

**Consultation Paper No: 5 / 2007**



**Telecom Regulatory Authority of India**

**Consultation Paper**  
**on**  
**“Access to Essential Facilities (Including Landing**  
**Facilities for Submarine Cables) at Cable Landing**  
**Stations”**

**13<sup>th</sup> April 2007**

**Mahanagar Door Sanchar Bhawan,  
Jawaharlal Nehru Marg, (Old Minto Road),  
New Delhi-110 002**

## Preface

The Telecom Regulatory Authority of India (TRAI) had earlier observed that International Private Leased Circuits (IPLC) segment is lacking competition needed for creating conducive environment for growth of various telecom services and requires soft regulatory intervention. In order to enhance competition in international bandwidth connectivity segment, TRAI had issued Consultation Paper No.5/2005 “Measures to Promote Competition in International Private Leased Circuits (IPLC) in India”, in June 2005. The Authority made recommendations to the Department of Telecommunications (DOT) on “Measures to Promote Competition in International Private Leased Circuits (IPLC) in India” on December 16, 2005.

DOT accepted TRAI’s recommendations pertaining to (a) Introduction of Resale in IPLC segments and (b) Access to essential facilities including landing facilities for submarine cables at cable landing stations. The Licensor has also amended the relevant clauses in International Long Distance (ILD) Service licence to bring out regulations to ensure efficient, transparent and non discriminatory “Access to Essential Facilities including landing facilities for Submarine Cables at Cable Landing Stations (CLS)”.

TRAI believes that competition in IPLC segment could be enhanced if ILD licensees entering the market have adequate access to necessary facilities at cable landing stations. To ensure this access, the interconnection regulations should provide for dominant suppliers who control or who are responsible for the operation of the cable landing station to allow other licensees to (a) have access to the cable landing stations; (b) physically co-locate their own equipment necessary for connection in the cable landing stations; (c) interconnect at the cable landing station to any operator’s equipment in the cable landing station at any technically feasible point; and (d) access backhaul circuits of all types in a timely fashion, under terms & conditions and rates that are cost oriented, transparent, and non-discriminatory.

With a view to bringing out all the related aspects of the issues and to provide a suitable platform for discussion, this consultation paper (along with draft regulations) is being released in the public domain. It focuses on the approach and modalities on **The International Telecommunication Access To Essential Facilities (including Landing Facilities for Submarine Cables) at Cable Landing Stations**. Any expression of opinion in the document is to be read in the context of analysis of the option / data and not the final view of the Authority.

It is requested that comments and views from all the stakeholders on any or all issues in this paper to reach TRAI on or before **30<sup>th</sup> April 2007**. For further clarification, **Mr. M.C. Chaube, Advisor (FN)**, TRAI may be contacted on Tel. No. 23230404 and e-mail: [chaubemc@traigov.in](mailto:chaubemc@traigov.in) or [traio9@bolnet.in](mailto:traio9@bolnet.in) . Submissions in electronic form would be appreciated.

**(Nripendra Misra)**  
**Chairman**

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## CHAPTER 1

### Introduction

- 1.1 International Private Leased Circuit (IPLC) is one of the significant elements of international connectivity for Internet, Broadband and IT Enabled Services (ITES). This resource is critical to the success of Business Process Outsourcing (BPO), ITES and Broadband Services in the country contributing to additional employment opportunities and Gross Domestic Product (GDP). The international connectivity consists of distant end IPLC half-circuit, near end IPLC half-circuit and access to submarine cable landing station. At the time of opening up of International Long Distance telecom service to private sector in the year 2002, the Government had realized that Submarine Cable Landing Station is essentially a 'bottleneck facility' and the fact that access to International connectivity would be severely affected by monopolistic position of the incumbent ILD operator.
- 1.2 TRAI had earlier observed that IPLC segment was lacking competition needed for creating proper environment for growth of various telecom services and requires some regulatory intervention. In order to enhance competition in International connectivity segment, TRAI initiated a consultation process with the issue of Consultation Paper No.5/2005 in June 2005. The Authority made recommendations to DOT on measures to promote competition in International Private Leased Circuits (IPLC) in India on December 16, 2005.
- 1.3 TRAI Recommendations, on "Access to Essential Facilities at Cable Landing Stations (CLS)" is reproduced below:

*"3.3 Access to Essential facilities at Cable Landing Station (CLS):*

*TRAI has examined the issue of access to cable landing stations (CLS) by various service providers i.e. new ILDOs as well as by Internet Service Providers (ISPs). On the basis of a detailed analysis carried out by TRAI, it has come to the conclusion that growth of competition in IPLC is being hampered by the absence of mandated equal access to cable landing stations. Accordingly, it is recommended that the time limit specified in clause 2.2 (b) of ILD licence agreement should be removed and the clause expanded to mandate permission to landing of submarine cables owned by licenced operators. This will avoid unnecessary expenditure and delay in setting up of new CLSs for new cables landing in the country. The CLS owning ILDO should be mandated through licence amendment to publish the terms & conditions of such access with prior*

*approval of regulator. This provision will enable TRAI to issue requisite regulation to ensure efficient, transparent & non-discriminatory access to the “essential facilities” at CLSs including fixing the cost-based access charges.”*

- 1.4 The Section 4.4.9 of the recommendation also mentions the variety of approaches adopted by regulators of some of the countries to mandate open access to CLSs and is reproduced below:

***“4.4.9 It can be seen from the experiences of other countries that a variety of approaches have been adopted by regulators to mandate open access to CLSs. A common feature in Hong Kong, Singapore and the UK and now in Malaysia has been the regulator’s recognition of the need to intervene for a considerable period during the evolution of competition in the arrangements concerning access to international capacity as well as landing of new cables on the existing CLSs, if a single or small number of players have the opportunity to exert unreasonable power/dominance over the essential facilities at the CLSs.”***

- 1.5 TRAI’s recommendations pertaining to (a) Introduction of Resale in IPLC segments and (b) Access to Essential Facilities including landing facilities for submarine cables at cable landing stations have been accepted by the licensor [copy at **Annexure 1**]. The Licensor has also amended relevant clauses in ILD licence vide letter no.16-3/2006-BS-I dated 15<sup>th</sup> January 2007 [copy at **Annexure 2**] to enable TRAI to bring out regulations to ensure efficient, transparent and non discriminatory “Access to Essential Facilities including Landing Facilities for Submarine Cables at Cable Landing Stations”.
- 1.6 Normally the submarine cable operator or the owner manages and controls the landing station also. For consortia cable typically the consortia member in each country where the cable lands, manages the landing station. In future, it is always possible that a situation could arise wherein change of ownership of submarine cable and / or change in the ownership of landing stations could take place impacting the relationship between these two entities. It is also possible that new submarine cables may land in the country. It is thus evident that under circumstances of monopoly or limited number of cable landing stations or other circumstances there is a need for regulating the access to submarine cable landing stations.
- 1.7 The Regulations to ensure efficient, transparent and non-discriminatory access to submarine cable at the landing station is required so that:

- a) The new operators have access to the capacity in the same way as the consortium members.
- b) Activated capacity is not unduly delayed by consortia member(s) having control over CLS.
- c) Charges are transparent and non-discriminatory to consortia-members or non-members.
- d) Restoration and maintenance services are ensured which is provided through a Service Level Agreement (SLA).

1.8 Regulators in various countries have felt the necessity of issuing explicit directives/regulations/order for access to submarine cable capacities. These generally include:

- a) Submarine cable landing facilities which are considered as bottleneck facilities.
- b) Close monitoring and scrutinizing the situation of possible anti-competitive behaviour in order to ascertain whether the incumbent operator /operator with Significant Market Power (SMP) continues to control most of the submarine cable landing facilities in its country.
- c) Charges for Access, Co-location and Landing Facility
- d) Time Limit for Provision of Access, Co-location and Landing Facility.

1.9 The chapters two to six of this consultation paper discusses the Cable Landing Stations (CLS) and present IPLC Scenario in India, International Practices, Regulatory issues related to sharing of bottleneck facilities and Co-location at CLS, draft regulations on the International Telecommunication Access to Essential Facilities including Landing Facilities for Submarine Cables at Cable Landing Stations and issues for consultation.

## CHAPTER 2

### Description of Cable Landing Station

#### 2.1 Elements of International Connectivity through Submarine Cable:

2.1.1 The International connectivity can be provided through submarine cable system. An International submarine cable system can normally be divided into the "wet" portion of submarine cables, the landing stations or "headends", and backhaul facilities for domestic connectivity. These are described below: -

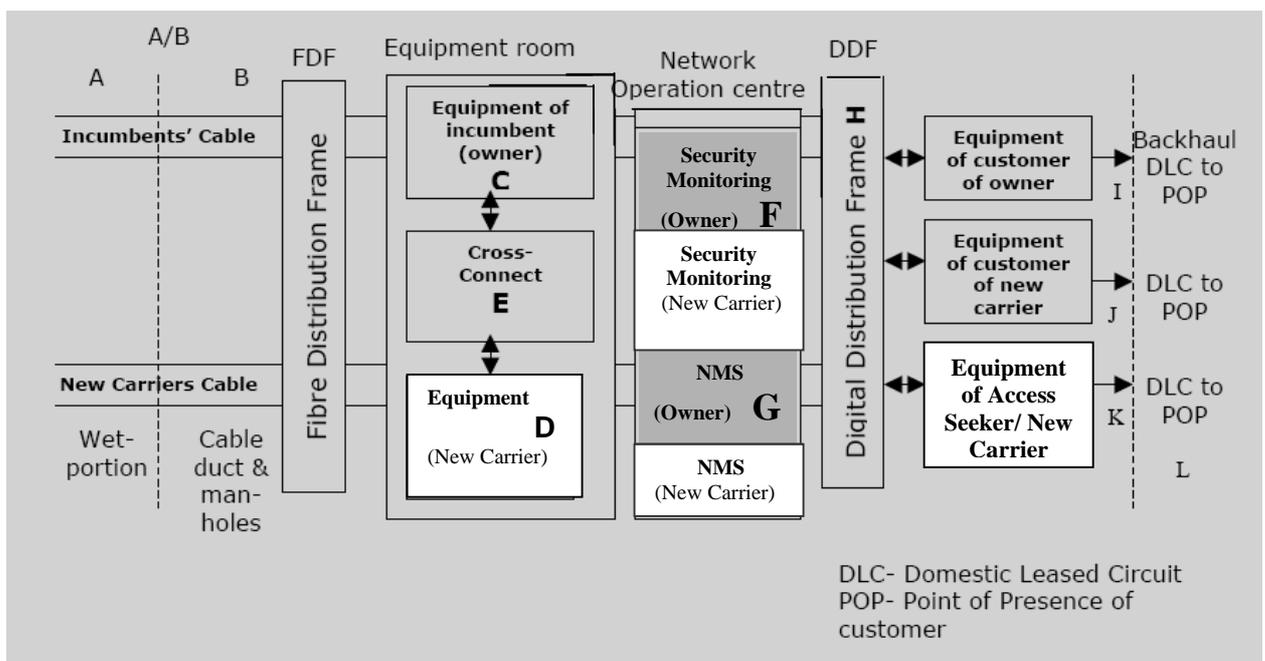
2.1.2 **The Wet Portion:** This element is the submarine optical fibre cable itself. From regulatory perspective, it is relevant to consider three aspects of this i.e. the construction, provisioning and support/maintenance of cable facilities. There are several barriers to entry into submarine cable markets, e.g. long lead times, limited number of undersea cable supply and limited expertise available for laying submarine cables in addition to requirements for many clearances from Govt. agencies. The process of planning and installing a cable system is very complicated and can be compared to any other complex project management.

2.1.3 **The Cable Landing Stations:** The Cable landing stations are the point at which International submarine cables come onshore and terminate. Generally, these are buildings, which contain the onshore end of the submarine fiber optic cable, house the necessary equipment to interconnect and pass traffic to and from the submarine cable, and are the point where the submarine cable capacity is connected to the domestic backhaul circuit. New entrants/ competitors generally have issues like cable owners not selling capacity in a fair and transparent manner, the prices being disproportionate to the cost of facilities and the differential price that the cable owner charge from their associate. This element is most critical in assessing whether there are any barriers to access or not. One more important aspect in the submarine cable is support for cable facilities including repair and restoration.

2.1.4 **Backhaul Facility:** This facility is the "high capacity inland domestic circuit, which is required by service providers to link the cable landing station to their existing national infrastructure". In most respects, this capacity is similar to domestic leased circuits (DLC) and is subject to the same rules as for any other domestic infrastructure, including the tariff orders and regulations for DLC.

## 2.2 Elements of Submarine Cable System

2.2.1 The schematic block diagram of a typical submarine cable system is shown in figure.1 below. Submarine cables traditionally were sponsored by consortium of owners and always the dominant or monopoly operators from a large number of countries were the founding members of such consortia or cable clubs. The legal document for these consortia has been the Construction and Maintenance Agreement (C & MA), which the consortia members negotiate among themselves. Capacity in submarine cables owned by consortia, has been divided into Minimum Investment Units (MIU). This concept of MIU doesn't apply to private owned cables, which are more prevalent these days. Both consortia and private cable operators sell capacity on cables in terms of Indefeasible Right of Use (IRU). These IRUs are sold through Capacity Purchase Agreements (CPA) often asking a buyer to obtain a unit of capacity for the remaining design life of a particular cable.



**Figure.1 Schematic Block Diagram of Submarine Cable System**

2.2.2 The submarine cable capacity transactions are based on operator agreements that establish relations between different carriers. The submarine cable capacity transaction involves two or more carriers, each prominent in its own national territory, exchanging traffic and making use of International system of accounting rates and settlements. As a part of this arrangement, the carrier would own half-circuits on submarine cable and hand over traffic to each other at a hypothetical mid point on the submarine cable. With the liberalization of telecom sector and with carriers needing full circuit

arrangements, especially for data and private leased circuits traffic, there is increasing customers demand for end-to-end solutions that includes submarine cable, terrestrial link and also national/local connectivity.

## **2.3 Types of Interconnectivity with CLS owner**

### **2.3.1 Path A to midpoint A/B:**

If a new entrant purchased an IRU for that path, it conceivably could seek interconnection at the midpoint to an incumbent's IRU, on the argument that it was terminating traffic on the incumbent's network at that point. The termination charge would comprise two components namely the terrestrial transmission facilities to link his Point of Presence (PoP) to the CLS (called the backhaul to the CLS) and the cost of the interconnect link, which in this case would extend from the mid point A/B of the International circuit to the relevant transit switch in the incumbent's network (point E in the diagram).

### **2.3.2 Midpoint A/B to landing headend C:**

A new entrant that owned "corresponding" IRUs in a cable (i.e., from A to A/B and from A/B to B) could seek interconnection of its IRU transmission capacity at the cable headend for termination of traffic on the incumbent's network. The termination charge would again comprise two components namely the terrestrial transmission facilities to link his point of Presence (PoP) to the CLS (called the backhaul to the CLS) and the cost of the interconnect link, which in this case would extend from the cable headend to the relevant transit switch in the incumbent's network (point C in the diagram).

Generally, the incumbent's Reference Interconnect Offer (RIO) should include terms and conditions for such interconnection links. Incumbents are subject to non-discrimination provisions, so that if they offer certain links to their own subsidiaries for certain prices and terms, they cannot discriminate in such offerings to others.

### **2.3.3 Transit links from landing headend B to new entrants' point of presence ("POP")**

A new entrant with IRUs in a submarine cable and a point of presence (POP) will require backhaul transit capacity from the cable landing station to its point of presence. There may be substantial competing sources of backhaul capacity close to landing headends, so a new entrant might not rely on the incumbent to provide backhaul facilities, but instead may seek a short distance circuit to the nearest source of competing backhaul. That link, represented

by the path H to L, is simply leased capacity, which could be supplied by another new entrant or by the incumbent.

#### 2.3.4 Interconnection link C to L:

The link between a new entrant's and the incumbent's network is a domestic interconnection link, and terms and conditions for such interconnection links are normally part of the incumbent's RIO.

#### 2.4 **Transit links from cable headend B and onward to another destination country:**

For the provision of International Telecom services an operator is required to establish connectivity with many operators to provide end-to-end service for its customers. For this purpose the operator has to have corresponding agreement for far end half/full circuit with other foreign carriers.

#### 2.5 **Grooming Service:**

The operators seeking access to a cable landing station may also need to be provided 'grooming service' by the operator/owner of cable landing station. Purpose of this service is to break down higher capacity output from the submarine cable termination into the lower capacity channels for connection to the backhaul facilities of the access seeker.

#### 2.6 Inter-connectivity with other operator and some of the technical issues involved in provision for International connectivity are:

- i. Access Provision/ Physical inter-connection
- ii. Un-bundled network elements
- iii. Unbundled service offerings
- iv. Essential support facilities
- v. Co-location facilities
- vi. Grooming service

#### 2.7 **Landing Facilities and Physical Interconnection:**

The physical inter-connection is necessary for provision of access to International submarine cables. The new entrants will require access to essential support facilities and unbundled network elements at following points of access;

- Cable Duct and Manholes
- Fiber Distribution Frame

- Equipment Room
- Network Operation Centre (NOC)
- Digital Distribution Frame
- Backhaul Termination
- Landing Facilities

## 2.8 Co-location Facilities

The Co-location facilities at submarine cable landing station include building space, power, environment services, security and site maintenance. The incumbent operator has little incentive for offering Co-location at its landing station. However, the element of competition is relevant. The dominant operator has to take reasonable measures to accommodate new operators. The cost of Co-location space and associated expenditure must be recovered in an equitable manner from various operators who have co-located their equipment.

## 2.9 Virtual Co-location

It may also be noticed that at times a new entrant wants to place its equipment outside the incumbent's landing station and run an interconnection cable to incumbent landing station to connect to the cable system. If the requesting licensee chooses to implement such a configuration, then incumbent must not deny access to the cable system. The dominant operator must offer to allow the physical linking of facilities based networks at any technically feasible point due to space or operational constraints/considerations. Such type of virtual Co-location may be economical for the new operator and incumbent should not deny such access. Under such situations incumbent should provide a transparent process by which a new operator can access the landing station as early as possible and must also agree to make available other elements such as lead-in duct and other links to the cable landing station for the purpose of running an interconnection cable to incumbents' cable landing station.

## 2.10 Present Scenario of Cable Landing Stations and International Bandwidth capacity in India

2.10.1 Table given below shows the International bandwidth capacities of Submarine Cables at different Cable Landing Stations in India as on October 2006, based on available data with TRAI:

### Capacities of Submarine Cables in India (October 2006)

Submarine Cable	Landing Stations	Landing Station owned by	Type of Cable System	Designed capacity of existing cable	Equipped / owned capacity (Gbps)
SMW3	Mumbai	VSNL	Consortium, Protected	212 Gbps	20
SMW4	Chennai, Mumbai	Bharti VSNL	Consortium, Protected	1.20 Tbps	20 20
SAFE	Cochin	VSNL	Consortium, Unprotected	5 Gbps	5
FLAG (Reliance)	Mumbai	VSNL	Hybrid, Protected	160 Gbps *	20**
i2i	Chennai	Bharti	Private, Unprotected	8.40 Tbps	160
TIC	Chennai	VSNL	Private, Unprotected	5.10 Tbps	320
Falcon	Mumbai	Reliance	Private, Unprotected	2.56 Tbps	80
Indo-Sri Lanka Cable	Tuticorin	BSNL	Private, Unprotected	960 Gbps	10
Total	CLS-6 Cables 9	4		18.60 Tbps	655

\* After the Arbitration Award by International Court FLAG is allowed to upgrade the capacity to 80 Gbps in both the directions.

\*\* 10 Gbps each in both the direction, about 5 Gbps is used for transit traffic.

Source: Operators' Data

2.10.2 International Long Distance Operators (ILDOs) provide IPLC services in India, which they may do either with a corresponding **International Telecom Entity (ITE)** in the end country (each operator is said to be providing a half-circuit service) or on an end-to-end basis, if the Indian ILDO also has an ITE licence for the end country (a full-circuit basis). To clarify one point of possible misunderstanding, the ITE term is a general one for any country; its realization in India is an ILDO and Internet Service Provider (ISP) with valid International Gateway permission.

2.10.3 At the time of opening up the ILD sector for competition March 2002, VSNL, the incumbent operator was the only operator in the International telecom market. Therefore, enabling provision for new entrants was incorporated in the ILD licences which states as under:

*"Equal access to bottleneck facilities for international bandwidth owned by national and international bandwidth providers shall be permitted for a period of five years from the date of issue of the guidelines for grant of licence for ILD service or three years from the date of issue of first licence for ILD service, whichever is earlier, on the terms and conditions to be mutually agreed".*

This provision has since lapsed in February 2005, i.e., after completion of 3 years time period after issue of first private licence for ILD services in February 2002.

DOT vide its letter no. 16-3/2006-BS-I dated 15<sup>th</sup> January 2007 has amended the relevant clauses of the ILD Licence agreement to facilitate access to CLS which is enclosed at **Annexure 2**.

- 2.10.4 In the beginning after liberalization, ILDO licences were acquired by Bharti Airtel Ltd., Reliance Communications, Bharat Sanchar Nigam Ltd (BSNL) and Data Access Ltd. However Data Access Limited is not operational at present. The sector was further liberalized in the year 2005-06 when Government reduced the entry fee for ILD Licence from Rs. 25 crore to Rs. 2.5 crore and annual revenue share reduced to 6% from 15% both for existing and new ILDOs. After reduction of entry /Licence fee, six new ILD licences have been issued. (Annex 3 provides name of all ILDOs as on 20.03.2007)
- 2.10.5 Control of International capacities, cable landing stations and associated facilities by only few operators can enable the owners to stall or delay entry of new operators. Problems can also be faced by operators who have acquired capacity in a cable system from other International carrier/submarine cable owner and wishing to access this capacity at the landing station of an ILDO. Discussions with industry sources suggested that establishing an International cable system including landing facilities in India not only requires a huge amount of investment but is also a time consuming process involving various clearances including security clearance, maritime clearance and civil authorities permissions etc. Thus, the control of access to the cable landing stations makes it possible for the owner of the access facility to impose non-price constraints affecting the competition. The licensor issued first ILD licence in Feb. 2002 and therefore, the new ILDOs were entitled for equal ease of access to bottleneck facilities at Submarine Cable Landing Station of the incumbent operator upto Feb. 2005. As per the licence, the terms and conditions of such access were to be mutually agreed. It is observed that there is no standard/published access agreement, which the new service providers can easily make use for availing of access to International submarine cable capacity. In such circumstances there is always a scope for delay/denial of access to the capacity acquired by the competing new operators or any other service provider.
- 2.10.6 Also it is observed that problems were faced by new service providers including ISPs to have timely access to International submarine cable capacity at a competitive tariff. Additionally, non-tariff issues like provision of grooming service and Co-location are known to result in delay in provisioning of capacity. Also, some industry organizations have represented that there is a shortage of high quality reliable international connectivity at competitive price. Thus in order to enable timely provision of International submarine capacities at affordable price to meet the need of all the

end users and industry at large, there is a need of regulatory interventions by way of making regulations for the access facilities and Co-location at CLS.

2.10.7 The summary of Present International Bandwidth situation in the country is given below:

- No. of ILDOs.....11
  - No. of CLS.....6
  - No. of Cable Systems.....9
- 
- . Total Designed Capacity.....18.60 Tbps
  - . Total Lit (Equipped) Capacity.....655 Gbps (3.5% of design capacity)
  - . Total Protected Capacity available.....100 Gbps\* (15% of lit capacity)
  - . Total Utilized Capacity.....87 Gbps (87% of protected capacity, 13% of total lit capacity)
  - . Total Spare Capacity.....553.50 Gbps (85% of total lit capacity)

\* 10 Gb each on TIC & i2i have mutual protection as a swap arrangement between VSNL & Bharti

## CHAPTER 3

### International Practices

3.1 As per the information available, it is recognized by regulators in many countries that "Submarine Landing Station is an essential bottleneck facility" and there is a potential for the owner of the cable landing station to deny access to cable landing stations and thereby prevent competition from new entrants. In order to prevent the misuse of dominant power by the incumbent operator, various countries have enforced specific obligations on the incumbents owning submarine cable system by applying the general interconnect agreement/directives to cover this segment also. The obligation on the incumbent/ Operator with significant market share (SMP) include requirement to publish Reference Interconnect Offer (RIO) covering terms and conditions for having access to submarine cable and Co-location facilities at the landing station

3.2 It is also noted that once the cable is made operational by traditional consortia model of submarine cables, it is usually impossible to enter consortium on the same equity basis as the original participants of the consortia. Any third party wishing to acquire access must obtain it from the existing incumbent either by trying to access circuits already allocated to consortium members or to obtain the capacity held in common / reserve pool. The prices of International Bandwidth capacity as well as access charges are generally higher as compared to the cost of network elements used /cost based tariffs. Regulators all over the world have been confronted with issues relating to access to submarine cable and associated costs/tariffs.

3.3 In most of the countries with government ownership of the incumbent, the original infrastructure like cable landing station, etc. were built with government funding which would not necessarily be commercially viable in other circumstances. Not only this, these telecom networks along with the landing station require significant investment and most of this will be sunk cost. Significant sunk costs create an asymmetry in the market between incumbent and potential new entrants that the former could exploit to deter entry of new operator. To address this effect, it is always appropriate for the telecommunication markets to have proper regulations to check anti-competitive behaviour of incumbent or operator with Significant Market Power.

3.4 The modus-operandi of regulations in this segment in some of the countries is discussed in following paragraphs.

### 3.4.1 **Singapore:**

Infocomm Development Authority (IDA), the telecom regulator of Singapore has taken several initiatives for bringing competition in International Telecom services.

IDA designated the connection service at submarine cable landing stations as unbundled network elements under the 'Code of Practice for Competition' in the provision of telecommunication service. IDA has taken this decision in the interest of facilitating competitive entry in the international telecom facilities in particular. The code of practice for competition has been amended from time to time for making various telecom services competitive so as to facilitate the entry of new operators. The IDA has also defined the dominant licensee for its code of practice for competition and every dominant operator / licensee is required to publish Reference Interconnect Offer (RIO) to include the offer of connection service as a UNS (unbundled Network Service) on a unbundled basis. In this context SingTel, the dominant licensee for international telecom service was directed to amend its RIO for the purpose of offering connection service to competing operators to have 'easy access' to the submarine cable capacities. IDA had already directed the incumbent to remove restrictions as well as enhance interconnection rights at its cable landing station to encourage greater choice, competitive pricing and service offerings.

### 3.4.2 **Hong Kong**

Hong Kong's international telecom services have historically been provided on a monopoly basis. Hong Kong Telecom International (HKTI) was holding an exclusive licence, which was issued in 1981, and this licence was due to expire in 2006. The Government has been progressively reforming the telecommunications sector in Hong Kong. Consequently the Government opened a dialogue with Hong Kong Telecom (HKT) in an attempt to explore the possibilities of achieving a mutually agreed early termination of the HKTI External Telecom Service Licence. The Government also invited comments from other three licensees (Hutchison Communications, New T & T and New World Telephone). The agreement to terminate the HKTI exclusivities prompted the Government to assess the issues of policy and regulation. The Government's objective was to ensure that a fair competitive environment is created for international telecom services in Hong Kong.

In Hong Kong, the international bandwidth market is now characterized by installation of new capacity, low barriers to entry,

commodity nature of bandwidth services and permissions for reselling and retail-minus pricing for wholesale.

OFTA mandated that HKTI would provide access and Co-location at its submarine cable landing station or virtual Co-location in a non-discriminatory and fair manner for a period of two years to competitive operators.

### 3.4.3 **France**

The French licensing structure generally requires entities, including submarine cable operators, to obtain individual licences to provide networks or services open to the public. The French Regulator (ART) has avoided the possibility of vertical price squeeze by directing the incumbent not to give more favorable conditions of operation to its own subsidiary vis-à-vis its competitor.

ART noted its concern that there was a possibility of anti-competitive activity in this sector, stating that restrictions relating to the access of new entrants to the submarine-cable market could threaten conditions for free competition.

In October 1997, ART launched a public consultation to review its policy with respect to submarine cable. This review aimed at establishing regulatory guidelines regarding access to submarine cable systems.

Following this consultation, ART announced in December 1997 that it will guarantee each operator the same conditions for accessing and using submarine cables as well as guarantee access to landing stations that interface with cables and the mainland infrastructure.

### 3.4.4 **Canada**

Canadian Radio & Telecommunication Commission (CRTC), The Canadian Regulator, was also confronted with anti-competitive and non-discriminatory practices at the time of liberalizing international telecommunication service/ operations. The Government's decision to terminate monopoly of Teleglobe was made in 1997 and CRTC immediately sought proposals from competing service providers on the regulatory regime that should be put in place to create a level – playing field for the stand-alone new operators, national long distance operators etc., at the time of opening of international telecom services for competition.

Teleglobe was a dominant service provider and was also owning cable landing stations. After considering the comments of other service providers and also existing interconnection regulations/ policy, the CRTC decided that till such time sufficient alternatives to

the facilities of Teleglobe are available to the other service providers, Teleglobe should be under positive obligation to provide interconnection. Teleglobe was also mandated to share its services and facilities in a non-discriminatory and fair manner.

#### 3.4.5 **USA**

(i) The market for international data in the USA is competitive, fuelled in large part by long-standing competition between the original three main operators, AT&T, MCI and Sprint, then by the addition of other operators including resellers, the deregulatory efforts of the FCC and advances in technology. International data services have not been regulated since 1985, when the FCC concluded that there were no dominant operators in the market.

(ii) Operators of the CLSs are varied, including the original main operators and several new investors, such as FLAG, Tyco and Global Crossing. The conditions placed on these landing stations require them to satisfy all of the rules and regulations of the FCC and hence to follow the general rules relating to access and supply.

## CHAPTER 4

### **Terms and Conditions proposed for Access Facilitation including Landing facilities for Submarine Cables at Cable Landing Stations (CLS) and Co-location of equipment at CLS**

#### **4.1 Background**

- 4.1.1** It is necessary for other ILDOs and ISPs with International Gateway permission to have access to, and co-locate at, the cable landing stations operated by owner of cable landing stations, because without such access and co-location it would not be possible for such operators to use the capacity they acquire or lease on any submarine cable for the provision of International Bandwidth. It is also necessary for other ILDOs to have Landing facilities at cable landing station.

It has been recognized that there is potential for cable system owner particularly the incumbent or operator with significant market power(SMP) to delay the provision of resources through higher charges or any other barriers preventing the competition by new entrants. The Primary Regulatory concern is to ensure that the incumbent/operator with significant market power having control over the cable system and CLS do not resort to non-price discrimination like denial/ delay in providing access, unreasonable terms and conditions for Access etc.

Therefore, it is felt that there is a need to have consultation over the issues related with Access Facilitation and Co-location including Access Facilitation Charges, O&M Charges, Co-location Charges, Timeframe and other terms and conditions of Access at cable landing stations.

- 4.1.2** International experience shows that there is a concept of Meet-Me-Room (MMR) for access facilitation and interconnection among international telecom carriers. The Meet-Me-Room is a place with co-location facilities where multiple telecommunication carriers can physically connect to one another and exchange the traffic without incurring domestic loop fees. Due to high concentration of network connections in such Meet-Me-Room, allows Telecom carriers/ service providers to cross connect at their convenience and also facilitate bandwidth trading in a secure location.

The Meet-Me-Room concept will become useful in a scenario where more than one ILDO owning Cable Landing Station bring their submarine cable capacity for access to eligible Indian International Telecommunication Entity. Under the MMR concept, the cost of interconnecting telecom link from MMR to Cable Landing Station shall form the part of Cable Station Access Charge. However in the present scenario of cable landing stations and limited number of

cable landing stations in India, it is unlikely that at one place two or more ILDOs will bring the international submarine capacity for sale/lease. Therefore, in this consultation paper the focus has been given for co-location and virtual co-location for accessing the capacity on submarine cables from Owner of Cable Landing Station.

#### **4.1.3 Charges for Accessing International Submarine Cable capacity:**

Normally an eligible Indian International Telecommunication Entity would be required to pay charges for following items to the Owner of Cable Landing Station:

1. Access Facilitation Charge
2. Annual Operation and Maintenance (O&M) Charge
3. Cable Landing Station's cost component in case if it is not included in other head of Charges

Under the Consortium Cables, the owner of International Submarine Cable capacity who sells the reference capacity has to bear the cost component of Cable Landing Station which normally is passed on to the purchaser of the reference capacity either upfront or upon usage of capacity. All the cost components from Beach Man Hole (BMH) up to Optical Distribution Frame (ODF)/Digital Distribution Frame (DDF) are paid for by the consortia. The Owner of Cable Landing Station in the respective country has the obligation as a member of the consortia to operate and maintain the Cable Landing Station and to provide international telecom services to other telecom operators and consortia members. It is the way in which these services are provided by the Owner of Cable Landing Stations that if not provided transparently and non-discriminative basis creates the bottleneck effect at Cable Landing Stations. It is for these reasons the Open Access need to be regulated so as to allow the open and reasonable access to such essential facilities at Cable Landing Stations in India. Even the Owner of Cable Landing Station has to bear the cost for accessing the international submarine cable capacity for his own use to consortia. In other scenario, Cable Landing Station access charge, which is not included in the Reference Capacity by the owner of International submarine cable system, are payable to Owner of Cable Landing Station by an eligible Indian International Telecommunication Entity. Cable landing Station cost component is distributed over the International submarine cable capacity. Also it is observed that the generally the cable landing station capital cost keep reducing as the capacity utilization increases.

Therefore, the owner of Cable Landing Station need to declare:

- (i) the Cable Landing Station cost for various systems

- declared to consortium
- (ii) Capacity level determined over which such landing station costs are to be recovered and
- (iii) Cumulative capacity utilization on each of the system since commencement of Cable Landing Station separately for its own usage and third party usage.

An eligible Indian International Telecommunication Entity needs in addition to access facilitation, the co-location facility for its equipment to be installed either at Cable Landing Station itself or by establishing virtual co-location nearby to the Cable Landing Station. The Owner of Cable Landing Station need to provide within reasonable timeframe the access to the building and co-location space or provide the facility for virtual co-location based on commercial terms and conditions.

It is necessary for an eligible Indian International Telecommunication Entity to have the right to utilize the backhaul facilities available at Cable Landing Station from any of the service providers. Interconnection between co-location areas need to be provided by the Owner of the Cable Landing Station on fair and reasonable terms.

The Owner of Cable Landing Station need to provide the interconnection to the Optical Distribution Frame (ODF)/Digital Distribution Frame (DDF) on cost based commercial terms in a time bound manner. The access seeker needs to have the co-location space in the Cable Landing Station so as to provide its own backhaul and backhaul to other such access seekers.

## **4.2 Charges payable by the International Telecom Entity (ITE) to OCLS**

The charges for access facilitation/co-location are normally cost oriented, which are payable by the eligible ITEs. Normally, such charges are to be filed by the OCLS to the regulator for approval.

### **4.2.1 Access Facilitation Charge**

The Access facilitation charge is paid by the ITEs to the owner of the cable landing station so as to access the capacity acquired on IRU basis or a short-term lease basis from the owners of the cable/consortia. This charge is based on the cost of various network elements required for provision of access distributed over the complete capacity of the system. This is a one time charge and is generally disputed by the new entrants on the grounds that the incumbent operator who also generally owns landing station fixes a

very high amount which is totally disproportionate to the cost of network elements involved in the provision of access.

#### **4.2.2 Operation & Maintenance (O&M) Charge**

The operation and maintenance charge (O&M) is the annual expense being claimed by the cable landing station owner from the service providers who uses its facilities for accessing the capacity. Worldwide regulators have mandated that the access charges as well as O & M charges would be based on the corresponding costs of network elements used for such services. O & M charges are normally be calculated taking into account the total operation cost distributed over the system capacity.

#### **4.2.3 Co-location Charges**

These charges include the charges for housing the equipment of the eligible ITEs or customers in the premises of service providers and can include lease charges for space, equipment room, power supply etc.

#### **4.2.4 Cable Landing Facility Charges**

These charges include the charges that a new entrant will be required to pay to avail landing facilities at a cable landing station. These can consist of lease rental for cableway, rental for Fiber Distribution Frame (FDF), equipment room, equipment rack and the Digital Distribution Frame (DDF) in addition to up-gradation cost of power system. This charge will generally depend upon the capital costs involved in such facilities.

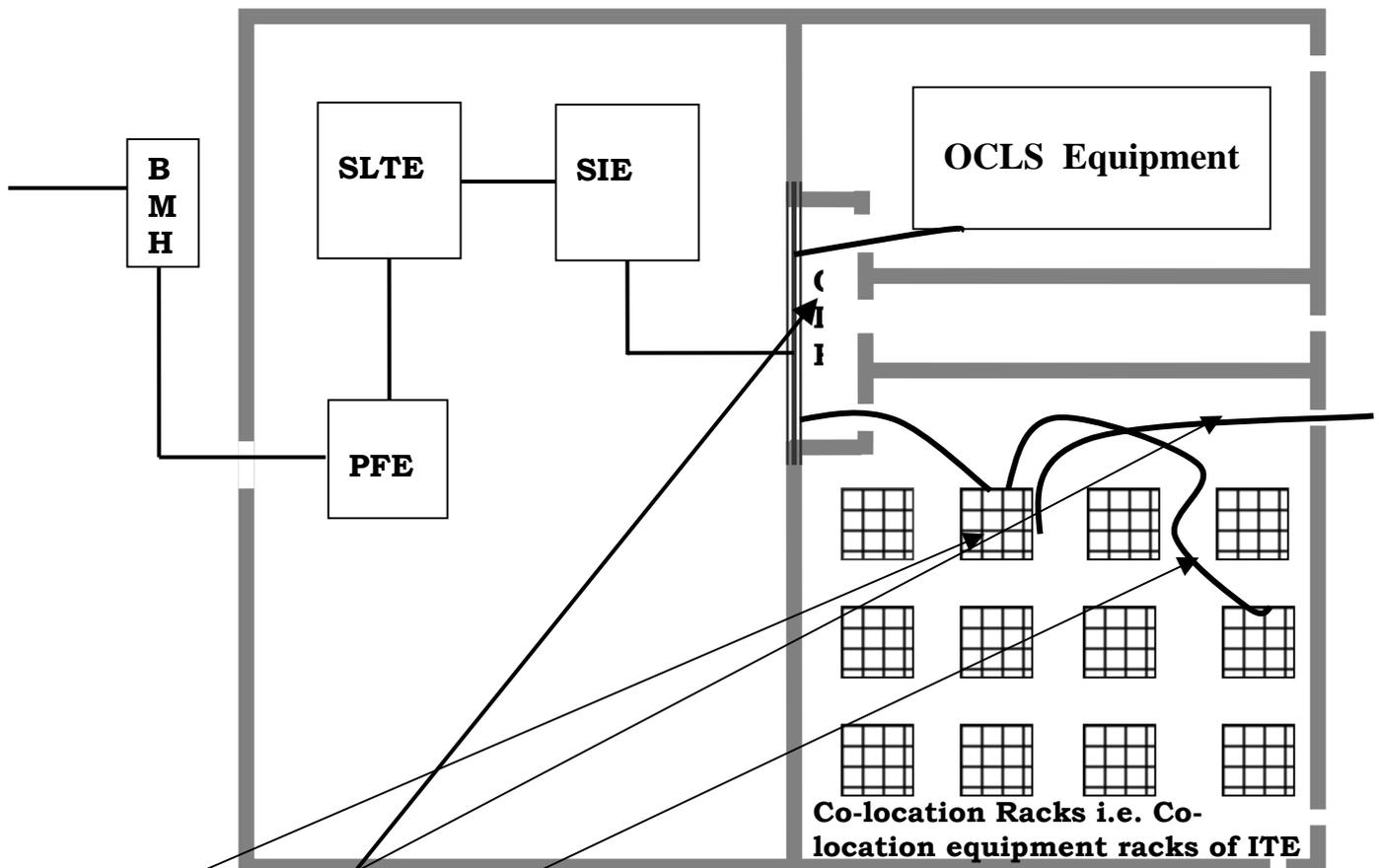
### **4.3 Access Facilitation and Co-location Lead-Time**

**4.3.1** It is the time which is taken by the landing station owner to permit the new entrant, the access facilitation, co-location facility and physical access. The access facilitation lead-time should not be discriminatory and should generally reflect the lead-time taken by the operator of the cable landing station to provide access for its own equipment. If an owner of cable landing station intends to offer terms and condition which have the effect that the response time would be longer than that which it offers to itself or its associate or affiliates, due consideration needs to be given to this situation. The imposition of such terms and conditions will be anti-competitive because of the competitors of the licensee (owner of cable landing station) could not have access to these facilities with the same speed as the licensee (owner of cable landing station) in question and that would put them in a disadvantageous position as they would not be able to at least match the quality of service of such licensee (owner of cable landing station) providing the access.

#### 4.4 Access Facilitation scenario at Cable Landing Station

The Figure-2 below explains the practical situations at a Cable Landing Station to access the submarine cable capacity by eligible Indian International Telecommunication Entity.

**FIGURE-2**  
**Access Facilitation arrangement at Cable Landing Station**



**Note 1.** ITE need to have access for co-location space at CLS or through a virtual co-location

**Note 2.** ITE needs to have co-location space in the CLS to provide its own backhaul and backhaul to other service providers.

**Note 3.** ITE need to access other service providers' backhaul facilities. Therefore Interconnection between co-location areas needs to be provided.

**Note 4.** OCLS needs to provide interconnection to the ODF.

- BMH** - Beach Man Hole,
- PFE** - Power Feed Equipment
- SLTE** - Submarine Line Terminal Equipment
- SIE** - SDH Interface Equipment,
- ODF** - Optical Distribution Frame
- OCLS** - Owner of Cable Landing Station,
- CLS** - Cable Landing Station

**ITE** - eligible Indian International Telecommunication Entity

## 4.5 Provisions in Draft Regulations

**4.5.1** Taking into consideration the International practices in general and Indian Scenario in particular as discussed above, TRAI has framed the draft regulations on **“The International Telecommunication Access to Essential Facilities (Including Landing Facilities for Submarine Cables) at Cable Landing Stations”** which also mandates publication of **“Cable Landing Station-Reference Interconnect Offer (CLS-RIO)”**.

Following issues have been addressed in the proposed regulations/CLS-RIO for facilitating and enabling the timely provision of access to essential facilities including landing facilities and Co-location at CLS, on fair and non-discriminatory basis to the requesting service provider by the Owner of Cable Landing Station.

- Eligibility for Access Facilitation
- Access Facilitation and Interconnection including time frame
- Co-location facility
- Capacity up-gradation
- Grooming Service
- Minimum Commitment Period of the Co-location Service
- Co-location site access lead-time and related issues
- Landing Facilities

**4.5.2** The service provider who owns and manages Submarine Cable Landing Station in India is called **“Owner of Cable Landing Station” (OCLS)** and shall provide access to cable landing station and related International Submarine cable capacity and interconnect to such capacity in any submarine cable landing at Cable Landing Station (CLS) to Backhaul Circuits of eligible **Indian International Telecommunication Entities (ITE)**, on fair and non-discriminatory terms and conditions.

**4.5.3** The Authority has also taken the note of the fact that Internet Service Providers (ISPs) are also eligible for setting up of a submarine cable landing station for International Gateway for Internet and such cable landing station for international gateway for Internet shall be used only for carrying Internet traffic. Attention of the Authority is also drawn to the fact that some of the ISPs have taken permission for setting up of submarine cable landing station for International Gateway for Internet. Therefore, in future it is quite possible that ISPs may set up submarine cable landing station for International Gateways for Internet. Stakeholders' comments are also solicited for whether mandating these regulations to such cable landing station is also required at this stage.

#### **4.5.4 Publication of Cable landing Station-Reference Interconnect Offer (CLS-RIO)**

(a) In order to establish a uniform practice and procedures for access facilitation to eligible ITEs at CLS, the OCLS has to make provisions to facilitate access and interconnections to International submarine cable capacity at CLS.

(b) The OCLS shall be required to submit within thirty (30) days from the date of notification of the proposed regulations and the Authority shall approve the Cable Landing Station – Reference Interconnect Offer within sixty (60) days from the date of its submission. OCLS is required to publish within fifteen (15) days from the date of approval of TRAI, the terms and conditions of Access Facilitation/co-location facility including landing facilities for submarine cables at cable landing stations for International submarine cable capacity in their '**Cable Landing Station Reference Interconnect Offer**' (CLS-RIO).

#### **4.5.5 Access Facilitation Arrangements / Provisioning of Co-location space**

##### **A. Eligibility**

- (a) ITEs eligible to seek access facilitation to the International submarine cable capacity in submarine cable systems landing at the CLS shall mean duly licenced International Long Distance Operators (ILDOS) or Internet Service Providers (ISPs) holding valid International gateway permission.
- (b) The OCLS shall provide access facilitation and interconnections to any eligible ITE desirous of accessing International submarine cable capacity on any submarine cable systems in accordance with published terms and conditions with prior approval of the Authority.
- (c) The OCLS shall also provide co-location to eligible ITE desirous of accessing International submarine cable capacity and landing facilities to licenced ILDOs for submarine cables at Cable Landing Station.

##### **B. Reference Capacity**

The International submarine cable capacity acquired or leased by the eligible ITE and activated by the Submarine Cable System Owner/Consortium, from the distant end Submarine Cable Station to the Cable Landing Station in India of Owner of Cable Landing Station is referred to in these terms and conditions as '*Reference Capacity*'.

### **C. Responsibilities of ITEs**

Application shall be submitted by eligible ITE to OCLS for Access Facilitation in the prescribed format as per Part-I of Schedule (Cable landing Station-Reference Interconnect Offer), along with the Registration Fee which shall be adjusted against the Access Facilitation Charges payable by the ITE.

Requesting eligible ITE shall represent and file application stating:

- (a) ITE is duly licenced to provide International telecommunications services from and into India under the provisions of the *Indian Telegraph Act. 1885* and the Rules made thereunder and such licences are valid and undertakes to promptly inform OCLS in the eventuality such licence ceases to remain valid due to any reason whatsoever;
- (b) ITE has entered into commercial arrangements to acquire Reference Capacity on Indefeasible Right of Use (IRU) or annual lease basis from Submarine Cable System Owner or a member of the Submarine Cable System Consortium or from the concerned Submarine Cable Consortium or any other Private Submarine Cable Owner itself for providing International telecommunication services in accordance with its Licence;
- (c) As an ITE, the Entity seeking Access Facilitation under these terms and conditions is itself liable for compliance with applicable security and monitoring requirements under its Licence as per the applicable rules and regulations notified by the Department of Telecommunications, Government of India ("DoT") and other regulatory or concerned agencies or authorities from time to time. ITE understands that the onus of complying with the security and monitoring requirements conveyed by DoT from time to time remains with the ITE itself and not with OCLS.
- (d) ITE undertakes that it shall comply with the relevant provisions of the Information Technology Act, 2000 and the Rules, Regulations and Guidelines issued thereunder and the Telecommunications licence in relation to use of the capacity.
- (e) ITE undertakes that it shall inform OCLS if the authorization or commercial arrangement to acquire Reference Capacity on IRU or lease basis from Submarine Cable System Owner or a member of the Submarine Cable System Consortium or from concerned Submarine Cable Consortium is terminated.

#### **4.5.6 Access Provisioning and Facilitation Procedures**

##### **(A). Demand for Access to Reference Capacity**

Within a period of 10 days of receipt of the Application for Access Facilitation and the requisite information and documents from the ITE, OCLS shall, either confirm its ability to meet the requested test schedule or in the event, it is not practicable for OCLS to comply with the test schedule proposed, communicate an alternative test schedule. If acceptable, the ITE will then execute an Access Facilitation Agreement by which it agrees to comply with the Terms and Conditions and pay the applicable charges as per Part-II of Schedule (Cable landing Station-Reference Interconnect Offer). On receipt of both the payment and duly executed Access Facilitation Agreement from ITE, the request for access facilitation shall be treated as "firm demand" and the date of payment shall be the date of firm demand. OCLS thereafter shall immediately initiate the process of provisioning subject to arrangement of backhaul circuits and installation of co-location equipment by the ITE.

##### **B. Provisioning, Testing and commissioning of Access Services and Reference Capacity Circuits**

- (a) Backhaul Circuits: The ITE shall arrange for and make ready the domestic capacity between CLS and ITE premises and once available, the Parties (OCLS and ITE) shall conduct necessary tests as per a mutually agreed testing procedure and ensure that the backhaul circuit is in a state of readiness.
- (b) Reference Capacity: OCLS shall use reasonable endeavors to meet such demand for access facilitation of Reference Capacity as per agreed test schedule subject to full cooperation from Requesting ITE/Submarine Cable System owner/ Consortium and Distant End Submarine Cable Station to initiate and complete the testing. OCLS would endeavor to commission the Reference Capacity at the earliest time frame subject to satisfactory completion of testing for the purpose which in normal case is expected to be completed within 10 days time.

Upon successful testing of the backhaul circuit and the Reference Capacity, OCLS shall complete all necessary actions for facilitating access to the Reference Capacity to the backhaul provider's equipment. Such actions shall include testing of links, cross connecting the Reference Capacity to backhaul circuit service provider's equipment collocated at CLS.

- (c) Upon satisfactory accomplishment of the actions set out in para above, OCLS shall notify the same to ITE for taking control of the reference capacity which shall be handed over by OCLS to the ITE immediately but not later than 2 days upon receipt of all necessary

payments, if any pending, from ITE and declare the Reference Capacity as commissioned. The date of such commissioning shall be referred to as "**Commissioning Date**".

(d) **Time Period for Provision of Access Facilitation Services and Co-Location Services by Owner of Cable Landing Station**

To have open access in fair and transparent manner the time frame for various activities need to be clearly indicated so that access to international reference capacity on submarine cable is provided within a maximum period of 22 to 24 days. [The time frame for access facilitation is envisaged in Part-III of Schedule (Cable landing Station-Reference Interconnect Offer).] The views of the Stakeholders on time frame or any alternate proposal to meet the key objective of timely access to international submarine cable capacity will be useful in finalizing such guidelines.

**Table**

<b>Activity</b>	<b>Days (Time limit)</b>
<b>A. TIME PERIOD FOR PROVISION OF ACCESS FACILITATION SERVICES</b>	
1. Eligible Indian International Telecommunication Entity, being Access Seeker submits Request to Owner of Cable Landing Station	Day 1
2. Owner of Cable Landing Station checks feasibility and reverts to eligible Indian International Telecommunication Entity, being Access Seeker with acceptance or modified schedule for access facilitation and testing; provides invoice for payment.	Day 11 (Max 10 days)
3. Date of firm demand (x is the time taken by of eligible Indian International Telecommunication Entity, being Access Seeker to sign the access facilitation Agreement including the payment as per invoice)	Day 11+x
4. Eligible Indian International Telecommunication Entity, being Access Seeker arranges and provides backhaul (y is the time taken by eligible Indian International Telecommunication Entity to arrange the backhaul circuit)	Day 11+x+y
5. Owner of Cable Landing Station to complete all actions with a view to facilitate Access to reference Capacity	Day 22+x+y (Max 10 days)

Capacity	
6. Owner of Cable Landing Station extend Reference Capacity to Cable Landing Station and provide cross connection immediately but not more than 2 days after completion of step 5.	Day 22/24 +x+y
7. Any other details required to be given but not specified at serial numbers 1 to 6 of this Form	
<b>B. TIME PERIOD FOR PROVISION OF CO-LOCATION SERVICES</b>	
1. Eligible Indian International Telecommunication Entity, being access seeker submits Request to Owner of Cable Landing Station	Day 1
2. Owner of Cable Landing Station checks feasibility and reverts to eligible Indian International Telecommunication Entity, being Access Seeker with acceptance or rejection with reasons and with alternative proposal	Day 11 (Max 10 days)
3. Owner of Cable Landing Station provides provision of Co-location at Cable Landing Station (z is the time taken by of eligible Indian International Telecommunication Entity, being Access Seeker to sign the co-location Agreement and payment of charges)	Day 11+z
4. Any other details required to be given but not specified at serial numbers 1 to 3 of this Form	

### **C. Grooming Service**

As part of this access arrangement, the Owner of Cable Landing Station need to allow ITE to provide “grooming services” or Owner of Cable Landing Station may provide such services. The purpose of the “grooming service” is to break down higher capacity outputs from the submarine cable termination into the lower capacity channels for connection to the backhaul circuit facility of the ITE.

### **D. Capacity Up-gradation**

In case, if the capacity up-gradation is required to access the submarine cable capacity by the requesting ITE, then the entire cost of up-gradation for the same is to be borne by the requesting ITE or foreign submarine cable capacity owner from whom the ITE

has entered in to an agreement for acquisition of reference capacity. The owner of the Cable Landing Station shall facilitate on receipt of request and charges for such up-gradation, if any.

#### **E. Cancellation Charges**

- (a) In the event of cancellation of demand by the ITE, the cancellation charge will be the equivalent of applicable O&M charges payable for one year.
- (b) The ITE shall pay the annual O&M recurrent charges [mentioned in Part-II of Schedule (Cable landing Station-Reference Interconnect Offer)] on or before due date. OCLS shall be entitled to discontinue the access facilitation provided to ITE in pursuant to the Terms and Conditions of Access Facilitation in case the annual O&M charges due and payable by ITE are not paid.

#### **4.5.7 Co-location Facility - Installation of ITE's equipment**

- (a) The Co-location space is solely for the purpose of ITE to access the submarine cable capacity in the cable landing station.
- (b) The ITE shall submit its request for Co-location space at cable landing station, containing the following information [in the format given at Part-IV of Schedule (Cable landing Station-Reference Interconnect Offer)].
  - (a) the Co-Location site at which Co-location space is requested;
  - (b) Purpose of accessing submarine cable capacity.
  - (c) Co-location equipment proposed to be installed;
  - (d) the space and power requirements;
  - (e) the floor loading of the Co-location equipment;
  - (f) the capacity of the Transmission Tie-Cable required;
  - (g) the type of optical fibre cable to be used
  - (h) the ITE's contact details.
  - (i) Any other requirement for co-location facilitation
- (c) OCLS shall acknowledge receipt of the Co-location Request within ten days and indicate whether the Co-location Request is accepted or rejected. If the Co-location Request is rejected, OCLS will provide written reasons for such rejection to the ITEs and also communicate an alternative co-location proposal thereto.
- (d) OCLS may reject a Co-location Request if the Access Seeker is not a eligible ITE;:
- (e) The Access Seeker acknowledges that the Co-location space allocated and the actual placement of the Co-location equipment

shall be determined by OCLS. OCLS is not obligated to place the same Access Seeker's Co-location equipment adjacent to each other, provided that OCLS will use its reasonable endeavours to accommodate any reasonable request for adjacent placement made by the ITE.

- (f) The ITE shall install their Co-location equipment.

#### **4.5.8 Allocation of alternative Co-location space**

- (a) In case Owner of Cable Landing Station is unable to offer, due to space limitations or any other valid reasons, the physical Co-location requested for by the ITE, the Owner of Cable Landing Station shall take reasonable measures to offer an alternative Co-location space or alternative remedies (including options of virtual Co-location, optimizing the use of existing space or finding adjacent space) to enable such ITE to have Access Facilities.
- (b) The Owner of Cable Landing Station generally shall provide Co-location for access facilitation at the Cable Landing Station for the requesting ITE. In case access facilitation to ITEs is extended through a virtual (distant) Co-location facility due to space constraints at Cable Landing Station or any other valid technical reasons, then the Owner of the Cable Landing Station shall make available required elements at cable landing station including duct within the building for the purpose of running an Interconnection Cable to the Cable landing Station. The charges for this shall be borne by ITE. The ITE shall arrange the telecommunication link from virtual Co-location site to Cable Landing Station at his own cost. In case ITE is not able to arrange a virtual (distant) Co-location, then the Owner of Cable Landing Station shall endeavor to provide alternate site. All charges relating to such Co-location and interconnecting link shall be payable by requesting ITE.

#### **4.5.9 Installations and Maintenance of Co-location equipment in Co-location space**

- (a) The Parties agree to comply with the procedures with the installation and maintenance of Co-location equipment. [The Co-location equipment Installation and Maintenance Procedures are envisaged at Part-V of Schedule (Cable landing Station-Reference Interconnect Offer) as guidelines].
- (b) The ITE shall request physical access to Co-location space [using the form envisaged in Part-IV of Schedule (Cable landing Station-Reference Interconnect Offer)]. OCLS shall authorize the access of ITE to the Co-location space [using the form envisaged in Part-VII of Schedule (Cable landing Station-Reference Interconnect Offer)]. Only ITE authorized personnel, [as listed in Part-VII of Schedule

(Cable landing Station-Reference Interconnect Offer)], shall have access to the Co-location space.

- (c) The ITE shall pay OCLS the charges in accordance with the OCLS published Co-location charges [as listed out in Part-II of Schedule (Cable landing Station-Reference Interconnect Offer)].

#### **4.5.10 Term of Lease for Co-location**

- (a) The agreement between the Parties regarding each Co-location space to be leased under the Co-location frame work shall commence on the date the Service Provider (access seeker) confirms its acceptance of the charges for the Co-location site and shall continue for three (3) years after the Commencement Date or as mutually agreed, unless terminated earlier in accordance with the provision of the terms and conditions and agreement made thereto.
- (b) OCLS may terminate the lease of Co-location space at any time with immediate effect by giving notice to the ITE if the ITE fails to complete the installation of its Co-location equipment within ninety (90) Days. If the ITEs failure to complete installation is attributable to circumstances beyond the ITEs reasonable control, OCLS will grant a reasonable extension of time for installation to the ITE at the ITEs request. ITEs request under this clause must describe the circumstances beyond the ITEs control and such request must be received prior to the expiry of the aforementioned ninety (90) days period.
- (c) The ITE may terminate the lease of Co-location space under this Co-location frame work by giving OCLS no less than six (6) months written notice. Termination of the lease will take effect from the date specified in the notice or payment of charges not exceeding six months.
- (d) OCLS may immediately terminate a lease of Co-location space at a Co-location site if:
  - (i) the Access Seeker ceases to hold valid Licence of ITE;
  - (ii) the ITE is using the Co-location space in contravention of an applicable law, licence, regulations or direction
  - (iii) the Co-location equipment is used for a purpose other than for the interconnection of the ITE Network to the OCLS Network;
  - (iv) the ITE removes or abandons its Co-location equipment or keeps such space idle for more than 90 days;
  - (v) the Co-location space has become unsafe or unsuitable for its purpose;

- (e) Upon termination of the contract of Co-location space, any physical access granted to the Co-location site shall also be terminated.

#### **4.5.11 Sub-Leasing**

The ITE shall not assign the lease in respect of or sub-let the Co-location space at the Co-location site.

#### **4.5.12 Additional Co-Location space and Co-Location equipment**

If the ITE wish to replace modify or rearrange existing Co-location equipment in the Co-location space or to install additional Co-location equipment in the Co-location space, the ITE must submit a request in respect of the replacement, modification, rearrangement or additional Co-location equipment.

#### **4.5.13 Termination of Access Facilitation**

- (a) The Access facilitation arrangement shall continue to be in force during the period of the IRU or Lease term, subject to the payment of the recurrent O&M charges by the ITE to OCLS.
- (b) The Access facilitation arrangement shall stand immediately terminated in the event ITE ceases to hold a licence under the Indian Telegraph Act, 1885.
- (c) The access arrangement under these terms and conditions shall be terminated forthwith in the event the ITE arrangement to acquire Reference Capacity on IRU or lease basis from Submarine Cable System Owner or a member of the Submarine Cable System Consortium or from concerned Cable Consortium is terminated.

#### **4.5.14 Access Facilitation and Co-location charges**

The Authority examined the principle whether the cost based charges for access facilitation and co-location charges are required to be prescribed in the regulations. The Authority observed that in most of the countries the charges are published by the OCLS with the prior approval of the Regulator. The Authority is also of the view that to reach on realistic cost based charges and provide first opportunity to the owner of the cabling landing station, it is a better that OCLS determine the charges on the basis of the cost involved in access facilitation and to provide co-location. However these charges are to be approved by the TRAI on the basis of well-established principles of costing methodology used by the Authority in various regulations time to time. For proper examination by the Authority, it is required that OCLS furnish cost of the network elements involved in access facilitation and also the various cost components involved in providing co-location facility. Costing

methodology along with calculation sheet to arrive at the various charges i.e. access facilitation charges, operation and maintenance charges and co-location charges is also required to be furnished by owner of cable landing station to the Authority.

## Chapter 5

### **Proposed Draft Regulations “The International Telecommunication Access to Essential Facilities (including Landing Facilities for Submarine Cables) at Cable Landing Stations”**

TO BE PUBLISHED IN THE GAZETTE OF INDIA, EXTRAORDINARY, PART III, SECTION 4

#### **TELECOM REGULATORY AUTHORITY OF INDIA**

No.----- OF 2007.

#### **NOTIFICATION**

New Delhi, the \_\_\_\_\_ April, 2007.

File No. 416-1/2007FN.----- In exercise of the powers conferred upon it under section 36, read with sub-clauses (ii),(iii) and (iv) of clause (b) of sub-section (1) of section 11 of the Telecom Regulatory Authority of India Act, 1997 (24 of 1997), the Telecom Regulatory Authority of India hereby makes the following regulations, namely:-

<b>CHAPTER I</b>  PRELIMINARY
<b>1. Short title, extent and commencement.</b> -- (1) These regulations may be called the International Telecommunication Access to Essential Facilities (including Landing Facilities for Submarine Cables) at Cable Landing Stations Regulations, 2007.
(2) They shall come into force on their publication in the Official Gazette.
<b>2. Definitions.</b> --In these regulations, unless the context otherwise requires,-
(a) “Access Facilitation” means access or interconnection, as the case may be, to the essential facilities (including landing facilities for submarine cable) at cable landing station;
(b) “Access Facilitation Charges” means, a charge payable by the eligible Indian International Telecommunication Entity to the owner of the cable landing station to interconnect or access the capacity acquired on Indefeasible Right of Use basis or on short-term lease basis from an owner of the submarine cable capacity or a member of consortium owning

submarine cable capacity ;
(c) “Act” means the Telecom Regulatory Authority of India Act, 1997 (24 of 1997);
(d) “Authority” means the Telecom Regulatory Authority of India established under sub-section (1) of section 3 of the Act;
(e) “backhaul circuit” means a domestic telecom circuit which connects a cable landing station to the infrastructure or equipment of the eligible Indian International Telecommunication Entity at its premises ;
(f) “cable landing station” means the location--
(i) at which the international submarine cable capacity is connectable to the backhaul circuit;
(ii) at which International submarine cables are available on shore,
for accessing international submarine cable capacity;
(iii) and includes buildings containing the onshore end of the submarine cable and equipment for connecting to backhaul circuits;
(g) “Cable Landing Station Reference Interconnect Offer ” means an offer made by the owner of cable landing station containing the terms and conditions of Access Facilitation and Co-location of equipment (including landing facilities for submarine cables at Cable Landing Stations for connectable system of International submarine cable) published after the approval of the Authority under sub-regulation (3) of regulation 3;
(h) “Co-location Facilities” means the facilities at a submarine cable landing station (including building space, power, environment services, security and site maintenance) which may be offered by the owner of cable landing station to the eligible Indian International Telecommunication Entity to facilitate access to the cable landing station of such owner (including installation of co-location equipment);
(i) “Co-location charges” means the charges --
(A) payable by the eligible Indian International Telecommunication Entity based on the type of facilities used ;
(B) for housing the equipment of such eligible Indian International Telecommunication Entity, being the access seeker at the premises of owner of cable landing station who provides the access to its cable landing station, and
include lease charges for space and charges for power supply, accessing physical facilities, operation and maintenance of co-location site for the

purposes of sub-clause(B) of this clause;
(j) “Co-location lead-Time” means the time taken by the owner of the cable landing station to make available co-location site ;
(k)“Capacity owner” means an International Telecom Carrier or Foreign Carrier or Indian International Long Distance Operator who owns capacity on the international submarine cable landing at a cable landing station in India;
(l) “eligible Indian International Telecommunication Entity” means--
(i) an International Long Distance Operator, holding licence to act as such, and, who has been allowed under the licence to seek access to the international submarine cable capacity in submarine cable system landing at the cable landing stations in India;
(ii) Internet Service Providers, holding valid international gateway permission or licence to act as such, and, who has been allowed under the licence to seek access to the International Submarine Cable capacity in submarine cable system landing at the cable landing stations in India;
(m) “Grooming Service” means breaking down higher capacity outputs from the submarine cable at a place or point at which it terminates into the lower capacity channels for connection to the backhaul circuits of the eligible Indian International Telecommunication Entity;
(n) “International Private Leased Circuits” means--.
(i) an international circuit leased to a customer and such circuit is not connected to the public network ;
(ii) the virtual private network using circuit or packet switched Internet Protocol technology in addition to point to point non-switched physical connections or transmission bandwidth and such circuit is not connected to the public network;
(o) “International Long Distance Operator” means a service provider or operator who has been granted licence to act as such to provide international long distance service;
(p)“Indefeasible Right of Use” means the right to use the Reference Capacity--.
(i) on long term lease for the period for which the submarine cable remains in effective use;
(ii) acquired (including equipment, fibers or capacity) under an agreement entered into between the Capacity owner and an eligible Indian

International Telecommunication Entity;
(iii) in respect of which maintenance cost incurred becomes payable in any circumstances during the period of validity of the agreement referred to in sub -clause (i) of this clause;
(q) “licence” means a licence granted or having effect as if granted under section 4 of the Indian Telegraph Act, 1885, (13 of 1885) and Indian Wireless Telegraphy Act, 1933 (17 of 1933);
(r) "Reference Capacity” means the international submarine cable capacity,---
(i) from the distant end submarine cable station to the cable landing station in India ;
(ii) acquired or leased by the eligible Indian International Telecommunication Entity;
(iii) activated by the owner of the submarine cable system or a member or members of consortium of submarine cable system;
(s) “operation and maintenance charges” means the annual charges,-
(i) payable to the owner of cable landing station by the eligible Indian International Telecommunication Entity ;
(ii) for operation and maintenance of facilities for accessing the capacity of the cable landing station of such owner;
(t) "regulations" means the International Telecommunication Access to Essential Facilities (including Landing Facilities for Submarine Cables) at Cable Landing Stations Regulations, 2007;
(u) “Schedule ” means the Schedule appended to these regulations;
(v) “ specified international submarine cable” means any submarine cable having International submarine cable capacity landing at a Cable Landing Station in India;
(w) “owner of cable landing station” means a service provider who owns and manages submarine cable landing station in India and has been granted licence to provide international long distance service;
(x) “Virtual Co-location” means a location—
(i) of the eligible Indian International Telecommunication Entity, being outside the cable landing station, whether adjacent or at a distant from such station;
(ii) at which the eligible Indian International Telecommunication Entity may install its equipment so as to access the sub-marine cable capacity from the

cable landing station ;
(y) all other words and expressions used in these regulations but not defined, and defined in the Act and the rules and other regulations made thereunder , shall have the meanings respectively assigned to them in the Act or the rules or other regulations, as the case may be.
<b>CHAPTER II</b> <b>ACCESS TO CABLE LANDING STATION AND RELATED INTERNATIONAL SUBMARINE CABLE CAPACITY</b>
<b>3. Provision of access to cable landing station and related international submarine cable capacity by owner of cable landing station. -----(1)</b> Every owner of cable landing station shall, in respect of its each cable landing station,---
(a) provide, on fair and non-discriminatory terms and conditions, at its cable landing station, access to any eligible Indian International Telecommunication Entity requesting for accessing international submarine cable capacity on any submarine cable systems;
(b) interconnect such specified international submarine cable landing at its cable landing station in India in accordance with the provisions of these regulations;
(c) provide landing facilities for submarine cables at its cable landing station to a service provider, who has been granted licence to act as International Long Distance Operator under the licence;
(d) submit to the Authority, within thirty days from the date of commencement of these regulations, a document containing the terms and conditions of Access Facilitation and Co-location facilities including landing facilities for submarine cables at its cable landing stations for international submarine cable capacity in accordance with the provisions of these regulations (hereinafter referred to as the “Cable Landing Station-Reference Interconnect Offer”) for its approval :
Provided that in case of a cable landing station which comes into existence after commencement of these regulations, the owner of such cable landing station shall submit, within thirty days from the date of coming into existence of such cable landing station, the Cable Landing Station-Reference Interconnect Offer in respect of such cable landing station to the Authority for its approval.
(2) Every Cable Landing Station-Reference Interconnect Offer shall be prepared in accordance with the Schedule appended to these regulations for submitting the same to the Authority for its approval.
(3) The Authority shall approve the Cable Landing Station-Reference

Interconnect Offer within sixty days from the date of its submission under sub-regulation (1) to the Authority:

Provided that in case the Authority is of the opinion, that the Cable Landing Station-Reference Interconnect Offer requires modifications so as to protect the interests of service providers or consumers of the telecom sector, or to promote or ensure orderly growth of the telecom or the Cable Landing Station-Reference Interconnect Offer has not been prepared in accordance with the provisions of these regulations, it may, after giving an opportunity of being heard to the concerned owner of the cable landing station require such owner to modify the said offer submitted by him and such owner shall make such modifications and submit, within fifteen days of receipt of requirement for modifications, the said offer after incorporating such modifications for approval.

(4) Every owner of a cable landing station shall publish, on its website and in any other manner as the Authority may specify, within fifteen days from the date of approval by the Authority, the Cable Landing Station-Reference Interconnect Offer approved by the Authority and forward a copy thereof to the Authority along with a confirmation to the effect that such offer had been published in accordance with the offer so approved by the Authority and in the manner specified in this sub-regulation.

(5) Every owner of cable landing station, desirous of making any modification in its Cable Landing Station-Reference Interconnect Offer published under sub-regulation (4), shall submit all such modifications in such Cable Landing Station-Reference Interconnect offer for prior approval of the Authority.

(6) All the provisions of these regulations, which apply for approval of the Cable Landing Station-Reference Interconnect offer, shall, mutatis mutandis, apply to the modifications to the Cable Landing Station-Reference Interconnect offer approved by the Authority under sub-regulation (3).

**4. Application by eligible Indian International Telecommunication Entity for access facilitation to cable landing station and related international submarine cable capacity.**----(1) Every eligible Indian International Telecommunication Entity desirous of accessing International submarine cable capacity on any submarine cable systems may make an application to the owner of cable landing station for Access Facilitation in the format specified in Part I of the Schedule along with the registration fee to be adjusted subsequently against the Access Facilitation Charges enclosing therewith the following, namely:- ---

(a) a copy of the licence agreement of the eligible Indian International Telecommunication Entity to act as international long distance operator or a copy of licence agreement with valid international gateway permission to act as internet service provider, as the case may be;

(b) a certificate by the eligible Indian International Telecommunication Entity confirming that it has been granted the permission or approval by the Government of India, Ministry of Communications and Information Technology (Department of Telecommunications) for the operation of international gateway.
(c) a confirmation, jointly or severally, from the owner of submarine cable or member of consortium owning Submarine Cable System or capacity owner in the concerned cable system stating that the eligible Indian International Telecommunication Entity has entered into agreement for sale or lease of Reference Capacity enclosing therewith,----
(i) copy of commercial agreement for sale or lease of Reference Capacity giving effect to the confirmation referred to in clause (c) above;
(ii) in a case where an agreement is being entered into but such agreement had not been concluded on the date of making the application referred to in sub-clause (i) above, a copy of Memorandum of Understanding giving effect to the confirmation referred to in sub-clause (i) above;
(d) a certificate by the eligible Indian International Telecommunication Entity confirming that it shall utilise the reference capacity in accordance with the terms and conditions of its licence.
(2) The commercial agreement referred to in sub-clause (i) of clause (c) of sub-regulation (1) or the Memorandum of Understanding referred to in sub-clause (ii) of clause (c) of sub-regulation (1) shall, amongst other things, specify---
(a) the number of units to be acquired or agreed to be acquired as Indefeasible Right of Use or on annual lease basis by the eligible Indian International Telecommunication Entity;
(b) the period of lease of the Reference Capacity, referred to in clause (c) of sub-regulation (1) to be acquired or agreed to be acquired as Indefeasible Right of Use or on annual lease;
(c) technical information relating to—
(i) slot allocation of Reference Capacity in relevant submarine cable system acquired or agreed to be acquired by the eligible Indian International Telecommunication Entity;
(ii) bearer designation of the capacity acquired or agreed to be acquired;
(iii) the tentative date or likely date of testing of reference capacity by the eligible Indian International Telecommunication Entity.
<b>5. Confirmation by the owner of cable landing station after receipt of application under regulation 4.-----</b> (1) Every owner of cable landing

station shall, within a period of ten days of receipt of the application for Access Facilitation and the requisite information and documents under regulation 4, send its confirmation of its ability to provide the Access Facilitation and required test to be undertaken for providing such Access Facilitation to the eligible Indian International Telecommunication Entity.

(2) In case it is not feasible for the owner of cable landing station to comply with the access facilitation procedure or the required test to be undertaken, as the case may be, referred to in sub-regulation (1), such owner shall, within a period of ten days, of receipt of the application made under regulation 4, intimate, to the eligible Indian International Telecommunication Entity, an alternative plan for Access Facilitation and required test to be undertaken.

**6. Entering into an agreement for providing Access Facilitation.----**

(1) After receipt of confirmation for Access Facilitation, the eligible Indian International Telecommunication Entity shall, within five days from the date of receipt of such confirmation, enter into an Access Facilitation Agreement with the owner of the cable landing station:

Provided that in case an International Long Distance Operator or Internet Service Provider, falling under the sub-clause (i) or (ii) of clause (l) of regulation 2, had entered, before commencement of these regulations, into an agreement with an owner of a cable landing station and the Cable Landing Station-Reference Interconnect Offer of such owner has been approved by the Authority under sub-regulation (3) of regulation 3, such owner shall, after publication of the said offer under sub-regulation (4) of regulation 3, give an option to such International Long Distance Operator or Internet Service Provider, as the case may be, to make an application for Access Facilitation in accordance with these regulations.

(2) In case the owner of a cable landing station and the eligible Indian International Telecommunication Entity fail to enter into an agreement under sub-regulation (1), in that case, both of them, may, jointly, without prejudice to the provisions of section 14A of the Act, at any time, request the Authority to facilitate in the process for entering into the agreement referred to in sub-regulation (1).

**7. Demand for access to Reference Capacity.-----**(1) The eligible Indian International Telecommunication Entity shall, within five days of entering into an agreement under regulation 6, make payment of fees and charges as specified in the Part II of the Schedule for seeking Access Facilitation for Reference Capacity.

(2) The owner of cable landing Station, on receipt of the payment of fees and charges payable under sub-regulation (1), shall consider, the number of units to be acquired or agreed to be acquired as Indefeasible Right of Use or on an annual lease basis as referred to in the agreement, as firm demand made by the eligible Indian International Telecommunication Entity.

<p>(3) The owner of cable landing station shall, immediately after considering the firm demand referred to in sub-regulation (2), initiate the provisioning of the Access Facilitation for the eligible Indian International Telecommunication Entity.</p>
<p><b>8. Ensuring provision of backhaul circuit by eligible Indian International Telecommunication Entity.</b>----- (1) Every eligible Indian International Telecommunication Entity shall arrange for backhaul circuit so as to make ready the domestic capacity between cable landing station and the premises of the eligible Indian International Telecommunication Entity.</p>
<p>(2) The owner of the cable landing station and the eligible International Telecommunication Entity shall conduct necessary tests as per a mutually agreed testing procedure and so that that the domestic capacity remains in a state of readiness for interconnection before the tests for Reference Capacity provisioning are carried out.</p>
<p><b>9. Testing of Reference Capacity proposed to be acquired by eligible Indian International Telecommunication Entity.</b>----- (1) The owner of the cable landing station shall, upon successful testing of the backhaul circuit to the cable landing station, complete all necessary steps for Access Facilitation to the Reference Capacity and such steps shall, <i>inter alia</i>, include--</p>
<p>(a) testing of links;</p>
<p>(b) interconnecting the Reference Capacity to the backhaul circuit or equipment of the service providers co-located at the cable landing station of such owner or at a Virtual Co-location.</p>
<p>(2) The owner of cable landing station and the eligible Indian International Telecommunication Entity, being an applicant under regulation 4, shall conduct necessary tests as per the testing procedure for the provisioning of Reference Capacity from eligible International Telecommunication Entity or cable landing station in India to Distant End or the other country's submarine cable station, within ten days or as may be mutually agreed upon by them.</p>
<p>(3) The owner of the cable landing station shall--</p>
<p>(a) send an intimation, after taking steps referred to in sub-regulation (2), to the eligible International Telecommunication Entity for taking control of the Reference Capacity;</p>
<p>(b) deliver, upon receipt of all necessary payments from the eligible International Telecommunication Entity, the Reference Capacity to such Entity immediately but not later than two days and declare the Reference Capacity as commissioned.</p>
<p>(4) The owner of the cable landing station and the eligible Indian</p>

International Telecommunication Entity shall follow the time period specified in these regulations and as specified in Part III of the Schedule.

**10. Access Facilitation Charges and payment terms.**----- (1) For the purposes of accessing the landing facilities at a cable landing station the Access Facilitation charges as specified in Part II of the Schedule shall be , -

(a) payable by the eligible Indian International Telecommunication Entity to the owner of the Cable Landing Station;

(b ) determined on the basis of the cost of network elements involved in the provision of access and distributed over the complete capacity of the system.

(2) The Access Facilitation arrangement shall, subject to the payment of the operation and maintenance charges by the eligible Indian International Telecommunication Entity to the Owner of Cable Landing Station, continue to be in force during the period of the Indefeasible Right of Use or on an annual lease basis.

(3)The eligible Indian International Telecommunication Entity shall be permitted by the owner of cable landing station to provide Grooming Services at cable landing station of such owner .

**11. Capacity up-gradation and payment for capacity up-gradation charges by eligible Indian International Telecommunication Entity.**----  
In case the capacity up-gradation is required to be provided for Access Facilitation to international submarine cable capacity at Cable Landing Station, the owner of the cable landing station shall, on receipt of request for such up-gradation, and payment of charges for such up-gradation from the eligible Indian International Telecommunication Entity, being an applicant under regulation 4, facilitate the up-gradation.

**12. Cancellation Charges.**----- (1) In case the eligible Indian International Telecommunication Entity fails to acquire number of units mentioned in clause (a) of sub-regulation (2) of regulation 4, either due to withdrawing of authorization or rescinding of agreement referred to in regulation 7 or any other reasons, cancellation charge for the units not so acquired shall be payable by such eligible Indian International Telecommunication Entity to the owner of the Cable Landing Station.

(2) The cancellation charges referred to in sub-regulation (1) shall be equivalent to the annual operation and maintenance charges referred to in regulation 10 and be payable for one year.

**13. Termination or discontinuance of Access Facilitation by owner of cable landing station.**.... (1) The Access Facilitation shall be terminated by the owner of cable landing station-----

(a) if the eligible Indian International Telecommunication Entity ceases to hold valid licence ;

(b) in case the arrangement to acquire Reference Capacity on the Indefeasible Right of Use or on an annual lease basis by the eligible Indian International Telecommunication Entity from submarine cable system owner or a member of the submarine cable system consortium or from concerned cable consortium, is terminated.

(2) In case the annual operation and maintenance charges due and payable by the eligible Indian International Telecommunication Entity remain unpaid for more than thirty days after expiry of date from which such charges become payable, the owner of cable landing station may discontinue the Access Facilitation provided to eligible Indian International Telecommunication Entity.

**14. Restoration of Access Facilities.**----- (1) In case the licence of the eligible Indian International Telecommunication Entity has been terminated or discontinued under regulation 13 but the same is subsequently restored, the Access Facilitation arrangement may be restored by the owner of cable landing station upon payment of all costs incurred by the owner of cable landing station for the purposes of reconnection or restoration of the Access Facilities, as the case may be, by the eligible Indian International Telecommunication Entity to the owner of cable landing station and such reconnection or restoration charges shall be such as may be mutually agreed upon between them or failing which in accordance with the costs specified in Part II of Schedule .

(2) If an authorization of the eligible Indian International Telecommunication Entity or arrangement entered into by it to acquire Reference Capacity on Indefeasible Right of Use or lease from submarine cable system or from a member of the submarine cable system consortium or from concerned submarine cable consortium, has been earlier withdrawn or rescinded but is subsequently restored, the access facilitation arrangement, if discontinued due to such withdrawal or rescinding may be restored by the owner of cable landing station upon payment of all costs incurred by owner of cable landing station for the purpose of reconnection or restoration, as the case may be, by the eligible Indian International Telecommunication Entity to owner of cable landing station and such reconnection or restoration charges shall be such as may be mutually agreed upon them or failing which in accordance with the costs specified in Part II of Schedule.

### **CHAPTER III**

#### **CO-LOCATION SITE AND CO-LOCATION SPACE**

**15. Application by eligible Indian International Telecommunication Entity for Provisioning of Co-location space.**---- (1) Every eligible Indian International Telecommunication Entity, who makes an application for accessing international submarine cable capacity on any submarine cable systems under regulation 4, shall make, simultaneously, another application to the owner of cable landing station in the Form specified in the Part -IV of the Schedule , for Co-location space at a cable landing station, if

such Co-location space is required by him for accessing international submarine cable capacity on any submarine cable systems from such cable landing station owner, enclosing therewith the following, namely:- ---.
(a) equipment layout plan at the Co-location site at which Co-location space is requested for;
(b) purpose of accessing submarine cable capacity;
(c) details of Co-location equipment proposed to be installed;
(d) the details of space and power requirements;
(e) the floor loading of the Co-location equipment;
(f) the specification of the Transmission Tie-Cable required;
(g) the type of optical fibre cable to be used;
(h) the address, phone number, fax and e-mail of the eligible Indian International Telecommunication Entity at which communications may be sent by the owner of the cable landing station;
(i) any other requirement for co-location of equipment.
(2) The owner of the cable landing station shall, within ten days after receipt of the application made under sub-regulation (1), acknowledge the receipt and communicate the acceptance or rejection thereof with reasons to the requesting eligible Indian International Telecommunication Entity.
(3) The owner of the cable landing station shall reject the application made by the eligible Indian International Telecommunication Entity under sub-regulation (1) if the access seeker is not an eligible Indian International Telecommunication Entity or he has not been granted international gateway permission or licence.
<b>16. Co-location charges and payment terms.</b> ----- <b>(1)</b> The Co-location charges shall be payable by the eligible Indian International Telecommunication Entity, who has been allotted Co-location by the owner of cable landing station, to such owner of the cable landing station;
<b>(2)</b> The Co-location charges referred to in sub-regulation (1) shall be published by the concerned owner of the Cable Landing Station in Part -II of Schedule with the prior approval of the Authority:
Provided that the Authority may specify, by other regulation made by it under the Act, such Co-location charges which shall be payable by a class or classes of eligible Indian International Telecommunication Entity and in such case the approval of the Co-location charges, as specified in Part II of the Schedule by the Authority shall not be required to be obtained under

these regulations.
(3) The Co-location charges shall be payable by the eligible Indian International Telecommunication Entity as per time Schedule as may be mutually agreed upon by them and where no such time schedule has been agreed upon, the Co-location charges shall be payable at such interval as specified in Part II of the Schedule.
(4) The owner of cable landing station shall, upon receipt of application under regulation (1) of regulation 15 and receipt of all charges and fulfillment of other requirements under these regulations, provide the Co-location facility at the cable landing station to the Indian International Telecommunication Entity who made such application..
<b>17. Allocation of alternative Co-location space.</b> ----- (1) In case the owner of cable landing station is unable to offer, due to space limitations or any other valid reasons, the physical co-location requested for by the eligible Indian International Telecommunication Entity, the owner of the cable landing station shall take reasonable measures to give an options of virtual Co-location to enable such eligible Indian International Telecommunication Entity to have Access Facilitation:
Provided that in case the owner of cable landing station is unable to offer Co-location space at cable landing station and the eligible Indian International Telecommunication Entity fails to arrange a Virtual Co-location site, then the owner of cable landing station shall endeavor to provide an alternate site other than the Virtual Co-location.
(2) All cost and charges relating to alternate site for co-location and interconnecting link to the cable landing station shall be borne by the eligible Indian International Telecommunication Entity.
(3) In case an eligible Indian International Telecommunication Entity is offered , due to space constraints at Cable Landing Station or any other valid technical reasons, a Virtual Co-location facility by the owner of the cable landing station, in that case the owner of the cable landing station shall make available required elements (including duct within the building) for the purpose of running an interconnection cable to the Cable landing Station for which the charges shall be payable and borne by eligible Indian International Telecommunication Entity.
(4) The eligible Indian International Telecommunication Entity shall arrange the telecommunication link from Virtual Co-location Site to Cable Landing Station, cost of which shall be borne by such eligible Indian International Telecommunication Entity.
<b>18. Additional Co-location space and Co-location equipment.</b> ----- (1) If the eligible Indian International Telecommunication Entity intends to replace, modify or re arrange any of its Co-location equipments in the Co-location space or install additional Co-location equipment in the Co-location

space, it shall submit a request in writing to the owner of cable landing station for such modification, rearrangement or additional Co-location equipment or replacement, as the case may be and owner of cable landing station shall intimate, within ten days of receipt of such request, its decision for such replacement , modification or re arrangement.

(2) The eligible Indian International Telecommunication Entity shall, upon receipt of acceptance from the owner of cable landing station for such request made under sub-regulation (1), modify, rearrange or replace, as the case may be, any of its Co-location equipments in the Co-location space or install additional Co-location equipment in the Co-location space after making payment of all charges and fulfillment of other requirements under these regulations.

**19. Installation of Co-location Equipment by eligible Indian International Telecommunication Entity.**----- The eligible Indian International Telecommunication Entity, being access seeker, shall install its Co-location equipment in the Co-location space as may be mutually agreed upon between him and the owner of Cable Landing Station, in accordance with the Co-location equipment installation and maintenance procedures specified in Part V of the Schedule.

**20. Authorization for physical access for Co-location space at cable landing station.**-----If the application made by the eligible Indian International Telecommunication Entities under sub-regulation (1) of regulation 15 has been accepted by the owner of the cable landing station, the eligible Indian International Telecommunication Entity shall---

(a) make an application in the Form specified in Part IV or as specified by the owner of cable landing station of the Schedule requesting for authorizing its personnel for physical access to Co-Location space at the cable landing station;

(b) communicate, the names of its personnel in the Form specified in the Part -VII of Schedule to the owner of cable landing station who shall allow them access to the Co-location space.

**21. Prohibition to sub-lease the Co-location space.**----- The eligible Indian International Telecommunication Entity shall not assign the lease in respect of or sub-let the Co-location space at the Co-location site;

**22. The Co-location space to be used exclusively for the purpose of accessing submarine cable capacity in the Cable Landing Station by the eligible Indian International Telecommunication Entity.**----- The Co-location space shall be used by the eligible Indian International Telecommunication Entity exclusively for the purpose of accessing submarine cable capacity in the Cable Landing Station.

**23. Termination of lease of Co-location space.**\_----- (1) The owner of cable landing station may, in the event of closure of co-location site or the expiry of

<p>the lease, terminate the lease of Co-location space, after giving to the eligible Indian International Telecommunication Entity a notice, in writing, of not less than six months from such closure or before the expiry of the lease, as the case may be, and such termination of the lease will take effect from the date specified in the notice.</p>
<p>(2)The owner of cable landing station may, terminate the lease of Co-location space, if-----</p>
<p>(a) the eligible Indian International Telecommunication Entity ceases to hold valid licence or the licensor directs, in the interest of the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality or for any other reason, the termination of such lease;</p>
<p>(b) the eligible Indian International Telecommunication Entity uses or allows to be used the Co-location space in contravention of the regulations or directions issued under the Act or any other law for the time being in force or in contravention of the terms of the licence;</p>
<p>(c) the eligible Indian International Telecommunication Entity removes or abandons its Co-location equipments or keeps such space idle for a period of more than 90 days;</p>
<p>(d) the Co-location space has become unsafe or unsuitable for purpose of accessing facilities under these regulations:</p>
<p>Provided that the owner of cable landing station shall not terminate the lease of Co-location space under clause (b) to (d) unless a notice of not less than ten days had been given to the eligible Indian International Telecommunication Entity,</p>
<p>(3) Upon termination of the lease of Co-location space on request by the eligible Indian International Telecommunication Entity, prior to the expiry of the lease term, the following charges shall be payable by the eligible Indian International Telecommunication Entity, namely:-</p>
<p>(a) co-location charges equivalent to not exceeding six months;</p>
<p>(b) outstanding pro-rata site preparation work charges.</p>
<p>(4) Subject to the provisions contained in sub-regulation (3),the owner of cable landing station may, at any time, by giving notice of not less than ten days to the eligible Indian International Telecommunication Entity, terminate the lease of Co-location space if the eligible Indian International Telecommunication Entity fails to complete the installation of its Co-location equipment within ninety (90) days.</p>
<p>(5) If the eligible Indian International Telecommunication Entity fails to complete installation of its Co-location equipment due to circumstances</p>

beyond its reasonable control, it may communicate such circumstances to the owner of cable landing station who shall grant a reasonable extension of time for installation of its Co-location equipment to the eligible Indian International Telecommunication Entity.

(6) If the eligible Indian International Telecommunication Entity, upon termination of the lease under sub-regulation (1), fails to discontinue the use of its Co-location equipment and remove its Co-location equipment under that sub-regulation, the owner of the cable Landing station may remove the Co-location equipment and restore the Co-location site to its original condition;

(7) Upon expiry or termination of the lease of Co-location space of the eligible Indian International Telecommunication Entity, the eligible Indian International Telecommunication Entity shall pay to owner of cable landing station all reasonable costs, connected with the work undertaken for restoration under sub-regulation (6) after removal of co-location equipment (including the disposal of the Co- location equipment).

(8) Upon expiry or termination of the lease of Co-location space of the eligible Indian International Telecommunication Entity, any physical access granted to the Co-location site shall stand withdrawn.

(9) In case restoration of access is required, the owner of cable landing station shall undertake reasonable endeavors and make all efforts to get the access restored to service in the earliest time frame;

(10) Nothing contained in these regulations shall be construed as binding the owner of Cable Landing Station for any service guarantee agreement or any representation by owner of cable Landing Station on the performance of the Submarine Cable System.

(11) Without the prejudice of the duty of the owner of the cable landing station specified in sub-regulation (2), the eligible Indian International Telecommunication Entity may negotiate with the owner of submarine cable system or Member of the Consortium of submarine cable system, as the case may be, for any restoration arrangement including alternate transmission medium, if necessary;

**CHAPTER IV  
MISCELLENEOUS**

**24. No Obligation of owner of cable landing station to place Co-location equipment of the eligible Indian International Telecommunication Entity adjacent to each other.**----- Every owner of the cable landing station shall endeavor to accommodate any reasonable request by the eligible Indian International Telecommunication Entity for adjacent placement of its Co-location equipment adjacent to each other but such request shall not confer any right upon the eligible Indian International

Telecommunication Entity for adjacent placement of its Co-location equipment and the Co-location space allocated and the actual placement of the Co-location equipment as determined by the owner of the cable landing station shall be final.

**25. Period of Co-location agreement.**-----(1) The agreement between the parties regarding each Co-location space to be leased under the Co-location frame work shall commence on the date the service provider confirms its acceptance of the charges for the Co-location site and remain in force for three years after such commencement or as mutually agreed, unless terminated earlier in accordance with the provision of these terms and conditions and agreement made thereto.

**26. Review.**---- The Authority, may suo-moto or upon request from any affected party, for good and sufficient reason, may review and modify these regulations and Schedule attached thereto.

## SCHEDULE

### Form of CABLE LANDING STATION-REFERENCE INTERCONNECT OFFER

(See regulation 3)

**[In accordance with the provisions of Telecommunication Access  
to Essential Facilities (Including Landing Facilities for Submarine  
Cables) at Cable Landing Stations Regulations]**

- A. The Owner Cable Landing Station shall be required to submit within thirty (30) days from the date of notification of these regulations, the **'Cable Landing Station-Reference Interconnect Offer (CLS-RIO)'** containing the terms and conditions of Access Facilitation and Co-location of equipment including landing facilities for submarine cables at Cable Landing Station for International submarine cable capacity as per the provisions of these regulations, and publish "Cable Landing Station- Reference Interconnect Offer (CLS-RIO)" within fifteen (15) days from the date of issue of approval from the Authority. The format of **CLS-RIO** shall contain the Part-I to Part-VII as per the "templates" in addition to terms and conditions (in accordance with the provisions of the said regulations)

**PART-I**

**Application format for Request to Access Facilitation at Cable Landing Station for International Submarine Cable Capacity**

**(See regulation 4)**

M/s .....(Name of access seeker) hereby request for Access Facilitation to below mentioned Capacity, which is subject to the Terms and Conditions published in “Cable Landing Station-Reference Interconnect Offer (CLS-RIO) made under the provisions of the Telecommunication Access to Essential Facilities (including Landing Facilities for Submarine Cables) at Cable Landing Stations regulations, 2007 for Access Facilitation to essential facilities including landing facilities for submarine cables at Cable Landing Stations for International submarine cable capacity at Cable Landing Station.

M/s .....furnish the necessary details as follows:-

1. Name of the company and its Address	
2. Billing Address	
3. Contact Person 3.1 Name: 3.2 Phone No: 3.3 Email: 3.4 Fax:	
4. Particulars of eligible Indian International Telecommunication Entity, being Access Seeker:	
4.1 International Long Distance Operator	
4.2 Internet Service Provider	
4.3 Licence number:	
4.4 Date of issue of Licence (Please attach an attested copy of licences and valid gateway licence as applicable)	

5. Technical details of Reference Capacity (Please provide or enclose the relevant information and details, as the case may be)	
5.1 Reference Capacity Details: Speed (STM-1/STM-4/STM-16/STM-64 etc.)	
5.2 Number of Capacity Units	
5.3 Indefeasible Right of Use or Lease	
5.4 Period (in case of Lease)	
6. Technical Details of Reference Capacity of Submarine Cable:	
6.1 Cable Station Backhaul Port Details (capacity and type-STM-1e/STM-1o/STM-4/STM-16/STM64 etc.)	
6.2 Assignment provided by Submarine Cable System Capacity Owner to be attached if available (slot or Fiber Pair allocation in submarine cable, Bearer Designation, Cable System Owner Internal ID etc.)	
6.3 Proposed/tentative date of testing back-haul link	
6.4 Proposed test schedule and copy of work order issued by owner of cable system (if available) along with any other related technical information to facilitate planning of Reference Capacity testing	
6.5 End to End testing (between the station of eligible Indian International Telecommunication Entity and distant end Submarine Cable station) schedule and provisioning of Access of the Reference Capacity at Cable Landing Station	

6. Details of Reference Capacity Owner(s)/Submarine Cable Capacity Owner(s)	
6.1 Name of the company and Address	
6.2 Contact Person 6.2.1 Name: 6.2.2 Phone: 6.2.3 Email: 6.2.4 Fax:	
7.Details of Backhaul Provider(s) (Domestic Link including Local Loop)	
7.1 Name of the company and Address	
7.2 Contact Person 7.2.1 Name: 7.2.2 Phone: 7.2.3 Email: 7.2.4 Fax:	
8. Registration Fee Payment Details 8.1Cheque/Banker's Cheque/Demand Draft No. _____ dated _____ for Rs . _____ Drawn on (bank/branch) _____	
9. Name of authorized signatory of this form (Please attach authorization)	
10. Any other details required to be given but not specified at serial numbers 1 to 9 of this Form	

**AUTHORIZED SIGNATORY**

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Official Seal:

## PART II

(See regulations 7, 10, 14 and 16)

<b>Details of Charges</b>		<b>Amount payable (Rupees)</b>
<b>(1)</b>		<b>(2)</b>
<b>1. Access Facilitation Charges for eligible Indian International Telecommunication Entity, being Access Seeker</b>		
1.1 In case of Indefeasible Rights of Use, one time Access Facilitation Charges <u>per unit capacity</u> payable on execution of the Access Facilitation Agreement		
<b>Sl.No.</b>	<b>Per Unit Capacity</b>	
(i)	STM-1	
(ii)	STM-4	
(iii)	STM-16	
(iv)	STM-64	
1.2 In case of lease, recurrent Access Facilitation Charges per annum per unit capacity payable on execution of the Access Facilitation Agreement and thereafter before the Due Date (anniversary of Commissioning date) each year subsequently. (Applicable only for first three years for each unit capacity)		
<b>Sl.No.</b>	<b>Per Unit Capacity</b>	
(i)	STM-1	
(ii)	STM-4	
(iii)	STM-16	
(iv)	STM-64	
<b>2. Annual Operation &amp; Maintenance (O&amp;M) Charges for eligible Indian International Telecommunication Entity, being Access Seeker</b>		
2.1 Charges per annum per unit payable on the execution of the Access Facilitation Agreement and thereafter before the Due Date (anniversary of		

Commissioning date) each subsequent year.		
<b>Sl.No.</b>	<b>Per Unit Capacity</b>	
(i)	STM-1	
(ii)	STM-4	
(iii)	STM-16	
(iv)	STM-64	
<b>3. Restoration charges One time per unit capacity in the event of termination or discontinuance of Access facilities</b>		
<b>Sl.No.</b>	<b>Per Unit Capacity</b>	
(i)	STM-1	
(ii)	STM-4	
(iii)	STM-16	
(iv)	STM-64	
<b>4. Co-location Charges:</b>		
5. Any other charges required to be given but not specified at serial numbers 1 to 4 of this Form		

**Part-III**

**TIME PERIOD FOR PROVISION OF ACCESS FACILITATION SERVICES  
AND CO-LOCATION SERVICES BY OWNER OF CABLE LANDING  
STATION**

(See regulation 4,6,9 and 15)

<b>Activity (1)</b>	<b>Days (Time limit)</b>
<b>A. TIME PERIOD FOR PROVISION OF ACCESS FACILITATION SERVICES</b>	
1. Eligible Indian International Telecommunication Entity, being Access Seeker submits Request to Owner of Cable Landing Station	Day 1
2. Owner of Cable Landing Station checks feasibility and reverts to eligible Indian International Telecommunication Entity, being Access Seeker with acceptance or modified schedule for access facilitation and testing; provides proforma for invoice	Day 11 (max 10 days)
3. Date of firm demand (x is the time taken by of eligible Indian International Telecommunication Entity, being Access Seeker to sign the access facilitation Agreement including the payment as per invoice)	Day 11+x
4. Eligible Indian International Telecommunication Entity, being Access Seeker arranges and provides backhaul (y is the time taken by eligible Indian International Telecommunication Entity to arrange and provide the backhaul circuit)	Day 11+x+y
5. Owner of Cable Landing Station to complete all actions with a view to facilitate Access to reference Capacity	Day 22+x+y (max 10 days)
6. Owner of Cable Landing Station extend Reference Capacity to Cable Landing Station and provide cross connection immediately but not more than 2 days after completion of step 5.	Day 22/24 +x+y (max 2 days)
7. Any other details required to be given but not specified at serial numbers 1 to 6 of this Form	

<b>B. TIME PERIOD FOR PROVISION OF CO-LOCATION SERVICES</b>	
1. Eligible Indian International Telecommunication Entity, being access seeker submits Request to Owner of Cable Landing Station	Day 1
2. Owner of Cable Landing Station checks feasibility and reverts to eligible Indian International Telecommunication Entity, being Access Seeker with acceptance or rejection with reasons and with alternative proposal	Day 11 (max 10 days)
3. Owner of Cable Landing Station provides provision of Co-location at Cable Landing Station (z is the time taken by of eligible Indian International Telecommunication Entity, being Access Seeker to sign the co-location Agreement and payment of charges)	Day 12+z
4. Any other details required to be given but not specified at serial numbers 1 to 3 of this Form	

**PART-IV**

**REQUEST FOR CO-LOCATION FACILITY AND SERVICES**

(See regulation 20)

**Application format for Request to Co-location Facility at Cable Landing Station for International Submarine Cable Capacity**

M/s .....(Name of access seeker) hereby request for Co-location facility, which is subject to the Terms and Conditions published in “Cable Landing Station-Reference Interconnect Offer (CLS-RIO) made under the provisions of the Telecommunication Access to Essential Facilities (including Landing Facilities for Submarine Cables) at Cable Landing Stations regulations, 2007.

M/s .....furnish the necessary details as follows.

1. Name of the company and its Address	
2. Billing Address	
3. Contact Person 3.1 Name: 3.2 Phone No: 3.3 Email: 3.4 Fax:	
<b>4. Particulars of eligible Indian International Telecommunication Entity, being Access Seeker:</b>	
4.1 International Long Distance Operator	
4.2 Internet Service Provider	
4.3 Licence number:	
4.4 Date of issue of Licence	
<b>5. Details of eligible Indian International Telecommunication Entity requesting for Co-location</b>	

5.1 Date of Application			
5.2 Application Reference No.			
5.3 Approval for Physical Access is sought for the purpose of:			
5.4 Reference Date /Time of Access			
5.5 Estimated Duration of Access			
5.6 Name of Person(s) for which Physical Access is required	No	Name of Person	Contact No.
	1		
	2		
	3		
	4		
5.7 The Co-location site at which Co-location space is requested:			
5.8 Purpose of accessing submarine cable capacity:			
5.9 Co-location equipment proposed to be installed:			
5.10 The space and power requirements:			
5.11 The floor loading of the Co-location equipment:			
5.12 The capacity of the Transmission Tie-Cable required:			
5.13 The type of optical fibre cable to be used:			
<b>6. On Behalf of eligible Indian International Telecommunication Entity</b>			
6.1 Name:			

6.2 Designation	
6.3 Contact Number	
6.4 Fax Number	
6.5 e-mail id	
6.6 Company Seal	
6.7 Signature	
<b>7. Owner of Cable Landing Stations' (Name) reply to the Requesting eligible Indian International Telecommunication Entity</b>	
7.1 Application returned – incomplete / illegible	
7.2 Not Approved	
7.3 Reasons for rejection	
<b>8. Approved Subject to Details &amp; Conditions given in the attached Letter of Authorization</b>	
8.1 Alternative Date & Time	
8.2 Alternative co-location site (if applicable)	
8.3 Owner of Cable Landing Station Approval Code	
<b>9. On Behalf of Owner of Cable Landing Station</b>	
9.1 Name	
9.2 Designation	
9.3 Contact Number	
9.4 e-mail id	
9.5 Fax No.	
9.6 Company Seal	
9.7 Signature	

**PART-V**  
**CO-LOCATION EQUIPMENT INSTALLATION AND MAINTENANCE**  
**GUIDELINES**

**(See regulation 17)**

**1. INSTALLATION OF EQUIPMENT AT CO-LOCATION SPACE**

**1.1 Installation of Co-location equipment**

(a) Prior to commencing installation of its Co-location equipment, the eligible Indian International Telecommunication Entity, being access seeker must submit detailed installation plans and installation schedule.

(b) The eligible Indian International Telecommunication Entity, being access seeker, must ensure that the floor loading of its Co-located equipment shall be limited to as specified by Owner of Cable Landing Station. The eligible Indian International Telecommunication Entity, being access seeker shall certify that the floor loading limit will not exceed as specified.

(c) The eligible Indian International Telecommunication Entity, being access seeker must install its Co-location equipment in the Co-location space within forty five (45) (working days after the final site inspection or as mutually agreed. If the eligible Indian International Telecommunication Entity, being access seeker, failure to complete installation is attributable to circumstances beyond the reasonable control of eligible Indian International Telecommunication Entity, Owner of Cable Landing Station will grant a reasonable extension of time for installation to the eligible Indian International Telecommunication Entity, at his request. Eligible Indian International Telecommunication Entity, being access seeker, request under this clause must describe the circumstances beyond its control and such request must be received prior to the expiry of the aforementioned forty five (45) working day period.

(d) The eligible Indian International Telecommunication Entity, being access seeker must not locate equipment other than Co-location equipment in the Co-location space.

**1.2 Optical Fibre Cable**

Unless otherwise agreed by the Parties, the eligible Indian International Telecommunication Entity, being access seeker, must not install more than two physical optical fibre cables in the Co-location Space and up to the lead-in manhole outside Co-location space.

### **1.3 Power & Earth**

Owner of Cable Landing Station shall, if the eligible Indian International Telecommunication Entity, being access seeker so desires, designate and provide the Exchange Earth and Power Distribution Point for the eligible Indian International Telecommunication Entity. The eligible Indian International Telecommunication Entity, being access seeker, shall pay Owner of Cable Landing Station the charges for the provision of the Exchange Earth and power installation and termination in accordance with Owner of Cable Landing Station published Co-location price list.

### **1.4 Interference**

Each Party shall ensure that its Co-location equipment does not cause any interference to the other Party's equipment, plant, facilities, Networks and the equipment of other occupying eligible Indian International Telecommunication Entity, being access seeker, in the Co-location space, including when installing equipment. In the event of any interference, the Parties shall take in good faith reasonable measures to resolve the problem promptly. Where the eligible Indian International Telecommunication Entity's equipment is causing interference to existing equipment and the interference cannot be resolved, the eligible Indian International Telecommunication Entity shall remove the source of interference immediately.

### **1.5 Standard Operating Procedures and Safety**

(a) In relation to the installation, operation and maintenance of its Co-located equipment located in the Co-location Space, the eligible Indian International Telecommunication Entity, being access seeker, must comply with Owner of Cable Landing Station Standard Operating Procedures for Co-location space and any written instructions, which are provided to the eligible Indian International Telecommunication Entity by Owner of Cable Landing Station.

(b) In relation to physical access to the Co-location space, the eligible Indian International Telecommunication Entity shall comply with Owner of Cable Landing Station Standard Physical Access Procedures as amended from time to time and any written instructions, which are provided to the eligible Indian International Telecommunication Entity by Owner of Cable Landing Station.

(c) Owner of Cable Landing Station will get the Co-location space inspected by the field units to which access has been approved for the installation, modification, replacement or addition of the equipment to verify that the eligible Indian International Telecommunication Entity, being access seeker, is undertaking the installation, modification,

maintenance, operation, replacement or addition of the equipment in accordance with the plan and such other written instructions provided to the eligible Indian International Telecommunication Entity.

(d) The eligible Indian International Telecommunication Entity, being access seeker, shall consult with and obtain the consent of Owner of Cable Landing Station before carrying out any hacking or drilling work on the floor, wall and ceiling slabs.

(e) No work shall be performed by the eligible Indian International Telecommunication Entity, being access seeker, on any of equipment, facilities, plant or Networks including, but not limited to earth bars and Power Distribution Points/boards of the Owner of Cable Landing Station.

(f) Owner of Cable Landing Station staff shall carry out all the interconnection of the eligible Indian International Telecommunication Entity, being access seeker, Co-location equipment to Owner of Cable Landing Station Earth bars and Power Distribution Points/boards. Charges for the work shall be borne by the eligible Indian International Telecommunication Entity, as set out in Owner of Cable Landing Station published Co-location price list.

(g) Where, during the course of installation, operation, maintenance, replacement or repair of its Co-located equipment the eligible Indian International Telecommunication Entity, being access seeker, causes any damage to Owner of Cable Landing Station Co-location site, plant, network, equipment or facilities, the eligible Indian International Telecommunication Entity, being access seeker, must report the damage immediately to Owner of Cable Landing Station. Owner of Cable Landing Station shall rectify the damage in any way it deems fit, the cost and expense thereof shall be borne by the eligible Indian International Telecommunication Entity, being access seeker.

## **1.6 Final Inspection**

(a) Upon completion of the installation of the Co-location equipment in the Co-location space, the eligible Indian International Telecommunication Entity, being access seeker, shall advise Owner of Cable Landing Station and request Owner of Cable Landing Station to conduct a final inspection and confirm that the installation conforms with the approved detailed installation plans.

(b) Where the final inspection reveals that the installation does not materially conform to the approved detailed installation plans; Owner of

Cable Landing Station shall notify the eligible Indian International Telecommunication Entity, being access seeker. The eligible Indian International Telecommunication Entity, being access seeker must reinstall or take other appropriate corrective action within ten (10) working days of notification, or such other time as is otherwise agreed.

(c) If the eligible Indian International Telecommunication Entity, being access seeker, fails to reinstall or take the appropriate corrective action referred to in clause **1.6(b)** Owner of Cable Landing Station may take appropriate corrective action including removal of the eligible Indian International Telecommunication Entity's Co-location Equipment. The reasonable costs for the corrective action shall be borne by the eligible Indian International Telecommunication Entity, being access seeker.

## **2. MAINTENANCE OF CO-LOCATION EQUIPMENT IN CO-LOCATION SPACE**

2.1 The eligible Indian International Telecommunication Entity, being access seeker, shall be responsible for the operation and maintenance of its Co-location equipment or as mutually agreed with the Owner of Cable Landing Station.

2.2 If a fault, defect or problem with the Co-location equipment of the eligible Indian International Telecommunication Entity, being access seeker, causes or may cause damage to the Co-location space or Owner of Cable Landing Station facilities, the eligible Indian International Telecommunication Entity, being access seeker must:

- (a) notify Owner of Cable Landing Station as soon as practicable; and
- (b) repair the fault, defect or problem or take other appropriate corrective action immediately.

2.3 The Co-location equipment must only be used by the eligible Indian International Telecommunication Entity, being access seeker, for the purpose of connecting the eligible Indian International Telecommunication Entity's Network to POI, or a Submarine Cable Landing Station under this Schedule.

### **2.5 Compliance**

(a) The eligible Indian International Telecommunication Entity, being access seeker, must ensure that its employees, agents and approved subcontractors comply with the provisions of this document including all reasonable procedures and directions of Owner of Cable Landing Station as notified from time to time.

(b) The eligible Indian International Telecommunication Entity, being access seeker, must comply with all laws, standards, authorizations and leases when performing works.

(c) The eligible Indian International Telecommunication Entity, being access seeker, must ensure that it has all necessary permits, approvals and leases from any person, governmental, regulatory or relevant authority in order to perform works.

d) The eligible Indian International Telecommunication Entity, being access seeker, will vests no right, title or proprietary interest in the Co-location site.

## **2.8 Marking of Equipment**

The Co-location equipment must be marked by the eligible Indian International Telecommunication Entity, being access seeker, to clearly indicate that it is leased by the eligible Indian International Telecommunication Entity, and in such manner as Owner of Cable Landing Station may reasonably direct.

**PART VI**

**FORMAT OF LETTER OF AUTHORIZATION FOR PHYSICAL ACCESS  
TO CO-LOCATION SPACE**

**(See regulation 15)**

This Letter of Authorization is issued in conjunction with the final approval given to the request application via reference \_\_\_\_\_ date \_\_\_\_\_

It must be carried in the possession of the senior person at all time during the duration of access granted to the Co-location space as indicated below

Location of Co-location space granted for Access:

[Location / Building Name]

Photo Identity

1. Approved Date of Access
2. Approved Time of Access
3. Approved Duration of Access

On Behalf of Owner of Cable Landing Station

Signature .....

Name .....

Contact Phone Number.....

Fax No.....

**PART VII**  
**NAME AND DETAILS OF AUTHORIZED PERSONNEL**  
**(See regulation 17)**

Sl.No.	Eligible Indian International Telecommunication Entity(Access Seeker) Name / Contractor Name	Identity Card No.	Contact Tel. No.	Fax No.
1				
2				
3				
4				
-				
-				
-				
-				
-				
-				
-				
-				

## **Chapter 6**

### **Issues for consultation**

The draft Regulations in Chapter 5 of the consultation paper are framed for enabling the access to essential facilities and Co-location at cable landing station in the time bound manner with fair and non-discriminatory basis. A number of issues arise in the context of the subject brought in the consultation paper and the responses of the stakeholders are solicited on the issues listed below:

1. (a) Is regulation required to be issued by the TRAI for mandating CLS-RIO to access the essential facilities and co-location at cable landing stations?
  - (b) If yes, whether the draft regulations (at Chapter 5) framed for access to essential facilities including landing facilities and Co-location at Cable Landing Station (CLS), enable the timely provision with fair, equitable, transparent and non-discriminatory basis to requesting eligible Indian International Telecommunication Entity from the Owner of Cable Landing Stations?
  - (c) In case considered inadequate, please give reasons and suggest any other additional/ alternative regulations required to achieve the basic objective of timely, fair and non-discriminatory access at CLS and Co-location with reasons thereof.
  
2. (a) Whether the charges for Co-location and access to CLS for landing facilities should be specified by TRAI or should it be left to commercial negotiations between an eligible Indian International Telecommunication Entity and the Owner of Cable Landing Station?
  - (b) Give reasons for your comments.
  - (c) If the above charges are to be specified by TRAI, what elements are to be taken in to consideration and which costing methodology is to be employed? Give cost of individual elements separately and detailed calculation sheet?
  
3. (a) Should there be any terms and conditions regarding the minimum commitment period for Co-location service at Cable Landing Station?
  - (b) If yes, what should be the minimum period and why?
  - (c) If not, give reasons?

4. Whether the leasing of backhaul for the interim period by the Owner of Cable Landing Station to an eligible Indian International Telecommunication Entity to be mandated or left for mutual negotiations between Service Providers. Give reasons for your comments?
5. What are the other non-price discriminatory practices of Owner of Cable Landing Station that are required to be addressed through proposed regulations?
6. Whether access facilitation to the leased fiber pair (Dark Fiber) from Owner of International submarine cable also need to be regulated? Give reasons for your answer?
7. Should the Owner of Cable Landing Station be mandated to provide the costing elements considered and costing methodology employed in arriving at the cost for access facilitation for International submarine cable capacity, landing access for Cable and Co-location to ITE? Give reasons for your answer?
8. What should be the terms and conditions for provision of landing facilities at cable landing station? Give reasons for your answer?
9. Whether these proposed regulations also to be mandated for the Cable Landing Stations set up by ISPs for International Gateway for Internet?
10. Is there any need of facilitation by the TRAI if Owner of Cable Landing Station and eligible International Telecommunication Entity fail to enter into an agreement?
11. Any other suggestions.

**No. 16-03/2006-BS-I  
Government of India  
Ministry of Communications & IT  
Department of Telecommunications  
Sanchar Bhawan, 20- Ashoka Road,  
New Delhi – 110 001.  
(CS Cell)**

Dated 23.11.2006

To

The Chairman,  
Telecom Regulatory Authority of India,  
A-2/14, Safdarjung Enclave,  
New Delhi.

**Subject: TRAI Recommendations dated 16th December 2005 on  
“Measures to Promote Competition in International  
Private Leased Circuits (IPLC) in India”.**

With reference to the TRAI recommendation on the above mentioned subject, it is to be stated that the competent authority has accepted the following two recommendations:

1. Introduction of Resale in IPLC Segment.
2. Access to Essential Facilities including Landing Facilities for Submarine cables at Cable Landing Stations.

It is requested that the detail terms and conditions in respect of these two recommendations may please be submitted to DoT. Relevant clauses of the Licence agreement shall be suitably amended upon receipt of the detail of terms and conditions from TRAI.

With regards,

Sd/-  
(G.P. Srivastava)  
DDG (CS)

**No. 16-3/2006-BS-I  
Government of India  
Ministry of Communications & IT  
Department of Telecommunications  
Sanchar Bhawan, 20- Ashoka Road,  
New Delhi – 110 001.  
(CS Cell)**

Dated 15<sup>th</sup> January 2007

**To  
ALL ILD Licensees**

**SUB: Amendments in International Long Distance Licence  
Agreement**

Kindly find enclosed herewith the annexure (01 page) containing amendments made in various clauses of the existing Licence Agreement for International Long Distance (ILD) Services effective from 15.01.2007. It is requested that the authorized signatory of your company may attend this office to sign and stamp the amendments (Annexure) within a period of 10 days from the date of issue of this letter.

Other terms and conditions of the existing ILD licence (including all amendments) shall remain unchanged.

Sd/-  
(S.T.Abbas)  
Director (CS-III)  
For and on behalf of President of India

Copy to:

1. Chairman, TRAI w.r.t. D.O.No.416-3/2006-FN dt.07.12.2006
2. Sr.DDG(TEC)
3. Sr.DDG(LF), DoT.

**Annexure****Amendments made in the Licence Agreement for International Long Distance Services effective from 15.01.2007**

<b>Clause No.</b>	<b>Existing Clause</b>	<b>Amended Clause</b>
2.2(c)	Equal access to bottleneck facilities for international bandwidth owned by national and international band width providers shall be permitted for a period of five years from the date of issue of the guidelines for grant of licence for ILD service or three years from the date of issue of first licence for ILD service, whichever is earlier, on the terms and conditions to be mutually agreed.	Equal access to bottleneck facilities at the Cable Landing Stations (CLS) including landing facilities for submarine cables for licensed operators on the basis of non discrimination shall be mandatory. The terms and conditions for such access provision shall be published with prior approval of the TRAI, by the Licensee owning the cable landing station. The charges for such access provision shall be governed by regulations / orders as may be made by the TRAI / DoT from time to time.
17.5	The terms and conditions of interconnection including standard interfaces, points of interconnection and technical aspects will be such as mutually agreed between the service providers.	The terms and conditions of interconnection including standard interfaces, points of interconnection and technical aspects will be such as mutually agreed between the service providers within the framework of orders, directions or regulations as may be issued from time to time by TRAI, under TRAI Act 1997.
17.10.	The network resources including the cost of upgrading / modifying interconnecting networks to meet the service requirements of the service will be provided by service provider seeking interconnection. However, mutually negotiated sharing arrangements for cost of upgrading / modifying interconnecting networks between the service providers shall be permitted.	The network resources including the cost of upgrading / modifying interconnecting networks to meet the service requirements of the service will be provided by service provider seeking interconnection. However, mutually negotiated sharing arrangements for cost of upgrading / modifying interconnecting networks between the service providers shall be permitted keeping in view the orders, directions or regulations issued by TRAI / DoT from time to time.

**ANNEXURE 3****International Long Distance Operators (ILDs) as on 20.03.2007.**

<b>S.N.</b>	<b>Name of the Licensees (ILD)</b>	<b>Licence Signed On</b>
1	M/s Reliance Infocomm Limited	Licence Signed on 25.02.02.
2	M/s Bharti Airtel Limited	Licence Signed on 14.03.02
3	M/s Data Access(India) Limited	Licence Signed on 27.03.02
4	M/s Bharat Sanchar Nigam Ltd	Licence Signed on 29.01.03
5	M/s Videsh Sanchar Nigam Ltd.	Licence Signed on 05.02.04
6	M/s i2i Enterprise Ltd.	Licence Signed on 11.07.06
7	M/s AT&T Global Network Services India Pvt. Ltd.	Licence Signed on 09.10.06
8	M/s Hutchison Essar South Ltd.	Licence Signed on 13.11.06
9	M/s Sify Communications Ltd.	Licence Signed on 21.11.06
10	M/s Dishnet Wireless ltd.	Licence Signed on 13.12.06
11	M/s BT Telecom India Pvt. Ltd.	Licence Signed on 20.02.07

*Source: DoT Website*

**List of Abbreviations**

BPO	Business Process Outsourcing
C & MA	Construction and Maintenance Agreement
CLS	Cable landing Station
CLS-RIO	Cable landing Station- Reference Interconnect Offer
CPA	Capacity Purchase Agreement
DDF	Digital Distribution Frame
DLC	Domestic leased Circuit
FDF	Fiber Distribution Frame
Gbps	Giga bits per seconds
GDP	Gross Domestic Product
ILD	International Long Distance
ILDO	International Long Distance Operator
IPLC	International Private Leased Line
IRU	Indefeasible Right of Use
ISP	Internet Service Provider
	Eligible Indian International Telecommunication
ITE	Entity
ITES	IT Enabled Services
MIU	Minimum Investment Units
NMS	Network monitoring System
NOC	Network Operation Centre
NRAs	National Regulatory authorities
O & M	Operation and Maintenance
OCLS	Owner of Cable Landing Station
PoP	Point of Presence
RIO	Reference Interconnect Offer
SLA	Service Level Agreement
Tbps	Tera bits per second
UNS	Unbundled Network Service