



Telecom Regulatory Authority of India



**Consultation Paper
on
Infrastructure sharing in broadcasting TV distribution sector**

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Written comments on the consultation paper are invited from the stakeholders by 21.10.2016 and counter comments, if any, may be submitted by 04.11.2016. Comments and counter comments will be posted on TRAI's website www.trai.gov.in . The comments and counter comments may be sent, preferably in electronic form to Sh. Sunil Kumar Singhal, Advisor (B&CS), Telecom Regulatory Authority of India, on the e-mail:- sksinghal@traigov.in or gs.kesarwani@traigov.in . For any clarification/ information, Sh. Sunil Kumar Singhal, Advisor (B&CS) may be contacted at Tel. No.: +91-11-23221509, Fax: +91-11-23220442.

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CHAPTER 1

INTRODUCTION

Overview of TV broadcasting sector

1.1 The TV broadcasting sector has witnessed a tremendous growth in the last decade. There has been an exponential increase in the number of satellite TV channels. At present, there are 864 satellite TV channels permitted for down-linking in the country in comparison to 37 TV channels permitted for down-linking in the year 2006. TV broadcasting services are distributed to consumers' using different distribution technologies like Cable TV, Direct to Home (DTH), Head-End in the Sky (HITS), Terrestrial TV and Internet Protocol TV (IPTV). Except analog terrestrial TV network, all other distribution networks are multi-channel broadcasting platforms. Figure 1 shows various distribution platforms available in the country.

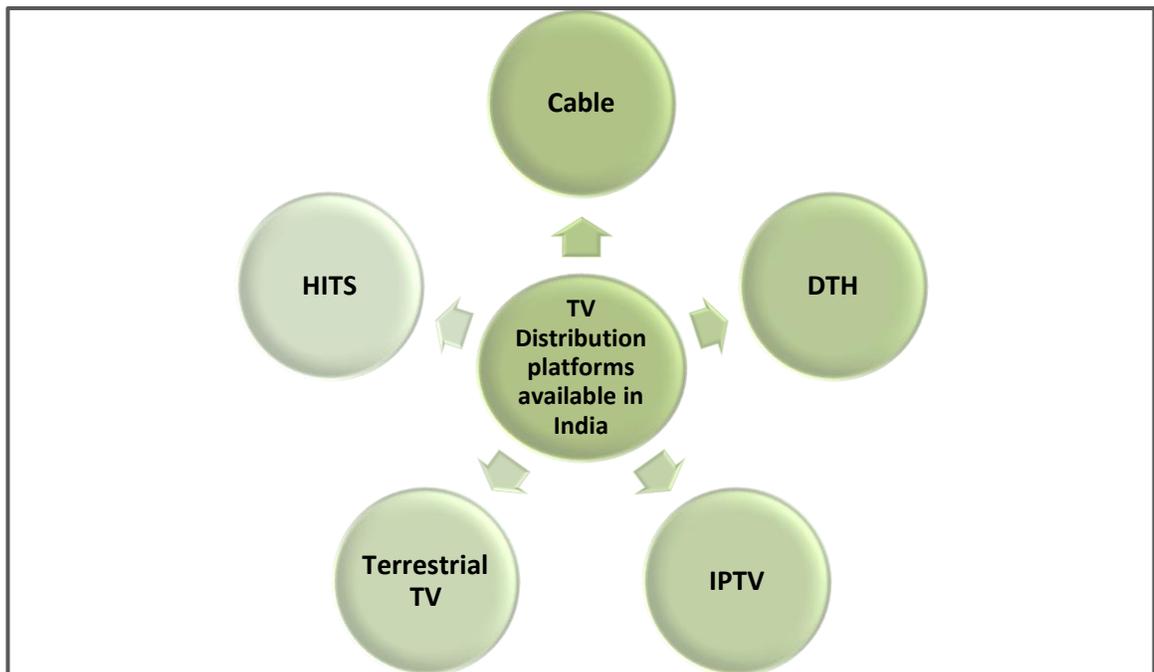


Figure 1: Various Broadcasting TV distribution Networks

- 1.2 The value chain for distribution of the satellite TV channels consists of the Broadcasters i.e. satellite TV channel providers; Distributors like the DTH/IPTV/HITS/Multi System Operators (MSOs), and the Local Cable Operators (LCOs).
- 1.3 Ministry of Information and Broadcasting (MIB) has laid down guidelines for up-linking and down-linking of satellite TV channels in India. Before up-linking signals of a TV channel, the broadcaster is required to obtain up-linking permission from MIB for that TV channel. The broadcaster, desirous of distribution of its satellite TV channels is required to obtain down-linking permission for those TV channels from MIB. The Distribution Platform Operators (DPOs) cannot re-transmit a satellite TV channel which has not been accorded down-linking permission by MIB. The DPOs i.e. DTH/MSO/ HITS/ IPTV operators are also required to take license or registration or permission from MIB before providing TV broadcasting services to the subscribers.
- 1.4 The Broadcasters uplink the signals of TV channels to the satellites, having C-Band¹ transponders, using earth stations, i.e. Teleports², stationed in India or outside India, as the case may be. For re-transmitting the signals of the permitted satellite TV channels through addressable systems, DPOs downlink signals of such TV channels using large size C-Band dish antennas and retransmit them using their own systems.
- 1.5 At present, there are 6 private DTH operators, more than 900 Multi System Operators (MSOs), few IPTV operators and 2 HITS operators

¹ C band satellites have the following downlink & uplink frequency range of 3,700-4,200 MHz & 5,925-6,425 MHz respectively.

² Satellite teleports are permanent satellite uplink facilities for the purpose of maintaining high quality data transmission and reception via a satellite connection.

distributing TV broadcasting services through Digital Addressable Systems in the country.

Infrastructure Sharing

- 1.6 Satellite transponder, Earth Station, Head-end, Hybrid Fibre Coaxial (HFC) network, Conditional Access System (CAS) and Subscriber Management System (SMS) form major part of the infrastructure used for delivery of the TV broadcasting services to the subscribers. Each multi-channel distribution platform retransmits large number of satellite TV channels. Out of these large number of satellite TV channels retransmitted by each operator, many of them are common across the distribution platforms in a relevant market. Therefore, retransmission of such common channels independently on each distribution platform ends up duplicating the infrastructure. There appears to be a distinct possibility for sharing of distribution infrastructure among multiple DPOs for its optimal utilization. It may result in reduction in Capital Expenditure (CAPEX) & Operating Expenditure (OPEX) for distributors.
- 1.7 Reduction in the CAPEX requirements brings down the entry barriers to new service providers in the market. In a competitive market, any kind of reduction in the expenditure of distributors could ultimately benefit the consumers in the form of reduced prices and better quality of services; and results in growth of sector due to increase in demand.
- 1.8 In this age of ICT, where the services are configured in the cloud, the infrastructure sharing among multiple DPOs can ultimately lead to specific focus areas wherein the network provider can focus on efficient operations and maintenance of its infrastructure like transponder space on satellite, earth station, Head-end facilities, transmission network, CAS, SMS etc. so as to ensure the maximum

uptime and optimal utilization of available capacities and the service delivery operator can focus on servicing the need of the consumers. The service delivery operator's focus on consumers may help in improving the delivery of services and speedy redressal of consumer grievances. Generally, for its own subscribers, the network provider is a service delivery operator also.

1.9 TRAI, on 23rd May 2016 issued a pre-consultation paper with an objective to solicit stakeholders' views on issues in sharing of infrastructure so that all likely issues can be identified before initiating consultation with the stakeholders. In response, 17 comments have been received from stakeholders.

1.10 The MIB has also sent a reference dated 29th April 2016 to TRAI, (Annexure-1) requesting the Authority to examine the issue of the infrastructure sharing by MSOs, LCOs and HITS operators in consultation with all the stakeholders and provide its recommendation to the Government under Section 11(1)(a) of TRAI Act 1997. MIB has also sought recommendation of the Authority on the amendment that may be required in the Cable TV Networks (Regulation) Act 1995 and Rules made there under to facilitate the infrastructure sharing.

1.11 In the above stated reference, the MIB has mentioned the following major requirements in the letter under reference:

- (i) These are acceptable to all stakeholders.
- (ii) No HITS operator/MSO/Local Cable Operator (LCO) is able to transmit any channel of any Broadcasters without an appropriate interconnection agreement with the broadcaster/MSO/HITS operator as the case may be.

(iii) No MSO/LCO is able to transmit or re-transmit any channel, including local and own channels, without encryption.

(iv) Authorized officers of the State Governments and their representatives are also able to access the system of MSOs/LCOs to ensure that there are no violations of the provisions of the Cable Act/Rules and TRAI Regulations and also to cross-check the reported number of subscribers/total collection from subscribers for the purposes of entertainment taxes etc.

(v) Accountability of MSOs/LCOs/HITS operators is ensured with reference to the SMS, their respective subscribers and to the respective state Governments and local administration as well as to the Central Government on all relevant aspects.

1.12 The objective of the present consultation is, to issue recommendations to the Government of India to formulate a policy framework for infrastructure sharing by DPOs so as to optimally utilize the infrastructure and to promote the healthy competition among service providers and, to identify the changes required in the Cable TV Act and the Rules made there under, in the license/ registration conditions of the Broadcasters/ DPOs in order to facilitate infrastructure sharing on voluntary basis.

1.13 This consultation paper is divided into 3 chapters. 2nd chapter deals with the possible models & frameworks for infrastructure sharing in TV broadcasting services. Chapter 3 lists issues for consultation.

CHAPTER 2

INFRASTRUCTURE SHARING IN TV BROADCASTING SERVICES

Infrastructure sharing among Cable TV and HITS operators

2.1 In digital cable TV networks, typically following infrastructure elements are required:

- (i) Dish farm for down-linking signals of satellite TV channels,
- (ii) Digital Head-end for processing and trans-modulation of signals,
- (iii) CAS for encryption of TV signals,
- (iv) SMS for subscriber management and billing of subscribers,
- (v) The Hybrid Fiber and Coaxial (HFC) cable network for transmission and distribution of signals.

2.2 For providing cable TV services through digital addressable systems, a cable operator is required to obtain an MSO registration from MIB. As per the existing terms and conditions for the MSO registration, each MSO is required to set up its own digital Head-end, CAS and SMS before providing the TV broadcasting services to the subscribers. The signals of TV channels processed in the Head-end are distributed through HFC cable network.

2.3 Similarly, for delivery of signals through HITS network, the following infrastructure elements are required:

- (i) Earth Station for down-linking signals of satellite TV channels from the broadcaster's satellite and up-linking the processed signal to a C/Ku band Satellite,
- (ii) Digital Head-end at earth station site for processing of signals,

- (iii) CAS for encryption of TV signals,
- (iv) SMS for subscriber management and billing of subscribers,
- (v) A node at LCO premises for trans-modulation of signals
- (vi) The Hybrid Fiber and Coaxial (HFC) cable network for distribution of signals.

2.4 HITS networks are similar to digital cable TV networks except to the fact that in case of HITS, the signals of TV channels are transmitted to cable operators using satellite in place of optical fiber network used by MSO for this purpose. Both - MSO and HITS - operators distribute the signals of TV channels to end subscribers through local cable networks.

2.5 Typically, a HITS network's area of coverage spans the whole country, whereas the coverage of a digital cable TV network is confined to limited geographical areas. Thus, through HITS platform, the signals of TV channels can be transmitted all over the country without using optical fiber infrastructure. In this way HITS networks are capable of transmitting signals of TV channels to every nook and corner of the country which include far flung areas and tough terrains where the optical fiber infrastructure is either not available or economically non-viable or difficult to lay.

2.6 As stated above, HITS networks are similar to digital cable TV networks. The only difference is in the mode of transmission of signal from Head-end to the node installed in the local cable network. The distribution of signals of TV channels in the LCOs network remains same irrespective of the fact that signals from backend are received from MSO or HITS operator. Technically, the HITS network can be effectively utilized by different MSOs for transmitting the signals of TV channels to their linked LCOs. Such sharing becomes more

relevant when an MSO wants to distribute signals of TV channels to a far located place from the locations of its head-ends.

- 2.7 In such case, if an MSO utilizes the HITS network for transmission of signals of TV channels to its linked local cable operator's networks, or two or more MSOs share the infrastructure among them, to optimize the cost of operations, it may ultimately benefit the end subscribers in the form of reduced prices with same quality of service. However, before considering such cost optimization proposals it is necessary that interests of all stakeholders in the value chain including the Central and the State Governments, and the Authorized officers as defined in the Cable TV Act, 1995 are protected and the relevant rules/ regulations are amended.
- 2.8 One way of sharing the HITS network infrastructure with the MSOs could be, herein after referred as 'model number-1', by using the HITS network infrastructure for down-linking the signals of TV channels and Integrated Receiver Decoders (IRDs) available with the HITS operator for each channel. The base band signal of such TV channels are then encoded, and multiplexed in the Head-end of the HITS operator before re-transmission. The multiplexed streams of the channels aggregated by the HITS operator are shared by multiple MSOs. The multiplex streams can be uplinked after carrying out encryption by same or different CASs as per agreement between the HITS operator and the MSOs. In this manner, a HITS network can be shared by multiple MSOs as a multiplexed stream of TV channels can be simulcrypt using 8 different CASs, as per DVB simulcrypt standards. In this way of infrastructure sharing, there could be savings in the CAPEX and OPEX for operators. This may ultimately result in same quality of service at an affordable price to the subscribers. This will ultimately result in focused attention of service

provider to further improve quality of service and address the customer concerns in much better way.

2.9 In this way, an MSO can have interconnection agreement with multiple broadcasters for commercial settlements and uses the multiplexed streams of the TV channels aggregated by the HITS operator for re-transmission. The MSO may use its own CAS and SMS or it can share any one or both of these infrastructure elements also with the HITS operator. Issues relating to sharing of CAS and SMS are being dealt separately in this paper. For provisioning, disconnection and security of the content, a suitable mechanism needs to be evolved through this consultation.

2.10 Another way of utilizing the HITS network infrastructure by the MSOs, herein after referred as 'model number-2', could be that the MSO uses its own infrastructure for down-linking the signals of TV channels using the IRDs provided to it by each broadcaster and multiplex them in its own Head-end before re-transmission. Such multiplexed streams of the channels made available by the MSO to the HITS operator for further re-transmission to the linked local cable operators of that MSO only. In this way, the HITS network is used as transmission system only and it addresses the issues relating to non-availability and cost of optical fiber infrastructure. However, it does not take advantage of the fact that large numbers of satellite TV channels retransmitted by each operator are common across the multiple MSOs in a relevant market and therefore the satellite transponders cannot be optimally utilized due to the transmission of signals of same channel in different streams. It could be termed as non-optimal way of utilizing the available transponder space.

- 2.11 These two are indicative models for infrastructure sharing between HITS operator and MSOs. There may be a possibility of other variants as well.
- 2.12 Similar to the above mentioned two different ways of sharing the infrastructure among MSOs and HITS operators, corresponding two ways of sharing the infrastructure among MSOs are also possible. Since the issues and concerns in sharing the infrastructure among MSOs and HITS operators, and among MSOs are of similar nature, these are discussed together further.
- 2.13 The sharing of infrastructure among MSOs and HITS operators, and among MSOs, using the 'model number-1', may also solve the issues relating to limited or practically 'nil' competition in the last mile access of the cable TV networks. With the help of simulcrypt technology and sharing of common transport stream, the signals of multiple operators can be distributed through a single coaxial cable TV network. Depending upon the number of interconnection agreements of an LCO, with MSOs and HITS operators, multiple options of choosing distributor may become practicable for the customers. The customer can exercise its choice out of available options.

(i) Is there a need to enable infrastructure sharing among MSOs and HITS operators, or among MSOs? It is important to note that no mandate for such infrastructure sharing is being proposed.

(ii) Which model is preferred for sharing of infrastructure among MSOs and HITS operators, or among MSOs? Kindly elucidate with justification.

Infrastructure sharing among DTH operators

2.14 DTH sector is one of the largest users of satellite transponders. With increase in demand for HD channels, the requirement for satellite transponders is also increasing day by day. Availability of adequate satellite transponders for growth is always a concern of DTH operators. Currently each DTH operator uplinks the signals of TV channels to different satellites located at different orbital slots. More than 100 transponders of 36 MHz equivalent are in operation by existing 6 DTH operators. Each DTH operator transmits approximately 350 to 450 SD TV channels and around 50 HD channels on its platforms. It may be noted that, more than 80% channels are common across the DTH operators. In this scenario, enabling sharing of satellite transponders and Earth station facilities, which may include the Head-end, CAS and SMS, also, by two or more DTH platform operators, may reduce the entry barriers and reduce CAPEX and OPEX of operators.

2.15 By sharing of infrastructure among multiple DTH operators, the multiplexed streams of common channels aggregated by a DTH operator are shared by multiple DTH operators. Platform specific channels/ services unique for each DTH operator can be multiplexed into separate streams and transmitted using additional transponder space on the same or adjoining satellite. The multiplexed streams can be uplinked after carrying out encryption by same or different CASs as per agreement between them. Sharing of satellite transponders among multiple DTH operators may address the issues relating to shortage of transponder space which some time necessitate the disproportionate compression of the signals of TV channels resulting into degradation in quality of viewing experience of consumers. The sharing of infrastructure among multiple DTH operators may ultimately result in better quality of viewing experience at an affordable price to the subscribers.

2.16 However, sharing of satellite capacity is possible only when the multiplexed streams have the same encoding and modulation standards. The encoding and modulation standards used by existing DTH operators are given below:-

S. No.	DTH Operator	Encoding Standards deployed	Modulation standards deployed
1	Airtel, TataSky Videocon D2H	H.264	DVB-S2
2	Reliance Big TV Sun Direct	H.264	DVB-S
3	Dish TV	MPEG-2	DVB-S

2.17 Further, the channel formats e.g. audio formats, multiple audio languages, subtitles, On Screen Displays (OSD) messages etc. may need to be identical for sharing DTH infrastructure.

(i) Is there a need to enable infrastructure sharing among DTH operators?

Analysis of relevant issues in sharing of infrastructure

2.18 To identify all the relevant issues involved in sharing of infrastructure, TRAI, on 23rd May 2016 issued a pre-consultation paper. Based on the responses received to the pre-consultation paper and internal analysis of TRAI, the relevant issues are analyzed hereinafter.

2.19 Some stakeholders, have stated that in broadcasting services, the networks remain tightly configured for the specific services and it would be difficult to meet the need of subscribers on quality of service from network providers across a range of parameters

including video encoding / trans-coding resolutions and quality, and criteria related to service growth, such as how fast new channels, services and subscribers can be added in both the short and long terms. They have further stated that there is a counter-trend among some major software service providers – recognizing the need for tightest possible coupling to enable best possible service differentiation – to provide more dedicated network infrastructure over which to provide their services.

2.20 Majority of the stakeholders opined that the infrastructure sharing should be permitted on voluntarily basis. Some other stakeholders stated that the operational and commercial issues in the infrastructure sharing should be left to market forces and regulatory & licensing condition should not be hurdle in the infrastructure sharing. Few stakeholders have stated that sharing of signal feed by multiple service providers would require suitable regulatory framework. While one stakeholder was of the opinion that the regulator should not impose or significantly incentivized infrastructure sharing. The same stakeholder also suggested that the public policy should facilitate increased choice, lower cost and high quality of services to the consumers.

2.21 The sharing of infrastructure in TV broadcasting services is a fairly new concept which may become reality in the coming times due to digitization and addressability of TV broadcasting services, and advancements in the ICTs. The infrastructure sharing is expected to improve efficiencies and resultant quality of service to the consumers as the cost for provisioning services could be shared amongst the operators. It may eventually lead to separation of networks and services. Even to enable infrastructure sharing for those operators who could be interested on voluntary basis as per their business requirements, certain amendments to the existing policy guidelines

and registration/ permission/ license conditions may be required. Changes in the regulatory framework, if any, could be considered after finalization of the policy for infrastructure sharing in the TV broadcasting services sector. It is an attempt to facilitate infrastructure sharing and address the bottle necks, without mandating the same.

2.22 The registration conditions of MSOs mandate that the MSO shall have an independent digital head end of his own and provide digital addressable cable TV services from its own head end. This condition may require to be amended, so that sharing of infrastructure becomes feasible. The Licensing Guidelines for HITS may also require some amendment to permit the HITS operator to offer its platform for utilization by other MSOs to reach their LCOs. Other registration/ licensing conditions of MSO / HITS may also require suitable amendments to enable infrastructure sharing. The relevant provisions in the Cable TV Act and Rules made there under, MSO registration conditions are attached as Annexure-II. The HITS guidelines which may have bearing on sharing of infrastructure among MSOs and HITS operator or among MSOs only, are attached as Annexure-III.

2.23 Some of the stakeholders have also suggested that amendment should be made in the Licensing conditions of DTH operators, stating that DTH operator can share its satellite capacity with other DTH/HITS/MSO or vice versa. At present the pre-requisite for making a license application for DTH is to specify the satellite capacity which a potential DTH operator proposes to use, and provide a satellite capacity lease Agreement. Satellite capacity is today authorized on the DTH licensee after paying the applicable spectrum fees. The emission characteristics (such as DVB-S or DVB-S2, symbol rate, data rate, FEC etc.) are also authorized on the DTH

licensee. The provisions of the DTH license guidelines are attached as Annexure-IV.

2.24 As discussed earlier in this paper, HITS networks are similar to digital cable TV networks. Both - MSO and HITS - operators distribute the signals of TV channels to end subscribers through local cable networks. Whereas, DTH operators distribute the signals of TV channels directly to end subscribers. Accordingly at this stage, infrastructure sharing between DTH and MSO/ HITS operators is not being envisaged.

2.25 Stakeholders opined that the infrastructure sharing will require changes in the agreement entered by the DPOs with Indian Space Research Organization (ISRO), Network Operation and Control Center (NOCC), Wireless Planning Commission (WPC), Teleport etc. Some stakeholders are of the view that, there may be a requirement of amendment in the policy framework for satellite communication in India so as to allow sharing of transponders and Earth stations. Simultaneous up-linking on two satellite till migration is complete is also an issue. NOCC arrangements and applicable fees may also need to be suitably defined/ amended for common Earth Station. Some stakeholders have stated that satellite redundancy in same orbital location is essential for DTH operators for their business, therefore, sharing of back-up head-ends should also be allowed. Few stakeholders have also stated that the agreements with ISRO for satellite capacity should also provide that such capacity can be shared with one or more DTH/HITS operators. Some operators have also stated that Department of Space (DoS) should also be consulted in the transponder & satellite capacity sharing scenario & DoS may act as an infrastructure/network service provider to various DPOs to ensure efficient operations & maintenance of networks.

- (i) What specific amendments are required in the cable TV Act and the Rules made there under to enable sharing of infrastructure among MSOs themselves? Kindly elucidate with justification.**
- (ii) What specific amendments are required in the MSO registration conditions and HITS licensing guidelines in order to enable sharing of infrastructure among MSOs and HITS operators? Kindly elucidate with justification.**
- (iii) What specific amendments are required in the guidelines for obtaining license for providing DTH broadcasting service to enable sharing of infrastructure among DTH operators? Kindly elucidate with justification.**
- (iv) Do you envisage any requirement for amendment in the policy framework for satellite communication in India to enable sharing of infrastructure among MSOs and HITS operators, and among DTH operators? If yes, then what specific amendments would be required? Kindly elucidate with justification.**
- (v) Do you envisage any requirement for amendments in the NOCC guidelines and WPC license conditions relating to satellite communications to enable sharing of infrastructure among MSOs and HITS operators, and among DTH operators? If yes, then what specific amendments would be required? Kindly elucidate with justification.**
- (vi) Do you envisage any requirement for amendments in any other policy guidelines to enable sharing of infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? Kindly elucidate with justification.**

2.26 Some stakeholders have opined that in case of default by an operator, it should be made obligatory for the network provider to discontinue the signals of the defaulting service provider on notification by the broadcaster.

2.27 After the implementation of infrastructure sharing in the TV broadcasting services, in the value chain three entities i.e. the broadcaster, network provider and service delivery operator, would be offering their services to each other. Therefore, it is essential that the infrastructure sharing framework should be able to address the issues arising out of disputes between any two out of three parties mentioned above. In case of any dispute between the broadcaster and the service delivery operator, it should be possible to discontinue the signals to the subscribers of defaulting service delivery operator only. Similarly, in case of any dispute between the broadcaster and the network provider, it should be possible to safeguard the interests of the service delivery operators associated with that network provider. One view could be that a tripartite agreement can be signed among the broadcaster, network provider and service delivery operator wherein clear terms can be notified by the parties to the agreement so that interests of the stakeholders are protected. Another view could be tripartite agreement may further complicate the business processes and delay the implementation. Suitable provisions can be incorporated in the agreements signed between the parties on bilateral basis.

(i) What mechanisms could be put in place for disconnection of signals of TV channels of defaulting operator without affecting the operations of the other associated operators with that network after implementation of sharing of infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? Kindly elucidate.

- (ii) Is there any requirement for tripartite agreement to enable sharing of infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? Kindly elucidate with justification.**

2.28 Some Stakeholders have shown the concerns relating to identification of pirates in sharing of infrastructure. They have expressed their apprehension that in the event of piracy it may be difficult to identify the pirate as after implementation of sharing of infrastructure one IRD may cater to multiple service providers. They have also mentioned that simulcrypt mode of transmission, where the multiple CAS encrypts the signal, reduces the level of security to that of the weakest CAS.

2.29 Identification of pirates of TV signals is a legitimate requirement. In addressable systems, it can be argued that a unique combination of the IRD, CAS and STB details may help in identification of pirates. The concerns relating to piracy due to weak CASs are already taken care in the existing regulatory framework by prescribing minimum conditions for any CAS to be deployed in the network. Further, these conditions can be revisited based on the experience of the stakeholders, to strengthen them. Simultaneously, operators sharing the infrastructure themselves would ensure that the CAS used by them does not allow any piracy of signals, as it may harm interests of all operators sharing the common infrastructure.

- (i) What techniques could be put in place for identification of pirates after implementation of sharing of infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? Kindly elucidate.**

- (ii) Is there any need for further strengthening of anti-piracy measures already in place to enable sharing of**

infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? Kindly elucidate with justification.

2.30 Some broadcasters have opined that geographical targeted advertisements may not be feasible in infrastructure sharing and there will not be any differentiation and personalization in delivery of the TV service to the subscribers and this may hamper competition and growth as well as it may also hamper the quality of service to the consumers. Further they have also stated that they may not be able to carry scrolls on the specific population of STBs for giving information such as notice for disconnection for signals of TV channels. Some other stakeholders have raised concerns about the provisioning of operator's logo and Electronic Programme Guide (EPG) specific to each service provider on the TV screens.

2.31 As far as the geographical targeted advertisements are concerned, it is primarily used in digital cable TV networks. After implementation of infrastructure sharing, one Integrated Receiver Decoder (IRD) serving a particular geographical area would be serving more number of subscribers. Therefore, it could be argued that the infrastructure sharing will facilitate such kind of advertisement leading to increased viewership with lesser efforts. In case of HITS and DTH services, targeted advertisements may not be relevant. On provisioning of scrolls and service providers logo, it may be possible with the help of latest technologies, the network operator is able to ensure that the scrolls are run on the specific STBs population on request of the broadcaster or the service delivery operator, and service delivery operator specific logo is displayed on TV screens. The display of service delivery operator specific EPG is a function of STB and EPG server. The same can be provided either by service delivery operator or the network provider on the request of the service delivery

operator. From this discussion, it appears that even after sharing of infrastructure, differentiation and personalization in delivery of the TV service may not be hampered. On the contrary, lowering of entry barriers and possibility of increased competition in the access cable network may improve the quality of services also.

- (i) Is there a requirement to ensure geographically targeted advertisements in the distribution networks? If yes, then what could be the possible methods for enabling geographically targeted advertisements in shared infrastructure set up?**
- (ii) Whether it is possible for the network operator to run the scrolls and logo on the specific STBs population on request of either the broadcaster or the service delivery operator after implementation of sharing of infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? If yes, kindly elucidate the techniques.**
- (iii) Whether implementation of infrastructure sharing affects the differentiation and personalization of the TV broadcasting services and EPG? If yes, then how those constraints can be addressed? Kindly elucidate with justification.**

2.32 Some stakeholders have shown their apprehension regarding sharing of carriage, placement and subscription revenue in shared infrastructure scenario. They have stated that the regulator should prescribe the revenue share formula for sharing of carriage fee among the DPOs sharing the infrastructure.

2.33 As far as the placement fee is concerned, the placement of channels is controlled by the EPG of each service provider. Therefore, the

treatment of placement fee may not change with decision of sharing the infrastructure. In shared infrastructure scenario, the carriage fee per subscriber may come down due to sharing of cost of transmission by various service providers. In such scenario, carriage fee, if any, may be charged by the network operator whereas the placement fee, if any, may be charged by the service provider. As far as the sharing of any kind of fee among the operators is concerned, it may not fit in the principal to principal relationship. In the principal to principal relationship, generally the service charges to be paid by one operator to another operator are decided by the market forces operating within the regulatory framework. Based on the economic efficiency and other strategic factors, individual operators may decide to opt or not to opt for infrastructure sharing. Even if there is any kind of regulatory intervention requirement then the same can be considered only after putting in place the policy changes.

- 2.34 On sharing of satellite transponders, some of the stakeholders have stated that sharing of satellite transponders will offer services at affordable prices. One stakeholder has stated that the sharing of transponder capacity will require more channels on one satellite which is not feasible due to constraints of transponder supply on single satellite or co-located satellites.
- 2.35 The way satellites are used now-a-days has also evolved. By co-locating several satellites at a single orbital position, it is possible to create the equivalent of a single virtual satellite with adequate number of transponders. Therefore, limitation of number of transponders on single satellite may not be a limiting factor for sharing of infrastructure.

(i) Whether, in your opinion, satellite capacity is a limiting factor for sharing of infrastructure? If yes, then what could be the solutions to address the issue?

- 2.36 One DTH operator has raised the concerns regarding practicability of reorientation of the dish antennas of the consumers in case an operator decides to use the infrastructure of the other operator. As the sharing of infrastructure is being envisaged on voluntary basis, it is up to the service providers to decide between long term benefits vis-a-vis the one time efforts for reorientation of dish antennas if needed.
- 2.37 DTH operators have raised their concerns regarding common head-end and Earth station as different technologies are used by DTH operators. They have expressed their apprehension about the responsibilities of common CAS, databases/ SMS maintained, handling common infrastructure & maintenance of network uptime for common services in shared scenario.
- 2.38 The evolution of technology is a continuous process and based on the business necessities, the operators upgrade their networks to latest technologies. The similar principles could be extended for decision on voluntary infrastructure sharing by the concerned operators. Since the infrastructure sharing has been envisaged to be solely on voluntarily basis, one view could be that it should be left to the market forces and the stakeholders should take necessary steps for protection of their interests. The other view could be that a guideline should be made by the Government or the regulator so that the rights and obligations are clearly defined in the infrastructure sharing agreement and uninterrupted services are available to the consumers.

2.39 SMS essentially runs CRM, authorization and billing applications, which are used to manage subscribers efficiently and implement the choice of subscribers. In this age of ICT, these kinds of services can be efficiently configured and delivered through cloud. In the cloud, virtual systems can be created specific to each operator to ensure the security and privacy of data. Generally, the applications running in the cloud are able to deliver error free and seamless services due to built-in redundancies as compared to standalone systems. While permitting the implementation of the SMS in the cloud, it is essential that the service providers follow the rules and the regulations relating to utilization of cloud for public services. Subject to the permissions, the applications running in the cloud can be accessed from remote locations also. In a way, permitting implementation of the SMS in the cloud may result into improved efficiencies, easier access for tax assessment authorities and better monitoring by the law enforcement agencies.

2.40 Similarly, if more than one service delivery operators are interested in sharing of the SMS, then they can deploy a large SMS like a private cloud to take advantage of its efficiencies.

2.41 Sharing of CAS among multiple operators may also be possible in the shared infrastructure scenario as the one transport stream of signals of TV channels is encrypted and decrypted by more than one operator. In such scenario it should be possible to identify the subscribers of individual operators. Sharing of CAS among multiple operators may reduce the cost of operations and it may also facilitate the dispersion of intra-CAS technical interoperability.

(i) Is there a need to permit sharing of SMS and CAS?

(ii) If yes, then what additional measures need to taken to ensure that SMS data remain accessible to the tax

assessment authorities and Authorized officers as defined in the Cable TV Act for the purpose of monitoring the compliance with relevant the Rules and the Regulations?

(iii) Whether sharing of CAS can in any way compromise the requirement of encryption as envisaged in the Cable TV Act and The rules and the regulations.

2.42 Stakeholders may also provide their comments on any other issue relevant to the present consultation paper.

CHAPTER-3

ISSUES FOR CONSULTATION

Infrastructure sharing among Cable TV and HITS operators

- (1) Is there a need to enable infrastructure sharing among MSOs and HITS operators, or among MSOs? It is important to note that no mandate for such infrastructure sharing is being proposed.**
- (2) Which model is preferred for sharing of infrastructure among MSOs and HITS operators, or among MSOs? Kindly elucidate with justification.**

Infrastructure sharing among DTH operators

- (3) Is there a need to enable infrastructure sharing among DTH operators?**

Relevant issues in sharing of infrastructure

- (4) What specific amendments are required in the cable TV Act and the Rules made there under to enable sharing of infrastructure among MSOs themselves? Kindly elucidate with justification.**
- (5) What specific amendments are required in the MSO registration conditions and HITS licensing guidelines in order to enable sharing of infrastructure among MSOs and HITS operators? Kindly elucidate with justification.**
- (6) What specific amendments are required in the guidelines for obtaining license for providing DTH broadcasting service to enable sharing of infrastructure among DTH operators? Kindly elucidate with justification.**

- (7) Do you envisage any requirement for amendment in the policy framework for satellite communication in India to enable sharing of infrastructure among MSOs and HITS operators, and among DTH operators? If yes, then what specific amendments would be required? Kindly elucidate with justification.**
- (8) Do you envisage any requirement for amendments in the NOCC guidelines and WPC license conditions relating to satellite communications to enable sharing of infrastructure among MSOs and HITS operators, and among DTH operators? If yes, then what specific amendments would be required? Kindly elucidate with justification.**
- (9) Do you envisage any requirement for amendments in any other policy guidelines to enable sharing of infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? Kindly elucidate with justification.**
- (10) What mechanisms could be put in place for disconnection of signals of TV channels of defaulting operator without affecting the operations of the other associated operators with that network after implementation of sharing of infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? Kindly elucidate.**
- (11) Is there any requirement for tripartite agreement to enable sharing of infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? Kindly elucidate with justification.**
- (12) What techniques could be put in place for identification of pirates after implementation of sharing of infrastructure**

among MSOs and HITS operators, among MSOs, and among DTH operators? Kindly elucidate.

(13) Is there any need for further strengthening of anti-piracy measures already in place to enable sharing of infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? Kindly elucidate with justification.

(14) Is there a requirement to ensure geographically targeted advertisements in the distribution networks? If yes, then what could be the possible methods for enabling geographically targeted advertisements in shared infrastructure set up?

(15) Whether it is possible for the network operator to run the scrolls and logo on the specific STBs population on request of either the broadcaster or the service delivery operator after implementation of sharing of infrastructure among MSOs and HITS operators, among MSOs, and among DTH operators? If yes, kindly elucidate the techniques.

(16) Whether implementation of infrastructure sharing affects the differentiation and personalization of the TV broadcasting services and EPG? If yes, then how those constraints can be addressed? Kindly elucidate with justification.

(17) Whether, in your opinion, satellite capacity is a limiting factor for sharing of infrastructure? If yes, then what could be the solutions to address the issue?

Sharing of CAS and SMS

(18) Is there a need to permit sharing of SMS and CAS?

- (19) If yes, then what additional measures need to taken to ensure that SMS data remain accessible to the tax assessment authorities and Authorized officers as defined in the Cable TV Act for the purpose of monitoring the compliance with relevant the Rules and the Regulations?**
- (20) Whether sharing of CAS can in any way compromise the requirement of encryption as envisaged in the Cable TV Act and The rules and the regulations.**
- (21) In addition to the issues mentioned above, comments of stakeholders is also invited on any other issue relevant to the present consultation paper.***

List of Acronyms

Abbreviations	Description
CAPEX	Capital Expenditure
CAS	Conditional Access System
DAS	Digital Addressable Cable TV Systems
DOS	Department of Space
DPO	Distribution Platform Operator
DTH	Direct to Home
DVB	Digital Video Broadcasting
EPG	Electronic Programme Guide
FEC	Forward Error Correction
HD	High Definition
HITS	Head-end in The Sky
ICT	Information and Communication Technologies
IPTV	Internet Protocol Television
IRD	Integrated Receiver and Decoder
ISRO	Indian Space Research Organisation
LCO	Local Cable Operator
MIB	Ministry of Information and Broadcasting
MPEG	Moving Picture Experts Group
MSO	Multi System Operator
NOCC	Network Operation and Control Centre
OPEX	Operating Expense
OSD	On Screen Display
SACFA	Standing Advisory Committee on Frequency Allocation
SD	Standard Definition
SMS	Subscriber Management System
STB	Set-Top-Boxes
TRAI	Telecom Regulatory Authority of India
WPC	Wireless Planning and Co-ordination

ANNEXURE – I

सुनील अरोड़ा, भा.प्र.से.
सचिव
SUNIL ARORA, IAS
SECRETARY



सत्यमेव जयते

[Handwritten signature]
Secretary

D.O. No. 12/12/2016-DAS

भारत सरकार
सूचना एवं प्रसारण मंत्रालय
शास्त्री भवन, नई दिल्ली-110001

GOVERNMENT OF INDIA
MINISTRY OF INFORMATION & BROADCASTING
SHASTRI BHAWAN, NEW DELHI - 110001

29th April, 2016

[Handwritten notes: Urgent, Pr. Advisor (BC&S)]

Dear Sir,

This is regarding sharing of infrastructure by MSOs, LCOs and HITS operators for providing TV services.

2. As you are aware that in a petition, filed by one registred MSO, namely M/s Shimla Satellite Cable Pvt. Ltd., in the Hon'ble High Court of Shimla regarding permission for sharing of infrastructure with another registered MSO for providing cable TV service, Hon'ble High Court had passed an order to the Ministry to consider the petition of the MSO. Since the Cable Television Networks (Regulation) Act 1995 and Rules made thereunder, as amended from time to time, are silent about sharing of infrastructure by the MSOs for providing cable TV services, therefore, on the basis of the various provisions of the cable TV Act/Rules and TRAI regulations, Ministry had disposed off his application stating that the request for sharing of digital headend cannot be acceded. Copy of the reply sent to the company is enclosed as Annexure-I.

3. TRAI in its letter No. 15-2/2016-BC&S dated 16th February, 2016 to JS(B-I) had mentioned that HITS infrastructure can be efficiently used for retransmission of signals of TV channels by different MSOs in far flung areas and certainly would be helpful in digitisation of TV services in the country.

4. Ministry fully supports the idea of sharing of infrastructure and is ready to make necessary amendments in the Cable Rules provided it fulfils the following major requirements:

- i. These are acceptable to all stakeholders.
- ii. No HITS operator/MSO/LCO is able to transmit any channel of any Broadcasters without an appropriate interconnection agreement with the broadcaster/MSO/HITS operator as the case may be.
- iii. No MSO/LCO is able to transmit or re-transmit any channel, including local and own channels, without encryption.

Chairman, TRAI
Dy. No. 2183
Date 4-5-16

सचिव/ड्राई 17/16
डाक्टरी सं. 05/05/16
दिनांक

Contd....Page-2/-

कमरा नं. 654, 'ए' विंग, शास्त्री भवन, नई दिल्ली-110 001
Room No. 654, 'A' Wing, Shastri Bhawan, New Delhi-110 001
Tel. : 011-23382639 Fax : 011-23383513, E-mail: secy.inb@nic.in

सूचना प्रदान करनेवाला (वि. एवं सी.एस.)
डाक्टरी सं. 2328
दिनांक 05/05/16

- iv. Authorised officers of the State Governments and their representatives are also able to access the system of MSOs/LCOs to ensure that there are no violations of the provisions of the Cable Act/Rules and TRAI Regulations and also to cross-check the reported number of subscribers/total collection from subscribers for the purposes of entertainment taxes etc.
- v. Accountability of MSOs/LCOs/HITS operators is ensured with reference to the Subscriber Management System (SMS), their respective subscribers and to the respective state Governments and local administration as well as to the Central Government on all relevant aspects.

5. A brief on various provisions in the Cable Act/Rules and TRAI Regulations, Court case and Communication from TRAI in this regard is enclosed as Annexure-II to bring to the fore the prevalent position in the matter.

6. In view of the above, I request you to kindly get the issue of sharing of infrastructure examined in consultation with all stakeholders and provide recommendations under Section 11 (1) (a). Amendments required in the Cable Television Networks (Regulation) 1995 Act and the Rules framed thereunder may also be suggested.

with regards

Yours sincerely,



(Sunil Arora)

Encl.: a/a.

Shri R.S. Sharma
Chairman
Telecom Regulatory Authority of India (TRAI)
Mahanagar Doorsanchar Bhawan
Jawaharlal Nehru Marg (Old Minto Road)
New Delhi.

Annexure I

24

By Speed Post/E-mail

No. 12/12/2016-DAS
Government of India
Ministry of Information and Broadcasting
A-Wing, Shastri Bhawan, New Delhi

Dated: 08.03.2016

To

M/s Shimla Satellite Cable Pvt. Ltd.
Thakur Vatika, Khalini,
Shimla - 171002
E-mail: munish.khanna185@yahoo.in

Sub: Representation from Shimla Satellite Cable Pvt Ltd. in terms of order dated 05.01.2016 passed by Hon'ble Himachal Pradesh High Court at Shimla in CWP No. 4884 of 2015 - reg.

Sir,

I am directed to refer to your representation dated 11.01.2016 regarding sharing of infrastructure with M/s Fastway Transmission Pvt. Ltd. who is having 51% share in M/s Shimla Satellite Cable Pvt. Ltd. In this connection on 20th January 2016, you were requested to provide the details of the infrastructure (hardware and software) which your company intends to share with M/s Fastway Transmission Pvt Ltd. and the infrastructure which your company will put up on your own. You were also requested to indicate the arrangements with regard to agreements with the broadcasters.

2. In response to the Ministry's letter, a reply dated 5th February 2016 has been received by e-mail from you indicating that your company will share digital headend inclusive of Subscriber Management System (SMS) and Conditional Access System (CAS) with M/s Fastway Transmission Pvt. Ltd. You have further mentioned that other infrastructure like billing, fiber optics, STBs and call center facility is provided and procured by M/s Shimla Satellite Cable Pvt. Ltd. You have further mentioned that your company will deal directly with the broadcasters for the content in your territory and pay them directly through M/s Shimla Satellite Cable Pvt. Ltd.

3. In this connection, your attention is drawn to the following provisions of the Cable Television Network (Regulation) Act and Rules framed there under and the regulations on digital addressable system (DAS) for cable TV network issued by Telecom Regulatory Authority of India (TRAI):

- (i) Rule 2(c) defines "the MSO as a cable operator who has been granted registration under Rule 11C and who receives programming service from

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specified by the Authority and obtain a certificate from such agency that its system meets the requirements specified in the schedule I to these regulations". Schedule I specifies the requirements of CAS (Conditional Access System and SMS (Subscriber Management System) to be installed by the MSO. Further, the schedule II of the same regulations which specifies the terms and conditions for Reference Interconnect Offers (RIO), it is mentioned under the heading "Reports" that MSO will maintain at its own expense a subscriber management system (SMS) that should be fully integrated with the CAS (Conditional Access System).

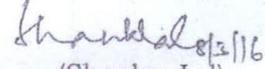
- (vi) Sub-regulation 5(7) of the interconnect 2012 (9 of 2012) issued by TRAI prescribes that "no broadcaster of pay channels shall make available signals of TV channels to any MSO without entering into a written interconnection agreement". For seeking TV channels from broadcasters MSOs are required to ensure that the requirements specified in Schedule I (pertaining to CAS and SMS) and schedule II of the interconnect regulations are met.

4. CAS and SMS are integral part of Digital Cable TV Headend. Since MSO is required to comply with the provisions of the cable TV networks (Regulation) Act/Rules and the Regulations issued by TRAI that is why the following condition had been made as one of the conditions for issue of the MSO registration:

"The MSO shall have an independent digital headend of his own and provide digital addressable service from his headend."

5. In view of the above, your request for sharing Digital Headend, inclusive of SMS and CAS, with M/s Fastway Transmission Pvt. Ltd, cannot be acceded to and your representation is accordingly disposed-off with the direction to make the system fully operational within the timeframe specified in this Ministry's registration letter No. 9/103/2015-DAS dated 13.07.2015 failing which the registration so granted shall liable to be revoked/suspended.

Yours faithfully,


(Shanker Lal)

Deputy Secretary to the Government of India

Tele: 2338 7373

(शंकर लाल)
(SHANKER LAL)
उप सचिव/Deputy Secretary
सूचना एवं प्रसारण मंत्रालय
Min. of Information & Broadcasting
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

12
By Speed Post/E-mail

**Shimla Satellite Cable Pvt. Ltd.
Thakur Vatika, Khalini,
Shimla-171002 (H.P.)**

Date: 05/02/2016

Sh. Anil Kumar
Under Secretary
To the Government of India,
Ministry of Information and Broadcasting,
A-Wing, Shastri Bhawan,
New Delhi

Sh. Anil

Subject: Representation from Shimla Satellite Cable Pvt Ltd. In terms of order dated 05.01.2016 passed by Hon,ble court of Shimla reg.

Dear Sir,

This has reference to your letter No. 12/1212016-DAS dated 28/01/2016, on the subject cited above regarding the requirement of certain information by your office in furtherance to our representation dated 11/01/2016.

In this regard it is submitted that in our representation dated 11/01/2016, we had specified the details of infrastructure to be shared with Fastway Transmission Pvt. Ltd., for your convenience we are again specifying the details of infrastructure to be shared with Fastway.

It is submitted we will share Digital Head End, inclusive of SMS (subscriber management system) and CAS (Conditional Access System).

11
It is further submitted that apart from above mentioned facilities all other infrastructure like Billing, fiber optics, STB's and call center facility is provided and procured by the Shimla Satellite Cable Pvt. Ltd.

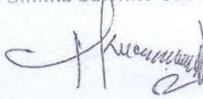
We further wish to specify that we will deal directly with the Broadcasters for the content in our territory and pay them directly through the Shimla Satellite Cable Pvt. Ltd..

Hope the above information suffices your queries, for any other information please feel free to contact the undersigned.

Thanking you in anticipation.

Yours Truly,

For Shimla Satellite Cable Pvt. Ltd.,
For Shimla Satellite Cable Pvt. Ltd.

 Director

Munish Khanna

Sharing of infrastructure –

Brief on various provisions in the Cable Act/Rules and TRAI Regulations, Court case and Communication from TRAI

1. Provisions in Cable TV Act/Rules and TRAI regulations reg. SMS etc.

1.1 Cable Television Network (Regulation) Rules 1994 as amended

- (i) Rule 2(c) defines "the MSO as a cable operator who has been granted registration under Rule 11C and who receives programming service from a broadcaster or his authorized agencies and retransmits the same or transmits his own programming service for simultaneous reception either by multiple subscriber directly or through one or more local cable operators and includes his authorized distribution agencies by whatsoever name called".
- (ii) Rule 13(3) mandates that "every MSO shall set up and operationalise its Subscriber Management System within a time frame as may be determined by the authority by regulation or order, for ensuring efficient and error-free service to the subscribers by recording and providing individualized preferences for pay channels, billing cycles or refunds".
- (iii) Terms and Conditions for registration as MSO specifies under Rule 11D (a) & (b) that a person who has been granted certificate as MSO under Rule 11C shall comply with inter alia, the following terms and conditions:
 - a. Such person shall comply with all the provisions of the Act and Rules made thereunder;
 - b. Such person shall comply with the regulations, orders, directions or guidelines made or issued by the Authority;

1.2 Cable Television Network (Regulation) Act 1995

Section 10A of the Cable Television Networks (Regulation) Act, 1995 mandates inspection of cable network and services by the Central Government or its authorized officers. Under the purview of this Act, authorized officers carry out the inspection of Headend equipment of MSOs for checking and confirming the data about the number of subscribers, the channels being provided by them etc. Authorized officers may also carry out inspection to ascertain the amount of entertainment and other taxes being collected/deposited by the MSOs. Section 4A (7) of the same Act mandates that every cable operator shall provide such information relating to the cable services in such format and at such periodic intervals to the Central Government or the State Government or the Authority or their authorized representatives, as may be specified by them from time to time.

1.3 TRAI Telecommunication (Broadcasting and cable Services) Interconnection (Digital Addressable Cable Television System) Regulation 2012

- (i) Sub-regulation 3(4) of the Telecommunication (Broadcasting and cable Services) Interconnection (Digital Addressable Cable Television Systems) Regulations 2012 (9 of 2012) issued by Telecom Regulatory Authority of India (TRAI), mandates that “every MSOs while seeking interconnection with the broadcaster shall ensure that its digital addressable system installed for the distribution of TV channels meets the digital addressable system requirements specified in Schedule I to these regulations: Provided that in case the broadcaster finds that the digital addressable system being used by the MSO for distribution of TV channel does not meet the requirements specified in the Schedule I, it shall inform such MSO who shall get its digital addressable system audited by M/S Broadcast Engineering Consultants Ltd or any other agency as may be specified by the Authority and obtain a certificate from such agency that its system meets the requirements specified in the schedule I to these regulations”. Schedule I specifies the requirements of CAS (Conditional Access System and SMS (Subscriber Management System) to be installed by the MSO. Further, the schedule II of the same regulations which specifies the terms and conditions for Reference Interconnect Offers (RIO), it is mentioned under the heading “Reports” that MSO will maintain at its own expense a subscriber management system (SMS) that should be fully integrated with the CAS (Conditional Access System).
- (ii) Sub-regulation 5(7) of the interconnect 2012 (9 of 2012) issued by TRAI prescribes that “no broadcaster of pay channels shall make available signals of TV channels to any MSO without entering into a written interconnection agreement”. For seeking TV channels from broadcasters MSOs are required to ensure that the requirements specified in Schedule I (pertaining to CAS and SMS) and schedule II of the interconnect regulations are met.

1.3 TRAI Telecommunication (Broadcasting and cable Services) Interconnection (Digital Addressable Cable Television System) Regulation 2012

- (i) Sub-regulation 3(4) of the Telecommunication (Broadcasting and cable Services) Interconnection (Digital Addressable Cable Television Systems) Regulations 2012 (9 of 2012) issued by Telecom Regulatory Authority of India (TRAI), mandates that "every MSOs while seeking interconnection with the broadcaster shall ensure that its digital addressable system installed for the distribution of TV channels meets the digital addressable system requirements specified in Schedule I to these regulations: Provided that in case the broadcaster finds that the digital addressable system being used by the MSO for distribution of TV channel does not meet the requirements specified in the Schedule I, it shall inform such MSO who shall get its digital addressable system audited by M/S Broadcast Engineering Consultants Ltd or any other agency as may be specified by the Authority and obtain a certificate from such agency that its system meets the requirements specified in the schedule I to these regulations". Schedule I specifies the requirements of CAS (Conditional Access System and SMS (Subscriber Management System) to be installed by the MSO. Further, the schedule II of the same regulations which specifies the terms and conditions for Reference Interconnect Offers (RIO), it is mentioned under the heading "Reports" that MSO will maintain at its own expense a subscriber management system (SMS) that should be fully integrated with the CAS (Conditional Access System).
- (ii) Sub-regulation 5(7) of the interconnect 2012 (9 of 2012) issued by TRAI prescribes that "no broadcaster of pay channels shall make available signals of TV channels to any MSO without entering into a written interconnection agreement". For seeking TV channels from broadcasters MSOs are required to ensure that the requirements specified in Schedule I (pertaining to CAS and SMS) and schedule II of the interconnect regulations are met.

2. Court Case

M/s Shimla Satellite Cable Pvt. Ltd., who is a registered MSO, had filed a case in the Hon'ble Court of Shimla requesting for permission not to set up his own headend as stipulated in the order for grant of MSO registration. He wanted sharing of infrastructure with M/s Fastway Transmission Pvt. Ltd. who is having 51% share in M/s Shimla Satellite Cable Pvt. Ltd. Hon'ble High Court had ordered to consider his representation. He was asked to provide the details of the infrastructure (hardware and software) which his company intends to share with M/s Fastway Transmission Pvt Ltd. and the infrastructure which his company will put up of its own. He was also asked to indicate the arrangements with regard to agreements with the broadcasters. In reply he had indicated that his company will share digital headend, inclusive of Subscriber Management System (SMS) and Conditional Access System (CAS), with M/s Fastway Transmission Pvt. Ltd. He had further mentioned that other infrastructure like billing, fiber optics, STBs and call center facility will be provided and procured by M/s Shimla Satellite Cable Pvt. Ltd. He had also mentioned that his company will deal directly with the broadcasters for the content in his territory and pay them directly through M/s Shimla Satellite Cable Pvt. Ltd. After examination, his representation was disposed off stating that the request

for sharing Digital Headend, inclusive of SMS and CAS, with M/s Fastway Transmission Pvt. Ltd, cannot be acceded. A copy of the reply sent to him is enclosed for reference.

3. Communication from TRAI for sharing of infrastructure for TV services on HITS platform

On the representations of HITS operators, TRAI in their letter No. 15-2/2016-BC&S dated 16th Feb 2016 has mentioned that HITS infrastructure can be efficiently used for retransmission of signals of TV channels by different MSOs in far flung areas and certainly would be helpful in digitisation of TV services in the country. In the case of TV services provided through HITS platform, the guidelines issued by Ministry inter alia state;

"The HITS operator can also decide to merely provide passive infrastructure facilities like transponder space on satellite, earth station facilities and the provisions for simulcrypting/multicrypting of channels aggregated by different MSOs with different encryption systems or to a consortium of cable operators/MSOs desirous of uplinking channels to his HITS satellite for downlinking and further transmission to the TV homes by cable operators across the country. The HITS operator in this case need not contract with the broadcasters for content".

1. Provisions in Cable TV Act/Rules and TRAI regulations reg. SMS etc.

1.1 Cable Television Network (Regulation) Rules 1994 as amended

- (i) Rule 2(c) defines “the MSO as a cable operator who has been granted registration under Rule 11C and who receives programming service from a broadcaster or his authorized agencies and retransmits the same or transmits his own programming service for simultaneous reception either by multiple subscriber directly or through one or more local cable operators and includes his authorized distribution agencies by whatsoever name called”.
- (ii) Rule 13(3) mandates that “every MSO shall set up and operationalise its Subscriber Management System within a time frame as may be determined by the authority by regulation or order, for ensuring efficient and error-free service to the subscribers by recording and providing individualized preferences for pay channels, billing cycles or refunds”.
- (iii) Terms and Conditions for registration as MSO specifies under Rule 11D (a) & (b) that a person who has been granted certificate as MSO under Rule 11C shall comply with inter alia, the following terms and conditions:
 - a. Such person shall comply with all the provisions of the Act and Rules made thereunder:
 - b. Such person shall comply with the regulations, orders, directions or guidelines made or issued by the Authority;

1.2 Cable Television Network (Regulation) Act 1995

Section 10A of the Cable Television Networks (Regulation) Act, 1995 mandates inspection of cable network and services by the Central Government or its authorized officers. Under the purview of this Act, authorized officers carry out the inspection of Headend equipment of MSOs for checking and confirming the data about the number of subscribers, the channels being provided by them etc. Authorized officers may also carry out inspection to ascertain the amount of entertainment and other taxes being collected/deposited by the MSOs. Section 4A (7) of the same Act mandates that every cable operator shall provide such information relating to the cable services in such format and at such periodic intervals to the Central Government or the State Government or the Authority or their authorized representatives, as may be specified by them from time to time.

GUIDELINES FOR PROVIDING HEADEND-IN-THE-SKY (HITS) BROADCASTING SERVICE IN INDIA

INTRODUCTION:

The Ministry of Information and Broadcasting, Government of India has formulated the policy guidelines for grant of Permission to establish and operate "Headend in the Sky (HITS)" broadcasting service from India.

Companies desirous of establishing and operating Headend in the Sky (HITS) Service platform shall be required to obtain Permission from the Ministry of Information and Broadcasting in accordance with the terms and conditions prescribed under these guidelines.

Headend-in-the-Sky (HITS) Broadcasting Service, refers to the multichannel downlinking and distribution of television programme in **C-Band or Ku Band**, wherein all the pay channels are downlinked at a central facility (Hub/ Teleport) and again uplinked to a satellite after encryption of channels. At the cable headend these encrypted pay channels are downlinked using a single satellite antenna, transmodulated and sent to the subscribers by using a land based transmission system comprising of infrastructure of cable/optical fibres network.

After obtaining a HITS license from the Ministry of Information & Broadcasting, the HITS operator can himself contract with different broadcasters for buying the content, aggregating the same at an earth station and then uplinking with his own encryption to a satellite hired by him. The uplinked channels can then be downlinked by the cable operators using a dish antenna for onward distribution through last mile conventional cable network to the TV homes. In this model, the HITS operator works like a conventional MSO, except that virtually the head-end is in the sky, instead of being located on ground.

The HITS operator can also decide to merely provide passive infrastructure facilities like transponder space on satellite, earth station facilities and the provision for simulcrypting/multicrypting of channels aggregated by different MSOs with different encryption systems to one or more MSOs or to a consortium of cable operators /MSOs desirous of uplinking TV channels to his HITS satellite for down linking and further transmission to the TV homes by the cable operators across the country. The HITS operator in this case need not contract with the broadcasters for content. He only enters into contracts with one or more MSOs or consortium of cable operators desirous of uplinking their aggregated channels from HITS earth station(s) to the HITS satellite.

The HITS operator has the freedom to use *his* satellite's transponder capacity both for transmitting his own aggregated content, as well as to provide passive infrastructure to other MSOs for uplinking/downlinking their aggregated content.

The permission of the existing two permission holders who have *been given* permission to provide HITS services in the year 2003 will continue for the remaining period of permission and operationalisation of HITS services may be done by them as per terms and conditions laid down in these guidelines.

1. ELIGIBILITY CRITERIA

1.1 The applicant seeking permission for providing HITS services shall be a Company registered in India under the Companies Act, 1956.

1.2 The Company should have a minimum Net worth of Rs Ten crores. The Net Worth shall be calculated as per the proforma specified and shall be certified by the Statutory Auditor of the company.

1.3 The total direct and indirect foreign investment including portfolio and foreign direct investments into the company shall not exceed 74% at the time of application and during the currency of permission.. The methodology of calculation of the direct and indirect foreign investments would be as per the extant policy of the Government. The company will be required to disclose the status of such foreign holding and certify that the foreign investment is within the ceiling of 74% on yearly basis.

1.4 FDI upto 49 per cent will be on automatic route. The approval of the Foreign Investment Promotion Board (FIPB) shall be required for FDI in the company/Indian promoters/investment companies including their holding companies if it has a bearing on the overall ceiling of 74 per cent.

1.5 The company shall make full disclosure, at the time of application, of Shareholders Agreements, Loan Agreements and such other Agreements that are finalized or are proposed to be entered into. Any subsequent changes in these would be disclosed to the Ministry of Information and Broadcasting, within 15 days of any changes, having a bearing on the foregoing Agreements.

1.6 Broadcasting Company(ies) and/or DTH licensee company(ies) will not be allowed to collectively hold or own more than 20% of the total paid up equity in the company at any time during the permission period. Simultaneously, the HITS permission holder should not hold or own more than 20% equity share in a broadcasting company and/or DTH licensee company. Further, any entity or person holding more than 20% equity in a HITS permission holder company shall not hold more than 20% equity in any other Broadcasting Company(ies) and/or DTH licensee and *vice-versa*. This restriction, however, will not apply to financial institutional investors. However, there would not be any restriction *on equity* holdings between a HITS permission holder company and a MSO/cable operator company.

1.7 While determining the shareholding of a Company or entity or person as per para 1.6 above, both its direct and indirect shareholding will be taken into account. The principle and methodology to determine the level of indirect holding shall be the same as has been adopted in Press Note 2 of 2009 dated 13.2.09 of the Department of Industrial Policy and Promotion under the Ministry of Commerce and Industry for determination of indirect foreign investment.

2. NUMBER OF PERMISSIONS:

There will be no restrictions on the total number of HITS permissions and these will be issued to any company which fulfils the eligibility criteria & necessary terms and conditions and subject to the security and technical clearances by the appropriate authorities of the Government.

3. PERIOD OF PERMISSION

3.1 Permission for providing the HITS Service will be valid for a period of Ten years from the date of issue of wireless operational license (WOL) by the Wireless Planning and Coordination Wing of the Ministry of Communications and Information Technology.

3.2 The permission may be terminated earlier as provided in paras 10 and 13..

3.3 The permission granted to the company shall be non-transferable except with specific and prior approval of the Government.

4. NON REFUNDABLE ENTRY FEES AND OTHER FEES

4.1 The applicant will be required to pay a non-refundable entry fee of Rs.10 crores.

4.2 No annual fee will be required to be paid.

4.3 The company/permission holder shall also in addition pay the license fee and royalty for the spectrum used as prescribed by Wireless Planning & Coordination Authority (WPC), under the Department of Telecommunications.

5. BANK GUARANTEE

5.1 The applicant company shall, within one month of the issuance of SACFA clearance by WPC, submit to the Ministry of I & B, a Bank Guarantee from any

Scheduled Bank in the format notified, for an amount of Rs.40 crores valid for a period of three years.

5.2 The HITS permission holder should commence uplinking/downlinking operations within a period of one year from the date of issuance of SACFA clearance by the WPC after obtaining Wireless Operational License failing which half of the bank guarantee would be forfeited.

5.3 If the operator does not start the service within two years from the date of issuance of SACFA clearance by the WPC, the full performance bank

guarantee will be forfeited and action for revocation of the permission will also be considered on completion of two years from the date of issuance of SACFA clearance by the WPC.

5.4 If the HITS permission holder fulfils the roll out obligation within one year of issuance of SACFA clearance by the WPC. then full amount of performance bank guarantee will be refunded. If the HITS permission holder meets the roll out obligation after one year but within two *year of* the issuance of SACFA clearance by the WPC, then half of performance bank guarantee will be refunded.

6. BASIC CONDITIONS AND OBLIGATIONS

6.1 *The* majority of Directors on the Board of the Company shall be Indian Citizens. The Company, Directors, Managing Director, Chief Executive Officer(CEO), and Chief Financial Officer (CFO) will be required to be security cleared from the Ministry of Home Affairs. The company shall give without fail intimation to Ministry of I & B regarding change in the directorship, key executives or foreign direct investment in the company, within 15 days of such a change taking place.

6.2 No permission holder shall carry or include in his HITS Service any television broadcast or channel which has not been registered by the Ministry of Information and Broadcasting for being viewed within the territory of India. Notwithstanding any agreement entered into between the permission holder and broadcaster(s)! TV channel owner(s), the permission holder shall stop from carrying! including in its HITS service, TV channels, whenever such registration/permission is withdrawn

6.3 The permission holder shall not carry any channels broadcast of which is prohibited by the Ministry of Information & Broadcasting.

6.4 The company shall not carry the channels of a broadcaster against whom the competent authority or any regulatory body, tribunal or court have found the following: -

- (i) It has refused access on a non-discriminatory basis to another broadcasting service provider contrary to the rules, regulations etc. governing the broadcasting services in India
- (ii) It has violated the provisions of any law relating to competition

including the Competition Act.

[Explanation: It shall be the sole responsibility of the permission holder to ascertain before carrying any channels on its network whether any television channel broadcaster has been found to be in violation of the above conditions or not. In respect of TV channels already being carried on the platform, the permission holder shall ascertain from every source including the Government, TRAI, Tribunal or a Court whether concerned broadcaster or the channel is in violation of the above conditions. If any violation so comes to its notice, the permission holder shall forthwith discontinue carrying the television channels of such broadcaster.]

6.5 The permission holder shall ensure that each of the channels carried by it follows the Programme Code and Advertisement Code as laid down under the Cable Television Networks (Regulation) Act, 1995 and the Rules framed thereunder or any other code made applicable.

6.6 The permission holder shall invariably ensure that the subscribers of the service do not have access to any pornographic channel or to secret/anti-national messaging and the like through the HITS platform. If the permission holder fails to do so . the permission granted shall be revoked and the company shall be disqualified to hold any such Permission in future for a period of five years, apart from liability for punishment under other applicable laws.

6.7 The permission holder shall ensure that its facilities are not used for transmitting any objectionable content, messages or communication inconsistent with the laws of India. If the permission holder fails to do so, the permission granted shall be revoked and the company shall be disqualified to hold any such Permission in future for a period of five years, apart from liability for punishment under other applicable laws.

6.8 The permission holder shall provide access to various content providers/channels on a non discriminatory basis.

6.9 The permission holder shall not enter into any exclusive contract for distribution of TV Channels.

6.10 The permission holder shall comply with the terms and conditions of Wireless Operational License to be issued by the WPC Wing, Ministry of Communications & IT.

6.11 The Company shall ensure its continued eligibility as applicable throughout the period of permission and adhere to all the terms and conditions of the permission, failing which the company shall be liable for penalty as specified in Para 14.2 below.

6.12 The government shall have the right to notify the number and names of television channel or channels of Prasar Bharati or any other television channel for compulsory carriage by the HITS provider in his *service* and the manner of reception and retransmission of such channels.

6.13 The Permission Holder shall carry other television channels of Prasar Bharati on the most favorable financial terms offered to any other channel.

7. MANDATORY SHARING OF CERTAIN BROADCAST SIGNALS WITH PRASAR BHARATI

7.1 The permission holder shall ensure that channels carried by and telecasting sporting events have ensured compliance with the provisions of Sports Broadcasting Signals (Mandatory Sharing with Prasar Bharti) Act, 2007.

8. TECHNICAL STANDARDS AND OTHER OBLIGATIONS

8.1 The applicant company shall furnish technical details such as Nomenclature, make, model, name and address of the manufacturers of the equipments/instruments to be used for broadcasting, distribution and reception system, the Block schematic diagram and also demonstrate the facilities for monitoring and storing record for 90 days.

8.2 The company can uplink in **`C' Band or `Ku' Band** only. Uplinking would be permitted both to Indian as well as foreign satellites. However, where the company does not have a satellite of its own or of its group company, proposals envisaging use of Indian satellites will be accorded preferential treatment. Satellite to be used should have been coordinated with ITISAT System.

8.3 The HITS operator is required to provide signals directly from his satellite only to the registered MSOs/cable operators and under no circumstances should the HITS operator provide signals directly from his satellite to the consumer. However, he will not be barred from providing signals, through his own cable network if any, to consumers also after first downlinking the signals to his terrestrial receiving station. The signals are to be provided only through QAM set top box.

8.4 The company is required to provide commercial interoperability with respect to its set top boxes so that if the subscribers decide to switch over to any other service provider or platform they should be able to do so at least cost. Commercial interoperability here would mean that in addition to offering the *receiver* set on an outright purchase basis, a subscriber should also have the option to purchase it on a hire-purchase basis or rental basis with a provision to return the set top box on such terms and conditions as may be laid down by regulations issued by TRAI.

8.5 The addressability provided to every subscriber should be capable of blocking any unwanted channel or group of channels by the Permission Holder.

8.6 The company shall ensure subscriber's interests through a Subscriber Management System (SMS) for an efficient, responsive and accurate billing and collection system.

8.7 The company shall not use any equipment, which is identified as unlawful/or render network security vulnerable.

8.8 All content provided by the HITS service provider to the subscribers, irrespective of its source, shall pass through the encryption and digital addressable system located within the earth-station situated on Indian soil.

9. MONITORING AND PUBLIC COMPLAINTS

9.1 The company at its own cost shall,

(i) Preserve the recordings of broadcast material for a period of three months from the date of broadcast and produce the same to the Government or its authorized representative, as and when required and

(ii) On demand by the Government or its authorized

representative, provide the necessary equipment, services and facilities at designated place(s) for continuous monitoring of the broadcasting service by or under supervision of the Government or its authorized representative.

9.2 The company shall submit such information with respect to its services as may be required by the Government or its authorized representative, in the format as may be required, from time to time.

10. INSPECTION

10.1 The Government of India, Ministry of Information & Broadcasting or its authorized representative shall have the right to inspect the broadcasting facilities. No prior permission intimation shall be required to exercise the right of Government or its authorized representative to carry out the inspection. The company will, if required by the Government or its authorized representative, provide necessary facilities for continuous monitoring for any particular aspect of the company's activities and operations.

10.2 The Government of India, Ministry of Information & Broadcasting or its authorized representative will ordinarily carry out the inspection after reasonable notice except in circumstances where giving such a notice will defeat the very purpose of the inspection.

11. NATIONAL SECURITY AND OTHER CONDITIONS

11.1 The Government of India, Ministry of Information & Broadcasting shall have the right to take over the entire services and networks of the permission holder or

revoke/terminate/suspend the permission of the company or to prohibit broadcasting of any or all of the channels for a specified period in the interest of national security or in the interest of emergency or war or low intensity conflict without giving prior notice to the company. The company shall immediately comply with any directives issued in this regard failing which the permission granted shall be revoked and the company disqualified to hold any such Permission in future for a period of five years.

Provided that any taking over or suspension of licence, issuance of a directive as described above shall neither be a ground for extension of licence period nor any compensation.

11.2 The company shall not use any equipment, which is identified as unlawful and/or render network security vulnerable.

11.3 Permission holder shall be required to obtain security clearance of all foreign personnel likely to be deployed for more than 60 days in a year by way of appointment, contract, and consultancy or in any other capacity for installation, maintenance, operation or any other services prior to their deployment.

11.4 The permission shall be subject to permission holder remaining security cleared throughout the currency of permission. In case the security clearance is withdrawn the permission granted is liable to be terminated forthwith.

11.5 In the event of security clearance of any of the persons associated with the permission holder or foreign personnel is denied or withdrawn for any reasons whatsoever, the permission holder will ensure that the concerned person resigns or his services terminated forthwith after receiving such directives from the Government failing which the permission granted shall be revoked and the company shall be disqualified to hold any such Permission in future for a period of five years.

12. VALUE ADDED SERVICES

12.1 The permission holder shall be able to use his network for providing other value-added services which otherwise do not require any specific license or permission. Services which require a specific license or permission from the competent authority can only be provided after obtaining such permission. However the permission holder is required to give prior information of all value added services to be carried by it to the Ministry of Information and Broadcasting.

13. PROVISIONS WITH RESPECT TO EXISTING PERMISSION HOLDERS:

13.1 Notwithstanding anything contained in the terms and conditions of permission issued earlier. These Guidelines will also be applicable to the existing permission holders.

13.1.1 The existing permission holders will be allowed to operationalise their services only after they give an undertaking supported by its Board resolution to Ministry of Information and Broadcasting to ensure compliance with all the provisions contained in the Guidelines within a period of three months from the issuance of these Guidelines which period may, at the discretion of the Government, be extended to a maximum of six months.

13.1.2 Existing permission holder will within a period of one month of the issuance of these Guidelines also submit a detailed plan for ensuring compliance to the provisions contained in guidelines. The existing permission holder will also have to deposit the non-refundable entry fee of Rs. 10 crores and submit proof of such deposition.

13.1.3 If compliance to provisions of 13.] .1 and 13.1.2 is not ensured by the existing permission holder within the stipulated time period the permission given earlier shall stand withdrawn.

13.1.4 The period of permission shall be ten years from the date of issuance of permission by Government of India as per pa 13.1.1 and 13.1.2.

14. TERMINATION OF PERMISSION

14.1 Consequences of violation of terms and conditions of the Permission

14.1.1 Subject to the provisions contained in paras 6.6, 6.7, 11.1, 1 1.4, 11.5 and 14.2 in the event of the company violating any of the terms and conditions of Permission, the Government shall have the right to impose the following penalties:

(a) In the event of first violation, suspension of the Permission and prohibition of broadcast up to a period of 30 days.

(b) In the event of second violation, suspension of the Permission and

prohibition of broadcast up to a period of 90 days.

- (c) In the event of third violation, revocation of the Permission and prohibition of broadcast up to the remaining period of the Permission.
- (d) In the event of the failure of the Permission Holder to comply with the penalties imposed within the prescribed time, revocation of Permission and disqualification to hold any fresh Permission in future for a period of five years.

14.1.2 In the event of suspension/revocation of Permission, the Government shall not be responsible for any investment by the Permission Holder on the service or by any other party on the strength of his permission.

14.1.3 Any suspension/revocation mentioned under this para shall be imposed only after giving a written notice to the company identifying the violation, providing opportunity to rectify it, if its nature so permits or otherwise show cause, within a period of 15 days and non-satisfaction from such rectification and/or cause so shown shall render the company liable for the proposed suspension/revocation.

14.2 Termination for Non eligibility

14.2.1 The Government may, at any time, terminate this Agreement and the Permission. without compensation to the Permission Holder in case the company fails to meet the eligibility criteria as laid down in these Guidelines or its security clearance is withdrawn or liquidation proceedings are initiated or becomes bankrupt or otherwise insolvent or applies for being adjudicated insolvent / bankrupt, provided that such termination shall not prejudice or affect any right of action which has accrued or will accrue thereafter to the Government.

14.3 Termination for convenience

14.3.1 The company may surrender the Permission, by giving an advance notice of one month to the Government as well as to all concerned/affected parties. It is clarified that the Company will not be entitled to claim any refund of the non-refundable Entry Fee already paid to the Government.

15. WPC WING'S PERMISSION

15.1 As aforementioned, a separate specific license i.e. Wireless Operational License (WOL), shall be obtained by the applicant company from the WPC Wing of Ministry of Communications &IT, permitting utilization of appropriate frequencies/band for the establishment, maintenance and operation of the HITS platform/facility under usual terms and conditions of such license. The Grant of such License shall be governed by the rules, procedures and guidelines and shall be subject to compliance with all requirements of the WPC wing.

15.2 For this purpose, an application shall be made to the "Wireless Advisor to the Government of India, WPC Wing, Department of Telecommunications, Ministry of Communications &IT," in the prescribed application form.

15.3 License fee/royalty as prescribed by WPC from time to time, shall have to be paid by the company towards grant of License for usage of frequency spectrum.

15.4 The company shall not cause harmful interference to other authorized users of radio spectrum. WPC Wing will have the sole discretion to take practicable and necessary steps for elimination of harmful interference, if any, to other licensed users.

15.5 The Wireless Planning and Coordination Wing, Ministry of Communications & IT shall have the right to inspect from time to time the installation from technical angles to check conformity with Wireless Operational License conditions.

16. PROCEDURE FOR APPLICATION AND GRANT OF PERMISSION:

16.1 All applicant companies shall apply to the Secretary, Ministry of Information & Broadcasting, in triplicate, in the prescribed proforma alongwith a processing fee of Rupees One Lakh

16.2 On the basis of information furnished in *the* application form, if the applicant is found eligible for setting up of 1-ZITS service in India, the application will be subjected to security clearance of the company, Board of Directors, Managing Director, CEO and CFO in consultation with the

Ministry of Home Affairs and for clearance of satellite use with the Department of Space.

16.3 After these clearances are obtained, the applicant would be required to pay a Non-Refundable Entry Fee of Rs.10 Crores to the Ministry of Information and Broadcasting.

16.4 After such payment of entry-fee, the applicant would be informed of intent of Min. of I & B to issue permission and requested to approach WPC for SACFA clearance.

16.5 After obtaining SACFA clearance, within one month of the same, the company will have to submit a Bank guarantee in desired format from any Scheduled Bank to the Ministry of Information and Broadcasting for an amount of Rs.40 crores valid for a period of three years.

16.6 After submission of this Bank Guarantee, the applicant would be required to sign a Grant of Permission Agreement with the Ministry of Information and Broadcasting as per prescribed proforma.

16.7 Thereafter the Ministry of Information and Broadcasting will issue permission to the applicant to provide HITS services in the country in accordance with the terms and conditions of the GOPA.

16.8 After signing of such agreement with the Ministry of Information and Broadcasting, the applicant will have to apply to the Wireless Planning & Coordination (WPC) Wing of the Ministry of Communications for seeking Wireless Operational License for establishment, maintenance and operation of HITS services.

16.9 All kinds of fees and other dues payable to the Government shall be deposited in the form of Demand Draft in favor of PAY & ACCOUNTS OFFICER, MINISTRY OF INFORMATION & BROADCASTING payable at New Delhi.

17. DISPUTES WITH OTHER PARTIES

17.1 In the event of any dispute between the company and any party other than the Government (including in relation to the Permission and/or Broadcasting services, etc) due to any reason *whatsoever*, it shall be the

sole liability of the company to resolve such dispute amicably or otherwise with the other party and the Government shall have no liability whatsoever in this regard. Further, the company shall undertake to fully indemnify and keep the Government harmless in respect of any action, claim, suit, proceeding, damage or notice to/against *the* Government for any act of omission or commission on the part of the company, its agents, employees, representatives or servants.

Provided that if any such third party dispute arises on account of non-observance or breach of any rules or regulations or any other terms and conditions of permission by the company as provided, the Government shall also have the right to take any action against the company as provided herein.

18. DISPUTE RESOLUTION AND JURISDICTION

18.1 In the event of any question, dispute or differences arising between the Central Government and the company with respect to permissions issued under these Guidelines, the same shall be resolved before Telecom Disputes Settlement and Administrative Tribunal as per the provisions of Telecom Regulatory Authority of India Act, 1997.

18.2 The courts at New Delhi shall have the jurisdiction over all disputes.

19. MISCELLANEOUS

19.1 The grant of Permission/registration shall be subject to the condition that as and when any regulatory authority to regulate and monitor the Broadcast Services in the country is constituted, the company shall adhere to the norms, rules and regulations laid down by such authority.

19.2 The Permission/registration shall be governed by the provisions of the Telecom Regulatory Authority of India Act, 1997, Indian Telegraph Act, 1885 and Indian Wireless Telegraphy Act, 1933 as amended from time to time and any other law as applicable to broadcasting facilities/services which has or may come into force.

19.3 The Government, Ministry of Information and Broadcasting shall have the right to modify at any time the provisions of these guidelines and/or the terms and conditions of permission, if in the opinion of the Government

it is necessary or expedient to do so in public interest or in the interest of the security of the State. The decision of the Government shall be final and binding in this regard.

RELEVANT PORTION OF GUIDELINES FOR OBTAINING LICENSE FOR PROVIDING DIRECT-TO-HOME (DTH) BROADCASTING SERVICE IN INDIA

The Union Government has decided to permit Direct-to-Home (DTH) TV service in Ku Band in India. The prohibition on the reception and distribution of television signal in Ku Band has been withdrawn by the Government vide notification No. GSR 18 (E) dated 9th January, 2001 of the Department of Telecommunications.

The salient features of eligibility criteria, basic conditions/obligations and procedure for obtaining the license to set up and operate DTH service are briefly described below. For further details, reference should be made to the Ministry of Information & Broadcasting.

Following are the eligibility criteria for applicants, conditions which will apply to DTH license and procedural details:

i) Eligibility Criteria:

- Applicant Company to be an Indian Company registered under Indian Company's Act, 1956.
- Total foreign equity holding including FDI/NRI/OCB/FII in the applicant company not to exceed 49%.
- Within the foreign equity, the FDI component not to exceed 20%.
- The quantum represented by that proportion of the paid up equity share capital to the total issued equity capital of the Indian promoter Company, held or controlled by the foreign investors through FDI/NRI/OCB investments, shall form part of the above said FDI limit of 20%.
- The applicant company must have Indian Management Control with majority representatives on the board as well as the Chief Executive of the company being a resident Indian.
- Broadcasting companies and/or cable network companies shall not be eligible to collectively own more than 20% of the total equity of applicant company at any time during the license period. Similarly, the applicant company not to have more than 20% equity share in a broadcasting and/or cable network company.

- The Licensee shall be required to submit the equity distribution of the Company in the prescribed Proforma (Table I and II of Annexure to Form-A) once within one month of start of every financial year.

ii) Number of Licensees:

- There will be no restrictions on the total number of DTH licenses and these will be issued to any person who fulfils the necessary terms and conditions and subject to the security and technical clearances by the appropriate authorities of the Govt.

iii) Period of license:

- License will be valid for a period of 10 years from the date of issue of wireless operational license by Wireless planning and Coordination Wing of Ministry of Communications. However, the license can be cancelled/ suspended by the Licensor at any time in the interest of Union of India.

iv) Basic conditions/obligations:

- The license will be subject to terms and conditions contained in the agreement and its schedule (Form-B)

v) Procedure for application and grant of licenses:

- To apply to the Secretary, Ministry of I&B, in triplicate, in the prescribed proforma (Form-A)
- On the basis of information furnished in the application form, if the applicant is found eligible for setting up of DTH platform in India, the application will be subjected to security clearance in consultation with the Ministry of Home Affairs and for clearance of satellite use with the Department of Space.
- After these clearances are obtained, the applicant would be required to pay an initial non-refundable entry-fee of Rs. 10 crores to the Ministry of Information and Broadcasting.
- After such payment of entry-fee, the applicant would be informed of intent of Min. of I & B to issue license and requested to approach WPC for SACFA clearance.
- After obtaining SACFA clearance, within one month of the same, the Licensee will have to submit a Bank guarantee (Form-C) from any Scheduled Bank to the Ministry of Information and Broadcasting for an amount of Rs.40 crores valid for the duration of the license.
- After submission of this Bank Guarantee, the applicant would be required to sign a licensing agreement with the Ministry of

Information and Broadcasting as per prescribed proforma (Form-B).

- After signing of such licensing agreement with the Ministry of Information and Broadcasting, the applicant will have to apply to the Wireless Planning & Coordination (WPC) Wing of the Ministry of Communications for seeking Wireless Operational License for establishment, maintenance and operation of DTH platform.
- The Licensee shall pay an annual fee equivalent to 10% of its gross revenue as reflected in the audited accounts of the Company for that particular financial year, in the manner detailed under Article -3 (License Fee) of the “Schedule to the License Agreement”
- The Licensee shall also, in addition, pay the license fee and royalty for the spectrum used as prescribed by Wireless Planning & Coordination Authority (WPC), under the Department of Telecommunications.

vi) Arbitration Clause:

Incase of any dispute, matter will be referred to the sole Arbitration of the Secretary, Department of Legal Affairs, Government of India or his nominee, for adjudication. The award of the Arbitrator shall be binding on the parties. The Arbitration proceedings will be governed by the law of Indian arbitration in force at the point of time. Venue of Arbitration shall be India.

TERMS AND CONDITIONS

ARTICLE-1

ELIGIBILITY CONDITIONS

- 1.1 The Licensee company shall be an Indian company, registered under the Indian Companies Act, 1956.
- 1.2 The total Foreign Investment, including FDI/NRI/OCB/FII in the paid up equity of the Licensee Company, shall not be more than 49%.
- 1.3 The FDI component of the foreign equity in the total paid up equity of the Licensee company shall not exceed 20%.

Explanation : The quantum represented by that proportion of the paid up equity share capital to the total issued equity capital of the Indian promoter Company, held or controlled by foreign investors through FDI/NRI/OCB investments, shall form part of the above said FDI limit of 20%.

- 1.4 The Licensee shall not allow Broadcasting Companies and/or Cable Network Companies to collectively hold or own more than 20% of the total paid up equity in its company at any time during the License period. The Licensee shall submit the equity distribution of the Company in the prescribed proforma (Table I and II of Form-A) once within one month of start of every financial year. The Government will also be able to call for details of equity holding of Licensee company at such times as considered necessary.
- 1.5 The Licensee company not to hold or own more than 20% equity share in a broadcasting and/or Cable Network Company. The Licensee shall submit the details of investment made by the Licensee company every year once within one month of start of that financial year. The Government. will also be able to call for details of investment made by the Licensee company in the equity of other companies at such times as considered necessary.

- 1.6 The applicant company shall always have Indian management control with majority representatives on the Board, as well as the Chief Executive of the company being a resident Indian citizen.

ARTICLE-2

TERM OF LICENSE

- 2.1 The validity period of License shall be ten (10) years, on non-exclusive basis, and shall be reckoned from the date of issue of Wireless Operational License by the WPC, unless terminated earlier for default or for insolvency or for convenience or for transfer of the License.
- 2.2 The license shall not be transferred without prior approval of the Licensor.

ARTICLE 3 LICENSE FEE

- 3.1 The Licensee shall pay an initial non-refundable entry fee of Rs. 10 crores before the issue of letter of intent to him by Licensor, and, after the issue of the Wireless Operational License by the Wireless Planning and Coordination (WPC) Wing of the Ministry of Communications, an annual fee equivalent to 10% of its gross revenue in that particular financial year within one month of the end of that year.
- 3.2 The Licensee shall also in addition pay the license fee and royalty for the spectrum used as prescribed by Wireless Planning & Coordination Authority (WPC), under the Department of Telecommunications.

ARTICLE-4

BANK GUARANTEE

- 4.1 The Licensee shall, within one month of issual of SACFA clearance by W.P.C., submit to the Ministry of I & B, a Bank Guarantee from any Scheduled Bank in Form-C for an amount of Rs.40 crores valid for the duration of the license.

- 4.2 The Licensor shall be at liberty to encash the Bank Guarantee in full or part in the event of non-payment of the license fee or violation of any of the license condition.

ARTICLE-5

COMPLIANCE WITH PROGRAMME AND ADVERTISING CODES

- 5.1 The Licensee shall ensure adherence to the Programme Code (PC) and Advertisement Code (AC), laid down by the Ministry of Information & Broadcasting from time to time.
- 5.2 The Licensee shall invariably ensure that the subscribers of the service do not have access to any pornographic channel or to secret/ anti-national messaging and the like. If the Licensee fails to do so, the License shall stand cancelled.

ARTICLE-6

PROHIBITION OF CERTAIN ACTIVITIES

- 6.1 The Licensee shall not carry any channels prohibited by the Ministry of Information & Broadcasting.
- 6.2 The Licensee shall ensure that its facilities are not used for transmitting any objectionable or obscene content, messages or communication inconsistent with the laws of India. The use of the facility or service for anti national activities would be construed as an offence punishable under the Indian Penal Code and applicable laws and will attract immediate termination of License.
- 6.3 The Licensor reserves the right to prohibit the transmission or reception of programmes in the interest of national security or in the event of emergency/war or similar type of situation. Notwithstanding any agreement between the Licensee and the content providers, the Licensee shall stop forthwith, transmission of TV channels or any content, as and when directed to do so by the Licensor or any other designated lawful authority.
- 6.4 Except with prior approval of Licensor, the Licensee shall not either directly or indirectly assign or transfer its right in any manner whatsoever under this Agreement to any other party or enter into any Agreement for sub-license and/ or partnership relating to any subject matter of the License to any third party either in whole or in part.

Any violation of the terms shall be construed as breach of the License Agreement and License of the Licensee shall be terminated immediately.

ARTICLE-7

TECHNICAL STANDARDS AND OTHER OBLIGATIONS

- 7.1 The Open Architecture (non-proprietary) Set Top Box, which will ensure technical compatibility and effective interoperability among different DTH service providers, shall have such specifications as laid down by the Government from time to time.
- 7.2 The Licensee shall ensure subscriber's interests through a Conditional Access System (CAS), which is compatible with an open Architecture (non-proprietary) Set Top Box.
- 7.3 The Licensee shall ensure subscriber's interests through a Subscriber Management System (SMS) for an efficient, responsive and accurate billing and collection system.
- 7.4 The Licensee shall not use any equipment, which is identified as unlawful.
- 7.5 All content provided by the DTH platform to the subscribers, irrespective of its source, shall pass through the encryption and conditional access system, located within the Earth Station, situated on Indian soil.
- 7.6 The Licensee shall provide access to various content providers/channels on a non-discriminatory basis.
- 7.7 The Licensee shall adhere to any guidelines/regulations which may be laid down by the Licensor in the interest of consumer such as pricing of bouquet(s) or tier(s) of channels, etc.
- 7.8 The Licensee shall carry channels of Prasar bharati on the most favourable financial terms offered to any other channel.

ARTICLE-8
MONITORING AND INSPECTION

- 8.1 The Licensee shall provide the necessary facility for continuous monitoring of the DTH broadcasting service at its own cost and maintain the recordings of programmes and advertisements carried on the platform for a period of 90 days from the date of broadcast and produce the same to the Licensor or its authorised representative, as and when required.
- 8.2 The Licensee shall furnish any such information at periodic intervals as may be required by the Licensor concerning Channels or content being transmitted or provided under the service, technical parameters etc. in the format as may be prescribed by the Licensor from time to time.
- 8.3 Licensee shall provide access to the Licensing Authority or its duly authorised representative. to all its facilities including equipments, records, systems, etc.
- 8.4 The Licensee will, if required by the Licensor or its authorised representative, provide necessary facilities for continuous monitoring for any particular aspect of the Licensee's activities and operations.
- 8.5 The Licensor will ordinarily carry out the inspection after reasonable notice except in circumstances where giving such a notice will defeat the very purpose of the inspection.

ARTICLE-9
NATIONAL SECURITY AND OTHER CONDITIONS

- 9.1 The Licensor reserves the right to take over the entire services and networks of the Licensee or revoke / cancel / suspend the License in the interest of national security or in the event of an emergency / war or low intensity conflict or similar type of situations. Further, the Licensor reserves the right to direct the Licensee to close down the service if implications of security so requires. Any specific order or direction from the Government issued in this regard shall be strictly complied with by the Licensee.
- 9.2 The Licensee shall not use any equipment, which are identified as unlawful and/or render network security vulnerable.

- 9.3 All foreign personnel likely to be deployed by way of appointment, contract, consultancy, etc. by the Licensee for installation, maintenance and operation of the Licensee's services shall be required to obtain security clearance from the Government of India prior to their deployment.

ARTICLE-10

VALUE ADDED SERVICES

- 10.1 The DTH facility shall not be used for other modes of communication, including voice, fax, data, communication, Internet, etc. unless specific license for these value-added services has been obtained from the competent authority.

ARTICLE -11

PREFERENCE TO INDIAN SATELLITES AND INTERSYSTEM CO-ORDINATION

- 11.1 Though Licensee can use the bandwidth capacity for DTH service on both Indian as well as foreign satellites, proposals envisaging use of Indian satellites will be extended preferential treatment.
- 11.2 The Licensee shall ensure that its operation will conform to the provisions of inter-system co-ordination agreement between INSAT and the satellite being used by the Licensee.

ARTICLE 12

WPC WING'S LICENSE

- 12.1 A separate specific operational license shall be required from the WPC Wing of Ministry of Communications for establishment, maintenance & operation of the DTH platform/facility under usual terms and conditions of that license. Grant of WPC operational license will be governed by normal rules, procedures and guidelines and will be subject to completion of all formalities. As may be prescribed by the WPC Wing, the Ministry of Communication for this purpose, an application shall be made to the "Wireless Advisor to the Government

of India, WPC Wing, Ministry of Communications, Dak Bhavan, Parliament Street, New Delhi-110001” in a prescribed application form available from WPC Wing within one month from the date of signing of this agreement.

- 12.2 The Licensee shall obtain clearances/approvals, as may be prescribed or required, from the Wireless Planning Coordination Wing or from the Department of Space.
- 12.3 The Wireless Planning & Coordination (WPC) Wing of the Department of Telecommunication, Ministry of Communication shall issue SACFA clearance to the Licensee as soon as possible after receiving the application the same and shall grant the final Wireless Operational License, after signing of this agreement, subject to fulfilment of the necessary terms and conditions including installation of equipment etc. as may be required by WPC.
- 12.4 The Wireless and Planning Coordination Wing shall have the right to inspect, from time to time, the installation with a view to ensuring conformity with the WPC’s license
- 12.5 The Licensee shall not cause harmful interference to other authorised users of radio spectrum. WPC Wing will have the sole discretion to take practicable and necessary steps for elimination of harmful interference, if any, to other licensed users.
- 12.6 The Licensee shall furnish to the WPC Wing the full technical and operational details of TV channels and other channels proposed to be uplinked through his/her Hub/Teleport in the prescribed format.

ARTICLE-13

COMMISSIONING OF DTH PLATFORM

- 13.1 The Licensee shall establish and complete the installation of the uplink earth station in India including the monitoring facility etc. and commission the DTH Platform within twelve months from the date of issue of the SACFA clearance by the WPC after obtaining wireless operational license and would submit a report to the Licensor in this regard.

ARTICLE-14

REQUIREMENT TO FURNISH INFORMATION TO THE LICENSOR

- 14.1 The Licensee shall furnish to the Licensor, such information at periodic intervals or at such times as the Licensor may require, including, but, not limited to, documents, reports, accounts, estimates, returns or other information such as change in Chief Executive, Board of Directors, equity holding pattern etc.

ARTICLE-15

TERMINATION OF LICENSE

- 15.1 Notwithstanding any other recourse under the terms and conditions of the license or any other law, the Licensor shall have the power, after recording the reasons in writing, to revoke/suspend the license in the event of breach of any terms and conditions of the license. However, before taking such action the licensing authority will give the Licensee an opportunity of being heard. The decision of the licensing authority shall be final.
- 15.2 The Licensor may, at any time, terminate the License without compensation to the Licensee in case Licensee becomes bankrupt or otherwise insolvent or applies for being adjudicated as insolvent/bankrupt, provided such termination shall not prejudice or affect any right of action which has accrued or will accrue thereafter to the Licensor.

ARTICLE-16

FORCE MAJEURE

- 16.1 If at any time, during the continuance of this License, the performance of any obligation either in whole or in part by any party is prevented or delayed, by reason of war, hostility, acts of enemy, civil commotion, sabotage, fire, flood, act of state or centre, explosion, epidemic, quarantine restriction, strikes materially affecting the performance of any obligations of affected party, or act of God (all or any of these hereinafter referred to as Force Majeure Event), neither party shall, by reason of such Force Majeure Event be entitled to terminate this License, nor shall either

party have any claim for damages against the other, in respect of such non-performance or delay in performance provided notice of happenings of any such Force Majeure Event is given by either party to the other, within 21 days from the date of occurrence thereof.

ARTICLE-17

DISPUTES WITH OTHER PARTIES

17.1 In the event of any dispute of the Licensee with any party other than Licensor due to any reason whatsoever, the dispute will be sorted out among themselves and Licensor will have no liability in any manner. The Licensee undertakes to indemnify Licensor in respect of any action against Licensor for acts of commission or omission on the part of the Licensee, its agents and servants.

ARTICLE-18

DISPUTE RESOLUTION AND JURISDICTION

- 18.1 In the event of any question, dispute or difference arising under this License, or in connection thereof, except as to the matter, the decision of which is specifically provided under this License, the same shall be referred to the sole arbitration of the Secretary, Department of Legal Affairs, Government of India or his nominee.
- 18.2 There will be no objection to any such appointment on the ground that the Arbitrator is a Government servant. The award of the arbitrator shall be final and binding on the parties. In the event of such Arbitrator, to whom the matter is originally referred to, being transferred or vacating his office, or being unable to act for any reason whatsoever, Secretary, Department of Legal Affairs shall appoint another person to act as Arbitrator.
- 18.3 The Arbitration and Conciliation Act, 1996, the rules made thereunder and any modification thereof, for the time being in force, shall be deemed to apply to the arbitration proceedings as above. The venue of arbitration

shall be New Delhi or such other place as the Arbitrator may decide. The arbitration proceedings shall be conducted in English language.

18.4 Upon any and every reference as aforesaid, the assessment of costs, interest and incidental expenses in the proceedings for the award shall be at the discretion of the Arbitrator.

18.5 The Courts at New Delhi shall have the jurisdiction over all disputes.

ARTICLE – 19

CONFIDENTIALITY

19.1 The Licensee shall keep all the secret and security related information exchanged between the Licensor and itself as confidential and shall not disclose such information to any third party or to the media.

ARTICLE-20

PENALTY

20.1 For violation of license conditions, in addition to any other action which may include revocation of license, a penalty upto Rs.50 crores can be imposed by the Licensor on the Licensee. However, before taking such action the licensing authority will give the Licensee an opportunity of being heard. The decision of the licensing authority shall be final.

ARTICLE-21

MISCELLANEOUS

21.1 Notwithstanding any clause anywhere else in the License, the License will be subject to the condition that as and when any regulatory authority to regulate and monitor the Broadcast Services in the country is constituted, the Licensee's will have to adhere to the norms, rules and regulations prescribed by such authority.

21.2 This license is subject to requirements and provisions of any law which may be enacted in future for regulating and guiding broadcasting in India.

21.3 The Licensee shall obtain the necessary environmental clearances, wherever required. The Licensee shall also comply with Copyright Act, the Electricity Act, Factories Act and other relevant laws of the land. In case of non-compliance of any of the aforesaid requirement, the Licensor shall have the right to revoke the License of the Licensee.