REVIEW OF INTERNAL WIRING FRAMEWORK

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

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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 Limited 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 Ltd and StarHub Cable Vision Ltd.

1. Introduction

StarHub welcomes the opportunity to provide comments to the Authority's public consultation on the Internal Wiring framework.

Internal wiring is an important element of a telecommunication network. The use of good quality (and properly installed) internal wiring will ensure that end-users enjoy a good service experience in the broadcasting / telecommunication services that are delivered over that wiring.

Given that services are now commonly provided to end-users in a multi-cable environment, StarHub supports the Authority's proposal to revise the Internal Wiring Framework such that it applies to twisted-pair, coaxial, structured, and optical fibre cables. The requirements for installers to possess the necessary certifications and licenses from the Authority to carry out internal wiring installation will also ensure that we have good quality internal wiring within an end-user's premise, thereby minimising any service performance issues to the end-user.

StarHub's specific comments on the Internal Wiring Framework are set out in the following section.

2. Specific Responses

Proposed Revision to Scope of IW Framework

Question 1: IDA invites views and comments on the proposed revisions to the IW Framework in respect of its application to coaxial cables, structured cables and optical fibre cables, in addition to twisted-pair cables.

StarHub supports the Authoirty's proposal to restructure and revise the IW Framework such that it applies to twisted-pair, coaxial, structured, and optical fibre cables.

Question 2: IDA invites views and comments on the proposal to only license IW Work installers who have: (a) passed the relevant courses approved by IDA; or (b) possess the necessary certification from the PTLs.

StarHub supports the Authority's proposal to license IW work installers who have passed the relevant courses approved by the Authority or possess the necessary certification from the PTLs. StarHub would welcome the opportunity to participate in the assessment of the courses that are necessary for the qualification of IW work installers.

Proposed Revisions to Certification Process under COPIF

Question 3: IDA seeks views and comments on the intention to retain the requirement to obtain readiness certification for coaxial cables and optical fibre cables under COPIF 2013 even if such cables have been installed by licensed installers/contractors.

StarHub agrees with the Authority's assessment that the requirement to obtain readiness certification should be retained. This will minimise inconvenience and service impact to end-users. The Authority may review the situation after the revised IW Framework come into effect, to assess whether the requirement to obtain readiness certification is still necessary.

Proposed Revisions to IW Work Licensing Structure

Question 4: IDA invites views and comments on the proposed revisions to the IW Work licence structure:

- ***to change the licensing regime for Installers, which is presently based on "individual licensing", to a "class licensing" regime;***
- ***to deem individuals who presently hold Installer's Licences (with respect to twisted-pair cables) to be registered or "class-licensed" to carry out IW Work for twisted-pair cables under the new framework;***
- ***to discontinue issuing hardcopy licences to registrants of both the Installer and Contractor class licence and IDA will publish, on the IDA website, details of Individual and Contractor class licensees.***
- ***to retain the present "class licensing" regime for the Contractor's Licence (for business organisations), but modify it such that organisations will need to register for each type of cable that they intend to carry out IW Work for;***
- ***the proposed licence fees; and***
- ***to include as a licence condition under the IW Regulation, the requirement that installers and contractors sign off and retain records of IW Works carried out.***

Question 5: IDA also invites views and comments on the length of the proposed transition period to allow existing installers to obtain the necessary certifications and obtain licences from IDA.

StarHub does not have any concerns with the Authority's proposed IW work licence structure. We also understand that the courses to obtain certification are likely to be of short duration. Therefore, the proposed 9-month transition period should be sufficient.

Proposed Revisions to the IW Regulations

Question 6: IDA invites views and comments on the proposed revised definition of "internal telecommunication wiring".

The Authority has proposed to use the "property boundary" (as set out in the title deeds to the relevant property, and which is usually physically demarcated by a wall or fence surrounding the property) to define the internal wiring used or intended to be used for telecommunications that is located within the property boundary.

StarHub submits that should the Authority decide to use "property boundary" to define the internal wiring, it should be made very clear to the relevant parties that the IW Framework does not determine the ownership of the internal wiring, but merely requires the IW installers engaged by the owners to install the internal wiring within a property boundary to meet the requirements specified in the IW Framework.

Question 7: IDA invites views and comments on the proposed revisions to the IW Regulations and suggestions on any other changes that IDA should implement.

StarHub does not have any concern to the proposed revisions to the IW regulations. Nonetheless, it is necessary that the IW framework is strictly enforced by the Authority as the quality of internal wiring is important for the delivery of fixed-line telecommunication services to end-users.

Proposed Revisions to IW Code

Question 8: IDA seeks views and comments on the content and structure of the draft revised IW Code, which is attached as an Annex to this consultation document, and suggestions on any changes to the IW Code.

Guidelines for Internal Telecommunication Wiring 2014

2.1.8 Installation of cables in Raised Floor Distribution System

To meet the Authority's objectives, we propose that cables should also be labeled with circuit/ link/ service reference at periodical intervals of the length of cable, so as to facilitate quick and easy identification. The lack of such identification can seriously delay the restoration of services to customers during an outage.

2.3.4 Termination of Cables onto 20/40-pair Quick-Connect Distribution Case

This section specifies that each cable shall pass through the guides provided and follow the raceways formed by the space between modules in the following manner:

- Pair 1 to 5 through the jumper rings on the left and pair 6 to 10 through the jumper rings on the right.

To further standardize the practice of terminating cables onto the distribution case, we would propose that the Authority specifies that the termination of the cables should begin from the lowest module of the distribution case. E.g., Pair 1 should begin from the 1st bottom module at the left-hand side of the distribution case. Such standardization would facilitate the fast deployment and repair of terminating cables.