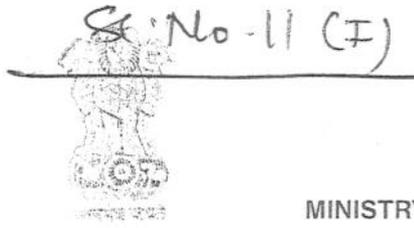


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GOVERNMENT OF INDIA
MINISTRY OF INFORMATION & BROADCASTING
NEW DELHI-110115

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D.O.No.8/5/2006-BP&L-Vol.II

11th May, 2010

Dear Shri Sarma,

Please refer to your d.o. letter No.4-76/2007-B&CS dated 30th January, 2008 forwarding therewith recommendations of Telecom Regulatory Authority of India under Section 11(1)(a) of TRAI Act, 1997 on interoperability and other issues relating to DTH.

2. In the Ministry's reference No.8/5/2006-BP&L dated 2.2.2009 vide which a number of issues were forwarded to TRAI for recommendations, it was indicated that though the TRAI recommendations dated 30.1.2008 are under consideration, however, 'the Ministry is of the broad view that the specification of STB should be so designed so as to ensure effective interoperability both intra and inter DTH operators using both MPEG-2 and MPEG-4 technologies'.

3. The matter has since been reconsidered and the views of the Ministry are being enclosed for reconsideration by TRAI for the reasons mentioned therein.

4. It is requested that as per the provisions of Section 11 of TRAI Act, the Authority after considering this reference may kindly furnish their recommendations to enable the Government take a final decision in the matter.

With regards,

Yours sincerely,

(Raghu Menon)

Shri J.S. Sarma
Chairman,
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg (Old Minto Road)
New Delhi.

Encl : As above

Government's views on TRAI's recommendations on Technical Interoperability dated 30.1.2008

10.5.2010

Recommendation	Summary of recommendation	Views of the Government
5.1	Technical Interoperability	
(i)	There is no need for doing away with the existing technical interoperability conditions.	<p>Before a decision is taken on this recommendation, the following factors/issues will need to be taken into account:-</p> <ul style="list-style-type: none"> (i) The present BIS specifications for STBs provide for MPEG-2 (DVB-S) standards. The interoperability is provided through a CI slot. The idea is that by inserting a CAM module provided by the DTH operator whose services are required to be received, the STB will be in a position to receive the services of the concerned DTH operator. CAM module is optional in BIS specifications as on date. The ground situation as per available information is that since the cost of CAM modules is as good as the STB itself, no DTH operator is providing CAM modules. Thus interoperability even within the operators using the same technology and standards i.e. MPEG-2 (DVB-S) is not manifest. (ii) Different technologies and standards (MPEG-2, MPEG-4/DVB-S, DVB-S2) are now available for signal transmission and compression and some others are being tried and developed. Such new technologies/standards provide efficient use of available spectrum and transponder space. A technology neutral policy enables the

		<p>use/adoption of different technologies and standards for the benefit of the operators as well as the subscribers.</p> <p>(iii) Mandating a particular technology/ standard today raises a number of issues while migrating to a new standard . Issues like who should bear the cost burden of switching over to the new technology crop up. It begins to be argued that since government has mandated the new standard therefore government should subsidise the cost of switching over. Issues of interoperability of equipment with existing customers based on old standards with those operators using new technology/standards crop up and become difficult to address every time a new standard gets developed. On the contrary if the operator is given the freedom to choose a technology, business compulsions themselves will require him to migrate to a better technology and he will himself develop strategies to retain his customer base.</p> <p>(iv) If a STB is to be interoperable across various DTH technologies and standards, then the STB will have to be built to conform to all such technologies. Such stacking of technologies may increase the size and cost of the STB. Moreover, such a stipulation will benefit only a small percentage of subscribers who wish to switch from one DTH operator to another, but the disadvantages of higher cost and size would have to be borne by each and every subscriber. This defeats the very purpose of</p>
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		<p>providing technical interoperability requirement.</p> <ul style="list-style-type: none">(v) Some DTH operators have even started offering STBs free of cost. Provisioning of technical interoperability requirement across all DTH service providers will increase the cost of STB and free STB schemes may have to be reconsidered by the operators. The ultimate loser will be the subscriber.(vi) TRAI has also mandated commercial interoperability which gives the subscriber an option to take the STB on rent or hire purchase basis giving him enough flexibility to be able to switchover from one operator to another at least cost.(vii) Technical interoperability was relevant from the point of view of subscriber earlier since the cost of STB was high. With the cost of the STB coming down, technical interoperability may lose its relevance in the years to come. It is also being argued that there is enough competition in the market to provide the consumer with wide choice and reasonable prices.(viii) Even the requirement of Technical interoperability within DTH service providers will not provide the option to migrate from a DTH service provider to the cable operator or IPTV service provider for which a different STB/CPE will be required. Commercial interoperability in that context is a better option.(ix) Limited technical interoperability within the same technology and standards is also difficult to
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		<p>achieve for the following reasons:-</p> <ul style="list-style-type: none">a. There are two components in STB (1) Hardware (2) Software, which includes Conditional Access System (CAS). Due to selection of different CAS by DTH operators there is no STB of open architecture. As such presence of CAS makes all STBs proprietary in nature. This goes against the requirement of technical interoperability.b. All new technologies are usually backwardly compatible and not upwardly compatible. MPEG-2 and MPEG-4 are separate compression standards. Hence their decoding chips do not decode each other. However new MPEG-4 STBs are able to decode MPEG-2 signals if MPEG-2 decoder chip and associated software is placed on it along with MPEG-4 decoding chip on the mother board.c. Similarly DVB-S2 STBs can decode DVB-S signals if DVB-S chip and associated software is placed on it along with DVB-S2 chip on the mother board.d. Due to the presence of proprietary CAS there is no possibility for limited technical interoperability of STB among various DTH operators. <p>TRAI is requested to take into account above factors while furnishing its recommendations on, whether</p>
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		requirement of technical compatibility and effective interoperability among different DTH service providers needs to be continued with as it is, or in a modified form, or should be dispensed with.
(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.	The recommendation is acceptable since BIS standards are only available for MPEG-2/DVB-S STBs. In case a technology neutral approach is preferred by TRAI then as and when an acceptable technology and standard becomes available BIS can be requested to lay down specifications of STBs for the same, allowing different technologies and standards to coexist.
(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.	<p>TRAI may like to take into account the following :</p> <ul style="list-style-type: none"> (i) Various DTH service providers have indicated that the six months time period is too short for the development, manufacturing and procurement of a STB after the new standards become available. (ii) It has been argued by DTH operators that it will not be proper to force the existing DTH operators (say using MPEG-2 compression format) to start providing STBs capable of receiving signals of a different technology (MPEG-4 in the present case) even though the operator decides not to migrate to the use of such different technology. This will not only mean additional cost to the subscribers but will also

		<p>place a huge financial burden on the DTH Operator, without the consequential benefits of the technology to either of them.</p> <ul style="list-style-type: none"> (iii) It has been demanded that the cost of migration should be borne by the Government. (iv) It has been contended that the recommendations have been given without going through a consultation process on the issues. (v) If there are better technologies available and in use by competing DTH operators, sheer business compulsions will force the DTH operator to migrate and come out with appropriate schemes for replacement of STBs or for adapting the STB to be able to receive the signals, for its existing subscribers
(iv)	<p>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</p>	<p>The formulation may require a relook if TRAI takes into account the issues raised in remarks of the Ministry indicated in 5.1 (i) to (iii) above.</p>

	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 <i>direct to subscribers’ premises without passing through an intermediary such as cable operator.</i> ”. Therefore, under no circumstance should the DTH operator provide signals to any MSO/ cable operator.	Acceptable.
(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.	The reception of signals in C-Band will require large size dishes for reception of signals which will need more space and will not be feasible to be placed on Multi Storeyed buildings already short of space. It will also mean more cost to the subscriber. Hence the most suitable band for DTH services is the Ku band only.