically integrated”, but in reality have internal divisions and systems that separate network/access and retail operations.

---

<sup>50</sup> Openreach front up much of BT’s interaction with other operators for number portability, but CUPID 001 is formally allocated to BT, and BT internally operate several voice networks (including traditional local exchanges for WLR, and VoIP networks).

Classification: CONFIDENTIAL

## 21 Appendix 3: Unique Property Reference Number (UPRN)

UK Government has established a standard called Unique Property Reference Number (UPRN).

GeoPlace LLP is a joint venture between the Local Government Association and Ordnance Survey. Their creation was approved by the Office of Fair Trading, and they started their work in 2011. Effectively there are the master of UPRN for all of the UK.

Openreach have exposed UPRNs via their address matching dialogue services for several years now; Virgin use UPRNs internally; newer network/access providers (alt-nets) are very likely to have used UPRN since their inception. So UPRN should be a recognized concept even for CP's at the retail end of the chain.

Given the provenance of UPRNs, and the existing widespread usage, UPRN will be a key piece of data for successful matching.

### 21.1 UPRNs are available for all of UK, including Northern Ireland.

A Google search for "UPRN Northern Ireland" (as of 13/01/2022) includes a commercial site<sup>51</sup> in the search results which includes "UPRN excludes Northern Ireland". In addition, for a Google search of "UPRN lookup", many of the publicly available search sites<sup>52</sup> only cover GB.

The "Open standards for government" includes a Guidance document "Identifying property and street information"<sup>53</sup> which states "UPRNs are the unique identifiers for every addressable location in Great Britain<sup>54</sup>" and in early January 2022 GeoPlace's website page introducing UPRN<sup>55</sup> used similar wording in its headline, implying that the concept of UPRN is not UK wider.

All of the above are misleading: there are UPRNs for addresses in Northern Ireland.

Reading further down GeoPlace's main page introducing UPRNs we find (emphasis for NI added):

GeoPlace is the central source for UK addresses and streets. We work contractually with all 339 councils in England and Wales which have statutory responsibility for approving and creating addresses and 174 local highways authorities. We manage a central hub of 42.8 million addresses and 1.3 million streets, taking feeds of address and street data from local authorities in England and Wales, central government, Ordnance Survey, Royal Mail and data from Scotland, Northern Ireland, Isle of Man and the Channel Islands via the Improvement Service, Land & Property Services, Isle of Man Government and Digimap respectively. Find out more, and see the infographic that shows the processes that take place at GeoPlace [here](#).

The more comprehensive understanding is:

- The AddressBase range of products from Ordnance Survey cover Great Britain.
  - AddressBase Islands extends the coverage to Northern Ireland (plus Isle of Man and the Channel Islands)
- The Pointer range of products from Ordnance Survey NI cover Northern Ireland.

Here are links to a few sites that support easy lookup of UPRNs:

- <https://www.findmyaddress.co.uk/search> - this is a GeoPlace service covering GB addresses only
- <https://ideal-postcodes.co.uk/guides/uprn> - this allows searches of GB and NI addresses, but returns the UPRN as "Not Available" for NI addresses.
- <https://lpsni.gov.uk/vListDCV/search.asp?submit=form> – this covers NI addresses only.

### 21.2 Do all addresses have UPRNs?

At a simple level, and especially considering residential addresses, we might expect every residential address to have a UPRN. Empirically, testing Openreach's address matching services, the vast majority of both Gold and Silver addresses have a UPRN – but not all.

<sup>51</sup> <https://ideal-postcodes.co.uk/guides/uprn>

<sup>52</sup> E.g. <https://www.findmyaddress.co.uk/search> and <https://uprn.uk/>

<sup>53</sup> <https://www.gov.uk/government/publications/open-standards-for-government/identifying-property-and-street-information>

<sup>54</sup> The full name of UK is "United Kingdom of Great Britain and Northern Ireland" – so GB usually implies England, Wales and Scotland only.

<sup>55</sup> <https://www.geoplace.co.uk/addresses-streets/location-data/the-uprn> Note that Niall Gillespie engaged with GeoPlace to query their positioning with regard to Northern Ireland, and within a few days they improved the wording on this page to refer to "UK" (rather than "GB") and added references to Pointer and LPS.

Classification: CONFIDENTIAL

Here's one example:

- Using the LPSNI link above, there is a single entry for “65 South Parade, Belfast BT7 2GN” with UPRN 185054690 – to the best of the author’s understanding, number 65 is a single rateable property. (NI still has rates!)
- Using the Openreach Portal to invoke their address matching service, there are two Gold NAD keys:
  - A00003465589 for 65 South Parade, with UPRN 185054690
  - A00003465573 for Flat 1, 65 South Parade and no UPRN.
- At the time of writing (13/01/2022), MLPA shows no lines at either address (and EMLC shows no FTTP ONTs) – but at some point in the past, there would have been services, and customers could have attempted to switch them.
- So if we make UPRN mandatory for Consumer switching with a fast response time to the match request, how would a GRCP and LRCP interact to switch a service installed in Flat 1?

**Question for wider OTS community:**

My proposal is that if there is no UPRN for the full address (including Flat 1 in this example), but there is a UPRN for the address without the sub-premises (UPRN 185054690 for 65 South Parade in this example), then the GRCP should use that UPRN, and the LRCP should return a successful match.

I’m also proposing that the match request should include all the elements of the address (including the “Flat 1” for this example) so that the audit trail is complete.

BT’s CP Test Facility is located in Swansea Automated Telephone Exchange on Strand in Swansea.

BT’s internal buildings site quotes postcodes of SA1 2AW and SA1 2AB. Google Maps has BT Tower, Strand with postcode SA1 2AG.

Royal Mail’s postcode lookup has the following matches.

- British Telecom, Automatic Telephone Exchange, Strand, Swansea, SA1 2AB
- British Telecom, Tower Block, Automatic Telephone Exchange, Strand, Swansea, SA1 2AB
- CP Test Facility, Automatic Telephone Exchange, Strand, Swansea, SA1 2AB
- British Telecom, Tower Block, Strand, Swansea, SA1 2AG
- SA1 2AW does exist, but appears to be further north along

FindMyAddress appears to have 2 UPRNs:

- 100100986504 for Automated Telephone Exchange, Strand, SA1 2AB
- 200002954391 for British Telecom, BT Tower Block, Strand, Swansea, SA1 2AG

Openreach’s NAD has many postcodes for this test facility – most of them are made up postcodes. Most of the addresses have no UPRN.

Testing switching at this location may not be feasible!

### **21.3 Business matching**

Business matching is likely to be more manual with longer response times (days), and so we might not make UPRN mandatory, but should still be included where known.

Classification: CONFIDENTIAL

## 22 Appendix 4: Asynchronous communications processes via the Industry Hub

Asynchronous messaging is a common practice in IT integrations where parties in a communication process cannot guarantee a response time.

Interactions between elements in an asynchronous process can either follow a 'fire and forget' methodology, or as will be the case with the Industry Hub, synchronous assured delivery between actors in an asynchronous communications process.

Taking an example of a message between a GRCP and an LRCP to obtain a switching match as an example. The GRCP will place a synchronous request to the Hub, containing routing information identifying the LRCP the message is intended for. The Hub must securely and persistently store that transaction before responding to the GRCP as a confirmation of receipt of that request. As part of receipting that message it will interrogate its header information, authenticate the origin of that transaction against the sender information in the message header and if there any mismatches then it will reject the request to send the message.

The Industry Hub then has responsibility to deliver the message to the LRCP. The Hub will for each LRCP have several end points identifying where a specific transaction type must be sent, that transaction type will again be identified in the header.

The Hub connects synchronously to the end point specified with appropriate security to identify itself to the end point and containing the message from the GRCP untouched. The Hub does not alter the content of the message in any way.

If a connection to the end point cannot be made, then the transaction will be retried. Policies will be defined within the Hub to specify how and when to retry transactions.

If a connection is made, then the message is sent to the LRCP who must respond with an affirmative receipt reply to the Hub for the Hub to consider the message delivered. For the LRCP to send an acceptance to the Hub, it must have securely stored the transaction in its systems to be processed. The Hub then can remove the message from its secure store as it has now been considered delivered.<sup>56</sup>

This process provides a level of commitment control to message delivery, ensuring that on passing a request from one party to the other that the delivery is not only acknowledged, but that the transaction cannot be lost due to internal failures in any party's systems.

Some transactions sent via asynchronous messaging will have an SLA. For example, on a switch matching request, a response would be required within 60 seconds for example. This delivery timeout will be included in the routing header of the message. If the Industry Hub cannot deliver the message within that period, it will respond asynchronously to the GRCP indicating delivery was not possible and remove the transaction from its system.

This is appropriate for atomic single use transactions where the non-delivery of a message does not break the process.

However, many other messages, such as the confirmation of a switch acceptance require a guaranteed delivery, and the message header will indicate that the Hub must continue to attempt delivery of the message.

Policies may be applied to these essential messages in the Hub to notify the GRCP if they had not been delivered after a period of time, for example 1 hour, 12 hours etc. allowing a GRCP to initiate any remedial processes if appropriate to that transaction.

If a message sent to the Hub requires a response from the LRCP, then it must supply a correlation ID. The LRCP will include that in their response message.

No messages should be resent to the Hub unless the Hub connection failed while sending and no response was received before the connection was lost. The Hub should include duplicate message protection if possible based on the source identifier and correlationID to ensure if a duplicate message is sent within a specified time frame that it can respond to the originator with a duplicate message received error. That will protect the processes from duplicate transaction processing during transient failure scenarios.

In all cases, the Hub plays no active part in the processing of the content of the message sent to it, other than to deliver it to the required destination and to maintain a log of transactions for regulatory auditing purposes.

---

<sup>56</sup> The message will also have logged by the Hub, to support any disputes, or investigations by Ofcom.

## Classification: CONFIDENTIAL

A typical message sending message header may look something like the following:

```
{
  "header": {
    "source": {
      "rid": "123",
      "correlationID": "ABC123456"
    },
    "destination": {
      "rid": "456"
    },
    "deliveryPolicy": {
      "deliveryTimeout": 45,
      "deliveryTimeoutInterval": "seconds",
      "retryPolicy": "otsMatch",
      "expirationPolicy": "discard",
      "messageType": "otsMatchRequest"
    }
  },
  "otsMatchRequest": {
  }
}
```

And an associated response message header may look something like this example:

```
{
  "header": {
    "source": {
      "rid": "456"
    },
    "destination": {
      "rid": "123",
      "correlationID": "ABC123456"
    },
    "deliveryPolicy": {
      "deliveryTimeout": 600,
      "deliveryTimeoutInterval": "seconds",
      "retryPolicy": "otsMatch",
      "expirationPolicy": "discard",
      "messageType": "otsMatchResponse"
    }
  },
  "otsMatchResponse": {
  }
}
```

As described in Appendix 5 on XML vs JSON, the formats can be very flexibly extended as new information is required to support other processes that may utilise the Hub. The routing header will try to remain agnostic of those processes themselves but for example the use of "rid" as the source and destination party in the transaction could be replaced with a "CUPID" if the Hub is used for exchanging porting messages.

Classification: CONFIDENTIAL

## 23 Appendix 5: Industry Hub data format (JSON v XML)

In establishing the recommended messaging structure for One Touch Switch, the following core requirements were taken into consideration.

1. Message must be capable of being validated partially as well as a whole depending on the system processing it.
2. Speed and simplicity of processing.
3. Adaptable, simple to change without impacting existing systems and processes.

XML and JSON, the two principal industry standards, share a lot of similarities. They are both structured message formats capable of organising messages into a machine-readable format that is simple to process. The origins of both stem from different needs and XML specifically was designed with automated processing in mind, with all manner of associated technologies to support things like validation and transformation. However, XML also suffers from generating larger messages, requiring more complex software parsers to process, and is typically very rigidly enforced through the use of schemas making it inflexible to changes in distributed and heterogeneous environments. XML parsing is also typically slower than JSON to process.

One key design decision when comparing the two is the requirement that messages be handled and processed by multiple systems in a workflow where each system only has to consider its own message content requirements. Unlike a client server relationship where an API defines the content, the messages the Industry Hub is routing will pass through several systems on their way between source and destination.

Consider that scenario, the Hub itself has no interest in what the source and destination systems have to say to each other in the body of the message, it only requires to understand how to route the message. The header and body can be both part of the message, but only the header needs to be understood and processed by the Hub. There may be multiple systems involved in a workflow, again only interested in parts of the message, and this has the potential to create a significant impact when it comes to change management regarding message formats.

XML Parsers require processing of the entire document and being able to both validate it and to understand its entire content (unless it is pre-processed or transformed first). JSON on the other hand supports the ability to ignore unknown entities, so that only elements understood by the processing system are interpreted and processed. This is significant, and extremely powerful when messages are handled by multiple systems and processes across many operators.

Consider thousands of users of the Hub, exchanging a common message structure, and then a change is implemented to introduce a new identifier into a transaction for a certain product or process. Coordinating thousands of users to change process at the same time would be impractical, and maybe that change only affects a small subset of the user community. XML would dictate a new message format and a new API. But with JSON that is a simple matter, making use of its ability to ignore unrecognised attributes – everyone continues to use the same message, ignoring the elements they don't need to process.

Though not a strict requirement for JSON, schema standards do exist and can still be provided and applied to message processing. But these schemas again only need to target the key elements of the messages that the processing system must understand to perform its processing.

This is the key design differentiator between XML and JSON, and a principal reason why JSON is the format the Industry Hub will support for all messages.

Further benefits of using JSON are that it produces smaller messages, which are faster to send and take less storage space. JSON parsers are also faster than XML parsers. All good reasons in themselves to consider JSON the preferred format.

Though XML has many other significant supporting capabilities that in certain scenarios could mandate its use, however none are considered necessary for the purposes of those processes that will make use of the Hub.

Therefore, JSON has been specified as the messaging format for all transactions passing through the Industry Hub.

Classification: CONFIDENTIAL

## 24 Appendix 6: Obligations on losing retail provider around delivery of switch information

There are several points in the September 2021 Statement that are worth noting (emphasis added):

- 4.199 Under the One Touch Switch process as proposed by industry, the Hub will send the losing provider's switching information directly to the customer using the contact details provided by the losing provider, but also to the details provided by the gaining provider, if these are different.<sup>276</sup> We share respondents' concerns that this could lead to customer information being sent to a person other than the authorised customer. In our view, the losing provider switching information should only be sent to the contact details already registered with the losing provider. However, we think losing providers should ensure a customer can subsequently contact them to update their contact details and ask for the information to be re-sent to the new contact details. See also paragraph 5.35 and paragraphs 7.47-7.56.
- 5.35 We have decided to amend the process from that proposed by industry, and set out in Section 2, and will not require that a losing provider send the switching information to the contact details that the customer has provided to the gaining provider (see paragraph 4.199). This means the losing provider switching information will in practice only be sent to the contact details already registered with the losing provider (see also paragraphs 7.47-7.56).
- 7.49 As noted in Section 4 (paragraph 4.199), our view is that allowing a customer to provide new contact details for receiving their losing provider switching information could risk customer information being sent to a person other than the authorised customer. As noted in Section 5 (paragraph 5.35), we have amended the process from that proposed by industry and will not require that a losing provider send the switching information to contact details provided to the gaining provider. This means the losing provider switching information will in practice only be sent to the contact details already registered with the losing provider (unless the customer subsequently contacts the losing provider to update their contact details and asks for the information to be re-sent to their new contact details).
- 7.55 We recognise that none of the options addresses the risk that customers might be unable to access their switching information at all if it has been sent to an old email address which the customer cannot access. In these circumstances a customer would need to contact the losing provider to update their contact details.

Condition C7 then includes:

- C7.4 All **Regulated Providers** shall ensure that:
- (c) [...]
  - (d) they cooperate in good faith and take all necessary steps within their control to complete the **Communications Provider Migration** process in accordance with this **Condition C7** and **Condition B3** and any applicable industry agreed processes;
- C7.10 **Regulated Providers** must take all reasonable steps to ensure that:
- (a) **Switching Customers** are adequately informed before and during the **Communications Provider Migration** process, including in relation to their right to compensation in accordance with **Condition C7.47**;
  - (b) [...]
- C7.12 The **Regulated Provider** that is the **Losing Provider** must take all reasonable steps to ensure that **Switching Customers** who are **Consumers** are provided with the following information, in the manner and form set out in **Condition C7.13**:
- [...]

It is likely that Ofcom would refer back to their Statement when considering what constitutes a "necessary step" or a "reasonable step".

Classification: CONFIDENTIAL

## 25 Appendix 7: Obligation on losing retail providers around “notifications”

Ofcom’s September 2021 Statement does not make a clear distinction between the communications sent to the customer by the losing retail provider at the time of matching (for a prospective switch) and at the time of switch order placement (for an actual switch). Examples include:

- Paragraph 4.185 includes “In One Touch Switch, the customer and services to be switched are identified through a matching process between the gaining and losing providers, using information the customer provides to the gaining provider. [...] In addition, both the losing provider and the gaining provider will send switching information to the customer which serves as a backstop to warn customers if they did not intend to switch those services or did not want to switch at all.”
  - As explained in §2.1, switching information is provided by both the losing and gaining retail provider (and by implication in multiple messages of notifications).
  - This paragraph does not specify the time at which the information might be sent, and could be construed to represent an accumulated set of information, both from losing and gaining retail providers, and from multiple points in time.
- Paragraph 4.195 includes “In One Touch Switch, the customer and the services to be switched are identified between the gaining provider and losing provider in the matching process. The gaining provider will presume the customer is authorised to request the switch if they provide the correct information and no subsequent objection is received when the losing provider sends out a notification to the customer informing them of the switch. The notification alerts the customer to the switch and names the gaining provider. This could alert customers to attempted slamming.”
  - Note the singular use of “notification”. It is unclear which “notification” this is referring to:
    1. On initial reading, it might be read as the notification sent on a successful match. But this first notification is not “informing them of a switch” – it is instead providing the information needed for a customer to decide whether or not to cancel their contract with the losing retail provider.
    2. It could be read as a later notification that a switch order has been placed with a gaining retail provider.
  - The revised General Conditions includes the following definition of Slamming:
 

**‘Slamming’** means where a transfer of **Internet Access Services** and/or **Number-based Interpersonal Communications Services** has been initiated [...]
  - If Slamming only start when a transfer has been initiated, it reinforces that this paragraph is referring to a notification sent once a switch order has actually been placed, and not to any notification sent at the time of initial matching.
- Paragraph 4.198 includes: “If the requesting customer provides the correct information, the losing provider sends out a notification to the customer informing them of the switch. It can be sent to the customer immediately and automatically. The notification would alert the customer to the switch and name the gaining provider. This would provide additional protection against slamming where the customer has not given their consent to switch (to that provider, or at all). The customer should then have enough time to take action and stop the switch if they did not request it, although we recognise this could take longer if the customer has chosen to receive all communications by post.
  - Note again the singular use of “notification”.
  - “If the customer provide the correct information” – this is a reference to the information captured for the match request. If the losing retail provider finds a match, they send switching information to their customer advising them of the impacts of switching if they were to proceed with a switch. But again, there is no actual switch until the customer gives their express consent.
  - Again the references to “informing them of the switch” and “alert the customer to the switch” imply that this notification is sent after the gaining retail provider proceeds with a switch order. A customer enquiring with a gaining retail provider about options does not yet have an actual switch – at this point, they are simply considering a potential future switch. A switch order can only be submitted after the customer has provided their express consent to the GRCP to start the process. They must have the option of taking time to consider the impacts of switching before giving express consent.
  - Once a switch order has been placed by a GRCP, there is a single gaining retail provider than can be named (as opposed to the multiple prospective gaining retail providers that the customer might have engaged with).
- Paragraph 4.204 then includes: “We also expect that both options would involve further notifications confirming a switch order [...]”.
  - This reinforces that Ofcom are expecting an initial provision of switching information from the losing retail provider (about a prospective switch) and further notification when a switching order is placed by the gaining retail provider.

## Classification: CONFIDENTIAL

- Paragraph 4.208 includes “For many customers, the information is likely to be limited to telling the customer whether they are still within their minimum contract term, and if so, how long is left and what they would have to pay if they switched before the end of the term.”
  - This also implies that Ofcom expect that the initial notification could be much more limited.

Turning now to the revised General Conditions:

**Provision of information**

C7.10 **Regulated Providers** must take all reasonable steps to ensure that:

- (a) **Switching Customers** are adequately informed before and during the **Communications Provider Migration** process, including in relation to their right to compensation in accordance with **Condition C7.47**;
- (b) [...]

C7.12 The **Regulated Provider** that is the **Losing Provider** must take all reasonable steps to ensure that **Switching Customers** who are **Consumers** are provided with the following information, in the manner and form set out in **Condition C7.13**:

- (a) an explanation that the **Switching Customer** is transferring their **Relevant Communications Services**;
- (b) the **Migration Date**, where known to the **Losing Provider**;
- (c) a clear identification of all **Relevant Communications Services** that will be transferred, including, where relevant, the **Calling Line Identification** of all **Relevant Communications Services** that will be transferred;
- (d) the impact, whether direct or indirect, financial or otherwise, that the **Losing Provider** reasonably expects the **Communications Provider Migration** to have on any **Relevant Communications Services** or other types of services provided by the **Losing Provider**, including any services and/or facilities that the **Switching Customer** may have access to pursuant to **Condition C5**;
- (e) all **Relevant Communications Services** provided by the **Losing Provider** that the **Losing Provider** reasonably expects to remain unaffected by the transfer;
- (f) the total charge payable by the **Switching Customer** on the **Migration Date**, or where that date is not known to the **Losing Provider**, on the day on which the information is provided, presented as a single (where applicable, aggregated) charge;
- (g) an explanation of the following:
  - (i) the cost and any process or conditions for retaining or returning **Terminal Equipment**;
  - (ii) in relation to **Mobile Communications Services**, as part of the information provided under (i), whether the handset is provided on a separate contractual basis than the SIM, and if it is, the amount still payable under the contract after transfer to another **Communications Provider** and/or the date on which the **Switching Customer** will cease to pay for the handset; and
  - (iii) any credit balance in respect of prepaid services and, if applicable, the right to a refund of this balance in accordance with **Condition C7.7(d)**, including the process for claiming such a refund and any conditions applying to this refund;
- (h) the location of the **Regulated Provider's** guidance in accordance with **Condition C7.10**;
- (i) the right to compensation in accordance with **Condition C7.47**;
- (j) where the information is provided in a letter, the date of the letter and the relevant contact details of the **Losing Provider**; and
- (k) where the information is provided in an electronic format, a web link to the log-in page for the **Switching Customer's** account with the **Losing Provider**.

C7.13 The information set out in **Condition C7.12** must be:

- (a) accurate; and
- (b) provided in clear, comprehensible and neutral terms and on a **Durable Medium**.

C7.25 The **Regulated Provider** must, upon request from the **Gaining Provider**, make available to the **Fixed Switching Customer** that is identified by the **Gaining Provider** the following information:

- (a) the information listed at **Condition C7.12**;
- (b) confirmation of the identity of the **Gaining Provider**; and
- (c) where the **Fixed Switching Customer** requests to transfer a **Bundle**, an explanation of any steps the **Fixed Switching Customer** needs to take in order to transfer any services forming part of the **Bundle**, including where relevant the steps for transferring **Mobile Communications Services** in accordance with the process set out in **Conditions C7.30 to C7.46**.

C7.26 The **Regulated Provider** must make available to the **Fixed Switching Customer** the information referred to at **Condition C7.25** in the manner and form set out at **Condition C7.13**.

## Classification: CONFIDENTIAL

There are a few points to note with these GCs:

- “Information” is an uncountable noun meaning ‘facts about someone or something’ – it has no plural form.
- C7.10(a) refers to “before and during the [...] process”, which is a clear reference to multiple points in time at which this information might be provided.
- Note the use of “confirmation of the identity of the Gaining Provider” in C7.25(b) – the word “confirmation” implies that there is something that needs to be confirmed.

Nothing in the above Conditions says that the losing retail provider must provide all of their switching information in a single notification:

- Some of this information will only be known when the gaining retail provider places the switch order, e.g:
  - The migration date chosen by the customer in conjunction with the gaining retail provider (e.g. lead time for provision, availability of engineer appointment slots).
  - Confirmation of the identity of the gaining retail provider.
    - The use of the term “confirmation” in Condition C7.25(b) could be construed to be a requirement to clearly inform the customer of the GRCP who has submitted an actual switch order. It could also be construed that there is no Condition requiring notification of the GRCP at the time of matching (since it cannot be confirmed at that point), or that the switching information has to be repeated when another GRCP makes the same matching request as a previous GRCP (particularly if the only difference is the identity of the GRCP).
  - Total charges based on chosen migration date.
- Some of this information can be given at the time of successful match, using the date on which the information is provided (when migration date is not yet known).
  - Some of it could (and should) be repeated once a switch order has actually been placed.
  - E.g. if the total charges were worked out on the date of the match request, and included ETCs, then customer then delays their migration date to the end of their commitment period, the
- One interpretation of C7.13 is that the notifications sent at the time of matching should be clear that e.g. the customer is not yet transferring their communication services, and this information is being provided to help the customer make an informed choice.
- It is also noticeable that Condition C7.12(f) refers to total charge payable “on the day on which the information is provided”. This could again be construed that the switching information does not have to be repeated when another GRCP makes the same matching request as a previous GRCP, even if there is a difference in the Early Termination Charge (especially if a small difference) – the total charge was correct on the day it was originally provided and remains so.

Taking all the above into consideration, this industry process states that the customer will receive multiple notifications from their losing retail provider:

1. At the point of successful match by a GRCP, the losing provide will send switching information, advising the customer of the impacts of switching – the customer may decide not to proceed, e.g. if they would face ETCs.
2. At the point of the GRCP sending a switch order, after the customer has provided their express consent to the switch.
  - Many RCPs using the existing NOT+ process refer to a “sorry to see you go” (STSYG) notification – it is likely that this terminology will continue for the notification sent by an LRCP when they receive an OTA switch order.

Customer should not be placing switch orders with multiple GRCP s (if an LRCP receives a switch order whilst they have an open switch order, the second order will be rejected), so notification type 2 (STSYG) can only be sent once by the LRCP.

However, if a customer shops around multiple GRCP s, and executes their sales journeys to the point of successful match, the LRCP could receive multiple match requests inside a short period of time. If the LRCP was obliged to send a notification with switching information for each successful match, this could constitute a nuisance for the customer (or perhaps the industry if a malicious actor was involved).

This industry process permits LRCP to “rate limit” their dispatch of notifications with switching information, triggered by successful match requests:

- We need to agree the permissible rate limiting. E.g. no more than once a week, fortnight, or month? Same for email and letter? Same for all RCPs, or just a max? Ofcom permission to extend max in response to an incident of widespread attack? Need input from wider group.

## Classification: CONFIDENTIAL

- Most customers will only trigger a single successful match, so the notification(s) which are sent should include the identity of the GRCP which sent the match request which triggered that notification.
  - It is likely that switching information which is suppressed during the rate limit period after an initial notification only differs in the identity of the GRCP.
- The guidance in §5.4.4 that match requests should generally include both broadband and voice should limit instances where the suppressed notifications contain information that differs from the notification(s) sent to the customer.
  - I.e. a customer is unlikely to have received switching information stating that voice service will continue (since first GRCP asks only about broadband), and then misses a suppressed notification stating that voice service will be ceased (since second GRCP asks about both broadband and voice).
- If a RCP decides to implement a rate limit, in their match response, they should indicate the date of last dispatch of switching information, where the current request will be suppressed by the rate limiting.
  - Does also imply an expected future date for a letter?
- It is expected that as time passes, any ETCs would reduce in value.
  - Thus any ETCs in a suppressed notification should have ETCs which are either the same or smaller than the notification that was last sent.
  - Additionally the switching information should include information about the commitment period (in addition to a simple total amount)
    - Need to find and quote the Ofcom guidance on this – somewhere in the Statement I think.
- RCPs should keep their own audit trail of successful matches and whether switching information was sent to the customer or suppressed by the rate limiting.
  - RCPs may make this information available to their customer service advisors (e.g. to assist with a customer enquiry), or only available to staff with specialised access (e.g. to support a statutory request from Ofcom under section 135 of the Communications Act 2003).
  - If RCPs choose to give customers visibility of switching information via their online account, they are encouraged to give visibility of all successful matches, including those where the switching information was suppressed by the rate limiting.

Classification: CONFIDENTIAL

## 26 Appendix 8: Migration on a Working Day

The revised General Conditions contain references to Working Day in the context of Migration Date, including (emphasis added):

### Migration Date

- C7.3 For the purposes of this **Condition C7**, the **Migration Date** shall be:
- (a) where technically possible, the date requested by the **Switching Customer**; or
  - (b) except where **Condition C7.3(a)** applies:
    - (i) as soon as possible; and
    - (ii) no later than:
      - a. [...]
      - b. in all other cases, one Working Day after the date on which all necessary validation processes have been completed, the network connection is ready for use by the **Switching Customer**, and, where relevant, the porting of the relevant **Telephone Number(s)** is(are) ready for activation.

### Provision of services by Losing Provider

- C7.7 The **Regulated Provider** that is the **Losing Provider** must:
- (a) [...]
  - (b) ensure that its contract with the **Switching Customer** is automatically terminated on the Working Day on which the Communications Provider Migration has been completed;

**'Working Day'** means the hours between 09.00 – 17.00 on Monday to Friday, with the exception of Bank Holidays and public holidays;

Note that Ofcom do not appear to define "Bank Holidays and public holidays" – there are separate holiday arrangement for England and Wales, Scotland and Northern Ireland.<sup>57</sup>

The OTS-DDG have noted the following points:

- Many gaining retail providers and their supply chain are able to offer installations late evening (i.e. completion after 17:00) and on a Saturday or Sunday or some bank holiday dates. We think this is a positive development for consumer customers, and switching should not artificially constrain the availability of installation slots that customers find beneficial.
- Cessation is fully automated for many LRCPs and their supply chain, and typically does not involved any engineering activity (most cessations take the form of a remote disconnection or de-activation).
- Ofcom's February 2021 Consultation and September 2021 Statement had several reference to avoiding double paying for services that overlap.
- Some of the customer's contractual obligations with the losing retail provider will continue after completion of the switch, notably obligation to pay the final bill, and obligation to return equipment (or pay a penalty for failure to do so).

As a result, this industry process assumes that the rental liability finishes on the final migration date (see §9.17 for an explanation of this date), even if the losing RCP processes that as a back-dated update.

- We also noted that the disconnection of the losing RCP service might not happen until the next Working Day after completion of the migration:
  - E.g. Customer picks an evening appointment or provision work runs past 17:00 (end of Working Day as per Ofcom definition), so the cease message via Hub is sent after 17:00 (but maybe before some reasonable cut-off such as 22:00) – the losing RCP may not progress the cessation until the next working day, but should respect the last day of rental liability.
- We also noted that the losing RCP provides service for part of the Migration Date as does gaining RCP, and RCP billing only works at a daily granularity. OTA advised the OTS-DDG that Ofcom had previously agreed that the migration date can be both the last date of rental liability for the losing RCP, and first date for gaining RCP.

<sup>57</sup> <https://www.gov.uk/bank-holidays>

Classification: CONFIDENTIAL

## 27 Appendix 9: Restriction on use of Cancel Other

The former General Conditions included the following in Annex 1 to Condition C7 (taken from the 31 December 2020 version):

- 2 The Losing Provider shall only be permitted to use Cancel Other in the following circumstances:
  - a) where Slamming has occurred;
  - b) at the Switching Customer's request, where the Gaining Provider has failed to cancel the Transfer Order after being directed by the Customer to do so ('Failure to Cancel');
  - c) where the telephone line is or will be, ceased during the Transfer Period ('Line Cease');
  - d) for other specified reasons not related to a Switching Customer's request to cancel a transfer, as agreed by the relevant industry forum and approved by Ofcom; and
  - e) in such other circumstances as directed by Ofcom.

Ofcom's September 2021 Statement included this paragraph:

- 7.168 The removal of the Notification of Transfer rules means that several definitions which are not used anywhere in the GCs except in those rules need to be removed. We envisage that, when developing the detailed rules of One Touch Switch, industry will develop equivalents to these processes and functionalities. The definitions which we propose to remove are:
- a) Cancel Other.
  - b) Failure to Cancel.
  - c) Transfer Order.
  - d) Transfer Period.

The Number Port Provisioning Core Processes includes the following explanation of the Cancel Other order type:

This order is used by the LCP to cancel any main order type where the port has not been activated, where the customer has informed the LCP they no longer wish to port. A Cancel Other order can be submitted to the GCP up until 16:00 on the working day prior to the requested port date. After that time, the end-user must contact the GCP directly to cancel the port.

If industry (via agreement of this draft industry process document) develop an equivalent of the NOT+ Cancel Other which happens to also be termed Cancel Other, that does not mean that the former restrictions need to be re-applied, especially when the number port process does not have the same restrictions.

**Question for wider OTS community:**

Is there any industry appetite to retain some or all of the current restrictions on use of Cancel Other?

Classification: CONFIDENTIAL

## **28 Appendix 10: Impacts on wholesalers in the supply chain**

Throughout this document, we have used the term “supply chain” to refer to all of the CPs who are upstream of the LRCP and GRCP.

We note that some switches may be between RCPs who use a common wholesaler, e.g. BT Wholesale, TalkTalk, Sky, Vodafone. Some of these wholesalers may choose to handle any transfer of service between retail CPs without informing the access provider, e.g. Openreach.

The wholesalers who use Openreach as their underlying network/access provider generally operate processes that are very similar to NOT+ (e.g. 10 day min lead time, managed cease notifications), and will need to make similar changes as those planned by Openreach, including:

- Removal of 10 day lead time (whilst retaining other provision lead times).
- Continuing to send managed cease notifications / KCIs.
- Retention of Cancel Other.

Other wholesalers, e.g. Common Wholesale Platform, will need to consider the impacts of OTS on their operation.

Classification: CONFIDENTIAL

## 29 Appendix 11: Numbering Plan Definition of RID

Ofcom's National Telephone Numbering Plan<sup>58</sup> contains the following definition:

**'Reseller Identification Code'** means a three-character alphabetic Administrative Code (e.g. 'AAB') that is Adopted or otherwise used to identify a reseller of BT's wholesale services;

The One Touch Switch process will require all RCP's who sell directly to Consumers (and probably to Business customers) to have a RID (including those who do not resell BT's wholesale services), so this definition will probably need to be updated at some time. (Note that Ofcom's March 2015 Statement on Increasing the supply of RIDs<sup>59</sup> mentioned "clarification on the definition of RID", but deferred it to future work.)

---

<sup>58</sup> Ofcom, December 2021. [The National Telephone Numbering Plan](#)

<sup>59</sup> Ofcom, March 2015. [Increasing the supply of Reseller Identification Codes \(RIDs\): A statement on ensuring there are sufficient RID administrative codes](#), 3.17 and 3.21

Classification: CONFIDENTIAL

## **30 Appendix 12: Hub One Touch Switch Messages**

Below is a list of the expected Hub messages as defined by the process flows in this document. Separate documentation will describe the messages including format and content once a detail specification has been produced with the Hub provider.

### **30.1 Switch Match Request**

Sent by a GRCP to an LRCP to obtain a match on an existing identified service. The message will contain the information necessary to identify the customer to the LRCP.

This will have an SLA associated with it to time out the message if it cannot be delivered with the industry prescribed timeframe.

### **30.2 Switch Match Success**

Sent in response to a switch request if a single customer was found matching at least one of the identified services requested to switch.

This will have an SLA associated with it to time out the message if it cannot be delivered with the industry prescribed timeframe.

This message will contain a switch order reference in the form of a GUID that must be supplied on all subsequent communications between the GRCP and LRCP.

### **30.3 Switch Match Failure**

Sent in response to a switch request either no customer is found, more than one customer is found, or no matching services are found based on the information supplied. Also sent in the event of a malformed request.

This will have an SLA associated with it to time out the message if it cannot be delivered with the industry prescribed timeframe.

The message will clearly identify the reason for the failure.

### **30.4 Switch Order Create**

Upon successful creation of an order within their own supply chain, the GRCP will generate a switch order creation message to the Hub for each LRCP associated with the switch providing the expected date of completion

### **30.5 Switch Order Update**

If the provide date within the supply chain changes, a switch order update transaction may be required to inform the losing retail provider. This is not documented in the current process flows, but may be required if there are SLAs involved in switching processes to avoid timeout and auto cancellation scenarios.

### **30.6 Switch Order Accepted**

Sent by an LRCP to acknowledge receipt of a switch order create or update. This marks the LRCPs instruction to prepare for a cease of service by the customer on or around the indicated switch date.

### **30.7 Switch Order Failure**

Sent in the event the switch order create cannot be accepted. This could be as a result of sending an invalid switch order reference, or that a switch process has been instigated already with the LRCP either by the same GRCP or another GRCP. The failure message will clearly identify the reason.

### **30.8 Switch Order Trigger Request**

Once a GRCP has been notified by their supply chain services have been successfully provided, they will notify the LRCP by sending a request for the LRCP to trigger the cessation of their services.

### **30.9 Switch Order Cease Success**

Sent by an LRCP in response to a switch order trigger message this indicates to the GRCP that the LRCP has successfully ceased the services they had previously matched and the switch has concluded.

### **30.10 Switch Order Cease Failure**

A switch order cease failure will be generated by an LRCP in the event that a switch order trigger message had been received, but either the switch order reference could not be identified or that the switch had been cancelled, in the event of a cancel other for example. The response will indicate the reason for failure clearly and the GRCP will be responsible for the resolution process.

Classification: CONFIDENTIAL

### ***30.11 Cancel Other Request***

Raised by the LRCP in the event the customer approaches them to request the switch be cancelled. The LRCP will cancel the pending switch order reference in their system and this message will be sent to the GRCP to halt the provide process. The LRCP must notify the GRCP the reason the customer is following the cancel other process.

### ***30.12 Cancel Other Success***

Sent by the GRCP in response to a cancel other request, this message indicates that the provide order has been cancelled including the switch.

### ***30.13 Cancel Other Failure***

A cancel other failure will be generated by the GRCP in the even that it cannot cancel the provide process. This could be because it has reached a point of no return within the supply chain. The exact reason for the failure will be indicated in the response and the LRCP and GRCP must coordinate with the customer to resolve the situation.

### ***30.14 Cancel Own Request***

Raised by the GRCP in the event the customer approaches them to cancel the switch order. The GRCP is not obliged to provide the LRCP for the reason for this.

### ***30.15 Cancel Own Success***

Sent by the LRCP on receipt of the cancel own request, this indicates the LRCP has cancelled their pending switch cease order or process.

### ***30.16 Cancel Own Failure***

If the LRCP cannot identify the switch request, the cancel own failure will be generated. This is not a critical error condition as it indicates both parties no longer have an active switch in progress.

### ***30.17 Invalid Request***

This message may be sent by any party in the event they cannot interpret the request, for example a corrupt message body.

**End of Document**