



17 June 2013

Info-communications Development Authority of Singapore
10 Pasir Panjang Road
#10-01 Mapletree Business City
Singapore 117438

Attention: Ms Aileen Chia
Deputy Director-General (Telecoms & Post)

Dear Ms Chia

CONSULTATION ON INTERCONNECTION OFFER FOR THE PROVISION OF SERVICES ON THE NEXT GENERATION NATIONWIDE BROADBAND NETWORK – NETWORK COMPANY PROPOSED CO-LOCATION SPACE & SERVICE IN CO-LOCATION ROOM 1 & CO-LOCATION ROOM 2

1. Singapore Telecommunications Ltd (**SingTel**) is pleased to respond to the Info-communications Development Authority of Singapore (**IDA**) request for comments on OpenNet Pte Ltd's (**OpenNet**) proposed new Schedule 12 dated 27 May 2013 (**Consultation**).
2. SingTel submits herein its comments to the Consultation in the attached Annex A.
3. Please do not hesitate to contact us if you have any queries.

Yours sincerely

A handwritten signature in black ink, appearing to be "Sean Slattery", written over the "Yours sincerely" text.

Sean Slattery
Vice President
Regulatory & Interconnect

Annex A: SingTel’s Comments on OpenNet’s Proposed Co-Location Space & Service in Co-Location Room 1 & Co-Location Room 2

No.	Schedule reference	Clause reference	SingTel’s comments and recommendations
1	Sch 12	3.3(A) 3.3(B)	The information required to be provided by the Requesting Licensee in a Co-Location Request should be aligned across clauses 3.3(A) and 3.3(B) e.g. clause 3.3(B)(j) is missing from clause 3.3(A), difference in drafting between clauses 3.3(A)(h) and 3.3(B)(h).
2	Sch 12 Sch 12, Annex 12E	3.3 (f) 1.5.3 ii	The proposed power allocation of 3kW per rack is too low. Each OLT rack will require up to 4kW of power in order to support 2 high density OLTs per rack. High density OLT will be necessary in view of the limited amount of space available at OpenNet’s Central Offices.
3	Sch 12	8.2	<p>Proposed drafting amendment for clarity:</p> <p><i>“However, at all times, OpenNet is entitled to not provision or cease provisioning the Bridging Connection Service as described in this clause 8 where such Bridging Connection Service will:</i></p> <p><i>(a) <u>such Bridging Connection Service will</u> give rise to significant health, safety, technical or engineering issues; or</i></p> <p><i>(b) the Requesting Licensee has committed a material breach of the ICO Agreement or this Schedule. Furthermore, OpenNet’s proposal offers neither opportunity for both parties to jointly verify the Requesting Licensee’s requirements nor any alternatives for the Requesting Licensee whose request for Co-Location Space is rejected or is forced to relinquish the Co-Location Space it has already acquired.”</i></p>
4	Sch 12, Annex 12B	General	<p>OpenNet should indicate which floor the Co-Location Rooms are located in each Central Office.</p> <p>[Start of Commercial-in-Confidence] [End of Commercial-in-Confidence]</p>
5	Sch 12, Annex 12E	1.1.2 (a) & (b)	The reference to “19 inch” or “24 inch” is unnecessary and should be removed. “19 inch” and “24 inch” refer to the dimensions of railings within a rack. This is transparent to OpenNet. OpenNet should only be concerned with the dimensions of the physical rack. The inner dimensions of equipment the Requesting

No.	Schedule reference	Clause reference	SingTel's comments and recommendations
			Licensee installs within the rack is irrelevant to OpenNet and solely at the Requesting Licensee's discretion.
6	Sch 12, Annex 12E	1.5.1	OpenNet shall specify the diameter of the power cable and ensure that the cable size is adequate to handle the maximum current supplied by OpenNet.
7	Sch 12, Annex 12E	1.5.2	<p><u>OpenNet should offer 1+1 redundancy for each power feed instead of 1+1 redundancy per rack.</u></p> <p>The offer by OpenNet to provide only 1 redundant power circuit per rack is insufficient. Each equipment rack would have at least 2 equipment chassis e.g. 2 OLTs per rack. Each chassis requires its own 1+1 redundant power feed. OpenNet should therefore offer 1+1 redundancy for each power feed requested by the Requesting Licensee.</p> <p><u>OpenNet should offer 1+1 redundant power for all Co-location Rooms</u></p> <p>OpenNet should offer 1+1 redundant power feed in Co-Location Room 1 similar to what is provided for Co-Location Room 2. Requesting Licensees would require power redundancy and resiliency in Co-Location Room 1 no different from Co-Location Room 2. It is especially critical that OpenNet provides 1+1 redundant DC power in Co-Location Room 1 given that Requesting Licensees are unable to install additional rectifiers to provide its own redundant power supply due to space constraints in Co-Location Room 1.</p>
8	Sch 12, Annex 12E Sch 15	1.5.2(a) 12.3.1	Clause 1.5.2(a) of Annex 12E, Schedule 12 states the voltage of direct current to be 48V. As such, the supply voltage used for the computation of the monthly recurring power charge should be 48V instead of the stated 54V in Schedule 15.