

## **Reliance Digital TV's Response to Pre-Consultation Paper on Set Top Box Interoperability**

### **Preamble:**

This has reference to the Pre-Consultation paper on Set Top Box Interoperability, which has been rolled out by TRAI seeking views of the stakeholders. At the outset, we welcome the opportunity to comment on issues concerning interoperability of set top boxes.

The issue of technical interoperability should be brought into perspective, beyond just as a means of providing customer an exit option from incumbent service provider, to adding an otherwise muted open market of retail STB, and broader adoption of technological innovation in the country.

Reliance Big TV, as a service provider is not in the business of supplying STB. Today, we are forced to supply the STB, which is only a via-media terminal to deliver our products, i.e. pay-TV content and VAS. We would desist ourselves from supplying STB for basic payTV services if there were sufficiently capable, secured and open standardized terminals in the market.

The aim of technical interoperability should be to promote more open STB in the retail market, such that the customers have a wider choice. Such products could claim to receive DTH/Cable content and label its basic and additional capabilities so that customers have a choice of selecting the right one which can work across operators for the basic services.

Multiple technical factors affect the choice of software & hardware design of the box provided by any DTH platform. The can be classified as follows:

- i. Security and Anti-piracy obligations towards Broadcasters and content owners
  - Conditional Access System (CAS)
  - Other operational features to enforce version upgrades and other required countermeasures to combat piracy and thwart any hacking attempts.
  - Middleware capability to assist identification & blacklisting of rogue user
- ii. Transmission efficiency V/s cost of transmission & Cost of box
  - DVB-S / DVB-S2 /DVB-S2X
  - MPEG-2 / MPEG-4 / HEVC etc etc.
  - MODCODS, roll offs etc. supported
  - Antenna sizes and LNB (e.g. Multi satellite support)
- iii. User experience and enhanced user support
  - EPG formats & layouts
  - Availability of video of tuned service while browsing guide / schedule
  - Customer remote support tools available in the box
  - Multiple audio stream languages / EPG languages & scripts

iv. Value added services

- Graphics capability & fonts available on board
- Games & other interactive services
- Video on demand
- Media gateway
- Internet access / Browser / other internet enabled services
- Satellite enabled one way / two way access to internet bandwidth

It is not possible to field upgrade or even construct any box to support all the above factors in a single box without compromising the security needed to fulfill obligation to the content owner. DVBCI standard mandated in BIS specification is obsolete, as it does not provide protection to content like host authentication, force fingerprint and has an open interface for transferring decrypted content. Even with integrated designs for Conditional Access, content security is being constantly attacked by the hackers / pirates.

Specifications for the host device terminal (connected to CAM) for interoperability discussed only about the hardware interfaces and not software capabilities. Hence, the notion of 'open architecture' does not exist. Interoperability should ideally work across different levels of software, if the same experience has to be made available for the consumer when he/she switches from one operator to another. Services like EPG, Customer information, Messaging, VAS services are host device specific and there is no interoperability standard to define them.

**If it was possible to fulfill all the above factors without compromising any obligations, using any third party box, no DTH operator would have ever invested in manufacturing, selling and installation of their own boxes. This is because no operator is making money by selling boxes, neither is the selling of boxes their core business. In fact, large part of their loss/risk is due to the fact that the Operator has to subsidize the STB to be able to acquire the customer in the environment of hyper competition between various forms of TV distribution options available to the consumers.**

Mandating a specification for hardware and software on the host device terminal inhibits adoption or promotion of technological innovation in the country. It has to be noted that BIS specifications lag in terms of technological innovation as it is intended towards standardization.

Higher end devices or services may include software features that are proprietary to the operator or product manufacturer. E.g. multi-screen, VoD, 3D, UHD, Wifi, DDP, DTS etc, apart from or may complement certain BIS spec in terms of capabilities. Mandating a specific interface for a spec may just add a dead piece of hardware at a higher cost. Hence, BIS specification for higher end devices is not a practical solution to interoperability. Indeed, customer should be aware that the device does not conform to the standard.

While it is appreciated that consumers would need an exit option, mandating technical interoperability through specification should be limited to open market retail products that have the compliance label.

Below are the question wise comments of Reliance BIG TV Limited. We believe that TRAI would consider the same before coming up with a final view.

**Comments on issues raised in the Pre-Consultation Paper:**

**Q1. In your opinion, what are the concerns that should be taken care of at the time of development of framework of interoperable of STBs?**

**Our comments:**

We firmly believe that one “size-fits-all” proposal never works and will prove to be counterproductive due to the below mentioned reasons:

1. The cost of the STB will shoot up dramatically.
2. There will be less diversity and innovation on the TV distribution platforms. Rulemaking is unnecessary given the breakneck speed of innovation in this field.
3. Any intervention in a competitive market stands to harm the market, its participants, and ultimately consumers.
4. Consumer choice is enhanced by, popular content providers such as Star, Zee, Sony etc., also licensing programming to OTT services. Consumers can watch this content on an array of devices, including tablets, gaming systems, smart phones, computers and smart TVs and do not have to depend on STBs. TV distribution platforms have also launched multi-screen services.
5. The “Cable Card” experiment failed in US as the retailed STBs were unable to provide the functionality in comparison to the STBs provided by the Distribution companies as outlined in the paper.
6. The DVB-CI is a complete failure for reasons that have been outlined on several occasions. The CI CAM and card costs are equivalent to that of a new STB. The Cable card issues of “functionality” apply here too. The requirement also limits the choice of devices – affecting cost and features – ultimately detrimental for the consumer.

**Q2. What are the techno-commercial reasons for non-interoperability of STBs other than those mentioned above? Please provide reasons with full details.**

**Our comments:**

Following are the issues that will have to be addressed in an interoperable STB:

1. Operators use MPEG2, H.264 & H.265 Encoding standards today and may add to this as the technology develops further.
2. Similarly the Modulation standards have undergone rapid changes – from DVB-S to DVB-S2 to DVB-S2X with some operators using tighter ModCods and rolloffs.
3. Support all the different CAS solutions – NDS, Nagra, Irdeto, Conax, Verimatrix etc. Each of the operators will insist that their CAS vendors certify the product as their service could be compromised/hacked if the manufacturer has not taken all the precautions that the CAS vendor insists upon.

All the above add to the cost of the STB. If the manufacturer has to cater to all the above requirements – the cost of the STB will be prohibitive – a safe estimate is that this will be more than double the current costs.

**Q3. What are the plausible solutions for technical interoperability of STBs and their impact on the sector growth?**

We believe that there is no viable or realistic solution for Technical interoperability.

\*\*\*\*\*