

NTT's Comments on the Industry Dialogue on Adoption of NIMS Standards document

21 June, 2010

1. Introduction

These are the comments from NTT on the Industry Dialogue on Adoption of NIMS Standards document, released on 20 May, 2010.

2. Comments

Question 1: IDA and MDA invite views and comments on whether the NIMS CF STB would result in cost savings for an IPTV RSP. Where possible, please provide relevant cost figures supporting your views and comments.

[Confidential]

Question 2: IDA and MDA note from industry feedback that current developments in IPTV standards are still nascent. Therefore, IDA and MDA invite views and comments on the feasibility, benefits and risks of a standards-based approach to accelerating the development of a vibrant NIMS Ecosystem.

There are IPTV standards for basic services (VOD, Linear TV, interactivity) including operator and service discovery mature enough to be deployed in the market with more than 1 million subscribers. For example, the specifications of IPTV Forum Japan are widely deployed as the standard in Japan, and more than 3 million terminals – STBs, PCs, and TV sets – complying with this standard have been sold in the market within the last two years since its publication in 2008. As more than two years have already gone by in most of services after its first release and commercial deployment, the specifications themselves can be said as sufficiently mature. The standard supports VOD, Linear TV, content, downloading, interactivity, service provider discovery, and content protection. There are currently more than 4 service providers providing services based on

the standard. They all use the same content protection scheme, Marlin-IPTV-ES, and the above mentioned terminals in the market can receive services from multiple service providers. (Please refer to the References)

Question 3: IDA and MDA invite views and comments on how the proposed areas of standardisation will impact the way IPTV RSPs differentiate their NIMS CF STBs, for example by including optional features as a way to attract new subscribers. Would there be an increase in promotions offering free rental of NIMS CF STBs to encourage end-users to switch STBs?

Standardized terminals have been around for many years in the area of broadcasting around the globe. Broadcasters around the world have differentiated themselves by providing good, popular differentiating content, rather than differentiating STBs. Another example is the World Wide Web, which is based on the standard technologies: IP (HTTP) and HTML. If the content is interesting the consumer will change the terminals. However, it is always good to have some incentives to change terminals.

Question 4: IDA and MDA invite views and comments on whether the current approach to standardisation in Singapore should be applied to the Next Gen NBN, taking into consideration the open architecture of the Next Gen NBN. In particular, do you agree with IDA's preliminary assessment that there is a need to provide greater clarity on standards relating to the host layers of the network?

NTT agrees with IDA/MDA that there is a need to provide greater clarity on standards relating to the host layers of the network

Question 5: IDA and MDA invite views and comments on whether the proposed standardisation efforts should be focused on the IPTV RSPs operating on the Next Gen NBN. Should the proposed standardisation approach similarly apply to future network infrastructure?

NTT agrees that future networks are beyond the scope of the current Industry Dialogue and the proposed standardization in this Document is not intended to address any issue relating such future networks.

Question 6: IDA and MDA invite views and comments on whether the timeline for achieving the Immediate Goal facilitates the implementation plans of IPTV RSPs.

NTT agrees that the timeline presented greatly facilitates the implementation plans of IPTV RSPs.

Question 7: IDA and MDA invite views and comments on any other options that may be considered to achieve standardisation of IPTV Standards.

These options may be applied to different areas of IPTV standards. Some parts of the standardized IPTV technology may be more or stable for a long time and need to be maintained as part of the infrastructure, whereas some others may be more dynamic and change quite often. For the former case, it is appropriate to have a mandatory recommendation, but for the latter case, more dynamic outcome based approach is more appropriate.

Question 8: IDA and MDA invite views and comments on the feasibility and the benefits and risks of issuing an outcome-based direction. How could such risks be mitigated and/or avoided? Will the inability to capture all players in the NIMS Ecosystem with the outcome-based direction poses a significant problem?

The concept “locking-in the industry to a particular set of standards” is rather difficult to understand. If the “particular set of standards” means “Singapore’s national standards”, it is entirely legitimate to “lock-in” the industry. Since the industry is allowed to use any optional technologies for proprietary needs, no such a lock-in would limit the adoption of proprietary technologies, as long as such an adoption will not hinder interoperability.

The sentence “In addition, there might not only exist a single set of standards which supports technical compatibility” needs more clarification. The whole point of standardization in NIMS in general, and CF-STB in particular, is “interoperability”, and not compatibility. If what is meant by “compatibility” is in fact “interoperability” and “conformance”, then the approach would be a reasonable one. There are many standards that will allow interoperability and many

standards do overlap. So it is a known-fact there are many standards that may potentially support interoperability.

If the outcome-based approach may be just another way to adopt anything, it will eventually fragmentize the market and diminish the value of adopting standard-based approach in the first place.

This approach's limitations, as mentioned in 5.2.4 "some IPTV RSPs and equipment manufacturers may potentially fall outside the ambit of the outcome-based direction" would eventually make CF-STB hard to achieve. So the desired outcome of Project NIMS may not be achieved.

In order to ensure that these risks will not materialize, strict rules of conformance and interoperability, or "technical compatibility", should be set up. Moreover, the scope of what technologies count as "standard" should be clarified. There could be any organization that would claim to be "standard". Well-recognized International standardization organizations, as recommended in the WTO agreement, should be first considered.

Question 9: IDA and MDA invite views and comments on the feasibility and the benefits and risks of adopting the industry opt-in approach. What are some of the factors which would encourage industry players to opt-in? What are some of the reasons why some IPTV RSPs might prefer not to adopt the recommended standards? How could such risks be mitigated and/or avoided?

NTT agrees that "opt-in" approach may result in market fragmentation and that as a result of such fragmentation, the desired outcome of Project NIMS may not be achieved. Standard-based approach is in fact beneficial to all players of the eco-system, because eventually it will be cost effective to adopt standards.

Perceived short-term benefits adopting non-standard solutions eventually results a high-cost of operation and lack of updatability and flexibility. Such a situation should be compared and well-advertized as opposed to the long-term benefits of adopting standard based solutions, where the lower cost of operation is often the main benefit.

In order for the standard to be cost-effective, it is important that the standard be widely used. The government can help ensure that the standard be used by creating an end-to-end environment in which all the points of IPTV value chain, from content creation and delivery to content consumption, are addressed.

Question 10: IDA and MDA invite views and comments on the benefits and risks of prescribing the standards for IPTV services provided over the Next Gen NBN.

NTT agrees that government intervention may give rise to strategic advantages in realizing CF-STB.

Question 11: IDA and MDA invite views and comments on the proposed approach to mandate adoption of standards based on the basic functions and the technical specifications which will be applied to the NIMS CF STB. What would be the likely costs of implementing these standardised basic functions? If an operator already owns infrastructure, how much of the existing components are likely to be reusable?

NTT agrees that the proposed approach is reasonable. The cost of implementation will depend the standards selected and the features to be built-in, which then will depend on such factors as the patented technologies involved in the implementation, the number of compliant vendors, and the projected number of terminals. If the standard is already deployed and used elsewhere, it would presumably easier to implement and the cost would be more reasonable than implementing something totally undeployed. For IPTV, much of IP-related components should be reusable. This is one of the differences between digital TV and IPTV. IP-related technologies are already globally standardized and used globally, whereas digital broadcasting standards are often regional. However, the reusability of components may not directly translate into lower cost, because the cost of integration may be greater.

Question 12: IDA and MDA invite views and comments on the likely scenarios in which IPTV RSPs may seek waivers from parts or all of the Mandated Standards.

One likely scenario may be where the waiver will provide solutions that prove to be more cost-efficient or better aligned with the IPTV RSPs' business plans but still interoperable with NIMS standard.

Question 13: IDA and MDA invite views and comments on what additional industry efforts are needed to foster the growth of the IPTV RSPs within the NIMS

Ecosystem and what would be various roles that the industry can participate in?

[Confidential]

3. References

- IPTV Forum Japan
<http://www.iptvforum.jp/>

- Marlin Community
<http://www.marlin-community.com/>

- Marlin Trust
<http://www.marlin-trust.com/about/client>

- About service launch from news release of Hikari TV by NTT Plala (in Japanese), 7/3/2008 <http://www.nttplala.com/news_releases/2007/mar/20080307.html>

- The 25th ordinary general meeting of shareholders (Hikari TV subscriptions exceeded 1 million)
<http://www.ntt.co.jp/ir/library_e/shareholders_meeting/pdf/shmeeting25.pdf>

- Excess of 2million terminals accessed to Actvila (in Japanese)
<<http://actvila.jp/whatsnew/item/pdf/press20100607.pdf>>

- DigiOn® provides Marlin IPTV-ES enabling module for “auBOX”, 26/12/2008 (KDDI Corporation's entertainment box for mobile phone services.)
<http://www.digion.com/en/news/20081226.htm>

- Marlin-IPTV-ES Terminals
<http://www.marlin-trust.com/about/client>

- IPv6: The Future of IPTV? - In Japan it isn't the future, it's now.
<<http://www.internetnews.com/dev-news/article.php/3795086/IPv6-The-Future-of-IPTV.htm>>

