STANDARD TERMS DETERMINATION FOR CHORUS' UNBUNDLED BITSTREAM ACCESS SERVICE

SCHEDULE 4
UBA OPERATIONS MANUAL
PUBLIC VERSION

12 December 2007

Updated to incorporate Commerce Commission decisions, amendments, and clarifications through to 14 March 2017

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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 Terms and sets out the operational processes and procedures for supply of the UBA Service.
1.2	**Relationship with the UBA Terms**	1.2.1	This Manual should be read in conjunction with the other documents which make up the UBA Terms, in particular the UBA 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 General Terms.
		1.3.2	Chorus will make the current version of this Manual available on a Chorus website accessible by 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 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 General Terms. Otherwise, the definitions set out in the UBA 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.

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

2.1.2 If for any reason a party is prevented from giving any Notice pursuant to the UBA 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 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 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 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 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 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 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 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.
Access Seeker only provides People who are authorised to download the UBA Price List file.	These are the people who will be set up with access to Chorus' secure web portal where the UBA 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 11.1.5 below.
Chorus only provides Business continuity email address.	This is the email address to send forms to under clauses 7.5.4 to 7.5.7.
Chorus only provides Billing team email address.	This is the email address to which the Access Seeker will send billing queries under clause 14.2.
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 Performance Reports. (This must include a name, email address and mobile and work telephone numbers.)	This is the contact to whom Chorus will send 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 Terms in good faith;

(b) interpret the technical manual or user guide consistently with the UBA 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.

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 Service.

4.1.2 Any dispute, question or difference (including a dispute, question or difference under section 3 above) that arises between the parties must be dealt with in accordance with the Escalation Protocol in Appendix B. The parties must use all reasonable endeavours to resolve the issue in this way before giving a Dispute Notice under section 37 of the UBA 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 General Terms, the Access Seeker must satisfy the following operational prerequisites in relation to the UBA 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 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, the Access Seeker must meet the following prerequisite:

(a) Chorus has granted to the Access Seeker, and the Access Seeker has verified it has access to, the Chorus Operational Support Systems required for the provision of the UBA Service Forecasts, namely the secure UBA 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, Chorus' Operational Support Systems required for the provision of the UBA Service, including:

- The UBA Pre-qualification system;
- 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 at clauses 7.1.7 and 10.3.1; and

(c) the Access Seeker must have nominated at least one Handover Point within a designated Coverage Area as set out in the Service Description. A list of available Handover Points will be available on a Chorus secure web portal; and

(d) the Access Seeker must have provided a mapping of their nominated Handover Points for every Coverage Area; and

(e) at each Handover Point nominated by the Access Seeker, the Access Seeker must have either connected to the Handover Point via a Handover Link or use a backhaul service to a designated Handover Point nominated by the Access Seeker.

5.2.3 Prior to placing each individual Order with Chorus, the Access Seeker must ensure the Technical Interface Specification set out in Appendix C is complied with.

5.2.4 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 Service while that Access Seeker continues to receive the UBA Service.

5.3 Time Estimates

5.3.1 Chorus estimates it will take existing and new Access Seekers who seek access to the UBA Service about 30 Working Days to complete the prerequisites where a new Handover Connection is not required (because, for example, an Access Seeker already has a Handover Link in place that is used for handover of other services). Where a new Handover Connection is required, depending on whether the equipment is available, it may take three to six months to complete the prerequisites.

PART 2 - FORECASTING

6 Access Seeker Forecasting

6.1 Overview

6.1.1 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.

6.1.2 For each Forecast type listed in clause 6.1.3, the Access Seeker must complete a separate Forecast for:

(a) Basic UBA Orders; and

(b) Enhanced UBA Orders.

6.1.3 There are two Forecast types that Access Seekers must provide:

(a) Exception Forecasts

(b) Total BAU Forecasts including breakdown of expected:

- New Connection Orders;
- Transfer Orders;
- Move Address Orders;
- Change Plan Orders; and
- Relinquishment Orders;

6.1.4 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.

6.1.5 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 D. 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 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.

6.1.6 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.

6.2 Bulk Transfer *Definition*

6.2.1 A Bulk Transfer is the transfer, in a coordinated manner, of 20 or more End Users onto services based on the UBA Service supplied to the Access Seeker. Bulk Transfer involves a number of Transfer Orders that may need to be synchronised, and resources co-ordinated, in order to meet the specific requirements of the Access Seeker and may involve dedicated or additional resource at the Exchange.

6.2.2 Subject to clause 6.2.3 there are three circumstances where an Access Seeker may request a Bulk Transfer:

(a) initial migration of the Access Seeker's End Users from other Chorus provided services to the UBA Service;

(b) subsequent Bulk Transfers as Access Seekers build End Users on other Chorus provided services, and then migrate them to the UBA Service; and

(c) transfers of End Users between Access Seekers as the result of a mass acquisition.

6.2.3 Bulk Transfers:

(a) must be a planned and managed event with representatives from Chorus, the Access Seeker (and in the case of Bulk Transfers as the result of mass acquisition, the Losing Access Seeker) working through an agreed process;

(b) must involve End Users all fed from the same Exchange;

(c) must not include new End User connections (i.e. End Users that were not End Users of either the Access Seeker or, in the case of Bulk Transfers as the result of a mass acquisition, the Losing Access Seeker, prior to the Bulk Transfer);

(d) must not include Move Address or Relinquishment Orders; and

(e) must not include any requests for additional services on a line as part of the process.

6.3 Exception to BAU

Definition

6.3.1 Exception to BAU relates to New Connection, Transfer, Change Plan, and Relinquishment Orders submitted that are outside an Access Seeker's business as usual requirements (such as where the Access Seeker has a special requirement for a number of Orders to be processed within a defined timeframe e.g. for a marketing campaign). Exception to BAU Orders may require increased resource for Order management and provisioning.

6.3.2 The key requirement is for Chorus to provide a capability such as a 'rapid response' churn of End Users, resulting from initiatives such as a door knock selling campaign, whereby UBA New Connection Orders, Transfer Orders, Change Plan Orders can be processed immediately and service swung over in a relatively short timeframe.

6.3.3 The additional capacity required to meet the requirements of an Exception to BAU Order will be agreed by Chorus and the Access Seeker in an Exception Plan (see clause 9.13 below). Any additional capacity will be charged at the price determined in accordance with the UBA Price List.

6.4 Exception Forecasts

Definition

6.4.1 Exception Forecasts relate to the combined forecast required by Chorus from Access Seekers for Bulk Transfers and Exceptions to BAU Orders.

Forecasting Requirements

6.4.2 For any proposed Bulk Transfer and/or Exception to BAU Order, the Access Seeker must submit to Chorus an Exception Forecast at least three months before the first day of the month

in which the Access Seeker requests the Bulk Transfer and/or Exception to BAU Order to commence. The date the Access Seeker requests the Bulk Transfer and/or Exception to BAU Order to commence is referred to below as **"UBA Day Zero"**. Further, more detailed Exception Forecasts for that Bulk Transfer and/or Exception to BAU Order must then be submitted:

(a) two months before the first day of the month of UBA Day Zero; and

(b) one month before the first day of the month of UBA Day Zero.

6.4.3 The detail required in the Exception Forecasts increases as UBA Day Zero is approached. All Exception Forecasts must contain all of the information indicated in the Exception Forecast Worksheet of the Forecasting Spreadsheet and must include the date the Exception Forecast is submitted, the date of UBA Day Zero and the Coverage Region at which the Bulk Transfer and/or Exception to BAU Order is to take place. In addition:

(a) the Exception Forecast submitted three months before the first day of the month of UBA Day Zero must show the number of proposed Transfer Orders and/or Exception to BAU Orders for each Coverage Region for the month of UBA Day Zero;

(b) the Exception Forecast submitted two months before the first day of the month of UBA Day Zero must show the number of proposed Transfer Orders and/or Exception to BAU Order for each Coverage Region for each week in the month of UBA Day Zero; and

(c) the Exception Forecast submitted one month before the first day of the month of UBA Day Zero must show the number of proposed Transfer Orders and/or Exception to BAU Orders for each Coverage Region for each Working Day in the month of UBA Day Zero.

6.4.4 Bulk Transfers and Exception to BAU Orders are not subject to the Service Levels in the SLA. The earlier the Access Seeker's Exception Forecast is submitted to Chorus, the more likely it will be that Chorus will be able to provide capability that meets the Access Seeker's requirements.

6.5 BAU Forecasts

Definition

6.5.1 BAU Forecasts involve the ongoing normal forecasting of UBA New Connection Orders, Transfer Orders, Move Address Orders, Change Plan Orders and Relinquishment Orders.

6.5.2 Multiple Orders relating to a single End User are considered part of BAU Forecasting. However, Access Seekers may request additional capacity to support the business End User situation where there are multiple Orders for that End User to be processed in a coordinated manner (provided at least 10 connections are involved). Where Access Seekers wish to make such a request, they should contact their Chorus Service Delivery Manager. Chorus and the Access Seeker will agree any additional capacity required.

Forecasting Requirements

6.5.3 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) Transfer Orders;

(c) Move Address Orders;

(d) Change Plan Orders; and

(e) Relinquishment Orders;

for each Coverage Region for each month in the following 12 month BAU Forecast period. BAU Forecasts are therefore rolling forecasts that are submitted each month.

6.5.4 Each BAU Forecast must be provided at least one month before the start of the 12 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.

6.6 Forecasting Submission

6.6.1 Each Forecast will be emailed to the email address advised by Chorus from time to time.

6.6.2 Each Forecast will be as accurate as possible.

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

6.6.4 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.

6.7 Underforecast / Overforecast

6.7.1 An Access Seeker may forecast any level of BAU Orders it considers appropriate, subject to section 6. The intent of the following provisions is to progressively increase the accuracy of forecasts and to limit variations in Forecasts during the 12 month period of BAU Forecasts leading up to the Order Month.

BAU Requirements

6.7.2 In this clause 6.7:

(a) "All Orders" means together, New Connection Orders, Transfer Orders, Change Plan Orders, Move Address Orders and Relinquishment Orders;

(b) "Previous Forecast" means the total of All Orders forecasted for the relevant Order Month in the BAU Forecast submitted in respect of the previous month;

(c) "Order Month" means the month in which Orders are made, or which forecasts relate to, as applicable;

(d) "Order Volume" means the total volume of All Orders forecasted by the Access Seeker;

(e) "Month [x]" means the month that is x months before the relevant Order Month. For example, Month 2 means the month that is two months before the relevant Order Month.

6.7.3 BAU Forecasts submitted in respect of

(a) Month 3 shall include forecasts of Orders on a per Coverage Region basis; and

(b) Month 2 or Month 1, shall include forecasts of Orders on a per week, per Coverage Region basis,

for the Order Month.

6.7.4 Where the Access Seeker provides a BAU Forecast of 10 or more connections for any Order Month, the Order Volume for that Order Month must be:

(a) where the BAU Forecast is for Month 12 to Month 5 (inclusive) (in this paragraph (a), "relevant month"), no greater than 120% and no less than 80% of the total of the Previous Forecast (if any); and where the Order Volume for the relevant month is:

(i) greater than 120%; or

(ii) less than 80%

of the Previous Forecast (or deemed to be forecasted under this clause 6.7.4) , then the BAU Forecast submitted in respect of the relevant month will be deemed to be a forecast for an amount of Orders equal to:

(iii) 120% of the total of those Orders forecasted where paragraph (i) above applies; or

(iv) 80% of the total of those Orders forecasted where paragraph (ii) above applies;

(b) where the BAU Forecast is for Month 4, no greater than 115% and no less than 85% of the Previous Forecast; and where the Order Volume for that Order Month is:

(i) greater than 115%; or

(ii) less than 85%

of the Previous Forecast (or deemed to be forecasted under this clause 6.7.4), then the BAU Forecast submitted in respect of Month 4 will be deemed to be a forecast for an amount of Orders equal to:

(iii) 115% of the total of those Orders forecasted where paragraph (i) above applies; or

(iv) 85% of the total of those Orders forecasted where paragraph (ii) above applies;

(c) where the BAU Forecast is for Month 3, when aggregated for all Coverage Regions, no greater than 110% and no less than 90% of the Previous Forecast and where the Order Volume for that Order Month is:

(i) greater than 110%; or

(ii) less than 90%,

of the Previous Forecast (or deemed to be forecasted under this clause 6.7.4), then the BAU Forecast submitted in respect of Month 3 (when aggregated for all Coverage Regions) will be deemed (on a proportional basis across Coverage Regions) to be a forecast for an amount of Orders equal to:

(iii) 110% of the total of those Orders forecasted where paragraph (i) above

applies; or

(iv) 90% of the total of those Orders forecasted where paragraph (ii) above applies;

(d) where the BAU Forecast is for Month 2 to Month 1 (inclusive) (in this paragraph (d), "relevant month"), no greater than 110% and no less than 90% of the Previous Forecast, per Coverage Region and where the Order Volume for the relevant month for a Coverage Region is:

(i) greater than 110%; or

(ii) less than 90%,

of the Previous Forecast for that Coverage Region (or deemed to be forecasted under this clause 6.7.4), then the BAU Forecast submitted in respect of the relevant month will be deemed to be a forecast for an amount of Orders equal to:

(iii) 110% of the total of those Orders forecast for that Coverage Region, where paragraph (i) above applies; or

(iv) 90% of the total of those Orders forecast for that Coverage Region, where paragraph (ii) above applies; and

(e) In addition to above paragraphs, where the BAU Forecast is for Month 2 or Month 1:

(i) the Order Volume for each week of Month 1 must be no greater than 130% of the Order Volume for that same week of Month 2, per Coverage Region. For example, if the Order Volume for week 2 of Month 2 is 100 for a Coverage Region, the Order Volume for week 2 of Month 1 must not be greater than 130 for that Coverage Region; and

(ii) to the extent that the Order Volume for a week of Month 1 is greater than 130% of the Order Volume for that same week of Month 2 per Coverage Region, Chorus shall notify the Access Seeker of the breach of paragraph (i) and allow the Access Seeker two Working Days from such notification to amend its Order Volume allocation per week (but not its Order Volume for Month 1) so that it complies with paragraph (i). To the extent that the Access Seeker does not so amend its per week Order Volume allocation, Chorus shall reallocate the

Order Volume per week of Month 1 so that the Order Volume complies with paragraph (i), and notify the Access Seeker of that reallocation.

Chorus will notify the Access Seeker of the deeming effects of paragraphs (a) to (d) and the reallocation provisions of paragraph (e) of this clause 6.7.4 so that the Access Seeker is aware of its then current BAU Forecast for a month, and where paragraph (e) applies, for its then current BAU Forecast for the week of a month.

6.7.5 The volume of All Orders actually made in an Order Month should be no greater than 110% or no less than 90% of the Previous Forecast per Coverage Region, and in the case of each week of the Order Month per Coverage Region, no greater than 130% of that same week of Month 1 for the Coverage Region (the +/-10% is the "**tolerance level",** and the +30% is the '**weekly tolerance level**"**)**. If the tolerance level for a Coverage Region is exceeded, the provisions of clause 6.7.6 or 6.7.7 apply.

6.7.6 Where the volume of All Orders actually made (as calculated at the end of the Order Month) by all Access Seekers for an Order Month for a Coverage Region is less than 90% of the Previous Forecast for that Coverage Region (or deemed to be forecasted under clause 6.7.4.d) for that Order Month ("**Overforecast**") then, if requested by Chorus, the Access Seeker will reimburse Chorus for the full costs (including staffing, resources and overheads) of any additional expenses which were reasonably incurred by Chorus in reliance on the Overforecast but not necessary given the actual Orders ("Costs"), calculated in accordance with the provisions of Appendix K

6.7.7 Where the volume of All Orders actually made (as calculated at the end of the Order Month) by all Access Seekers for an Order Month for a Coverage Region is greater than 110% of the Previous Forecast for that Coverage Region (or deemed to be forecasted under clause 6.7.4.d) for that Order Month ("**Underforecast**"), there will be no requirement for Chorus to meet the Service Levels set out in the SLA for a certain number of All Orders, calculated in accordance with the provisions of Appendix K

6.7.8 Where the volume of All Orders actually made for a week of an Order Month for a Coverage Region (in this clause 6.7.8, "**the relevant week**") is greater than 130% of that same week of the Previous Forecast for that Coverage Region (or the reallocation by Chorus under clause 6.7.4.e) for that Order Month ("**Excess Orders**"), there will be no requirement for Chorus to meet the Service Levels set out in the SLA for Excess Orders. However, where clause 6.7.7 applies, and the relevant week is subject to a benefit under that clause (being "B" in the formula relevant to clause 6.7.7), that benefit may operate to mitigate the loss of service levels that would otherwise apply under this clause 6.7.8.

6.7.9 To the extent that clause 6.7.7 or 6.7.8 applies, and so far as is practicable, Chorus will consult with the Access Seeker about

whether any Orders actually made during a week of a month that

(a) exceed the Month 1 BAU Forecast; or

(b) exceed the weekly tolerance level (as described under clause 6.7.5)

(c) are at risk of no service levels under the SLA applying to such Orders.

6.7.10 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 6.7.6, 6.7.7 and 6.7.8. 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.

6.7.11 The parties acknowledge that:

(a) for the purposes of clauses 6.7.4 to 6.7.8, a Forecast “in respect” of a month shall in practice be submitted 1 month and 2 days before that month; and

(b) where the volume of All Orders actually made (as calculated at the end of the Order Month) by the Access Seeker for a Coverage Region for an Order Month is less than 10, the consequences for inaccurate forecasting set out in clauses 6.7.4 to 6.7.8 will not apply.

6.7.12 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 Service Levels set out in the SLA.

PART 3 - PRE-QUALIFICATION AND PROVISIONING

7 The OO&T System

7.1 OO&T

Overview

7.1.1 Subject to the provisions below relating to business continuity all Access Seeker Orders for the UBA 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. Chorus will use all reasonable endeavours to notify the Access Seeker if such Orders have been received.

7.1.2 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).

7.1.3 Access Seekers requesting:

(a) multiple Orders relating to a single End User as described at clause 6.5.2; or

(b) Exception to BAU Orders as described at clause 6.3;

must contact their Chorus Service Delivery Manager to agree what additional capacity is required, how Orders relating to that capacity will be processed, and how the additional capacity will be delivered. Exception to BAU Orders will be charged for by Chorus in accordance with the UBA Price List.

7.1.4 Access Seekers requesting Bulk Transfers as described in clause 6.2 must, prior to submitting Orders through OO&T, contact their Chorus Service Delivery Manager, to begin discussing the relevant details.

Terms of Provision

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

B2B

7.1.6 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.

Training and Support

7.1.7 Chorus will provide reasonable initial set up training on OO&T.

7.1.8 '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;

(b) overview of forms for ordering;

(c) basic details of OO&T (including demonstration of the system);

(d) overview of billing and accounts; and

(e) Q&A.

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

7.1.10 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 Price List.

7.2 Access to OO&T

Description of OO&T

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

Access for Authorised Personnel

7.2.2 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.

7.2.3 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

7.2.4 Subject to clause 7.2.5, 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.

		7.2.5	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.
7.3	**Additional Functionalities or Enhancements to OO&T**	7.3.1	Where Chorus creates any additional functionality within OO&T or makes any enhancement to it, Chorus will notify 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 Service.
		7.3.2	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).
		7.3.3	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).
7.4	**Costs**	***Chorus Costs***	
		7.4.1	Chorus will be solely responsible for Chorus' costs of designing and developing OO&T, including any modifications and enhancements.
		Access Seekers' Costs	
		7.4.2	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	
		7.4.3	Chorus will charge a monthly licence fee for OO&T as set out in the UBA Price List.
7.5	**Terms of Use**	***Use of OO&T***	
		7.5.1	The Access Seeker must only use OO&T for purposes authorised by Chorus.
		Availability	
		7.5.2	Chorus will use all reasonable endeavours to ensure that OO&T is available to Access Seekers from 24 hours a day, 7 days a week.
		7.5.3	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

7.5.4 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.

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

(a) Pre-qualification form;

(b) UBA without POTS:

- Transfer form;
- New Connection form;
- Change Plan form;
- Move Address form;
- Relinquishment form;

(c) UBA with POTS

- Transfer form;
- New Connection form;
- Change Plan form;
- Move Address form;
- Relinquishment form;

(d) Handover Link form.

7.5.6 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 Form Name] - [Access Seeker Name] - [Access Seeker reference number]

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

8 Pre-qualification

8.1 Ordering UBA Pre-qualification

Overview

8.1.1 Pre-qualification is a service that enables the Access Seeker to:

(a) confirm if the given address is within the area of geographical coverage of the UBA Service and a line at the given address is capable of supporting UBA; and

(b) receive a range of line speed at the given address.

8.1.2 There are two types of pre-qualification:

(a) Automated Pre-qualification (existing addresses or Service Identifiers); and

(b) Special Manual Pre-qualification Investigation (new addresses).

8.1.3 Automated Pre-qualification will be provided through OO&T. In addition to this, the B2B interface will provide pre-qualification functionality. Pre-qualification orders will be processed as set out below.

8.2 Automated Pre-qualification Orders

Information Supplied

8.2.1 The Access Seeker will supply the item to be pre-qualified. That item may either be an existing service address or an existing Service Identifier.

8.2.2 For an existing service address entry to be pre-qualified, a single address needs to be identified by selection from the existing Chorus address list using OO&T.

Information Returned

8.2.3 The information returned by OO&T may include:

(a) number/address not found;

(b) number in invalid format;

(c) search could not be done;

(d) Exchange/cabinet identifier;

(e) the estimated downstream line speed range for this query;

(f) the estimated upstream line speed range for this query;

(g) list of UBA Services available at the End User premises for the address or Service Identifier submitted, and notes on whether there is a limitation on the throughput available to the End User due to the infrastructure available; and/or

(h) whether further investigation is required to determine if the UBA Service can be provided.

If the Access Seeker chooses to carry out more investigation this can be done using the pre-qualification process described in clause 8.3.

8.3 Special Manual Pre-qualification Investigation Orders

Overview

8.3.1 This investigation is carried out in circumstances where the Access Seeker wishes to obtain information about a new address or where an Access Seeker wishes to carry out further investigation after an Automated Pre-qualification Order.

Information Supplied

8.3.2 The Access Seeker must submit the item to be pre-qualified. If it is a new address, all address elements must be provided (street name, number etc).

Information Returned

8.3.3 The information returned will include:

(a) Exchange/cabinet identifier

(b) the actual downstream line speed range for this query;

(c) the actual upstream line speed range for this query;

(d) list of UBA Services available at the End User premises for the address or Service Identifier submitted, and notes on whether there is a limitation on the throughput available to the End User due to the infrastructure available; and/or

(e) whether the UBA Service can be provided.

8.4 Pre-qualification Acknowledgement

8.4.1 For each Pre-qualification Order that is received by Chorus, Chorus will provide the Access Seeker with acknowledgement of receipt of the Order.

8.5 Charging for Pre-qualification

8.5.1 Charges for Pre-qualification are set out in the UBA Price List.

9 Order Processing

9.1 Order Types

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

(a) New Connection;

(b) Transfer;

(c) Change Plan;

			(d) Move Address; (e) Relinquishment; and (f) Handover Link.
		9.1.2	These Orders will be processed as outlined below.
9.2	**Mandatory Fields**	9.2.1	For each Order that is submitted either via OO&T or by email as outlined in clauses 7.5.4 to 7.5.7, the Access Seeker must complete all of the fields on the relevant form that are marked as mandatory.
		9.2.2	Chorus will acknowledge receipt of each Order.
9.3	**Business Hours**	9.3.1	For the purpose of determining whether Chorus has met any relevant Service Levels as defined in the SLA 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.
9.4	**Order Validation**	9.4.1	An Order will be deemed invalid and may be rejected by Chorus if: (a) it is not submitted in accordance with this Manual; or (b) one or more of the rejection reasons listed in Appendix E apply; or (c) it is otherwise defective; or (d) the Access Seeker does not have capability at the required Handover Point to access and interconnect with the UBA Service.
		9.4.2	Chorus will perform a validation check of each Order that it receives. That validation check will determine whether the Order complies with the requirements of clause 9.4.1.
		9.4.3	If an Order is rejected, Chorus will advise the Access Seeker of that rejection and provide the Access Seeker with the applicable rejection reason.

9.5	**Irregularities**	9.5.1	Chorus may waive immaterial irregularities and process Orders where the intention is unambiguous. Examples of such irregularities include: (a) use of different conjunctions (e.g. '&' 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).
9.6	**RFS Date**	9.6.1	If an Order is accepted, Chorus will either: (a) advise the Access Seeker of an expected Ready For Service (**RFS**) date (where applicable to the type of Order involved); or (b) where there are infrastructure capacity constraints, advise the Access Seeker the Order is a 'waiter' and provide an approximate RFS date not subject to the SLA. When infrastructure becomes available the Access Seeker will be advised of an expected RFS date. The Service Levels in the SLA will not apply for the period that the Order is a waiter.
		9.6.2	Chorus will use all reasonable endeavours to meet the notified expected RFS Date as provided in clause 9.6.1.
		9.6.3	Where Chorus becomes aware that it will be unable to meet the expected RFS Date notified under clause 9.6.1, 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.
9.7	**Cancelling an Order**	9.7.1	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 Price List, for costs it has incurred in processing the Order (including any truck roll).
9.8	**Updating an Order**	9.8.1	The Access Seeker may change an existing Order that has been submitted using OO&T provided that changes to an existing Order by an Access Seeker can only be made within three Working Days of the RFS Date if Chorus has given its consent in writing to the change and that consent is not unreasonably withheld.

		9.8.2	If the Access Seeker changes an existing Order under clause 9.8.1: (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.
9.9	**Confirmations**	9.9.1	Chorus will provide the Access Seeker with confirmation that provisioning of an Order has been completed.
		9.9.2	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.
		9.9.3	Order confirmations for Enhanced UBA submitted to the Access Seeker will contain at least the following information: (a) Handover Point ID; (b) Service VLAN ID; (c) Customer VLAN ID; and (d) Service Identifier.
		9.9.4	Order confirmations for Basic UBA submitted to the Access Seeker will contain at least the Service Identifier.
9.10	**Charges**	9.10.1	Charges for all the transactions, processes and services referred to in this section are set out in the UBA Price List. Charges may only be made for valid Orders following the validation provided for in clause 9.4.2.
9.11	**Transfers**	9.11.1	This clause 9.11 applies to Transfer Orders where an End User is transferring from one Access Seeker (or Service Provider as the case may be) to another Access Seeker.
		9.11.2	Access Seekers must obtain Customer Authorisation to these transfers, in accordance with the terms of the Customer Transfer Code, before the relevant Order is submitted.
		9.11.3	Chorus is entitled to rely on the Transfer Order as evidence that a valid Customer Authorisation has been obtained in accordance with the Customer Transfer Code. Chorus is not liable in the event that authorisation is found to be invalid or not in accordance with the Customer Transfer Code.
		9.11.4	Chorus and the Access Seeker will comply with the Customer Transfer Code.

9.12 Changes between 'with POTS' and 'without POTS' services

9.12.1 Where an Access Seeker is receiving a ‘with POTS’ service of the UBA Service, and that Access Seeker is notified by the relevant End User that he or she wishes to cancel his or her POTS service, the Access Seeker will request a change to the POTS service from Telecom and, until three years from Separation Day, notify Chorus of the change. Chorus will change the Access Seeker to the equivalent ‘without POTS’ service of the UBA Service. UBA Service Transaction and Recurring charges as set out in the UBA Price List for the equivalent ‘without POTS’ service will apply from when POTS is disconnected.

9.12.2 Where an Access Seeker is receiving a ‘with POTS’ service of the UBA Service, and a second Access Seeker is notified by the relevant End User that he or she wishes to cancel his or her POTS service, the second Access Seeker will request a change from Telecom and , until three years from Separation Day,notify Chorus of the change. Chorus will change the Access Seeker to the equivalent ‘without POTS’ service of the UBA Service and notify the Access Seeker accordingly. UBA Service Transaction and Recurring charges as set out in the UBA Price List for the equivalent ‘without POTS’ service will apply from when POTS is disconnected.

9.12.3 Where an Access Seeker is receiving a ‘without POTS’ service of the UBA Service, and the Access Seeker is notified by the relevant End User that he or she wishes to obtain a POTS service, the Access Seeker will request a change from Telecom and, until three years from Separation Day, notify Chorus of the change. Until three years from Separation Day, Chorus will change the Access Seeker to the equivalent ‘with POTS’ service of the UBA Service and notify the Access Seeker accordingly. UBA Service Transaction and Recurring charges as set out in the UBA Price List for the equivalent ‘with POTS’ service will apply from when POTS is connected.

9.12.4 Where an Access Seeker is receiving a ‘without POTS’ service of the UBA Service, and a second Access Seeker is notified by the relevant End User that he or she wishes to obtain a POTS service, the second Access Seeker will request a change from Telecom and, until three years from Separation Day, notify Chorus of the change. Until three years from Separation Day, Chorus will change the first Access Seeker to the equivalent ‘with POTS’ service of the UBA Service and notify the first Access Seeker accordingly. UBA Service Transaction and Recurring charges as set out in the UBA Price List for the equivalent ‘with POTS’ service will apply from when POTS is connected.

9.13 Exception to BAU Orders

9.13.1 Prior to an Access Seeker placing an Exception to BAU Order, Chorus and the Access Seeker must agree on an Exception Plan that:

(a) describes how the Exception to BAU Order will be managed and carried out (including details of the dates on which the relevant batches of individual Orders will take place and, where appropriate, the resources to be used); and

(b) states the price to be paid (excluding the charges for the individual Orders) by the Access Seeker for the provision of the Exception to BAU Order service by Chorus. This price must be determined in accordance with the UBA Price List.

9.13.2 If the parties cannot agree on the terms of the Exception Plan, either party may refer the issue to the dispute resolution procedure in the UBA General Terms. Any such dispute will be treated as a technical or operational dispute and in the event of a Deadlock, must be resolved by expert determination. Chorus is not required to carry out any Exception to BAU Order until an Exception Plan has been agreed by the Access Seeker and Chorus or determined by an expert.

9.13.3 Chorus is entitled to rely on an Exception to BAU Order as evidence that valid Customer Authorisations have been obtained in accordance with the requirements of the Customer Transfer Code. Chorus is not liable in the event that the Customer Authorisations are found to be invalid or not in accordance with the Customer Transfer Code.

9.13.4 Access Seekers should note that the individual Orders covered by an Exception to BAU Order are subject to the same processes, systems and rules as other Orders. However, workflow will be managed separately.

9.13.5 Service Levels under the SLA will not apply to individual Orders forming part of an Exception to BAU Order.

9.14 Bulk Transfer Orders

Overview

9.14.1 Bulk Transfers enable an Access Seeker to transfer large volumes of End Users onto the UBA Service in a co-ordinated manner. Details of what a Bulk Transfer is and when a Bulk Transfer can be requested is set out in clause 6.2 above.

Submitting Bulk Transfer Orders

9.14.2 Access Seekers should contact their Chorus Service Delivery Manager to discuss the requirements and timeframes of any Bulk Transfer before placing a Bulk Transfer Order.

9.14.3 All Bulk Transfer Orders are to be entered in the OO&T system at least 20 Working Days before the date on which the Access Seeker would like the first individual transfer included in the

Bulk Transfer to occur.

9.14.4 Once a Bulk Transfer Order has been placed, Chorus and the Access Seeker must agree on a Bulk Transfer Plan that describes how the Bulk Transfer will be managed and carried out (including details of the dates on which the relevant batches of individual transfers will take place and, where appropriate, the resources to be used).

9.14.5 Where there are resource contention issues in relation to the carrying out of the Bulk Transfer, the Bulk Transfer Plan must be consistent with the application of the priority rules set out in clause 9.15 and Chorus can specify (without the agreement of the Access Seeker) the details of the plan (including individual transfer dates) to the extent necessary to enable compliance with those rules.

9.14.6 Once the Bulk Transfer Plan has been agreed, any necessary changes to the Bulk Transfer Order will be made and this Order will be accepted and allocated an accepted Bulk Transfer Order number. The Access Seeker must then submit an individual Order for each transfer included in the Bulk Transfer. Each such individual Order must state that it is part of a Bulk Transfer and include the accepted Bulk Transfer Order number for that Bulk Transfer.

9.14.7 If the parties cannot agree on the terms of the Bulk Transfer Plan, either party may refer the issue to the dispute procedure in section 37 of the UBA General Terms. Any such dispute will be treated as a technical or operational dispute and in the event of a Deadlock, must be resolved by expert determination. Chorus is not required to undertake any Bulk Transfer until a Bulk Transfer Plan has been agreed by the Access Seeker and Chorus or determined by an expert.

9.14.8 Bulk Transfer Orders are not able to be cancelled within 10 Working Days of the date on which the first relevant individual transfer will take place.

9.14.9 Chorus is entitled to rely on a Bulk Transfer Order as evidence that valid Customer Authorisations have been obtained in accordance with the requirements of the Customer Transfer Code. Chorus is not liable in the event that the Customer Authorisations are found to be invalid or not in accordance with the Customer Transfer Code.

9.14.10 Access Seekers should note that the individual transfers covered by a Bulk Transfer Order are subject to the same processes, systems and rules as other transfers. However, Service Levels under the SLA will not apply to individual transfers covered by a Bulk Transfer Order.

9.15 Prioritisation of Bulk Transfer Orders ***Overview***

9.15.1 Where there is contention for resources in relation to:

(a) Space resource constraints at distribution frames for Bulk Transfers;

(b) Space resource constraints at distribution frames during initial build activity;

(c) Resource constraints during Bulk Transfers;

(d) Circumstances where Bulk Transfer activity poses a risk to BAU provisioning activity; and

Chorus will apply the following prioritisation rules.

Prioritisation Rules

9.15.2 BAU capability must be preserved above all other requirements.

9.15.3 The order in which Bulk Transfers will be carried out will be the order in which the Bulk Transfer Orders are received. However where two or more Access Seekers submit a Bulk Transfer Order on the same day, and this gives rise to contention for resources, the order in which the Bulk Transfers will be carried out will be decided by the "throw of a coin".

9.15.4 Resources will be used in a serial fashion in a pre determined order (that matches the order of the relevant Bulk Transfers). For example, if there is capacity to complete 100 transfers per day at an Exchange, then that resource would work only on transfers for a single Access Seeker and when all their planned batches of transfers are complete, start the work for the next Access Seeker.

9.15.5 In a case where more resource is available to perform transfers than is able to be supported by the Access Seeker (an Access Seeker cannot manage the volume of transfers possible per day at their end), the additional resource may be able to be used performing transfers for the next Access Seeker on the priority list.

Prioritisation and Allocation Disputes

9.15.6 In relation to any prioritisation or allocation issue, in the event that an Access Seeker feels the relevant prioritisation or allocation rules have not been correctly applied they may refer the issue to the dispute procedure in the UBA General Terms. Any such dispute will be treated as a technical or operational dispute and in the event of a Deadlock, must be resolved by expert determination.

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 basic faults.

10.2 Terms of Provision

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

10.3 Training and Support

10.3.1 Chorus will provide reasonable initial set up training on OFM.

10.3.2 'Reasonable initial set up training' in this context consists of a workshop covering the items below, held at a Chorus nominated location. The workshop will address:

(a) overview of forms for fault reporting;

(b) basic details of the OFM (including demonstration of the system); and

(c) Q&A.

10.3.3 Access Seekers will ensure that a reasonable number of staff (up to a maximum of 10) attend any training provided to the Access Seeker in respect of OFM.

10.3.4 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 Price List.

10.4 Access to OFM

Description of OFM

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

Access for Authorised Personnel

10.4.2 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.

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

Right to Restrict or Prohibit Use of OFM

10.4.4 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.

10.4.5 Chorus must use all reasonable efforts to provide the Access Seeker with 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.

10.5 Additional Functionalities or Enhancements to OFM

10.5.1 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 Service.

10.5.2 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).

10.6 Costs

Chorus Costs

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

Access Seeker's Costs

10.6.2 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

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

10.7 Terms of Use

Use of OFM

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

Availability

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

10.7.3 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 Service

Responsibility for faults

11.1.1 Chorus is only responsible for faults that are within Chorus' responsibility, as set out in section 22 of the UBA 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 Price List. Where Chorus is responsible for the fault, no No Fault Found fee will be charged.

Initial Diagnosis by the Access Seeker

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

11.1.3 The requirements for this initial fault diagnosis are set out in section 23 of the UBA General Terms.

Reporting Faults to Chorus

11.1.4 Subject to clause 11.1.5 the Access Seeker must use OFM for reporting all faults regarding the UBA 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.

11.1.5 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. Chorus must use all reasonable endeavours to advise Access Seekers immediately upon becoming aware that the OFM is unavailable.

11.1.6 Once the Access Seeker has provided initial fault diagnosis, complied with section 23 of the UBA 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) contact name, phone number, and alternate phone number of the End User experiencing the fault (where appropriate);

(d) End User's Service Identifier for service that is experiencing the fault (where appropriate);

(e) fault type and description;

(f) time the fault occurred;

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

(h) any other relevant information.

11.1.7 If any of the above information is not provided, the Service Levels in the SLA will not apply.

11.1.8 Chorus is responsible for the repair of faults in the Handover Connection, including faulty termination at the OFDF.

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.

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 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 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 the End User.

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 B.

12 Interference Management

12.1 Overview

12.1.1 Chorus must comply with the Interference Management Plan.

PART 5 - HANDOVER LINK CO-LOCATION

13 Handover Link Co-location

13.1 Overview

13.1.1 Access Seekers will require one or more Handover Links between a Handover Point and the remotely located Access Seeker's equipment used to provide access to and interconnection with the UBA Service. A Handover Link consists of a Handover Connection between the Handover Point and the OFDF, and a Handover Fibre between the OFDF and the Access Seeker's equipment.

13.1.2 This section deals with the situation where the Access Seeker provides the Handover Fibre and this is co-located 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 Handover Point to the OFDF. Chorus will also install the Access Seeker's Handover Fibre between the Exchange Entry Point and the OFDF. The installation and other charges set out in the UBA Price List will apply.

13.1.3 A diagram showing the Handover Link is set out in Appendix F.

13.2 Handover Link

Fibre Standards

13.2.1 An Access Seeker will supply its own Handover Fibre. The Handover Fibre must meet the relevant part of the Optical Fibre Specification set out in Appendix G.

Chorus Responsibilities

13.2.2 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.

13.2.3 The naming convention for Access Seeker Handover Fibres encompasses a combination of the ownership and naming conventions. It consists of the Access Seeker ID, '/', Exchange ID and the next sequential number, e.g. TCL/MAB 101.

13.2.4 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.

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

13.2.6 For Access Seeker supplied Handover Fibre, a Chorus-specified length of fibre will be received at Chorus' 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 Entry Point.

13.2.7 Chorus will supply and install the Handover Connection between the Handover Point and the OFDF.

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

13.2.9 Chorus will terminate the Handover Fibre on the OFDF.

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

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

Access Seeker Responsibilities

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

13.2.13 The Access Seeker will own the Handover Fibre. The Access Seeker will be responsible for the Handover Fibre's repair and maintenance with the exception of the Handover Fibre located in the Exchange Entry Point and between the Exchange Entry Point and the OFDF, for which the Access Seeker must request Chorus to repair any faults. Where an Access Seeker requests Chorus to repair any fault, Chorus must do so and the Service Levels and charges set out in the UBA Service Level Terms and UBA Price List will apply.

13.2.14 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 (e.g. for fault resolution).

Resolution of Inconsistency

13.2.15 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.

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

13.2.17 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.

13.3 Recording and Data

Overview

13.3.1 Chorus requires access to certain information to manage delivery of the UBA 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).

13.3.2 Any information provided to Chorus by the Access Seeker under this clause will be Confidential Information for the purposes of section 32 of the UBA General Terms.

13.3.3 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.

PART 6 - BILLING

14 Billing

14.1 Invoicing

14.1.1 Chorus will invoice the Access Seeker for all charges on the basis specified in the UBA 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 Price List.

14.1.2 The eBill must include the following information:

(a) Service Identifier;

(b) Fault or Order identifier; and

(c) Type of fee.

14.1.3 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.

14.1.4 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.

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

14.1.6 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.

14.2 Billing Enquiries

14.2.1 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.

14.2.2 The email must include the following information:

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

(b) a completed Billing Enquiry Form.

14.2.3 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.

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

14.2.5 The process set out in this clause is an informal enquiry process that does not limit the UBA General Terms. If the Access Seeker wishes to claim an Invoice Error in an invoice, it must follow the procedure set out in section 16 of the UBA General Terms.

PART 7 - OTHER

15 Requirements for End User Site Visits

15.1	**General**	15.1.1	Fault and provisioning related site visits will be arranged by appointment under OO&T and need not be confirmed. Chorus will not be required to consult the Access Seeker or End User when work at a site does not require entry to a premises or contact with an End User. Where entry to a premises or contact with an End User is required then the Access Seeker will make arrangements for the site visit with the End User and the relevant Chorus representative.
15.2	**Field Force**	15.2.1	Chorus representatives will carry Chorus identification and wear appropriate clothing.
15.3	**Arriving on Time**	15.3.1	The Chorus representative will use all reasonable endeavours to start all visits to an Access Seeker End User's site at the scheduled time.
15.4	**Courtesy**	15.4.1	When interacting with any Access Seeker End User, Chorus representatives will always act in a professional and courteous manner, and they will not use that interaction for sales and marketing purposes.
15.5	**Confirming Details and Outcomes of Visit**	15.5.1	At the completion of all site visits, the relevant Chorus representative will record the details in appropriate systems.
15.6	**Abortive End User Site Visit Charge**	15.6.1	When for any reason outside Chorus' control it is unable to complete a visit at the scheduled time (e.g. an End User is unavailable), Chorus will charge the Access Seeker an abortive End User site visit charge in accordance with the UBA Price List.

16 Premises Wiring, Modem Installation and Approved Modem List[2]

[2] Decision No 679 (23 July 2009).

16.1 Premises Wiring[3]

16.1.1 Access Seekers must ensure correct installation in relation to premises wiring at each End User's premises.[4]

16.1.2 If the End User does not wish to use the premises wiring then there is no obligation to isolate the wiring from the Chorus Network. If the End User wishes to continue to use the premises wiring, for other than an active POTS service, then the Access Seeker must either:

(a) ensure premises wiring is isolated from the Chorus Network; or

(b) ensure that only Telepermitted equipment is connected to the premises wiring.

16.1.3 When monitored alarms and/or SKY Digital service are installed at an End User's premises and the Access Seeker takes UBA and Telecom POTS, the Access Seeker must advise its End User to ensure that the necessary filters are fitted or that arrangements are made for the End User to have a splitter installed by the Access Seeker (or by Chorus). When monitored alarms and/or SKY Digital service are installed on an End User's premises and the Access Seeker takes UBA without POTS, the End User should be advised alternative arrangements are required to retain existing functionality.

16.1.4 If an End User converts from a service based on UBA without Telecom POTS to a service based on UBA with Telecom POTS then where a splitter or filters are required it will be the responsibility of the Access Seeker initiating the change to advise the End User.

16.1.5 If a fault is found to be caused by non-compliant wiring or equipment, then the Access Seeker will be liable for the No Fault Found charge as set out in the UBA Price List.

16.1.6 For detailed information on household wiring standards refer to PTC103 and PTC106 on the Telepermit website (www.telepermit.co.nz). Access Seekers must ensure PTC103 and PTC106 are complied with at all times.

[3] Decision No 679 (23 July 2009).

[4] From an Access Seeker's point of view, there are three installation options they can request from Chorus. The options are:

(a) **Connection only:** a service where Chorus will provide connection to the ETP with no site visit. A TelePermitted line filter (PTC 280-series) must be fitted on the network side of all POTS CPE (not the DSL modem). This includes any medical or security alarm systems and SKY Digital Decoders (which incorporate a dial-up modem) which are plugged into jack points.

(b) **Connection and wiring:** a service where Chorus will provide a connection and install a splitter. Chorus will provide premises wiring to a single jackpoint at the End User's premises or isolate the premises wiring from Chorus' Network. For UBA with POTS the Access Seeker must ensure that the connection and wiring option is followed by End Users in all premises where medical or security alarm systems are already connected to the line in 'Line Break-in Mode', or where more than 5 line filters would be required.

(c) **Connection and wiring with modem installation:** a service where Chorus will provide a connection and wiring in accordance with sub-clause (b) and install a service compatible modem provided by the Access Seeker from the Approved Modem List.

(Changes from: Decision No 679 (23 July 2009)).

16.2 Modem Installation[5]

16.2.1 Chorus will install a Telepermitted, service compatible modem ("**Modem**") on behalf of the Access Seeker in their End User's premises. The Access Seeker will ensure that, at the time the Chorus field force representative visits the End User premises, the End User has:

(a) a Modem available from the Approved Modem List; and

(b) a single desktop or laptop personal computer with the operating system required to support the Model e.g. not Local Area Network environments.

16.2.2 Subject to clause 16.2.1, Chorus will:

(a) connect the Modem to existing power outlet and computer;

(b) load the Modem driver software on the computer;

(c) enter the user ID and password supplied by the Access Seeker;

(d) set up the End User's email account, internet browser and wireless network (if applicable) as specified by the Access Seekers; and

(e) if the Modem does not connect Chorus will perform basic fault finding or diagnostic in conjunction with the Access Seeker's helpdesk.

16.2.3 The Modem installation service is only available when the connection and wiring service is also ordered. Charges for connection and wiring with modem installation are set out in the UBA Price List.

16.2.4 If the Access Seeker does not meet their obligations under clause 16.2.1, the Access Seeker will be charged an Abortive End User Site Visit fee as set out in the UBA Price List.

16.3 Approved Modem List[6]

16.3.1 Chorus will publish an Approved Modem List on a Chorus website accessible by the Access Seeker.

16.3.2 Changes to the Approved Modem List by either Chorus or Access Seekers will be made in accordance with section 9 of the General Terms.

16.3.3 Access Seekers wanting additional modems added to the Approved Modem List must supply Chorus with the following to allow field force training material to be developed:

(a) sample modem;

[5] Decision No 679 (23 July 2009).

[6] Decision No 679 (23 July 2009).

(b) modern installation and technical manuals (including email and internet browser settings);

(c) Access Seeker's helpdesk contact details; and

(d) Access Seeker's technical or operational specialists to assist with drafting of operational requirements.

16.3.4 Within 5 Working Days of receiving the information set out in clause 16.3.3, Chorus will notify the Access Seeker ("Notification Date") of the date when the modem will be added to the Approved Modem List, ("Expected Approval Date"). Chorus will provide the Access Seeker with written reasons explaining any delay in approving the modem if the Expected Approval Date is greater than 7 Working Days from the Notification Date under this clause 16.3.4.

16.3.5 Chorus will notify the Access Seeker when the modem is added to the Approved Modem List ("Approval Date") and the Access Seeker will be able to place orders for UBA variants supported by the Modem 30 Working Days from the Approval Date. Chorus requires this 30 Working Day period to complete dissemination of information and training material to Field Force personnel.

16.3.6 The addition of an Access Seeker Modem to the Approved Modem List requires the development of field force training material, and is therefore subject to a Charge. The Charge for additions to the Approved Modem List is set out in the UBA Price List.

17 Network Changes and Re-Mapping

17.1 Network Change Process

Notice of Network Change

17.1.1 The locations of Handover Points and Coverage Areas 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 by technology;

(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.

17.1.2 A list of current Coverage Areas and their associated Handover Points will be made available to Access Seekers via a secure web portal. Chorus may, from time to time, make changes to the existing Coverage Areas or Handover Points and/or introduce new Coverage Areas or Handover Points 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. Similarly, the data switch to which a particular DSLAM connects may change for the same reasons. Chorus will advise Access Seekers of these changes as set out below.

17.1.3 Subject to clause 17.1.4, Chorus will provide Access Seekers with 12 months' Notice (or earlier by agreement with affected Access Seekers) of the following network changes that have an effect on the Access Seeker's UBA Service:

(a) changes to Coverage Areas by deletion or boundary change or addition of new Coverage Areas; and

(b) changes to Handover Points by deletion or move or addition of new Handover Points.

17.1.4 However where the only change is an increase in geographical availability or coverage of the UBA Service, Chorus will not be required to provide 12 months Notice. Chorus will instead provide Notice of any increase in the area of geographical availability or coverage of the UBA Service as soon as reasonably practicable following an increase and will provide Notice to all Access Seekers at the same time.

Implementation

17.1.5 Chorus will consult with each Access Seeker affected by a network change as described in clause 17.1.3 and will develop an implementation plan for each affected Access Seeker.

17.2 Access Seeker Re-Mapping

Re-mapping

17.2.1 Where Access Seekers wish to establish a new Handover Link at a new Handover Point or otherwise re-map their nominated Handover Points for each Coverage Area they must advise their Service Delivery Managers. The Access Re-Mapping Fee set out in the UBA Price List will apply.

18 LAP Utilisation reporting

18.1 LAP Utilisation reporting

18.1.1 Within 10 Working Days following the end of each month Chorus must:

(a) determine the Peak Utilisation for that month on each LAP both for upstream and downstream traffic; and

(b) make available on a website accessible by the Access Seekers and the Commission a report showing, separately for upstream and downstream traffic:

(i) the number of LAPs in each Peak Utilisation band, as set out in Appendix L;

(ii) for each LAP where the Peak Utilisation as calculated at 18.1.1(a) exceeds 80% and for which Chorus has an internally approved upgrade plan:

1 Exchange/cabinet identifier and location for the LAP;

2 details of the proposed upgrade; and

3 estimated completion date of the upgrade, together with any commentary (if relevant).

(c) for each LAP where Peak Utilisation as calculated at 18.1.1(a) exceeds 80% and for which Chorus does not have an internally approved upgrade plan, provide a report to the Commission showing:

(i) Exchange/cabinet identifier and location for the LAP;

(ii) the peak utilisation on each LAP;

(iii) the number of times Peak Utilisation exceeded 80%; and

(iv) any relevant commentary.

APPENDIX A - GLOSSARY

Overview	The glossary contains terms that are used in this document and are not defined in the UBA General Terms.

Term	***Meaning***
ATM	Asynchronous Transfer Mode.
Automated Pre-qualification Order	is described in clause 8.2.
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.
Basic UBA	means the Basic UBA service or services of the UBA Service as described in the UBA Service Description.
BAU	means business as usual - the ongoing, every day operation of business, processes and systems.
Bulk Transfer	is described in clause 6.2.
Bulk Transfer Plan	is described in clause 19.14.4.
Business Hours	means 0800 to 1700 on any Working Day.
Change Plan Order	means any Order where the Access Seeker requests a change from Chorus' existing unbundled bitstream service or wholesale broadband service to the UBA Service or from one service of the UBA Service to another service of the UBA Service. It also includes changes to interleaving, changes between with POTS and without POTS, and changes of speed. In all cases the Access Seeker will stay the same.
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.
Coverage Area	means the geographic area serviced by a given Handover Point.
Coverage Region	means a group of Coverage Areas aggregated for forecasting purposes, a list of which is attached in Appendix I.
Customer Authorisation	means a valid authorisation for a Transfer Order by a customer or a customer's duly appointed agent that meets the requirements of the Customer Transfer Code.
Customer Transfer Code	means the Code for the Transfer of Telecommunications Services approved by the Commission on 12 October 2006 and/or endorsed by the TCF on 3 November 2006, as applicable, and any equivalent replacement Code or Codes.

Customer VLAN ID	this is the outer VLAN ID of a stacked VLAN pair of IDs. Each Enhanced UBA End User has a unique stacked VLAN ID per Handover Point.
DSLAM	means Digital Subscriber Line Access Multiplexer - 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.
Enhanced UBA	means the Enhanced UBA service or services of the UBA Service as described in the UBA Service Description.
Escalation Protocol	means the protocol set out in Appendix B.
Ethernet	Ethernet is a common communication protocol, defined in international standard IEEE 802.3, that is used to connect multiple devices on the same Layer 2 network.
Exception Day Zero	means the date on which the first individual Order is proposed to be submitted as part of the Exception to BAU Order.
Exception to BAU	is described in clause 6.3.
Exception to BAU Plan	means the plan described in clause 9.13.1.
Exception Forecast	is described in clause 6.4.1.
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.
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 D.
GigE	means Gigabit Ethernet.
Handover Connection	means the Chorus Owned Equipment and includes: • the port on the relevant data switch; • the optical fibre from the port to Chorus' OFDF; and • the OFDF.
Handover Fibre	means the Handover Fibre interconnected with the Handover Connection (and is supplied by either the Access Seeker or Chorus) that provides physical interconnection with the Access Seekers Network.
Handover Link	means the interconnected link comprising a Handover Fibre and a Handover Connection between the Handover Point and the Access Seeker's remotely located equipment, used for the purpose of handing over traffic for the UBA Service.
Handover Point	means Chorus' first data switch, or equivalent facility, located in the Coverage Area.
Handover Point ID	means a unique alphanumeric identifier assigned by Chorus to a Handover Point.
L2TP	Layer 2 Tunnel Protocol.
Move Address Order	means an Order where an End User requests the relocation of their Access Seeker Telecommunications services to another physical address.
New Connection Order	means an Order for a new UBA connection.
OFDF	means Chorus' optical fibre distribution frame.
Order	means any order for the UBA Service.
OSS	means Chorus' operational support systems.
PPP	means Point to Point Protocol.
Pre-qualification	is a service described in clause 8.1.1.
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 SLA.
Service Provider	means a provider of a Telecommunication service.
Service VLAN ID	This is the inner VLAN ID of a stacked VLAN pair of IDs. Each Enhanced UBA End User has a unique stacked VLAN ID per Handover Point.
SLA	means the UBA Service Level Terms set out as Schedule 3 of the UBA General Terms.
Special Manual Pre-qualification Investigation Order	is described in clause 8.3.
Stacked VLANs	Sometimes called 802.1QinQ, this technique allows for the insertion of two VLAN IDs in each Ethernet Frame. This extends the amount of virtual networks, and therefore End Users, a single Handover Link can support. Stacked VLANS have an Ethertype (ethernet frame type) of 8100. Stacked VLANs are vendor-specific and compatibility issues may need to be resolved prior to service commencing.
STM	means Synchronous Transfer Mode.
Technical Interface	means the technical interface specification set out in Appendix C.
Transfer Order	means an Order by the Access Seeker to transfer services submitted in accordance with this Manual.
VLAN	VLAN (Virtual Local Area Network) is a method of creating independent logical networks within a single physical network. In Enhanced UBA each End User is given a separate VLAN on a shared Handover Link to allow Access Seekers to uniquely send and receive traffic to that End User. The Ethernet frame includes 12 bits to allow up to 4094 separate VLANs on a single physical link.
VLAN ID	The VLAN ID is 12 bits, defined in IEEE 802.1Q, that represents a particular VLAN. This ID allows the ISP to determine which End User will receive a particular ethernet frame, and which End User sends a particular frame. Stacked VLANs is a vendor-specific feature that allows two VLAN IDs in each frame, the Service VLAN ID (s-vid) and the Customer VLAN ID (c-vid).
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). ***[Drafting note: to update with a more specific URL once it becomes available.]***
with POTS	means where there is a Telecom active analogue telephone service on the same copper pair as the UBA Service.
without POTS	means where there is not a Telecom active analogue telephone service on the same copper pair as the UBA Service.

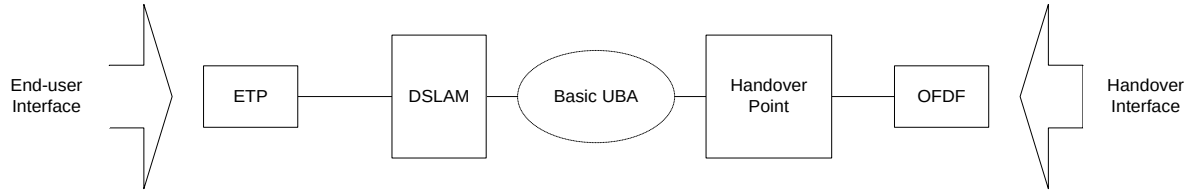
APPENDIX B - ESCALATION PROTOCOL

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, i.e. 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 cannot 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 C - TECHNICAL INTERFACE SPECIFICATION

Technical Interface Specification for Basic UBA

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



19 Basic UBA End User Interface

20 The End User interface requires the following protocol stack:

IP	MTU of 1500 bytes
PPP	PPPoA - RFC 2364 (PPP over AAL5) with VC multiplexed encapsulation Username in format of username@domain name. Note that this is only validated to the extent that it is in the correct format. PPP Compression (LCP PCOMP) : Off PPP Address & Control Field compression (LCP ACCOMP): Off Magic Number: Enabled Authentication Protocol: PAP Multilink PPP: Controlled by Access Seeker and LNS
ATM	ATM Cell VPI/VCI () settings: 0/100 VPI: ATM Virtual Path Indicator VCI: ATM Virtual Circuit Indicator
Physical	ADSL or ADSL2+ (refer to PTC 273: 2007) • ADSL conforming to ITU-T G.992.1 (G.dmt) • ADSL2+ conforming to G.992.5 Premises wiring is described in section 16.

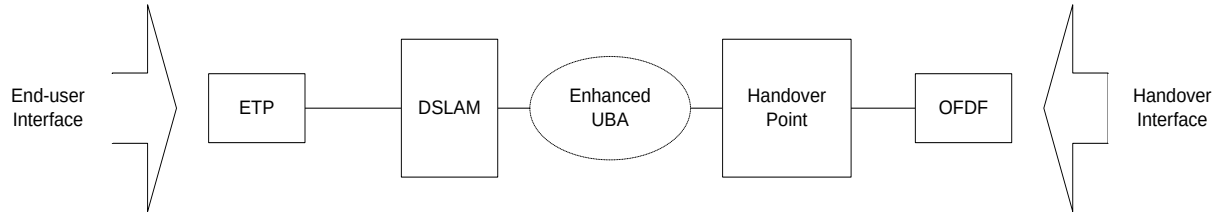
Basic UBA Handover Interface

The handover interface requires the following protocol stack:

IP	MTU of 1500 bytes
L2TP	• L2TP termination per End User • All End Users in a Coverage Area must be mapped to the same LNS • An LNS can support multiple Coverage Areas, limited by the number of End Users the LNS can support
IP	• MTU 1600 bytes • One public IP address per LNS • For ATM: One LNS per handover • For Ethernet: Multiple LNS per handover
Layer 2	ATM • Cell Ethernet • Jumbo Frames to support L2TP • One shared VLAN for all USAPs on the Handover Link
Physical	• ATM STM-1 • ATM STM-4 • GigE (See Appendix G)

Technical Interface Specification for Enhanced UBA

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



Enhanced UBA End User Interface

The End User interface requires the following protocol stack:

Ethernet	Ethernet will support a packet length (MTU) of 1600 bytes. Jumbo Frames are supported to allow Access Seekers to use PPPoE or similar protocols, but Access Seekers should not use packet sizes that will require fragmentation at the Handover Point. 802.1 p (Ethernet priority flags) settings: • Internet-class frames are 'Transmission Class 5' tagged in 802.1 p as: '0' • Voice-class frames are 'Transmission Class 2' tagged in 802.1 p as: '6'
ATM	RFC 2684 bridged Ethernet over vpi/vci x / xxx (to be advised following detailed design).
Physical	ADSL or ADSL2+ (refer to PTC 273: 2007) • ADSL conforming to ITU-T G.992.1 (G.dmt) • ADSL2+ conforming to G.992.5 Premises wiring is described in section 16.

Enhanced UBA Handover Interface

The End User interface requires the following protocol stack:

Ethernet	The maximum Ethernet (Layer 2) frame size accepted and transmitted will be 1600 bytes. End Users and Access Seekers should not use packet sizes that will require fragmentation at the Handover Point.
	
	802.1 QinQ settings (Virtual LAN IDs)
	
	• Each End User will be delivered over Ethernet with a unique Stacked VLAN ID of the following format:
	  ○ Inner tag (Ethertype = 8100) = Customer Virtual LAN ID (C-vid)
	  ○ Outer tag (Ethertype = 8100) = Service Virtual LAN ID (S-vid)
	• The C-vid/S-vid combination is unique to a handover
	• It may not be unique among multiple Handover Points
	
	802.1 p (Ethernet priority flags) settings:
	
	• Internet-class frames are 'Transmission Class 5' tagged in 802.1 p as: '0'.
	• Voice-class frames are 'Transmission Class 2' tagged in 802.1 p as: '6'.
	
	Note that 802.1QinQ is vendor specific and interoperability needs to be confirmed prior to service commissioning.

Physical	• GigE Interface. (See Appendix G)

Change Processes for Network Identifiers

V-LAN IDs:

In rare circumstances, the Stacked V-LAN ID may change during the life of the service. A process to notify Access Seekers of this change will be defined however the details of this process are subject to technical design and are to be advised.

APPENDIX D - FORECASTING SPREADSHEET

1.1 BAU Forecast

BAU Forecast submitted on	**[Enter submission date]**
BAU forecast for period starting	**[Enter Forecast Start Date]**
Product 1 [repeat forecast for each product]	**[Select one of EUBA with POTS, EUBA without POTS, BUBA with POTS, BUBA without POTS]**

		[Enter Month 1]					**[Enter Month 2]**					**[Enter Month 3]**					**[Enter Month 4]**				
Coverage Area		New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ
[Enter Area]		[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]
[Enter Area]		[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]
[Enter Area]		[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]
[Repeat for Area as required]		…		…	…		…		…	…		…		…	…		…		…	…	

Where:

[n1]	is the total number of New Connection Orders
[n1]	is the total number of Transfer Orders
[n3]	is the number of Move Address Orders
[n4]	is the number of Change Plan Orders
[n5]	is the number of Relinquishment Orders

Example Only

BAU Forecast submitted on	**30/04/2008**
BAU forecast for period starting	**Jun-08**
Product	**EUBA with POTS**

		Jun-08					**Jul-08**					**Aug-08**					**Sep-08**				
Coverage Area		New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ
Auckland Central		40	10	5	3	8	40	10	5	4	7	5	40	5	3	6	5	40	5	3	5
Wellington Central		45	5	5	3	6	45	5	5	5	5	5	45	5	3	4	5	45	5	3	3
Otago		15	20	0	3	4	15	20	0	6	3	0	15	0	3	2	0	15	0	3	1

1.1 BAU Forecast (continued)

[Enter Month 5]					[Enter Month 6]					[Enter Month 7]					[Enter Month 8]				
New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ
[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]
[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]
[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]
…		…	…		…		…	…		…		…	…		…		…	…	

Oct-08					Nov-08					Dec-08					Jan-09				
New & Tfr		Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ
5	40	5	3	4	5	40	5	3	3	40	10	5	3	8	40	10	5	3	8
5	45	5	3	2	5	45	5	3	1	45	5	5	3	6	45	5	5	3	6
0	15	0	3	0	0	15	0	3	-1	15	20	4	9	9	15	20	0	3	4

1.1 BAU Forecast (continued)

[Enter Month 9]					**[Enter Month 10]**					**[Enter Month 11]**					**[Enter Month 12]**				
New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ
[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]
[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]
[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]	[n1]	[n2]	[n3]	[n4]	[n5]
…		…	…		…		…	…		…		…	…		…		…	…	

Feb-09					**Mar-09**					**Apr-09**					**May-09**				
New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ	New	Transfer	Move Addr	Chg Plan	RQ
40	10	4	8	2	40	10	5	3	8	40	10	5	3	8	40	10	5	3	8
45	5	5	3	6	45	5	13	25	11	45	5	5	3	6	45	5	5	3	6
15	20	0	3	4	15	20	0	3	4	15	20	1	0	0	15	20	0	3	4

1.2 Exception Forecast - 3 months prior

BAU Exception Forecast 1 submitted on					**[Enter Forecast date, should be 3 months prior to the first day of the month of Exception Day zero]**											
BAU forecast for					**[Enter day and month of Exception Day Zero]**											
Product 1 [repeat forecast for each product]					**[Select one of EUBA with POTS, EUBA without POTS, BUBA with POTS, BUBA without POTS]**											
	Weekly Estimate for				**[Enter Month 1]**											
Week Starting	**[Enter Week Start Date]**				**[Enter Week Start Date]**				**[Enter Week Start Date]**				**[Enter Week Start Date]**			
Coverage Area	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish
[Enter Area]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]
[Enter Area]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]
[Enter Area]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]
[Repeat for Area as required]	…		…		…		…		…		…		…		…	
Where:																
[n1] is the number of New Connection Orders																
[n2] is the number of Transfer Orders																
[n3] is the total number of Change Plan Orders																
[n4] is the number of Relinquishment Orders																
Example Only																
BAU Exception Forecast 1 submitted on					**31/05/2008**											
BAU forecast for					**1-Sep-08**											
Product					**BUBA without POTS**											
	Weekly Estimate for				**Sep-08**											
Week Starting	**1/09/2008**				**8/09/2008**				**15/09/2008**				**22/09/2008**			
Coverage Area	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish
South Canterbury	200	1500	0	20	200	1500	0	20	200	1500	0	20	200	1500	0	20
Otago	100	43	0	10	100	43	0	10	100	43	0	10	100	43	0	10
Southland	50	46	0	10	50	46	0	10	50	46	0	10	50	46	0	10

1.3 Exception Forecast - 1 month prior

BAU Exception Forecast 2 submitted on					**[Enter Forecast date, should be 1 month prior to the first day of the month of Exception Day zero]**											
BAU forecast for					**[Enter day and month of Exception Day Zero]**											
Product 1 [repeat forecast for each product]					**[Select one of EUBA with POTS, EUBA without POTS, BUBA with POTS, BUBA without POTS]**											
	Daily Estimate for				**[Enter Month]**											
Week Starting	**[Enter Week Starting Date]**															
Date	[Enter day]				[Enter day]				[Enter day]				[Enter day]			
Coverage Area	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish
[Enter Area]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]
[Enter Area]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]
[Enter Area]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]	[n1]	[n2]	[n3]	[n4]
[Repeat for Area as required]				…	…			…	…			…	…			…
Where:																
[n1] is the number of New Connection Orders																
[n2] is the number of Transfer Orders																
[n3] is the total number of Change Plan Orders																
[n4] is the number of Relinquishment Orders																
Example Only																
BAU Exception Forecast 2 submitted on					**31/07/2008**											
BAU forecast for					**1-Sep-08**											
Product					**BUBA without POTS**											
	Daily Estimate for				**Sep-08**											
Week Starting	**1/09/2008**															
Date	1/09/2008				2/09/2008				3/09/2008				4/09/2008			
Coverage Area	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish	New	Transfer	Chg Plan	Relinquish
South Canterbury	60	100	3	0	60	100	3	0	75	198	3	0	75	198	3	0
Otago	5	20	4	0	5	20	4	0	6	20	4	0	6	20	4	0
Southland	10	150	4	0	10	150	4	0	11	150	4	0	11	150	4	0

1.3 Exception Forecast - 1 month prior (continued)

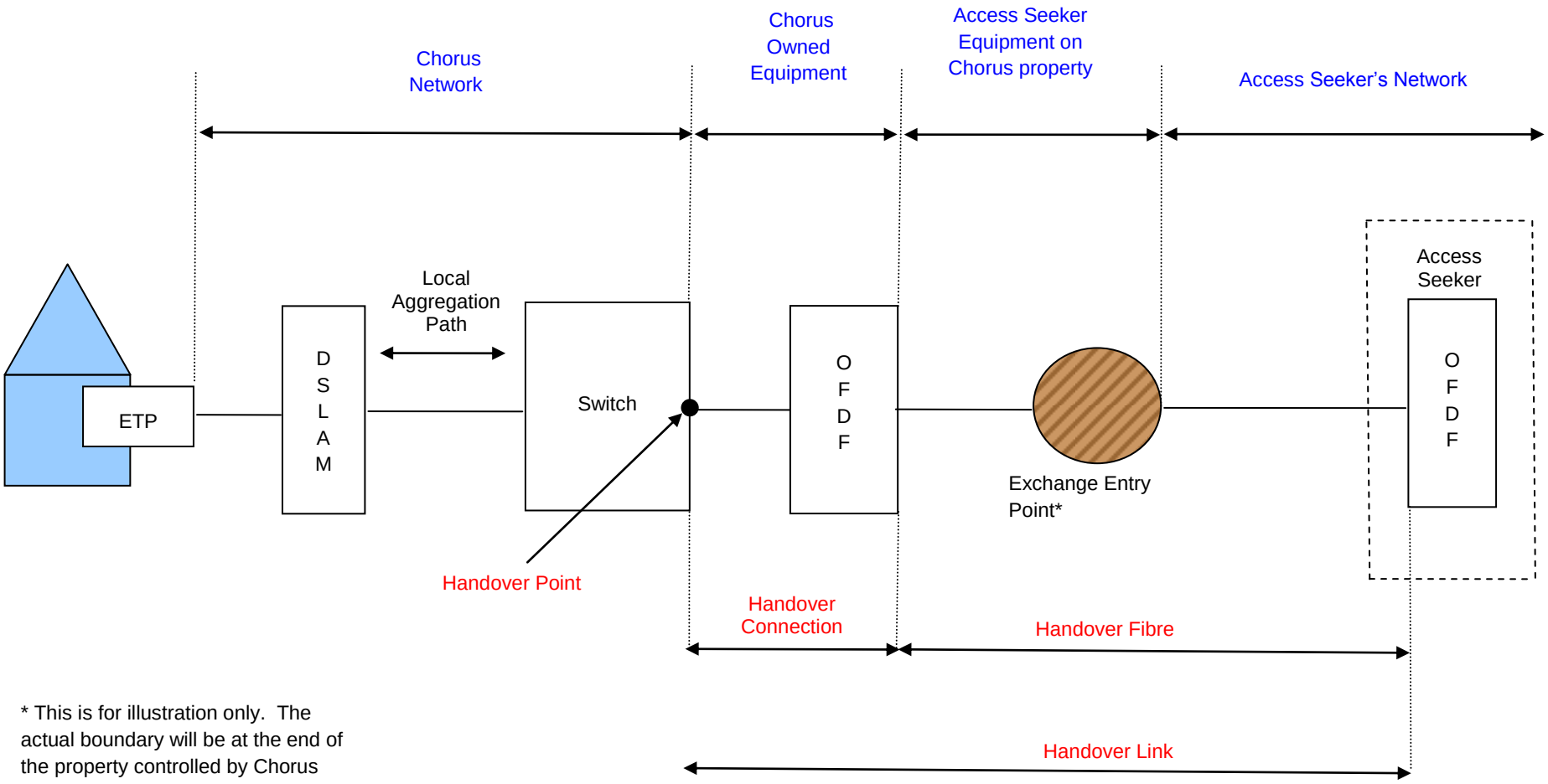
[Enter day]				[Enter day]	[Enter day]						
New	Transfer	Chg Plan	Relinquish	w/e	w/e						
[n1]	[n2]	[n3]	[n4]								
[n1]	[n2]	[n3]	[n4]			Repeat weekly blocks as required.					
[n1]	[n2]	[n3]	[n4]								
…			…								
5/09/2008				6/09/2008	7/09/2008						
New	Transfer	Chg Plan	Relinquish	w/e	w/e						
75	198	3	0								
6	20	4	0			Repeat weekly blocks as required.					
11	150	4	0								

APPENDIX E - REJECTION REASONS[7]

Reject Code	Description	Explanation
007	Services not covered.	The request is for the supply of a service that is not covered by existing contracts/Terms with the Service Provider/Access Seeker.
010	Wrong order type.	The request has been provided using the wrong form.
011	Open Service Order.	There is an existing open service order in relation to the relevant service/line/circuit.
014	Invalid Account Number.	The account number provided is incorrect or does not significantly match the information in available 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.
034	Customer Cancelled	Service request has been cancelled at the customer request
036	Requested service not present for deactivation to be disconnected,	Unable to process this request as service is not on the line.
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.
051	Service unsupportable	The line/connection/circuit/network identified is incapable of supporting the service requested.
099	Not otherwise specified	Rejection does not fit into specific codes above.

[7] Decision No 679 (23 July 2009).

APPENDIX F - DIAGRAM SHOWING HANDOVER LINK



* This is for illustration only. The actual boundary will be at the end of the property controlled by Chorus as part of the Exchange.

APPENDIX G - OPTICAL FIBRE SPECIFICATION

This appendix sets out the Optical Fibre Specification for Handover Fibres connected to Handover Connections.

Cable Specification

- For ATM STM-1 connection the Handover Fibre must comply with the following:
  - 1260-1360 nm single mode fibre
  - Spectral shift: 7.7 nm (maximum)
  - Average Receive Power: -28dBm to -8 dBm.
  - Coupled Transmit Power: 15 dBM to -8 dBm
  - Extinction Ratio: 8.2 dB (minimum)
  - Complies with ITU-T G.957

- For ATM STM-4 connection the Handover Fibre must comply with the following:
  - 1293-1334 nm single mode fibre
  - Spectral shift: 4.7 nm (maximum)
  - Average Receive Power: -28dBm to -8 dBm.
  - Coupled Transmit Power: 15 dBM to -8 dBm
  - Extinction Ratio: 8.2 dB (minimum)
  - Complies with ITU-T G.957, S-41, Bellcore GR=253-CORE, IR-1,.ANSI T1.105.06, IR-1

- For GigE interface connection the Handover Fibre must comply with the following:
  - For handover links < 15 km
    - 1000BASE-LX 1310nm over single mode fibre
  - For handover links < 40km
    - 1000BASE-ZX 1550nm over single mode fibre
  - For handover links > 40km
    - Handled on an exception basis

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 of 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 I – COVERAGE REGIONS

Coverage Area	Coverage area name	Handover point	Indicative handover point	Coverage Region
1	Northland	Airedale St 2	Whangarei	Northland
2	North Auckland	Mayoral Drive 1	Mayoral Drive	Auckland
3	East Coast Bays	Glenfield 1	Glenfield	Auckland
4	North Shore	Mayoral Drive 2	Mayoral Drive	Auckland
5	Hobsonville	Mayoral Drive 3	Mayoral Drive	Auckland
6	West Auckland	Mayoral Drive 4	Mayoral Drive	Auckland
7	Hillsborough	Papatoetoe 3	Papatoetoe	Auckland
8	Grey Lynn	Mount Albert 1	Mayoral Drive	Auckland
9	Auckland Central	Airedale St 1	Mayoral Drive	Auckland
10	Grafton	Airedale St 3	Mayoral Drive	Auckland
11	Tamaki	Ellerslie 1	Papatoetoe	Auckland
12	South Auckland	Papatoetoe 1	Papatoetoe	Auckland
13	Eastern Suburbs	Otahuhu 1	Papatoetoe	Auckland
14	Counties	Papatoetoe	Papatoetoe	Auckland
15	North Waikato/Coromande	Hamilton 1	Hamilton	Waikato
16	Hamilton	Hamilton 2	Hamilton	Waikato
17	Tauranga	Tauranga 1	Tauranga	Waikato
18	Bay of Plenty / East Coast	Rotorua 1	Rotorua	East Coast
19	Central	Palmerston North 2	Palmerston North	Western North Island
20	Taranaki	New Plymouth 1	New Plymouth	Western North Island
21	Hawkes Bay	Napier 1	Napier	East North Island
22	Manawatu	Palmerston North 1	Palmerston North	East North Island
23	Hutt/Wairarapa	Lower Hutt 1	Porirua	East North Island
24	Wellington Suburbs	Porirua 1	Porirua	Western North Island
25	Wellington Central	Wellington 1	Wellington	Western North Island
26	Nelson	Nelson 1	Nelson	Northern South Island
27	Marlborough/North Canterl	Courtney Place	Wellington	Northern South Island
28	West Coast	Wellington 2	Wellington	Canterbury
29	Christchurch North	Christchurch 3	Christchurch	Canterbury
30	Banks	Riccarton 1	Riccarton	Canterbury
31	Christchurch Central	Christchurch 1	Christchurch	Canterbury
32	South Canterbury	Christchurch 2	Christchurch	Canterbury
33	Otago	Dunedin 2	Dunedin	Otago / Southland
34	Southland	Dunedin 1	Dunedin	Otago / Southland

APPENDIX J – FORECASTING MODEL

UBA BAU Forecasting Model

	Month 12 to 5	Month 4	Month 3	Month 2 to 1	Order Month
Accuracy to previous month	+/- 20%	+/- 15%	+/- 10%	+/- 10%	
Granularity - geographic	National	National	Coverage Region	Coverage Region	
Granularity - temporal	Month	Month	Month	Week	
Accuracy to week in previous month				+ 30%	

APPENDIX K – FORECASTING CALCULATION & WORKED EXAMPLES

$T_i = [X_i - Z_i]$

$AT = \sum [T_i]$

$P = \sum [T_i]$, only where T_i and AT share the same sign (+ or -)

where:

X_i	is the number of All Orders that the Access Seeker could have made in the Order Month for a Coverage Region within the tolerance level.
Z_i	is the actual number of All Orders made by the Access Seeker for that Coverage Region in the Order Month.
T_i	is the individual impact of an Access Seekers forecast in the Order Month for a Coverage Region i.e. over or under the tolerance level. *NB. If Z_i is within the tolerance level, then T_i is deemed to equal 0 i.e. has no impact on Chorus' cost or Service Levels.*
AT	is the sum of all T values, representing the aggregate net impact of Access Seeker forecasting on Chorus i.e. both under and over forecasts.
P	is the sum of T_i (calculated as above) that share the same sign as AT i.e. > 0 or < 0 e.g. if AT shows there has been over forecasting at an aggregate Coverage Region level, P is the sum of Access Seeker's who have over forecast in that Coverage Region.
i	(subscript) denotes Access Seeker 1 to n.

Over forecast if AT > 0:

Access Seekers who have T values > 0, pay a proportion of Chorus' reasonable cost equal to:

$[T_i / P]$

Individual Access Seeker monetary penalty is equal to:

[Cost incurred by Chorus relying on over forecast in Coverage Region] x $[T_i / P]$

Under forecast if AT < 0:

AT represents the number of Orders that will not receive SLAs in that Order Month for a Coverage Region. These Orders are distributed across Access Seekers with T values < 0 as a proportion equal to:

$[T_i / P]$

Individual Access Seeker Service Level penalty is equal to:

$AT \times [T_i / P]$

The assessment of under forecasting (in this manner) at an aggregate Coverage Region level can lead to a Service Level benefit (B), created through the over forecasts of other Access Seekers, equal to:

$B_i = T_i – AT \times [T_i / P]$, where T_i values < 0

each week of the Order Month in which the weekly tolerance level is exceeded for a Coverage Region (the first such week of the Order Month is, in clause 6.6.6, the "relevant week"), the number of Orders to which no Service Level would apply ("E") is calculated as follows:

$E_i = [S_i - Y_i]$

where:

S_i is the number of All Orders that the Access Seeker could have made in the Order Month for a Coverage Region within the tolerance level allocated to the relevant week.

Y_i is the actual number of All Orders by the Access Seeker for that Coverage Region in the Order Month allocated to the relevant week.

E_i is the aggregate number of Orders by the Access Seeker to which Service Levels will not apply in the relevant week,

but where B_i is > 0:

A Service Level credit is applied to the number of Orders in the relevant week of the Order Month for that Coverage Region to which no Service Levels under the SLA will apply as follows:

$[E_i + B_i]$

If B_i (credit) is greater than E_i (Orders with no Service Level), the Access Seeker may apply that "credit" difference to the week following the relevant week, provided the following week is part of the same Order Month.

Over forecast example:

AS 1														AS 1
		Forecast												X
National	**Month**	12	11	10	9	8	7	6	5	4				Z
	Tolerance	20%	20%	20%	20%	20%	20%	20%	20%	15%				T
	Geographic	National	National	National	National	National	National	National	National	National				AT
	Actual	200	221	230	220	260	400	180	280	230				P
	Adjusted	200	221	230	220	260	312	250	280	238				

		Forecast					Aggregation			
Coverage Region	**Month**	3	2	1	Order		+/- Tolerance		Prop	
	Tolerance	10%	10%	10%	10%	**AS 1**	**8**	**8**	**24%**	
	Geographic	Region	Region	Region	Region	AS 2	25	25	76%	
	Actual	123	120	120	100	AS 3	0	0	0%	
	Adjusted	123	120	120	108	AS 4	-20	0	0%	
					8	AS 5	-5	0	0%	
						Aggregate	**8**	**33**	**100%**	
							NB. A negative (-) denotes an under-forecast			

		Forecast											
Coverage Region	**Week**	2.1	2.2	2.3	2.4	1.1	1.2	1.3	1.4	Order.1	Order.2	Order.3	Order.4
	Tolerance					30%	30%	30%	30%	30%	30%	30%	30%
	Geographic	Region	Region	Region	Region	Region	Region	Region	Region	Region	Region	Region	Region
	Actual	30	30	30	30	40	40	20	20	30	40	30	0
	Adjusted	30	30	30	30	39	39	20	22	30	40	26	4

In this example, Access Seeker 1 has placed an Order for 100 against a forecast of 120 in Month 1, which is an over forecast. AS 1 will pay a proportion of Chorus' reasonable cost (based on AT) equal to 24%.

NB. It has been assumed that AS1 elected to reallocate (2) Orders from 1.1 and 1.2 to 1.4, in accordance with clause 6.7.4.e (ii). There is no lower tolerance level for weekly allocation of Orders; hence AS1 was able to reduce Orders from 1.4 to Order.4 without penalty.

Under Forecast example:

AS 1														AS 1
		Forecast												X
National	**Month**	12	11	10	9	8	7	6	5	4				Z
	Tolerance	20%	20%	20%	20%	20%	20%	20%	20%	15%				T
	Geographic	National	National	National	National	National	National	National	National	National				AT
	Actual	200	221	230	220	260	400	180	280	230				P
	Adjusted	200	221	230	220	260	312	250	280	238				B
														E
														S
														Y

		Forecast					Aggregation					
Coverage Region	**Month**	3	2	1	Order		+/- Tolerance		Prop	Penalty	Benefit
	Tolerance	10%	10%	10%	10%	**AS 1**	**-8**	**-8**	**24%**	- **2**	**6**
	Geographic	Region	Region	Region	Region	AS 2	25	0	0%		
	Actual	123	120	120	140	AS 3	0	0	0%		
	Adjusted	123	120	120	132	AS 4	-20	-20	61%	- 5	15
					-8	AS 5	-5	-5	15%	- 1	4
						Aggregate	**-8**	**-33**	**100%**	- **8**	**25**
							NB. A negative (-) denotes an under-forecast				

		Forecast											
Coverage Region	**Week**	2.1	2.2	2.3	2.4	1.1	1.2	1.3	1.4	Order.1	Order.2	Order.3	Order.4
	Tolerance					30%	30%	30%	30%	30%	30%	30%	30%
	Geographic	Region	Region	Region	Region	Region	Region	Region	Region	Region	Region	Region	Region
	Actual	30	30	30	30	40	60	20	0	50	60	30	0
	Adjusted	30	30	30	30	39	39	20	22	50	51	26	13
										0	-9	-4	0
										0	-3	-4	0

In this example, Access Seeker 1 has placed an Order for 140 against a forecast of 120 in Month 1, which is an under forecast. As a result of aggregating all Access Seeker Orders (in the Coverage Region), AS 1 will receive a Service Level benefit on 6 Orders. The benefit is applied at the week level, where AS 1 has exceeded the tolerance level in Week 2 i.e. [-9 + 6] = -3.

Where an Access Seeker is within the monthly tolerance level i.e. where T = 0, no aggregate benefit can accrue, and there is therefore no Service Level relief for Access Seekers that exceed only weekly tolerance levels.

NB. It has been assumed that AS1 elected to reallocate (2) Orders from 1.1 and 1.2 to 1.4, in accordance with clause 6.7.4.e (ii). There is no lower tolerance level for weekly allocation of Orders; hence AS1 was able to reduce Orders from 1.4 to Order.4 without penalty.

APPENDIX L – CHORUS' LAP UTILISATION DASHBOARD

Month [XXX] of Year [XXX]			
Peak Utilisation band (downstream traffic)	LAP other than Ethernet fibre-based LAP	Ethernet fibre-based LAP	Total
0-25%			
25-35%			
35-45%			
45-55%			
55-65%			
65-75%			
75-80%			
80-85%			
85-90%			
90-95%			
95-100%			

Month [XXX] of Year [XXX]			
Peak Utilisation band (upstream traffic)	LAP other than Ethernet fibre-based LAP	Ethernet fibre-based LAP	Total
0-25%			
25-35%			
35-45%			
45-55%			
55-65%			

65-75%			
75-80%			
80-85%			
85-90%			
90-95%			
95-100%			