

PUBLIC VERSION

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COMMERCE COMMISSION

**STANDARD TERMS DETERMINATION FOR
TELECOM'S SUB-LOOP UNBUNDLED
COPPER LOCAL LOOP NETWORK
SERVICES**

**SERVICE APPENDIX 3, SCHEDULE 1
SUB-LOOP BACKHAUL SERVICE
DESCRIPTION**

PUBLIC VERSION

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1 INTRODUCTION

- 1.1 References to clauses or sections are references to clauses or sections in this Sub-loop Backhaul Service Description unless expressly provided otherwise. The definitions in the Sub-loop Services General Terms and the Sub-loop Backhaul Operations Manual apply to the extent that they are not expressly modified by or inconsistent with this Sub-loop Backhaul Service Description.
- 1.2 The Sub-loop Backhaul Service (and its associated functions, including the associated functions of Telecom's operational support systems) is a service that provides transmission capacity in Telecom's Network between the Distribution Cabinet Handover Point and the Local Exchange Handover Point for the purposes of providing access to, and interconnection with, the Sub-loop Network. A diagram of the Sub-loop Backhaul Service is attached as Appendix A.
- 1.3 The Access Seeker is only able to purchase the Sub-loop Backhaul Service where that Access Seeker is also purchasing the Sub-loop UCLL Service. The Access Seeker can combine the Sub-loop Backhaul Service with any relevant telecommunications service in order to deliver telecommunications services to End Users, including the following:
- (a) the Sub-loop Co-location Service; or
 - (b) the Access Seeker's own network or wholesale network transport services provided by other providers.

2 SUB-LOOP BACKHAUL SERVICE HANDOVER POINTS

- 2.1 The Handover Points for the Sub-loop Backhaul Service are:
- (a) the Local Exchange Handover Point, which is the OFDF in the Local Exchange Co-location Service Area; and
 - (b) the Distribution Cabinet Handover Point, which is the OFDF (or equivalent facility) in the Distribution Cabinet.

3 SUB-LOOP BACKHAUL SERVICE TRAFFIC

- 3.1 Sub-loop Backhaul Service traffic for a Distribution Cabinet is routed to the relevant Local Exchange for that Distribution Cabinet. The Local Exchange for a Distribution Cabinet must be identified by Telecom according to long-term efficient network planning principles, and will be set out in the Distribution Cabinet Information.

4 CONNECTION REQUIREMENTS

- 4.1 Telecom must install and interconnect the Sub-loop Backhaul Connection and Sub-loop Handover Fibre. Either the Access Seeker or Telecom may supply the fibre cable for the Sub-loop Backhaul Connection or Sub-loop Handover Fibre.

- 4.2 The Sub-loop Backhaul Service must be used for supplying transmission capacity for the purposes of providing access to, and interconnection with, the Sub-loop UCLL Service (including any necessary supporting equipment).
- 4.3 Sub-loop Backhaul Service assistance provided by Telecom comprises automated facilities for Orders and for logging of faults. Further details of Sub-loop Backhaul Service assistance provided by Telecom are set out in the Sub-loop Backhaul Operations Manual.
- 4.4 The Sub-loop Backhaul Service implementation activities that will be carried out by Telecom include:
- (a) provisioning of the Access Seeker's Sub-loop Backhaul;
 - (b) design of the optical link budget in conjunction with the Access Seeker, including SFP¹ selection and attenuation settings;
 - (c) supply of the Sub-loop Backhaul Connection or Sub-loop Handover Fibre if requested by the Access Seeker;
 - (d) identification of the route that the Sub-loop Backhaul Connection and Sub-loop Handover Fibre will take within the Distribution Cabinet, Telecom ducts and the Distribution Cabinet Manhole, between:
 - (i) the Access Seeker's Rackprint(s) in the Distribution Cabinet (including any associated Pedestal) and the Distribution Cabinet OFDF (or equivalent facility); or
 - (ii) the Distribution Cabinet OFDF (or equivalent facility) and the Access Seeker's Equipment that is remotely located and used to provide access to, and interconnection with, the Sub-loop UCLL Service,²

including installation of any required cable racks and trays to support the Sub-loop Backhaul Connection and Sub-loop Handover Fibre;
 - (e) installation of the Sub-loop Backhaul Connection or the Sub-loop Handover Fibre between:
 - (i) the Access Seeker's Rackprint(s) in the Distribution Cabinet (including any associated Pedestal) and the Distribution Cabinet OFDF (or equivalent facility); or
 - (ii) the Distribution Cabinet OFDF (or equivalent facility) and Telecom's Distribution Cabinet Manhole.

¹ Means a Small Form-factor Pluggable transceiver, used to transmit signals over fibre. An SFP interfaces a network device mother board to a fibre optic or unshielded twisted pair networking cable.

² For avoidance of doubt, this reference to remotely located Access Seeker Equipment includes Access Seeker Equipment installed in an Access Seeker-owned pedestal used to provide access to, and interconnection with, the Sub-loop UCLL Service.

For Telecom supplied cable, the cable must be delivered to the Access Seeker outside and adjacent to the Distribution Cabinet Manhole. For Access Seeker supplied cable, the cable, of length advised by Telecom, must be received at the Distribution Cabinet Manhole;

- (f) identification of the route that the Sub-loop Backhaul Connection and the Sub-loop Handover Fibre will take within the Local Exchange, Telecom ducts and the Local Exchange Manhole, between:

- (i) the Access Seeker's Footprint(s) and Local Exchange OFDF; or
- (ii) the Local Exchange OFDF and the Access Seeker's Equipment that is remotely located and used to provide access to, and interconnection with, the Sub-loop Backhaul Service,

including installation of any required cable racks and trays to support the Sub-loop Backhaul Connection and the Sub-loop Handover Fibre;

- (g) installation of the Sub-loop Backhaul Connection or Sub-loop Handover Fibre between:

- (i) the Access Seeker's Footprint(s) and the Local Exchange OFDF; or
- (ii) the Local Exchange OFDF and Telecom's Local Exchange Manhole.

For Telecom supplied cable, the cable will be delivered to the Access Seeker outside and adjacent to the Local Exchange Manhole. For Access Seeker supplied cable, the cable, of length advised by Telecom, will be received at the Local Exchange Manhole.

4.5 The specific exclusions to the Sub-loop Backhaul Service include:

- (a) access to, and the use of, space in, on or around any location apart from the Distribution Cabinet and the Local Exchange;
- (b) the Sub-loop UCLL Service; and
- (c) the Sub-loop Co-location Service.

4.6 The Sub-loop Backhaul Service is not available for resale to End Users. However, the Sub-loop Backhaul Service may be resold to other Access Seekers to provide transmission capacity for the purposes of providing access to, and interconnection with, the Sub-loop Service. For the avoidance of doubt, this paragraph is not intended to prevent the Access Seeker from reselling services that are based on the end-to-end Sub-loop Services to End Users or other Access Seekers.

5 TRANSMISSION CAPACITY

- 5.1 The Sub-loop Backhaul Service provides transmission capacity as an Ethernet connection with an optical interface. The specification of the Sub-loop Backhaul Service is set out in Appendix B.
- 5.2 The Sub-loop Backhaul Service provides transmission capacity at a bandwidth of 1Gbit/s. It is the responsibility of the Access Seeker to purchase sufficient capacity and to manage its Sub-loop Backhaul traffic to achieve its service specifications.

6 CAPACITY/GEOGRAPHIC AVAILABILITY

- 6.1 The Sub-loop Backhaul Service is available between the Local Exchange Handover Point and the Distribution Cabinet Handover Point. Telecom must provide the Sub-loop Backhaul Service in accordance with standard access principles (including standard access principle 3) in subpart 1 of Part 1 of Schedule 1 of the Act. Without limiting the foregoing, when there is limited transmission capacity between the Local Exchange Handover point and the Distribution Cabinet Handover Point Telecom must not discriminate between the provision of transmission capacity as part of the Sub-loop Backhaul Service to an Access Seeker and any provision of transmission capacity to a division of Telecom.

7 ACCESS SEEKER RESPONSIBILITIES

- 7.1 In addition to the responsibilities stated in this Sub-loop Backhaul Service Description, the Access Seeker's other responsibilities are detailed in the Sub-loop Services General Terms and the Sub-loop Backhaul Operations Manual.

8 COMPONENTS OF THE SUB-LOOP BACKHAUL SERVICE AND ASSOCIATED CHARGES

- 8.1 Detailed information on the components of the Sub-loop Backhaul Service and the core charges, sundry charges, transaction charges and recurring charges are set out in the Sub-loop Backhaul Price List.

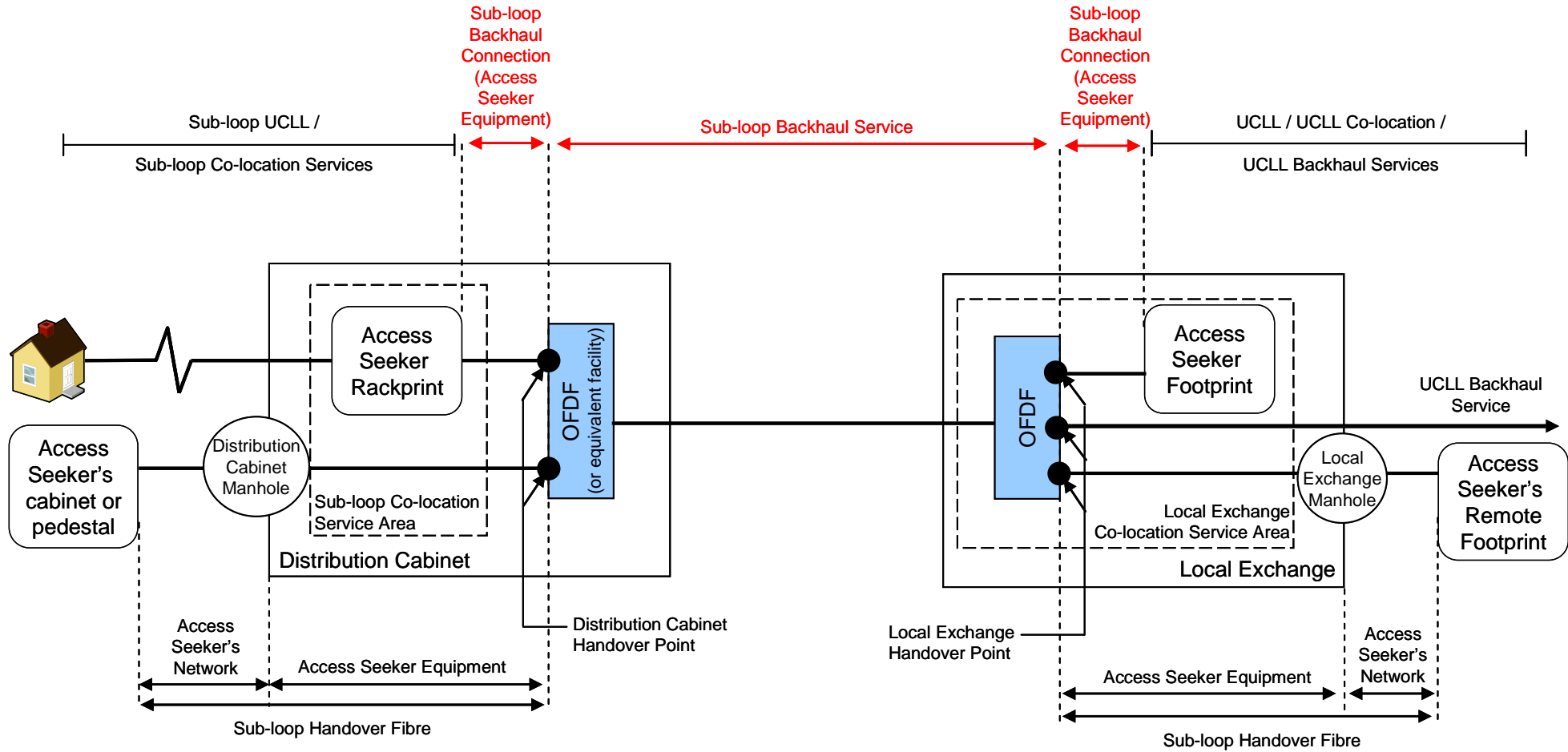
9 SERVICE LEVELS

- 9.1 The applicable service levels are set out in the Sub-loop Backhaul Service Level Terms.

10 OPERATIONS MANUAL

- 10.1 Detailed information on the operational processes and procedures for supply of the Sub-loop Backhaul Service are set out in the Sub-loop Backhaul Operations Manual.

APPENDIX A – DIAGRAM



APPENDIX B – SPECIFICATION FOR THE SUB-LOOP BACKHAUL SERVICE

The characteristics of the Sub-loop Backhaul Service available under this Sub-loop Backhaul Service Description are as follows:

Protocol	Ethernet: IEEE 802.1 ad, 802.1Q or native Ethernet framing with a maximum packet size of 1600 bytes. It is the responsibility of the Access Seeker to manage and police traffic to its service specifications.
Interface	Optical 1Gpbs 802.3z
Transport	Basic layer 2 transmission (non-intrusive transport)
Bandwidth	1Gbit/s
Attributes	Point to point only
Tagging	Access Seekers will be responsible for ensuring the end to end uniqueness of their VLAN tags
Latency ³	< 5msec
Jitter ⁴	< 1msec
Availability	99.5% for link lengths up to 10km, measured over a twelve month period ⁵

³ Latency or the mean one way packet delay shall be evaluated over an interval of 15 minutes for all classes, as per Telecom standard network practice.

⁴ Jitter or the packet delay variation means the packet transfer delay (PTD) upper minus PTD min where PTD upper is the 99.9% quartile of PTD in the evaluation interval, and PTD min is the minimum PTD in the evaluation interval. The evaluation interval will be 15 minutes, as per Telecom standard network practice.

⁵ Averaged over 12 months, and averaged over all Sub-loop Backhaul links.