

Consultation Paper No. 3/ 2005



Telecom Regulatory Authority of India

**Consultation Paper
on
Issues Relating to
Private Terrestrial TV
Broadcast Service**

New Delhi

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PREFACE

In India, Terrestrial television broadcasting remains in the exclusive domain of Doordarshan under Prasar Bharati. At present Doordarshan has 27 satellite Channels in all (Parliament-2, National-5, International-1, Regional-11 and State-8), but it is unable to provide these channels in terrestrial mode except for the DD National and DD News channels. This is so, because an additional TV transmitter is required for each additional TV channel for terrestrial coverage, which is very expensive. Further, the terrestrial transmission of Doordarshan is primarily in analog mode.

In almost all the developed countries in the world, terrestrial TV broadcasting is not exclusively reserved for the Public Service Broadcasters. Even in developing countries, private terrestrial television broadcast services are common.

Accordingly, this Consultation Paper has been prepared on issues relating to Private Terrestrial TV Broadcasting Service. The Consultation Paper covers the following issues:

- i) Participation of private sector in Broadcasting
- ii) Broadcast Television Systems
- iii) Licensing
- iv) Alternative Technologies

The Objective of this Consultation Paper is to obtain the inputs of stakeholders and to generate a discussion on the appropriate policy and licensing framework for the introduction of Private Terrestrial Television Broadcast service in India. Based on these inputs, TRAI would either give its recommendations to the Ministry of Information and Broadcasting on the issues involved or go in for a more detailed consultation.

Written comments on this Paper may be furnished to Secretary, TRAI by March 31, 2005. The gist of these comments received will be posted on the TRAI's website. For any further clarification on the matter, Secretary, TRAI or Adviser (B&CS) may be contacted at traio7@bol.net.in (Phone No. 26167448, Fax No. 26103294) and rkacker@tra.gov.in (Phone No. 26713291, Fax No. 26713442) respectively

New Delhi

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Chapter 1: Introduction

1.1 Background

Even though more than 100 television channels are available on cable television networks, terrestrial television broadcasting remains in the exclusive domain of Doordarshan under Prasar Bharati. Over the years, the increase in viewership of cable television and DTH has been at the cost of viewership of terrestrial television broadcasts.

Grant of licenses to Private FM Radio broadcasters resulted in a significant increase in Radio listenership and re-emergence of Radio as a significant media sector. TRAI has already given its recommendations on private FM commercial radio as well as community radio. The issues relating to allowing private broadcasters in the field of terrestrial television broadcasting are covered in this consultation paper.

1.2 Terrestrial Television

Terrestrial television is the traditional method of television broadcast signal delivery. Terrestrial television broadcasting dates back to the very beginnings of television as a medium itself with the first long distance public television broadcast from Washington, DC on April 7, 1927. There was virtually no other method of television delivery until the advent of cable television, or community antenna television (CATV) in the 1950s. The first non-terrestrial method of delivering television signals began with the use of communications satellites during the 1960s and 1970s. In the Indian context, cable television networks

made their appearance in early 1990s and the first Direct To Home (DTH) Satellite television service was launched in October 2003.

Apart from cable television networks and DTH service, analog terrestrial television is now also subject to competition from distribution of video and film content over the Internet and telecommunication networks. The technology of digital terrestrial television has evolved as a response to these challenges.

1.3 Television Broadcasting Timeline

After initial experimental television broadcasts in different countries with different technologies, regular television broadcasting began in 1935. Private broadcasters were issued commercial TV licenses in 1941. Some important milestones in TV broadcasting history are as under: -

- March 1935 - the **German** government began its national service. This was the first non-experimental public television service.
- November 11, 1936 - The first scheduled television broadcasts in the **UK** began.
- 1939: The first regularly scheduled television broadcasts in the **USA** began.
- 1941: The first sponsored television broadcast appeared in the **USA**.
- July 1, 1941 - The first commercial TV licenses were issued to WCBW (later WCBS-TV) and WNBT (later WNBC-TV), New York City, **USA**.
- September 15, 1959 - First telecast started in **India** in Delhi by All India Radio.
- 1982: Doordarshan introduced colour TV in **India** coinciding with Asian Games

1.4 International Practice

In almost all the developed countries in the world, terrestrial TV broadcasting is not exclusively reserved for the Public Service Broadcasters. Even in developing countries, private terrestrial television broadcast services are common. The private terrestrial TV scenario in different Asian countries is outlined below.

Hong Kong

The market is served by two commercial terrestrial broadcasters, TVB (TVB-Jade, TVB-Pearl) and ATV (ATV-Home, ATV-World) who control 4 stations between them. Both broadcast in Chinese and English.

Japan

The market is served by more than 100 terrestrial broadcasters (apart from more than 60 satellite and cable broadcasters). In addition to the special public service broadcaster, NHK, there are five principal commercial broadcasters. All are Tokyo-based and offer multiple channels. The five principals are: TV Asahi, Fuji TV, Nippon TV (NTV), Tokyo Broadcasting System (TBS) and TV TOKYO Corporation (TXN).

Indonesia

Televisi Republik Indonesia (TVRI), the government-owned broadcaster remained the only TV broadcaster in Indonesia until 1989, when UHF permits were issued to Rajawali Citra Televisi Indonesia (RCTI) and Surya Cipta Televisi (SCTV). These were followed by other commercial broadcasters: Televisi Pendidikan Indonesia (TPI) in 1991, Cakrawala Andalas Televisi (ANteve) and IDOSIAR in 1993.

South Korea

There are mainly four free-to-air national broadcasting systems in South Korea. These are Korea Broadcasting System (KBS), Munhwa Broadcasting Corporation (MBC), Seoul Broadcasting System (SBS) and Education Broadcasting System (EBS). MBC and SBS are private commercial networks. Apart from these there are private regional terrestrial TV stations also.

Singapore

There are 6 free-to-air television stations. They are controlled by just two networks: MediaCorp (Channel 5, Channel 8, Central, Suria) & SPH MediaWorks (Channel U, Channel i). MediaCorp is owned by a state investment agency. In addition, there are 16 satellite broadcasters that uplink from Singapore. However DTH is not permitted.

Taiwan

There are five free-to-air terrestrial stations. They are Formosa Television (FTV), Taiwan Television Enterprise (TTV), China Television Company (CTV), Chinese Television System (CTS) and the Public Television Service (PTS). FTV is affiliated with the Democratic Progressive Party.

Afghanistan

Afghanistan's first private television station went on air in May 2004 in Kabul, some two years after the fall of the Taliban regime. The free-to-air private station run by Ahmed Shah Afghanzai, an Afghan businessman, is a major step towards developing a private TV sector and intends to go national within a year. Earlier Afghanistan only had one state TV channel which broadcasts for a few hours in the evening.

Pakistan

Shalimar Television Network (STN) is the first semi-private TV network of Pakistan. Shalimar Recording & Broadcasting Company Ltd. (SRBC) which operates the STN TV channel is a joint stock company in which the Government holds 54 per cent shares. STN commenced its broadcast in 1990 from the capital city Islamabad; it now has stations in 20 major cities and commercial centers of Pakistan, covering over fifty percent population of the country.

Bangladesh

Ekushey Television, a news and entertainment channel, was launched in April 2000 as the country's first private terrestrial broadcasting channel. Ekushey Television (ETV) went off the air in August, 2002 after losing a legal battle over its broadcasting rights.

Nepal

The government opened the establishment, operation, and maintenance of terrestrial television station to the private sector in October 2000 and asked for proposals in October 2001. Two private television channels Image Metro Television and Kantipur Television were inaugurated in July 2003.

As may be seen from the experience narrated above, in all these countries the private sector has been permitted to enter the field of terrestrial television broadcasting. This is in contrast to India where the private sector has not been so far permitted in this area.

1.5 Context of this Consultation Paper

The purpose of this Consultation Paper is to invite comments from all stakeholders on various issues related to introduction of Private

Terrestrial Television Broadcast service in India. Given the fact that Cable & Satellite televisions have expanded enormously it is not clear whether throwing open this area to the private sector at this stage will generate much response. The Consultation Paper's primary objective is to:

- Generate discussion on the appropriate policy and licensing framework for the introduction of Private Terrestrial Television Broadcast service in India.
- Provide inputs which can form the basis for recommendations to the Government or for a second round of more detailed consultation, depending upon the degree of response and interest

The issues raised in the Consultation Paper are thus not exhaustive. Depending upon the views of the stakeholders and degree of interest generated by the Consultation Paper, the scope of consultation may be expanded to cover new issues thrown up by the preliminary discussions/ responses of stakeholders.

Chapter 2: Privatization of Broadcasting

2.1 TV Scenario in India

Cable TV was introduced in India sometime in early 1990s at the time of the First Gulf War. Since then there has been a profusion of satellite channels in the country dedicated to news, music, movies, religion, sports, adventure, reality, drama, cartoons, animals/ wildlife, geography, history etc. A large number of regional channels in different Indian languages have also been established. The extent of penetration of TV and Cable/ Satellite TV in the country can be seen from Table 2.1.

Table 2.1

TV SCENARIO IN INDIA						
	Urban		Rural		Total	
Base: Estimated Households (in Lakhs) All India	566	(28)	1454	(72)	2020	(100)
TV Households	424	(74.8)	432	(29.7)	856	(42.4)
Non-TV Households	143	(25.2)	1022	(70.3)	1164	(57.6)
Cable & Satellite Households	273	(64.3)	153	(35.5)	426	(49.8)
Figures in brackets are percentages ; Source : NRS-2003						

2.2 Private Sector Participation in Radio Broadcasting

The Government allowed fully owned Indian companies to set up private FM radio stations on a license fee basis during the Ninth plan period in line with the policy of liberalization and reforms. Accordingly, 108 frequencies across 40 cities were auctioned in May 2000. However, out of the 108 frequencies put on bid only 21 are today operational and of these two have also given notice to close down. Even though the result of the first

phase of liberalization of FM radio broadcasting has not been very encouraging, it is a fact that launch of Private FM Radio channels has resulted in significant increase in Radio listenership.

2.3 Rationale for Private Sector participation in terrestrial television broadcasting

There are various advantages/ reasons in favour of allowing private sector participation in terrestrial TV broadcasting in India. These are briefly discussed below: -

Resources

Since large investment is required for providing multiple TV channels to viewers across the country, the Public Service Broadcaster may not be in a position to spend so much money. Allowing the private sector in terrestrial TV broadcasting would result in inflow of private capital in the sector and growth of terrestrial TV channels.

Plurality of views

It was held in the Supreme Court judgment in the case between the Union of India & Cricket Association of Bengal that: -

- The right of free speech and expression includes the right to receive and impart information.
- For ensuring the free speech right of the citizens of this country, it is necessary that the citizens have the benefit of plurality of views and a range of opinions on all public issues.
- This cannot be provided by a medium controlled by a monopoly – whether the monopoly is of the State or any other individual, group or organization.

Thus, allowing the private sector in terrestrial TV broadcasting would end the monopoly of Doordarshan and provide for plurality of views.

Free to air

Even today a large number of free to air Satellite/ Cable TV Channels are available to the viewers. However, to avail these channels a person has to pay monthly subscription fee to the cable operator. Therefore, even though a broadcaster may be offering a channel as free to air, the viewer can get it only after payment of subscription fee. In case of terrestrial broadcasting, the viewers will get such Free to Air channels without having to pay any subscription fee.

Coverage of more areas

Private terrestrial broadcasters may adopt alternative technologies such as MMDS (discussed in para 5.2) particularly where cable and satellite have not penetrated.

Choice for consumer

The licensing of private terrestrial broadcasters would also lead to more choice for consumers as these terrestrial channels will produce their own programmes.

Coverage of local issues, events, music and culture

Currently, the Satellite/ Cable TV Channels have programmes directed at the national audience. There are a few Cable TV operators which show local level programmes also, but by and large such programmes are very few. It is expected that Private terrestrial television broadcasting will lead to enhanced coverage of local issues, events, music and culture.

Complement the Public Service Broadcaster

As on 1st September 2004, Doordarshan had 25 Channels, 59 Studio Centers and 1402 transmitters. Thus it can be seen that in spite of a large number of transmitters, the Studio Centers for producing programmes are very limited. Private terrestrial television broadcasters would complement the services of Doordarshan by generating more content.

2.4 Extent of Interest in the private sector in terrestrial TV broadcasting.

While it may be desirable to remove any statutory restrictions on participation of private sector in terrestrial television broadcasting for the reasons discussed in para 2.3 above, it is not very clear, at this point of time, as to how many broadcasters would be interested in terrestrial television broadcasting.

It may be too late to open up terrestrial television broadcasting for private sector participation as cable TV networks have already spread to all the urban areas of the country. Rural areas can be covered by DTH.

There is likely to be very little interest in case private terrestrial television broadcasting is restricted to digital format only because of non-existence of digital receivers in the country. Consumers are not likely to buy digital set top boxes/ TVs to view channels which they are already getting through Cable TV.

However, some of the terrestrial television broadcasting technologies such as MMDS (discussed in para 5.2) may be attractive to some service providers in certain areas. Currently, there is no policy for terrestrial television broadcasting by private service providers.

Therefore, it is desirable to have a policy framework in place for adoption of such alternative technologies.

The issue for consultation is: -

- **Whether terrestrial television broadcasting in India should be thrown open for participation by the private sector?**

Chapter 3: Broadcast Television Systems

3.1 Background

There are several broadcast television systems in use in the world today. These can be broadly classified as Analogue systems and Digital systems. An analogue television system has a set of technical parameters for the video signal, a system for encoding color, and a system for encoding audio signal. In digital television system, all of these elements are combined in a single digital transmission system. In case private terrestrial television broadcasting is to be permitted, it needs to be decided whether this would be either in analogue mode or in digital mode.

3.2 Indian Situation

At present Doordarshan has 27 satellite Channels in all (Parliament-2, National-5, International-1, Regional-11 and State-8), but it is unable to provide these channels in terrestrial mode except for the DD National and DD News channels. This is so, because additional TV transmitter is required for each additional TV channel for terrestrial coverage, which is very expensive.

The terrestrial transmission of Doordarshan is in analog mode. To make more channels available terrestrially in analog mode requires setting up of thousands of transmitters which is not possible due to limited resources.

Doordarshan has started experimental transmission of digital TV in UHF band by installing 1 KW digital transmitters in the four metros. Doordarshan has adopted DVB-T digital standard which is in line with DVB-S and DVB-C adopted by the BIS in respect of DTH and digital

cable TV respectively. Each digital transmitter of Doordarshan carries five Doordarshan channels. The Doordarshan digital channels are in free to air mode and can be received with the help of a digital decoder.

3.3 International Situation

Many countries have adopted a time table for digitalization of their broadcasting services. This includes digitalization of Cable TV networks, DTH services as well as terrestrial transmission systems. This has been discussed in detail in Chapter 2 of the Consultation Paper on Digitalisation of Cable Television released on 3rd January 2005. The focus in most countries is on digitalizing terrestrial television to reclaim spectrum.

The present international status of implementation of digital terrestrial TV broadcasting is summarized below:

Europe

Most of the European countries have taken initiatives for the transition of analogue to digital terrestrial TV broadcasting. The national plans of these countries are at various stages of implementation. At the initiative of these countries, ITU convened the first session of the Regional Radiocommunication Conference (RRC) in May, 2004 in Geneva for the planning of digital terrestrial broadcasting services in VHF/UHF bands. The 2nd session of RRC will be held in May, 2006 in Geneva. Among the European countries, Germany and UK have taken a lead in providing large digital TV coverage. The extent of digitalization of Television Systems in different countries of European Union (EU) is given in Ann.-I.

Germany

The capital, Berlin and the surrounding state of Brandenburg, have switched over exclusively to digital TV from 4th August 2003. The

Berlin-Brandenburg region is World's first television broadcasting area to go completely digital. Other regions are expected to follow over the next few years ahead of a proposed digital switchover date of 2010.

U.K.

In September 1999, the government announced its plans to achieve digital switchover. The Secretary of State said that digital switchover could start as early as 2006 and be completed by 2010 although the precise date would depend "on how the broadcasters, manufacturers and consumers behave". Presently more than half of UK homes have digital TV.

Japan

In 1998, the Ministry of Internal Affairs & Communications (MIC) issued its timeframe and plan for full digitalization of terrestrial by 2011. The criteria for switching analog off has been set as equivalent coverage to analog; and 85% take up rate, including reception over cable TV systems.

Taiwan

In November 1997, the National Information Infrastructure (NII) under the Executive Yuan unveiled its timetable and plans for digitalization of the Taiwan broadcasting industry. The plan dictates that digital migration will complete by January 2008.

China

The State Administration of Radio Film & TV (SARFT) has set itself ambitious targets. By 2010, all TV stations and distribution networks (cable included) are scheduled to broadcast in digital. By 2015, all analog broadcasts will cease.

Hong Kong

The government has directed terrestrial broadcasters TVB and ATV to begin simulcast broadcasting of both analog and digital TV (HDTV) in 2007 at the latest and extend the coverage of their digital networks to 75% of Hong Kong by 2008. The government plans to switch off analog broadcasting 5 years (2012) after the commencement of simulcast although it states that this is “subject to further market and technical studies.” The government is indirectly paying for digital transmission upgrade by abolishing the 10% royalty on terrestrial TV advertising revenues it collected until 2003.

Korea

The Korean government is committed to building a national infrastructure by digitizing broadcast-related networks as well as information and communications related networks. In terms of broadcast related networks, the government plans to complete digital transition by 2010.

U. S. A.

The Federal Communications Commission (FCC) has established a faster schedule for the introduction of digital TV than the rest of the world. After April 1, 2005, the simulcast (broadcast on both their digital and analog channels) requirement will be 100%. After the transition period ends (31/12/2006), all analog broadcasts will end. However, this date (December 31, 2006) may be extended until most homes (85%) in a given area are able to watch digital TV programmes. Until the transition is complete, television stations are required to broadcast on both their digital and analog channels.

3.4 Switch over to Digital System

The DTTB has following advantages over analog transmission

- One digital transmitter can carry four to six TV Channels;
- Vastly superior and uniform quality of reception in the entire reception area;
- The deterioration of video quality due to multi path ghosts is removed;
- Reception of TV/multi-media services even in moving vehicles;
- More than 50% saving in power consumption as compared to analog transmitters;
- Digital TV system is highly spectrum efficient. Video compression technology employed in digital TV enables transmission of at least 5 TV channels in the same analog TV bandwidth of 7/8 MHz;
- It is possible to dynamically allocate the bandwidth (bit rate) in real time to different programmes depending upon the requirement.
- The digital TV can also be used for data-casting services such as INTERNET etc.

The switch over to digital transmission is necessary in view of the similar developments around the world. India will have to follow this trend to remain competitive in a global market and to avoid analogue technological obsolescence as also to provide more choice to viewers especially in rural areas and small towns.

Adoption of Digital transmission requires replacement of all analog transmitters by digital ones. At the same time, the public will also have to acquire digital TV sets or set-top boxes to be attached to existing TV sets to receive digital signals. This would require substantial

investment by TV homes. As it may not be possible for most of the consumers to invest this amount, for some time, TV broadcasting will be in simulcast mode i.e. relay of both digital and analog signals so that consumers not having digital TV sets or set top boxes are not deprived of services. This policy is followed at present in many developed countries.

If India migrates from analogue broadcasting to digital broadcasting within the next decade, it makes sense from an economic point of view for new entrants to the broadcasting market to offer their services on a digital platform. However, this could potentially, in the short-term, undermine the universal access and coverage obligations of a public broadcasting service.

The issue for consultation is: -

- **If private terrestrial television broadcasting is allowed whether this should be permitted in analogue mode or should it compulsorily be in digital mode?**

Chapter 4: Licensing

4.1 Introduction

Licensing is the process used to regulate the entry of service providers in a particular industry. As on date the terrestrial television broadcasting is exclusively done by Doordarshan, the Public Service Broadcaster. As such there is no policy framework for licensing of Private Terrestrial Television Broadcast Service providers in the country. However, the issues relating to formulation of a policy framework for licensing of Private Terrestrial Television Broadcast Service providers are very similar to such issues in other sectors of electronic media.

4.2 Eligibility

Television can influence and mould public opinion to a great extent. Therefore it is necessary to lay down eligibility conditions for award of license to Private Terrestrial Television Broadcasters, to prevent mischievous/ irresponsible elements from obtaining access to this powerful medium of mass communication.

As per the eligibility/ ineligibility criteria adopted for Phase-I of Private FM radio only Companies registered under the Indian Companies Act with all shareholding by Indians (except limited holding by FIIs, NRIs, PIOs and OCBs subject to ceiling put by Ministry of Finance) were eligible to apply. The following entities were disqualified from holding of License: -

- General Disqualifications
 - Companies not incorporated in India;
 - Any company controlled by a person convicted of an offence involving moral turpitude or declared as insolvent or applied for being declared insolvent;

- Subsidiary company of any applicant in the same centre;
- Companies with the same management within a centre;
- More than one Inter-Connected Undertaking at the same centre.
- Religious bodies
- Political bodies
- Advertising agencies

The issue of eligibility of applicants was also covered in the Broadcast Bill, 1997. Section 12 of the Broadcast Bill, 1997 lays down that no person specified in part-I of the Schedule shall be eligible for grant of a broadcasting license. These disqualifications are listed as under:-

1. General disqualification:

- (a) An individual who is not an Indian national.
- (b) A partnership firm all of whose partners are not citizens of India.
- (c) Companies not incorporated in India.
- (d) Companies incorporated in India but with foreign equity in case of terrestrial broadcasting services
- (e) Governments and local authorities.
- (f) Any person convicted of an offence under this act or convicted under the Representation of the Peoples Act or declared as insolvent.
- (g) A body, which is controlled by a person, referred to in any of clause (a) to (e) above.
- (h) A body corporate, in which a body referred to in clause (g) above, is a participant with more than five per cent interest.

2. Religious bodies

3. Political bodies

4. Publicly funded bodies

5. Advertising agencies

The issue for consultation is: -

- **What should be eligibility conditions for grant of license for private terrestrial television broadcasting?**

4.3 Ownership

As a policy, restrictions have been placed in India on foreign ownership/ investment in relation to various media sectors as per details below: -

- a. Print Media – news & current affairs – FDI upto 26%
- b. Print Media – non news category – FDI upto 74%
- c. DTH – total foreign equity upto 49% [FDI not to exceed 20%]
- d. Cable television – foreign investment upto 49%
- e. TV Uplink hub/ teleport – total foreign equity holding upto 49%
- f. Uplink of news/current affairs TV channels – FDI not to exceed 26%
- g. News agencies for uplinking for news-gathering and its further distribution – 100% owned by Indians with Indian Management control

The rules regarding FDI vary from segment to segment in the media sector. It has been recommended by the Authority on 11th August 2004 in the recommendations made on Licensing Issues Relating to 2nd Phase of Private FM Radio Broadcasting that it is necessary for the Government to review the policy in a holistic manner and bring about a greater degree of consistency in the rules for various segments.

For Private Terrestrial Television Broadcast Service providers also some restriction on FDI has to be specified which is consistent with the other segments of the media sector. A similar approach is required for dealing with portfolio investment.

The issues for consultation are:

- **What should be the limit for FDI and portfolio investment in Private Terrestrial Television Broadcast Service providers?**

4.4 Period of License

The broadcast licenses have been issued in the case of Private FM Radio for a fixed term of 10 years. The Private Terrestrial Television Broadcast Service providers could also be licensed for a similar term. However, setting up a Private Terrestrial Television Broadcast Service is much more Capital intensive. Transmitter as well as the Studio equipments in the case of Television is more expensive as compared to FM Radio. Moreover, in case licenses are allowed only for Digital Terrestrial Television Broadcasting, the initial viewership and consequently advertising revenue is likely to be very small. Therefore, the time period required for recouping the Capital investment will be longer.

Automatic extension of license period by 5 years had been recommended by the TRAI for Phase-II of licensing of Private FM radio. The Authority had recommended that,

“The existing license period of 10 years could be extended by another 5 years on an automatic basis unless there are grounds for complete reorganization of the industry due to changes in

technology (for example developments in the field of Digital Radio Broadcasting) in which case no extension should be given to any licensee. “

In case licenses are allowed only for Digital Terrestrial Television Broadcasting, there would not be a likelihood of changes in technology in near future. In such a case a longer license period could be laid down.

The issue for consultation is:

- **What should be the term of license for the Private Terrestrial Television Broadcasting Service providers?**

4.5 License Fee

The license fee for Private FM Radio broadcasters was determined by a bidding process at the time of award of licenses and has a built in annual escalation clause. However, all Private FM Radio broadcasters are incurring a loss and that in aggregate this loss is more than the existing license fee. Out of the 108 frequencies put on bid only 21 are today operational and of these two have also given notice to close down. This clearly indicates that with the present levels of license fees it is unlikely that existing Private FM Radio broadcasters will be in a position to continue their operations for a long time. Accordingly, a revenue share based license fee regime has been recommended by the Authority in its recommendations made on Licensing Issues Relating to 2nd Phase of Private FM Radio Broadcasting.

Thus, the levy/ quantum of license fee can affect the viability of Private Terrestrial Television Broadcasting Service providers also as an

industry. This is more so because the investment is likely to be much more as compared to FM Radio Broadcasting service. Moreover, as already mentioned in para 4.4 above, in case licenses are allowed only for Digital Terrestrial Television Broadcasting, the initial viewership and consequently advertising revenue is likely to be very small.

A revenue share based license fee regime with a one time entry fee along with annual revenue share as recommended by the Authority for 2nd Phase of Private FM Radio Broadcasting may be a viable option. The advantage of such a regime is that the license fee grows with the growth in the revenues of the broadcaster. However, in case there are very few applicants for Private Terrestrial Television Broadcasting Service license, the bidding process may not be the best way to determine the entry fee.

The issues for consultation are:

- **Whether any license fee should be imposed on the Private Terrestrial Television Broadcasting Service providers?**
- **Whether in view of the high capital investment costs and risk associated with the establishment of Private Terrestrial Television Broadcasting Service, a revenue share system would be more appropriate?**
- **What should be the structure of license fee to be imposed on the Private Terrestrial Television Broadcasting Service providers?**

4.6 License Area and networking

The licenses for Private Terrestrial Television Broadcasting Service can be awarded for coverage on national/ regional/ city level. Since,

the coverage area of any television transmitter is limited, the national level licenses would mean transmitters in different cities broadcasting the same program, i.e. networking.

Networking had not been allowed in Phase I of Private FM Radio Broadcasting except on important occasions with the prior permission of the Government. The Authority in its recommendations made on Licensing Issues Relating to 2nd Phase of Private FM Radio Broadcasting had recommended that

- Networking should be permitted but only between stations located in different cities.
- No networking should be permitted across licensees, except on special occasions.
- The Licensor should make available a list of special and important occasions annually on which the licensees would not require prior permission for networking.

While considering the issue of networking, it is important to keep in mind the relative advantages of national/ regional/ city level licenses.

The advantages of having regional/ city level licenses are: -

- i) Localized content and programming would be available to the viewers.
- ii) It will provide a forum for local cultural expression and showcase local talent.
- iii) It will give opportunity to local artists to get wider exposure, training & experience.

The main advantage of regional/ national level licenses for a Private Terrestrial Television Broadcasting Service is that the major cost of running a station is the cost of providing content. Sharing it with many

viewers simultaneously will greatly encourage new investment to come in.

The issue for consultation is:

- **Whether the licenses for Private Terrestrial Television Service should be given on national/ regional/ city basis?**

Chapter 5: Alternative Technologies

5.1 Introduction

Apart from the regular television broadcasting technologies discussed in Chapter 3, there are other terrestrial broadcasting technologies available which can be used for delivery of video signals. As already mentioned in para 1.2 distribution of video over the telecommunication networks, has also started. Presently, there is no policy/ regulatory framework for introduction/ adoption of such technologies in the country. While telecom operators are providing these services using the spectrum and infrastructure licensed for their telecom network, any person/ organization interested in providing broadcasting services using regular television broadcasting technologies/ other non-conventional terrestrial broadcasting technologies is not permitted to use spectrum as on date.

5.2 MMDS

A proposal has been received for setting up of wireless cable TV station based on MMDS technology on a pilot project basis at Kasauli in Himachal Pradesh. The pilot project at Kasauli is proposed for a period of 15 years and is to cover 150 km radius which would include parts of Punjab, Haryana, Uttaranchal and UP.

Multichannel Multipoint Distribution Service (MMDS)

MMDS is a terrestrial mode of transmission of multiple TV channels and is perceived to supplement Cable TV particularly in remote and inaccessible areas.

2. MMDS technology is not in widespread use. Its utilization has been restricted in USA, Ireland and parts of Africa and South America.

3. There is no allocation of spectrum in ITU Radio Regulations for MMDS service. With the result, different countries having MMDS service are allotting different bandwidth for this service depending upon their needs broadly in the frequency range 2.5 to 2.9 GHz.

4. As per National Frequency Allocate Plan (NFAP) 2004, the requirement of MMDS service may be considered on case by case basis in the bands 2.535-2.655 GHz, 2.7-2.9 GHz, 24.5-26.5 GHz and 27.5-29.5 GHz.

5. As microwave signals travel only in a straight line of sight, the transmitting antenna height is important. The receiving antenna has also to be at sufficient height in order to avoid obstruction from buildings, trees etc. Generally, a MMDS transmitter covers a radius between 20 and 50 km depending upon the height of transmitting antenna and other parameters. MMDS signals are normally being encrypted, to allow the service provider to control and bill his services.

6. At the receiving side, a small directional receiving antenna is used. After the antenna, a down converter is installed, to covert the microwave frequencies to normal VHF or UHF TV channels which are acceptable to TV receivers.

7. The cost of receiving equipment at customers end is much lower in the case of analog MMDS since it does not require a costly STB which is essential in the case of Digital MMDS. However, the penalty is that the analog MMDS service is highly spectrum inefficient and requires 5 to 7 time more spectrum as compared to digital one.

8. Digital MMDS technology can be used to deliver multiple channels of video and data which can offer high speed internet access.

9. As compared to cable TV, the investment required in MMDS is lower. Being a wireless medium, it can also be installed much faster than a cable network. Cable, on the other hand, can distribute much larger number of channels and does not need precious radio frequency spectrum

10. In comparison with classical terrestrial TV broadcasting which uses VHF/UHF bands, MMDS has the advantage of being multichannel and use of microwave band which is less crowded than VHF/UHF bands. The cost of the equipment is significantly cheaper since it uses much less power. Operating costs are therefore much lower. Since frequencies in VHF/UHF bands travel long distances as compared to microwave, large spectrum is needed in terrestrial TV broadcasting to

cover the whole country as compared to MMDS. On the other hand microwave travels shorter distances. Moreover, MMDS receiving antennas are highly directional and provide good polarization discrimination with the result that with careful planning even the same spectrum can be assigned to the neighboring MMDS network. Thus on the whole MMDS service is more spectrum efficient as compared to classical TV broadcasting in VHF/UHF bands.

11. The analog MMDS service could be a viable last mile option to deliver multiple TV channels to rural and inaccessible areas in the country which are not covered by cable TV. The chances of availability of adequate spectrum may also be high in such areas

5.3 MMDS Proposal – Approach

The proposal received by TRAI, involves two pilot projects - one large pilot project involving investment of US\$ 1 million and the other alternative is a small pilot project of US\$ 675000. In both the projects, the company proposes to invest its own money at no cost to the Government.

Allowing such a pilot project has the advantages of –

- Trying and testing new technology at no cost to the Government.
- Installation and commissioning can start right away.
- The technology can be assessed in Indian conditions.

The disadvantages are –

- Different pilot projects in different areas could lead to promotion of different standards in broadcasting technologies in the country.
- Hilly terrain gives the advantage of increased height of antenna and consequently a much larger range. A pilot project on hilly terrain does not establish the efficacy of technology on plains.

- Companies may set up operations in profitable locations only in the pilot projects and other areas may continue to remain uncovered.
- Quality of service – Without any verification of technology/ quality of service standards on the part of the Government, consumers will have to bear with whatever is the quality of service provided by the service provider.
- The future of a pilot project is uncertain. It may not be permitted to continue after the initial trial/ pilot period. Hence, the investment made by the Consumers in buying the antenna etc. may get wasted.
- The pilot project is restricted to a very small area, in case a consumer shifts out of that area, the investment in buying the antenna etc. gets wasted.
- So far no private party has been permitted to undertake terrestrial TV transmission in the country. Allowing a pilot project without properly examining the merits and demerits may prove to be a hasty decision.

The issues for consultation are:

- **Whether such proposals should be permitted as pilot projects or should these be examined in detail and regular licenses should be issued after laying down a policy?**
- **If allowed on a pilot basis what should be the period of license?**
- **On what basis should the permission for pilot projects be granted?**
- **Whether any license fee should be charged for issue of licenses for such pilot projects?**

Chapter 6: Issues for Consultation

6.1 Privatization of Broadcasting

Whether terrestrial television broadcasting in India should be thrown open for participation by the private sector?

6.2 Broadcast Television Systems

If private terrestrial television broadcasting is allowed whether this should be permitted in analogue mode or should it compulsorily be in digital mode?

6.3 Licensing

6.3.1 Eligibility

What should be eligibility conditions for grant of license for private terrestrial television broadcasting?

6.3.2 Ownership

What should be the limit for FDI and portfolio investment in Private Terrestrial Television Broadcast Service providers?

6.3.3 Period of License

What should be the term of license for the Private Terrestrial Television Broadcasting Service providers?

6.3.4 License Fee

- Whether any license fee should be imposed on the Private Terrestrial Television Broadcasting Service providers?
- Whether in view of the high capital investment costs and risk associated with the establishment of Private Terrestrial Television Broadcasting Service, a revenue share system would be more appropriate?
- What should be the structure of license fee to be imposed on the Private Terrestrial Television Broadcasting Service providers?

6.3.5 License Area and Networking

Whether the licenses for Private Terrestrial Television Service should be given on national/ regional/ city basis?

6.4 Alternative Technologies

- Whether such proposals should be permitted as pilot projects or should these be examined in detail and regular licenses should be issued after laying down a policy?
- If allowed on a pilot basis what should be the period of license?
- On what basis should the permission for pilot projects be granted?
- Whether any license fee should be charged for issue of licenses for such pilot projects?

Digital TV households in 2003

(in millions and in percentage of national households)

	Total TV HH	Total DTV HH		Cable DTV		Satellite DTV		Terrestrial DTV	
		TV HH	%	TV HH	%	TV HH	%	TV HH	%
Austria	3.2	0.55	17.1%	0.05	1.6%	0.50	15.5%	0.00	0.0%
Belgium	4.2	0.18	4.3%	0.16	3.8%	0.02	0.5%	0.00	0.0%
Denmark	2.3	0.35	15.5%	0.08	3.5%	0.27	11.9%	0.00	0.0%
Finland	2.3	0.21	9.2%	0.02	0.9%	0.10	4.4%	0.09	3.9%
France	24.4	4.62	18.9%	0.92	3.8%	3.70	15.2%	0.00	0.0%
Germany	36.6	5.16	14.1%	1.63	4.5%	3.15	8.6%	0.38	1.0%
Greece	3.0	0.25	8.4%	0.00	0.0%	0.25	8.4%	0.00	0.0%
Ireland	1.3	0.46	35.1%	0.10	7.6%	0.36	27.4%	0.00	0.0%
Italy	20.9	2.85	13.6%	0.00	0.0%	2.85	13.6%	0.00	0.0%
Luxembourg	0.2	0.01	5.3%	0.00	1.0%	0.01	4.2%	0.00	0.0%
Netherlands	7.1	0.69	9.7%	0.11	1.6%	0.55	7.8%	0.03	0.4%
Portugal	3.1	0.51	16.2%	0.02	0.6%	0.49	15.6%	0.00	0.0%
Spain	12.6	2.38	18.9%	0.15	1.2%	2.06	16.4%	0.17	1.3%
Sweden	4.5	1.25	28.0%	0.17	3.8%	0.88	19.7%	0.20	4.5%
UK	24.4	13.14	53.8%	2.29	9.4%	8.04	32.9%	2.81	11.5%
TOTAL EU	149.94	32.6	21.7%	5.7	3.8%	23.2	15.5%	3.7	2.5%

Figures in this table come from *Strategy Analytics: "Digital TV Devices: European Market Forecast, July 2003"*, except for Luxembourg, where figures provided by national authorities for 2002 were used. Figures provided by other national authorities are indicated in footnote.

Figures are given in million HH.

Finland: satellite DTV (0.045), cable and terrestrial DTV (0.097).

France: cable DTV (0.82), satellite DTV (3.2).

Germany: cable DTV (1.62), satellite DTV (2.1), terrestrial DTV (0.12).

Greece: satellite DTV (0.7).

Italy: cable DTV (>0.1), satellite DTV (3.2).

Netherlands: cable DTV (0.107), satellite DTV (0.47).

Spain: satellite DTV (2.2).

Sweden: cable DTV (0.16), satellite DTV (0.475), terrestrial DTV (0.17).

UK: cable DTV (2.1), satellite DTV (7.2), terrestrial DTV (1.6), DSL TV (0.012).