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**AGNSI/TRAI/I&FN/CLS-CP/2012-13**

**November 6, 2012**

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**Telecom Regulatory Authority of India**  
Mahanagar Doorsanchar Bhawan,  
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**Subject: Consultation Paper [No. 14/2012 dated October 19, 2012] on Estimation of Access Facilitation Charges and Co-location Charges at Cable Landing Stations**

Ref.: TRAI letter No. 416-3/2010-I&FN dated 5<sup>th</sup> September 2012  
TRAI letter No. 416-3/2010-I&FN dated 4th April 2012  
TRAI letter No. 416-3/2010-I&FN dated June 22 2011  
TRAI letter No. 416-3/2010-I&FN dated July 8 2011  
Our letter No. AGNSI/CLS/2011-12 dated August 16 2011  
Our letter No. AGNSI/TRAI/I&FN/CLS-CP/2012-13 dated April 19,2012  
Our letter No. AGNSI/TRAI/I&FN /2012-13 dated September 18,2012

Dear Sir,

This is with reference to the captioned Consultation Paper [No. 14/2012] released by Hon'ble Authority on 19<sup>th</sup> October 2012.

At the outset, we would like to sincerely thank the Hon'ble Authority for issuing the amendment on the International Telecommunication Access to Essential Facilities at Cable Landing Stations (Amendment) Regulations, 2012 as well as for the captioned consultation document. AT&T Global Network Services India Private Limited ("AT&T") respectfully submits these comments on the TRAI Consultation Paper on Estimation of Access Facilitation Charges and Co-location Charges at Cable Landing Stations, issued on 19<sup>th</sup> October 2012 (the "Consultation Paper").



Additionally, through our industry association "ACTO", we have also submitted detailed inputs on the below mentioned questions which we fully support.

We trust you will find our submissions in order and will duly consider the same while finalizing and determining the charges.

Thanking you,

Respectfully submitted,  
for **AT&T Global Network Services India Private Limited**

*Naveen Tandon*

**Naveen Tandon**  
**Authorised Signatory**

Encl.: As above

**Comments of AT&T on the Consultation Paper on  
Estimation of Access Facilitation Charges and Co-location Charges  
at Cable Landing Stations**

**Introduction and Summary**

AT&T Global Network Services India Private Limited ("AT&T") respectfully submits these comments on the TRAI Consultation Paper on Estimation of Access Facilitation Charges and Co-location Charges at Cable Landing Stations, issued on October 19, 2012 (the "Consultation Paper"). AT&T is licensed to provide National Long Distance (NLD), International Long Distance (ILD) and Internet Service Provider (ISP) services in India and began providing these services in 2007.

Access to submarine Cable Landing Stations (CLS) is an essential network element for almost every telecom network services requiring international connectivity, and access barriers to these facilities can constrain the competitiveness of telecom operators and harm the growth of the international telecom market. AT&T's comments filed on April 19, 2012 on Consultation Paper No. 08/2012 noted that CLS access charges continue to be unreasonably high and result in artificially inflated prices for international services in India. AT&T urged the TRAI to address these important concerns by requiring access facilitation charges (AFC), operations and maintenance charges (O&M) and co-location charges (CLC) to be established by the Authority on the basis of cost. Other parties in the proceeding, including owners of cable landing stations as well as service providers and other interested parties, made similar recommendations.

AT&T therefore welcomes the Authority's decision to amend its regulations to change the existing procedures for the establishment of access facilitation charges (AFC) and to provide for the determination of these charges by the Authority. (*See Notification, International*

*Telecommunication Access to Essential Facilities at Cable Landing Stations, (Amendment) Regulations, 2012 (No. 21 of 2012), October 19, 2012.)* In accordance with this approach, the Authority has analyzed cost data submitted by the OCLS to determine these charges and requests comment on its analysis and proposed charges as described in the Consultation Paper. AT&T strongly supports the Authority's efforts to establish more reasonable and cost-based access charges for these key facilities, and is pleased to offer some suggested amendments to these proposals that would further benefit the Indian market. AT&T's major suggestions are as follows.

*First*, AT&T believes that the Authority should require additional access facilitation arrangements to be made available that do not require the use of, or include charges for Digital Cross Connection (DXC) equipment, ODF equipment associated with the DXC, and Dense Wave Division Multiplexing (DWDM) equipment that is not required as a technical matter for all these arrangements but which accounts for substantial shares of the access costs identified in the Consultation Paper. This amendment would be in accordance with the Authority's regulation requiring that the AFC shall be "determined on the basis of the cost of the network elements involved in the provision of access." (*Access to Essential Facilities at Cable Landing Stations Regulations, 2007 (5 of 2007), Chapter II, Paragraph 10(1)(b).*)

*Second*, based on industry norms for these charges, operations and maintenance charges (OPEX) should not exceed 7 percent of capital costs (CAPEX) for complex active equipment and no higher than 2 percent of CAPEX for passive equipment. Establishing OPEX charges at the level of 30 percent of CAPEX for both active and passive equipment, as proposed by the Consultation Paper, would far exceed any reasonable level of cost for these services.

AT&T describes these suggestions in more detail in its comments below and would be pleased to provide any additional information that would be helpful to the Authority. AT&T hopes that the Authority will swiftly complete this proceeding and establish new rates in accordance with its proposals and AT&T's suggested changes. The Authority should require these new rates to be applied to all access arrangements at India's cable stations from the effective date of its final order.

### **Comments on the Issues for Consultation**

- 1. Cost data and costing methodology used for estimating the access facilitation charges and co-location charges in this consultation paper. In case of a different proposal, kindly support your submission with all relevant information including cost and preferred costing methodology.*

#### **Response to Question No. 1:**

The Authority has sought to identify the network elements required to provide access facilitation at CLS and alternative locations and has analyzed current cost data provided by the OCLS to determine the directly attributable cost of access at the 10C/STM-64 level. AT&T agrees with this overall approach, which properly recognizes that the predominant form of access is now at the 10G/STM-64 level. The TRAI has also appropriately based its calculations of apportioned capital cost on fully loaded equipment and has applied a utilization factor of 70 percent in calculating average annual CAPEX. Since the relevant CLS equipment may, if necessary, be augmented on an economic basis within a reasonable timeframe, this is a conservative utilization factor that provides more than adequate buffer capacity to meet unexpected near term increases in demand.

AT&T also recommends the adoption of the following refinements to the Authority's analysis:

**A. Some Listed Network Elements Should Not be Required**

Over 85 percent of the capital cost used as the basis of the proposed charges for access facilitation at the CLS, and approximately 45 percent of the capital cost used as the basis of the proposed charges for access facilitation at alternate co-location sites, is for Digital Cross Connection (DXC) equipment. (See Consultation Paper, Tables 3, 4(a) & 4(b).) However, as AT&T noted in its comments filed on April 19, 2012, much of the international submarine cable capacity landing in India, including much of AT&T's capacity, requires no use of any DXC equipment at the cable station or any alternate co-location site, or of any optical distribution frame (ODF) equipment associated with the DXC. Instead, this capacity uses Direct Wavelength Access (DWA) that is specifically designed to access the SLTE directly without passing the signal through any DXC equipment at the cable station in order to ensure that mesh network nodes function efficiently.

There is no reason for the Authority to approve mandatory CAPE and OPEX charges for this unnecessary equipment. There is certainly no basis to the claims made by the OCLS that the provision of access facilitation using only the ODF linked directly to the submarine cable is neither "appropriate" or "possible" (See Consultation Paper, ¶ 14). Indeed, as noted by the Consultation Paper (¶ 13), two of the OCLS, BSNL and Reliance, do not make these claims and, rather, state that access at the 10G level only requires the use of the ODF and that access for lower capacity merely requires additional multiplexing.

The further argument by the OCLS that they do not control the consortium-owned network elements at the CLS, even if correct, also provides no justification for the use of this unnecessary equipment. In fact, the OCLS operate the CLS as the consortium landing parties and always have full operational control over all consortium equipment at the station.

An important concern is that mandating the payment of substantial CAPEX and OPEX charges for the use of unnecessary equipment, as proposed by the Consultation Paper, artificially inflates the level of the proposed charges for these arrangements, and therefore fails to follow the Authority's regulation requiring that the AFC shall be "determined on the basis of the cost of the network elements involved in the provision of access." (*Access to Essential Facilities at Cable Landing Stations Regulations, 2007 (5 of 2007)*, Chapter II, Paragraph 10(1)(b).). To meet this standard, the Authority should require additional access facilitation arrangements to be made available that do not automatically include CAPEX and OPEX charges for the use of DXC and ODF equipment that is not required for all arrangements. These alternative access arrangements are described in response to Question No. 4 below.

Direct Wavelength Access STM-64 and STM-16 capacity connected to consortium system provided System Interface Equipment (SIE) does not require the use of a DXC and associated ODF as described above, and it is likely that the even larger wavelengths that may be used in the future also will not require this equipment. However, there could be infrequent occasions when an ITE may need to access the submarine cable system at capacity levels below those supported directly by the consortium-provided and funded SLTE or SIE equipment, for example at STM-1 or STM-4 levels. In these specific situations, the use of a DXC is required and the inclusion of the apportioned cost of the DXC and associated ODF is consistent with the Authority's regulation requiring that the AFC shall be "determined on the basis of the cost of the network elements involved in the provision of access." To address such circumstances, AT&T has included access arrangements with DXC equipment in the list of categories for which the Authority should prescribe uniform fees for ACF in response to Question No. 4 below.

Similar concerns regarding CAPEX and OPEX charges for unnecessary equipment apply to Dense Wave Division Multiplexing (DWDM) equipment, which comprises over 40 percent of the capital cost used as the basis of the proposed charges for access facilitation at alternate co-location sites. (See Consultation Paper, Tables 4(a) & 4(b).) Specifically, DWDM equipment is not required for alternate co-location sites situated 2 kilometers or less from the CLS. This is because the consortium-owned SLTE equipment at the cable station includes transponder cards that provide the same functionality as DWDM equipment for a minimum distance of about 2 kilometers. Accordingly, the access facilitation charges for alternate co-location sites located within 2 kilometers of the cable station, which do not require DWDM equipment, should not include CAPEX and OPEX charges for this equipment. Instead, the TRAI should require additional access facilitation arrangements to be provided so that arrangements that do not require this equipment can avoid these charges.

**B. OPEX Should be Reduced**

As noted below in response to Question No. 3, the Authority's identification of operations and maintenance costs (OPEX) as being 30 percent of the capital costs of the network elements used to provide access facilitation is based on no apparent evidence and establishes these charges at a very high level compared to industry norms. To reflect industry practice more closely and avoid establishing the relevant charges at overly high levels, this amount should be reduced to 7 percent of CAPEX for complex active equipment and OPEX charges for passive equipment should be no higher than 2 percent.

**C. Error in License Fee Calculation**

The Authority's calculations of access facilitation charges in Tables 7(a) and 7(b) and co-location charges in Tables 9(a) and 9(b) make a mathematical error in calculating the 8 percent



license fee that results in erroneous total charges. Specifically, each of these tables calculates the “Charges per annum with License fee @ 8%” by *dividing* by “1-0.08,” rather than the correct approach of *multiplying by 108 percent*. The Authority’s approach results in an inflated charge, as demonstrated if this approach is applied to a hypothetical base amount of 100, resulting in 108.69, rather than the correct figure of 108.

**D. All Parties Should Have Access to OCLS Cost Data**

AT&T also notes that it and other stakeholders have had no opportunity to review the cost data submitted by the OCLS in this proceeding, which was not included in their public comments on Consultation Paper No. 08/2012, and are therefore limited to the information concerning that data that is provided in the Consultation Paper. As described in AT&T’s comments filed on April 19, 2012, the Authority should allow all parties to have access to the cost data submitted by the OCLS. These procedures, which should be supported by appropriate protections to protect confidential information, would allow all parties to submit comments on this evidence for consideration by the Authority.

**2. *On the power requirement of the transmission equipment i.e. DWDM, DXC equipped with different capacities, supplied by different equipment manufacturers.***

**Response to Question No. 2:**

The Consultation Paper reports (¶ 31) that the two OCLS submitted data showing electricity consumption varying from 2 KVA to 6 KVA per rack for different transmission equipment. In AT&T’s experience, a rack full of DWDM equipment uses an average of 1.5 KVA per annum.

**3. *Percentage used for OPEX and capacity utilisation factor with supporting data on each OPEX item specially on space and power consumption of various equipments.***

**Response to Question No. 3:**

The Authority sets operations and maintenance costs (OPEX) at the level of 30 percent of the capital costs of the network elements used to provide access facilitation (CAPEX). The Authority states that it uses this percentage amount rather than cost data to determine these costs because of a large variation in the cost data provided by the OCLS. (See Consultation Paper, ¶ 32.) However, the Authority provides no information in the Consultation Paper concerning the basis of this percentage and states that it will revisit its calculation of operating cost after receiving stakeholders' comments on the Consultation Paper.

AT&T believes that the percentage amount identified by the Authority should be reduced significantly, since it far exceeds industry norms for operations and maintenance costs, and therefore would result in a large over-recovery of these costs by the OCLS. Instead, to reflect industry norms for these costs, this percentage amount should be reduced to 7 percent of CAPEX for complex active equipment and OPEX charges for passive equipment should not exceed 2 percent of the CAPEX for this equipment.

In AT&T's experience, based on its world-wide operations, a normal annual operations and maintenance fee for complex active equipment is around 7 percent of the capital value. Additionally, operators are not generally charged operations and maintenance fees for passive equipment, such as ODFs, patch cords and cabling, because this passive equipment rarely requires maintenance or replacement, and may be readily replaced with spare equipment at minimal cost. A charge not exceeding 2 percent of CAPEX is therefore more than sufficient to cover these costs.

4. *Whether ceiling of uniform Access Facilitation Charges may be prescribed for all Cable Landing Stations in two categories i.e. AFC at CLS and AFC at alternate Co-location, or*

*these charges should be dependent on submarine cable system or location of cable landing stations?*

**Response to Question No. 4:**

AT&T supports the use of uniform fees to provide predictability for stakeholders as well as to reduce the substantial administrative work by the TRAI that would be required to establish separate fees for each cable station. Additionally, provided that the underlying costs are similar, uniform fees are consistent with the requirement of the Authority's regulations that that the AFC should be "determined on the basis of the cost of the network elements involved in the provision of access." (*Access to Essential Facilities at Cable Landing Stations Regulations, 2007* (5 of 2007), Chapter II, Paragraph 10(1)(b).) AT&T also believes that the costs of access arrangements appear to be sufficiently similar at different cable stations and for different submarine cable systems to support the use of uniform rates, provided that these different arrangements require the use of the same equipment.

Uniform rates should not ignore situations, however, where different access arrangements require the use of different equipment that has a substantial impact on costs, as in the case of Digital Cross Connection (DXC) equipment, optical distribution frame (ODF) equipment associated with the DXC, and Dense Wave Division Multiplexing (DWDM) equipment. As stated in response to Question No. 1, much of the international submarine cable capacity landing in India, including much of AT&T's capacity, requires no use of any DXC equipment at the cable station or any alternate co-location site, or of any ODF equipment associated with the DXC, and alternate co-location sites located 2 kilometers or less from the CLS may make no use of DWDM equipment.

Because DXC equipment accounts for over 85 percent of the CAPEX and OPEX at the CLS, and because DXC and DWDM equipment each account for over 40 percent of these

charges at alternate co-location sites, the Authority's access rates should take account of these major cost differences. As previously noted, fees that include significant non-cost-based CAPEX and OPEX charges for access arrangements that do not require this equipment are not "determined on the basis of the cost of the network elements involved in the provision of access" as required by the Authority's regulation.

As stated in response to Question No. 1, the proposed fees, therefore, should be adjusted to take account of the use of these different network elements that result in substantially different costs. Instead of applying one fee for all CLS arrangements and another fee for all alternate co-location arrangements, the Authority should establish different access fees for these arrangements, based on the use or non-use of DXC, associated ODF, and DWDM equipment. Specifically, the Authority should prescribe uniform fees in the following six categories based on the major network elements required for the provision of access:

1. AFC at CLS for capacity requiring DXCs and the associated ODFs;
2. AFC at CLS for capacity not requiring DXCs and the associated ODF;
3. AFC at alternate Co-location for capacity requiring DXCs and the associated ODFs and DWDM equipment;
4. AFC at alternate Co-location for capacity not requiring DXCs and the associated ODFs or DWDM equipment;
5. AFC at alternate Co-location for capacity requiring DXCs and the associated ODFs but not requiring DWDM equipment;
6. AFC at alternate Co-location for capacity requiring DWDM equipment but not requiring DXCs and the associated ODFs.

***5. Whether prescribing the access facilitation charges on IRU basis is required?***

**Response to Question No. 5:**

AT&T does not believe that it is necessary to prescribe these charges on an IRU basis.

**6. *Whether uniform co-location charges may be prescribed or such charges should be location dependent?***

**Response to Question No. 6:**

As noted above in response to Question No. 4, uniform fees provide the advantages of predictability and administrative efficiency, but should be offered in compliance with the requirement of the regulations for cost-based rates. Based on the information provided in the Consultation Paper showing the charges for Chennai and Mumbai varying by approximately 50 percent, it does not appear that co-location costs at all CLS are sufficiently similar to support uniform co-location charges. (See Tables 9(a) & 9(b).) AT&T suggests that the Authority should request the submission of cost data for co-location arrangements at a wider range of CLS to allow consideration of a more complete record on which to base this decision.

**7. *Whether the restoration and cancellation charges should be either a fixed charge or based on a percentage of the AFC. In case of fixed charge, should the present charges be continued or need revision?***

**Response to Question No. 7:**

Charges for the reconnection or restoration of the access facilities, following the termination of an access facilitation arrangement, and for the cancellation of an arrangement, should also be based on the relevant costs of reconnecting the relevant facilities. If such information is not available to the Authority, the OCLS should be requested to provide this information so that the Authority may review the data and establish these rates. It is not clear that cancellation rates based on the annual charge, or a percentage of that charge, as referenced by the Consultation Paper (¶ 41), bear any relationship to cost.

8. *Any other comment related to Access Facilitation Charges, Co-location charges and other related charges like cancellation charges, restoration charges along with all necessary details.*

**Response to Question No. 8:**

AT&T again commends the Authority for the important steps it has taken to establish more reasonable and cost-based rates for these important facilities, which will provide significant benefits to the Indian market. AT&T also respectfully requests the Authority to include the revisions in the rates proposed by the Consultation Paper as described in these comments. The Authority should require these new rates to be applied to all access arrangements at India's cable stations from the effective date of its final order.

AT&T would be pleased to answer any questions concerning these comments.

Respectfully submitted,

6 November, 2012