

RESPONSE BY SITI CABLE NETWORK LIMITED

With reference to

Pre – Consultation on Set Top Box Interoperability

Siti Cable would like to comment on the questions raised by the Authority which is mentioned below:

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?

In our opinion the major concerns with regard to STB interoperability are as below:

- First step in this direction should be to define the standards for interoperability of STBs.
- The entire exercise is dependent on CAS, the registration of CAS Vendors in India should be made mandatory. No MSO should be allowed to use non-registered CAS.
- The Authority should give a fixed time frame for all CAS Vendors operating in India to register as CAS provider and after such time they should be barred from operating in India. For any new CAS Provider it should be mandatory to get themselves registered with the Authority before providing their services to any MSO in India.
- This can be similar to the system where downlinking permission for channels is mandatory for any broadcaster to operate in India.
- The Authority should also decide the parameters and format for STBs both for SD and HD boxes.
- The Authority should also decide on the minimum features required in any STB as there are many CAS Providers who are providing their services in India as on date.

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

- **Format**
 - Mpeg-4 (any other future format e.g. Mpeg-6) signals cannot be decoded through Mpeg-2 STBs

- About 80-85% of the STBs deployed in the Indian CATV market are Mpeg-2.

- **Platform**

- Each STB across different vendors work on different OS platforms – Linux based, Android based etc.
- MSOs push OTA upgrades to offer new features & change the UX which includes an overhaul change in the UI of the STB.
- Most MSOs in the present scenario have about 5-6 models of STBs from different vendors. Smaller MSOs have even lesser.
- Now with interoperability, he needs to support & look into the requirements of each & every customer with a different STB. And at most times he cannot technically achieve this as he has to take support from all the STB vendors to design the OTA.

- **Unifying CAS**

- There are about 10 majorly deployed CAS providers in India. And about 10 smaller ones. Each MSO chooses to have either 1 or 2 CAS integrated in his DHE & deploys STBs.
- STBs are designed to run with a particular CAS integrated with it. This is achieved at chip level & rarely can an STB be shifted from one CAS to the other.

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

- **CAM**

- Majority of the STBs deployed in the Indian market only have a slot for a Viewing Card, but not a CAM. If CAM are to be used, these STBs have to be swapped/physically upgraded.
- Typical cost of CAM modules in mass production – Rs.800-900
- This price is not much different compared to the existing STB prices of Rs.1000-Rs.1400 hence STB cost will increase substantially.

- **Status of Middleware**

- Middleware is a general term for software that mediates between two systems. Middleware creates a software environment and a defined interface essentially,

a 'virtual' set-top box that shields applications from the underlying hardware of the set-top box.

- There has to be a common middleware across all the STBs.

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

- STB/CAS/Chipset/Middleware are being procured from different vendors under different agreements for service support.
- The issue of interoperability need much discussions and deliberation before floating the Consultation so that thorough study of the present issues and their possible solution with least investment requirements can be worked out.