

**IDA ANNOTATION – 13 DECEMBER 2000**

**SINGTEL RESPONSE – 11 JANUARY 2001**

**SCHEDULE 7A**  
**WHOLESALE DARK FIBRE SERVICE**

## SCHEDULE 7A

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## SCHEDULE 7A

### WHOLESALE DARK FIBRE SERVICE

#### *CLAUSE 1 – MODIFICATION REQUIRED*

##### 1. SCOPE

#### *CLAUSES 1.1 TO 1.2 – MODIFICATION REQUIRED*

- 1.1 This Schedule sets out the terms and conditions under which SingTel will provide the Requesting Licensee with the Wholesale Dark Fibre Service for the sole purpose of the Requesting Licensee providing telecommunication services ~~to the Requesting Licensee's Customers.~~
- 1.2 SingTel will provide the Wholesale Dark Fibre Service to the Requesting Licensee on a point to point basis between:
- (a) ~~a Requesting Licensee's site and another Requesting Licensee's site via a SingTel site; or~~
  - (b) ~~a Requesting Licensee's site and a SingTel site; or~~
  - (c) ~~a Requesting Licensee's Customer site and a Requesting Licensee's site via a SingTel site~~SingTel sites and customer sites (but not between a Customer site and another Customer site). The Dark Fibre routing between the point to point of the Requesting Licensee shall be at the sole discretion of SingTel.

**SingTel comments :** SingTel has redrafted the above to clarify the type of routes on which the Wholesale Dark Fibre Service will be provided, subject to the comments below in relation to resale.

*The Requesting Licensee's eligibility to obtain Wholesale Dark Fibre Service under the RIO is subject to IDA's criteria. If the Requesting Licensee meets IDA's qualifying criteria, the Requesting Licensee will be permitted to obtain Wholesale Dark Fibre Service from SingTel for the purpose of providing Telecommunication Services. Other than the prohibition on re-sale of Wholesale Dark Fibre Services, IDA has not*

*specified any other restriction on how the Requesting Licensee may use the Wholesale Dark Fibre Service in the provision of Telecommunication Services.*

*SingTel must modify:*

- (a) *Clause 1.1 by deleting the phrase “to the Requesting Licensee’s Customers” in the third and fourth lines;*

**SingTel comments :** Agreed, although we note that the deletion of these words does not affect the resale prohibition.

- (b) *Clause 1.2 by deleting the phrase “(but not between a customer site and another customer site)” in the third line; and*

**SingTel comments :** Not agreed. IDA mandated the provisioning of dark fibre to FBO to enable the FBO to jumpstart their deployment of network in order to provide creative and innovative network and value-added services to benefit Singapore customers. Therefore, the provisions of Dark Fibre for FBO is not intended for allowing end-user customer-to-customer site connection as the FBO concerned is clearly not introducing any innovation in the marketplace nor building any new network infrastructure. This runs counter to IDA’s intention to introduce competition in Singapore and to enhance Singapore’s competitiveness in the telecommunications industry. Furthermore, the ability to get customer-to-customer site dark fibre connection means that the FBO would essentially resell plain dark fibre. This does not serve to motivate nor incentivise commitment to roll-out new FBO infrastructure. If this fundamental understanding is not maintained, then the FBO will see no incentive in wanting to rollout their own infrastructure as soon as possible.

- (c) *Clause 1.2 by deleting “at the sole discretion of SingTel” in the fifth and sixth lines and instead to provide that the Dark Fibre routing between the point to point of the Requesting Licensee shall be as mutually agreed between SingTel and the Requesting Licensee.*

**SingTel comments :** Not agreed. Part of the fibre route makes use of SingTel’s existing fibre network, and cannot be subject to the Requesting Licensee’s agreement on the route of such fibre. The Requesting Licensee shall specify the A & B end of the fibre route, and SingTel shall determine the route between the two points. If the Requesting Licensee could request a route it would be subject to a high degree of rejection because that route may not be available.

### ***CLAUSE 1.3 – MODIFICATION REQUIRED***

- 1.3 This Schedule only applies to the Requesting Licensee if it is an FBO ~~providing a wireline or broadband service and~~ who has~~ve~~ obtained prior approval from the Authority to acquire the Wholesale Dark Fibre on these terms and conditions.

*Consistent with the principle of technological neutrality, see Code § 1.5.4, SingTel must modify Clause 1.3 to provide that this Schedule 7A applies to any Facilities-based Licensee providing Telecommunication Services.*

**SingTel comments :** As per iDA's comments, the Schedule will be limited to those FBO Requesting Licensee's who have obtained approval from the Authority to acquire Wholesale Dark Fibre service.

#### ***CLAUSE 1.4 – CONDITIONAL APPROVAL***

- 1.4 Resale of the Wholesale Dark Fibre Service acquired under these terms and conditions is strictly prohibited.

- 1.5 (a) The timeframes in this Schedule relating to pre-provisioning work to be undertaken by SingTel under clauses 2.4, 3.1 and 4.3 (such as the completion of project studies and the assessment of applications) are subject to delays caused by events outside SingTel's reasonable control, in which case SingTel may extend these timeframes for a period equal to the period of such delays.

- (b) A failure to meet these timeframes does not constitute a breach of this Schedule or this RIO Agreement.

- 1.6 (a) If SingTel fails to meet any timeframes in this Schedule relating to provisioning work to be undertaken by SingTel under clause 5.1, and the failure to meet the timeframe is solely caused by SingTel, SingTel will provide a remedy to the Requesting Licensee.

- (b) Such remedy will be in the form of a credit to the Requesting Licensee of a proportion of the installation Charges payable for the delayed services as determined in accordance with the table in Annex 7A-3.

- (c) The Requesting Licensee acknowledges that this remedy is a genuine pre-estimate of the Requesting Licensee's loss and will be the sole and exclusive remedy available to the Requesting Licensee for such failure to meet

provisioning timeframes and shall be SingTel's sole and exclusive liability to the Requesting Licensee for such failure.

**SingTel comments :** SingTel has inserted these clauses as a result of the removal of "reasonable endeavours" from certain timeframes to allow SingTel to extend these timeframes due to circumstances beyond its control. It also provides for a remedy where the provisioning delay is caused by circumstances within SingTel's control.

## ***CLAUSE 2 – MODIFICATION REQUIRED***

### **2. ORDERING AND PROVISIONING PROCEDURE**

#### ***CLAUSE 2.1 – MODIFICATION REQUIRED***

2.1 The Requesting Licensee shall submit a Request for Wholesale Dark Fibre Service in the form containing the following information:

- (a) the Authority's approval letter;
- (b) point to point addresses.
- (c) location and/or site plan of the required Dark Fibre that the Requesting Licensee seek;
- (d) number of Dark Fibres requested between the point to point addresses; and
- (e) ~~the Requesting Licensee's proposed use of the Wholesale Dark Fibre Service;~~

***To qualify for Wholesale Dark Fibre Service, the Requesting Licensee need only obtain approval from IDA.***

**SingTel comments :** Agreed to delete.

- (f) the Requesting Licensee contact details;
- (g) ~~such other information as SingTel reasonably requires.~~

*IDA requires SingTel to specify all the information that it requires from the Requesting Licensee upfront and be subject to IDA's scrutiny as part of the RIO approval process. SingTel, therefore, must delete Clause 2.1(g).*

**SingTel comments :** Agreed to delete clause 2.1(g).

#### ***CLAUSE 2.2 – CONDITIONAL APPROVAL***

2.2 All applications for the Wholesale Dark Fibre Service from all Licensees will be processed on a first come first serve basis subject to the total cumulative number of applications to be processed in Clause 2.3.

#### ***CLAUSE 2.3 – MODIFICATION REQUIRED***

2.3 The cumulative number of Request for Wholesale Dark Fibre Service to be processed are:

- (a) four (4) Requests from any Licensee shall be accepted on each Business Day, with subsequent Requests overflowing to the next Business Day; and
- (b) ten (10) Requests from all Licensees shall be accepted each week, with subsequent Requests overflowing to the next week.

*These restrictions would unreasonably delay the deployment of competitive Telecommunications Services and, therefore, would not serve the public interest. SingTel must modify Clause 2.3 to increase the number of requests that SingTel will accept, both on a daily basis and a weekly basis. SingTel must deploy additional resources to process requests. SingTel may recover the reasonable cost incurred in processing requests for Wholesale Dark Fibre Service.*

**SingTel comments :** Noted, however there will be construction works required for the provisioning of dark fibre to the customer premise or even the Requesting Licensee site. This limit is set in consideration of the work required for Project Study and the subsequent construction. While it may be possible to process the applications, it would be impossible to perform the Project Study and the necessary construction of dark fibre within the timeframe specified in the schedule.

#### ***CLAUSE 2.4 – CONDITIONAL APPROVAL***

2.4 SingTel shall acknowledge the receipt of the Request for Wholesale Dark Fibre Service by 5pm on the next Business Day by providing the Requesting Operator with a request identification number and the date the application would be processed.

***CLAUSE 2.5 – CONDITIONAL APPROVAL***

2.5 The Requesting Licensee shall pay the application fee specified in Schedule 9 regardless of the outcome of the Request for Wholesale Dark Fibre Service.

***CLAUSE 3 – MODIFICATION REQUIRED***

**3. STUDIES**

***CLAUSE 3.1 – MODIFICATION REQUIRED***

3.1 SingTel will ~~use its reasonable endeavours to~~ perform a Project Study in relation to the Requesting Licensee's Request for Wholesale Dark Fibre Service within ten (10) Business Days after receipt of the Request.

*The RIO must set forth a binding contractual offer. See Code § 5.3.2. IDA requires SingTel to give a firm commitment to carry out the Project Study (as opposed to using reasonable endeavours).*

*The initial project study should not require significant effort. The 10 Business Days proposed would unreasonably delay the competitive provision of Telecommunications Services and, therefore, would not serve the public interest. SingTel must revise Clause 3.1 to shorten the time frame.*

**SingTel comments :** Project studies are complex tasks that depend upon the nature of the specific dark fibre requested, the availability of highly specialised and skilled staff and the number of current project study requests. While SingTel envisages that some project studies will be completed in a shorter time frame, in the circumstances it is unable to guarantee any shorter period than 10 Business Days. SingTel believes that the removal of 'reasonable endeavours' provides sufficient comfort to the Requesting Licensees.

***CLAUSE 3.2 – CONDITIONAL APPROVAL***



3.2 Following completion of the Project Study, SingTel will notify the Requesting Licensee of either its In-principle Approval (**In-principle Approval**) or rejection of the Request for Wholesale Dark Fibre Service.

***CLAUSE 3.3 – MODIFICATION REQUIRED***

3.3 SingTel may reject a Request for Wholesale Dark Fibre Service if:

- (a) the Authority’s approval letter is not attached;
- (b) the Requesting Licensee is not an FBO who has obtained prior approval from the Authority to acquire the Wholesale Dark Fibre on these terms and conditions~~providing a wireline or broadband service;~~

*Consistent with the principle of technological neutrality, see Code § 1.5.4, SingTel must modify Clause 3.3(b) by substituting “wireline or broadband service” with “Telecommunication Services”.*

**SingTel comments :** Wording made consistent with clause 1.3 above.

- (c) the Request for Wholesale Dark Fibre Service is not in the prescribed form;
- (d) the Request for Wholesale Dark Fibre Service does not contain all the required information;
- ~~(e)~~the Wholesale Dark Fibre Service is not available as determined by SingTel;
- ~~(f)~~(e) SingTel reasonably determines that it does not have any Dark Fibre in the area where the request for access to Dark Fibre is requested; or

*SingTel is obligated to provide Dark Fibre to eligible Facilities-based Licensees that meet IDA’s criteria. SingTel must specify in Clauses 3.3(e) and (f) the objective criteria on which SingTel will determine that the Wholesale Dark Fibre Service is unavailable. In addition, where SingTel has determined, on the basis of the specified objective criteria, that the Wholesale Dark Fibre Service is unavailable, SingTel must inform the Requesting Licensee of the reason(s) for the unavailability.*

**SingTel comments : Agree to delete (e). For (f), where SingTel does not have fibre in the area where the Dark Fibre is required for, SingTel would not be able to provide. We have inserted “reasonably determines” in paragraph (f). It is not possible to set out a complete list of when fibre may or may not be available.**

~~(g) SingTel is not reasonably satisfied that the use of the Wholesale Dark Fibre Service is for the provision of telecommunication services to Customer; or~~

*Clause 3.3(g) must be deleted. So long as IDA has approved the Requesting Licensee’s application to obtain Wholesale Dark Fibre Service from SingTel, SingTel must provide the Wholesale Dark Fibre Service to the Requesting Licensee.*

**SingTel comments : Agreed to delete.**

~~(h)(f) the Requesting Licensee has not obtained access to the necessary sites for connection of the Wholesale Dark Fibre Service.~~

3.4 The Requesting Licensee acknowledges that a grant by SingTel of the In-Principle Approval does not mean that SingTel is obliged to ensure that the Wholesale Dark Fibre Service will be available at the required time.

#### ***CLAUSE 4 – MODIFICATION REQUIRED***

##### **4. DETAILED STUDY**

#### ***CLAUSE 4.1 – MODIFICATION REQUIRED***

4.1 Within five (5) Business Days from the In-Principle Approval, the Requesting Licensee shall provide its agreement:

- (a) to proceed with a Detailed Study which would include a site survey conducted by SingTel with the presence of Requesting Licensee to establish the availability of the building facilities and routing of the Wholesale Dark Fibre Service; and
- (b) to pay the relevant Charges (including as incorporated into other Charges) incurred in conducting the Detailed Study.

If the Requesting Licensee does not notify SingTel to proceed with a Detailed Study or ~~pay~~ agree to pay the Charges under this clause, the Requesting Licensee's Request for Wholesale Dark Fibre Services shall lapse.

*Clause 4.1 appears to unreasonably allow for "double recovery" of the cost of the Detailed Study. The administrative and installation fee for Wholesale Dark Fibre Service is intended to recover the cost of the Detailed Study. Unless SingTel can demonstrate that the administrative and installation fee does not recover the cost of the Detailed Study, SingTel must eliminate the separate Charge for this activity.*

**SingTel comments :** This is not intended to double recover the cost incurred for the Detailed Study. It is supposed to recognise the cost incurred for such an activity, even though the cost has been incorporated into the Administrative and Installation Fees. In the event of cancellation upon the conduct of the Detailed Study, SingTel should be entitled to recover the cost incurred in the Detailed Study. We have clarified the wording to state that it is the "relevant" Charges for the Detailed Study "(including as incorporated into other charges)".

#### ***CLAUSE 4.2 – CONDITIONAL APPROVAL***

4.2 Upon the receipt of the Requesting Licensee's agreement in clause 4.1, SingTel shall initiate a Detailed Study on the availability of the Wholesale Dark Fibre Service.

#### ***CLAUSE 4.3 – MODIFICATION REQUIRED***

4.3 SingTel shall ~~use its reasonable endeavours to provide~~ theits results of the Detailed Study within twenty five (25) Business Days from the receipt of the Requesting Licensee's agreement under clause 4.2.

*The proposed 25 Business Day period would unreasonably delay the provision of competitive Telecommunications Services. Unless SingTel can demonstrate that it requires the full 25 Business Day period, IDA requires SingTel must complete the Detailed Study within a shorter time frame than currently provided.*

**SingTel comments :** See comments above in relation to the Project Study. The deletion of reasonable endeavours should give the Requesting Licensees sufficient comfort.

***CLAUSE 4.4 – CONDITIONAL APPROVAL***

4.4 On completion of the Detailed Study, SingTel shall notify the Requesting Licensee whether the Wholesale Dark Fibre Service is available or not.

***CLAUSE 4.5 – MODIFICATION REQUIRED***

4.5 If the Detailed Study identifies that the Wholesale Dark Fibre Service is available, SingTel shall notify the Requesting Licensee of its final approval (**Final Approval**) together with the following information:

- (a) the location of the Fibre Termination Block;
- (b) the estimated Ready For Service date;
- (c) the ~~estimated~~ charges that SingTel would incur in the provision of the Dark Fibre consisting of:
  - (i) patching of intermediate points;
  - (ii) printing of plans; and
  - (iii) provision and installation of the Dark Fibre;
  - (iv) ~~any other charges as reasonably incurred by SingTel for the provisioning of Dark Fibre;~~

***IDA has determined all the applicable charges that SingTel may recover for the provision of Wholesale Dark Fibre Services. SingTel may not provide for any other charges in relation to its provision of Wholesale Dark Fibre Services to the Requesting Licensee, unless SingTel can demonstrate why these separate charges are necessary to recover SingTel's cost.***

**SingTel comments :** Agree to delete (iv) and the reference to estimated where Charges already determined. SingTel shall apply Administrative and Installation Fees upon Final Approval.

- (d) the number of Dark Fibres approved.

***CLAUSE 4.6 – CONDITIONAL APPROVAL***

4.6 The Requesting Licensee shall provide its agreement to proceed with the installation of Wholesale Dark Fibre Service within five (5) Business Days from the Final Approval. If the Requesting Licensee does not respond, its Request for Wholesale Dark Fibre Service will be deemed to be cancelled.

***CLAUSE 5 – MODIFICATION REQUIRED***

**5. DELIVERY**

5.1 Upon receipt of the Requesting Licensee’s agreement under clause 4.6, SingTel shall install the Wholesale Dark Fibre Service within twenty five (25) Business Days ~~or such longer time as SingTel notifies the Requesting Licensee otherwise.~~

*SingTel must commit to installing the Wholesale Dark Fibre Service within the time specified in Clause 5.1. SingTel must delete the phrase “or such longer time as SingTel notifies the Requesting Licensee otherwise” in the second and third lines.*

**SingTel comments : Agreed.**

***CLAUSE 5.2 – CONDITIONAL APPROVAL***

5.2 SingTel will advise the Requesting Licensee when the installation of the Wholesale Dark Fibre Service is completed (**Completion Date**). The Requesting Licensee shall provide its own patch cords to connect to SingTel Fibre Termination Block to their equipment or final destination.

***CLAUSE 6 – CONDITIONAL APPROVAL***

**6. CABLE DIVERSION**

***CLAUSE 6.1 – CONDITIONAL APPROVAL***

6.1 SingTel may carry out fibre diversion at the request of the Government Agencies, private developers and other relevant parties.

- 6.2 The Requesting Licensee acknowledges that the fibre cable length and the routing of the Wholesale Dark Fibre Service may change resulting in the increase of the Dark Fibre attenuation loss. SingTel shall not be held responsible for any such attenuation loss.

#### ***CLAUSE 7 – CONDITIONAL APPROVAL***

##### **7. DARK FIBRE RE-ROUTING**

- 7.1 Subject to clause 7.2, SingTel reserves the right to, at any time, re-route the Dark Fibre without prior notification given to the Requesting Licensee.
- 7.2 Where SingTel proposes to re-route the Dark Fibre, SingTel will use its reasonable endeavours to provide prior notice of such re-routing to the Requesting Licensee.

#### ***CLAUSE 8 – CONDITIONAL APPROVAL***

##### **8. FORECASTS**

- 8.1 On the first day of each Calendar Quarter, the Requesting Licensee shall submit to SingTel forecasts for the following six months, containing the following information:
- (a) the likely number of Requests for Wholesale Dark Fibre Services; and
  - (b) the number of Dark Fibres likely to be requested in such Requests for Wholesale Dark Fibre Services.

#### ***CLAUSE 9 – CONDITIONAL APPROVAL***

##### **9. STANDARD TERMS AND CONDITIONS**

- 9.1 SingTel is responsible for maintenance and administration of the Wholesale Dark Fibre Service under this Schedule.
- 9.2 The Requesting Licensee shall be responsible for patching and maintenance of its patch cords from the SingTel Fibre Termination Block to the Requesting Licensee's

- equipment or final destination. SingTel will be responsible for maintaining the Dark Fibre up to SingTel's Fibre Termination Block.
- 9.3 If in the course of each Parties' own activities, when either Party detects a fault, defect or problem in the other's Party's fibre cable or patch cords, it shall notify the other Party as soon as practicable.
- 9.4 The Requesting Licensee must:
- (a) take such action as a reasonably prudent Licensee would take in relation to the Wholesale Dark Fibre Service;
  - (b) keep the Fibre Termination Block and the fibre cable and its surrounding area free of debris and in a tidy and safe condition;
  - (c) immediately notify SingTel of any damage to the SingTel's fibre cable and Fibre Termination Block consequent upon its act or omission.
- 9.5 When SingTel's and the Requesting Licensee's plant is damaged by a Third Party at the same location, SingTel has priority over the Requesting Licensee to work in SingTel's fibre cable and its associated facilities.
- 9.6 SingTel is not responsible for the maintenance of the Requesting Licensee patch cord and its associated equipment.
- 9.7 The technical information relating to the Wholesale Dark Fibre Service is contained in Annex 7A.1.

## ***CLAUSE 10 – MODIFICATION REQUIRED***

### **10. ACCESS AND APPROVALS REQUIRED**

#### ***CLAUSE 10.1 – CONDITIONAL APPROVAL***

- 10.1 If an end or ends of the Wholesale Dark Fibre Service is located at a SingTel site, the Requesting Licensee must obtain access to that site under Schedule 8 or as otherwise agreed for the purpose of locating its equipment at that site.

### ***CLAUSE 10.2 – CONDITIONAL APPROVAL***

10.2 If an end or ends of the Wholesale Dark Fibre Service are to be or are located at a Requesting Licensee site, the Requesting Licensee must:

- (a) provide SingTel with safe and reasonable access to the Requesting Licensee’s premises as reasonably required to enable SingTel to install, test, inspect, repair, modify and maintain its equipment at the premises in connection with the provision of the Wholesale Dark Fibre Service; and
- (b) not permit any person other than a person reasonably identified as an authorised representative of SingTel to maintain, modify, repair or interfere with such equipment.

### ***CLAUSE 10.3 – CONDITIONAL APPROVAL***

10.3 If an end of the Wholesale Dark Fibre Service is to be or is located at a Customer site, the Requesting Licensee must obtain the permission of the Customer to allow SingTel to physically access the site and deal with equipment in the same manner as permitted at Requesting Licensee’s sites under clause 10.2.

### ***CLAUSE 10.4 – MODIFICATION REQUIRED***

10.4 In addition to clauses 10.2 and 10.3, the Requesting Licensee must use its reasonable~~best~~ endeavours to assist SingTel to access to the fibre cable and its associated facilities.

- (a) at the Requesting Licensee’s cost, co-operating with SingTel so that SingTel is able to access the fibre cable and its associated facilities; and
- (b) obtaining and maintaining any authorisation, permission, licence, waiver, registration or consent from any person necessary for SingTel to access fibre cable and its associated facilities.

***The RIO consistently requires SingTel to make reasonable endeavours, but unreasonably imposes a higher standard on the Requesting Licensee in this instance. SingTel must modify Clause 10.4 by substituting “reasonable endeavours” in place of “best endeavours” in the first line.***



**SingTel comments : Agreed.**

***CLAUSE 11 – MODIFICATION REQUIRED***

**11. PROTECTION AND SAFETY**

***CLAUSE 11.1 – MODIFICATION REQUIRED***

11.1 The Requesting Licensee is responsible for the safe operation of its Network and shall be responsible for the safe operation of the Wholesale Dark Fibre Service and its equipment and shall, so far as reasonably practicable, take all necessary steps to ensure that the Wholesale Dark Fibre Service use and its equipment:

- (a) does not endanger the safety of any person, including the employees, contractors, customers or third persons;
- (b) does not damage, interfere with or cause any deterioration in the operation of SingTel’s Network;

***SingTel must modify Clause 11.1(b) to refer to “physical or technical” harm.***

**SingTel comments : Not agreed. See comments in other schedules. The standard is not absolute in this clause but subject to “all necessary steps”.**

- (c) does not jeopardise the integrity or confidentiality of Communications within the SingTel’s Network; or
- (d) does not threaten the security and accessibility of SingTel’s Dark Fibre.

***CLAUSE 11.2 – MODIFICATION REQUIRED***

11.2 The Requesting Licensee must comply with SingTel’s standard operating procedures in relation to the use of the Wholesale Dark Fibre Service, as amended by SingTel from time to time.

*The RIO must contain a complete statement of the Requesting Licensee's rights and obligations. See Code § 5.3.2. Therefore, SingTel must modify the proposed RIO to include the applicable standard operating procedures.*

**SingTel comments :** Not agreed. SingTel agrees that changes to these procedures will be subject to the approval of the Authority but these procedures may change from time to time.

## **CLAUSE 12 – MODIFICATION REQUIRED**

### **12. PERMITS, LICENSES AND APPROVALS**

12.1 The Parties shall comply with clause 16.4 of the main body of this RIO Agreement in relation to the obtaining of all licences, permits, consents, waivers, authorisations and intellectual property or other rights required for the provision of the Wholesale Dark Fibre Service.~~If it is necessary to obtain any permit, approval or license from any person, governmental, regulatory or relevant authority in relation to work to be performed by the Requesting Licensee or by SingTel under this Schedule, the Requesting Licensee must obtain such permit, approval or license.~~

*In general, each Licensee should be required to obtain the appropriate licences, permits, etc. governing its activities. Each Licensee must reasonably co-operate with the other Licensee in obtaining the licences, permits, etc.*

**SingTel comments :** Agreed. Changed to refer to relevant clause in the main body of the RIO Agreement.

## **CLAUSE 13 – CONDITIONAL APPROVAL**

### **13. REQUESTING LICENSEE RIGHTS**

13.1 The approval and provision of the Wholesale Dark Fibre Service does not vest in the Requesting Licensee any right, title or proprietary interest in the Dark Fibre.

13.2 The Requesting Licensee must not grant a third person a right to use the Wholesale Dark Fibre Service to which the Requesting Licensee has been granted under this Schedule.

## **CLAUSE 14 – MODIFICATION REQUIRED**

*This provision is not commercially reasonable. Consistent with its practice in the retail market, SingTel must offer a minimum licence term of not more than 12 months.*

**SingTel comments :** Agreed to reduce to 12 months.

#### **14. TERM OF SUPPLY**

14.1 The term of supply of a Wholesale Dark Fibre Service shall commence on the date of Final Approval and shall continue for 12 months~~until the date being 18 months after the date of approval of this RIO Agreement.~~

#### **CLAUSE 15 – MODIFICATION REQUIRED**

*The right to suspend the provision of Wholesale Dark Fibre Service should be governed by the suspension provision set out in the main body of the RIO. This includes obtaining IDA’s approval. See Code § 4.4.3. SingTel may specify specific additional instances where it may ask IDA’s permission to suspend the Wholesale Dark Fibre Service.*

**SingTel comments :** Partially agreed. Paragraphs (b) and (c) have been merged as in other Schedules. Paragraph (a) has been retained as equivalent provisions are not contained in the other parts of this Schedule. These suspension rights are otherwise most relevant to this Service and it would not be appropriate for inclusion in the main body of the RIO Agreement which deals more appropriately with the termination and suspension of the whole or large sections of the RIO agreement.

#### **15. SUSPENSION**

15.1 SingTel may suspend the supply of the Wholesale Dark Fibre Service until further notice if:

- (a) in the reasonable opinion of SingTel, it is necessary to suspend the supply of the Wholesale Dark Fibre Service in order for SingTel to carry out repair or upgrading of any equipment or facility forming part of the Dark Fibre; or
- (b) the Wholesale Dark Fibre Service causes or is likely to cause physical or technical harm to any telecommunications network, system or services (whether of SingTel or any other person) including but not limited to a failure, interruption, disruption or

~~congestion occurring in the SingTel Network. the supply of the Wholesale Dark Fibre Service is having, or is likely to have, an adverse network impact on SingTel; or~~

*SingTel must modify Clause 15.1 (b) to refer to “physical or technical” harm.*

**SingTel comments :** Agreed. See reference above as per other Schedules.

- (c) ~~the Requesting Licensee or any of the Requesting Licensee’s Customers do anything, or allow anything to be done, which in SingTel’s reasonable opinion may jeopardise the Dark Fibre.~~

#### ***CLAUSE 16 – MODIFICATION REQUIRED***

*The right to terminate the provision of Wholesale Dark Fibre Service should be governed by the termination provision set out in the main body of the RIO. This includes obtaining IDA’s approval. See Code § 4.4.3. SingTel may specify additional instances where it may ask IDA’s permission to terminate the Wholesale Dark Fibre Service.*

**SingTel comments :** See comments above. As discussed for the other Schedules, these termination events are relevant to the provision of services under this Schedule and should be retained in this Schedule.

#### **16. TERMINATION**

16.1 SingTel may immediately terminate the supply of a Wholesale Dark Fibre Service if:

- (a) the Requesting Licensee is no longer an FBO who has obtained approval from the Authority to acquire the Wholesale Dark Fibre Service on these terms and conditions~~such supplies wireline or broadband services;~~
- (b) the Requesting Licensee is in breach of this Schedule and such breach remains unremedied for a period of five (5) Business Days after receiving notice from SingTel to do so;
- (c) in SingTel’s reasonable opinion, the Requesting Licensee is using the Wholesale Dark Fibre Service in contravention of an applicable law, licence, code, regulation or direction and SingTel has the necessary confirmation from the relevant Governmental

Agencies that the Requesting Licensee is in contravention of the law, licence, code, regulation or direction;

~~(d)~~ the Requesting Licensee's use of the Wholesale Dark Fibre Service is having an adverse Network impact on SingTel;

~~(e)~~(d) the Requesting Licensee's Wholesale Dark Fibre Service is used for a purpose other than for the purpose contemplated under clause 1.1 or is used for resale as prohibited under clause 1.4;

**SingTel comments : These words added because of the removal of the customer reference in clause 1.1. Termination should be permitted if resale is being engaged in.**

~~(f)~~(e) the Requesting Licensee abandons the Wholesale Dark Fibre Service;

~~(g)~~(f) the Dark Fibre has become unsafe or unsuitable for its purpose;

~~(h)~~(g) SingTel's right to own, maintain or operate the Dark Fibre is revoked or terminates or expires; or

~~(i)~~(h) use of the Wholesale Dark Fibre Service causes or is likely to cause physical or technical harm to any telecommunications network, system or services (whether of SingTel or any other person) including but not limited to a failure, interruption, disruption or congestion occurring in the SingTel Network.~~the Requesting Licensee does or allows anything to be done which in SingTel's reasonable opinion may jeopardise the Dark Fibre or the SingTel Network.~~

***SingTel must modify Clause 16.1(i) to refer to "physical or technical" harm.***

**SingTel comments : Agreed as amended above and in other Schedules.**

16.2 If during the term of supply of the Wholesale Dark Fibre Service the Dark Fibre is:

- (a) no longer in use by the Requesting Licensee;
- (b) no longer suitable for use in SingTel's opinion; or
- (c) no longer available to be used as determined by SingTel;

three (3) months' prior notice may be given by SingTel to the Requesting Licensee for termination of the supply of the Wholesale Dark Fibre Service.

16.3 SingTel may give the Requesting Licensee no less than six (6) months' notice at any time during the term of supply of the Wholesale Dark Fibre Service because of the closure of a SingTel co-location site at which the Wholesale Dark Fibre Service terminates. The Requesting Licensee shall bear its own cost associated with the closure of the SingTel site and the termination of the supply of the Wholesale Dark Fibre Service, and the Requesting Licensee shall solely be responsible for making such alternative arrangements as are necessary to continue to provide its customers with services. In the event that the Requesting Licensee requests assistance from SingTel, within thirty (30) Business Days after receiving notice under this clause, to provide an alternative solution to the Wholesale Dark Fibre Service which is being terminated, SingTel shall use its reasonable endeavours to assist the Requesting Licensee in finding suitable alternatives to the Wholesale Dark Fibre that is the subject of termination provided that nothing in this clause shall restrict SingTel's right to terminate under this clause 16 and that the ultimate responsibility to find an alternative lies with the Requesting Licensee.

*SingTel must provide Dark Fibre on reasonable terms and conditions. Notwithstanding the 6 months notification requirement, before SingTel may proceed to close the SingTel co-location site, SingTel must use reasonable endeavours to assist the Requesting Licensee in finding suitable alternatives to the Dark Fibre that is the subject of termination. In addition, SingTel must take reasonable measures to minimise disruption to the service provisioning by the Requesting Licensee to its customers using the Dark Fibre that is the subject of termination.*

**SingTel comments : Partly agreed. See comments in other Schedules. SingTel agrees to use reasonable endeavours to find alternatives but not to minimise Customer disruption. Requesting Licensee has been provided adequate notice to do this.**

## **CLAUSE 17 – CONDITIONAL APPROVAL**

### **17. EXPIRY OF TERM**

#### **CLAUSE 17.1 – CONDITIONAL APPROVAL**

17.1 Upon expiry or termination of the supply of a Wholesale Dark Fibre Service, the Requesting Licensee must have discontinued the use of the Wholesale Dark Fibre Service within twenty (20) Business Days of expiry or termination.

***CLAUSE 17.2 – CONDITIONAL APPROVAL***

17.2 Where the Requesting Licensee fails to discontinue the use of the Wholesale Dark Fibre Service, SingTel shall disconnect the Wholesale Dark Fibre Service and the Requesting Licensee shall pay any costs associated with its disconnection.

***CLAUSE 17.3 – CONDITIONAL APPROVAL***

17.3 Upon termination of the supply of Wholesale Dark Fibre Services, the following Charges shall be recovered from the Requesting Licensee:

- (a) charges for the remainder of the term of the Wholesale Dark Fibre Service;
- (b) outstanding pro-rata site preparation charges.

***CLAUSE 17.4 – CONDITIONAL APPROVAL***

17.4 If this Schedule or Agreement is terminated for any reason, any supply of Wholesale Dark Fibre Service is also terminated.

***CLAUSE 18 – CONDITIONAL APPROVAL***

**18. SUB-LICENSING**

18.1 The Requesting Licensee must not assign its rights in respect of or sub-let the use of the Wholesale Dark Fibre Service provided under this Schedule.

## ***ANNEX 7A-1 – CONDITIONAL APPROVAL***

### **ANNEX 7A-1 TECHNICAL INFORMATION OF DARK FIBRE**

1. **High Loss** – Data errors experienced during data transmission. Threshold Level - 25 dB at 1310nm from point to point.

2. **Fibre Discontinuity** – Data errors experienced due to fibre break or cut.

3. **Technical Specification :**

(i) Single mode fibre is used.

(ii) In accordance to ITU-T Recommendations G.652.

(iii) Attenuation Co-efficient:

The attenuation co-efficient of the single-mode optical fibre shall be less than 0.4dB/km at 1310 nm wavelength. The attenuation co-efficient of the fibre operating at 1550 nm wavelength shall be less than 0.3dB/km. An attenuation co-efficient function of operating wavelengths is in the region from 800 - 1600nm for single mode fibre. The peak attenuation co-efficient in the OH absorption band in the region of 1380nm shall not exceed 1dB.

(iv) Fibre Dispersion:

Chromatic Dispersion Co-efficient - The maximum chromatic dispersion co-efficient in the wavelength region from 1285nm to 1330nm shall be less than 3.5 ps/nm.km. The maximum magnitude of the total dispersion co-efficient at 1550nm wavelength shall be less than 18 ps/nm.km.



**ANNEX 7A-2 – CONDITIONAL APPROVAL**

**ANNEX 7A-2 FAULT RESTORATION PROCEDURE FOR DARK FIBRE**

1. COMMON FAULT DESCRIPTION

<b>Fault Type</b>	<b>Description</b>
High Loss	a) Termination Fault at Requesting Licensee premise b) Termination Fault at SingTel Telephone Exchange c) Termination Fault at Fibre Node (Building MDF)
Fibre Discontinuity	a) Fibre breaks at Requesting Licensee premise b) Fibre breaks at SingTel Telephone Exchange c) Fibre breaks at Fibre Node (Building MDF) d) Fiber breaks outside building

Note: Termination Faults include but not limited to Connector fault, Patch-cord fault, Coupling problems, pigtails, etc.

2. AVERAGE SERVICE RESTORATION

Fault Description	Average Restoration Time	
	Office Hours	After Office Hours
High Loss	6 Hours	8 Hours
Fibre Discontinuity	8 Hours	12 Hours

3. CHECK LIST FOR FAULT REPORTING

Items	Description / Remarks
Identification of faulty segments	Fault report should identify the segment of the suspected dark fibre. Segment refers to the link between any two of the termination points at different locations.
Essential information	Circuit/Link reference, location, time of fault occurrence, etc.
High Loss Fault	To provide the Loss figure and the type of measurement.
Contact person	To provide contact person name and contact number for purpose of fault updates.
Access for SingTel staff	Security clearance for SingTel staff into Requesting Licensee's premises for the purpose of fault isolation.
Fault Management Centre (FMC)	Tel: 1800-7880022

Note: Fault Docket shall be issued upon fault reporting by the customer. Docket shall be the reference for all communication between customer and FMC.

**ANNEX 7A-3 REMEDIES FOR INSTALLATION CHARGES**

For delayed provisioning, the credit to the Requesting Licensee will be calculated as follows:

<b><u>Missed delivery date by</u></b>	<b><u>Credit calculation</u></b>
<u>1 Business Day</u>	<u>5% of Installation Charge</u>
<u>2 Business Days</u>	<u>10% of Installation Charge</u>
<u>3 Business Days</u>	<u>20% of Installation Charge</u>
<u>4 Business Days</u>	<u>30% of Installation Charge</u>
<u>5 Business Days</u>	<u>40% of Installation Charge</u>
<u>More than 5 Business Days</u>	<u>50% of Installation Charge</u>