

Consultation Paper No 6/2008



**Telecom Regulatory Authority of India
(TRAI)**

Consultation paper

on

Restructuring of Cable TV Services

4th March 2008

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Preface

The Indian cable TV industry has scaled major strides and this owes in a large measure, to the entrepreneurial skills of the cable TV operators. Present cable TV networks are largely analog and limited to the provisioning of TV channels only. On the other hand, consumers want newer on demand value added services. Cable TV operators using conventional technology will face fierce competition from operators using the advanced distribution technologies like DTH, HITS & IPTV, which are already providing such services. With the spread of convergence and advancement of technology, it is possible to provide telecom services like broadband and internet telephony through cable TV networks.

Though the physical spread of cable TV sector is increasing, the sector in its present form is subjected to least control and supervisory guidance. The present provisions for registration, information system for monitoring of cable TV industry, customer grievance redressal and quality of service etc. need immediate attention. Supervisory guidance and constructive control will result in systematic and planned growth of cable TV networks.

The growth in cable TV sector is technology driven and will enable a much wider scope of cable TV services in comparison to what exists today. However, this phenomena calls for hike in investment that will make this sector more competitive and effective to produce quality service. To achieve this objective, more and more emphasis needs to be made on creating a supportive regulatory environment for this sector, which should take care of issues impeding the growth of cable TV sector.

The Consultation Paper is a step towards a meaningful examination of the relevant issues and would provide the necessary platform for discussing them. The comments and other inputs provided by the stakeholders would enable the Telecom Regulatory Authority of India to formulate appropriate policies for the orderly growth of the cable TV services in the country. The consultation paper has already been placed on TRAI's website (www.trai.gov.in).

The stakeholders are requested to send their comments preferably in electronic form on the various issues mentioned in the consultation paper by 2nd April 2008. In case of any clarification/information, please contact Sh. S. K. Gupta, Advisor (CN), Tel.No.+91-11-23217914, Fax: +91-11-23211998 or email at skgupta@trai.gov.in or guptask61@gmail.com

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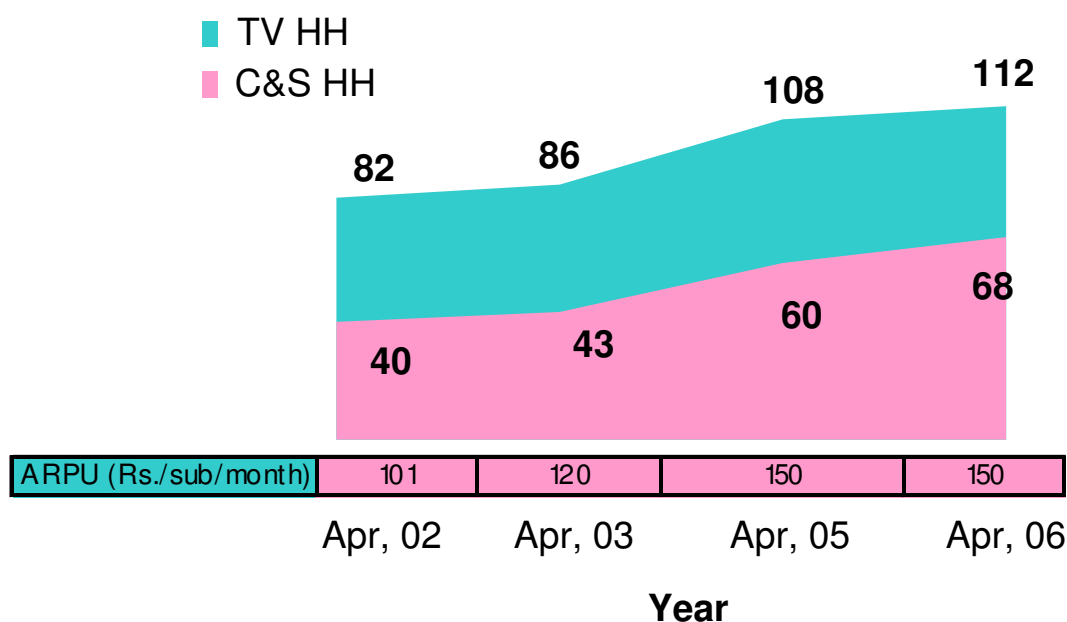
Chapter 1

Introduction

- 1.1 Cable television came into existence in India in 1983 when Doordarshan started its services through cable in rural areas of Rajasthan. In 1989 few entrepreneurs setup small Cable TV networks and started local video channels showing movies & music videos after obtaining rights from film & music distributors. The international satellite television was introduced in India during 1991 with the live coverage of the Gulf War by CNN. The spread of cable TV was further fuelled during 1992 with the launch of cable TV program networks from Zee telefilms and STAR group for beaming India specific content. From just 410,000 Cable TV subscriber households in early 1992, the number of cable TV homes went up to 1.2 million by the end of same year. **There were approximately 71 million pay TV subscribers at the end of December 2006.**
- 1.2 The cable and satellite broadcast business has undergone a major transformation. In the beginning, it was driven by small cable TV operators and some smart entrepreneurs in the free-for-all cable TV operating business. For about Rs. 100/- a month, an Indian home could receive a dozen or so channels, including local channel running videos of the latest Indian films. An estimated 60,000 cable TV operators were functional in 1995-96 in the country. The subscriber base of one cable TV operator varied between 50 –1000. Most of the networks could relay just 6 to 14 channels as higher channel relaying capacity required heavy investments.

- 1.3 The Government enacted the Cable Television Networks (Regulation) Ordinance, 1994 on September 29, 1994 that set down rules for registration of Cable TV Operators and introduced the Programming Code & the Advertisement Code. Subsequently this ordinance was converted into the Cable Television Networks (Regulation) Act 1995 (hereinafter “Cable Act”), on March 25, 1995.
- 1.4 Subsequently cable TV industry witnessed the entry of organised Multi System Operators (MSOs). These MSOs have established their headends in metros and major towns for receiving signals from broadcasters and distributing these signals to cable TV operators who became their franchisee or had commercial agreements with MSOs. Such cable TV operators did not require separate dish antennas for receiving signals. Independent local cable TV operators (LCOs) who directly receive channels from broadcasters have consolidated their networks and are providing services in mostly semi-urban areas.
- 1.5 The proliferation of localised programming alongwith the investment made by domestic and international broadcasters enabled the cable TV and satellite household growth with a compound annual rate of 15% to 20%. As per Ministry of Information & Broadcasting’s working group report, there are 30000 registered cable TV operators presently in the country, broadcasting over 310 cable and satellite TV channels in national and regional languages. There are unauthenticated reports of 60000 cable TV operators in the country, indicating that a large number of cable TV operators still remain unregistered. Thus there is a need for effective and enforceable regulatory mechanism for compliance of the Cable Act.

1.6 As per National Readership Survey (NRS) 2006, at the end of April 2006, there were 112 million TV households in the country, out of which 68 million are Cable TV & Satellite households. The Average Revenue Per User (ARPU) reached to Rs 150/- per month at the end of April 2006 from Rs 101/- per month at the end of April 2002 (fig 1).



Source: NRS 2006

Fig 1: TV and Cable TV & Satellite growth (mn households)

1.7 Presently India has around 220 million households and as per Media Partners Asia Ltd's report on Asia Pacific Pay-TV & Broadband Markets 2007, there were around 71 million households receiving Cable TV services at the end of December 2006. As per this report, cable TV households accounts for 59.2 % of the total TV households in the country and the subscription revenue of the cable TV was approx. Rupees 11484 crore annually by the year ending December 2006.

- 1.8 In the present cable TV delivery mechanism, MSOs and independent cable TV operators set up head-ends to receive and transmit TV signals. These headends comprise essentially of Satellite Dishes, Receivers, Integrated Receivers and Decoders (IRDs), Modulators, Fiber Transmission Equipment etc. The satellite dishes are used to downlink and receive the channels in both Free to Air (FTA) and Pay Channel mode. The signals received from the Dishes are fed into the Receivers for FTA Channels and IRDs for the Pay Channels. The output from the Receivers and IRDs is modulated and fed into fiber/coaxial cables and periodically amplified to bring signals to the customer premises.
- 1.9 Presently most of the cable TV networks are analog and have limited capacity to deliver between 40 to 80 channels, which is only a small part of the total availability. As more channels are being launched, there is a need to upgrade the system through Digitalization. Much higher capacity is possible after the system is upgraded to provide digital transmission. As per Cable And Satellite Broadcasting Association of Asia (CASBAA) report titled 'India Digital Strategy', only 10% of the existing cable TV homes are served by upgraded two way digital cable TV networks.
- 1.10 Digitalisation will also enable cable TV operators to provide better quality in addition to various value added services like Video on Demand, Interactive TV, Time shifted TV and Interactive gaming. Such services are already being provided using new distribution technologies such as DTH, HITS, IPTV etc. These services have already started proliferating in India and there were approximately 3.5 million pay DTH subscribers by the end of December 2007. Cable TV operators using conventional technology will face fierce

competition from operators using the advanced technologies and will lag behind if they do not upgrade their network.

1.11 **Present Legal provisions and Regulatory Framework**

1.11.1 The first legal provision to regulate the cable TV industry in India began with the promulgation of the Cable Television Networks (Regulation) Ordinance, 1994 on September 29, 1994, which was converted into the Cable Television Networks (Regulation) Act 1995 (hereinafter “Cable Act”), on March 25, 1995. Some of the major provisions of the Cable Act are as follows:

- To operate the cable television network the operator has to be registered with the registering authority (head post-master of the head post office of the area) as a cable TV operator.
- Registration is renewable after every twelve months at an annual fee of Rs Five hundred.
- The person intending to register as cable TV operator can be
 - (i) an individual who is a citizen of India;
 - (ii) an association of individuals or body of individuals, whether incorporated or not, whose members are citizens of India;
 - (iii) a company in which not less than fifty-one percent, of the paid-up share capital is held by the citizens of India;
- No person can transmit or retransmit programmes and advertisements through the cable TV network unless they conform to the programming code and the advertisement code respectively prescribed under the rules.
- Cable TV operators have to use equipment that conform to the standards prescribed by the Bureau of Indian Standards, on

and from the expiry of a period of three years from the date of establishment and publication of such standards.

- Seizure and confiscation of equipment of cable TV operators if they are unregistered or breach programming or advertisement code or fail to transmit Doordarshan channels as prescribed under the Cable Act.
- Contravention of any of the provisions of the Cable Act could result in imprisonment up to two years and/or fine up to one thousand rupees for the first offence and for every subsequent offence imprisonment up to five years and fine up to five thousand rupees.
- Under the Cable Act, the Authorised Officer has to take actions in case of violation of section 3, 5, 6 and 8 relating to “regulation of Cable Television Network”, and in terms of Section 18 of the Cable Act. No court will take cognizance for any offence punishable under the Act unless there is a written complaint by an Authorised Officer.
- Every cable TV operator in CAS notified area is to submit information regarding the number of subscribers, subscription rate, number of subscribers of basic tier and other pay channels to the Central Government.

1.12 The Cable Act has the provisions for monitoring of content transmitted through a Cable TV network, which is mainly focused on the channels received from broadcasters at present. With advancement of technology and demand of new value added services from consumers, cable TV operators may provide services like video on demand, interactive gaming etc. Issues relating to monitoring of such content will need to be addressed.

- 1.13 The physical spread of cable TV is increasing but present information system utilised to monitor cable TV industry is inadequate and needs immediate attention. Proper maintenance of records and monitoring is necessary for the effective enforcement of the Cable Act and the Cable Rules.
- 1.14 The cable TV sector is highly fragmented. The existing regulatory policy framework for the cable TV industry seems to be inadequate in certain aspects. Urgent need is felt for proper maintenance of records, which can be easily accessed as and when required. In the present system of registration, there is lack of effective control mechanism and provisions for penalties for defaulters.
- 1.15 The inflow of investment is key for network upgradation and introduction of new technologies, but investment generally flows in organized sectors only. Therefore this sector urgently needs restructuring for modernization and effective functioning of cable TV industry. The thrust should be to encourage investment in the sector, upgradation of network and technologies to provide various services, applications and content, introduce digitalization and addressability and move towards greater transparency. This will require a supportive framework and supervisory guidance to boost the industry in this age of fierce competition where only fittest is bound to survive.
- 1.16 We have already moved in the convergence era. Convergence is a very general term and it means different things to different people. Convergence covers provisions of different services through the same technology as well as provision of the same service through different technologies and platforms. Thus convergence can either mean converging technologies or converging services. There is

convergence of technologies in telecom and broadcasting on account of digitalization and increasing use of IP technology. The major technological change that has facilitated the convergence process is digitalization. Digitalization enables new possibilities for development and creation of services within and beyond the framework of traditional communication sectors. The developments in hardware and software have empowered digital signal processing to such an extent that with use of IP technology in information transmission, the networks and customer premises equipment have got empowered to introduce hitherto not known applications and services.

- 1.17 Convergence is spreading all over world and more & more countries are adopting a regulatory approach conducive for convergence. International Telecommunication Union (ITU) in its report on convergence mentioned that this is the right time to develop a regulatory framework for convergence and those who will not adopt it are likely to lag behind. This has increased the need for restructuring of existing regulatory framework to support the march of the cable TV industry towards next stage of growth & consolidation and to protect the interests of the consumers.
- 1.18 Though in its recommendations on “Issues related to Broadcasting and Distribution of TV channels” dated 1st October 2004, TRAI recommended several measures for regulatory enforcement, and other issues related to Cable TV operators(refer Annex I); the emerging issues qualify for fresh consultation.
- 1.19 In order to develop a regulatory framework that will allow the Cable TV industry to grow in an organised manner and to address the issues of technological advancement, convergence, and

increasing competition; the Authority has suo-motu initiated this consultation process to seek the views of all the stakeholders.

1.20 The paper is divided into four chapters. Second chapter deals with the technical functioning & scope. Third chapter deals with the regulatory issues. Fourth chapter summarizes all the issues for consultation.

Chapter 2

Technical Functioning and Scope

2.1 Most cable TV networks in India deliver TV channels on analog mode to the subscribers. In the beginning cable TV operators were able to show only 6-14 analog channels through their networks. Since then, the channel providing capacity has been enhanced by extending the bandwidth of the cable TV distribution system. From a bandwidth of 225 MHz in the early days of cable TV, the networks progressively enhanced capacity to 300 MHz, 450 MHz, 550 MHz, 750 MHz and now to 860 MHz, which is the largest available cable TV bandwidth worldwide. In the future this could get enhanced to 1000 MHz. The bandwidth of cable systems and maximum possible analog channels on such systems are given in Table1:

Table 1

Bandwidth	Maximum Number of Channels
300 MHz	36
450 MHz	54
550 MHz	67
750 MHz	92
860 MHz	106

2.2 In Metro cities most of the Cable TV homes receive 65 to 90 channels. Almost all networks in the Metro cities utilize a combination (Hybrid) of Optical fibre and coaxial cables. These Hybrid Fibre Coaxial cable (HFC) networks are being gradually introduced throughout the country. In fact most of the cities have services upto 60 channels over a 550 MHz bandwidth. These

networks often cater to typically 5000 customers per head end. The smallest cable networks in the country typically deliver upto 30 channels over a 300 MHz bandwidth.

2.3 Initially a cable TV operator had to install separate dish antennas for receiving signals from each broadcaster. With the increasing number of broadcasters, number of such antennas also increased and most of the cable TV operators were not able to install all the dish antennas due to shortage of space or finances. This necessitated the need of the aggregator and resulted in the entry of Multi System Operators (MSOs). The MSOs aggregate the signals obtained from different broadcasters and provide these aggregated signals to cable TV operators either themselves or through their franchisees/distributors.

2.4 Presently the distribution chain in the cable TV industry consists of two independent paths: (i) Broadcasters, Multi System Operators (MSOs) & their franchisees/distributors, local cable TV operators (LCOs); (ii) Broadcaster and Independent local cable TV operators. The distribution chain is depicted in Fig. 2.

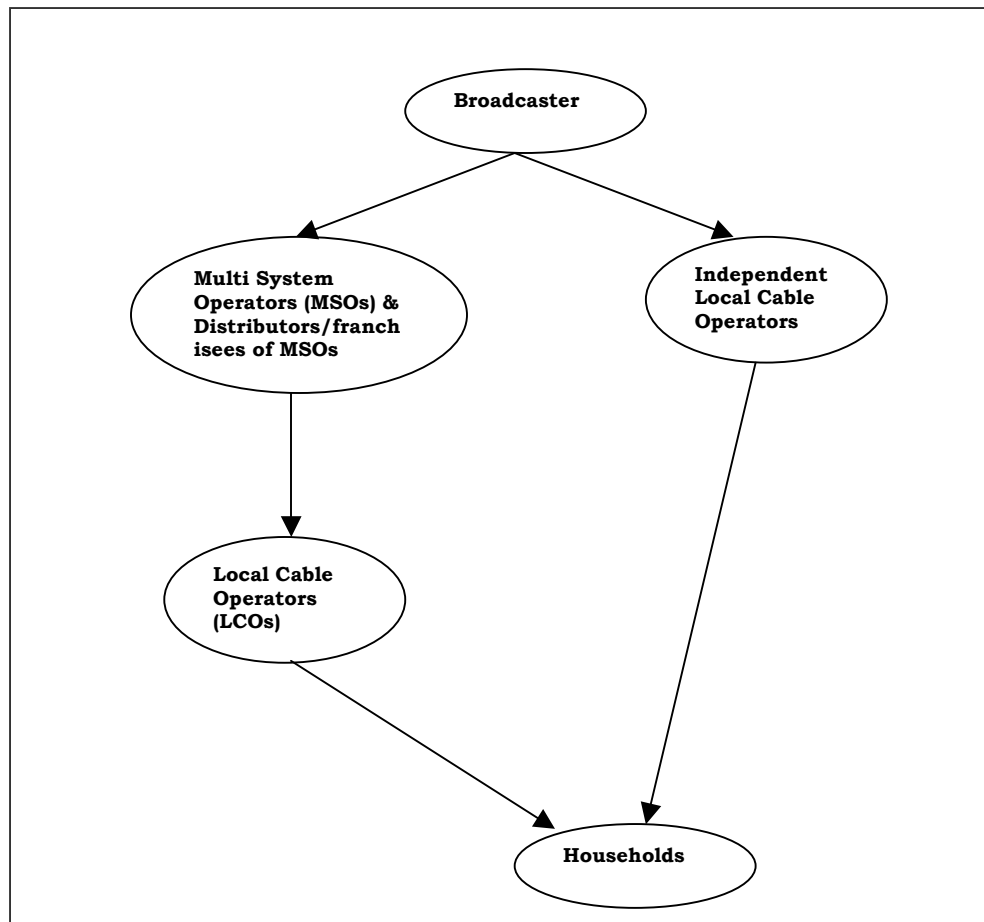


Fig 2: Cable TV distribution chain

2.5 Presently many MSOs have set up sophisticated head-ends capable of delivering 60 to 90 channels. These channels are mostly delivered in an analog mode. The existing capacity of cable systems is far less than the demand. As more channels are being launched, there is a need to upgrade the system through Digitalisation. Digital transmission, offers a number of advantages over analogue broadcasting. These include better reception quality, increased channel carrying capacity, new features such as programme guides, multi view, interactive services and potential to provide Triple play (i.e. voice, video and data).

2.6 **Digitalisation of Cable TV networks:**

A single analog video signal occupies 8MHz of bandwidth on the cable. By using bandwidth efficient digital modulation techniques such as Quadrature Amplitude Modulation (QAM), data rates in excess of 56Mb/s can be transmitted within 8MHz band. Using Motion Picture Expert Group (MPEG) compression techniques, a high quality video signal can be compressed into 3-4Mbps data stream. Therefore, by upgrading a cable plant from analog to digital TV transmission, one can achieve more channel capacity. The 800 MHz of available downstream bandwidth in a modern cable plant could, in theory, support over a thousand channels of video services.

2.7 **Conditional Access System (CAS):**

Conditional Access System is utilised to introduce addressability in cable TV networks providing signals in digital format. A Conditional Access System (CAS) ensures that only authorised subscribers are able to view a particular programming package. A conditional access system is installed in set-top box (STB) or integrated receiver decoder. This is an electronic box, which contains the necessary hardware, software, and interfaces to select, receive, unscramble and view the programmes. Since signals are scrambled in CAS, only those viewers with a valid contract are authorized to unscramble and view the chosen programmes. Moreover, when the viewer chooses a pay channel or a programme, the information is stored and updated on a database, which includes subscriber details, method of payment, and services purchased. A CAS may be used not only for selecting pay channels, but can also be used for other services, like Video on Demand, etc. In some cases, encrypted programmes may also be received from

different mechanisms like cable, satellite, terrestrial broadcasting etc on the same STB.

2.8 There are some other competing technologies like Headend in The Sky (HITS), Direct To Home Services (DTH), Internet Protocol TV (IPTV), which are used to provide broadcasting services.

2.9 **Headend In The Sky (HITS):**

In this system the Head End is placed on the satellite. In HITS all the pay channels are aggregated and again uplinked to a satellite after encryption of channels. At cable headend these encrypted pay channels in digital format are downlinked using a single satellite antenna, transmodulated and sent to the subscribers. At the subscribers end, Set Top Boxes de-encrypt the pay channels based on authorisation received from Subscriber Management System (SMS). As per the present practice, the cable TV operator may downlink Free To Air (FTA) channels in analogue format and send this to the subscriber on the same cable network. The STB will pass these FTA analogue channels to the TV set in the usual manner. It is also possible to provide FTA digital channels to the cable TV operators through HITS platform. Such signals will be delivered to subscriber's television set through STB by the cable TV operator.

2.10 **Direct To Home Services (DTH):**

DTH is a distribution platform for multi-channel TV programmes using a satellite system that transmits the programmes/provides TV signals directly to subscribers' premises. The reception of signals/programmes requires a small dish antenna and a Set Top Box. The Set Top Box contains software, which together with the viewing card unscrambles the digital TV signals and allows the

viewer to watch the DTH service. The viewing card acts as a key to access any DTH platform for authorizing the service.

2.11 **Internet Protocol TV (IPTV):**

Provision of the television channels using high speed Internet protocol (IP) technology is normally called as IPTV. IPTV system delivers digital television service using Internet Protocol (IP) over various access technologies supporting high speed Internet. The transmission network of a cable TV operator (If designed to support two way operations) is capable to provide IPTV services. IPTV platform can also provide services like Video on Demand (VoD), Time shifted TV, Live Video and gaming etc. Since triple play services encompass Voice, Video and data, IPTV is also considered within umbrella of triple play services. In implementation of IPTV, cable TV operators can utilize their existing transmission infrastructure, customer resource manager (CRM) and invoicing system.

2.12 **Broadband and Internet Telephony through Cable TV Network:**

New technological developments in Cable TV networks have made it possible to send data in both directions. It is possible to provide broadband over cable TV networks using cable modem technologies like Data over Cable Service Interface Specifications (DOCSIS), which permits two way communications in cable network. DOCSIS system packetises the data and sends over the network at high speed, in very similar manner as done in IP networks. Along with broadband, Internet telephony can also be provided over upgraded cable TV networks. Provisioning of broadband and internet telephony over a cable TV network is depicted in fig 3:

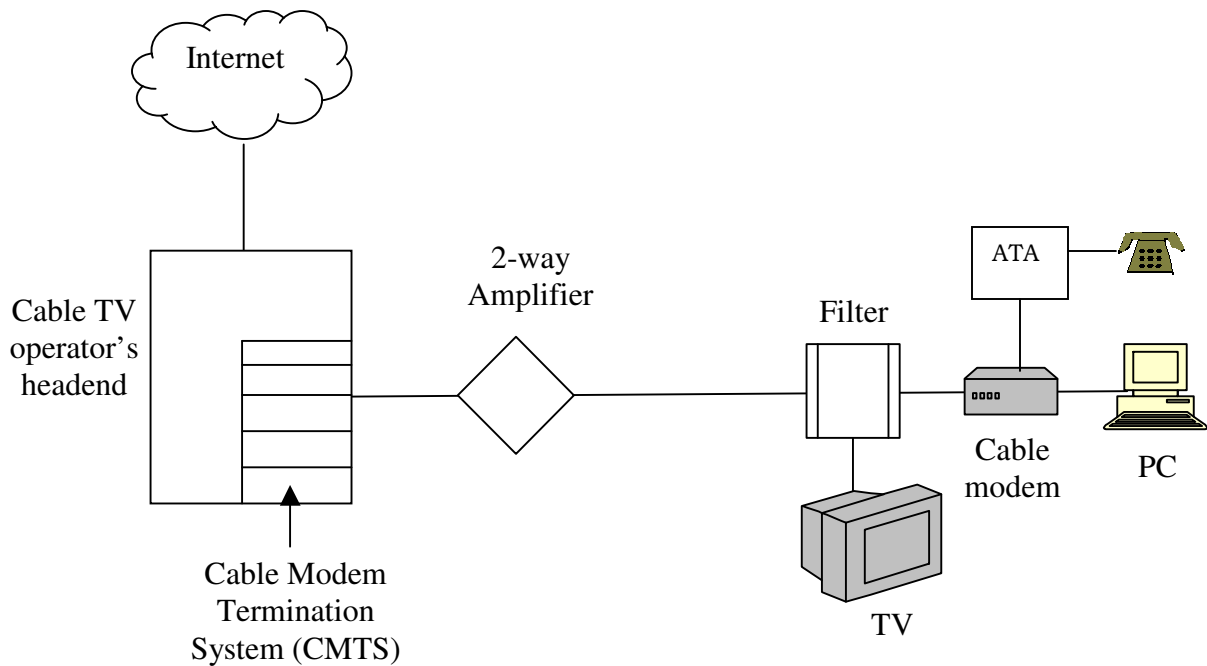


Fig 3: Broadband & Internet telephony through Cable TV Network

2.13 Future scope for Cable TV operators:

2.13.1 As an underlying technology, digitalisation is a growth driver. Digital transmission offers a number of advantages over analogue broadcasting. Deployment of digital cable TV networks help to provide internet and broadband services. These networks have the potential to ultimately converge with the telecom networks. Many companies in USA and few other developed countries have started providing voice and internet services on these networks and are competing directly with the telecom companies. This presents quite an attractive business potential for cable TV operators.

2.13.2 As per Media Partners Asia Ltd's report on Asia Pacific Pay-TV & Broadband Markets, the forecast for Dec 2007 for digital cable TV subscribers is around 1.4 million and 77 million for analog subscribers in India. The forecast indicates a big gap between digital and analogue services, indicating enormous scope for existing cable TV operators having analog networks to upgrade their networks. There is likelihood of their consumers migrating to other platforms like DTH, IPTV etc. for digital signals and for accessing latest value added services, if they do not upgrade their network.

Chapter 3

Regulatory Issues

3.1 Regulatory Enforcement

- 3.1.1 The present cable TV sector is regulated through Cable Television Networks (Regulation) Act, 1995 and TRAI Act.
- 3.1.2 The efficacy of regulatory enforcement depends on the extent to which the regulations can be enforced on the ground. This is also crucial for the cable TV industry in view of technological advancements, convergence, increasing capability to provide various contents and applications. The large number of cable TV operators and consumers spread all over the country provide a strategic significance to cable TV from other platforms capable to provide similar services. There is a need to revisit the present regulatory regime in view of changing scenario due to technological evolution, convergence, type of contents, future scope and other interactive applications.
- 3.1.3 The Cable Act defines eligibility to operate a cable television network as “an individual who is citizen of India; an association of individuals or body of individuals, whether incorporated or not, whose members are citizen of India; and a company in which not less than fifty-one percent of the paid up capital is held by the citizens of India.” The definition of ‘person’ in relation to a company requires clarification. The expression citizen of India is not further clarified. This creates a doubt whether a company (Indian or multinational) in which Indian financial institution, corporate or Non Resident Indians (NRIs) have more than fifty-

one per cent of the paid-up share capital is eligible to apply for the registration for cable TV operations or not. Clarity in eligibility criteria is necessary.

- 3.1.4 The Cable Act does not cast any requirement relating to the financial strength, educational qualification, technical knowledge or experience to run such services. As a result any person as described above can register himself with the registering authority and can start providing cable TV services.
- 3.1.5 In a fast changing technological scenario particularly with the advent of convergence, the competition and efficiency issues are supermost for survival. This will not only require much higher investments to compete but also better technological knowledge and experience to run such services. Therefore financial and technical background of the entity seeking registration is relevant. In the absence of proper eligibility criteria of cable TV operator, quality of service may not improve. Such operators will not be in a position to upgrade their networks to provide newer services, which are fast emerging due to advancement of technology. In the era of convergence, operators from other domains are also entering into broadcasting arena and in such a scenario cable TV operators will need to gear up to sustain their business. This will be possible if the cable TV operators are brought under progressive regulatory framework which will assist the cable TV operators to develop a sustainable business model. The consumers will also get advantage of the technological evolution. Therefore, it is advocated that eligibility criteria, which is progressive but not restrictive is introduced for the registration as cable TV operators.

- 3.1.6 One may advocate that the registration of cable TV operator should be procedurally simple and affordable. Eligibility criteria like financial and technical background should not be a pre-requisite. A cable TV operator should have the freedom to structure his business model and accordingly plan his network. In a competitive environment, his survival will depend on the viability of business model. In view of this stakeholders may suggest eligibility criteria to be casted in the Cable TV Act.
- 3.1.7 Quality of Service (QoS) is another important aspect. Facilitating availability of new value added services and their applications to customers and ensuring QoS is one of the primary tasks of the regulator. Quality of Service means ensuring certain level of service for the existing customers. It covers various aspects such as quality of reception, billing accuracy, avoiding unnecessary changes in placement of channels, clarity about value added services etc. It is also equally important that the cable TV operator should have an effective grievance redressal mechanism. The Cable Act does not cast any responsibility on cable TV operator to guarantee quality of service and does not have well defined customer grievance handling mechanism in place to effectively address customer grievances. This would require certain changes in present regulatory framework.
- 3.1.8 For registration as cable TV operator, a person as defined in the Cable Act has to apply for registration or renewal of registration in the prescribed forms 1 or 2 (Annex-III) accompanied by a fee of Rs 500/- with the registering authority, which is the Head Post Master of a Head Post Office, of the area within whose territorial jurisdiction cable TV operator is situated. The only documents mentioned in these forms are 'copy of challan vide which the fees

have been deposited' and 'mutilated or defaced original certificate of registration/copy of report made to the police in case of theft or loss of the original certificate' (required in case of application for issue of duplicate certificate of registration). On receipt of the application, the registering authority has to satisfy itself that the applicant has furnished all the required information and on being so satisfied, register the applicant as a cable TV operator and grant him a certificate of such registration valid for one year.

3.1.9 Instances have come to the notice where the registering authority demanded documents related to ID proof/ address proof of the applicant, network design layout or clearance from the concerned authorities for laying cables on electric or telephone poles etc. and in case the applicant failed to produce such document, the registration was refused. To introduce transparency and predictability a comprehensive list of documents required to be submitted along-with the application of registration need to be mentioned in the application form itself.

3.1.10 Present provision authorise registering authority to refuse to grant registration for reasons to be recorded in writing and communicate the same to the applicant if he is satisfied that applicant does not fulfil following specified conditions:-

- (i) Application is incomplete.
- (ii) Registration fee has not been tendered.
- (iii) Applicant is not a citizen of India.
- (iv) Less than fifty one percent of the paid-up share capital of the applicant company is held by citizens of India.

3.1.11 There have been cases where head post master of concerned post office has neither granted the registration nor communicated any

reasons for the same to the applicants. This situation prevails as the Cable Act and Cable Rules neither prescribe any time limit for grant of registration nor communicate for rejection. Applicants have also expressed the views that there is no prescribed hierarchy or authority for registering complaint or representation on matters relating to registration. There have been suggestions that either clear time lines be defined for grant of cable registration or automatic provision of cable registration be made after lapse of certain time if no objection is received from the concerned authorities.

3.1.12 Though the Cable Act mandates that the registering authority will inform the applicant in the prescribed form the reasons for refusal of registration, there is no provision of the appellate authority in the Cable Act. In case the applicant is not in agreement with the reasons mentioned for refusal of registration, there is no mechanism in place for redressal of grievance.

3.1.13 Presently the only criteria to be seen while registering as cable TV operator is whether applicant has furnished all the required information and the form is scrutinized based on the documents attached. There is no provision for the verification of the documents of cable TV operators who is seeking registration. In the absence of such verification any person can get himself registered as cable TV operator without verification of his antecedents. Even defaulters can get them re-registered in new name and start operations as there is no such check. The convergence regime will require more responsibilities to be cast on cable TV operators. Therefore, the cable TV sector needs to be brought under a progressive, predictable and light touch regulatory framework.

- 3.1.14 The Cable Act also prescribes periodical submission of certain reports to the Government indicating number of subscribers, subscription rates, and rate of amount payable to any broadcaster etc by the Cable TV Operator in CAS notified areas. However, no details of the agency are given in the Cable Act, to whom such information is to be sent. It is also not envisaged that any such agency will maintain the records provided by the cable TV operators in CAS notified areas. No such provision exists today for non-CAS notified areas. In the absence of such reporting, exact details of cable TV sector are not available resulting in absence of supervisory guidance.
- 3.1.15 Supervisory guidance and positive control will ensure systematic and planned growth. The cable TV sector in its present form is subject to loose controls. Even the exact number and location of all the cable TV operators are not readily available. Though cable TV operator's registration is provided for one year but whether all cable TV operators are getting their registrations renewed timely and whether post offices have updated records of all such cable TV operators cannot be claimed with any certainty. Since all the cable TV operators take signal either from the broadcasters or MSOs, they need to effectively ensure cable TV operator's registration before signing the contract and giving channel signals to such cable TV operators.
- 3.1.16 The collection of relevant information/data is significant for keeping track of the development. As far as cable TV industry is concerned there is no centralized nodal authority where all the information relating to the development of the sector is collected and made available. The cable TV operators should be brought under compulsory reporting obligations to a specified nodal

agency/authority at regular intervals. Such data collected at regional level can be compiled to arrive at consolidated national figures. Cable TV operators may be adequately informed about this mandatory requirement at the time of registration itself. The data collection process at the Cable TV operator level should be simple considering their vast spread. Web based data collection can be another alternative. The best suited methodology to be adopted in data collection need to be explored.

3.1.17 The Cable Act casts certain responsibilities on cable TV operators like enforcement of Programme code, Advertisement code, carriage of DD channels etc. To enforce the same, the Cable Act has a provision for authorized officer defined as:

“‘authorised officer’ means, within his local limits of jurisdiction;-

(i) a District Magistrate, or

(ii) a Sub-divisional Magistrate, or

(iii) a Commissioner of Police,

and includes any other officer notified in the Official Gazette, by the Central Government or the State Government, to be an authorised officer for such local limits of jurisdiction as may be determined by that Government;]”

3.1.18 It is also possible that the Central Govt. and the State Govt. may appoint separate authorized officers. This will create duality of control and will impact the monitoring mechanism. For smooth functioning of the system there should be clarity regarding the appointment of authorized officers. Well defined procedures must be put in place to avoid such overlapping.

- 3.1.19 The Cable Act empowers the authorized officer to seize the equipments of cable TV operators where there are reasons to believe that provisions of sections 3, 4A, 5, 6 or 8 have been violated.
- 3.1.20 There is also a need to have explicit provisions about the customers' right including the redressal of consumer grievances. There are complaints that consumers do not get good quality of signals. Presently there is no standard procedure formulated for guiding consumers on getting new connection, desired content, disconnection of existing connection and complaint handling procedure.
- 3.1.21 The Cable Act is silent regarding mandatory notice to the customers in case a cable TV operator wants to discontinue its services. Similarly there is need to clearly mention the provision for suspension or cancellation of the registration for breach of terms and condition of the Cable Act/ Cable Rules or any other regulatory provision of TRAI Act. It is felt that adequate provision for suspension or cancellation of registration in cases of violation is a must, though with sufficient safeguards to avoid its misuse. In telecom sector service providers are required to inform their customers in advance regarding discontinuation of their services, so that customer can avail the services of another service provider well in time. Similar provisions may be considered for incorporation in the Cable Act to avoid the inconvenience to the consumers. The protection of customers' interest is a priority. Comments are invited on to how the interests of customers of cable TV service can be best protected.

3.1.22 The discussions in above para can be summarized indicating certain weaknesses of the present regulatory system for cable TV services:

- Verification of the antecedents of the applicant not mandated.
- Financial strength, technical background and experience to run such services are not laid out.
- Present regulatory framework is bereft of customer grievance redressal mechanism and quality of service standards.
- Lack of supervisory guidance and control. No data bank is available to assess development and growth of the sector.
- Anti competitive practices are in existence due to monopoly of cable TV operators.

3.1.23 The issue for consideration is how to make cable TV registration process effective to keep pace with the developments and address the issues discussed in preceding para.

3.1.24 There are several agencies entrusted with the task of enforcing the various provision of the Cable Act. It would be better if there is one agency at the local level that could perform all the regulatory functions. Presently all the cable TV operators have to be registered in the post offices. Then they have to regularly contact the office of the Entertainment Tax Officer of the respective areas to submit the information related to entertainment tax payments etc. Similarly enforcement of important provisions of the Cable Act relating to CAS as well as non CAS area, Programme code, Advertisement code, compulsory carriage of Doordarshan channels etc. are with the Authorized Officers. Also, cable TV operators are required to send some information directly to Ministry of Information & Broadcasting in

case of CAS areas. Therefore comments of the stakeholders will be important to decide as to who should be nominated as Registering Authority and how to ensure effective data collection and compilation so that same can be used as and when it is required.

3.1.25 TRAI in its recommendations on “Issues relating to Broadcasting and Distribution of TV channels” dated 1st October 2004 already recommended that:

- The duties to be assigned to Authorised Officers appointed by the State Government and the Central Government should be clearly demarcated.
- The Registration of Cable Operator should be done by the Authorised Officer and not by the Head Post Master. The existing cable operators may not be asked to obtain fresh registration but the next renewal of registration should be done with the Authorised Officers.
- The Authorised Officer should have the power to revoke registration if a cable operator has been convicted of a criminal offence and imprisoned for the same.
- Information under the Section 4 A (9) of the Cable Act should be submitted to the Authorised Officer. The consolidated information may be sent to the central/state government.

3.1.26 The situation has changed since then and services like IPTV and Mobile TV may takeoff soon. Moreover convergence is increasing and customer grievance redressal has become very important. Therefore registration of cable TV operators has to be looked into in a changed scenario. Stakeholders are requested to give suggestion with justification regarding future framework for cable TV registration.

3.1.27 Issues for consultation:

- **The technological advancements, convergence and increasing popularity of value added services & applications require more vibrant and effective regulation for cable TV industry. Present eligibility criteria do not clearly define a person and also do not take into account financial strength, technical strength and experience of the applicant to provide cable TV services. Do you feel that present regulatory framework requires change? Please give suggestions with justifications.**

- **The registering authority may refuse the grant of registration in case of non submission of any document required by him as the application form does not clearly list out the documents to be submitted. In view of this, should a comprehensive list of documents required to be submitted along-with the application of registration be mentioned in the application form itself? Similarly, is there a need to make provisions for the appellate authority in case of refusal of registration by the registering authority?**

- **The present cable TV industry is subjected to minimum supervisory guidance and control. Do you feel that there is a need to streamline registration process, data collection and monitoring to ensure better cable TV services to customers? Is there a need to have a centralized/ decentralized authority where all the information relating to cable TV sector and also monitoring is managed? If yes, then what should be the structure and scope of work of such an agency? Please, give suggestions with justification.**

- **Present cable TV registration, the Cable Act and the Cable Rules do not cast any specific responsibility for effective customer grievance redressal. What changes do you suggest to bring in effective consumer grievance redressal mechanism?**
- **At present by and large only one cable TV operator is providing service in a locality. Is there a need to introduce competition with more than one operator? Give your suggestions with justifications.**
- **Any other regulatory reform.**

3.2 Problems faced by Cable TV operators:

3.2.1 The absence of addressability leads to certain forms of market aberrations. On one hand, the broadcasters complain that MSOs and LCOs do not declare their full subscriber base. On the other hand, the MSOs and LCOs charge the broadcasters with hiking up their channel rates. There are complaints that broadcasters insist on certain minimum guaranteed connectivity levels. All this leads to frequent disputes and disconnections leading to consumer's inconvenience.

3.2.2 TRAI issued the Telecommunication (Broadcasting and Cable) Services (Second) Tariff (Eighth Amendment) Order, 2007, on 4th October 2007 and stipulated the following measures which are expected to enable the MSOs/cable TV operators to choose channels in tune with the liking of their subscribers in the localities being served them, and consequently to reduce the burden of cable charges on the subscribers on account of unwanted channels.

3.2.2.1 Broadcasters must provide all their channels on a la carte basis and declare a la carte rates to the multi system operators (**MSOs**)/cable TV operators. Bouquets of channels can also be offered. But to prevent perverse pricing of bouquets and to make the a-la-carte choice effective, it has been provided that the bouquet rates and a la carte rates of channels forming part of a bouquet should satisfy the following conditions:

- a. Sum of a la carte rates not to exceed 1.5 times the bouquet rate.
- b. A la carte rate of each channel cannot be more than three times the average rate of the pay channel in the bouquet.

3.2.3 Presently cable TV operators are required to pay entertainment tax and service tax, which are linked to the number of subscribers. Cable TV operators charge a consolidated amount monthly from their consumers and sometimes do not provide any receipt to the consumers. Even if they provide receipt, it does not clearly reflect charges for the service and applicable taxes on them separately. In such a scenario cable TV operators may evade taxes by under declaring their subscribers. TRAI in the Telecommunication (Broadcasting and Cable) Services (Second) Tariff (Eighth Amendment) Order, 2007, dated 4th October 2007 also stipulated the Requirements of mandatory billing with necessary details, issue of receipts for payments made. However, details of impact of implementation are not available at present. There is a need to develop a proper system of billing and monitoring so that evasion of taxes can be avoided and problems of connectivity also gets substantially addressed.

3.2.4 Presently Cable TV operators are permitted to show broadcast television signals as defined in the Cable Act and are required to adhere to program code, advertisement code and other guidelines issued from time to time. Majority of the content shown by Cable TV operators are TV channels obtained from broadcasters. For broadcasting of TV channels broadcasters are already bound by the up-linking/ down-linking guidelines. MSOs sometimes also distribute local news & video channels to cable TV operators. These channels are not obtained from broadcasters; therefore such channels are not subjected to up-linking/ down-linking guidelines. However, these channels are subjected to program code, advertisement code and other such guidelines. Apart from TV channels from broadcasters & MSOs, cable TV operators can also show locally developed content like video on demand, music-on-demand etc which are also regulated under program code, advertisement code and other such guidelines .

3.2.5 For all contents and channels obtained from broadcasters/MSOs; responsibility must completely rests with broadcaster/MSO providing such contents. It has been contested that even for violation by broadcasters/MSOs; cable TV operators are being penalized. In their view cable TV operators should be held responsible for observing program code and advertisement code for content provided solely by them and that Cable TV operators should not be held responsible for content being provided by MSOs/broadcasters. The issue needs detailed deliberation to clearly demarcate the responsibility of various entities in case violation of guidelines/ codes related to content.

3.2.6 As per the existing provisions in the Cable Act, the authorised officer is empowered to prohibit transmission of certain

programmes in public interest. There is no explicit provision for appeal by a cable TV operator against such order. In such a scenario there may be a possibility of misuse of such provision. In a progressive regulatory environment every operator should have the right to appeal.

3.2.7 For provisioning of service to their consumers, cable TV operators lay cables in their area of operation. Presently cable TV operators mostly rely on the cables over the roof tops and electric & telephone poles. This disturbs the aesthetic look of the city as several cables hang improperly on electric & telephone poles. However, the cable TV operators have no alternative as right of way (RoW) is not available to MSOs/ Cable TV Operators being not licensed under Section 4 of the Indian Telegraph Act 1885. Some State Governments ask cable TV operators to pay charges even for laying of cables on electric poles. These charges vary from state to state and district to district. There is a need for provisions for non-exclusive permission to cable TV operators for laying the cables in structured manner over poles. Such cables are also more prone to fault as these are exposed to extreme weather conditions apart from not installed properly. Sometimes cable is stolen or even cut down by rival operators. This not only affects the QoS, but also causes disruption of services. Such environment is not conducive for digitalisation of networks. The cost to provide digital cable services per user can be substantially brought down in case service from a digital head end is supplied to a larger area through optical fibre cable network. TRAI in its recommendations on “Digitalisation of Cable Television” dated 14th September 2005 already recommended that licensee of digital transmission systems be provided Right of Way on the lines of provisions contained in The Communication Convergence Bill 2001 through appropriate

amendments in the Cable Act. The need of RoW to cable TV operators requires further deliberations by stakeholders.

3.2.8 Existing regulations are not explicit on the issues discussed above. In view of the upcoming technological developments, the reach of cable TV services will become much deeper. There is a need to strengthen the existing regulatory framework, which should take care of such issues.

3.2.9 Issue for consultation:

- **In view of deliberation in para 3.2, is there a need to modify provisions of the Cable Act/ Cable Rules? Please, give suggestions with justification.**
- **In particular, suggestions may be given for a proper regulatory framework on the following issues, among others:**
 - (i) Correct determination of subscriber base**
 - (ii) Laying a good quality network**
 - (iii) Permission and monitoring of ground-based channels offered by MSOs and LCOs.**

3.3 Separate license/ Registration of Multi-system Operator (MSO):

3.3.1 As per the existing provision MSO is also registered as Cable TV operator as there is no separate provision for their registration in Non CAS area. However the function and nature of business of an MSO is somewhat different. While MSO works in close coordination of broadcasters and works as content aggregator, local cable TV operators basically work as carrier to provide the channels to the customers. However, the MSOs in many places work as last mile

cable TV operators also providing TV channels directly to some subscribers.

3.3.2 Ministry of Information & Broadcasting have already mandated registration of MSOs in CAS notified area. In non-CAS areas, as per unauthentic reports, there are approx. 6000 MSOs and 60000 LCOs. Many of the LCOs are standalone and take some feed directly from the broadcasters. The presence of MSOs is more predominant in urban and semi-urban areas. In some semi-urban and remote areas, standalone LCOs are predominant.

3.3.3 There is one school of thought which feels that MSOs have distinct functional responsibility, thus warranting separate regulatory provision. This would enable the MSOs to have well defined commercial and technical agreements with broadcasters on one hand and LCOs on the other.

3.3.4 The area of operation of a MSO is another issue at hand. As per the provisions of the Cable Act, cable TV operator can provide signals within the city in which he is registered with the head post office. However, there are several multi-city MSOs for whom registration in all cities may be difficult. So, in such a case whether there is a need to bring in different regulatory framework for MSOs and whether different area of operation needs to be prescribed. Comments of the stakeholders are invited on these issues.

3.3.5 In the changing scenario of convergence, MSOs also play an important role to aggregate and provide contents through ground based channels other than broadcasting channels. There will be a need to put in place effective monitoring mechanism for such channels which improve the business model and strengthen the

MSOs to face the competition. The regulatory framework may also need to have provision for monetary penalties in case of breach. Comments of the stakeholders are requested on the issue.

3.3.6 MSOs can also play important role in ensuring the registration of the LCOs. All LCOs take content from MSOs (leaving aside the Independent LCOs). Therefore, while giving contents to such LCOs, MSOs can ensure that such LCOs are registered and make sure that registration number of such LCOs is one of the items in their agreement while providing content. This would help in ensuring that the cable TV operators are being registered. MSOs can also be asked to give details of registration to identified central agency to have accurate information of cable TV operators and their registration status.

3.3.7 **Issue for consultation:**

- **Presently MSOs are also registered as Cable TV operators. Do you feel the need for a different regulatory framework for MSOs in view of discussions in section 3.3? Give your suggestions with justification. The suggestions may specifically cover, among others, the issues relating to registration of multi-city MSOs, monitoring mechanism, number of MSOs in a city/state etc.**

3.4 **Quality of Service Standards**

3.4.1 The purpose of laying down Quality of Service (QoS) parameters is to provide a framework for quality of service with certain obligation on cable TV operators and follow certain customer service guidelines.

3.4.2 The quality of the cable TV service depends on the signal strength received, the network design, planning, operation and maintenance and the management of the service. The network performance is an important element of Quality of Service. At present quality standards exist only in the form of technical standards laid down by the BIS.

3.4.3 There is a need to expand the QoS parameters to include the following for cable TV services in non Conditional Access System (non-CAS) areas.

- Signal strength levels and signal to noise ratio at different points of the network so that it can be quantified and effectively monitored.
- Information to be provided to consumer at the time of installation of cable TV connection
- Complaint handling procedure and benchmarks to redress complaints
- Billing Procedure and complaints redressal mechanism.

3.4.4 TRAI in its recommendations on “Issues relating to Broadcasting and Distribution of TV channels” dated 1st October 2004 suggested certain QoS codes and guidelines for the cable TV industry, which included Information to be provided to consumer at the installation of cable TV connection, Complaint handling procedure, benchmarks to redress complaints and Billing Procedure (refer Annex-IV). TRAI also issued Regulation on the Standards of Quality of Service (Broadcasting and Cable services) for cable TV in CAS areas on 23rd August 2006 and Regulation on Quality of Service and Redressal of Grievances for Direct to Home Broadcasting Services on 31st August 2007. However, no QoS regulation has been issued for non CAS areas. In case QoS parameters are prescribed for non CAS area, it will not be easy to

enforce and monitor these in view of the very large number of cable TV operators, lack of addressability and unplanned growth of cable TV networks. Ensuring quality of service will be desirable keeping in view the convergence and competition also.

3.4.5 In some countries technical standards for cable TV networks like signal leakage limit, carrier-to-noise ratio, distribution cable specifications, system/equipment layout and safety requirements have been mandated.

3.4.6 The issue of concern is how to address effectively the concern of customers relating to quality of service in non-CAS areas. The specific parameters and mode of monitoring needed to be prescribed. Comments of the stakeholders in this regard are invited.

3.4.7 **Issue for consultation:**

- **What QoS parameters should be prescribed for non CAS areas to address concerns of the customers keeping in view the present status of networks? What should be the points in the network to define various signal parameters such signal strength, S/N ratio etc? What should be the monitoring mechanism to ensure effective implementation?**

3.5 Incentives for network upgradation

3.5.1 Existing networks of the cable TV operators are based on old technology with capacity to provide 40 to 80 analog TV channels to the subscribers. The emphasis is shifting to digital transmission

from existing analog transmission. With the advancement of technology cable TV operators may like to provide Internet, broadband and other value added service like Video on Demand, Interactive TV, Time shifted TV & Interactive gaming etc. For this purpose cable TV operators are required to upgrade their existing network. It is advocated that such upgradations will require detailed network planning and significant cost. Unless suitable business model is conceived, the existing cable TV operators may find it difficult. Telecom service providers are likely to start providing triple play services which may include IPTV, VoD etc. Other platforms like Direct to Home (DTH), HITS, and mobile TV are likely to be available and competing in the same segment. In order to compete and co-exist, it will be necessary that cable TV operators upgrade their network. TRAI while fixing the tariff ceiling for non-CAS area have not put any ceiling for cable TV operators providing addressable digital signals in non-CAS areas. This is a step to encourage cable TV operators to upgrade and digitalise their networks. Services like IPTV have also been permitted to cable TV operators. It can be argued that the cost of channel price is most significant factor. It has also been felt that digitalisation and voluntary CAS activities can be boosted if price of such digital channels in non CAS areas are also regulated. It is argued that since TRAI has already provided framework to determine each broadcast channel cost for CAS areas, similar prices may also be mandated to all non CAS areas (Not notified as CAS area so far) to boost voluntary CAS and digitization. This is seen as a major incentive to the local cable TV operators to digitize their networks and start voluntary CAS. This may also be welcomed by broadcasters as many a time broadcasters complaint of under reporting. An addressable system will overcome this problem to a great extent. Comments from stakeholders are invited as to how

cable TV network can be upgraded to provide better service to customers and also ensure business viability.

3.5.2 Issue for consultation:

- **In view of technological advancement, convergence, and increasing competition upgradation of cable TV operators network will be desirable; however it may require significant investments. Please suggest how cable TV operators can be encouraged to upgrade their network both in their business interest and in interest of customer to provide better services?**

3.6 Standardization of the software

3.6.1 Cable TV operators are likely to use different type of software for encryption of the digital signals while providing voluntary CAS as well as for billing and customer management system. At present, there are no set standards for such software. Different broadcasters demand compliance to different software and in absence of this, they do not agree with the billing and subscriber base figures. Similarly they may not agree with a particular encryption software and may want that their channel signal be protected using only a specific software. There have been suggestions that some technical body may be asked to look into it and standardise the software considering all aspects so that one can choose from the list. Comments of the stakeholders are invited.

3.6.2 Issue for consultation:

- **Is standardization of encryption and subscriber management software feasible? Please, give comments with justification.**

3.7 Transition of existing cable TV operators

3.7.1 As mentioned earlier, there are approx. 6000 MSOs and 60000 LCOs in the country. In order to bring in systematic and planned growth of cable TV networks, this paper discusses various relevant issues like registration, information system for monitoring of cable TV industry, customer grievance redressal and quality of service etc. The revised regulatory regime, as and when brought in place, will boost the competition and growth potential. However, it would be necessary to think of a smooth transition for existing cable TV operators & MSOs to such a regime.

3.7.2 Issue for consultation:

- **What should be the consideration, important criteria and guiding factors for prescribing the transition path for the existing cable TV operators and MSOs to the revised regulatory regime? Please, give suggestions with justification.**

Chapter 4

Issues for Consultation

- 4.1 The technological advancements, convergence, and increasing popularity of value added services and applications require more vibrant and effective regulation for cable TV industry. Present eligibility criteria do not clearly define a person and also do not take into account financial strength, technical strength and experience of the applicant to provide cable TV services. Do you feel that present regulatory framework requires change? Please give suggestions with justifications.**
- 4.2 The registering authority may refuse the grant of registration in case of non submission of any document required by him as the application form does not clearly list out the documents to be submitted. In view of this should a comprehensive list of documents required to be submitted along-with the application of registration be mentioned in the application form itself? Similarly is there a need to make provisions for the appellate authority in case of refusal of registration by the registering authority?**
- 4.3 The present cable TV industry is subjected to minimum supervisory guidance and control. Do you feel that there is a need to streamline registration process, data collection and monitoring to ensure better cable TV services to customers? Is there a need to have a centralized/ decentralized authority where all the information relating to cable TV sector and also monitoring is managed? If yes, then what should be the structure and scope of work of such an agency? Please, give suggestions with justification.**

- 4.4 Present cable TV registration, the Cable Act and the Cable Rules do not cast any specific responsibility for effective customer grievance redressal. What changes do you suggest to bring in effective consumer grievance redressal mechanism?**
- 4.5 At present by and large only one cable TV operator is providing service in a locality. Is there a need to introduce competition with more than one operator? Please give your suggestions with justifications.**
- 4.6 Any other regulatory reform.**
- 4.7 In view of deliberation in para 3.2, is there a need to modify provisions of the Cable Act/ Cable Rules? Please give your suggestions with justifications.**
- 4.8 In particular, suggestions may be given for a proper regulatory framework on the following issues, among others:**
- (iv) Correct determination of subscriber base**
 - (v) Laying a good quality network**
 - (vi) Permission and monitoring of ground-based channels offered by MSOs and LCOs.**
- 4.9 Presently MSOs are also registered as Cable TV operators. Do you feel the need for a different regulatory framework for MSOs in view of discussions in section 3.3? Give your suggestions with justification. The suggestions may specifically cover, among others, the issues relating to registration of multi-city MSOs, monitoring mechanism, number of MSOs in a city/state etc.**

- 4.10 What QoS parameters should be prescribed for non CAS areas to address concerns of the customers keeping in view the present status of networks? What should be the points in the network to define various signal parameters such signal strength, S/N ratio etc? What should be the monitoring mechanism to ensure effective implementation?**
- 4.11 In view of technological advancement, convergence, and increasing competition upgradation of cable TV operators network will be desirable; however it may require significant investments. Please suggest how cable TV operators can be encouraged to upgrade their network both in their business interest and in interest of customer to provide better services?**
- 4.12 Is standardization of encryption and subscriber management software feasible? Please, give comments with justification.**
- 4.13 What should be the consideration, important criteria and guiding factors for prescribing the transition path for the existing cable TV operators and MSOs to the revised regulatory regime? Please, give suggestions with justification.**

TRAI's recommendations on "Issues related to Broadcasting and Distribution of TV channels" dated 1st October 2004

- 1) **The duties to be assigned to Authorised Officers appointed by the state government and the central government should be clearly demarcated so that there is no overlapping of jurisdiction and responsibilities. The following recommendations are for additional duties of the Authorised Officers to be appointed by the State Governments.**
- 2) **The Registration of Cable Operator should be done by the Authorised Officer and not by the Head Post Master. The existing cable operators may not be asked to obtain fresh registration but the next renewal of registration should be done with the Authorised Officers.**
- 3) **The registration amount should be deposited by the Authorised Officer in the Post Office or under a central head in a nationalized bank.**
- 4) **The Authorised Officer should have the power to revoke registration if a cable operator has been convicted of a criminal offence and imprisoned for the same.**
- 5) **Information under the Section 4 A (9) of the Cable Act should be submitted to the Authorised Officer. The consolidated information may be sent to the central/state government.**
- 6) **Consumers and operators should have the option to approach the Authorised Officers for implementation of the Authority's regulations/tariff orders concerning the cable TV services. In case of violation of the regulations, the Authorised Officers should have the power to file complaints.**
- 7) **The government may consider setting up an alternate dispute resolution mechanism for cable operators at the local level. For multi system operators and broadcasters there need be no change in the present arrangements.**
- 8) **All cable operators and multi system operators shall maintain a register of subscribers containing the names of the subscriber, address, monthly fee charged and number of channels received. The register shall be furnished for inspection to the Authorised Officer whenever he considers it expedient to inspect such register to find out if there has been a violation of any regulation.**
- 9) **No broadcaster or MSO can cut off the signals to an MSO/cable operator without giving at least one month's notice giving in**

brief reasons for the proposed action. Such notice shall also be given in two local newspapers having wide circulation so that consumers are also aware of the dispute and can take steps to protect their interests.

- 10) The Broadcasters and the Multi System Operators/ Independent Cable Operators shall not insist on minimum subscriber guarantees from MSOs/Cable of CAS areas where transparent subscriber management systems are installed.**
- 11) The Foreign Direct Investment limit in Cable TV as well as related sectors like DTH should be reviewed and a consistent policy adopted.**

International Experience

1. USA

1.1 In US cable TV services are regulated under the 1992 Cable Act. Under this act the Federal Communication Commission (FCC) has adopted, a regulatory plan allowing local and/or state authorities to select a cable franchisee and to regulate in any areas that the Commission did not preempt. Local franchising authorities have adopted laws and/or regulations in areas such as subscriber service requirements, public access requirements and franchise renewal standards. Under the 1992 Cable Act, local franchising authorities have specific responsibility for regulating the rates for basic cable service and equipment.

The Communications Act requires that no new cable operator may provide service without a franchise and establishes several policies relating to franchising requirements and franchise fees. The Communications Act authorizes local franchising authorities to grant one or more franchises within their jurisdiction. However, a local franchising authority may not grant an exclusive franchise, and may not unreasonably withhold its consent for new service. Included in the grant of a franchise to a cable system are rights relating to the construction of the system, including the local franchising authority's authorization to use public rights-of-way, easements, and to establish the areas to be served. Moreover, franchising authorities are required to ensure that access to cable service is not denied to any group of potential residential cable subscribers on the basis of income class. Although the Communications Act also generally precludes the regulation of cable systems as common carriers, it authorizes the Commission, to require, if it chooses, the filing of informational tariffs for intrastate communications services, other than cable service, which is provided by a cable system.

Franchising authorities may charge the cable operator a fee for the right to operate a cable system in that franchise area; however, the franchise fee paid by the cable system can be no more than five percent of its lannual gross revenue. A franchising authority may use the money collected from this fee for any purpose. A cable operator must list any applicable franchise fee as a separate item on the subscriber's bill.

1.2 REGISTRATION OF A CABLE SYSTEM

Before commencing operation, a cable system operator must send the following information to the Secretary of the Commission for each community to be served:

- (1) The legal name of the operator, the entity identification or social security number, and whether the operator is an individual, private association, partnership or corporation. If the operator is a partnership, the legal name of the partner responsible for communications with the Commission;
- (2) The assumed name (if any) used for doing business in the community;
- (3) The mailing address, including zip code, and the telephone number to which all communications are to be directed;
- (4) The date the system provided services to 50 or more subscribers;
- (5) The name of the community or area served and the county in which it is located;
- (6) The television broadcast signals to be carried;

A registration statement must be signed by an authorized representative of the cable television company. The Commission issues a public notice setting forth the details of each registration statement as it is received. The cable television operator is not required to serve the registration statement on any party and may begin operation immediately upon filing the registration statement. However, commencement of operation is entirely at the risk of the system operator. If violations of the rules are subsequently discovered, appropriate regulatory sanctions, including imposition of a monetary forfeiture and/or the issuance of a cease and/or desist order, may be employed.

1.3 Customer service Guidelines

After the passing of 1992 Cable Act, the FCC in the United States adopted federal guidelines, which provide a standard for improving the quality of customer service rendered by cable operators. These guidelines provide minimum levels of service, which should be provided by a cable operator like:

- **Subscriber Calls to a Cable System:** each cable system must maintain a local, toll-free or collect-call telephone line available 24 hours a day, 7

days a week. The customer service center and bill payment locations must be conveniently located and must be open at least during normal business hours and should include at least one night per week and/or some weekend hours.

A call to a cable system must be answered -- including time the caller is put on hold -- within 30 seconds after the connection is made. If the call is transferred, the transfer time may not exceed 30 seconds. Also, cable system customers may receive a busy signal no more than three percent of the time.

- **Installations, Service Interruptions and Service Calls:** Federal guidelines state that standard installations -- which are those located up to 125 feet from the existing distribution system -- must be performed within seven days after an order has been placed. Except in situations beyond its control, the cable operator must begin working on a service interruption no later than 24 hours after being notified of the problem. A service interruption has occurred if picture or sound on one or more channels has been lost. The cable operator must begin to correct other service problems the next business day after learning of them. Cable operators may schedule appointments for installations and other service calls either at a specific time or, at a maximum, during a four-hour time block during normal business hours. Cable operators may also schedule service calls outside of normal business hours for the convenience of the customer. No appointment cancellations are permitted after the close of business on the business day prior to the scheduled appointment. If the cable installer or technician is running late and will not meet the specified appointment time, he or she must contact the customer and reschedule the appointment at the convenience of the subscriber. These requirements concerning installations, outages and service calls must ordinarily be met at least 95 percent of the time, measured quarterly, under normal operating conditions.

- **Changes in Rates or Service and Billing Practices:** Thirty days advance written notice (using any reasonable written means) must be given to subscribers and local franchising authorities of any changes in rates of programming services or channel positions, if the change is within the control of the cable operator. Bills must be clear, concise and understandable, with full itemization. Cable operators should respond to written complaints about billing matters within 30 days. Refunds, if any, must be issued no later than either the customer's next billing cycle or 30 days.

- **Information to Customers:** The information about products and services offered; prices and options of programming services and conditions of subscription to programming and other services; installation and service maintenance policies; instructions on how to use

the cable service; channel positions of programming carried on the system; and billing and complaint procedures, including the address and telephone number of the local franchising authority's office must be provided to the customer.

- **Home Wiring:** The home wiring rules are intended to encourage competition between multichannel video delivery services by allowing a consumer who voluntarily terminates cable service to use the wiring to receive a competing multichannel video delivery service, such as direct broadcast satellite, wireless cable ("MMDS"), or a different cable service, without the expense and inconvenience of installing new wire.

1.4 Technical Requirements

Cable systems distribute TV signals either through optical fiber or through coaxial cable strung on existing poles owned by telephone or electric utility companies. Cable operators also may use their own poles, place their cable underground or use transmission facilities or rights-of-way owned or controlled by a utility or municipality. Some may use combinations of these arrangements. Sometimes conflicts arise between cable television systems and utility companies over pole attachment issues, particularly the rates for use of utility facilities. The Communications Act Amendments of 1978 authorized the Commission to resolve such disputes by regulating the rates, terms, and conditions for cable TV pole attachments to ensure they are just and reasonable unless a state regulates such factors.

In 1985, the Commission adopted rules requiring each state to certify that: it has issued, and made effective, rules implementing the state's regulatory authority over pole attachments; its rules and regulations include a specific methodology for regulating pole attachments, and; the methodology has been made publicly available in the state. Local pole attachment requirements may be obtained from local franchising authorities. The amended rules also require that jurisdiction revert to the Commission unless a state acts on a complaint in a timely fashion. The Commission periodically issues public notices listing those states which have filed pole attachment regulation certifications.

The 1996 Act made the existing maximum just and reasonable pole attachment rate formulas temporary applicable to telecommunications carriers and cable operators providing telecommunications services. The 1996 Act also created a distinction between pole attachments used by cable operators solely to provide cable service and pole attachments used by cable operators or by any telecommunications carrier to provide any telecommunications service. The Act prescribed a new methodology for determining pole attachment rates for the latter group. The new

formulas will require that, in addition to paying their share of a pole's usable space, these telecommunications service providers also must pay their share of the fully allocated costs associated with the unusable space of the pole, duct, conduit, or right-of-way. In order to implement these new formulas, Congress directed the Commission to issue new pole attachment regulations relating to telecommunications carriers within two years after the date of enactment of the 1996 Act, to become effective 5 years after enactment.

1.5 Technical Standards

To ensure the delivery of satisfactory television signals to cable subscribers, the Commission has adopted various technical performance standards which local franchising authorities are generally authorized to enforce through their franchising process. Cable operators are required to establish a complaint resolution process and to advise their subscribers about it annually.

In addition to establishing new standards for the delivery of color signals and of closed captioned data, the Commission generally preempted conflicting local standards. Cable systems with fewer than 1,000 subscribers, as well as those serving rural areas, may negotiate with their respective franchising authorities for certain lower standards.

2. Pakistan

Cable TV industry in Pakistan is regulated by the provisions of Pakistan Electronic Media Regulatory Authority (PEMRA) Ordinance, 2002. A company registered with the Security and Exchange Commission of Pakistan under the Companies Ordinance, 1984 or the Registrar of the Firm, is only eligible to apply for Cable TV Licence. For seeking license one has to submit the application form along with all the necessary documents to the Regional office or Sub office of PEMRA in their respective area. After scrutiny of the application form and documents, the Regional Office will forward the application to Cable TV Wing and that Wing on receipt of all the mandatory documents issue Cable TV licence. Licence fee varies according to the number of subscribers and can be as low as Rs.10,000/- and as high as Rs.1,750,000/-.

PEMRA has issued "Standards for Cable TV" Regulations 2003 for mandating technical and other QoS standards of cable TV networks.

2.1 Technical Standards

1) A Cable Television Operator shall ensure that the signal leakage from a cable television system shall be within the limits specified below:

Frequencies (MHz.)	Signal leakage limit ($\mu\text{V}/\text{meter}$)	Distance (meters)
Upto and including 54	15	30
Over 54	20	3

2) The carrier-to-noise ratio for each television channel received at subscriber's end of the subscriber's drop shall not be less than 45 dB.

2.2 System/Equipment Layout and Location

1) A Cable Television Operator shall establish the head-end facilities in an area which is easily accessible to its subscribers and authorised officers, and does not cause nuisance to people living in residential areas.

Provided that no objection certificate (NOC) has been obtained from all relevant organisations, where required.

(2) A Cable Television Operator shall ensure that the distribution cable does not become nuisance to the public and does not pose a hazard to people, animals and the environment, besides the security of the medium itself

(a) In case where the distribution cable has to be buried in ground, the following specifications shall be complied with:

Area	Standard
In case of public areas, where the distribution cable has to be buried under road, footpaths etc.	PVC pipes shall be used which shall be buried at least one foot below the ground level.
In all other areas	The distribution cable shall be passed in trenches with bricks on three sides (two sides and on top) and is filled with sand.

(b) In case where the medium has to be laid overhead, the Cable Television Operator shall ensure that the distribution cable is installed at a sufficient height, out of reach of people and vehicles passing under it and that it is properly clamped to the poles. The clearance of the distribution cable shall at least be as follows:

In case:	Minimum Ground Clearance
Where vehicles, people, animal etc pass under it	14 feet
All other areas	11 feet

Provided that HT electricity poles (on which 11 kV and above live lines are strung) are not used for the purpose of laying the distribution cable.

Provided further that in case of using electricity/telephone/railway poles, disturbance from external sources i.e. electricity, telephone lines etc. does not cause interference in the distribution cable which may result in the inferior quality of service to the subscribers and that all the requirements laid down in Section 6(2)(b) are fulfilled. The following clearance between the lines and the distribution cable shall be maintained.

In case:	Minimum clearance between the distribution cable and the lines
Where the distribution cable has to be strung on LT live lines poles(400/220 V)	3 feet
Where the distribution cable has to be strung on communication lines.	2 feet

3)A Cable Television Operator shall ensure that its cable system does not cause interference or harm to the equipment of subscribers and other systems that may be connected to its system.

4) In case of an expansion/construction of the cable system, the Cable Television Operator shall ensure that the work is undertaken only after obtaining proper permission/ NOC from the relevant agencies/offices in case of digging roads and using other utilities poles etc.

2.3 Quality of Service

(a) Service Reliability

- A Cable Television Operator shall take all necessary steps to avoid interruption of cable service to its subscribers.

(b) Maintenance of Record

- A Cable Television Operator shall maintain a record, which shall be available for inspection by the Authority or its authorized officer with all the relevant information.

(c) New Connection

- Ensure cable service is provided to an applicant within 48 hours after payment of installation fee and completion of all other formalities:

(d) Monthly Billing Procedure

- Bill to be delivered in the first week of the following month.
- One month advance notice in case of a variation in the monthly charges.
- Convenient process for collection with proper receipt
- Representative of Cable Operator should carry proper identification documents along with his photograph.
- Seven days notice for disconnection in case of default by subscriber for two consecutive months after serving the notice of Termination of Service with reasons.

(e) Procedure for change in Television Channels

- 48 hours notice, in writing, in case of any change within the eligible television channels.

(f) Complaints Handling Procedure

- A Customer Service Center operating 24 hours a day, with adequate and trained staff, within its defined area of service, which is easily accessible to all its subscribers.
- Maintenance of record containing all complaints and submit to the Authority as when required to do so.
- Redressal of complaints within 48 hours or two working days.
- For the purpose of maintenance/repair, a Cable Operator shall ensure that its representative(s) carry proper identification documents along with a photograph.

(g) Fine for Violation

- In case of a violation of Standards a fine of Rs.10,000/- may be imposed.
- In case of continuous violation of these Standards, proceeding against the Cable Operator under Section 33 of the PEMRA Ordinance 2002.

3. Japan

3.1 In Japan cable TV services are regulated under the Cable Television Broadcast Law that protects the interests of receivers of cable television broadcasts and also to foster the sound development of cable television broadcasting by ensuring proper installation of cable television broadcasting facilities and operation of service, and thereby to contribute to the promotion of public welfare.

3.2 Permission to Install Facilities

- (1) Any person who intends to install cable television broadcasting facilities and to provide cable television broadcasting service through said facilities shall obtain permission from the Minister of Public Management, Home Affairs, Posts and Telecommunications to install the facilities. This shall not apply, however, to cable television broadcasting facilities whose scale does not exceed the standard stipulated in the applicable ordinance of the Ministry of Public Management, Home Affairs, Posts and Telecommunications.
- (2) Any person who intends to obtain permission under the preceding paragraph shall file with the Minister of Public Management, Home Affairs, Posts and Telecommunications an application form describing the area where the facilities are to be installed and other installation plans, the frequency to be used, an outline of the cable television broadcasting facilities, and the other matters stipulated in the applicable ordinance of the Ministry of Public Management, Home Affairs, Posts and Telecommunications.

3.3 Permission Standards

- (1) The Minister of Public Management, Home Affairs, Posts and Telecommunications shall grant permission under Paragraph (1) of the preceding Article if he determines that an application for permission under the same Paragraph conforms to each of the following items:
 - i) The installation plan for the cable television broadcasting facilities shall be reasonable, and also its implementation shall be feasible.
 - ii) The cable television broadcasting facilities shall conform to the technical conditions stipulated in the applicable ordinance of the Ministry of Public Management, Home Affairs, Posts and Telecommunications.
 - iii) The applicant shall possess the financial basis and technical capabilities sufficient for reliable installation and operation of the cable television broadcasting facilities.

- iv) In addition, installation of the cable television broadcasting facilities shall be necessary and suitable in the light of the natural, social and cultural circumstances of the area in question.

4. Canada

4.1 The members of the Canadian Cable Television Association (CCTA) have voluntarily developed and adopted these Cable Television Customer Service Standards to ensure high quality service to their customers. These are administered by the Cable Television Standards Foundation, and apply to all members of the Foundation. Members report regularly to the Foundation on their performance against the service standards. These are summarized below:

4.2 Commencement of Service

Each member company will:

- offer a comprehensive array of entertainment and informational video and audio products, from which the customer will be given the maximum opportunity to select those services which he/she wants, consistent with prudent consideration of regulatory, financial and marketing requirements;
- provide the basic service upon payment by the customer as follows:
 - (i) an amount not exceeding the amount of the non-recurring costs to be reasonably incurred by the cable TV operator for the installation or reconnection of the subscriber drop;
 - (ii) the fee for basic service for one month;
 - (iii) any overdue debt of basic service that the customer owes to the cable company.

4.3 Continuation of Service

Each member company will:

- continue to provide the services to a customer as long as the customer pays the service fees for each month the services are received;
- waive the requirement for a deposit on service equipment for customers who have established satisfactory credit information;
- maintain high-quality signals in accordance with the Technical Standards Guidelines established by the CCTA and complete any necessary repairs in a timely and effective manner;
- provide service credits on request to customers who have experienced complete and extended interruption of service;

- inform customers of the hours of operation and telephone numbers for the company's business office and service department (including after hours telephone numbers);
- promptly answer inquiries from customers and the public in a friendly, courteous and knowledgeable manner
- make available convenient methods of payment recognizing that the customers generally pay one month in advance for basic service;
- ensure that, at least once annually, all customers receive an invoice or other appropriate notification, clearly identifying, in plain and easily-understood language, those services that are part of the basic service and those services that are discretionary services, the fee for each service or package of services and for extra-cost equipment, including additional outlets and taxes, and the actions a subscriber needs to take to subscribe to or discontinue the services.

The invoice, or other notification, as the case may be, shall show separately non-recurring costs for installations;

- upon request, provide a detailed breakdown of the customer's balance;
- indicate clearly on invoices the address, telephone number and hours of operation for both the business office and the service department;
- inform customers at least 60 days in advance of any increases to the monthly rate for the basic service. For some increases to the basic service the CRTC requires that cable companies provide at least 90 days notice before the increase comes into effect. (Cable systems not subject to rate regulation will inform customers at least 30 days in advance of any increase to the monthly rate for the basic service.);
- inform customers 30 days in advance of any increase to the monthly rate for services other than basic service;
- provide customers with reasonable advance notice of any channel lineup changes when the timing of such changes is within the cable company's control;
- ensure that all cable company employees provide identification, including a photograph, when requesting entrance to customers' premises;
- inform customers of the person within the system to whom complaints may be addressed if any inquiry or request has not been handled to the satisfaction of the customer in the ordinary course of business;
- upon request by a customer, remove his/her name from listings for mail and telephone solicitation.

4.4 **Termination of Service**

Each member company will:

- arrange disconnection of basic service for the customer and refund within 45 days any prepaid funds remaining upon receipt of notice (not to exceed one month), and the return of all company-owned equipment in satisfactory operating condition, excepting normal wear and tear;
- where service is to be disconnected for non-payment of amounts owing, provide written notice to the customer at least five business days in advance of the disconnection, indicating the reason for the disconnection and the amount owed; the final payment date; the reconnection charge, and a telephone number to call for further information or comment. The five-day notice does not apply to services invoiced on a usage basis (i.e. Pay-Per-View);
- restore service after disconnection upon payment of monies owing on the account, including any applicable administration or reconnection fees;
- where service has been disconnected in error or without justification, restore service on the next working day following discovery of the error, or as soon as practicable thereafter, without payment of a reconnection or administrative charge. Provide customer with appropriate refund or credit for the period during which the service was disconnected.

Forms for registration for cable TV operators

¹FORM 1

(See rule 3 (1))

(To be submitted in duplicate)

Form of application for *registration/renewal of registration/issue of duplicate certificate of registration as a cable operator

To

The Head Postmaster

Head Post Office

.....

Application for *registration/renewal of registration/issue of duplicate certificate of registration as a cable operator

1. (a) Name of Applicant (individual/firm/company/association of persons/ body of individuals)*
(b) *Age/Date of establishment/Date of incorporation.
2. (a) Address (office)
(b) Telephone Number (if any)
3. (a) Nationality (for individual applicants/ body of individuals)
(b) By birth/domicile.
4. (a) Amount of fee paid for *registration/ renewal/ issue of duplicate certificate Rs.....
(b) Name of Head Post Office.....
(Attach copy of challan *vide* which the fees have been deposited)
5. Area in which cable television network is working/ proposed to be set up.....
6. Date from which the cable television network is operating/proposed to be set up.....
7. Number of channels being provided/ proposed to be provided (with names)
8. (a) Whether using Television Receive Only (TVRO) Yes/No
(b) If yes, number and size of TVRO.....
(c) Location.....
9. Names of Doordarshan satellite channels included in cable service.....
10. Copy of earlier registration certificate enclosed. (To be filled in only for renewal of registration). Yes/No
11. (a) State reasons for issue of duplicate certificate of registration.....

(Attach mutilated or defaced original certificate of registration/copy of report made to the police in case of theft or loss of the original certificate)

¹ Substituted by GSR 459(E), dated 8.10.1996, with effect from 8.10.1996.

(b) Period of validity of the original Registration Certificate for which the duplicate Registration Certificate is being sought.....

(To be filled in only for issue of duplicate Registration Certificate)

12. Declaration in Form 2 enclosed. Yes/No

(To be filled in for *registration/renewal of registration only)

I/We the applicant(s) *(Individual/firm/ company/ association of persons/body of individuals) do hereby declare that the above facts are correct in all respects.

.....

Signature of Applicant

*(Individual/firm/company/association of persons/body of individuals)

Place: Name

Date: Address

* Score out the word or words which are not applicable.

FORM 2

(see rule 3(1-3))

I/We the applicant(s) *(individual/ firm/ company/ association of person/body of individuals) for registration as a cable operator/renewal of registration as a cable operator do hereby declare that,—

- (i) I/We shall ensure that my / our television network shall be run in accordance with the provisions of the Cable Television Networks (Regulation) Act, 1995 at all times.
- (ii) I/We shall not permit/associate any person who is not eligible to run a cable television network under the Cable Television Networks (Regulation) Act, 1995 to run/with the running of my/our cable television network.
- (iii) I/We shall strive to the best of my / our ability to provide cable service to the satisfaction of the subscriber (s) of my/our cable television network.
- (iv) I/We shall strive to the best of my / our ability to ensure that my / our cable television network is not used for any unlawful purpose.
- (v) I/We shall obtain the necessary approval/clearance from the relevant authority for the running of my / our cable television network.
- (vi) I/We shall abide by any direction issued by the Central Government in respect of the running of a cable television network within India.

.....

Signature of Applicant

*(Individual/firm/company/association of persons/body of individuals)

Name

Address

Place:

Date:

* Score out the word or words which are not applicable

QUALITY OF SERVICE GUIDELINES BY TRAI

The purpose of laying down Quality of Service (QOS) parameters is to provide a framework whereby cable TV operators are required to meet certain customer service guidelines in the delivery of cable TV services to consumers. These guidelines and codes of practice will also need to be enforced.

Regulation on the Quality of Service

Through its analysis of international QOS codes and practices and its appraisal of QOS information from Indian cable TV industry stakeholders, **the Authority has decided that the following should serve as QOS codes and guidelines for the cable TV industry in India:**

Information to be provided to consumer at the installation of cable TV connection

- (i) Detailed information must be provided to consumers at the time of installation and activation of cable services and at least annually to subscribers and at any time upon request about:
- products and services offered i.e number of channels and names of individual channels being offered
 - prices and options of programming services
 - installation and service maintenance policies
 - billing and complaint procedures including the address and telephone number of the customer service centre.

Complaint handling procedure and benchmarks to redress complaints

- (ii) A cable operator shall improve the network quality and the complaint redressal infrastructure to meet the following benchmarks:
- 90% of complaints will be corrected within 4 hours.
 - No more than 3% of customers should require to lodge complaint against service interruption each month.

- 90% of "no signal" calls received should be corrected within 24 hours.
 - 90% of all other types of complaints will be corrected within 48 hours.
- (iii) Each cable operator must maintain a customer service center or help desk 8 hours a day, 6 days a week. All complaints shall be registered and complaint number issued for each complaint.
- (iv) A Cable Operator shall maintain record containing all complaints filed by the subscriber. The records shall include name and address of complainant, date and time of filing complaint, type of complaint and redressal date and time with the confirmation of the consumer that the complaint has been redressed. The cable operator shall present the records whenever called upon by the Authority or the Authorised officer.
- (v) A Cable Operator shall take all necessary steps like provision of alternate power supply for at least 6 hours, to minimise the incidence of service interruption for power failure.
- (vi) For the purposes of maintenance and repair, a cable operator must ensure that its representative(s) carry proper identification along with a photograph.

Billing Procedure and complaints

- (vii) Cable subscribers must be billed monthly with statements being clear and transparent. Where a customer does not view pay channels via a set-top box, a bill should be itemized clearly indicate cable charges and taxes. Where a customer does view pay/premium channels via a STB, a bill should be itemized and clearly indicate the price of the basic free-to-air tier, the price of pay channels or bouquets, STB rental and deposits, and taxes.
- (viii) The billing system should be such that the following benchmarks are met:
- complaints shall be addressed within 7 days of notice from the consumer to the operator.
 - Refunds must be issued no later than either the customer's next billing cycle or 30 days following the resolution of the complaint, whichever is earlier.

STB related Complaints

- (ix) In cases, where there is a malfunction of a STB provided by the operator on rent, a cable operator must repair or replace the STB within 24 hours.
- (x) In cases where a customer chooses to return a STB, the refund must be made within 15 days, subject to a proper working condition of the STB.
- (xi) If a customer chooses to subscribe to pay channels via a set-top box STB installation and, subscriber activation must take place within 48 hours of the receipt of the subscriber's request.
- (xii) Rebate for deficient service: In case the installation and activation of the STB is delayed beyond 48 hours of the receipt of the Subscriber's request, the multi system operator/cable operator shall in the monthly subscription give a rebate of Rs 15 per day for the first 5 days and Rs 10 per day for the subsequent period.

Change in positioning of channels

- (xiii) Change of positioning of TV channels should not be normally done. In case of pressing technical reasons requiring changes of TV channel position is required; the cable operators shall notify subscribers at least two days in advance of such occurrence.

Technical Standards

- (xiv) A Multi System Operator and cable operator shall match the technical standards set by the Bureau of Indian Standards (BIS) for cable TV Network.