# Telstra Dark Fibre Section

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# Telstra Dark Fibre Section

#### 1 About the Telstra Dark Fibre Section

#### **Our Customer Terms**

- 1.1 This is the Telstra Dark Fibre Section of Our Customer Terms.
- 1.2 The <u>General Terms of our Customer Terms</u> also apply unless you have entered into a separate agreement with us which excludes the General Terms of our Customer Terms.

#### **Inconsistencies**

- 1.3 If the General Terms of Our Customer Terms are inconsistent with something in this section, then this section applies instead of the General Terms to the extent of the inconsistency.
- 1.4 If a provision of this section gives us the right to suspend or terminate your service, that right is in addition to our rights to suspend or terminate your service under the <a href="General Terms">General Terms</a> of our Customer Terms.

#### 2 Telstra Dark Fibre overview

- 2.1 The Telstra Dark Fibre service (**Service**) is a Dark Fibre access service and comprises:
  - (a) the licence described in clause 5.1; and
  - (b) ongoing maintenance and repair of the Dark Fibre, in accordance with this OCT and the Telstra Enterprise Dark Fibre Operations and Maintenance Manual.
- 2.2 The Service does not include:
  - (a) any electronic devices or optical terminal equipment;
  - (b) access to the spaces and facilities where the Service Delivery Point (**SDP**) is located; and
  - (c) the design, construction and maintenance of any optical systems used to deliver Carriage Services over the Service.

# 3 Eligibility

- 3.1 The Service may not be available at a particular site due to capacity, geographic coverage, technical capability and other technical matters affecting our network.
- 3.2 You must ensure (at your cost) that you have all necessary access rights to the facilities and land where SDPs and the Dark Fibre is located from the owner or occupier of the relevant facility or land.
- 3.3 If the A-end point or B-end point of Dark Fibre is located in a Telstra Exchange, you must separately have and maintain Telstra Exchange building access, on separate terms and pricing for the term of your Service.

# 4 Ordering

4.1 You may order a Service by entering into an Application Form or separate agreement with us for that Service. We are not obliged to agree any Application Form or separate agreement with you for the Service.

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- 4.2 The Dark Fibre(s), SDPs, permitted construction activities and routes for each Service will be set out in the relevant Application Form or separate agreement with us for the Service.
- 4.3 After you have entered into an Application Form or separate agreement with us for a Service, you may request a change to that Service (including in relation to the SDP, routes and A-end point and B-end point). We may (but are not obliged to) agree to such requests, subject to payment of the additional charges contemplated in clause 13.7).

#### 5 Licence

- 5.1 We grant you a licence to access and use the Dark Fibre described in each Application Form or separate agreement with us for a Service for the applicable Service Term.
- 5.2 The licence in clause 5.1:
  - (a) does not create any tenancy between you and us;
  - (b) is exclusive in relation to the Dark Fibre that is subject of the licence for the term of the licence; and
  - (c) does not confer on you any proprietary title or interest, security interest, or any interest capable of becoming a security interest in the Telstra Exchange, the Dark Fibre or any infrastructure used to supply the Service.

#### 6 Maintenance

6.1 We will use commercially reasonable efforts to maintain our network in a manner that will permit you to use the Dark Fibre in accordance with this section of Our Customer Terms, your separate agreement with us for the Service (if applicable) and any applicable Application Form and will use commercially reasonable efforts to perform all scheduled and unscheduled maintenance for the Dark Fibre in accordance with the Telstra Operations and Maintenance Manual.

#### 7 Dark Fibre terms

#### **Dark Fibre**

- 7.1 Dark Fibre is comprised of two (a pair) unlit single mode, non-dispersion shifted, terrestrial optical fibres between two SDPs at an A end site and a B end site (**Dark Fibre**). Each of these interfaces has a port at the SDP, as described in clause 9.
- 7.2 The A and B end sites will be located at the sites identified in the relevant Application Form.
- 7.3 The Service can be provided as a single 'point-to-point' service or can be ordered as two or more separate but linked Services to provide full diversity. Each individual Telstra Enterprise Dark Fibre Service consisting of a fibre pair is non-diverse unless specifically agreed by the parties. For clarity, diversity is a non-standard offering and each Dark Fibre link is a separate Service.

#### **Dark Fibre route**

7.4 The routing of the Service is at our discretion. We will offer the Service over certain predefined routes, as notified to you from time to time. We may determine the pre-defined routes in our sole discretion and may add or remove available routes at any time. Removal

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of a route will not affect Services provisioned prior to the date of removal during the relevant Service Term for those Services.

7.5 You may request special routing or additional diversity arrangements. We will consider, but are not obliged to accept such requests. We may accept a request subject to agreement on additional charges (including installation/special linkage charges and other charges), and any such arrangements will be documented separately.

#### **Dark Fibre specifications**

- 7.6 The Dark Fibre we use to deliver the Service complies with ITU-T G.652.D (as of August 2006 and prior to that time G 652.B) and ITU-T G.657.A2.
- 7.7 The light transmission characteristics of optical fibre can change over time, either as a result of natural fibre age degradation, or as a result of geological disturbance creating physical distortions in the fibre. The fibre in our network has been progressively deployed over time and thus the individual fibre sections utilised in making the end-to-end path of your Service may vary in age. The Service may consist of a distribution of different aged fibre sections and you should plan accordingly.
- 7.8 Except where noted, the characteristics provided in this section reflect Telstra's current specifications for newly deployed fibre.
- 7.9 At the Service Delivery Point each fibre will be presented as an A/SC connector for you. For example:

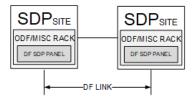


Figure 1 - Typical Dark Fibre Link

7.10 Further specifications relating to the Dark Fibre links are set out below:

Criteria	Specifications
Connector Type	Angled PC SC
Bulkhead Interface	sc
Insertion Loss (Connector)	<.25 dB (per connector)
Optical Return Loss (Reflectance)	>60 dB
Maximum Splice Loss (average bi-directional)	0.10dB @ 1550nm
Maximum Splice Loss after fibre repair (average bi-directional)*	0.30dB @ 1550nm
Optical Reflectance per event	<-45dB
Glass-thru sites	Spliced
SDP	Single Patched SDP
Total loss of SDP	<.5db @ 1550nm
	[number of connectors x 0.25dB] + [# of splices
Maximum Span Loss (@ 1550nm)	x 0.10dB] + [specified cable loss per km x length of cable in km] + 0.5dB

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- \*Allowable splice loss if <0.10dB cannot be achieved after 3 attempts
- \*\* Gainers will be allowed if you provide detailed information of type of fibres, cable section lengths used on the fibre strand and Chromatic Dispersion reports.

## 8 Customer Provided Equipment

#### **Customer Provided Equipment**

- 8.1 You may select the equipment that you use in connection with the Service provided that it meets the standards set out in this clause 8 or as otherwise notified to you from time to time in writing (Customer Provided Equipment).
- 8.2 You are responsible for providing all Customer Provided Equipment used by you in connection with the Service, including any optical patch cords which are required to for connection from between a Service Delivery Point to and your Customer Provided Equipment.
- 8.3 You are responsible for the operation and maintenance of Customer Provided Equipment you attach to and use in connection with the Service (including installation, testing, repair and removal).

#### Laser safety

8.4 You must ensure that Customer Provided Equipment attached to or used in connection with the Service complies with the laser safety requirements specified in the Telstra Operations and Maintenance Manual.

#### **Power limits**

- 8.5 You must ensure that Customer Provided Equipment connected to a Dark Fibre link:
  - (a) is fitted with an automatic power reduction system which will, in the event of a break in the optical path of your Service, automatically turn off or reduce the power of the emitting lasers in the system in such a way as to ensure that the accessible emission level of laser radiation at any stage of operation on or with your Service at any point, including during commissioning and maintenance situations, does not exceed 'Class 1M' levels as defined in IEC 60825.1; and
  - (b) does not at any time exceed a maximum transmitted optical power level of 500 mW (+27 dBm) for non-Raman systems and a maximum of 1.58 W (+32 dBm) for Raman systems.
- When using Visual Fault Locator (VFL) devices for fibre identification, 'Location Hazard Level 2M' (as defined in IEC 60825.1) is allowable.

# 9 Demarcation point

- 9.1 The Service Delivery Points are the only points at which your optical line terminal equipment may be connected to the Service.
- 9.2 The Service Delivery Points at the A-end site and the B-end site of the Service are physically located at optical connectors provided by us.
- 9.3 We provide the Service Delivery Points for the Dark Fibre but nothing in this section of Our Customer Terms or your separate agreement with us for the Service transfers ownership of a Service Delivery Point to you.

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- 9.4 At the A-end site and the B-end site, we will connect our network, using cabling owned and maintained by us, to the agreed location of the relevant Service Delivery Point. The exception to this is where there is existing suitable customer cabling at the Customer's premises to one of these points:
  - (a) in the common area; or
  - (b) where the site is a Data Centre or a Business Premise
- 9.5 The Network Boundary Point for the Service is the Service Delivery Point.

#### 10 Assurance

#### Fault reporting

- You must notify us of any Fault caused by an issue with the Dark Fibre or our network (Fault Notification). Prior to submitting a Fault Notification, you must perform isolation and other testing to confirm that the Fault is caused by an issue in the Dark Fibre or our network (and is not, for example, caused by Customer Provided Equipment). Unless otherwise agreed in writing, we are not required to monitor the Dark Fibre for Faults and no response or restoration obligations arise until you notify us of a Fault.
- 10.2 Unless otherwise agreed with you in an Agreed Quote, the service levels set out in clause 10.3 apply to Services located in Metro Areas. Alternative service levels may attract additional costs. All service levels in clause 10.3 are targets only and do not apply during scheduled maintenance periods.
- 10.3 We will aim to meet the following service levels in respect of Services located in Metro Areas:

Service Level	Target
Uptime availability of Dark Fibre	99.95%
Delivery target time for On-Net Orders (Pre-defined Route) in Metro Areas	We will aim to provision any On-Net Order (Pre-defined Route) in Metro Areas within 20 Business Days from the date that you enter into an Application Form with us for the relevant Service and any On-Net Order (Other Routes) in Metro areas within 30 business days from the date the Order is accepted.
Delivery target time frame for non Metro Areas, On-Net Orders (Other Routes) and Off-Net Orders	As set out in the relevant Application Form or separate agreement with us for the Service.
Fault Notification response target time	We will aim to respond to you within 60 minutes of receipt of a Fault Notification. The respond time starts when we receive a Valid Service Fault Notification and ends when we tell you that work has started to identify the cause of the fault.

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Restoration target time	On receipt of a Fault Notification, we will
	aim to restore the relevant Service within 8
	hours.

10.4 No service credits or service rebates are payable if we fail to meet the service level targets set out in clause 10.3. If we fail to meet a service level target set out in clause 10.3 then your sole and exclusive remedy is to escalate this to your Telstra account manager.

#### Service appointment times

We will arrange service appointment times for restoring and repairing Faults with you and you must not unreasonably refuse our appointment time requests.

#### **Planned outages**

- 10.6 Where reasonably practical, we will give you advance notice of planned outages, where we think the outage will cause significant interruption to your Service.
- However, if we reasonably think that an urgent outage is needed (including to fix critical problems), we try to notify you of the outage as soon as reasonably practicable.

#### 11 Restrictions and limitations of the Service

- 11.1 Your use of the Service is subject to:
  - (a) our rights to install, operate and maintain cables and equipment in our facilities;
  - (b) our rights to pass through any permitted sites, adjoining sites and licenced areas for the purpose of us and third parties using and maintain equipment located in or on those sites;
  - our rights to enter and inspect all areas relevant to the Dark Fibre at the sites where Service Delivery Points are located, and to protect our network;
  - (d) any encumbrances affecting the land around or in which Dark Fibre is located; and
  - (e) our rights or any third party rights in relation to the land on which Dark Fibre is located.

# 12 Your obligations

- 12.1 You must at all times:
  - (a) obtain and maintain (at your cost) all authorisations necessary to:
    - (i) lawfully exercise your rights under the licence in clause 5.1; and
    - (ii) access and use:
      - (A) any facility at which a Service Delivery Point is located; and
      - (B) to the extent that you require access, any land on which that facility is located and any other facilities located on that land;
  - (b) ensure our personnel are in a safe working environment when on your sites and premises;

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- (c) ensure your maintenance contact agreed with us (or their replacement as notified by you) is available for us to contact 24 hours a day, each day of the year;
- (d) at your cost, give us all reasonable assistance, cooperation, access, information, materials and facilities as we reasonably request from time to time in connection with us providing the Service to you; and
- (e) in relation to non-Telstra locations:
  - obtain (at your cost) all third party consents needed for us to lawfully use the facilities, sites and any materials requested by us to provide the Service;
  - (ii) provide us with a secure and lockable storage area for our equipment during installation and commissioning of the Service; and
  - (iii) give us floor plans showing power distribution and agreed equipment placement.
- 12.2 You must ensure that we or our representatives are the only ones that carry out connections and disconnections to the Service and your Customer Provided Equipment (at your cost).
- 12.3 You must not resell or resupply, or permit any third party to use, the Service (or any part of it) without our prior written consent.

### 13 Charges

#### Charges

- 13.1 The charges for each Service are set out in, and calculated in accordance with, the relevant quote or your separate agreement with us for that Service and this clause 13. These include installation charges, monthly rental charges and other charges.
- 13.2 The installation charge is not refundable.
- 13.3 The installation charge may include components of Commercial Works to the extent required to provide the Service/s, or we may issue you a separate charge for those Commercial Works.

#### In Building Network Extension Charges

- 13.4 Customer must pay an In Building Network Extension Charge where the Customer requests the service delivery point within a premise that is beyond the existing network boundary or existing common area.
- 13.5 Telstra must notify Customer of the amount of an applicable In Building Network Extension Charge before starting any of the special work.

#### Incorrect callout fee

- 13.6 If you report a Fault to us and our technician is required to visit the location of the alleged Fault to investigate that alleged Fault and:
  - (a) our technician reasonably determines that:
    - (i) there is no Fault with the Dark Fibre or that there is a Fault but it was not caused by an issue with the Dark Fibre or our network; or

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- (ii) you have not properly performed isolation and other testing to confirm that the alleged Fault is caused by an issue in the Dark Fibre or our network (in accordance with clause 10.1);
- (b) you do not provide us with reasonable cooperation in relation to the investigation of the alleged fault (in accordance with your obligations in clause 12.1(d)); or
- (c) our technician cannot physically access your point of presence, premises or site at the time arranged in accordance with clause 10.5,

we will charge you a fee in respect of that callout, as set out in the relevant Application Form or your separate agreement with us for the relevant Service.

#### Time and materials charges

- 13.7 If you request, and we agree, to carry out:
  - (a) an add, move or change in respect of a Service (including as contemplated in clause 4.3); or
  - (b) work in respect of a Service outside of Business Hours (other than responding to Faults as contemplated in clause 10.3),

then we will charge you for such work on a time and materials basis at our then-current rates.

#### 14 Term and termination

#### Term and termination

- 14.1 Each Service commences on the date it is provisioned and continues for the term set out in your Application Form or separate agreement with us for that Service (**Service Term**) unless it is terminated earlier in accordance with this section of Our Customer Terms or your separate agreement with us for that Service. At the end of the Service Term for a Service:
  - (a) that Service automatically renews on a month to month basis until terminated in accordance with this section of Our Customer Terms or your separate agreement with us for that Service; and
  - (b) either party may terminate that Service on 30 days written notice to the other party.

#### Early termination charges

14.2 If during the Service Term a Service is cancelled or terminated for any reason other than for our material breach, we may charge you any waived Service charges and an amount calculated as follows:

A x B x 30%

where:

"A" = the average Service charges paid or payable each month by you for the relevant Service up to the date of cancellation.

"B" = the number of months (or part of a month) remaining in the Service Term.

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14.3 You acknowledge that this amount is a genuine pre-estimate of the loss we are likely to suffer.

#### 15 Definitions

15.1 In this Service Schedule, unless otherwise stated:

**Application Form** means an application form we have agreed with you in respect of a Service.

Business Hours means the hours of 8am to 5pm on Business Days.

Business Premise means single and multiple level buildings occupied by you.

Commercial Works means civil or other works undertaken to construct and/or install, and then provide telecommunications network infrastructure from the relevant property boundary point to the relevant service delivery point or main distribution frame (including the distribution frame or another point beyond the distribution frame), necessary to provide the Service to you.

**Customer Provided Equipment** has the meaning given to it in clause 8.1 of this section of Our Customer Terms.

**Dark Fibre** has the meaning given to it in clause 7.1 of this section of Our Customer Terms.

#### Fault means either:

- (a) a total loss of end-to-end optical connectivity of a Section of a Service; or
- (b) the end-to-end insertion loss of each Service or a Section of a Service (as applicable) measured at 1310 nm and 1550 nm exceeds the Initial Loss Measurement.

**Fault Notification** has the meaning given to it in clause 10.1 of this section of Our Customer Terms.

**In Building Network Extensions** means extension of the Telstra network that is beyond the existing Telstra network boundary and/or existing common room area, as confirmed by Telstra.

**Initial Loss Measurement** means the end to end insertion loss of each Service or section of a Service (as applicable) measured at 1310 nm and 1550 nm by us prior to delivery of the relevant Service to you, as adjusted from time to time in accordance with the Telstra Operations and Maintenance Manual.

Metro Areas means Melbourne, Sydney, Adelaide, Brisbane, Canberra and Perth.

**Network Boundary** means the boundary determined under section 22 of the *Telecommunications Act 1997* (Cth).

**Off-Net Order** means an a Service set out in an Application Form or separate agreement with us for that Service, that requires us to undertake civil works to extend our network in order to provision that Service.

**On-Net Order (Pre-defined Route)** means a Service set out in set out in an Application Form or separate agreement with us for that Service with a route that is pre-defined us, that can be fulfilled using Dark Fibre that is part of our network as at date the relevant

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Application Form or separate agreement is agreed, or which requires us to add capacity to our network in order to provision that Service.

**On-Net Order (Other Route)** means a Service set out in set out in an Application Form or separate agreement with us for that Service with a route that is not pre-defined by us, that can be fulfilled using Dark Fibre that is part of our network as at the date the relevant Application Form or separate agreement is agreed, or which requires us to add capacity to our network (without any additional civil works) in order to provision that Service.

**Order** means an order for the Service (including a request to vary or reconfigure an existing Service) submitted to Telstra by you via Application Form or separate agreement with us.

Service has the meaning given to it in clause 2.1 of this section of Our Customer Terms.

**Service Delivery Point or SDP** means the end point at which Dark Fibre terminates, located as described in clause 7.2.

**Service Term** has the meaning given to it in clause 14.1 of this section of Our Customer Terms.

**Telstra Exchange** means a building (or any part of it) and, where applicable, the site on which the building is located, which is owned or leased by, or licensed to, Telstra or a Related Body Corporate for the purpose of housing telecommunications network equipment.

**Telstra Operations and Maintenance Manual** means the Dark Fibre operations and maintenance manual provided by us to you, as amended from time to time.

**Valid Service Fault Notification** means a notice you give us, that contains all the relevant fault information we need and we have responded to that notice with a fault number, ticket or incident reference number.