COMMERCE COMMISSION

CLARIFICATION OF THE STANDARD TERMS DETERMINATIONS ON TELECOM'S UNBUNDLED COPPER LOCAL LOOP NETWORK BACKHAUL (TELEPHONE EXCHANGE TO INTERCONNECTION POINT) SERVICE AND UNBUNDLED BITSTREAM ACCESS BACKHAUL SERVICE

DECISION NO. 665

Clarification under section 58 of the Telecommunications Act 2001 (the **'Act'**) of Decisions 626 and 627

The Commission:	Paula Rebstock
Summary of Application and Initiation:	The Commission received an application for clarification from Telecom to Decision 626 under section 58 of the Act and has made further amendments of its own initiative to that Decision and to Decision 627.
Date of clarification:	5 March 2009

Background

1. The Commerce Commission (the '**Commission**') is a body corporate established under the Commerce Act 1986 having its head office at Wellington. The Commission has various functions and powers under the Telecommunications Act 2001 (the '**Act**').

2. On 27 June 2008, the Commission issued standard terms determinations ('**STD**') under section 30M of the Act in respect of the designated access services of Telecom's unbundled copper local loop network backhaul (telephone exchange to interconnect point) ('**UCLL Backhaul**') and Telecom's unbundled bitstream access service backhaul ('**UBA Backhaul**').

3. On 11 September 2008 Telecom applied under section 58 of the Act for the Commission to clarify the UCLL Backhaul STD.[1]

4. On 24 September 2008 the Commission invited submissions from interested parties, including the Telecommunications Carriers' Forum ('**TCF**'), on Telecom's requested clarification of the UCLL Backhaul STD.

5. On 10 October 2008, the Commission received submissions from Vodafone, Orcon and the TCF.

6. The TCF submission in general supported the proposed clarification and noted that separate submissions were being made by Vodafone and Orcon.

7. Vodafone, while generally supporting the proposed clarification, submitted that:

   - clarification item 1 (Aggregation) in Schedule 1 proposed by Chorus – rather than deleting example 2 from the application of charges, instead the example should be clarified;
   - clarification item 3 (Capital carrying cost formula) in Schedule 1 proposed by Chorus – consistency of the capital carrying cost formulae across all regulated services is important, but should be dealt with through a review of all STDs; and
   - clarification item 9 (Jitter) in Schedule 1 proposed by Chorus – an explanation from Chorus as to why the jitter on a Primary Link should increase from 1 msec to 3 msec was needed.

8. Orcon also submitted, in relation to clarification item 1 (Aggregation) in Schedule 1 proposed by Chorus, that example 2 should not be deleted, rather it should be clarified.

9. In light of Vodafone's and Orcon's submissions regarding clarification item 1 (Aggregation) in Schedule 1 proposed by Chorus, the Commission prepared revised examples that would replace examples 2 and 3, rather than deleting example 2.

10. On 17 December 2008, the Commission released these revised examples and invited submissions from interested parties, including the TCF, on the revised examples.

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[1] A copy of the Application is available on the Commission's website at:
http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/StandardTermsDeterminations/Unbundle dLocalLoopBackhaulService/DecisionsList.aspx.

11. On 5 February 2009, the Commission received a submission from the TCF, advising that Orcon, Vodafone, Telecom and TelstraClear agreed with the Commission's revised examples.

Jurisdiction

12. Under section 58 of the Act the Commission may amend a determination for the purpose of making a clarification if:

    - at any time the Commission, on its own initiative or on the application of any person, considers that a determination requires clarification; and
    - no appeal is pending in respect of the determination.

13. Under section 19(c) of the Act, the Commission is required to make a decision that best gives, or is likely to best give, effect to the purpose set out in section 18 of the Act.

Analysis

14. The Commission has considered the original request for clarification made by Telecom's business unit known as Chorus under section 58, the subsequent submission received from the TCF, Vodafone and Orcon, including submissions in relation to the Commission's revised examples, the wording of the relevant standard terms determinations, and the purpose set out in section 18 of the Act. The Commission has also considered whether any consequential changes need to be made as a result of Telecom's request for clarification.

15. The Commission's analysis is that clarification of items 1 (Aggregation), 4 (Standard lead times for Handover Fibre), and 8 (Latency) in Schedule 1 proposed by Chorus are required and are likely to best give effect to the purpose set out in section 18. The Commission considers that these clarifications will enhance the delivery of the service in the backhaul markets in New Zealand.

16. The Commission's analysis, taking into account the purpose set out in section 18, in relation to:

    - clarification item 1 (Aggregation) in Schedule 1 proposed by Chorus, is that the clarifications in the Commission's revised examples in Annexes One and Two to Schedule 1 of this Clarification decision better reflect the manner in which both the regulated Backhaul Service and commercial backhaul services can be purchased, as well as the manner in which they can be combined;
    - clarification item 2 (Pricing) in Schedule 1 proposed by Chorus, is that the clarification Chorus proposed is appropriate with modifications so that amended clause 2.2.3(b) of the UCLL Backhaul Price List would read as follows "where an Access Seeker has more than one link ending at an ASNAPOI, a Two Ends connection charge is payable by the Access Seeker for each Link";
    - clarification item 3 (Capital carrying cost formula) in Schedule 1 proposed by Chorus, is that the clarified formula should be revised to be the same as the formula in clause 7.4.7 of the draft Sub-loop Backhaul Operations Manual, in order to ensure consistency across STDs. The Commission considers that this change to ensure consistency is appropriate at this time, rather than being deferred to the review of all STDs, as proposed by Vodafone;

- clarification item 7 (UCLL Backhaul Soft Launch) in Schedule 1 proposed by Chorus, is that the purpose of the clarification Chorus proposed is appropriate, but that this clarification would better be given effect by introducing the concept of the "Soft Launch Initiation Day" as the starting point for the relevant timeframes that are dependent on an Access Seeker having requested the UCLL Backhaul Service. The Commission has made a series of amendments to the UCLL Backhaul Implementation Plan to give effect to the substance of the clarification requested by Chorus. These changes are illustrated in Annex Three to Schedule 1 of this Clarification decision; and

- clarification item 9 (Jitter) in Schedule 1 proposed by Chorus, is that the clarification Chorus proposed is appropriate with a modification so that the first paragraph reads "For a link that comprises a Primary Link only: <3msec". The Commission notes that the same change has been made to the UBA Backhaul STD and considers that this clarification is appropriate to ensure consistency with the UBA Backhaul STD.

17. The Commission's analysis is that the clarifications of the following matters are not required under section 58 of the Act, for the following reasons:

- clarification item 6 (definitions of OFM and OO&T) in Schedule 1 proposed by Chorus is not required, as the current wording is clear. References to these Telecom systems include any replacement from time to time.

- clarification item 10 (quotes) in Schedule 1 proposed by Chorus is not required, as the UCLL Backhaul STD Price List includes a provision for a quote to be requested by Access Seekers at clause 2.4. This is a common clause for all STDs in relation to prices that have been determined as Price on Application ('**POA**'). The proposed amendment reflects provisions for quotes in the UCLL Co-location STD and draft Sub-loop Co-location Operations Manual, where the nature of the quote is substantially different, and will contain a substantial amount of work to determine matters relating to an Access Seeker's Footprint or Rackprint, compared to POA items, where there should be a relatively simple calculation of the likely cost based on time and materials.

18. The Commission's analysis is that a consequential change to the UBA Backhaul STD is appropriate, in order to maintain consistency between the UCLL Backhaul STD and the UBA Backhaul STD. The Commission's view is that the change to the capital carrying cost formula in clarification item 3 (Capital carrying cost formula) in Schedule 1 proposed by Chorus, as amended by the Commission and reflected in Schedule 1, should also be made to the UBA Backhaul STD.

19. Chorus also requested, in item 5 (review of competition assessment), that the Commission clarify the process that will be followed for reviews, under section 30R of the Act, of the competition assessment in the UCLL Backhaul STD (discussed in paragraphs 203 to 208 of the UCLL Backhaul STD Decision Document). The Commission has progressed the section 30R review separately, including consulting on the process the Commission is following for section 30R reviews, and clarification of this matter is no longer required.

Decision

20. The Commission considers that the clauses of the UCLL Backhaul STD and the UBA Backhaul STD set out in column 1 of the attached Schedule 1 (**'References'**) require clarification under section 58 of the Act. Further, it notes that no appeal is pending in respect of the determination.

21. The Commission clarifies the References by making the amendments identified in column 2 of the attached Schedule 1 (**'Amendments'**). The reasons for the Commission's clarifications are set out in this decision and in column 3 of the attached Schedule 1.

22. The Commission considers that the clarifications set out in Schedule 1 are likely to best give effect to the purpose set out in section 18 of the Act. In terms of section 18(2), the clarifications will promote efficient delivery of the UCLL Backhaul Service and the UBA Backhaul Service.

DATED at Wellington this 5th day of March 2008

Paula Rebstock
Chair
Commerce Commission

Schedule 1

Reference	Amendment	Reason
Changes to UCLL Backhaul STD Operations Manual (Schedule 4 of STD) and UBA Backhaul STD Operations Manual (Schedule 4 of STD)		
Appendix A – Glossary Capital carrying cost formula	**Delete:** $r \times K_0 + (K_0 - K_1)$ Where: r is the weighted average cost of capital over the time period when the equipment is held in inventory. For example, where there is an annual weighted average cost of capital of R (Commission benchmark of 9.5%), and the equipment is held in inventory for t months, r will be estimated using $r = (1 + R)t/12 - 1$ K_0 is the actual purchase cost of the capital equipment K_1 is the cost of purchasing new equipment at the completion of the period where the asset is in inventory. **Replace with:** $CCC = r.K_0 + (K_0 - K_t)$ Where: CCC is the capital carrying cost K_0 is the cost of the equipment at the order date (time = 0) K_t is the cost of the equipment at the redeployment date (time = t) r is the pre-tax WACC for the period of time t, and $= [1 + [R/(1 - T)]]^{t/12} - 1$ Where: t is the time in months between order and redeployment R is the post-tax WACC (Commission benchmark of 9.5%) T is the company tax rate (currently 30%)	The capital carrying cost formula is clarified to properly account for taxation. The clarified formula has been revised to be the same as the formula in clause 7.4.7 of the Draft Sub-loop Backhaul Operations Manual, in order to ensure consistency across STDs.
Changes to UCLL Backhaul STD Decision 626		

Reference	Amendment	Reason
Appendix I: Application of Charges	**Add, in Example 1, to end of first sentence in first paragraph under heading "Access Seeker 1":** "and doesn't require access to links at Local Exchange B" **Delete Examples 2 and 3, and replace with Examples 2, 3 and 4 in the form attached as Annex One to this Schedule.**	Addition clarifies how Backhaul Service is configured for combination of links that pass through an Exchange where the Access Seeker does not have a point of presence. New examples clarify that aggregation of the regulated UCLL Backhaul service is not possible and that the regulated UCLL Backhaul Service is an end-to-end service (consistent with paragraphs 356 to 360 of the Decision Report). New examples also show how the regulated Backhaul Service and commercial backhaul services can be combined or contrasted.
Changes to UCLL Backhaul STD – Schedule 1, Service Description		
Appendix B – Specification for the UCLL Backhaul Service: Latency	**Delete:** "For a link that comprises a Primary Link only or a Secondary Link only: < 5msec For a link the comprises a Primary Link and a Secondary Link: <25msec" **Replace with:** "For a Link that comprises a Primary Link only: < 5msec For a Link that comprise a Primary Link and a Secondary Link, or a Secondary Link only: < 25msec"	This change clarifies that the Latency standard for a Secondary Link only should be < 25msec. The same change has been made to the UBA Backhaul STD and this clarification is appropriate to ensure consistency with the UBA Backhaul STD.
Appendix B – Specification for the UCLL Backhaul Service: Jitter	**Delete:** "For a Link that comprises a Primary Link only or a Secondary Link only: < 1msec For a Link that comprises a Primary Link and a Secondary Link: < 2msec" **Replace with:** "For a Link that comprises a Primary Link only: < 3msec For a Link that comprises a Primary Link and a Secondary Link, or a Secondary Link only: <	This change clarifies that: • the Jitter standard for a Primary Link only should be < 3msec; and • the Jitter standard for a Secondary Link only should be the same as for a Primary Link and a Secondary Link, and that this should be < 7msec.

Reference	Amendment	Reason
	7msec"	The same change has been made to the UBA Backhaul STD and this clarification is appropriate to ensure consistency with the UBA Backhaul STD.
Changes to UCLL Backhaul STD – Schedule 2 Price List		
Clause 2.2.2	**Delete last sentence:** "In contrast, service component 1.2 applies where the Access Seeker requires a new UCLL Backhaul connection for One End." **Replace with:** "In contrast, service component 1.2 applies where the Access Seeker requires a rearrangement involving a new UCLL Backhaul connection for One End of a Link."	This change clarifies that a single ended link charge will only apply where the Access Seeker requires a rearrangement involving One End of a UCLL Backhaul Link.
Clause 2.2.3	**Delete clause 2.2.3(b):** "(b) a single connection charge for the ASNAPOI End is payable by the Access Seeker regardless of how many Links the Access Seeker has ending at that ASNAPOI; and" **Replace with:** "(b) where an Access Seeker has more than one link ending at an ASNAPOI, a Two Ends connection charge is payable by the Access Seeker for each Link; and" **Delete from clause 2.2.3(c):** "Example 3" **Replace with:** "Example 4"	This change clarifies that the UCLL Backhaul service is an end-to-end service, and as such Two Ends are needed for all connections. The only situation where a One End connection charge is technically possible is where the Access Seeker requires a rearrangement involving One End of a UCLL Backhaul Link.
Appendix B – Application of UCLL Backhaul connection charges and monthly rental charges	**Add, in Example 1, to end of first sentence in first paragraph under heading "Access Seeker 1":** "and doesn't require access to links at Local Exchange B" **Delete Examples 2 and 3, and replace with Examples 2, 3 and 4 in the form attached as Annex Two to this Schedule.**	Addition clarifies how Backhaul Service is configured for combination of links that pass through an Exchange where the Access Seeker does not have a point of presence. New examples clarify that aggregation of the regulated UCLL Backhaul service is not possible and that the regulated UCLL

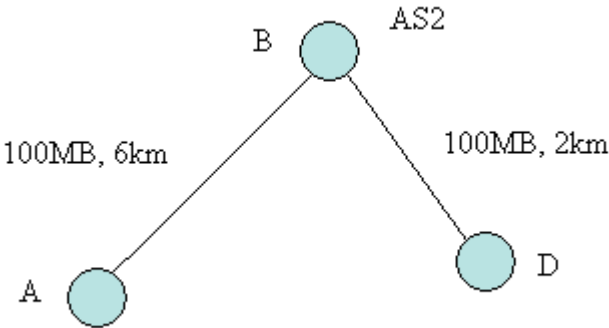| Reference	Amendment	Reason
		Backhaul Service is an end-to-end service (consistent with paragraphs 356 to 360 of the Decision Report). New examples also show how the regulated Backhaul Service and commercial backhaul services can be combined or contrasted.
Changes to UCLL Backhaul STD – Schedule 3 Service Level Terms		
Appendix 4	**Delete the following row:** <table><tr><td>Handover Fibre Order (Equipment available) Backhaul Connection order (Equipment Available) Speed Change Order (where Truck Roll required and equipment available)</td><td>21 Working Days</td></tr></table> **Replace with:** <table><tr><td>Handover Fibre Order (Equipment available) Backhaul Connection order (Equipment Available) Speed Change Order (where Truck Roll required and equipment available)</td><td>21 Working Days Where the Access Seeker provides the Handover Fibre or Backhaul Fibre (as appropriate), the 21 Working Days will not include the Working Days between the Working Day on which Telecom requests the Handover Fibre or Backhaul Fibre from the Access Seeker and the Working Day on which the Access Seeker provides the Handover Fibre or Backhaul Fibre to Telecom.</td></tr></table>	This change clarifies that the "clock stops" on the Standard Lead-Time of 21 days when Telecom requests in writing (by email) the Handover Fibre or Backhaul Connection from the Access Seeker (if not already provided) and restarts again when the Handover Fibre or Backhaul Connection is received by Telecom.
Changes to UCLL Backhaul Implementation Plan		
Clause 1.8	**Delete:** "1.8 The timelines under the UCLL Backhaul Implementation Plan are measured as Working	This clarification reflects that no Access Seekers had sought to take up the UCLL Backhaul Service by the date that the Soft

Reference	Amendment	Reason
	Days after Day Zero. For instance, +10 Working Days means 10 Working Days after Day Zero." **Replace with:** "1.8 The timelines under the UCLL Backhaul Implementation Plan are measured either: 1.8.1 as Working Days after Day Zero. For instance, Day Zero +10 Working Days means 10 Working Days after Day Zero; or 1.8.2 as Working Days after the Soft Launch Initiation Day. For instance, Soft Launch Initiation Day +10 Working Days means 10 Working Days after the Soft Launch Initiation Day."	Launch was due to commence. Accordingly, for all matters that require an Access Seeker to participate in a Soft Launch, the concept of Soft Launch Initiation Day has been used as the starting point for the relevant timeframe.
Clause 3.1	**Delete:** "3.10" **Replace with:** "3.13" **Delete:** "100 Working Days after Day Zero" **Replace with:** "Soft Launch Initiation Day + 70 Working Days"	See above at clause 1.8.
Clause 3.8	**Delete:** "3.8 To participate in the Soft Launch, Access Seekers must place valid New Connection Orders in accordance with the Soft Launch plan by +40 Working Days. Telecom must make the UCLL Backhaul Service available for the purposes of the Soft Launch by +50 Working Days." **Replace with:** "3.8 To initiate the Soft Launch, an Access Seeker must place a valid New Connection Order in accordance with the Soft Launch plan. 3.9 Telecom must advise the Commission, and all persons who are Access Seekers in relation to the UCLL Service, that the first valid New Connection Order has been placed in accordance with Soft Launch plan by Soft Launch Initiation Day +5 Working Days. 3.10 Any other Access Seeker that wishes to participate in the Soft Launch, once initiated, must place valid New Connection Orders in accordance with the Soft Launch plan by Soft Launch	See above at clause 1.8.

Reference	Amendment	Reason
	Initiation Day +10 Working Days. 3.11 Telecom must make the UCLL Backhaul Service available for the purposes of the Soft Launch by Soft Launch Initiation Day +20 Working Days." **And consequentially renumber remaining sub-clauses in clause 3.**	
Clause 3.13	**Delete:** clause 3.13 (originally numbered clause 3.10) **Replace with:** clause 3.13 in the form attached as Annex Three to this Schedule.	See above at clause 1.8.
Clause 4.2	**Delete from clause 4.2.1:** "+50" **Replace with:** "Day Zero + 50" **Delete from clause 4.2.2:** "+80" **Replace with:** "Soft Launch Initiation Day +50" **Delete from clause 4.2.4:** "+100" **Replace with:** "Soft Launch Initiation Day +70"	See above at clause 1.8.
Clause 4.3	**Delete from clause 4.3.1:** "+60" **Replace with:** "Soft Launch Initiation Day +30" **Delete from clause 4.3.2:**	See above at clause 1.8.

Reference	Amendment	Reason
	"+90" **Replace with:** "Soft Launch Initiation Day +60" **Delete from clause 4.3.3:** "+115" **Replace with:** "Soft Launch Initiation Day +85"	
Clause 5.1.1	**Delete:** "+100" **Replace with:** "Soft Launch Initiation Day +70"	See above at clause 1.8.
Clause 5.5.3	**Delete:** "have placed a valid New Connection Order in accordance with the Soft Launch plan by +40 Working Days" **Replace with:** "be the Access Seeker who initiates the Soft Launch by placing the first valid New Connection Order in accordance with the Soft Launch plan, or be an Access Seeker who places a valid New Connection Order in accordance with the Soft Launch Plan by Soft Launch Initiation Day +10 Working Days."	See above at clause 1.8.
Appendix A - Glossary	**Insert the following definition after the definition of "soft launch":** "**Soft Launch Initiation Day**" means the first Working Day after the Soft Launch is initiated by an Access Seeker placing the first New Connection Order under clause 3.8 in accordance with the Soft Launch plan."	See above at clause 1.8.

Annex One: Revised Examples 2, 3 and 4 for APPENDIX I: APPLICATION OF CHARGES of UCLL Backhaul STD

Example 2:

Access Seeker 2

Access Seeker 2 (AS2) has DSLAMs located in Exchanges A and D. The Parent POI is at B, and AS2 is also located near B (ie B is the ASNAPOI for AS2). The UCLL Backhaul Service required by AS2 would have the following prices:
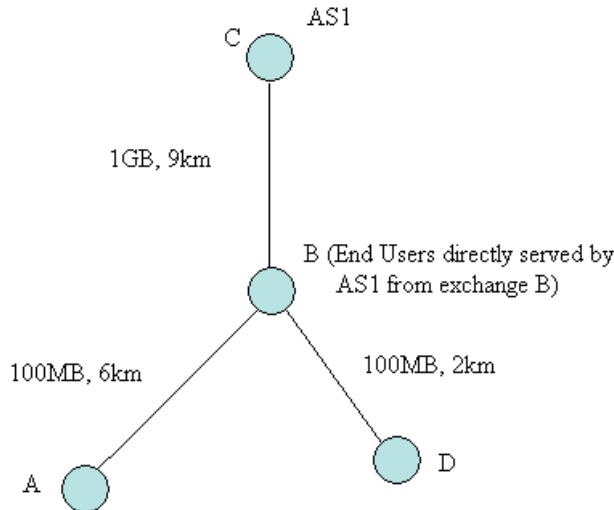
Monthly Rental Rate A-B (100Mbps, 6kms):	$1,683 per month
Monthly Rental Rate D-B (100Mbps, 2kms):	$ 964 per month
Total Monthly Rental Rate:	$2,647 per month
Connection Charge (A, B):	$8,059 (one-off)
Connection Charge (B, D):	$8,059 (one-off)
Total Connection Charge:	$16,118 (one-off)

In example 2, AS2 is able to take the regulated UCLL Backhaul Service for all of its backhaul requirements, as both the links A-B and D-B are end-to-end services for AS2.

Compared to example 1, both the monthly rental and connection charges paid by AS2 are higher, reflecting the additional Primary Link that AS2 has added (D-B) and the Connection Charge for the additional Primary Link.

Example 3:

The regulated UCLL Backhaul Service is an end-to-end service, where aggregation is not possible. However, an Access Seeker that has aggregation equipment at a Parent POI, under the UCLL Co-location STD or a commercial co-location arrangement with Telecom, can choose to purchase a combination of lower capacity commercial primary links[2] and a higher capacity regulated Secondary Link, after aggregation has occurred as illustrated by the example of Access Seeker 1 (AS1) below.

Access Seeker 1

Access Seeker 1 (AS1) has DSLAMs located in exchanges A, B and D, as it is serving end users off all three of these exchanges. In addition to the DSLAMs, AS1 has aggregation equipment located in exchange B. The parent POI for exchanges A and D for the commercial unbundled copper local loop backhaul service is at B, and AS1 is located near C (ie C is the ASNAPOI for AS1 under the UCLL Backhaul Standard Terms Determination).
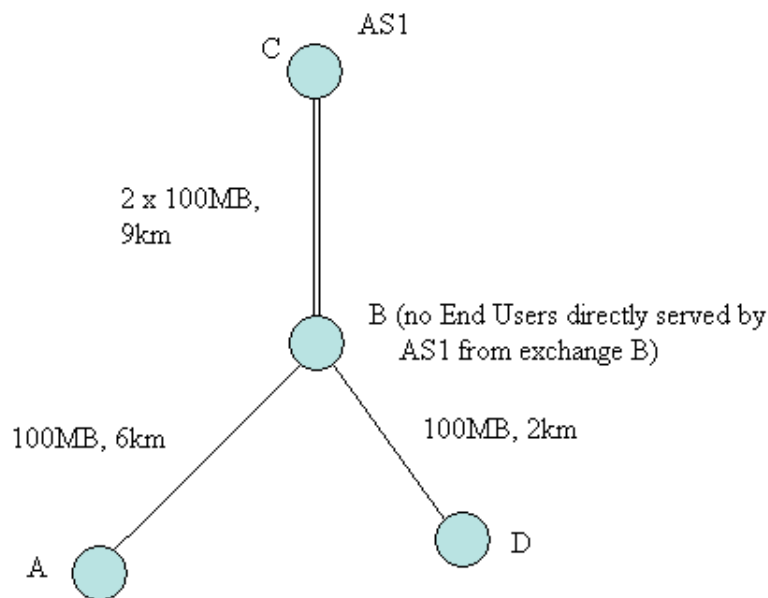
If AS1 chooses to aggregate its backhaul needs at exchange B, then it would only be able to access the regulated UCLL Backhaul Service for the Secondary Link B-C, as that would be the only end-to-end service from an exchange to the ASNAPOI for AS1. The Primary Links A-B and B-D would be available as commercial unbundled copper local loop backhaul services only, as they are not an end-to-end service from an exchange to the ASNAPOI for AS1.

The regulated UCLL Backhaul Service required by AS1 would have the following prices:

Monthly Rental Rate B-C (1Gbps, 9kms):	$4,091 per month
Connection Charge (B, C):	$8,059 (one-off)

The prices for the links A-B and D-B would be as agreed in the commercial contract that they are available under but these links would not be governed by this UCLL Backhaul Standard Terms Determination.

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[2] The configuration of any commercial unbundled copper local loop backhaul services purchased from Chorus is at the discretion of Chorus.

Example 4:

Access Seeker 1

Access Seeker 1 (AS1) has DSLAMs located in Local Exchanges A and D and doesn't require DSLAMs at exchange B, as it is not serving any End Users from that Local Exchange.

The Parent POI is at B, and AS1 is located near C (ie C is the ASNAPOI for AS1). In this example, AS1 purchases Links between A-C and D-C, which would have the following prices:

Monthly Rental Rate A-C (100Mbps, 15kms):	$2,181 per month
Monthly Rental Rate D-C (100Mbps, 11kms):	$2,181 per month
Total Monthly Rental Rate:	$4,362 per month
Connection Charge (A, B):	$8,059 (one-off)
Connection Charge (B, D):	$8,059 (one-off)
Total Connection Charge:	$16,118 (one-off)

In example 4 the fact that AS1 does not serve any End Users from Local Exchange B means that they cannot co-locate (aggregation) equipment in Local Exchange B under the UCLL Co-location STD.

As example 4 is comprised solely of regulated UCLL Backhaul Services, it cannot be directly compared to example 3, which contains a mix of the regulated UCLL Backhaul Service and commercial unbundled copper local loop backhaul service.

AS1 will, however, face trade-offs between the regulated and commercial prices for monthly rental and connection charges, and in particular:

Example 3		**Example 4**
the monthly charges of a regulated, higher capacity 1Gbps Secondary Link, two regulated connection charges and	**compared to**	the regulated monthly charges for the regulated Links, lower capacity end-to-end Primary and Secondary Links, four regulated

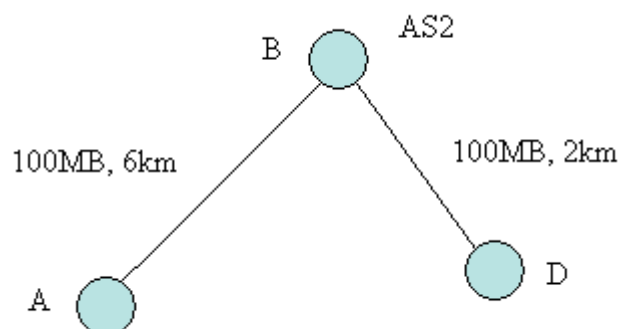|	
commercial charges for the remaining links, plus the opportunity to aggregate further links in the future at Local Exchange B.	connection charges, and the inability to aggregate links at Local Exchange B.

The optimal configuration of Primary and Secondary Links for AS1, and whether they are regulated, commercial or a combination, will depend on AS1's expectations about the amount of capacity required at Local Exchange B (ie the number of unbundled exchanges it will serve from that Parent POI) and AS1's ability to locate aggregation equipment at Local Exchange B.

Annex Two: Revised Examples 2, 3 and 4 for Appendix B – Application of UCLL Backhaul Connection charges and monthly rental charges of UCLL Backhaul Price List

Example 2:

In this example, the Access Seeker is able to purchase two regulated UCLL Backhaul Services, as both the links A-B and D-B are end-to-end services for AS2.
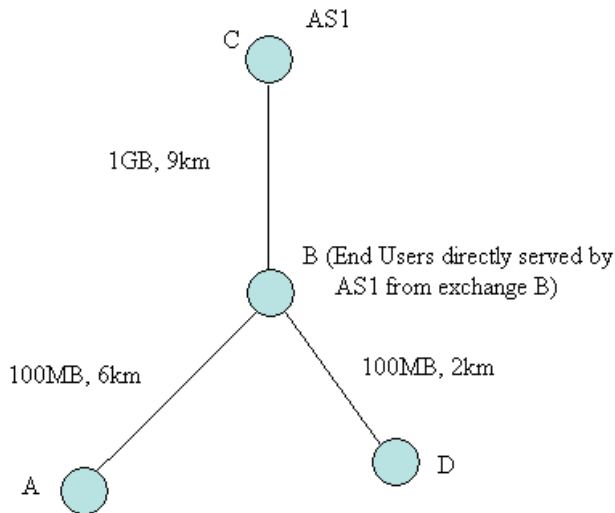

Access Seeker 2

Access Seeker 2 (AS2) has DSLAMs located in Exchanges A and D. The Parent POI is at B, and AS2 is also located near B (ie B is the ASNAPOI for AS2). In this example, the applicable monthly rental rates and connection charges are as follows:

Monthly Rental Rate A-B (100Mbps, 6kms):   Service component 2.3: UCLL Backhaul Service – 100 Mbps – Distance Group 2
Monthly Rental Rate D-B (100Mbps, 2kms):   Service component 2.1: UCLL Backhaul Service – 100 Mbps – Distance Group 1
Connection Charge (A, B):   Service component 1.1: UCLL Backhaul Service New Connection – Two Ends
Connection Charge (B, D):   Service component 1.1: UCLL Backhaul Service New Connection – Two Ends

Example 3:

In this example, the Access Seeker has aggregation equipment at a Parent POI, under the UCLL Co-location STD or a commercial co-location arrangement with Telecom. This example shows how the Access Seeker can choose to purchase a combination of lower capacity commercial primary links[3] and a higher capacity regulated Secondary Link, after aggregation has occurred.

Access Seeker 1

Access Seeker 1 (AS1) has DSLAMs located in exchanges A, B and D, as it is serving end users off all three of these exchanges. In addition to the DSLAMs, AS1 has aggregation equipment located in exchange B. The parent POI for exchanges A and D for the commercial unbundled copper local loop backhaul service is at B, and AS1 is located near C (ie C is the ASNAPOI for AS1 under the UCLL Backhaul Standard Terms Determination).

If AS1 chooses to aggregate its backhaul needs at exchange B, then it would only be able to access the regulated UCLL Backhaul Service for the Secondary Link B-C, as that would be the only end-to-end service from an exchange to the ASNAPOI for AS1. The Primary Links A-B and B-D would be available as commercial unbundled copper local loop backhaul services only, as they are not an end-to-end service from an exchange to the ASNAPOI for AS1.

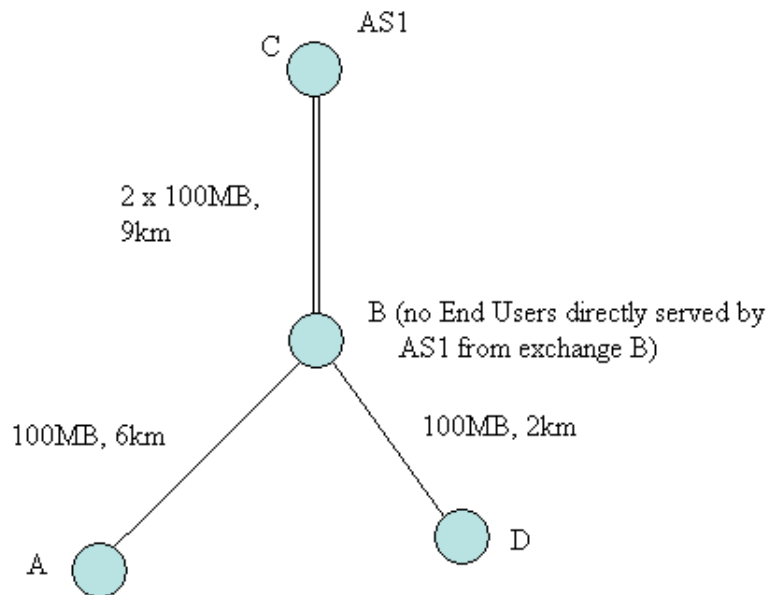The regulated UCLL Backhaul Service required by AS1 would have the following prices:

Monthly Rental Rate B-C (1Gbps, 9kms):	Service component 2.1: UCLL Backhaul Service – 1 Gbps – Distance Group 2
Connection Charge (B, C):	Service component 1.1: UCLL Backhaul Service New Connection – Two Ends

The prices for the links A-B and D-B would be as agreed in the commercial contract that they are available under but these links would not be governed by this UCLL Backhaul Standard Terms Determination.

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[3] The configuration of any commercial unbundled copper local loop backhaul services purchased from Chorus is at the discretion of Chorus.

Example 4:

In this example, the Access Seeker requires the same capacity on the Primary Links and the Secondary Links of the UCLL Backhaul Service. As the Access Seeker does not have any End Users that it serves at Local Exchange B, the Access Seekers is not able to locate aggregation equipment at Local Exchange B under the UCLL Co-location STD (although the Access Seeker could locate aggregation equipment at Local Exchange B under a commercial co-location arrangement with Telecom).

Access Seeker 1

Access Seeker 1 (AS1) has DSLAMs located in Local Exchanges A and D and doesn't require DSLAMs at exchange B, as it is not serving any End Users from that Local Exchange.

The Parent POI is at B, and AS1 is located near C (ie C is the ASNAPOI for AS1). In this example, AS1 purchases Links between A-C and D-C, which would have the following prices:

Monthly Rental Rate A-C (100Mbps, 15kms): Service component 2.5: UCLL Backhaul Service – 100 Mbps – Distance Group 3
Monthly Rental Rate D-C (100Mbps, 11kms): Service component 2.5: UCLL Backhaul Service – 100 Mbps – Distance Group 3
Connection Charge (A, C): Service component 1.1: UCLL Backhaul Service New Connection – Two Ends
Connection Charge (D, C): Service component 1.1: UCLL Backhaul Service New Connection – Two Ends

As example 4 is comprised solely of regulated UCLL Backhaul Services, it cannot be directly compared to example 3, which contains a mix of the regulated UCLL Backhaul Service and commercial unbundled copper local loop backhaul service. [4]

AS1 will, however, face trade-offs between the regulated and commercial prices for monthly rental and connection charges, and in particular:

Example 3		**Example 4**
the monthly charges of a regulated, higher capacity 1Gbps Secondary Link, two regulated connection charges and commercial charges for the remaining links, plus the opportunity to aggregate further links in the future at Local Exchange B.	**compared to**	the regulated monthly charges for the regulated Links, lower capacity end-to-end Primary and Secondary Links, four regulated connection charges, and the inability to aggregate links at Local Exchange B.

The optimal configuration of Primary and Secondary Links for AS1, and whether they are regulated, commercial or a combination, will depend on AS1's expectations about the amount of capacity required at Local Exchange B (ie the number of unbundled exchanges it will serve from that Parent POI) and AS1's ability to locate aggregation equipment at Local Exchange B.

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[4] The configuration of any commercial unbundled copper local loop backhaul services purchased from Chorus is at the discretion of Chorus.

Annex Three: Revised clause 3.13 for UCLL Backhaul Implementation Plan

### *UCLL Backhaul Timeline*	
3.13 Telecom and Participating Access Seekers must comply with the timeline for the Soft Launch and delivery of the UCLL Backhaul Service. This includes Telecom and the Participating Access Seekers meeting the following key milestones (Key Milestones):	

Key milestones (Working Days)	Action
Day Zero +10	Telecom completes initiation stage, which requires: • Project members confirmed; • Scope of the project confirmed; and • High level requirements and a Telecom high level solution design developed.
Day Zero +20	Telecom completes design stage.
Day Zero +30	Telecom makes draft technical user guides available to Access Seekers.
Day Zero +35	Telecom sends Soft Launch plan to the Commission and Access Seekers.
Soft Launch Initiation Day	Day after first Access Seeker places New Connection Order in accordance with the Soft Launch plan.
Soft Launch Initiation Day +5	Telecom advises Commission, and all persons who are Access Seekers in relation to the UCLL Service, that the first valid New Connection Order has been placed in accordance with Soft Launch plan.
Soft Launch Initiation Day +10	Other Access Seekers wanting to participate in the Soft Launch place New Connection Orders in accordance with the Soft Launch plan.
Day Zero + 50	Telecom completes OSS build, which requires: • Changes made to fulfil, assure and bill mechanisms; • Telecom's online ordering and tracking processes and systems enhanced; • Telecom's online faults management processes and systems enhanced; • Internal testing carried out; and • Production deployment completed in preparation for Soft Launch.
Soft Launch Initiation Day +20	Telecom and Access Seekers start Soft Launch, which requires: • End to end testing of the UCLL Backhaul Service. This will test the end to end solutions in a live environment, combining the processes of both Telecom and Access Seekers. • Identifying and rectifying issues arising from the Soft Launch.
Soft Launch Initiation Day +30	Telecom sends OSS report to the Commission and Access Seekers.
Soft Launch Initiation Day +50	Telecom and Access Seekers complete Soft Launch.
Soft Launch Initiation Day +60	Telecom sends Soft Launch report to the Commission and Access Seekers, which requires: • Analysis of outcomes/results. • Consultation with Access Seekers and identification and rectification of issues.
Soft Launch Initiation Day +70	Delivery of UCLL Backhaul Service to new and existing Access Seekers, which requires: • Implementation of Soft Launch report recommendations. • Bedding down, including consequential changes to Telecom's processes and systems.
Soft Launch Initiation Day +70	Telecom makes final technical user guides available to Access Seekers.
Soft Launch Initiation Day +85	Telecom sends report on implementation to the Commission and Access Seekers.