

PRE-CONSULTATION PAPER ON INFRASTRUCTURE SHARING IN BROADCASTING TV DISTRIBUTION SECTOR

We, Sony Pictures Networks India Pvt. Ltd., thank the Authority for initiating this pre-consultation process with respect to “Infrastructure Sharing in broadcasting sector”.

Before addressing the questions specifically asked by the Authority in this paper on infrastructure sharing in broadcasting industry, we wanted to bring to the Authority’s notice some facts which would enable the Authority to appreciate our concerns.

We agree that in the telecommunication sector, infrastructure sharing has shown favorable results. The operators by virtue of tower sharing have cut down their capital expenditure and operation cost and were able to enter remote regions which could have had high roll out costs. However, it is imperative for the Authority to understand and appreciate the differences in operating mechanism of telecommunication and broadcasting sector.

Telecom sector:

The telecommunication sector focuses primarily on voice and/or data. Neither the voice nor the data is a copyright of a particular telecom service provider and the same can be accessed using the services of any of the telecom service provider.

There are only two technologies on which the mobile phones work- (i) Code Division Multiple Access (“**CDMA**”) or (ii) Global System for Mobiles (“**GSM**”). Most of the cellular network operators use GSM.

The conditions conducive for the infrastructure or tower sharing are:

- 1) **Technologies**- Since only two technologies are used, GSM predominantly, it is not a difficult task to build tower or infrastructure sharing.
- 2) **Mature network**- The maturity of the operators play a major role in tower sharing.
- 3) **No intermediaries**- The operation of telecom sector is simple. There are no intermediaries involved, and the network operators deal directly with the end subscribers and vice versa. For the operators to then share the infrastructure helps both the consumers (for better connectivity) as well as the operators (reduction in cost). This helps bigger operator to also earn from sharing their tower.
- 4) **Timeline**- The towers take time to build, and it is easier for the new entrants to roll out their services with the infrastructure sharing.
- 5) **Competition**- Even though the competition amongst the telecom service providers is intense, they understand that it is the best way to marginalize the cost and provide a better service to the customers.

Broadcasting sector:

Broadcasting sector on the other hand is more complex and has to be viewed differently. Every broadcaster focuses on building the content, which may include general entertainment shows, news, or invests considerably in acquiring the rights of movies, shows, sports etc. Broadcasters are either the owners of such content or may have duly licensed the same from the respective license owners.

The content mostly is exclusive to each broadcaster and unlike telecom service providers, the subscribers would want to view the content of at least all the major broadcasters. Distribution of the content is through distribution platform operators (“**DPOs**”), who would distribute the same either through the local cable operators (“**LCOs**”) or end subscribers directly [as is being done by Direct to Home (DTH) operators], as the case may be.

It’s imperative to point out the following challenges that we foresee in the implementing infrastructure sharing in distribution of TV channels:

- a) **Technologies**- Unlike telecom, there is no standard technology that is followed by all the DPOs in whatever platform they operate. For e.g. the make of CAS and SMS system used by one operator in DAS will be completely different from another DAS operator. Further, having these technologies sync with the technology of the main headend will also be a key hurdle.
- b) **CAS and SMS**- It is imperative for the broadcasters to have the subscriber reports on a regular basis for generating invoices, and thus having CAS and SMS systems for each operator is extremely crucial. In the current scenario, every DPO has its own CAS and SMS systems installed, however, in case of infrastructure sharing, it needs to be ensured that the CAS and SMS systems are not common for all the DPOs sharing the infrastructure. In the event the CAS and SMS systems are common for all the DPOs, we are not sure whether the passive infrastructure provider would ensure that the bifurcation of packages as well as subscribers are clearly provided for every operator for reporting to the broadcaster.
- c) **Obligation**- As stated above, if the CAS and SMS are common for all the DPOs, it is essential to then decide whose obligation it would be to submit the reports on a timely basis to the broadcasters- the passive infrastructure provider or the DPO itself.
- d) **Encryption**- It is submitted that Entitled Control Mechanism (“**ECM**”) and Entitled Management Message (“**EMM**”) are the most important part of CAS, which denote whether the subscriber is authorized to view or access the services or not. In case of infrastructure sharing, will the ECM and EMM be common for all the operators sharing infrastructure? In such case, how would the STBs be authenticated and how would the channel level reporting be possible for every operator? These issues would be required to be taken into consideration before arriving at a conclusion.

- e) **Existence of intermediaries-** Contrary to telecom, the presence of intermediaries (one or two levels) between a broadcaster and subscriber leads to various issues including failure to make payments on regular basis, absconding DPOs, piracy, non-provision of reports on a timely basis etc. This leads to immense struggle between a broadcaster and a DPO. Further, as we had stated earlier, every DPO and subscriber would want multiple channels of various broadcasters, leading to disputes amongst the DPOs sharing the infrastructure, which could eventually affect the subscribers and the viewership of the channels.
- f) **Piracy-** Piracy is one of the biggest concerns of the broadcasters, and we need to figure out how could we ensure curbing piracy in case of infrastructure sharing. We have discussed this further in the operational issues.

The reason why we have mentioned the above challenges in our response to the present paper is because the Authority needs to appreciate the varied nature and dynamics in which the broadcaster operates, which is not at all similar to the telecom operators.

We are not in principle averse to the idea of infrastructure sharing, and believe if used in the right manner, it will not only help operators who do not have the ability to build their own headend, reduce CAPEX and OPEX and burden of having own headend, but also encourage effective competition in the market. However, it is extremely crucial to ensure that while approving infrastructure sharing in the broadcasting TV distribution sector, certain parameters are laid down which protects the interests of all parties involved in the infrastructure sharing so that no specific stakeholder is able to misuse the same to its advantage.

We agree with the Authority's view on sharing of transponder and earth station infrastructure and that since most of the satellite TV channels retransmitted by DTH/HITS operators are replicated, it results in the inefficient use of the satellite transponders. Sharing of the transponder space by DTH and HITS will result in effective use of the transponders as well as will have space for the other channels which are not commonly subscribed. This would also provide enough channel carrying capacity to the DTH operators as they normally assert that they have bandwidth issues. The foreseeable challenges, however, in this model are:

- a) the syncing of KU band used by the DTH operators with the C Band used by HITS operators;
- b) the location of CAS and SMS system;
- c) the broadcaster would need to understand how the reports for bandwidth of the channels and subscribers be provided to the broadcasters in case of shared space on the transponder.
- d) what would be the sharing cost for the DTH operator, if it intends to share the transponder space capacity; and
- e) the technology used by the DTH players are different from each other, and how will those work together;

With respect to sharing of HITS/MSO infrastructure, HITS is allowed two modes of operation- active and passive, where it acts like an MSO having its headend in the sky, and provide infrastructure facilities to one or more MSOs desirous of uplinking TV channels to its satellite for downlinking and further transmission to their subscribers respectively. This will not only reduce CAPEX and OPEX of the operators but also save foreign exchange outflow and will facilitate the faster rolling of the services. Similarly, we are in agreement to having a same headend shared by upto 8 DPOs, which would reduce CAPEX and the cost of retransmission of signals. Provided however, as regards the Authority's view that the efficient utilization of HITS infrastructure will be ensured when the common feed aggregated by the HITS operator is shared with multiple MSOs, we respectfully submit that unlike the telecommunication services, where the services are provided by the telecom operators to the subscribers directly, in broadcasting sector, the intermediaries (DPOs) who provide the services to the end subscribers, need to enter into separate interconnection agreements with the broadcasters. There could well be a scenario where a HITS platform may not have chosen all the channels of every broadcaster, however, the MSO has chosen channels different from the HITS platform. If the Authority grants the right to the HITS operator to share the same feed which has been aggregated by him for its active operations with desirous MSOs as passive infrastructure provided, the same will have an adverse effect on the business of the broadcasters. In the passive mode, HITS operator should provide its infrastructure to the MSO to uplink the feed aggregated by MSO independently on its satellite. In case of a same headend shared by DPOs, there are again various challenges with respect to the active mode of the headend operator and passive mode where it provides its infrastructure to other DPOs, which we would discuss in the issues for consultation in detail.

ISSUES FOR CONSULTATION

- a) **In addition to infrastructure sharing possibilities discussed in pre-consultation paper what more can be shared by the DPOs (MSOs, HITS, DTH) for better utilization of infrastructure?**

At this time, in addition to infrastructure sharing possibility, which in itself covers all the important aspects in the distribution of TV channels, we do not think there is anything else that could be shared amongst the DPOs for better utilization of infrastructure.

- b) **What could be the operational, commercial, technical and regulatory issues which require to be addressed at the time of developing policy and regulatory framework for enabling infrastructure sharing in the broadcasting TV distribution space?**

Operational and Technical:

- i) We are concerned about the scenario where the DPO having the headend does not have an agreement with the broadcasters for retransmission of the channels, however, the operator desirous of entering into infrastructure sharing has valid interconnection agreement with that broadcaster. How will the services then be provided?

- ii) Broadcasters and DPOs enter into channel placement deals, where the channels are placed as decided between the broadcasters and a DPO. However, as a broadcaster our concern is whether the operator be able to place the channels on the broadcaster desired LCNs, if the headends will be shared amongst them? Further, we are of the opinion that if 7-8 CAS systems are on a transponder, and in addition to the same all activation/de-activation, EMM/ECM, Finger print, OSD/control, word message are added to the common transponder, it would be considerable and we believe that almost 20-25% bandwidth will be occupied on each transponder by this alone.
- iii) Will it be mandatory for the CAS and SMS to be situated at the headend or should they be situated at every operators' place of business. If the CAS system is owned by HITS or the headend, how could the DPOs be able to make a distinct packaging as agreed between the broadcasters and DPOs? Further, if SMS is also common, attributing subscriber figures to one DPO could also become a considerable challenge.
- iv) If multiple operators are using a single headend, how can the burning issue of piracy be resolved, given the fingerprinting of all the boxes in that headend will be the same? Since fingerprinting relates to Integrated Receiver Decoders (IRDs), we presume that in the single headend one IRD will cater to multiple DPOs. Under current scenario, the identification of the platform through which piracy is taking place can be recognized by looking at individual broadcaster channel's fingerprinting. Under the shared infrastructure, since common broadcaster IRD will be used as a signal source for channels, then it will be impossible for the broadcaster to identify the platform, through which piracy is taking place.
- v) In the event the signals to the infrastructure sharing DPO is disconnected by the broadcaster due to its breach/default, how would we ensure that the signals to the other operators sharing the infrastructure continue to receive the signals?
- vi) The audit mechanism and type of logs shared by each of the DTH /HITS/MSO, needs to be redefined in case of infrastructure sharing. Current technical regulation will not be able to cover all the aspect of audit of such shared resources.
- vii) How will a new MSO/DTH player get security that the infrastructure shared with him will be properly maintained by the existing MSO/DTH? Secondly, the concern could be of already existing operator tweaking into the connectivity of new MSO/DTH to make its services unstable, as existing operator or a passive infrastructure provider may have a better control on the infrastructure.
- viii) How the shared infrastructure will be maintained? Who will be responsible for it and how will the commercial bifurcation be sorted?

Commercial and Regulatory

- i) The headend operator shall not be given an absolute discretion to pick and choose the operator who it wants to share its headend with. To the contrary, the broadcaster shall be given the right to enter into tripartite agreements with the operator as well as the headend operator and only when the interconnection agreement between them is duly executed the headend operator should be entitled to provide the sharing services to the operator for that particular broadcaster. This would eliminate the possibility of provisioning of the signals to a defaulting operator.
 - ii) The tripartite interconnection agreement shall clearly state the rights and obligations of each party to the agreement.
 - iii) The headend operator shall ensure that it will disconnect signals immediately to a particular operator if so notified by the broadcaster. However, the broadcaster needs to be protected in case of disconnection of signals due to dispute between the headend operators and operator availing sharing services. Only after a broadcaster is satisfied about the genuineness of the dispute and approves of the disconnection, the headend operator should be allowed to disconnect the signals to any of the shared operator since this would have a serious impact on the viewership of the channels.
 - iv) If the infrastructure sharing platform is owned by the DPO, it will have vested interest in the infrastructure that it owns, and there may be possibilities where it will not share or charge exorbitant amount from the network who desires to share the infrastructure. Our recommendation is that the Authority decides the rate at which the infrastructure is shared with the other operators and there should be a ceiling prescribed so as to avoid any type of exploitation.
 - v) Does the Authority envisage having “must share” in the regulation in case the operators wish to avail sharing of the headend space/HITS space to ensure a level playing field?
 - vi) How will the confidentiality of the agreements between such headend operator, operator and the broadcaster be maintained?
- c) **Do you envisage any requirement for change in the existing licensing/registration framework laid for DTH, DAS and HITS broadcasting services? If yes, please specify those changes clearly for each platform.**

No.

- d) **What could be the implications of allowing separation of network and service provider functions at distribution level? How the responsibilities can be divided between the network and service providers?**

We believe that the separation of network and service provider functions would help eliminate some of the concerns which we have elaborated in our response to issue (b). The network provider will provide the infrastructure facilities to the operators including transponder space on satellite, earth station, headend facilities, simulcrypting/multicrypting of channels with different encryption systems and the operators will focus on meeting the consumer needs, provision of the signals to the subscribers and launching of additional value added services.

In our view, the network operators should not have any association with the DPOs and no DPO should have any stake or vice versa in the network operator to achieve fair play in the market. The DPO will pay the license/rentals to the network provider in consideration of providing the infrastructure facilities.

Implementation of this will reduce the cost with respect to audit and once the audit of the network is completed, it can provide services to the operators that the broadcasters enter into interconnection agreement with. This will also lead to more efficiency and standardization in the cable TV channels distribution space.

The Authority is already aware that the business of broadcasting is directly related to the reach of the channels of the broadcasters. Thus, there has to be a robust set of regulations when it comes to disconnection of a particular operator from the network provider's infrastructure e.g. of default of the DPO in making the payments to the network provider.

- e) **Any other issue which you feel will be relevant for enabling the infrastructures sharing and separation of network and service provider functions in TV distribution sector?**

None.