## Consultation note on Solution Architecture for Technical Interoperable Set Top Box, dated 11th August, 2017

In response to TRAI's Consultation note on Solution Architecture for Technical Interoperable Set Top Box, dated 11th August, 2017, our comments are stated herein under.

You may kindly note that below comments are without prejudice to our rights and contentions, including in any ongoing or future litigations and we reserve our rights to modify, change and submission of further comments or counter comments to clarify our position on the issues under this consultation paper.

We thank the Authority for initiating this consultation process and as such, providing us the opportunity to present our views in this context.

We support technical interoperability and given the highly competitive economic conditions prevalent in the Indian Cable and Satellite TV market, consumers must have the choice and ability to shift from one service provider to another at little or negligible cost. However, there are few techno-commercial issues in respect of interoperability of STBs which should be addressed before a regulatory framework is brought into place by the regulator, the details of which are as follows:

**1.** The framework must be sound enough to prevent reception of services by unauthorized persons. In the past DTH STBs have been used to source channels for unauthorized distribution in cable networks. The primary tool that broadcasters use to detect such STBs used in piracy, is "fingerprinting".

Technical interoperability of STBs has potential to jeopardize the fingerprinting feature and it should be ensured that such feature would be available in all combinations of STBs and CAS.

**2.** The prices of the interoperable STBs should remain comparable to non-interoperable STBs.

**3.** The portability cost should be reduce considerably to make it a viable option for the consumer.

**4.** The STB operating system (OS)/software heavily depends on the equipment/ hardware and the amount of Random Access Memory (RAM) built within the STB. Hence to ensure that the interoperable STB is able to function with all platforms, the base specification of such a box has to be of the highest possible specification presently available. This may pose a challenge to increase features & performance of such STBs in the future as better specifications may be required to implement such features & performance.

**5.** The DPOs should be able to choose security solutions (Conditional Access System) as per their requirements.

**6.** The User Interface (UI) and Electronic Program Guide (EPG) format customization by DPO should be made a mandatory feature in the approved STB. The framework should ensure that TV channels with EPG listing continue to be available to the consumers on migration to another operator.

**7.** The main objective of this consultation exercise is to empower the TV consumer to flexibly change from one service provider to another, provided the alternate service provider's signals are available at the respective location.

Therefore it is pertinent to ensure that the STB's are technologically capable of providing inter- platform migration.

Inter- platform migration is also important as generally in rural areas only one cable operator is active in an area, hence intra platform STB interoperability may not contribute in the achievement of said objective. Same condition applies for HITS as the last mile delivery is through the local cable operator.

Further, following are technical inputs and suggestions with respect to the technological solutions, framework and feature requirements for implementation of STB interoperability:

**1.** It should be ensured that CAS should be common on all the platforms.

**2.** The UI & EPG should be same in design. EPG and timing should be same on all platforms.

**3.** Migration from one service provider to another service provider should be easy and accessible to all. The same STB should be useable on any platform.

**4.** BARC or TAM rating compatible with enable / disable mode.

**5.** Storage for local content should be present.

**6.** All kinds of modulation technique should be compatible.  (DVB S, DVB S2, etc.) up to 32 PSK etc.

**7.** All kind of compression technique should be supportable. (MPEG 2, MPEG 4 etc.)

**8.** Mobile based control on STB should be provided, just as currently available in DTH.

**9.** STB should be paired to only one service provider at a time and not linked to multiple DPOs.

**10.** EPG can be edited OTA (Over The Air) by the broadcaster.