



**DECISION AND EXPLANATORY MEMORANDUM ON PROPOSED CODE OF
PRACTICE FOR THE PROVISIONING OF COAXIAL CABLE HOME
NETWORKING SOLUTIONS**

21 July 2014

PART I: INTRODUCTION

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PART I: INTRODUCTION

1. On 18 March 2013, IDA invited views and comments on the proposed Code of Practice for the Provisioning of Coaxial Cable Home Networking (“**CCHN**”) Solutions (“**CCHN Code**”). At the close of the public consultation on 15 April 2013, IDA received comments from two (2) respondents, namely SingNet Pte Ltd and StarHub Ltd. IDA would like to thank the respondents for their comments.
2. IDA has given careful consideration to the comments received. The following section discusses the key issues raised and sets out IDA’s Decision on the proposed CCHN Code. IDA has also issued the final CCHN Code together with this Decision.

PART II: SUMMARY OF KEY COMMENTS RECEIVED IN PUBLIC CONSULTATION AND IDA’S ASSESSMENT

3. This section provides a summary of the key comments received on the proposed CCHN Code, as well as IDA’s assessment of the comments.

(A) Access To Coaxial Distribution Tap Boxes

Industry Comments:

4. One respondent submitted that the CCHN Code should not require isolation filters to be installed at coaxial distribution taps located outside residential premises as the standard practice. The respondent submitted that should IDA require that isolation filters be installed at the coaxial distribution taps, IDA should: (a) require access to be provided by the Broadband Coaxial Cable System (“**BCS**”) operator (“**BCS Operator**”); and (b) determine the terms and conditions of such access. Where IDA does not require access or IDA does not determine terms and conditions of such access, a Solution Provider should be granted the right to install the isolation filter within the home. The respondent also submitted that IDA should resolve any dispute in relation to the terms and conditions of access.
5. Another respondent indicated that its preference was for the isolation filter to be installed at the coaxial distribution taps. The respondent, who is a BCS Operator, submitted that it was prepared to facilitate access to the coaxial distribution taps, subject to agreed prices, terms and conditions, to ensure that services on the BCS would not be affected by the deployment of the CCHN Solution. The respondent also sought clarification on what would be considered as “unable to obtain reasonable access”.

IDA Response:

6. IDA notes that there are alternatives to the CCHN Solution that can be put in place for high speed data networking within the homes. Such other alternatives, including powerline communication, wireless communication and the use of

structured cabling, are currently readily available in the market. Taking into consideration the availability of alternatives, IDA is mindful of the extent of regulatory intervention required in relation to the deployment of CCHN Solutions.

7. As explained in the consultation paper issued on 15 April 2013, while IDA holds the view that there are merits in requiring all isolation filters be installed at distribution taps as a standard practice for efficient fault localisation and isolation, IDA also recognises that it is not the only means and there may be challenges for Solution Providers to gain access to the distribution taps. From IDA's perspective, the preferred option should not result in BCS Operators denying reasonable access to the Solution Providers. Hence, where reasonable access is not provided, IDA is prepared to also allow the deployment of the isolation filter in homes. IDA believes that the above approach (as proposed under the draft CCHN Code) provides the appropriate balance and gives parties incentives and flexibility to work out the necessary distribution tap access arrangements. Accordingly, IDA also believes that it is not necessary for IDA to prescribe specific terms and conditions for access to the distribution taps.
8. Notwithstanding the above, IDA has been facilitating the engagement among the industry players (i.e., Solution Providers, who have indicated their interest in deploying the CCHN Solution, and the BCS Operator (i.e., StarHub Cable Vision Ltd ("**StarHub**")) in relation to the access to distribution taps so as to implement the preferred option. Taking into consideration the parties' concerns, IDA has provided guidance to StarHub on how its terms and conditions could be further refined to ensure that reasonable access would be provided. IDA therefore urges the parties to negotiate in good faith and agree on the terms and conditions for the above access so as to implement the preferred option. Where necessary, IDA is prepared to facilitate further discussions among the parties in the implementation of the said access to the coaxial distribution taps.
9. What constitutes "being unable to obtain reasonable access" would have to be reviewed on a case-by-case basis.

(B) Others Requirements In The Proposed CCHN Code

10. The respondents also provided other comments to amend or clarify some aspects of the draft CCHN Code, including the suitability of home configurations and operational procedures related to the deployment of the CCHN Solutions. The key comments from respondents and the corresponding IDA responses are as follows:
 - (a) Industry Comments: The CCHN Solution may be deployed using not only single coaxial splitters, but also multiple coaxial splitters, so long as the CCHN Solution is deployed to points on the same coaxial splitter.

IDA Response: IDA notes the comment. IDA was simply clarifying that the deployed CCHN Solution would function only if it was deployed over in-home coaxial cables which are connected to the same series of

coaxial splitters which are downstream of IDA has thus clarified the position in the final CCHN Code.

- (b) Industry Comments: The BCS Operator should publish a list of services that are delivered over the BCS in the same/adjacent frequency band used by the CCHN Solution, which may be affected, so that Solution Providers can inform the end-users of the affected services prior to any CCHN Solution installation.

IDA Response: As information relating to the list of services that are delivered over the BCS in the same/adjacent frequency band used by the CCHN Solution is only available from the BCS Operator, IDA agrees that it is appropriate for the BCS Operator to make such information available to the Solution Providers. Accordingly, IDA has incorporated the above into the CCHN Code.

- (c) Industry Comments: Where the CCHN Solution is affecting the services on the BCS of other end-users, the Solution Provider must be required to promptly uninstall the CCHN Solution from the in-home premises and restore the in-home coaxial cables to their original configuration.

IDA Response: IDA agrees that in the situation where other end-users are affected by the CCHN Solution, it is reasonable for the Solution Provider to uninstall the CCHN Solution as soon as practicable so that services can be restored. Accordingly, IDA has clarified the position in the CCHN Code.

- (d) Industry Comments: Solution Providers are required to keep a record of end-users' acknowledgement/written consent as well as verification tests results and to provide such information to the BCS Operator.

IDA Response: IDA agrees that since Solution Providers are required to inform end-users of the possible implications of deploying the CCHN Solution and would be conducting tests to ensure that the CCHN Solution is properly installed, it is not unreasonable to require Solution Providers to keep a record of such acknowledgements and test results. However, IDA is of the view that such documentation should only be provided in situations where there are disputes over whether Solution Providers had indeed performed these activities as part of the deployment of CCHN Solutions or during fault investigations. Accordingly, IDA has clarified the position in the CCHN Code.

(C) Regulatory Framework on CCHN Solutions

Industry Comments:

11. One respondent commented that the technical specifications of the isolation filter should be adjusted such that signal attenuation be minimised beyond 75 MHz (instead of the current allowed frequency of 85MHz). The respondent, who is a BCS Operator, explained that it was carrying its preview service over channel 76.25 MHz and the isolation filter, if deployed, would affect the particular service.

IDA Response:

12. IDA notes that the requirements set out in the Reference Specification for CCHN (IDA RS CCHN Issue 1, Jul 2011) had already been extensively discussed by the industry working group¹ (which the respondent is a member of) and were eventually adopted by IDA. In view of the above, IDA does not intend to re-open the above discussion and make further changes to the specifications. Instead, the BCS Operator should include its above mentioned preview service as one of the cable TV channels in its list of services (as described in paragraph 10(b) above) that are delivered over the BCS in the same/adjacent frequency band used by the CCHN Solution which may not be available after the installation of the CCHN Solution. IDA notes that other than the above, the industry did not provide other comments in relation to the proposed regulatory framework to govern the deployment of CCHN Solutions.

PART III: CONCLUSION

13. Taking into consideration the above, IDA has issued the final CCHN Code together with this Decision and will proceed to:
 - (a) convert the Reference Specification for CCHN (IDA RS CCHN Issue 1, Jul 2011) to a Technical Specification (IDA TS CCHN)²; and
 - (b) allow dealers of CCHN devices to supply such equipment to Facilities-Based Operations licensees and Services-Based Operations licensees in accordance with the CCHN Code.
14. IDA recognises that BCS Operators, Solution Providers and dealers will require sufficient time to ensure that they fully comply with all requirements set out in the CCHN Code. Accordingly, IDA will provide the industry with the necessary lead-time and the CCHN Code will come into effect on 21 August 2014. IDA will closely monitor developments in relation to the provision of CCHN Solutions and, where necessary, IDA may introduce further measures.

¹ Telecommunications Standards Advisory Committee (TSAC)

² In order for CCHN equipment to be sold and used in Singapore, suppliers will have to register the equipment with IDA under the Simplified Equipment Registration ("SER") scheme. For the purpose of the equipment registration, suppliers will have to ensure that such CCHN equipment comply with the technical standards of IDA TS CCHN.