C-DOT response to TRAI consultation Paper on "Promoting Local Manufacturing in the Television Broadcasting Sector"

C-DOT is a premier telecom R&D organization of Government of India carrying out advanced research and development activities in various domains, including, but not limited to broadband public switching and transmission networks, Quantum Cryptography, optical communication equipment, network protocols, Broadcast & Converged Networks, network planning and network management systems

It is pertinent to mention here that C-DOT is a technology and core product development organization and have successfully developed the following subsystems indigenously for the broadcasting network/industry of the country:

a. STBs for various segments: Cable / Satellite / OTT / Terrestrial
b. Hybrid – Cable+IP, Terrestrial+IP, Satellite+IP
c. CAS (Conditional Access System)
d. SMS (Subscriber Management System)
e. DVB-WiFi Gateways.
f. Digital Content Rights Management : DRM for paid content distribution
g. Solution architecture and framework for STB interoperability.

Some of the very important points as brought out in this TRAI consultation paper are:

1. There is an annual STB requirement of 28 million in India.
2. More than 80% of demand is catered through imports, despite having higher production capacity in India.
3. CAS as used in Indian Network is predominantly supplied by the foreign vendors.

Keeping in perspective, the above mentioned important points, C-DOT would like to submit the following comments/inputs towards a much needed sustainable manufacturing boost in the Broadcasting segment of the country:

1. In order to have a sustainable manufacturing boost in the country for STB, it is inevitable to encourage & deploy major modules/sub-systems of the total value chain from indigenous sources, backed-up with indigenous R&D efforts & designs. This will not only reduce the cost of the overall system and services in the long run, but will also provide flexibility, structured growth and security features needed in the Broadcasting ecosystem that is emerging towards a more software intensive, configurable and converged paradigm, in line with technological advancements. CAS is the most important sub-system in the total value chain in the linear broadcasting segment that has direct & paramount implications on practical realization & rollout of sustainable boost in indigenous STB manufacturing. It is impossible to have sustainable manufacturing progress of STB in isolation without addressing the core issue of indigenous CAS. There is a very close coupling between CAS and STB

(both in terms of Hardware and Software). Any indigenous STB manufacturing initiative without keeping in perspective, the dependency on CAS (and DRM – Digital Right Management for non-linear content streaming) will not be sustainable and may only serve a very superficial, short term objective.

2. Also security and advanced features in the Broadcasting segment can be realized seamlessly through an indigenous CAS.

3. In order to gradually proliferate and energize Indian manufacturing of STB, Indigenous CAS shall be mandatorily be put in the networks of all major Indian operators (both Cable & DTH) in simulcrypt mode (coexist with already deployed CAS).

4. The Indigenous CAS & SMS can be provided by C-DOT as per government mandate and suitable terms. The CAS Server Hardware can be initially subsidized by Government and are understood to be not very high investment intensive.

5. C-DOT CAS is a total indigenously developed advanced security enabled solution. It is certified by NIST CAVP (USA). C-DOT has indigenously developed STBs for all transmission technologies with advanced attributes and with state-of-the-art security features. Further, C-DOT STB can be leveraged upon as a reference by the Indian industry to adapt/customize towards rolling out make-in-India STBs, powered by C-DOT CAS.

6. With forward march of technology, connected STBs are getting proliferated. In order to proceed towards a harmonized development and scaling up through indigenous manufacturing of these connected (hybrid) STBs etc, it is of paramount importance and prudent that technical interoperability of connected (hybrid) STBs are brought in at this stage itself. In this regard, a framework for interoperable connected (hybrid) STBs needs to be finalized, keeping in perspective, the Indian context and ecosystem.

Request for kind considerations of the above mentioned submissions. C-DOT reiterates its commitments to "AtmaNirbhar Bharat" and "Make In India" initiatives in the true sense and spirit of it and hopeful to play a more pivotal role in that direction, for Broadcasting & Converged Networks as well, along with TRAI and other stakeholders in the near future.