Comments of Prasar Bharati for consideration of TRAI on the consultation issues raised in its Pre-Consultation Paper on Set Top Box Interoperability dated 4th April 2016.

With beast regards

P. Das

DDG (Tech.)

Comments of Prasar Bharati on the consultation issues raised by TRAI in its Pre-Consultation Paper on Interoperable STBs:

As on date, similar kind of services are being offered through digital cable TV and DTH. Therefore, in case a consumer intends to migrate to another operator, it would be equally probable for him/her to migrate to another DTH operator or cable TV operator. Further, in the terrestrial sector, DD has recently launched digital TV services and has planned to progressively replace its entire analogue terrestrial TV network to digital mode. Therefore, when a framework is being developed for interoperable STBs, it should not be restricted for allowing migration within a particular platform. This requires that the regulatory framework should promote and ensure use of interoperable STBs which should be capable to work equally with cable, DTH and digital terrestrial signals.

Consultation Issues and response of Prasar bharati thereon

1. **In your opinion, what are the concerns that should be taken care of at the time of development of framework of interoperable of STBs?**

   PB Response:
   The following concerns should be taken care of at the time of development of framework for interoperable STBs:

   - Framework for interoperable STBs should not be restricted to interoperability within a particular platform
   - Co-existence of interoperable and non-interoperable STBs in any given market: after the transition period, as prescribed by regulator, only interoperable STBs should be offered in the market; no co-existence of interoperable and non-interoperable STBs
   - Imposition of conditions-implicit or explicit, by an operator with the intent to restrict its subscriber who intends to migrate to another operator/platform.

- poor maintenance support post migration: the regulatory framework should provide protection against poor/absence of maintenance support when a consumer migrates to another operator/ platform using its existing interoperable STB
- Lack of consumer awareness: this should not be a reason for poor uptake of interoperable STBs. Regulator as well as service providers should educate consumers and promote use of interoperable STBs.

2. **What are the techno-commercial reasons for non-interoperability of STBs other than those mentioned above? Please provide reasons with full details.**

   PB Response: No comments.

3. **What are the plausible solutions for technical interoperability of STBs and their impact on the sector growth?**

   PB Response:

   The following provisions should provide a plausible solution:

   - Beyond a cut-off date, only interoperable STBs are to be offered by operators. The offered STBs should work equally with cable, DTH and digital terrestrial signals. When the boxes are produced in huge numbers that too by independent manufacturers, the price will automatically come down and the argument that interoperable boxes shall be costlier, will become a non-issue.
   - The middleware should have the essential feature that it could be updated/upgraded off-air/on-line. This will ensure that platform specific innovations in middleware features can be updated by the operator and in case of migration to another operator, the middleware of that operator can be loaded in the STB off air/on-line.
   - STBs should support any CAS which is based on DVB-CSA standard.
   - BIS should come out with specifications for interoperable STBs prescribing, amongst others, suitable hardware features to support the above solution for modulator/decoder, middleware and CAS.

   Initially, such interoperable STBs may cost more but, in the medium and long term, such STBs would prove to be economical to the consumers, saving enormous money at the aggregated level and curb e-waste. Moreover, interoperability will incentivise those operators who offer better services to the consumers. This would ultimately result into improved competition amongst service providers, and overall growth of the sector.

4. **Any other issue which you feel will be relevant for development of technical interoperability of the set top boxes.**

   PB Response: Nothing at this stage.

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