29th April, 2016

By Email and hand

Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan
Jawaharlal Nehru Marg (Old Minto Road)
New Delhi - 110002

Subject: Response to the Pre-Consultation Paper on Set Top Box Interoperability dated 4th April, 2016

Kind Attn: Mr. Sunil Kumar Singhal, Advisor (B&CS)

Dear Sir,

We thank the TRAI for this opportunity to express our views on the above captioned consultation paper. Tata Sky's response to the same is attached for your ready reference.

Yours faithfully,

Harit Nagpal
Managing Director and CEO

ISSUES FOR CONSULTATION

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?*
2. *What are the techno-commercial reasons for non-interoperability of STBs other than those mentioned above? Please provide reasons with full details.*
3. *What are the plausible solutions for technical interoperability of STBs and their impact on the sector growth?*
4. *Any other issue which you feel will be relevant for development of technical interoperability of the set top boxes.*

TATA SKY RESPONSE:

We remain concerned on the above issues for consultation and would like to bring the following to the attention of the TRAI:

A. AN INFEASIBLE OPTION

- **MPEG2 vs MPEG 4 vs HEVC**: DTH operators commenced their business operations at different points in time based on securing licenses from the government. They used the best possible technology available at that point in time for their operations. Hence some started with MPEG 2 technology and are continuing to use it, others have migrated to MPEG4 and some always had MPEG4. Meanwhile HEVC is being introduced by some as a new compression standard. Presence of multiple compression standards comes in the way of interoperability.

- **Common Interface Slot has cost the industry over USD 100 million**: However, every DTH platform has been including a Common Interface Slot, as mandated by the government and the regulator, at a cost that makes the service more expensive for the subscribers and is a drain on foreign exchange resources too. This has already cost the industry and the country in excess of USD 100 million.

- **CAM Module cost is at par with STB Cost**: The Conditional Access Module that helps make a STB technically interoperable, costs USD 20 to 25, which is at par with the cost of a SD Set Top Box ('STB'), hence the platforms are better off providing a new STB instead of a CAM to the subscriber.

- **Hyper Competitions results in customer not paying for STB**: Hyper-competition in the industry also ensures that the subscriber does not pay for the cost of the STB which is highly subsidised and the customer actually ends up paying only for an activation and installation fee which does not represent the real value of a STB.

B. POSSIBLE BREACH IN SECURITY

- The interoperability of STBs would mean changing the Conditional Access systems which have unique hardware elements. Having a common Conditional Access system will expose the DTH operators to possible security breach/threat in the event the system is hacked.

C. TECHNICAL DIFFICULTIES WITH INTEROPERABILITY

- **Different technologies and standards used by each Operator**: As the model, functionality, processor speed and memory of STB being provided differ from one DTH operator to another, the software configuration used in the said device may vary with different transmissions, encryption technologies and video standards, besides the different levels and types of services provided (such as

PVR, VoD, Bluetooth etc.). This may lead to issues of compatibility when providing the option of interoperability to the subscribers.

- **Different Satellites and Customer Equipment do not allow real interoperability**: Even if the STB achieves the desired standards to facilitate the option of interoperability, there are however chances that the services may not meet the requirement of technical interoperability.Operators use different satellites to carry their services to their respective subscriber and this would necessarily require repointing at the subscriber's location. In addition, different operators use different dish design and size and this would also require to be replaced.

D. No Successful Global Model

- The Pre-Consultation Paper ('CP')made mention of various models/technologies introduced and experimented in different regions, such as USA, Europe and Asia, as a model that may be followed for the DTH Industry in India. None of the examples provided in the said paper have actually been adopted in the respective countries where it has been intended to be introduced, or have been successful in meeting the technical and commercial viability of interoperability where it has been adopted or are still under consideration.In such a scenario it may be advisable to first provide a confirmed model with a technology that has been practically tested, secure and is at the same time cost effective to incorporate as a standard model in India prior to introducing any regulations on the same.

E. Old and Existing STBsA Financial Drain and Will CreateE-waste

- **60 Million STBs already in the Market Place:**The CP fails to provide any solution for the millions of STBs which are currently being used by subscribers. This would result in loss of huge investments and would createe-waste.
- **Customer Costs will rise:**Moreover, introducing technical interoperability would require obtaining higher models of technology at a much higher cost to meet the specifications. The cost of these boxes would have to be borne by the customer as the operators have anyway not yet recovered the cost of the boxes they had provided in the first instance.
- **E Waste Problem:**Considering that the volume of e-waste is increasing in India and the cost that is involved in handling such e-wastes, the TRAI should address the issue in a manner that that allows the continued use of current STBs.

F. Submission

- ➤ In view of the aforesaid reasons, continuing to provide the option of technical interoperability **will not be commercially viable for either the industry or the consumers**.
- ➤ In addition, the introduction of technical interoperability would mean having one common STBin the marketthat meets the requirement of all DTH operators in terms of functionality, processor speeds, memory etc.,**which may also lead to such technologies getting outdated sooner due to lack of competition and hence killing innovation**.
- ➤ **Technical Interoperability of the STB does not resolve the issues with different satellites and other Customer Premise Equipment** used by various operators.
- ➤ Given that currently the subscribers have the choice to switch from one DTH operators to another, and considering the technical complexities involved in having the STBs interoperable, and **no actual statistics having shown the successful transition and adoption of such system**, one may consider keeping the current proposed regulation on hold until any firm resolution is achieved, especially when customers in any significant numbers are not asking for this.
- ➤ **TRAI had earlier proposed Commercial Interoperability as an option and we feel that the same should be actively pursued as it would be agnostic to all the issues with Technical Interoperability,** detailed above.