

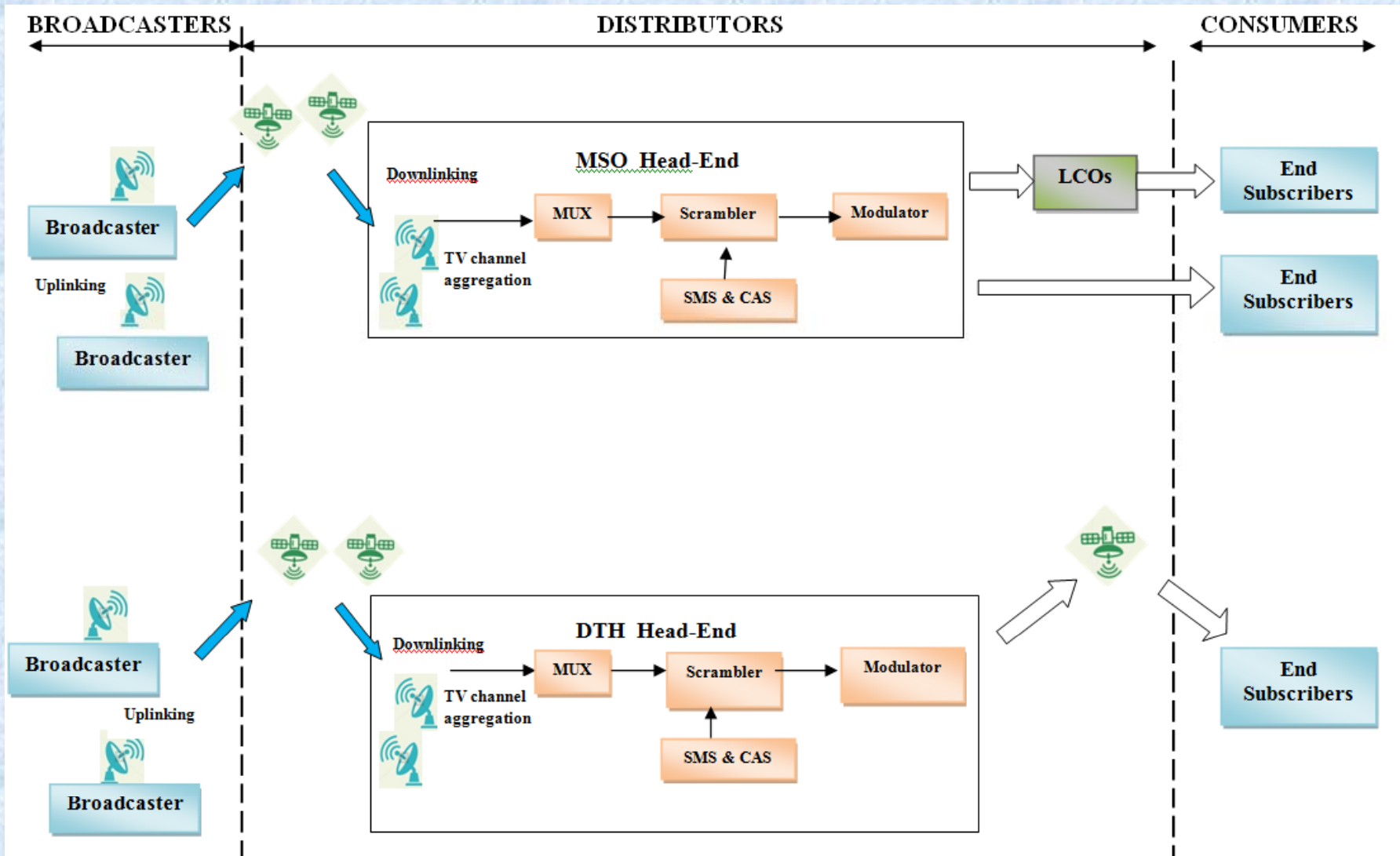
A Presentation
On
**Infrastructure Sharing in Television Broadcasting
Distribution Sector**

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Indian TV broadcasting sector

Sl.	Details	Qty	Remarks
1	Number of permitted satellite TV channels	899	As on 31.12.2016
2	Number of MSOs	1130	Including provisional registered MSOs
3	Number of DTH operators	7	6 Pay DTH operator 1 Free to view DTH operator
4	Number of HITS operators	2	
5	Number of LCOs	60,000 approx	Estimated

Broadcasting Distribution



Other DPOs : IPTV and HITS

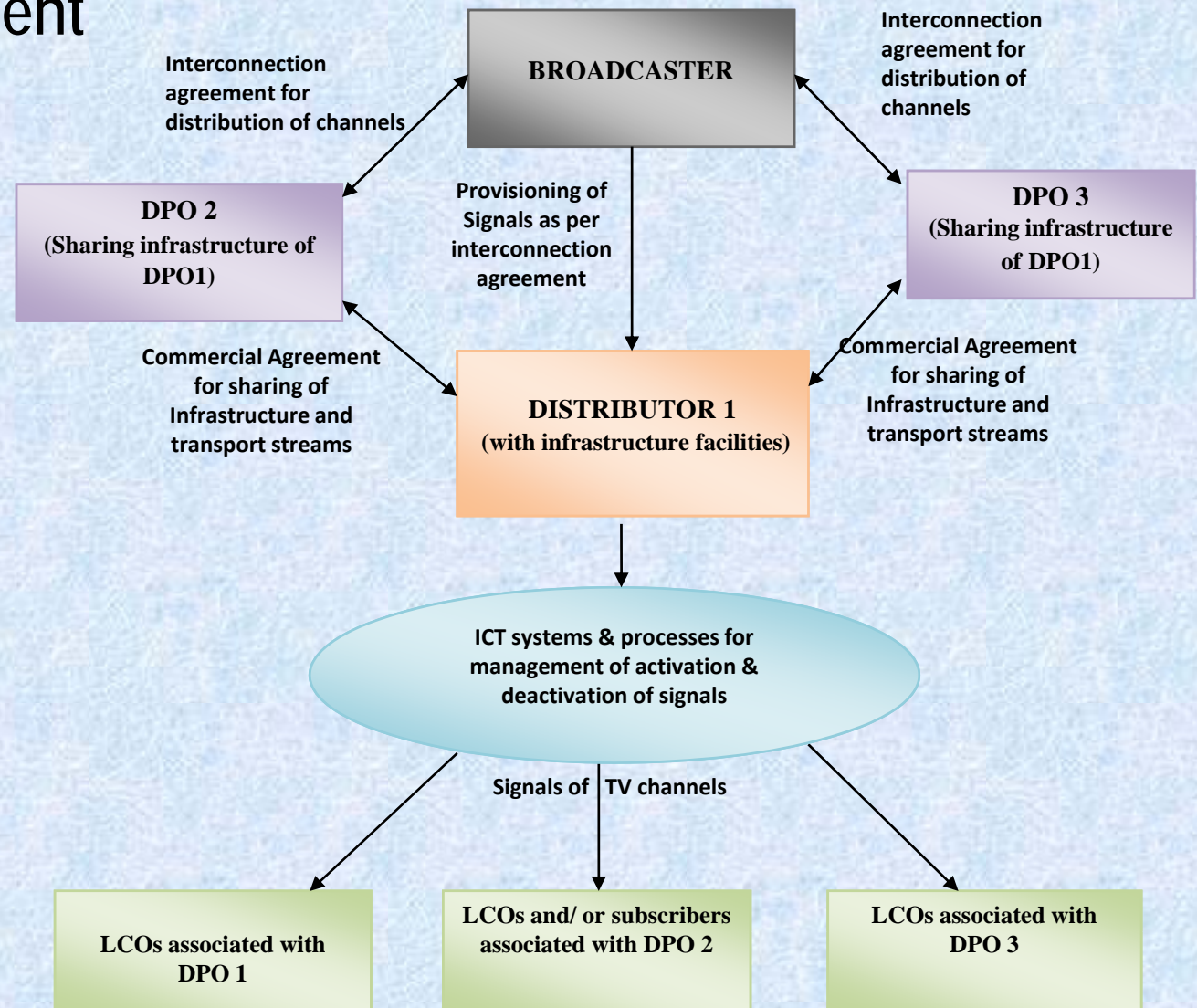
Why infrastructure sharing in TV broadcasting distribution sector ?

- Many of the TV channels being offered by service providers to consumers are common.
- Creating multiple similar type of networks such as multiple Cable TV networks or DTH for distribution TV broadcasting services do not lead to capacity addition but is inefficient use of resources.
- Distribution networks can be shared for delivery of broadcasting services to subscribers while having complete flexibility.
- Service providers have their own networks to deliver services to consumers
- Sharing of infrastructure is proven to be beneficial not only in Telecom sector but also in others resulting in optimum utilization of resources

Infrastructure Used in Distribution Networks

- Headend for downlinking, processing and re-transmission of signals of TV channels.
- Conditional Access System (CAS) for addressability and encryption of signals of TV channels.
- Subscriber Management System (SMS) for subscription management, billing and accounting of subscription revenue.
- Satellite transponders used by Direct To Home (DTH) operators for distribution of signals of TV channels to subscribers, Headend in The Sky (HITS) operators for distribution of signals of TV channels to Local Cable Operators (LCOs).
- Hybrid Fiber Coaxial (HFC) cable networks used by Multi System Operators (MSOs), HITS operators, IPTV operators and LCOs for distribution of signals of TV channels to subscribers;

Provisioning of signals & sharing of transport streams in a shared environment



sharing of infrastructure in TV broadcasting distribution sector

- Distribution Platform Operators (DPOs) of a particular geographic region retransmit mostly common channels as the demands of subscribers of that region remains similar.
- The transport streams of common TV channels can be shared by multiple DPOs of same category using simulcrypt mode of encryption.
- For re-transmission of channels unique to a specific operator, such transport streams of specific channels can be transmitted by using capacities, which remains vacant after transmitting signals of common TV channels.
- DPOs should be permitted to share common hardware for their CAS & SMS applications. Details of such arrangements should be reported to the MIB, TRAI and concerned broadcasters, 30 days in advance.

sharing of infrastructure in TV broadcasting distribution sector

- Sharing of CAS & SMS may help in standardization of processes, allow more transparency and enable even small MSO's to avail benefits of high end CAS & SMS.
- With developments in IT sector, virtual systems, specific to each operator, can be created on a common hardware. Such implementations can reduce the cost of operations, improve the reliability of the systems, and provide mechanisms to ensure the integrity, security of the data recorded in these systems.
- A DPO, willing to share its transport stream of TV channels with another DPO, should ensure that the later DPO has valid written interconnection agreements with concerned broadcasters for distribution of pay TV channels of those broadcasters to the subscribers.
- Each DPO should undertake to provide access of the CAS & SMS used to the concerned broadcasters for the purpose of audit as per the regulations and the authorized officers, whenever demanded.

Benefits of sharing of infrastructure

- Efficient utilization of available infrastructure.
- Reduced Capital Expenditure (CAPEX) & Operational Expenditure (OPEX).
- Saving of foreign capital due to reduction in import of electronic systems and less requirement of satellite transponders.
- Reduced cost of distribution of TV broadcasting services to subscribers.
- Sharing of available infrastructure would enhance distribution network capacities.
- Reduced entry barriers for new distributors in the market, paving way for healthy competition in the sector.

Different approaches for sharing of infrastructure in broadcasting TV distribution sector

- One approach could be where two or more DPOs join hands on voluntary basis to provide TV broadcasting services to subscribers using common infrastructures.
- Another approach could be where distribution network is established, operated, and maintained by one DPO, and other DPOs delivers services to their subscribers by using the network of earlier DPO on pay and use basis.

Basic features of TRAI Recommendations

Recommendations :

Government should encourage sharing of infrastructure, wherever technically feasible, in TV broadcasting distribution network services, on **voluntary basis**.

–While sharing the infrastructure with another DPO, the responsibility of compliance to the relevant Acts/ rules/ regulations/ license/ orders/ directions/ guidelines would continue to be of each DPO independently.

–Each DPO should undertake to ensure encryption of signals & addressability of subscribers in all circumstances;

–Each DPO should undertake to provide access of the all the systems and the networks, to the concerned broadcasters for the purpose of audit.

- After the policy decision is taken by the Central Government on sharing of infrastructure and necessary amendments in the relevant rules/ guidelines/ licenses, conditions are carried out, the requisite **amendments in the regulations/ orders notified by TRAI shall be incorporated.**

Thank You

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