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14 September 2011

Ms Aileen Chia
Deputy Director-General (Telecoms & Post)
Infocomm Development Authority of Singapore
10 Pasir Panjang Road
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Singapore 117438

By email: IDA_ILO@IDA.GOV.SG

Dear Ms Chia

**PUBLIC CONSULTATION ON THE SECOND REVIEW OF SINGAPORE
TELECOMMUNICATIONS LIMITED'S REFERENCE INTERCONNECTION OFFER**

1. We refer to the above public consultation document issued by the Authority on 1 August 2011.
2. StarHub Ltd is grateful for the opportunity to comment on the Singapore Telecommunications Limited's Reference Interconnection Offer. Enclosed is our response to the consultation.
3. Please do not hesitate to contact me, should anything in this letter require clarification or elaboration.

Yours sincerely
For and on behalf of
StarHub Ltd

A handwritten signature in blue ink, appearing to be "TG" with a stylized flourish extending to the right.

Tim Goodchild
Head (Government & Strategic Affairs)

**PUBLIC CONSULTATION ON THE SECOND REVIEW OF
SINGAPORE TELECOMMUNICATIONS LIMITED'S
REFERENCE INTERCONNECTION OFFER**

**Submission by the StarHub Group to the
Info-communications Development Authority of Singapore**

14 September 2011

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Statement of Interest

StarHub Ltd is a Facilities Based Operator (FBO) in Singapore, having been awarded a licence to provide public basic telecommunication services (PBTS) by the Telecommunications Authority of Singapore (TAS) (the predecessor to IDA) on 5 May 1998.

Nucleus Connect Pte Ltd, a wholly-owned subsidiary of StarHub Ltd, incorporated on 14 April 2009, is the appointed Operating Company of the Next Generation Nationwide Broadband Network.

StarHub Mobile Pte Ltd is a wholly-owned subsidiary of StarHub Ltd. StarHub Mobile Pte Ltd was issued a licence to provide public cellular mobile telephone services (PCMTS) by the TAS on 5 May 1998. StarHub launched its commercial PBTS and PCMTS services on 1 April 2000.

StarHub Ltd acquired CyberWay (now StarHub Internet Pte Ltd) for the provision of Public Internet Access Services in Singapore on 21 January 1999.

In July 2002, StarHub Ltd completed a merger with Singapore Cable Vision to form StarHub Cable Vision Ltd. StarHub Cable Vision Ltd holds a FBO licence and offers broadband and cable TV services.

StarHub Online Pte Ltd is a wholly-owned subsidiary of StarHub Ltd. StarHub Online Pte Ltd was issued a licence to provide Public Internet Access Services in Singapore on 22 February 2005.

This submission represents the views of the StarHub group of companies, namely, StarHub Ltd, StarHub Mobile Pte Ltd, StarHub Internet Pte Ltd, StarHub Online Pte Ltd and StarHub Cable Vision Ltd.

1. Introduction

StarHub welcomes the opportunity to provide its comments to the Authority's public consultation on the second review of Singapore Telecommunications Limited's (SingTel) Reference Interconnection Offer (RIO). SingTel's RIO remains an important instrument to facilitate rapid adoption of reasonable interconnection agreements between SingTel and other telecom operators, to expedite market entry, and to promote effective and sustainable competition.

StarHub has reviewed the revised RIO proposed by SingTel and would provide its comments in the following section.

2. Specific Responses

Schedule 4B – Submarine Cable Connection Service

Annex 4B.5

StarHub understand that the APCN Cable System has been decommissioned. Therefore, the APCN Cable System should no longer be listed under the Group B Cable Systems.

Schedule 5A – Licensing of Lead-in Duct and Lead-in Manholes

Clause 1.1

SingTel has made modifications to Schedule 5A, so that SingTel will provide a Requesting Licensee with:

- (i) a licence for the use of Building Lead-in Ducts and Lead-in Manholes; or
- (ii) a licence for the use of Building Lead-in Ducts without Lead-in Manholes in circumstances where SingTel does not own the associated Lead-in Manholes and the Requesting Licensee has acquired access to the Lead-in Manholes from a third party.

StarHub is concerned by the considerable uncertainty that option (ii) would generate. It is important for the Authority or SingTel to provide greater clarity how option (ii) case will be addressed going forward, so that FBOs can understand the implications and ways to acquire access to the Lead-in Manholes from a third party. If a licensee can only access the lead-in duct, but cannot access the lead-in manhole, this is tantamount to

refusal to provide entry. The licensee will be unable to serve customer in the building in question.

StarHub would also highlight that there may be circumstances where a Requesting Licensee is prevented from deploying its own pipeline and manholes to the Building Lead-in Ducts and Lead-in Manholes. For example, a building owner may refuse to allow a Requesting Licensee from deploying its own pipeline and manholes within the building owner's compound, as there are already existing pipeline and manholes connected to the Building Lead-in Duct and Lead-in Manhole. Therefore, we would seek further clarity from the Authority whether the Requesting Licensee is expected to acquire access to existing pipeline and manholes owned by SingTel or third party at regulated rates. We would also seek further clarity from the Authority whether a Requesting Licensee is able to acquire access to the Lead-In Manholes owned by a third party at regulated rates.

Schedule 8A – Co-location for Point of Interconnection (POI)
Schedule 8B – Co-location for Point of Access (POA)
Schedule 8D- Co-location at Submarine Cable Landing Station

Access to Mandated Services offered by Mandated Licensees at SingTel's Exchange Buildings (Schedule 8A and 8B)

In the Authority's consultation on SingTel's RIO earlier this year, one respondent suggested that an obligation should be imposed on licensees (offering mandated services) to offer physical interconnection. StarHub has concerns over this approach, as this could distort level playing field between licensees. In the decision issued by the Authority in June 2011, StarHub understands that the Authority was of the view that it was not appropriate to address this matter under the SingTel's RIO. Should the Authority decide to review this matter, StarHub would provide its comments on this matter.

Clause 3.3 (Schedule 8A), Clause 3.3 (Schedule 8B) and Clause 3.4 (Schedule 8D)

Under the above schedules, SingTel has proposed that:

"The Requesting Licensee must ensure that its Co-Location Equipment at the Co-Location Space does not exceed a heat load limit of 900 watts per square metre of its Co-Location Equipment footprint."

StarHub is very concerned with this clause. It is unclear why SingTel imposes such heat load limit. StarHub understands that current Co-location Equipment would typically generate heat load ranging from 3,000 – 6,000 watts per square metre. StarHub also understands that new Co-location Equipment could even run on higher power

consumption and hence generate higher heat load. Therefore, SingTel's proposed requirement will impede FBOs from obtaining Co-location Space in SingTel's exchanges. It is critically important for SingTel to provide Co-location Space that is fit-for-purpose. By setting an artificially low heat load limit on Requesting Licensees, SingTel is failing to provide a fit-for-purpose space, and is seeking to impose additional costs on Requesting Licensees.

Clause 6.3 (Schedule 8A), Clause 6.4 (Schedule 8B) and Clause 6.2 (Schedule 8D)

Under the above schedules, SingTel has proposed that:

"Where any diversion or maintenance of existing cable trays or ladders used for the purpose under this Schedule requires the installation of new cable trays or ladders within the SingTel Exchange Building, the affected Requesting Licensees will bear the costs associated with such installation, proportionately based on each Requesting Licensee's usage."

StarHub is very concerned with this clause, as there would be cables carrying live customer traffic. As such, unilateral action by SingTel is unwarranted and inappropriate. It is also unclear under what circumstances such scenario will arise. We submit that where any diversion or maintenance of existing cable trays or ladders is required, SingTel should consult the affected Licensees on the diversion or maintenance works and the cost which parties have to bear. This would prevent any unnecessary service disruption and disputes with SingTel.

Schedule 8D, Clause 1.2

Under Clause 1.2, SingTel has proposed that:

"The Co-Location Space is solely for the purpose of the Requesting Licensee to, either:

- (a) access and use its cable system within the Submarine Cable Landing Station; or*
- (b) provide backhaul services to one or more other Licensees who:*
 - (i) hold an Indefeasible Right of Use (IRU) to access their acquired capacity of the relevant Cable System;*
 - (ii) hold a Long Term Leased Capacity to access their leased capacity in the relevant Cable System; and/or*
 - (iii) own landed submarine cable system for access to their own capacity of the relevant Cable System."*

We understand that some FBOs who have Co-location Equipment in the Submarine Cable Landing Station and connect to their submarine cable capacity but would still require backhaul from third parties to bring the capacity from Submarine Cable Landing Station to elsewhere in Singapore.

We would like to seek the Authority's confirmation that a Requesting Licensee who has Co-location Equipment in the Submarine Cable Landing Station and backhaul services is able to connect to another FBO's Co-location Equipment at the same premise and provide backhaul services to that FBO.

3. Conclusion

StarHub welcomes the opportunity to provide our comments to the Authority's public consultation on the second review of SingTel's RIO. We would be grateful if the Authority could provide greater clarity on the issues raised by StarHub. This would ensure that the issues to be faced by FBOs, in implementing the RIO agreement with SingTel, are minimised.

StarHub is grateful for the opportunity to comment on this matter.

StarHub Ltd
14 September 2011