

SCHEDULE 8C

CO-LOCATION AT SATELLITE EARTH STATION

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ANNEX 8C.1

SCHEDULE 8C

CO-LOCATION AT SATELLITE EARTH STATION

1. GENERAL

- 1.1** This Schedule sets out the terms and conditions under which SingTel will provide the Requesting Licensee with Co-Location Space and physical access thereto at Satellite Earth Stations, subject to clause 1.2.
- 1.2** For access to Co-Location Space at Satellite Earth Stations, the Requesting Licensee must have acquired or entered into the following before SingTel will provide such access at those places:
- (a) a Satellite Transponder Lease Agreements (TLA) or Inmarsat Land Earth Station Operator Agreements (LESOA) with the relevant satellite owner; or
 - (b) any such licenses as required from time to time to operate satellite services.
- 1.3** For the avoidance of doubt, the connection service between the Requesting Licensee's Co-Location Equipment at the Co-Location Space to the related satellite systems is not covered in this Schedule. SingTel shall offer to provide the connection service to the Requesting Licensee pursuant to a tariff filed with and approved by the Authority under Section 5.8.3 of the Code.
- 1.4** Except as provided in this Schedule, the Requesting Licensee shall provide all installation materials and manpower needed for the installation of its Co-Location Equipment.
- 1.5** The list of Co-Location Sites as at the date of this RIO Agreement for Satellite Earth Stations, is listed in Annex 8C.1.
- 1.6** SingTel may vary the Co-Location Sites listed in Annex 8C.1 from time to time with the approval of the Authority.
- 1.7** SingTel shall not be responsible for any damage to the Requesting Licensee's Co-Location Equipment caused by fire, water leakage, air-conditioning/mechanical ventilation failure, power fluctuation/interruption, or anything beyond SingTel's

control at the Co-Location Site other than to the extent that it is the result of a grossly negligent, wilful or reckless breach of this RIO Agreement by SingTel.

- 1.8** This Schedule 8C only applies to Requesting Licensees who are FBOs.
- 1.9** (a) The timeframes in this Schedule relating to pre-provisioning work to be undertaken by SingTel under clauses 3.3, 4.3 and 4.4 (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) For the avoidance of doubt, a failure to meet these timeframes caused by events outside SingTel's reasonable control does not constitute a material breach of this RIO Agreement.
- 1.10** (a) If SingTel fails to meet any timeframe in this Schedule relating to provisioning work to be undertaken by SingTel under clause 5.2, 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 the recurring charges payable for the delayed services over a period equal to the period of delay.
- (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.
- 1.11** For the avoidance of doubt, any Requesting Licensee eligible to co-locate equipment at a Satellite Earth Station pursuant to this Schedule, may use that equipment to access its own space segment capacity or to access the space segment capacity of a Third Party (including but not limited to another licensee) for the purpose of providing a competitive backhaul service to that Third Party.
- 2. AVAILABILITY AT A CO-LOCATION SITE**
- 2.1** For the purposes of this Schedule, SingTel may have regard to the following when assessing the availability of Co-Location Space at a Co-Location Site:

- (a) SingTel's reasonably anticipated requirements in the next two (2) years for space at the Co-Location Site for the provision to itself and its Customers;
- (b) SingTel's reasonably anticipated requirements in the next two (2) years for space at the Co-Location Site for operation and maintenance purposes;
- (c) the Requesting Licensee and other Third Party requirements (including for operation and maintenance purposes) which have been ordered but not yet delivered or which have been provided;
- (d) security and confidentiality requirements imposed on SingTel by Governmental Agencies;
- (e) whether SingTel has plans or otherwise proposes to decommission the Co-Location Site.

3. ORDERING AND PROVISIONING PROCEDURE

3.1 The Requesting Licensee shall submit its request for Co-Location Space at a Co-Location Site listed in Annex 8C.1 using a Co-Location Request Form in the form of Attachment G containing the following information:

- (a) the Co-Location Site listed in Annex 8C.1 at which Co-Location Space access is sought;
- (b) confirmation that Co-Location Space is sought at that Co-Location Site for the purpose of accessing space segment capacity together with evidence of the satisfaction of the condition in clause 1.2;
- (c) the type of Co-Location Equipment proposed to be installed at that Co-Location Site;
- (d) the space (subject to clause 3.2) and power requirements;
- (e) the floor loading of the Co-Location Equipment;
- (f) the type of optical fibre cable to be used, and the diameter of the fibre cable; and
- (g) the Requesting Licensee's contact details.

- 3.2** The Requesting Licensee must request space in a Co-Location Site of a minimum of one (1) square metre to a maximum of ten (10) square metres.
- 3.3** SingTel shall acknowledge receipt of the Co-Location Request under clause 3.1 within three (3) Business Days and indicate whether the Co-Location Request is preliminarily accepted on a non-binding basis (subject to the completion of a Project Study under clause 4) or rejected. If the Co-Location Request is rejected, SingTel will provide the reasons for such rejection to the Requesting Licensee. SingTel shall recover the Co-Location Request fee for the reasonable cost of processing the Co-Location Request as provided Schedule 9, irrespective of the outcome of the Co-Location Request.
- 3.4** SingTel may reject a Co-Location Request if:
- (a) the Requesting Licensee is not an FBO; or
 - (b) the Co-Location Request is not in the prescribed form; or
 - (c) the Co-Location Request does not contain the required information; or
 - (d) the Requesting Licensee has not satisfied clause 1.2; or
 - (e) the space requested is not within the limits prescribed by clause 3.2; or
 - (f) there is no available space at the Co-Location Site as determined in accordance with clause 2; or
 - (g) acceptance of the Co-Location Request will give rise to significant health, safety, technical or engineering issues.
- 3.5** The Requesting Licensee acknowledges that the Co-Location Space allocated and the actual placement of the Co-Location Equipment shall be determined by SingTel. SingTel is not obligated to place the same Requesting Licensee's Co-Location Equipment adjacent to each other, provided that SingTel will use its reasonable endeavours to accommodate any reasonable request for adjacent placement made by the Requesting Licensee.

4. PROJECT STUDY

- 4.1** The Requesting Licensee may request in writing confirmation of the preliminary acceptance of the Co-Location Request by way of a Project Study within five (5) Business Days from the date of the preliminary acceptance of a Co-Location Request by SingTel, together with an acceptance of the Charges for the Project Study. The provision of such a request by the Requesting Licensee shall constitute its agreement to pay the Project Study fee. If the Requesting Licensee does not request confirmation within this time, the Co-Location Request will lapse.
- 4.2** The Project Study normally entails at least two (2) site visits:
- (a) a preliminary site survey by SingTel to determine and assess the space, power, earth, fibre and cable routing and any Site Preparation Works required for Co-Location; and
 - (b) a joint site survey with the Requesting Licensee.
- 4.3** Following notification by the Requesting Licensee under clause 4.1, SingTel shall schedule the preliminary site survey and a joint survey. SingTel shall complete the Project Study within fifteen (15) Business Days of receipt of the notice in clause 4.1.
- 4.4** Following completion of the Project Study, SingTel shall provide the Requesting Licensee with the following information:
- (a) the estimated Charge for the Site Preparation Work, along with an outline of the major elements of the Site Preparation Work to be undertaken by SingTel;
 - (b) the location of the designated Lead-in Manhole and the direction of the Connection Duct;
 - (c) the estimated length of fibre cable required from the Lead-in Manhole to the Co-Location Space;
 - (d) the number of Business Days expected to complete the Site Preparation Work.
- 4.5** SingTel shall be entitled to levy and receive the Project Study fee provided in Schedule 9 irrespective of whether the Requesting Licensee proceeds with the Co-Location Request after completion of the Project Study.

5. SITE PREPARATION WORK

- 5.1** Within five (5) Business Days from the date of notification of the result of the Project Study under clause 4.4, the Requesting Licensee shall confirm in writing that it wishes to proceed with co-location and it agrees to pay the estimated Charges for Site Preparation Work.
- 5.2** SingTel shall complete the Site Preparation Work within the period advised under clause 4.4. If SingTel is unable to complete the Site Preparation Work within the advised period, SingTel shall notify the Requesting Licensee of a revised date for completion.
- 5.3** As part of the Site Preparation Work, SingTel shall construct two (2) 110mm Connection Ducts of one (1) metre from the designated Lead-in Manhole in the direction indicated in clause 4.4(b) for the Requesting Licensee to connect its ducts. SingTel shall construct the duct seal for the Connection Ducts constructed in SingTel's Lead-in Manhole.
- 5.4** Upon completion of the Site Preparation Work, SingTel will notify the Requesting Licensee and request the Requesting Licensee to attend the Co-Location Site for a final site inspection of the Co-Location Space.

6. INSTALLATION AND MAINTENANCE OF CO-LOCATION EQUIPMENT IN CO-LOCATION SPACE

- 6.1** The Parties agree to comply with the following procedures in connection with the installation and maintenance of Co-Location Equipment:
- (a) the Co-Location Equipment Installation and Maintenance Procedures at Attachment A and as amended by SingTel from time to time;
 - (b) the Standard Operating Procedures at Attachment B and as amended by SingTel from time to time; and
 - (c) the Physical Access Procedures at Attachment C and as amended by SingTel from time to time.
- 6.2** For any installation at Sentosa Satellite Earth Station, the Requesting Licensee must have obtained the relevant licence or permit from Sentosa Development Corporation before the Requesting Licensee can commence work at the site. SingTel will use its

reasonable endeavours to assist a Requesting Licensee in obtaining any such necessary licence or permit.

7. TERM OF LICENCE

7.1 A licence of each Co-Location Space under this Schedule shall commence on the date the Requesting Licensee confirms its acceptance of the Charges for Site Preparation Work at the Co-Location Site and continues for two (2) years unless terminated earlier in accordance with this Schedule.

7.2 SingTel may terminate the licence of Co-Location Space at any time with immediate effect by giving notice to the Requesting Licensee if the Requesting Licensee fails to complete the installation of its Co-Location Equipment within thirty (30) Business Days under Attachment A. If the Requesting Licensee's failure to complete installation is attributable to circumstances beyond the Requesting Licensee's reasonable control, SingTel will grant a reasonable extension of time for installation to the Requesting Licensee at the Requesting Licensee's request. A Requesting Licensee's request under this clause must describe the circumstances beyond the Requesting Licensee's control and such request must be received prior to the expiry of the aforementioned thirty (30) Business Day period.

7.3 The Requesting Licensee may terminate a licence of Co-Location Space under this Schedule by giving SingTel no less than six (6) months written notice. Termination of the licence will take effect from the date specified in the notice.

7.4 Subject to clause 13.2 of the RIO Agreement where SingTel is the party terminating, either Party (**Terminating Party**) may immediately terminate a licence of Co-Location Space at a Co-Location Site if the other Party is in breach of this Schedule and such breach remains unremedied for a period of five (5) Business Days after receiving written notice from the Terminating Party to do so.

7.5 Subject to clause 13.2 of the RIO Agreement, SingTel may immediately terminate a licence of Co-Location Space at a Co-Location Site if:

- (a) the Requesting Licensee is no longer an FBO;
- (b) in SingTel's reasonable opinion, the Requesting Licensee is using the Co-Location Space 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 applicable law, licence, code, regulation or direction;

- (c) the licence of Co-Location Space causes or is likely to cause physical or technical harm to the SingTel Network or Co-Location Site, including but not limited to causing damage, interfering with or causing deterioration in the operation of the SingTel Network;
- (d) the Co-Location Equipment is used for a purpose other than for the purpose contemplated under clauses 1.2 and 1.11;
- (e) the conditions in clause 1.2 are no longer satisfied;
- (f) the Requesting Licensee removes or abandons its Co-Location Equipment;
- (g) the Requesting Licensee locates equipment other than Co-Location Equipment in the Co-Location Space;
- (h) the Co-Location Space has become unsafe or unsuitable for its purpose; or
- (i) SingTel's right to own, maintain or operate the Co-Location Site is revoked or terminates or expires.

7.6 SingTel may give the Requesting Licensee no less than six (6) months' notice at any time during the term that the licence at a Co-Location Space is to be terminated because of the closure of that Co-Location Site. The Requesting Licensee shall bear its own cost associated with the closure of a Co-Location Site 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 a notice under this clause to provide an alternative solution to the Co-Location Space which is being terminated SingTel will use its reasonable endeavors in providing such assistance. SingTel will take reasonable measures to minimise disruptions to the Requesting Licensee in the provision of its services to Customers arising from the termination of the Co-Location Site. The Requesting Licensee shall remain solely responsible for making any alternative arrangements as are necessary to continue to provide its Customers with services. Nothing in this clause prevents SingTel from terminating the licence at a Co-Location Space at the end of the six (6) month notice period under this clause provided that SingTel has complied with this clause.

7.7 Upon expiry or termination of the licence of Co-Location Space:

- (a) the Requesting Licensee must discontinue the use of its Co-Location Equipment and remove its Co-Location Equipment from the Co-Location Site within thirty (30) Business Days after the expiry of the Requesting Licensee's licence or from the date of termination of Co-Location Space, whichever is the earlier; and
- (b) SingTel shall reinstate the Co-Location Space and recover/reinstate all cables/supports/opening and recover the reasonable cost of such reinstatement from the Requesting Licensee.

7.8 If the Requesting Licensee fails to discontinue the use of its Co-Location Equipment and remove its Co-Location Equipment under clause 7.7, SingTel shall remove the Requesting Licensee's Co-Location Equipment and reinstate the Co-Location Site to its original condition. The Requesting Licensee shall pay to SingTel all reasonable costs associated with the work undertaken by SingTel including the disposal of the Co-Location Equipment. In such event, the Requesting Licensee shall have no claim whatsoever, against SingTel.

7.9 Upon termination of the licence of Co-Location Space, any physical access granted to the Co-Location Site shall also be terminated.

7.10 Upon termination by the Requesting Licensee under clause 7.3 or by SingTel under clauses 7.2, 7.4 or 7.5 (except clause 7.5(h) and (i)) of a licence of Co-Location Space prior to the expiry of the licence term referred to in clause 7.1, the following Charges shall be recovered from the Requesting Licensee but only where SingTel has, at its discretion, constructed additional Co-Location Space and has not recovered the full cost of Site Preparation Work from the Requesting Licensee from upfront Site Preparation Work Charges:

- (a) licence Charges for the remainder of the original licence term; and
- (b) outstanding pro-rata Site Preparation Work Charges.

8. SUB-LICENSING

8.1 The Requesting Licensee must not assign the licence in respect of or sub-let the Co-Location Space at the Co-Location Site.

9. ADDITIONAL CO-LOCATION SPACE AND CO-LOCATION EQUIPMENT

- 9.1** If the Requesting Licensee wishes to replace, modify or rearrange existing Co-Location Equipment in the Co-Location Space or to install additional Co-Location Equipment in the Co-Location Space, the Requesting Licensee must submit a request in respect of the replacement, modification, rearrangement or additional Co-Location Equipment.
- 9.2** Requests for additional Co-Location Space at Co-Location Sites shall be treated as a separate Co-Location Request and the process of ordering and provisioning in clause 3 shall apply.

Annex 8C.1

List of Possible Co-Location Sites at Satellite Earth Station

Serial Number	Description of Co-Location Site
1	Bukit Timah Satellite Earth Station
2	Sentosa Satellite Earth Station
3	Seletar Satellite Earth Station