



Telecom Regulatory Authority of India

Recommendations on

Interoperability & other issues

relating to DTH

January 30, 2008

Mahanagar Doorsanchar Bhawan

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New Delhi- 110 002

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Section - 1: Background

- 1.1 The Ministry of Information & Broadcasting, Government of India, had sought recommendations of the Telecom Regulatory Authority of India (TRAI) under Section 11(1) for amendment in license conditions of DTH about technical interoperability and certain other issues in May 2006 on a representation received from M/s. Tata Sky Ltd. The Authority had issued a Consultation Paper on these issues on June 5, 2006. After careful consideration of all the comments and views of the stakeholders the Authority had sent its recommendations on the issues to the Government on August 25th, 2006.
- 1.2 Subsequently, another consultation process was initiated by the Authority by issue of a Consultation Paper on “Issues Relating to DTH” on March 2, 2007. The consultation paper covered interconnection issues, quality of service issues and regulatory issues relating to set-top boxes for DTH services. The Authority also held an open house discussion in Bhubaneswar on May 18, 2007 on the subject.
- 1.3 After detailed examination and analysis of the responses received during the consultation process, the Authority issued the Direct to Home Broadcasting Services (Standards of Quality of Service and Redressal of Grievances) Regulation, 2007 on August 31, 2007 and the Telecommunication (Broadcasting and Cable Services) Interconnection (Fourth Amendment) Regulation, 2007 on September 3, 2007.
- 1.4 The issues relating to quality of service were covered by the Direct to Home Broadcasting Services (Standards of Quality of Service and Redressal of Grievances) Regulation, 2007 dated August 31, 2007 and most issues relating to interconnection were covered by the Telecommunication

(Broadcasting and Cable Services) Interconnection (Fourth Amendment) Regulation, 2007 dated September 3, 2007. However, two issues relating to Technical Interoperability of Set-top Boxes for DTH and “Must Carry” provisions in the licence agreement remained to be addressed.

- 1.5 Meanwhile, the Secretary, Ministry of Information and Broadcasting also sought recommendations of the Authority on Technical Interoperability of Set-top Boxes for DTH vide letter dated September 28, 2007. The Authority was also requested to examine the possibility of allowing DTH operators to provide signals to cable operators in KU-Band.
- 1.6 The recommendations of the Authority on the issues of “Must Carry” provisions in the licence agreement, Technical Interoperability of Set-top Boxes for DTH and the possibility of allowing DTH operators to provide signals to cable operator in KU-Band are covered in succeeding chapters.

Section - 2: Non-discriminatory access

- 2.1 The DTH guidelines require the DTH licensees to provide access to various content providers/channels on a non-discriminatory basis. The relevant clause of the DTH license agreement is Clause 7.6, which stipulates that:

“7.6 The Licensee shall provide access to various content providers/channels on a non-discriminatory basis.”

This clause is mistaken by some stakeholders to mean “must carry”, i.e., the DTH operators must carry all the channels in a non-discriminatory manner when so approached by broadcasters. The phrase “must carry” has not been used in the DTH license agreement. Also, because of transponder capacity constraints, it is technically not feasible for the DTH service providers to carry all the channels on the DTH platform as there are nearly 312 TV channels permitted under uplinking/ downlinking guidelines by the Ministry of Information and Broadcasting.

- 2.2 The issue of non-discriminatory access including ‘must carry’ was addressed by the Hon’ble TDSAT in its order dated March 31, 2007 in petition no. 189 (C) of 2006 (M/s. Tata Sky Ltd. v/s. M/s. Zee Turner Ltd. & ors.). The Hon’ble TDSAT has held as under:

“...It is not disputed that there is no specific provision in the Regulations for ‘must carry’ concept. We are unable to read a ‘must carry’ provision in clause 7.6. A plain reading of clause 7.6 suggests that the obligation is cast on a Licensee to provide access to various content providers /channels on a non-

discriminatory basis. As per this clause, therefore, the Licensee is not the seeker of channels. The broadcasters or the content providers have to approach the Licensee for providing access on its platform for their channels and then the Licensee is required to do so on a non-discriminatory basis. ...

... Further, it must be noted that the interpretation suggested by the learned counsel for the respondent in clause 7.6 of the Licence is totally irrational because it overlooks the fact that it will choke the DTH operator if it has to carry all the channels of every broadcaster. ...

... If a DTH operator has to take all the channels of every broadcaster, it may not be physically possible to do so. Moreover, if every channel has to be taken it means that it will have to be paid for. This will increase the cost for the DTH operator. Ultimately, the cost will get passed on to the consumer. If DTH becomes expensive consumers will keep away from it. It will not be able to compete with CAS or cable. Thus, such an interpretation of clause 7.6 may be anti consumer.”

Thus, the Hon’ble TDSAT has held that clause 7.6 of the DTH license agreement does not imply ‘must carry’.

Comments of the stakeholders

- 2.3 In the comments received during the consultation process, all DTH operators and licensees except M/s Bharti have recommended retention of Clause 7.6 of the DTH licensing agreement. Amongst the broadcasters M/s.

Set Discovery Pvt. Ltd., M/s. Star India Pvt. Ltd., and M/s. Zee Turner Ltd. have also recommended retention of the Clause 7.6.

Analysis of Comments and Recommendations of the Authority

- 2.4 It is seen that almost all the DTH Operators and broadcasters want clause 7.6 of the DTH license agreement to be retained. The Hon'ble TDSAT has also held that clause 7.6 of the DTH license agreement does not imply 'must carry'.
- 2.5 In view of the increasing number of channels permitted under the up-linking and down-linking guidelines and capacity constraints of DTH service providers, it is quite clear that it is not possible for a DTH platform to carry all the channels permitted under the up-linking and down-linking guidelines. Since, only some of the channels permitted under the up-linking and down-linking guidelines can be carried on a DTH platform, the DTH service provider has to exercise choice of the channels to be carried. Moreover, some of the channels are Free-To-Air (FTA) channels and others are Pay channels. Among the Pay channels also, different channels are priced at different levels. Therefore, there is visible differentiation regarding terms for carriage of channels on the DTH platform. It is, therefore, necessary to appreciate the concept of "non-discriminatory" against this background.
- 2.6 The Authority is of the view that the market forces and competition will ensure that the DTH platforms will select the channels in a non-discriminatory manner so as to maximize satisfaction for the viewers. The commercial terms will be accordingly determined by the DTH service provider. The DTH platform has to carry the popular content of competing broadcasters also so as to ensure non-discriminatory and transparent treatment. If a DTH platform is not sensitive to its subscribers in terms of content and price, the subscribers have the choice of subscribing to other DTH operators, cable operators or IPTV.

2.7 It is abundantly clear that the term “non-discriminatory” refers to transparent, predictable, fair, equal and unbiased treatment. This essentially means that the DTH operator should select the channels for carriage on its platform in a fair and equitable manner, which would enable various content providers to constructively negotiate. The factors that would have a bearing are price and the broad terms offered by the broadcasters. Any decision based on the above mentioned considerations is further subject to the technical limitation on the number of channels that a DTH platform can carry. Therefore, it can be inferred that the term “non-discriminatory” in clause 7.6 of the DTH license agreement is restricted to transparent, fair and predictable offering of terms for commercial agreement. The clause in the license agreement should remain unchanged.

Section - 3: Interoperability

- 3.1 The requirement of technical interoperability of set-top boxes of DTH is incorporated in the licensing agreement for DTH. Clause 7.1 of the DTH license agreement stipulates that:

“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.”

- 3.2 The requirement of technical interoperability essentially protects the interest of the subscribers by enabling them to shift from one DTH service provider to another without having to buy new hardware. Presently, the DTH license agreement does not provide for commercial interoperability of set top boxes. However, the Direct to Home Broadcasting Services (Standards of Quality of Service and Redressal of Grievances) Regulation, 2007 dated August 31, 2007 requires the DTH service providers to give an option to their subscribers for obtaining the DTH hardware on hire purchase or rent basis. Thus the DTH subscribers have an option to change their service provider through commercial interoperability as provided by the quality of service regulation.

- 3.3 Regulation 4 of the Direct to Home Broadcasting Services (Standards of Quality of Service and Redressal of Grievances) Regulation, 2007 dated August 31, 2007 mandates that

“(1) Every direct to home operator shall give an option to every person making request under regulation 5 to make available to him, the Direct To Home Customer Premises Equipment conforming to the Indian Standard set by the Bureau of Indian Standards as

applicable, on out right purchase basis or hire purchase basis or rental basis...”

- 3.4 While the requirement of making available the Customer Premises Equipment on hire purchase basis or rental basis is somewhat similar to the provisions made for cable services in Conditional Access System (CAS) notified areas, the major difference is that no standard tariff packages have been specified by the Authority in respect of hire purchase/ rental schemes for DTH. The reasons for this deviation have been discussed in the Explanatory Memorandum to the Direct to Home Broadcasting Services (Standards of Quality of Service and Redressal of Grievances) Regulation, 2007 dated August 31, 2007. Para 18 of the Explanatory Memorandum reads as under:-

“18. The provisions relating to standard tariff packages for set top boxes for cable services in CAS areas were necessitated by the need for keeping entry barriers low for subscribers opting for pay channels in CAS areas. This was required to ensure that the existing cable subscribers could easily migrate to CAS without suffering loss of content due to compulsory implementation of CAS. However, DTH service is purely an optional service and any subscriber opting for DTH service makes a free choice and therefore entry barrier need not be artificially lowered through regulation in the prevailing circumstances. At the same time, it is felt that mandating rental or hire purchase schemes has the advantage of offering an easy exit route for the subscribers who may not be happy with their service providers. Therefore, the Authority has mandated that the subscribers shall be given an option to procure DTH Consumer Premises Equipment (CPE) on out right purchase basis or hire purchase basis or rental basis. However, the hire purchase or rental schemes have not been specified by the Authority for the present

and the DTH operators are free to come out with their own schemes in this regard.”

3.5 Thus, commercial interoperability has been mandated for Customer Premises Equipment for DTH by the aforementioned Regulation and the subscribers have a choice to return the equipment taken on hire purchase/ rental basis from DTH operators if they are dissatisfied with the service. However, it is important to note that the commercial interoperability has been mandated in addition to technical interoperability. As the commercial interoperability has been addressed separately in the Direct to Home Broadcasting Services (Standards of Quality of Service and Redressal of Grievances) Regulation, 2007 dated August 31, 2007, there is no purpose for its inclusion in the license conditions.

3.6 In the case of DTH the existing exit scheme based on the technical interoperability requirement has two drawbacks. Firstly it is not easy for consumers to switch from one DTH operator to the other as is envisaged in the licensing conditions for the reasons explained in para 3.11 ahead. The second is that the license conditions only allow a consumer to switch from one DTH operator to the other. It is not possible for the consumer to get out of the DTH platform and migrate to a cable or IPTV platform. At the same time it could also be argued that the existing licensing conditions provide an effective exit option especially with new service providers coming in and all that needs to be done is to remove the problems in the scheme.

Comments of the stakeholders

3.7 Two of the DTH licensees/ applicants have favored retention of technical interoperability, while three others have stated that technical interoperability is not working. As regards commercial interoperability, two of the licensees/ applicants have suggested mandating commercial

interoperability. The other three licensees/ applicants have suggested that there should be no such regulation.

Analysis of Comments and Recommendations of the Authority

3.8 The comments show that the DTH licensees/ applicants are divided on the issue. However, the suggestion that interoperability of Set Top Boxes should not be mandated is not acceptable. It is necessary to provide an effective exit option to the subscribers who are not satisfied with their DTH service provider for any reason to migrate to another DTH operator or to another distribution platform. As already mentioned, the Direct to Home Broadcasting Services (Standards of Quality of Service and Redressal of Grievances) Regulation, 2007 dated August 31, 2007 requires the DTH service providers to give an option to their subscribers for obtaining the DTH hardware on hire purchase or rental basis. This empowers the subscriber to exercise the exit option at a reasonable cost.

3.9 On the issue of rental schemes for Set Top Boxes for DTH services, the Authority had recommended in its recommendations on Licensing Issues relating to DTH sent to the Government on August 25, 2006 that

“...The DTH Service Providers should also be encouraged to provide Basic or Advanced Set Top Boxes to consumers under rental schemes, but there should be no dilution in the technical interoperability conditions as they exist today...”

3.10 It is seen that in the present state of development of DTH market in the country, technical interoperability has not taken deep roots. The main reason for this is unavailability of Conditional Access Modules (CAM) of different DTH service providers. The BIS specifications for DTH set top boxes require each set top box to have a Common Interface (CI) slot for the purposes of technical interoperability. Technical interoperability is achieved by plugging in the CAM of new DTH operator in the CI slot of set top box

provided by the existing DTH operator. For example, a subscriber of DTH operator 'A' who wishes to switch over to DTH operator 'B' has to procure a CAM from 'B' and plug the CAM into the CI slot of the set top box supplied by 'A'. This enables the subscriber to start receiving the services of 'B' using the existing set top box and dish antenna (although the dish antenna has to be re-aligned towards the satellite being used by 'B').

3.11 As of now, the Conditional Access Modules (CAM) are not being supplied by the DTH operators as the Conditional Access Modules (CAM) presently cost almost as much as a new set top box. Therefore, technical interoperability has not been very successful. However, it is expected that the new DTH service providers, who may be interested in taking over the DTH subscribers of existing DTH operators, will start making available Conditional Access Modules (CAM). Moreover, presently the DTH market is at a nascent stage with a small subscriber base. With a small subscriber base, the churn or shift from one service provider to another is going to be even smaller. Therefore, the demand for Conditional Access Modules (CAM) is also very limited. Once, the subscriber base of DTH grows and the churn becomes substantial, the demand for Conditional Access Modules (CAM) will also increase and it is expected that increase in volumes will result in drastic fall in prices of Conditional Access Modules (CAM). Hence, it is essential to ensure that all the set top boxes have the CI slot mandated by the BIS specifications in order to benefit from the technical interoperability in near future.

3.12 Therefore, the Authority is of the opinion that in spite of some problems in implementation of technical interoperability of DTH set top boxes, the provision requiring technical interoperability for DTH set top boxes needs to be retained. Therefore, **the Authority recommends that there is no need for doing away with the existing technical interoperability conditions.** Further, the provisions of the Direct to Home Broadcasting

Services (Standards of Quality of Service and Redressal of Grievances) Regulation, 2007 dated August 31, 2007 will also be retained which require the DTH service providers to give an option to their subscribers for obtaining the DTH hardware on hire purchase or rent basis provide additional protection for the interests of consumers.

- 3.13 The issue of strict adherence to BIS specifications of the STBs inhibiting the advent and advancement of technology has also been considered by the Authority. The solution to this problem does not lie in discarding BIS specifications but in ensuring that the BIS specifications also reflect the advancement of technology. World over, the standardization bodies revise the standards from time to time so as to incorporate the latest developments in the field of technology.
- 3.14 The letter from the Ministry of Information & Broadcasting seeking recommendations of the Authority (Annexure-I) also refers to the advancement in compression technology from MPEG 2 to MPEG 4 format, and its implication for technical interoperability. Para 3 of the letter is reproduced below:-

“There are already two DTH operators who are operational and are using the MPEG 2 compression format as per the present BIS specification provided for the same. The new operators like Sun TV Direct Pvt. Ltd., Reliance Blue Magic Ltd., and Bharati Telemedia Ltd. are wanting to go on the MPEG 4 compression format and it has been said that it offers substantial video quality improvements over current compression format and with over 25% savings in the transmission bandwidth.”

The Ministry had also convened a meeting with the representatives of BECIL, Prasar Bharati and Bureau of Indian Standards and para 4 of the letter in this regard is reproduced below:-

“A meeting was held in the Ministry with the representatives of BECIL, Prasar Bharati and Bureau of Indian Standards on the issues of technical interoperability. It was suggested in the meeting that the guidelines be modified to incorporate the commercial interoperability of set top boxes for the following reasons:-

- (a) the interoperability between set top boxes between two DTH operators is practically not feasible to the level of completeness.*
- (b) the imposition of this clause of interoperability increases the cost of set top boxes which consumer has to bear.*
- (c) the strict adherence to BIS specifications of set top boxes inhibits the advent and advancement of technology and the resulting benefit to the consumer.”*

The Authority does not share the apprehension outlined in sub para (c) of para 4 of the letter provided the following steps are taken-

- (i) Time bound updating of standards by the Bureau of Indian Standards (BIS).
- (ii) Reasonable transition time to service providers
- (iii) Effective commercial interoperability as additional support. (This has already been done by the Authority vide the Direct to Home Broadcasting Services (Standards of Quality of Service and Redressal of Grievances) Regulation, 2007 issued on August 31, 2007.)

The step at (i) above is to be taken by the Bureau of Indian Standards. Assuming that the BIS changes the standard from MPEG 2 to MPEG 4, then the DTH licensees can be given a time frame of 6 months for the transition. Since such revisions would be there in future also, DTH licensee may, while finalizing STB vendor contracts, stipulate upgrade conditions in such contracts.

3.15 The change in compression technology means that a DTH subscriber who has been using a Set Top Box using MPEG 2 compression format cannot migrate to the services of another DTH operator who is using MPEG 4 compression format using the same Set Top Box, though the converse is possible. This issue can be resolved by mandating that once BIS standards for DTH Set Top Boxes are revised incorporating MPEG 4 compression format, then even the DTH operator using MPEG 2 format should start supplying Set Top Boxes with MPEG 4 format for his new subscribers enrolled after the revision in BIS standards. It may be noted here that change in the BIS standards for DTH Set Top Box from MPEG 2 to MPEG 4 would not mean that the existing DTH operator using MPEG 2 broadcast stream has to start transmitting the broadcast stream in MPEG 4 format. The correct position is that the DTH operator can continue to broadcast in MPEG 2 format or switchover to MPEG 4 format at his option, but the Set Top Boxes which he will start distributing should be based on MPEG 4 standards due to revision in BIS standards and because these new Set Top Boxes using MPEG 4 format can continue to receive the existing MPEG 2 transmissions of the existing DTH operator. This also flows from the fact that BIS standards are fixed for DTH Set Top Boxes, and not for transmission stream of DTH operators. This would ensure on one hand that the DTH operator using MPEG 2 format will continue to service his new subscribers because Set Top Boxes based on MPEG 4 format will be capable of receiving transmission streams based on MPEG 2 format. On the other hand, it will ensure that the benefit of technical interoperability is available to all new subscribers who would be in a position to migrate to any other DTH operator using MPEG 2 or MPEG 4 formats. While it is so, it needs to be noted that the existing subscribers which are using STBs based on MPEG 2 formats will not be able to migrate to another DTH operator using MPEG 4 format. It will not be operationally feasible for a DTH operator using MPEG 2 format to upgrade the MPEG 2-based STBs of millions of existing subscribers to MPEG 4 format. However, it is

expected that the market forces would step in, and a DTH operator using MPEG 4 format who wishes to take away the existing subscribers having an MPEG 2 Set Top Box of another DTH operator will offer upgrades to such subscribers. Moreover, the exit route through commercial interoperability mandated by TRAI is now available to an existing subscriber who has taken the MPEG 2 Set Top Box on rent/ hire purchase. Here, it is necessary to note that the existing DTH operators using MPEG 2 formats may have placed bulk orders for STBs based on MPEG 2 formats in order to get best prices. In such cases, it would be difficult for such DTH operators to start supplying STBs using MPEG 4 formats from the very day that the Set Top Box standards are revised by Bureau of Indian Standards, and they would need to be given a suitable transition time of, say, six months from the date of revision of standards after which they must supply only such STBs which are fully compliant with revised standards.

- 3.16 Considering the advantages of technical interoperability as well as the need to adopt modern technology, **the Authority recommends that the issue of revision of BIS standards for DTH set top boxes should be taken up by the Government with the Bureau of Indian Standards so that the standards laid down by BIS for DTH Set Top Boxes are updated for advanced technologies. It is further recommended that revision of standards should be prospective and should apply to DTH subscribers who are enrolled after six months from the date of such revision. Such revision should not compulsorily require the DTH operators to upgrade the STBs of existing subscribers to conform to revised standards, though they would be free to do so on their own.**
- 3.17 Accordingly, the Authority recommends that clause 7.1 of the DTH license conditions should be amended to read as under:-

“7.1 The Open Architecture (non-proprietary) Set Top Box, should be such as to ensure technical compatibility and effective

interoperability among different DTH service providers. The DTH Set Top Boxes supplied to the subscribers shall have such specifications as laid down or as revised by the Government from time to time. However, in cases of revision of specifications such revisions will be applicable prospectively to new subscribers, and the licensee will have a transition period of six months from the date of such revision to ensure full compliance with the revised specifications for the new subscribers.”

Section - 4: Provision of signals to cable operators

- 4.1 The definition of Direct-to-Home (DTH) Broadcasting Service as given in the guidelines for obtaining license for providing Direct-To-Home (DTH) broadcasting service in India is as under:-

“Direct-to-Home (DTH) Broadcasting Service, refers to distribution of multi channel TV programmes in Ku Band by using a satellite system by providing TV signals direct to subscribers’ premises without passing through an intermediary such as cable operator.”

- 4.2 The definition of Direct-to-Home (DTH) Broadcasting Service makes it clear that distribution of multi channel TV programmes by the licensee has to be direct to subscribers’ premises. Distribution of signals passing through intermediaries such as cable operators has been specifically prohibited in the definition. Therefore, the present status is that the DTH licence holders are not permitted under the DTH licence to provide signals of multi channel TV programmes to cable operators for further distribution. On the other hand, in TRAI’s recommendation on Head-end in the sky (HITS), it is contemplated that the HITS operator will provide signals only to MSOs/LCOs and not to the subscribers directly. The underlying reason behind this recommendation is that in order to maximize competition which would be beneficial for the consumers, it is essential to ensure multiplicity of delivery platform such as conventional cable TV, DTH and HITS.
- 4.3 The issue of reviewing the restriction on DTH to serve only the end customer is related to the issue of whether the HITS operator should be allowed to serve only the MSOs/LCOs or whether he should be allowed to

provide satellite signals from his satellite both to MSOs/LCOs and also directly to consumers. This issue was taken up in the consultation process on Headend-In-The-Sky (HITS) initiated by the Authority.

- 4.4 Another issue for consultation with the stakeholders was whether the HITS operation be allowed both in “Ku band” and “C band” or only in ‘C band’. Also, if both bands are to be allowed for HITS, then whether the existing restriction on DTH for transmission under Ku band should also be reviewed.
- 4.5 The Authority, in its recommendations on Headend-In-The-Sky (HITS) sent to the Government on October 17, 2007 had recommended that **HITS operator should provide signals directly from his satellite only to the registered MSOs/cable operators...However, under no circumstances should the HITS operator provide signals directly from his satellite to the consumer.** Further, the Authority had also recommended that **there should not be any transmission band restriction for HITS operators.**
- 4.6 Thus, it is seen that while recommending transmission band neutrality (between Ku band and C band) for HITS licensees, the Authority did not recommend target group neutrality (between MSOs/cable operators and consumers) and specifically recommended that HITS operators should provide signals from satellites only to MSOs/LCOs and not directly to subscribers. As already mentioned in para 4.2 above, it is necessary to maintain a clear dividing line between HITS and DTH in order to maximize competition.
- 4.7 Along the same lines, **the Authority recommends that there should be no dilution of condition relating to provision of signals directly to subscribers, as laid down in the DTH guidelines, namely “Direct-to-**

Home (DTH) Broadcasting Service, refers to distribution of multi channel TV programmes in Ku Band by using a satellite system by providing TV signals direct to subscribers' premises without passing through an intermediary such as cable operator.'". Therefore, under no circumstance should the DTH operator provide signals to any MSO/ cable operator.

- 4.8 Similarly, as regards demarcation of transmission bands, **the Authority recommends that there should not be any transmission band restriction for DTH operators, which can offer their services directly to subscribers either in Ku Band or C Band.** As of now it may not be feasible to supply DTH signals in C band to subscribers on account of larger dish antenna size due to the present level of technological advancement. However, there need not be any regulatory restriction in this regard because future advancements in technology may make C band transmission also capable of being received with small antenna. The issue of availability and timing for allocation should be determined by the Government.

Section - 5: Summary of Recommendations

5.1 Technical Interoperability

- (i) There is no need for doing away with the existing technical interoperability conditions.**
- (ii) The issue of revision of BIS standards for DTH set top boxes should be taken up by the Government with the Bureau of Indian Standards so that the standards laid down by BIS for DTH Set Top Boxes are updated for advanced technologies.**
- (iii) Revision of standards should be prospective and should apply to DTH subscribers who are enrolled after six months from the date of such revision. Such revision should not compulsorily require the DTH operators to upgrade the STBs of existing subscribers to conform to revised standards, though they would be free to do so on their own.**
- (iv) Clause 7.1 of the DTH license conditions should be amended to read as under:-**

“7.1 The Open Architecture (non-proprietary) Set Top Box, should be such as to ensure technical compatibility and effective interoperability among different DTH service providers. The DTH Set Top Boxes supplied to the subscribers shall have such specifications as laid down or as revised by the Government from time to time. However, in cases of revision of specifications such revisions will be

applicable prospectively to new subscribers, and the licensee will have a transition period of six months from the date of such revision to ensure full compliance with the revised specifications for the new subscribers.”

5.2 Supply of signals to cable operators in KU Band

- (i) There should be no dilution of condition relating to provision of signals directly to subscribers, as laid down in the DTH guidelines, namely “*Direct-to-Home (DTH) Broadcasting Service, refers to distribution of multi channel TV programmes in Ku Band by using a satellite system by providing TV signals direct to subscribers’ premises without passing through an intermediary such as cable operator.*”. Therefore, under no circumstance should the DTH operator provide signals to any MSO/ cable operator.**
- (ii) There should not be any transmission band restriction for DTH operators, which can offer their services directly to subscribers either in Ku Band or C Band.**



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181/CPI/07
4/10/07

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SECRETARY
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नई दिल्ली-१, तारीख २००
Dated New Delhi-1, the 200
September 28, 2007

2435
4/10

Dear Shri Hishra,

Please refer to your letter No. 4-1/2005-B&CS dated August 25, 2006 forwarding therewith recommendations of TRAI on the 'licensing issues relating to DTH'.

2. The said recommendations broadly cover the issues relating to uplinking and platform services, MDU technology, PVR and interoperability etc. With respect to technical interoperability, it was suggested that there should not be any amendment in Article 7.1 and 7.2 of the DTH license agreement which mandate technical interoperability among DTH service providers. It was also suggested that the license conditions should be amended to provide for casting an obligation on the service provider to inform and educate the consumers about limited technical interoperability of the set top boxes with personal video recorders/digital video recorders.

3. There are already two DTH operators who are operational and are using the MPEG 2 compression format as per the present BIS specification provided for the same. The new operators like Sun TV Direct Pvt. Ltd., Reliance Blue Magic Ltd., and Bharati Telemedia Ltd. are wanting to go on the MPEG 4 compression format and it has been said that it offers substantial video quality improvements over current compression format and with over 25% savings in the transmission bandwidth.

4. A meeting was held in the Ministry with the representatives of BECIL, Prasar Bharati and Bureau of Indian Standards on the issues of technical interoperability. It was suggested in the meeting that the guidelines be modified to incorporate the commercial interoperability of set top boxes for the following reasons:-

(a) the interoperability of set top boxes between two DTH operators is practically not feasible to the level of completeness.

(b) the imposition of this clause of interoperability increases the cost of set top boxes which consumer has to bear.

(c) the strict adherence to BIS specifications of the set top boxes inhibits the advent and advancement of technology and the resulting benefits to the consumer.

5. It is understood that TRAI has concluded a consultation process on issues relating to DTH and has received comments on the interoperability issue also. It is requested that TRAI recommendations on the issue of interoperability be made available to us at the earliest for us to take a view on whether guidelines need to be modified or not. In case it is recommended that commercial interoperability needs to be provided for then BIS specifications will need to be revised and an appropriate regulatory framework put in place. It is also requested that the possibility of allowing DTH operators to provide signals to cable operators in Ku Band be also examined for us to take a view on the policy recommendations dated August 25, 2006.

with regards,

Yours sincerely,

Asha Swarup
(Asha Swarup)

Shri Nripendra Mishra
Chairman
Telecom Regulatory Authority of India
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Jawaharlal Nehru Marg,
New Delhi.