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STANDARD TERMS DETERMINATION FOR CHORUS' UNBUNDLED BITSTREAM ACCESS BACKHAUL SERVICE

SCHEDULE 4
UBA BACKHAUL OPERATIONS MANUAL

PUBLIC VERSION

27 June 2008

Updated to incorporate Commerce Commission decisions, amendments, and clarifications through 30 November 2011

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PART 1 - DOCUMENT INFORMATION

1 Introduction

1.1 Purpose

1.1.1 This Operations Manual (**Manual**) is part of the UBA Backhaul Terms and sets out the operational processes and procedures for supply of the UBA Backhaul Service.

1.2 Relationship with the UBA Backhaul Terms

1.2.1 This Manual should be read in conjunction with the other documents which make up the UBA Backhaul Terms, in particular the UBA Backhaul General Terms.

1.3 Change Mechanism and Distribution

1.3.1 This Manual may be changed in accordance with the change mechanism set out in section 9 of the UBA Backhaul General Terms.

1.3.2 Chorus will make the current version of this Manual available on a secure web portal accessible to the Access Seeker.

1.3.3 Chorus will review this Manual every second year on the anniversary of the determination date of the Unbundled Copper Local Loop STD[1] (7 November 2007) (or earlier if requested by the Access Seeker and an earlier review is agreed by Chorus). The change mechanism set out in section 9 of the UBA Backhaul General Terms will apply to any changes proposed by Chorus as a result of any review.

1.4 Definitions

1.4.1 References to clauses or sections are references to clauses or sections in this Manual unless expressly provided otherwise. The Glossary (Appendix A) sets out definitions for terms contained in this Manual that are not defined in the UBA Backhaul General Terms. Otherwise, the definitions set out in the UBA Backhaul General Terms apply.

2 People and Contact Details

2.1 General

2.1.1 Immediately following the Access Date, the Access Seeker and Chorus must provide each other with the people and contact details set out in clause 2.2. Any change to the people or contact details must be advised in writing to the other party's principal point of contact. All people and contact details will remain valid until a party has advised the other in writing of a change (and provided an updated list of people and contact details). In addition to the provided people and contact details, where Chorus details are specified in the body of this Manual, the Access Seeker must use those details.

2.1.2 If for any reason a party is prevented from giving any Notice pursuant to the UBA Backhaul Terms to the relevant person or contact advised by the other party, the same Notice may be given to the other party's principal point of contact. If for any

[1] Commerce Commission Decision 609, *Standard Terms Determination for the designated service Telecom's unbundled copper local loop network,* 7 November 2007.

reason the other party's principal point of contact is unavailable or his or her identity and contact details have not been advised, the same Notice may be given by serving it either:

(a) at the other party's contact address for giving Notice under the UBA Backhaul Terms; or

(b) personally (if the other party is a natural person); or

(c) at the other party's registered office (if the other party is incorporated).

2.2 People and Contact Details

Contact and detail required	***Purpose***
Both parties provide Contact address for giving Notice under the UBA Backhaul Terms. (This must include a street address and a fax number.)	This is the street address and fax number that Notices can be sent to under the UBA Backhaul Terms by the other party.
Both parties provide Principal point of contact. (This must include the principal point of contact's email address, mobile and work telephone numbers.)	This is the person responsible for the overall relationship between the parties with respect to the UBA Backhaul Service. For Chorus this will usually be the Account Manager for the relevant Access Seeker.
Chorus only provides Service Delivery Manager. (This must include the Service Delivery Manager's email address, mobile and work telephone numbers.)	This is the person responsible for service delivery of the UBA Backhaul Service to the Access Seeker.
Chorus only provides Provisioning Manager. (This must include the Provisioning Manager's email address, mobile and work telephone numbers.)	This is the person responsible for the provisioning of the UBA Backhaul Service to the Access Seeker.
Chorus only provides Email address for submission of Forecasts.	This is the email address to which the Access Seeker must send Forecasts.
Access Seeker only provides Provisioning and Forecasting Manager. (This must include the Provisioning and Forecasting Manager's email address, mobile and work telephone numbers.)	This is the Access Seeker's counterpart to the Chorus Provisioning Manager.
Access Seeker only provides Names and email addresses of one or two people to become OO&T and OFM user administrators.	These people will manage the creating and disabling of Access Seeker staff accounts to access the OO&T and OFM websites.
Access Seeker only provides People who are authorised to download eBill files.	These are the people who will be set up with access to Chorus' secure web portal from which the Access Seeker's eBills can be viewed and downloaded.

Contact and detail required	*Purpose*
Access Seeker only provides People who are authorised to download the UBA Backhaul Price List file.	These are the people who will be set up with access to a secure web portal where the UBA Backhaul Price List file can be viewed and downloaded.
Access Seeker only provides Order confirmation email address.	This is the email address to which Chorus will send confirmation of Orders in cases where the Access Seeker has submitted a provisioning request via email.
Chorus only provides Fault reporting contact details. (This must include an 0800 fault reporting service number.)	These are the contact details the Access Seeker must use for the reporting of faults in instances where Chorus has advised that OFM is unavailable under clause 11.1.6 below.
Chorus only provides Business continuity email address.	This is the email address to send forms to under clauses 8.5.4 to 8.5.7.
Chorus only provides Billing team email address.	This is the email address to which the Access Seeker will send billing queries under clause 13.2.
Access Seeker only provides Name, email address, mobile and work telephone number of person Chorus should respond to for billing queries.	This is the email address to which Chorus will respond in relation to billing queries.
Access Seeker only provides Contact for faults. (This must include a name, email address and mobile and work telephone numbers.)	This is the contact Chorus will deal with in respect of faults.
Access Seeker only provides Contact for UBA Backhaul Performance Reports. (This must include a name, email address and mobile and landline telephone numbers.)	This is the contact to whom Chorus will send the UBA Backhaul Performance Reports.

3 Technical Manuals and User Guides

3.1 General

3.1.1 This Manual refers to various technical manuals (including published New Zealand and international standards) and user guides that contain technical and procedural detail. Such reference is necessary for both the Access Seeker and Chorus so that:

(a) uniform standards of best practice are set;

(b) the performance of Chorus' Network can be maintained;

(c) the health and safety of the Access Seeker's and Chorus' employees, contractors and other agents can be protected;

(d) systems are in place for the management of outages, faults and any work the Access Seeker or Chorus need to undertake; and

(e) the Access Seeker's and Chorus' employees, contractors and other agents have access to uniform technical instructions.

3.1.2 To the extent that this Manual creates any obligation to comply with a technical manual or user guide, the Access Seeker and Chorus must:

(a) apply the technical manual or user guide under the UBA Backhaul Terms in good faith;

(b) interpret the technical manual or user guide consistently with the UBA Backhaul Terms; and

(c) comply with the technical and/or procedural detail the technical manual or user guide contains.

3.1.3 Electronic copies of all the relevant technical manuals and user guides will be made available to the Access Seeker as soon as practicable after the Access Date or following an earlier request from the Access Seeker. A list of technical manuals, user guides and standards referred to in this Manual is listed on Chorus' website (www.chorus.co.nz).

4 Good Faith and Dispute Resolution

4.1 General

4.1.1 The parties will deal with each other in good faith in relation to this Manual. The parties will act co-operatively and in good faith to facilitate the processes and procedures required for supply of the UBA Backhaul Service.

4.1.2 Any dispute, question or difference (including a dispute, question or difference arising in relation to technical manuals and user guides under section 3 above) that arises between the parties must be dealt with in accordance with the Escalation Protocol in Appendix C. The parties must use all reasonable endeavours to resolve the issue in this way before giving a Dispute Notice under section 36 of the UBA Backhaul General Terms.

4.1.3 In some parts this Manual provides that any Dispute in relation to a particular issue will be of a technical, operational or implementational nature, which requires significant investigation of factual matters, and therefore, in the event of a Deadlock, must be resolved by an expert determination. However, nothing in this Manual will prevent the Access Seeker or Chorus from seeking any remedies available under the Act.

5 Prerequisites

5.1 Overview

5.1.1 In addition to the commercial prerequisites set out in section 6 in the UBA Backhaul General Terms, the Access Seeker must satisfy the following operational prerequisites in relation to the UBA Backhaul Service. The Access Seeker may, at its option, enter into a non-disclosure agreement with Chorus covering discussions prior to placing an Order for the UBA Backhaul Service (but neither Chorus nor the Access Seeker will be under any obligation to do so).

5.2 Operational

5.2.1 Prior to placing the first Forecast with Chorus, Chorus must have granted to the Access Seeker, and the Access Seeker must have verified it has access to, the Chorus operational support systems (**OSS**) required for the provision for the UBA Backhaul Service Forecasts, namely the secure UBA Backhaul web portal (this is required in order to download soft copies of the Forecasting Spreadsheet).

5.2.2 Prior to placing the first Order with Chorus, the Access Seeker must meet the following prerequisites:

(a) Chorus has granted to the Access Seeker, and the Access Seeker has verified it has access to, OSS required for the provision of the UBA Backhaul Service, including:

- Chorus' online ordering and tracking system (**OO&T**);
- Chorus' online fault management system (**OFM**); and

(b) the Access Seeker's nominated staff have completed the appropriate training as set out in section 6; and

5.2.3 Prior to placing each individual Order with Chorus, the Access Seeker must ensure:

(a) at least one Handover Link is in place or ordered at the relevant ASNAPOI; and

(b) the Technical Interface Specification set out in Appendix D is complied with in respect of each connection to the UBA Backhaul Service.

In addition, the Access Seeker must ensure that the prerequisites specified in this clause are complied with on an ongoing basis in respect of each connection to the UBA Backhaul Service while that Access Seeker continues to receive the UBA Backhaul Service.

5.3 Time Estimates

5.3.1 Chorus estimates it will take existing and new Access Seekers who seek access to the UBA Backhaul Service about 30 Working Days to complete the prerequisites.

6 Training

6.1 General

6.1.1 Chorus will provide reasonable initial set up training.

6.1.2 'Reasonable initial set up training' in this context consists of a workshop held at a Chorus location. The workshop will address:

(a) overview of forms for forecasting and ordering;

(b) overview of forms for fault reporting;

(c) basic details of OO&T and OFM (including demonstration of the

systems);

(d) overview of billing and accounts; and

(e) Q&A.

6.1.3 The Access Seeker will ensure that a reasonable number of staff (up to a maximum number of 10) attend any training provided.

6.1.4 Any additional training required by the Access Seeker beyond reasonable initial set up training will be charged for by Chorus in accordance with the UBA Backhaul Price List.

PART 2 - FORECASTING

7 Access Seeker Forecasting

7.1 Overview

7.1.1 The Access Seeker must use all reasonable endeavours to provide Chorus with accurate Forecasts of the volumes of its expected Orders as outlined in this section.

7.1.2 Access Seekers must provide BAU Forecasts including breakdown of expected:

(a) New Connection Orders;

(b) Network Change Orders;

(c) Speed Change Orders; and

(d) Relinquishment Orders.

7.1.3 Access Seekers should note that while there is no requirement to Forecast expected Orders for Handover Links, depending on whether the equipment is available there can be a period of three to six months from Handover Link Order before Handover Links can be provisioned. Access Seekers should discuss anticipated requirements in respect of Handover Links with their Service Delivery Managers and, if necessary, place Orders early. Chorus will use all reasonable endeavours to minimise the waiting period for completion of Orders for Handover Links.

7.1.4 An Excel spreadsheet template will be provided by Chorus with a separate worksheet for each Forecast type (**the Forecasting Spreadsheet**). An example of the template is attached as Appendix E. Each time the Access Seeker submits a Forecast, it must email Chorus a copy of the Forecasting Spreadsheet with the relevant worksheet or worksheets completed in full, containing all of the indicated information. Chorus may update the Forecasting Spreadsheet from time to time as may reasonably be necessary or appropriate for providing the UBA Backhaul Service. In the event that Chorus updates the Forecasting Spreadsheet, it will email a copy of the updated Forecasting Spreadsheet to the Access Seeker's provisioning and forecast manager 20 Working Days prior to the date on which forecast managers will be expected to make use of the revised Forecasting Spreadsheet, and update the Forecasting Spreadsheet on its website.

7.1.5 Where the Access Seeker fails to submit any of the required BAU Forecasts, Chorus will use all reasonable endeavours to process any relevant Orders but there will be no requirement for Chorus to meet the Service Levels in respect of the services or transactions to which the missing Forecast should have related.

7.2 BAU Forecasts

Definition

7.2.1 BAU Forecasts involve the ongoing normal forecasting of New Connection Orders, Network Change Orders, Speed Change Orders and Relinquishment Orders.

Forecasting Requirements

7.2.2 The Access Seeker must each month submit to Chorus a BAU Forecast of its expected volumes of each of the following:

(a) New Connection Orders;

(b) Network Change Orders;

(c) Speed Change Orders; and

(d) Relinquishment Orders,

for each FDS and POI Site for each month in the following six month BAU Forecast period. BAU Forecasts are therefore rolling forecasts that are submitted each month.

7.2.3 Where an Access Seeker does not expect to place any New Connection Orders, Network Change Orders, Speed Change Orders or Relinquishment Orders in the following six month BAU Forecast period, there is no requirement to submit a BAU Forecast. In that situation the Access Seeker will be deemed to have provided/submitted a BAU Forecast of zero Orders.

7.2.4 Each BAU Forecast must be provided at least one month before the start of the six month BAU Forecast period to which it relates. A BAU Forecast must contain all of the information indicated in the relevant worksheet of the Forecasting Spreadsheet including the date it is submitted to Chorus.

7.2.5 The BAU Forecasts for a particular month that are submitted:

(a) three months,

(b) two months, and

(c) one month,

before the first day of that particular month will be treated as firm (binding) Forecasts.

7.2.6 The BAU Forecasts for a particular month that are submitted:

(a) six months,

(b) five months, and

(c) four months,

before the first day of that particular month will be treated as indicative (non-binding) Forecasts.

7.3 Forecasting Submission

7.3.1 Each Forecast will be emailed to the email address advised by Chorus in accordance with section 2.

7.3.2 Each Forecast will be as accurate as possible.

7.3.3 The Access Seeker will ensure that each Forecast is received by the dates specified above, as applicable.

7.3.4 Chorus may make a reasonable request of the Access Seeker to provide additional information relating to a Forecast already provided. The Access Seeker must prepare the requested information with reasonable care and promptly provide it.

7.4 Underforecast / Overforecast

7.4.1 Access Seekers can Forecast any level of BAU Orders that they consider appropriate. The intent of the following provisions is to encourage Access Seekers to ensure that their Forecasts for a particular month are accurate in the three months prior to the month of Order.

7.4.2 In this clause (7.4), “All Orders” means together, New Connection Orders, Network Change Orders, Speed Change Orders and Relinquishment Orders.

BAU Underforecast

7.4.3 Where the Access Seeker:

(a) provides a BAU Forecast relating to any FDS and POI Site for any month; and

(b) the actual total volume of All Orders submitted by the Access Seeker for that FDS and POI Site for that month is greater than the total volume of those Orders forecasted for that FDS and POI Site for that month in any of the BAU Forecasts submitted (or deemed submitted) three months, two months or one month before the first day of that month (**Underforecast**),

then there will be no requirement for Chorus to meet the Service Levels to the extent that any failure to meet the Service Levels is attributable to the Underforecast.

BAU Overforecast

7.4.4 Where the Access Seeker:

(a) provides a BAU Forecast relating to any FDS and POI Site for any month; and

(b) the actual total volume of All Orders submitted by the Access Seeker for that FDS and POI Site for that month is less than the total volume of those Orders forecasted for that FDS and POI Site for that month in any of the BAU Forecasts submitted three months, two months or one month before the first day of that month (**Overforecast**),

then, if requested by Chorus, the Access Seeker will reimburse Chorus for its actual and reasonable Capital Carrying Costs and related administrative costs of equipment (including cards) purchased by Chorus in reliance on the Overforecast but not necessary given the actual Orders. An invoice presented by Chorus will be prima facie evidence of such costs.

7.4.5 Chorus will notify the Access Seeker of:

(a) any costs claimed by Chorus in respect of any Overforecast; and

(b) the extent to which Chorus was unable to meet the Service Levels in the SLA as the result of any Underforecast or any excess Orders,

in each case, in accordance with clauses 7.4.3 and 7.4.4. Where requested, Chorus must provide the Access Seeker with such information as may reasonably be required to validate such claims. An invoice presented by Chorus will be prima facie evidence of the Access Seeker's proportion of costs. Access Seekers may claim a reasonable reduction in these Costs where the reduced actual Order volume is due to Faults, Planned Outages, Unplanned Outages, and Force Majeure Events.

7.4.6 Where the Access Seeker provides a BAU Forecast relating to any FDS and POI Site for any month, and

(a) Chorus intends to purchase equipment or perform Pre-work in reliance on that BAU Forecast; and

(b) in the event of an Overforecast, the purchase of that equipment or performance of that Pre-work would be likely to result in the Access

Seeker being required to reimburse Chorus in accordance with clause 7.4.4,

then, as soon as reasonably practicable, Chorus will:

(c) notify the Access Seeker of its intention to purchase equipment or perform Pre-work; and

(d) provide the Access Seeker with an estimate of:

(i) the costs Chorus could reasonably expect to claim in accordance with clause 7.4.4; and

(ii) the increased Lead-Times for Orders that Chorus would expect to result if it was required to wait for actual Orders rather acting on the applicable BAU Forecast(s).

7.4.7 Where clause 7.4.6 applies, the Access Seeker will:

(a) accept or reject the proposed purchase of equipment or completion of Pre-work based on the information provided by Chorus in accordance with clause 7.4.6; and

(b) notify Chorus of its decision within 3 Working Days from the date that Chorus provides the information in accordance with clause 7.4.6.

7.4.8 If the Access Seeker fails to notify Chorus of its decision within 3 Working Days (in accordance with 7.4.7(b)), then Chorus will assume that the Access Seeker accepts the proposed purchase of equipment or performance of Pre-work.

7.4.9 Until the Access Seeker has provided at least two consecutive months of monthly BAU Forecasts, Chorus will use all reasonable endeavours to process any Orders but there will be no requirement for Chorus to meet the relevant provisioning Service Levels.

7.5 Early Orders

7.5.1 If Chorus identifies infrastructure capacity constraints based on the indicative BAU Forecasts received from all Access Seekers, it may discuss with the relevant Access Seekers the option of placing Orders earlier than indicated in their BAU Forecasts in order to increase the likelihood that such Orders will not be rejected by Chorus due to infrastructure capacity constraints.

7.5.2 Where an Access Seeker places an Order earlier than indicated in its BAU Forecasts and agrees a suitable RFS date or dates with Chorus, the Service Levels will apply subject to the agreed RFS date or dates.

7.6 Chorus Equipment Ordering

7.6.1 Chorus will base its own orders for equipment to meet Access Seeker Orders on the firm BAU Forecasts received. Chorus will use all reasonable endeavours to ensure equipment is available to meet expected volumes of Orders contained in firm BAU Forecasts. However Chorus will not allocate transmission capacity to an Access Seeker until Orders from that Access Seeker are accepted.

PART 3 - PROVISIONING

8 The OO&T System

8.1 OO&T

Overview

8.1.1 Subject to the provisions below relating to business continuity, all Access Seeker Orders for the UBA Backhaul Service must be placed using OO&T. Any Orders that the Access Seeker attempts to place by other means (for example, by email or by fax) will be invalid and may be disregarded by Chorus. If an Access Seeker does place an invalid Order, Chorus will use all reasonable endeavours to notify the Access Seeker if such Orders have been received.

8.1.2 OO&T allows the Access Seeker to:

(a) submit and track the status of Orders; and

(b) update existing Orders (up to the time they are accepted).

Terms of Provision

8.1.3 OO&T is a Chorus System provided by Chorus in accordance with the UBA Backhaul General Terms and this Manual.

B2B

8.1.4 The Access Seeker can choose to directly integrate its systems with OO&T via the OO&T Business to Business Web Services Interface (**B2B**). If the Access Seeker is interested in B2B it can contact its Account Manager for documentation describing the development required to interact with B2B. A trial agreement must be signed before access to a test site, after which an Integration Access Agreement is required to be executed prior to migrating to a production instance.

8.2 Access to OO&T

Description of OO&T

8.2.1 OO&T allows the Access Seeker to log on to a secure site for placing and monitoring Orders with Chorus.

Access for Authorised Personnel

8.2.2 In accordance with section 2, the Access Seeker will provide Chorus with the names of one or two people to become OO&T user administrators. These people will then manage the creating and disabling of Access Seeker staff accounts to access OO&T.

8.2.3 On request from the Access Seeker, Chorus will reset, disable or alter the user administrator accounts.

Right to Restrict or Prohibit Use of OO&T

8.2.4 Subject to clause 8.2.5, Chorus may restrict or prohibit access to OO&T if any of the Access Seeker's staff or systems:

(a) perform malicious or unintentional actions that damage or may potentially damage OO&T; or

(b) use OO&T in an unauthorised manner or in such a way that causes

or may cause material performance issues,

provided that Chorus will restrict or prohibit access to the minimum extent practicable to protect OO&T and any related system.

8.2.5 Chorus must use all reasonable endeavours to provide the Access Seeker with reasonable prior Notice of such restrictions or prohibitions. Where this is not practicable in the circumstances, Chorus will give the Access Seeker Notice of the restriction or prohibition as soon as practicable after the event.

8.3 Additional Functionalities or Enhancements to OO&T

8.3.1 Where Chorus creates any additional functionality within OO&T or makes any enhancement to it, Chorus will give Notice to the Access Seeker. The Access Seeker will modify its own provisioning systems and/or operational procedures to the extent required. Chorus must consult with the Access Seekers before notifying Access Seekers of any additional functionality or enhancements to OO&T which affect the use of OO&T in relation to the UBA Backhaul Service.

8.3.2 The Access Seeker will utilise the additional functionalities or enhancements to OO&T as notified by Chorus from the date specified in Chorus' Notice (at the latest).

8.3.3 The Access Seeker is responsible for ensuring that its own systems are configured in accordance with its use of OO&T and comply with the requirements in the Chorus Web Services Interface Software Development Kit and the OO&T User Guide (both available on Chorus' website (www.chorus.co.nz).

8.4 Costs

Chorus Costs

8.4.1 Chorus will be solely responsible for Chorus' costs of designing and developing OO&T, including any modifications and enhancements.

Access Seekers' Costs

8.4.2 Access Seekers will be solely responsible for the costs of modifying their systems and processes to interface with OO&T and B2B and for participating in the consultation and implementation process.

OO&T Charges

8.4.3 Chorus will charge a monthly licence fee for OO&T as set out in the UBA Backhaul Price List.

8.5 Terms of Use

Use of OO&T

8.5.1 The Access Seeker must only use OO&T for purposes authorised by Chorus.

Availability

8.5.2 Chorus will use all reasonable endeavours to ensure that OO&T is available to Access Seekers 24 hours a day, 7 days a week.

8.5.3 Chorus must take all reasonable steps to prevent the introduction of viruses or other destructive features to OO&T, but Chorus does not guarantee that it is free of such viruses or other destructive features.

Business Continuity

8.5.4 If Chorus advises the Access Seeker OO&T is unavailable the Access Seeker may submit provisioning requests by emailing the relevant form to Chorus as outlined

below.

8.5.5 Chorus will make the following business continuity forms available to the Access Seeker:

(a) New Connection Order form;

(b) Network Change Order form;

(c) Speed Change Order form;

(d) Relinquishment Order form; and

(e) Handover Link Order form.

8.5.6 All business continuity forms submitted in accordance with this clause should come from a generic mailbox. This mailbox must include the Access Seeker's name in the email subject line as below:

[UBA Backhaul Form Name] - [Access Seeker Name] - [Access Seeker reference number]

8.5.7 Once completed, business continuity forms must be sent to the business continuity email address advised by Chorus in accordance with section 2.

9 Order Processing

9.1 Tool

9.1.1 Chorus will make available, via a secure portal, a tool to assist the Access Seeker in determining the location and availability of the UBA Backhaul Service.

9.2 Order Types

9.2.1 The following types of Orders may be submitted using the relevant web form in OO&T:

(a) New Connection Order;

(b) Network Change Order;

(c) Speed Change Order;

(d) Relinquishment Order; and

(e) Handover Link Order.

These Orders will be processed as outlined below.

9.3 Mandatory Fields

9.3.1 For each Order that is submitted either via OO&T or by email as outlined in clauses 8.5.4 to 8.5.7, the Access Seeker must complete all of the fields on the relevant form that are marked as mandatory.

9.4 Business Hours

9.4.1 For the purpose of determining whether Chorus has met any relevant Service Levels for dealing with Orders, any Orders submitted to Chorus outside of Business Hours will be deemed to have been received by Chorus in the first Business Hour of the following Working Day.

9.5 Order Acknowledgement

9.5.1 For each Order that is submitted either via OO&T, or by email as outlined in clauses 8.5.4 to 8.5.7, Chorus will provide the Access Seeker with acknowledgment of receipt of that Order during Business Hours..

9.6 Order Validation

9.6.1 An Order will be deemed invalid and may be rejected by Chorus if:

(a) it is not submitted in accordance with this Manual;

(b) one or more of the rejection reasons listed in Appendix F apply; or

(c) it is otherwise defective.

9.6.2 Chorus will perform a validation check of each Order that it receives. That validation check will determine whether the Order will be deemed invalid in accordance with clause 9.6.1..

9.6.3 If an Order is rejected, Chorus will advise the Access Seeker of that rejection and provide the Access Seeker with the applicable rejection reason.

9.7 Irregularities

9.7.1 Chorus will waive immaterial irregularities and process Orders where the intention is unambiguous. Examples of such irregularities include:

(a) use of different conjunctions (eg '&' instead of 'and');

(b) improper application or omission of apostrophes;

(c) variations in letter case;

(d) use of initials instead of first names, or vice versa; and

(e) names where letters have been accidentally transposed but the meaning is still clear (e.g. Dominoin = Dominion).

9.8 RFS Date

9.8.1 If an Order is accepted, Chorus will advise the Access Seeker of an expected RFS date.

9.8.2 Chorus will use all reasonable endeavours to meet the notified expected RFS date as provided in clause 9.8.1.

9.8.3 Where Chorus becomes aware that it will be unable to meet the expected RFS date notified under clause 9.8.1, Chorus will advise the Access Seeker of a revised expected RFS date. In that situation the Service Levels in the SLA will continue to apply to the original notified expected RFS date, rather than the revised expected RFS date.

9.9 Cancelling an Order

9.9.1 An Order may be cancelled at any time. Where an Order is cancelled after the RFS date is advised Chorus may charge an Access Seeker, in accordance with the Charges set out in the UBA Backhaul Price List, for costs it has incurred in processing the Order (including any Truck Roll).

9.10 Updating an Order

9.10.1 The Access Seeker may change an existing Order that has been submitted using OO&T provided that changes to an existing Order by the Access Seeker can only be made within 10 Working Days of the RFS date if Chorus has given its consent in writing to the change and that consent is not unreasonably withheld.

9.10.2 If the Access Seeker changes an existing Order under clause 9.10.1:

(a) Chorus will notify the Access Seeker of a revised expected RFS date (where applicable to the type of Order involved); and

(b) all of the relevant Service Levels for that Order, as defined in the SLA, will be restarted and measured as from the revised RFS date.

9.11 Confirmations

9.11.1 Chorus will provide the Access Seeker with confirmation that provisioning of an Order has been completed.

9.11.2 Order confirmations submitted to the Access Seeker outside of Business Hours will be deemed to have been received by the Access Seeker in the first Business Hour of the following Working Day.

9.11.3 Order confirmations for the UBA Backhaul Service submitted to the Access Seeker will contain at least the following information:

(a) Handover Link ID; and[2]

(b) Service Identifier.

9.12 Charges

9.12.1 Charges for all the transactions, processes and services referred to in this Part are set out in the UBA Backhaul Price List. Charges may only be made for valid Orders following the validation provided for in clause 9.6.1.

9.13 Time Frames

9.13.1 The end to end time to make the UBA Backhaul Service available to the Access Seeker is an accumulation of the time to complete the prerequisites set out in section 5 and the relevant standard lead times set out in Appendix 4 of the UBA Backhaul Service Level Terms.

[2] Decision No 654 (19 September 2008).

PART 4 - PROBLEM MANAGEMENT

10 OFM

10.1 Overview

10.1.1 Chorus has a web-based fault management system (**OFM**). OFM allows Access Seekers to:

(a) create a new trouble ticket;

(b) retrieve a trouble ticket;

(c) update a trouble ticket; and

(d) report faults.

10.2 Terms of Provision

10.2.1 In relation to the UBA Backhaul Service, OFM is a Chorus system provided by Chorus in accordance with the UBA Backhaul General Terms, the UBA Backhaul Service Level Terms and this Manual.

10.3 Access to OFM

Description of OFM

10.3.1 OFM allows the Access Seeker to log on to a secure site for reporting and monitoring faults with Chorus.

Access for Authorised Personnel

10.3.2 In accordance with section 2, the Access Seeker will provide Chorus with the names of one or two people to become OFM user administrators. These people will then manage the creating and disabling of Access Seeker staff accounts to access OFM.

10.3.3 On request from the Access Seeker, Chorus will reset, disable or alter the user administrator accounts.

Right to Restrict or Prohibit Use of OFM

10.3.4 Subject to the Notice provisions below, Chorus may restrict or prohibit access to OFM if any of the Access Seeker's staff or systems:

(a) perform malicious or unintentional actions that damage or may potentially damage OFM; or

(b) use OFM in an unauthorised manner or in such a way that causes or may cause material performance issues,

provided that Chorus will restrict or prohibit access to the minimum extent practicable to protect OFM and any related system.

10.3.5 Chorus must use all reasonable endeavours to provide the Access Seeker with reasonable prior Notice of such restrictions or prohibitions. Where this is not practicable in the circumstances, Chorus will give the Access Seeker Notice of the restriction or prohibition as soon as practicable after the event.

10.4 Additional Functionalities or Enhancements to OFM

10.4.1 Where Chorus creates any additional functionality within OFM or makes any enhancement to it, Chorus will notify the Access Seeker. The Access Seeker will modify its own fault systems and its own operational procedures to the extent required. Chorus must consult with the Access Seekers before notifying Access Seekers of any additional functionality or enhancements to OFM which affect the use of OFM in relation to the UBA Backhaul Service.

10.4.2 The Access Seeker will utilise the additional functionalities or enhancements to OFM as notified by Chorus from the date specified in Chorus' Notice (at the latest).

10.5 Costs

Chorus Costs

10.5.1 Chorus will be solely responsible for Chorus' costs of designing and developing OFM, including any modifications and enhancements.

Access Seekers' Costs

10.5.2 Access Seekers will be solely responsible for the costs of modifying their processes to work with OFM and modifying their systems to interface with OFM (if applicable).

OFM Charges

10.5.3 Chorus will charge a monthly licence fee for OFM as set out in the UBA Backhaul Price List.

10.6 Terms of Use

Use of OFM

10.6.1 The Access Seeker must only use OFM for purposes authorised by Chorus.

Availability

10.6.2 Chorus will use all reasonable endeavours to ensure that OFM is available to Access Seekers 24 hours, 7 days a week.

10.6.3 Chorus must take all reasonable steps to prevent the introduction of viruses or other destructive features to OFM, but Chorus does not guarantee that it is free of such viruses or other destructive features.

11 Faults

11.1 Faults within the UBA Backhaul Service

Responsibility for faults

11.1.1 Chorus is only responsible for faults that are within Chorus' responsibility, as set out in section 21 of the UBA Backhaul General Terms. If Chorus investigates and no fault is found or no fault for which Chorus is responsible is found, Chorus will charge the Access Seeker the No Fault Found fee as set out in the UBA Backhaul Price List. Where Chorus is responsible for the fault, a No Fault Found fee will not be charged.

11.1.2 In relation to Handover Links Chorus is responsible for faults in a Handover Connection or the OFDF, but in accordance with clause 12.2.13, is not responsible for faults in a Handover Fibre.

Initial Diagnosis by the Access Seeker

11.1.3 It is the Access Seeker's responsibility to provide initial fault diagnosis on all faults reported to it by its End Users.

11.1.4 The requirements for this initial fault diagnosis are set out in section 22 of the UBA Backhaul General Terms.

Reporting Faults to Chorus

11.1.5 Subject to clause 11.1.6 the Access Seeker must use OFM for reporting all faults regarding the UBA Backhaul Service. If the Access Seeker uses any other method to report a fault, the Service Levels as defined in the SLA will not apply to that fault.

11.1.6 Chorus must use all reasonable endeavours to advise Access Seekers immediately upon becoming aware that the OFM is unavailable. Where Chorus advises the Access Seeker that OFM is unavailable, the Access Seeker must submit fault reports to Chorus by calling the 0800 fault reporting service number provided by Chorus.

11.1.7 Once the Access Seeker has provided initial fault diagnosis, complied with section 22 of the UBA Backhaul General Terms and determined that it requires Chorus' assistance to resolve the fault, the following information is required when reporting a fault:

(a) confirmation that the initial fault diagnosis has been completed;

(b) contact name and phone number of the Access Seeker staff member logging the fault;

(c) fault type and description;

(d) estimated time the fault occurred;

(e) address and contact details for the site of the fault (where appropriate); and

(f) any other known relevant information.

11.1.8 If any of the above information is not provided, the Service Levels will not apply.

Hours of Operation

11.1.9 Faults can be logged 24 hours a day, seven days a week.

11.1.10 Faults that are Chorus' responsibility will be fixed by Chorus representatives during Fault Restoration Hours. If a fault is logged outside of those hours, it is possible Chorus will only start working on the fault as from 7.00am the following day. Extended fault restoration hours apply for emergency faults as provided for in clause 11.1.20.

11.1.11 For the purpose of determining whether Chorus has met any relevant Service Levels for dealing with faults, any faults submitted to Chorus outside of Fault Restoration Hours will be deemed to have been received by Chorus in the first Fault Restoration Hour of the following day.

Fault Report Acknowledgement

11.1.12 When a fault report is received, Chorus will advise the Access Seeker, acknowledging receipt of the fault report.

Fault Tracking

11.1.13 All faults will be logged in OFM and the Access Seeker will be given a fault reference number and an expected, a fault restoration time. The expected fault restoration time will be provided in accordance with Chorus' fault prioritisation

systems.

11.1.14 Chorus will use all reasonable endeavours to meet the notified expected fault restoration time as provided in clause 11.1.13.

11.1.15 Where Chorus has allocated an expected fault restoration time to a fault and it subsequently becomes apparent that the fault restoration time cannot be met, Chorus will advise the Access Seeker of a revised fault restoration time. In that situation the Service Levels in the SLA will continue to apply to the originally notified expected fault restoration time, rather than the revised fault restoration time.

11.1.16 The Access Seeker will be able to check the progress of a fault via OFM. The fault reference number is to be used in all communications regarding the fault.

Chorus Contractor Work

11.1.17 If Chorus identifies the need to send a faults contractor, Chorus will update OFM.

11.1.18 The Access Seeker's helpdesk is responsible for coordinating site access and any required outage window with End Users.

Fault Closure

11.1.19 Once the fault has been resolved, Chorus will notify the Access Seeker via OFM (or other means) that the fault has been resolved, confirm the reference number and, where possible, provide the cause of the fault and any actions taken to reach resolution.

Emergency and Core Network Faults

11.1.20 Emergency and Core Network faults reported to Chorus outside of the hours of operation set out in clause 11.1.10 will be treated on a case by case basis.

11.1.21 In the first instance, Chorus will propose a temporary solution. However, in the absence of a viable temporary solution, Chorus may schedule a callout to respond to Core Network faults, or to emergency faults relating to:

(a) medical emergencies;

(b) where the End User provides an essential community service (e.g. police or a doctor's residence); or

(c) where there is a mass outage that impacts on 200 or more End Users.

Escalation Protocol

11.1.22 The Escalation Protocol is provided in Appendix C.

PART 5 - HANDOVER LINK

12 Handover Link

12.1 Overview

12.1.1 Access Seekers will require one or more Handover Links between an ASNAPOI and the remotely located Access Seeker's equipment used for the UBA Backhaul Service.

12.1.2 A Handover Link consists of a Handover Connection between the ASNAPOI data switch (or equivalent facility) and the OFDF and a Handover Fibre between the OFDF and the Access Seeker's remotely located equipment.

12.1.3 This section deals with the situation where the Access Seeker provides the Handover Fibre and this is sited on Chorus' premises. In this situation Access Seekers can place a Handover Link Order and Chorus will supply and install a Handover Connection from the ASNAPOI data switch (or equivalent facility) to the OFDF. Chorus will also install the Access Seeker's Handover Fibre between the ASNAPOI Exchange Entry Point and the OFDF. The installation and other charges set out in the UBA Backhaul Price List will apply.

12.1.4 A diagram showing the Handover Link is set out in Appendix A of the UBA Backhaul Service Description.

12.2 Handover Link

Fibre Standards

12.2.1 Handover Fibres must meet the relevant part of the Technical Interface Specification set out in Appendix D.

Chorus Responsibilities

12.2.2 Chorus will name all Handover Connections and Access Seeker Handover Fibres and record these in Chorus' system for managing fibre inventory. Chorus will also record the relationship between the Handover Connections and the Access Seeker's Handover Fibres.

12.2.3 The naming convention for Access Seeker Handover Fibres is the Access Seeker ID, '/', Exchange ID and the next sequential number, eg TCL/MAB 101.

12.2.4 Chorus will identify the route that the Handover Fibre will take within the Exchange (including Chorus ducts and Chorus manholes) and install any required cable racking to support the Handover Fibre.

12.2.5 Chorus will install the Handover Fibre between Chorus' Exchange Entry Point and the OFDF.

12.2.6 For Access Seeker supplied Handover Fibre, a Chorus-specified length of fibre will be received at the Exchange Entry Point. Chorus and the Access Seeker will work together to get fibre from the Access Seeker manhole to Chorus' Exchange Entry Point with Chorus performing all work in its Exchange Manhole.

12.2.7 Chorus will supply and install the Handover Connection between the ASNAPOI data switch (or equivalent facility) and the OFDF.

12.2.8 Chorus will supply and record the necessary space on the OFDF.

12.2.9 Chorus will terminate the Handover Fibre on the OFDF.

12.2.10 Chorus is responsible for the repair and/or replacement of faults in the Handover Connection and faulty termination at the OFDF.

12.2.11 Chorus is responsible for any costs incurred if Chorus requires the Access Seeker's Equipment to be relocated.

Access Seeker Responsibilities

12.2.12 The Access Seeker will deliver its (or a third party's) fibre to the Chorus Exchange Entry Point (with Chorus performing all work in its Exchange Manhole).

12.2.13 The Access Seeker will own the Handover Fibre. The Access Seeker will be responsible for the Handover Fibre's repair and maintenance. However, in relation to the part of the Handover Fibre located in the Exchange Entry Point and between the Exchange Entry Point and the OFDF, the Access Seeker must request Chorus to carry out any maintenance and repair. Where an Access Seeker requests Chorus to repair a Handover Fibre, Chorus must do so and the Service Levels and Charges set out in the UBA Backhaul Service Level Terms and UBA Backhaul Price List will apply.

12.2.14 The Access Seeker must maintain and be responsible for its own Handover Fibre inventory system. This system must be able to record the following:

(a) the termination of each Handover Fibre;

(b) the Access Seeker's own assignments or reassignments of Handover Fibre; and

(c) changes to Handover Fibre when service has been transferred (eg for fault resolution).

Resolution of Inconsistency

12.2.15 Where Chorus' records and the Access Seeker's records differ with regard to the status of a Handover Fibre, the Access Seeker must confirm the accuracy of the status of the Handover Fibre in its inventory system.

12.2.16 If this does not resolve the difference, the Access Seeker must liaise with Chorus' Service Delivery Manager.

12.2.17 After the Handover Fibre is terminated at the OFDF by Chorus, Chorus and the Access Seeker will jointly carry out end to end testing between the OFDF and the Access Seeker's remote equipment location.

12.3 Recording and Data Management

Overview

12.3.1 Chorus requires access to certain information to manage delivery of the UBA Backhaul Service and safely manage its exchanges. The Access Seeker must comply with any reasonable request made by Chorus for information to enable Chorus to keep accurate technical records, including information about:

(a) 'as built' records;

(b) connections made to the OFDF (which must be identified and coded for billing information on Chorus' operational support systems); and

(c) cabling (including assignments/allocations of fibres within cable sheaths, location of cables within the exchange and information regarding sub-ducts).

12.3.2 Any information provided to Chorus by the Access Seeker under this clause will be Confidential Information for the purposes of section 31 of the UBA General Terms.

12.3.3 Access Seekers must ensure that information regarding their sub-ducts and cabling is supplied to Chorus for recording. Access Seekers should check subsequent as-built records to ensure accuracy of detail. Chorus requires Access Seekers to mark or label cables/plant in the field.

12.3.4 All cables and closures belonging to the Access Seeker must be clearly marked to ensure the owner is correctly identified. Markings must occur at least every 1 metre (sufficiently clear to enable ready identification of the cable owner).

12.3.5 All fibre closures on Chorus property must have an appropriate laser warning label that complies with IEC 60825-2 (2004) fixed in a prominent position on the outside of the closure.

PART 6 - BILLING

13 Billing

13.1 Invoicing

13.1.1 Chorus will invoice the Access Seeker for all Charges on the basis specified in the UBA Backhaul Price List. Invoices will be in an electronic bill format (**eBill**). eBill will replace the provision of a paper invoice, except that a printed GST summary will be provided to the Access Seeker. A hard copy paper invoice will be available to Access Seekers at the price set out in the UBA Backhaul Price List.

13.1.2 The eBill must include the following information:

(a) Service Identifier;

(b) Fault or Order identifier; and

(c) Type of Charge.

13.1.3 Chorus will transmit the eBill using a secure web portal. The eBill can be accessed through a web browser. Alternatively, the Access Seeker can arrange with Chorus to write their own scripts and access the eBill through a script platform.

13.1.4 In accordance with section 2, the Access Seeker will provide Chorus with the list of people that are authorised to download the eBill file. Chorus will set up access rights for these people on a secure web portal.

13.1.5 Chorus will provide the eBill and the printed GST summary to the Access Seeker free of charge.

13.1.6 Chorus will maintain one or more separate Access Seeker accounts for services provided to the Access Seeker. Chorus may alter the account structure as it considers appropriate, however, Chorus will consult with the Access Seeker prior to doing so.

13.2 Billing Enquiries

13.2.1 If the Access Seeker wishes to raise a billing enquiry, it may do so by emailing the Chorus billing team in the first instance at the billing email address supplied by Chorus under section 2.

13.2.2 The email must include the following information:

(a) a header reading 'Billing Query'; and

(b) a completed Billing Enquiry Form.

13.2.3 Chorus will acknowledge the query and will use all reasonable endeavours to respond within the current billing period. Any billing enquiries submitted without the use of a Billing Enquiry Form will be rejected.

13.2.4 Additional billing information, over and above that reasonably required to assist Access Seekers in interpreting invoices, will be charged in accordance with the UBA Backhaul Price List. The Access Seeker may require Chorus to provide a quote for any such request for further information.

13.2.5 The process set out in clause 13.2 is an informal enquiry process that does not limit the UBA Backhaul General Terms. If the Access Seeker wishes to claim an

Invoice Error in an invoice, it must follow the procedure set out in section 15 of the UBA Backhaul General Terms.

PART 7 - OTHER

14 Network Changes

14.1 Network Change Process

Notice of Network Change

14.1.1 The locations of POI Sites, Parent POI Sites and their associated FDSs are determined by Chorus taking into account various factors including:

(a) network architecture and design requirements including network robustness and logical and physical diversity requirements;

(b) the availability of local and national backhaul capacity;

(c) the number of data switches required to support the required volume of End User services; and

(d) DSLAMs and throughput capacity and the location of the DSLAMs in the network.

14.1.2 The POI Sites are geographic points around New Zealand chosen to optimise network efficiency. They are the sites Chorus currently has designated as tier 2 nodes in its network architecture. A list of POI Sites is set out in Schedule 5 to the UBA Backhaul General Terms.

14.1.3 Chorus will make available a list of current POI Sites, Parent POI Sites and their associated FDSs to Access Seekers via a secure web portal. Chorus may, from time to time, introduce new POI Sites or FDSs depending on various factors including (but not limited to) the growth of broadband services demand, any increase in broadband coverage and changes in network architecture and design requirements. Chorus will advise Access Seekers of these changes as set out below.

14.1.4 Chorus will provide Access Seekers and the Commission with at least 12 months' notice or longer if reasonably practicable, of changes to POI Sites (including new POI Sites or deletion of POI Sites) that may have an effect on the Access Seeker's UBA Backhaul Service. Chorus will also provide Access Seekers and the Commission with at least 12 months' notice or longer if reasonably practicable, of any effect on the Access Seeker's receipt of the UBA Backhaul Service due to any change made to the location of POI Sites.

14.1.5 Chorus will provide all Access Seekers and the Commission with 12 months' notice (or less by agreement with Access Seekers affected by the change), of any increase in the geographic availability or coverage of the UBA Backhaul Service.

Implementation

14.1.6 Chorus will consult with each Access Seeker affected by a network change as described in clauses 14.1.4 and 14.1.5, and will develop an implementation plan for each affected Access Seeker.

APPENDIX A – GLOSSARY

Overview	The glossary contains terms that are used in this document and are not defined in the UBA Backhaul General Terms.
ASNAPOI	means the Access Seeker's nearest available point of interconnection as described in the UBA Backhaul Service Description.
ASNAPOI Handover Point	means the Access Seeker side of the data switch in the ASNAPOI as described in the UBA Backhaul Service Description.[3]
B2B	means the OO&T Business to Business Web Services Interface that allows Access Seekers to integrate their front end systems with Chorus' ordering and service management systems.
BAU	means business as usual - the ongoing, every day operation of business, processes and systems.
BAU Forecast	is described in clause 7.2.
Business Hours	means 8.00am to 5.00pm on any Working Day (where the first Business Hour in a Working Day is consecutive to the last Business Hour in the preceding Working Day).
Capital Carrying Costs	means the cost to Chorus of carrying equipment purchased in reliance on an Overforecast but not necessary given the actual Orders and measured as: $r \times K_0 + (K_0 - K_1)$ Where: r is the weighted average cost of capital over the time period when the equipment is held in inventory. For example, where there is an annual weighted average cost of capital of R (Commission benchmark of 9.5%), and the equipment is held in inventory for t months, r will be estimated using $r = (1 + R)^{t/12} - 1$ K_0 is the actual purchase cost of the capital equipment K_1 is the cost of purchasing new equipment at the completion of the period where the asset is in inventory.
Core Network	means equipment used to provide a centralised service capability to multiple Customers of Chorus where no physical part of the equipment is dedicated to a single specific Customer.
DSLAM	means Digital Subscriber Line Access Multiplexer which is a device that connects many digital subscriber lines to a network by multiplexing the DSL traffic onto one or more network trunk lines.
eBill	means invoices provided in an electronic format.

[3] Decision No 654 (19 September 2008).

Escalation Protocol	means the protocol set out in Appendix C.
Ethernet	means a common communication protocol, defined in international standard IEEE 802.3, that is used to connect multiple devices on the same Layer 2 network.
Exchange ID	means a unique alphanumeric identifier assigned by Chorus to an Exchange.
Fault Restoration Hours	means 7.00am to 7.00pm, seven days a week and 'Fault Restoration Hour' means one hour within this period.
FDS	means the UBA Service first data switch (or equivalent facility) as described in the UBA Backhaul Service Description.
FDS Handover Point	means the Access Seeker side of the data switch in the FDS as described in the UBA Backhaul Service Description.[4]
Forecast	means any or all (as the context requires) of the Forecasts required to be provided by the Access Seeker in this Manual.
Forecasting Spreadsheet	means the Excel spreadsheet template provided by Chorus with a separate worksheet for each Forecast type, an example of which is attached as Appendix E.
GigE	means Gigabit Ethernet.
Handover Connection	means the Chorus Owned Equipment that includes: ▪ the trunk port on the FDS or ASNAPOI data switch (as the case may be); ▪ the optical fibre from the port to Chorus' OFDF; and ▪ the OFDF.
Handover Fibre	means the Handover Fibre interconnected with the Handover Connection that provides physical interconnection with the Access Seekers Network.
Handover Link	means the link comprising a Handover Fibre and a Handover Connection between the ASNAPOI data switch and the Access Seeker's remotely located equipment used for the purpose of handing over traffic for the UBA Backhaul Service.
Handover Link[5] ID	means a unique alphanumeric identifier assigned by Chorus to a Handover Point.
Lead-Time	means the time period that it will take Chorus to provision a UBA Backhaul Service. Standard Lead-Times are set out in Appendix 4 of the UBA Backhaul Service Level Terms.
Network Change Order	means an Order where an Access Seeker requests a Relinquishment and New Connection in a coordinated fashion (and includes such an Order where there is a change in an Access Seeker's ASNAPOI). In all cases the Access Seeker will stay the same.

[4] Decision No 654 (19 September 2008).

[5] Decision No 654 (19 September 2008).

New Connection Order	means an Order for a new UBA Backhaul Service connection.
OFDF	means Chorus' Optical Fibre Distribution Frame.
Order	means any order for the UBA Backhaul Service.
OSS	means Chorus' operational support systems.
Parent POI Site	means, in relation to a FDS, the POI Site to which that FDS is connected for the purposes of routing the UBA Backhaul Service. For the avoidance of doubt, the Parent POI Site may sometimes be the same as the ASNAPOI.
POI Site	means a point in Chorus' Network at which the Access Seeker may interconnect for the purposes of the UBA Backhaul Service.
Pre-work	means preliminary work that is performed by Chorus in reliance on BAU Forecasts submitted by Access Seekers.
Relinquishment	means the cessation of a service.
Relinquishment Order	means an order for the cessation of a service.
RFS	means ready for service.
Service Identifier	means a unique alphanumeric identifier assigned by Chorus to a service.
Service Levels	means the Service Levels set out in the UBA Backhaul Service Level Terms.
Service Provider	means a provider of a telecommunication service.
Speed Change Order	means an Order where the Access Seeker requests a change from one transmission capacity of the UBA Backhaul Service to another.
Truck Roll	means each occurrence on which Chorus physically despatches a field services person to go out and perform Exchange or field work in connection with the UBA Backhaul Service.
UBA Service	means that part of the UBA Service that is described as the "enhanced unbundled bitstream access service" set out in section 4 of the UBA Service Description and, for the avoidance of doubt, excludes that part of the UBA Service described as the "basic unbundled bitstream access" set out in section 3 of the UBA Service Description.
UBA Service Description	has the meaning set out in the UBA Backhaul Service Description.
Web Services Interface Software Development Kit	means the document entitled "Web Services Interface Software Development Kit" that is available on Chorus' website (www.chorus.co.nz).

APPENDIX B – LIST OF USER GUIDES, TECHNICAL MANUALS AND STANDARDS

User guides, technical manuals, and standards are now listed at Chorus' website, www.chorus.co.nz.

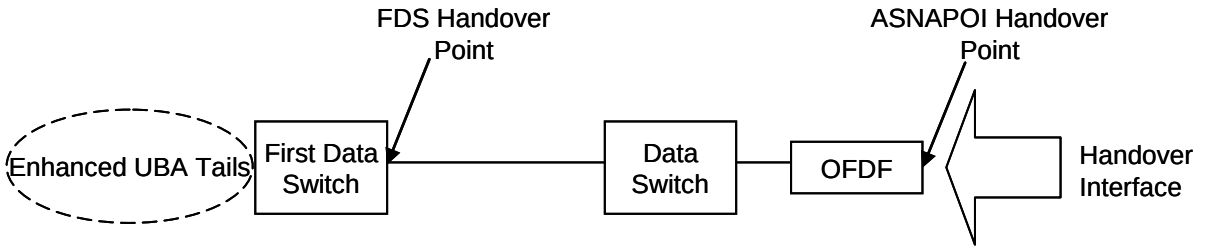
APPENDIX C – ESCALATION PROTOCOL

Rule No.	Escalation Rule	Further Explanation
1	Identify correct escalation path.	Before any issue is escalated, sufficient investigation should be undertaken to ensure that the functional group that will most likely be responsible for resolving the issue has been correctly identified.
2	Attempt to resolve issues at BAU level before escalating them.	Every effort should first be made to resolve an operational issue at the BAU level, ie direct communication between the originator and the recipient.
3	First escalation should be via e-mail.	In the first instance an escalation at BAU level should be received via e-mail and clearly labelled as such with the email subject line beginning with 'ESCALATION'. The email should contain the relevant history of the issue, including the escalation history and when applicable the customer name, Service Identifier/circuit numbers and fault/service order numbers.
4	Level One and Two escalations shall be peer to peer.	If an operational issue can not be resolved at the BAU level it must first be raised by the team member with their own team leader/manager. If the team leader/manager agrees that the issue warrants being escalated to the other party they shall contact their peer in the other organisation and endeavour to resolve the issue between them - this would normally be the level one escalation point. Under no circumstance should this step in the escalation path be bypassed unless every reasonable attempt to communicate with their peer in the other organisation has failed. Only then should the level one contact in party A attempt to escalate the issue to the level two contact in party B. Subject to the above, level two escalations should also be peer to peer.
5	A mutually agreed plan of action to resolve an issue shall not be interfered with by other individuals.	If a plan of action to address an escalated issue has been agreed to by both parties then no other individual from either organisation should attempt to interfere with that agreement. If another individual has a concern with an already agreed plan of action they should raise it in the first instance with the person in their own organisation that was party to the original agreement.
6	People who do not follow the above rules will be redirected to the correct point of escalation.	If, as part of an escalation, an individual is contacted by a person from the other company and it is discovered that that person has not followed the protocol described above, then that individual can at their discretion respectfully redirect that person to the correct escalation contact person.

APPENDIX D – TECHNICAL INTERFACE SPECIFICATION

Technical Interface Specification for UBA Backhaul

This section describes the technical specifications needed to connect End User or Access Seeker equipment to Chorus' UBA Backhaul service.



UBA Backhaul First Data Switch Interface

The service interface at the first data switch is internal to the Chorus switch and all connections will comply with the UBA service specification.

UBA Backhaul Handover Interface

The Handover interface requires the following:

Layer 2	• Ethernet 802.3 1000base LX • 1600 bytes Maximum frame size (including Ethernet header) • 802.1ad o One S-VLAN per access service For specific configuration of Ethernet parameters, please refer to the interface specifications of the services being delivered over the backhaul, ie for EUBA refer to the EUBA Layer 2 Interface Specification.

UBA Backhaul optical fibre specification

Cable Specification

For GigE interface connection the Handover Fibre must comply with the following:

- For 1 Gbps rate:
  - 1000Base-LX over single mode fibre – 1310nm or 1550nm centre frequency, depending on range;
- Typical ideal receive power level for circuits less than 100km is between -3 dBm and -20 dBm. Where required, optical signal attenuation or amplification is the Access Seeker's responsibility; and
- Deployment of backhaul services will require collaboration between Chorus and Access Seeker technical specialists.

Cable Standards

The preferred lead-in cable is the fire-retardant eight fibre mono tube that can be run directly to the OFDF (Optical Fibre Distribution Frame).

Alternatively an eight fibre building cable can be used but runs off this to outside access joints should be limited to less than 300m.

If more than eight fibres are required then standard outside plant cables can be used, but must not be run more than 10 metres inside a building without being converted to a fire retardant cable.

APPENDIX E – FORECASTING SPREADSHEET

BAU forecast for [Enter Forecast Start Date]																			
					[Enter Month 1]				**[Enter Month 2]**				**[Enter Month 3]**				**[Enter Month 4]**			
FDS	**Parent POI**	**Access Seeker NAPOI**	**Service Speed**	**RFS Date**	New	Network Change	Speed Change	Relinquish	New	Network Change	Speed Change	Relinquish	New	Network Change	Speed Change	Relinquish	New	Network Change	Speed Change	Relinquish
				[Enter RFS]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]
				[Enter RFS]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]
				[Enter RFS]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]
					…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
Where:																			
FDS is the exchange containing the First Data Switch at which the primary link commences																			
Parent POI is the exchange at which the primary link terminates and the secondary link commences																			
Access Seeker NAPOI is the exchange at which the secondary link terminates and is where the Access Seeker picks up the traffic																			
Service Speed is the required speed, it can be 50Mbps; 100Mbps; 200Mbps or 1Gbps																			
RFS is the requested Ready For Service date																			
[n1] is the number of New Connection Orders																			
[n2] is the number of Network Change Orders																			
[n3] is the number of Speed Change Orders																			
[n4] is the number of Relinquishment Orders																			
Example BAU forecast																			
BAU forecast as at 1/3/2008																			
FDS	**Parent POI**	**Access Seeker NAPOI**	**Service Speed**	**RFS Date**	New	Network Change	Speed Change	Relinquish	New	Network Change	Speed Change	Relinquish	New	Network Change	Speed Change	Relinquish	New	Network Change	Speed Change	Relinquish
Upper Hutt	Naenae	Wellington	1Gbps	1/04/2008	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
					…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…

APPENDIX F – REJECTION REASONS

Reject Code	Description	Explanation
007	Services not covered	The request is for the supply of a service that is not covered by existing contracts/ with the Service Provider/Access Seeker.
010	Wrong order type	The request has been provided using the wrong form.
014	Invalid Account Number	The account information specified is incorrect or does not match the information in Chorus' records.
015	Invalid line or address	The service identifier or address specified on the form is incorrect or does not match the information in Chorus' records.
018	Not capable of providing service	There is insufficient capacity on Chorus' network or equipment/plant is temporarily unavailable.
020	Incomplete information	The form does not contain all of the required information.
021	Corrupt or unreadable	The form is wholly or partially corrupted or unreadable.
023	Other incorrect information	The form contains other information that is incorrect or that does not match the information in Chorus' records.
036	Requested service not present for deactivation	Unable to process this deactivation/relinquishment request as service does not exist.
037	Requested service already present	The service which has been requested is already in existence.
038	Outside service area	Service requested is outside of the current service area.
047	Contact details	No site contact or contact details.
099	Not otherwise specified	Rejection does not fit into specific codes above.
[TBA]	Service unsupportable	The line/connection/circuit/network identified is incapable of supporting the service requested.