

No.701/1/2012-CW/TRAI

Dated 19th April, 2012.

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Subject: - Comments on TRAI's Consultation Paper (No.08/2012) dated 22nd March, 2012 on "Access Facilitation Charges and Co-location Charges at Cable Landing Stations".

Sir,

Cable & Wireless Worldwide (C&WW) welcomes TRAI's endeavor of starting long awaited consultation process on "Access Facilitation Charges and Co-location Charges at Cable Landing Stations". We are thankful to the Authority for accepting our Association's (ACTO's) request for reviewing the overdue Access Facilitation Charges (AFC) and Co-location Charges (CLC) which were pending since 2010. The Hon'ble Authority has also recognized this fact in its recommendations dated 12th April, 2011 on "Telecommunications Infrastructure Policy" wherein the Authority has very rightly noted that *"while the TRAI mandated RIO publication has ensured fair practices, the Authority understands the need for a periodic review of RIO pricing especially in view of the constantly changing International bandwidth prices"*

2. The Authority has rightly noted in the Consultation Paper that the cable landing station market in India is highly concentrated. Tata and Bharti together have a 93% market share.

3. We would also urge TRAI to take immediate measures to bring down the CLS access charges, through a prompt charges determination pursuant to this Consultation. We further urge the TRAI to immediately approve the RIO in respect of the EIG / other cable systems (with an appropriate charges determination arising from the current consultation process) to ensure that appropriately licensed carriers are able to obtain prompt and competitive access to this international capacity. This would effectively and immediately benefit the end-users, contribute towards the Government's objective to bridge the digital divide between rural and urban India, and further boost the Indian economy.

4. We believe that the present charges for access facilities at cable landing stations are not cost based. If these are determined based on cost oriented principle then these charges can be reduced by 95% from the present prices of 10G/ STM-64.

5. We are please to submit our comments on the consultation paper which are enclosed with this letter as **Annexure-I**. Additionally, through our industry association ACTO we have also submitted detailed inputs on the consultation paper.

With kind regards,



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Enclosure: A/A

Cable & Wireless Worldwide (CWW) Response to TRAI's consultation paper No 08.2012 dated 22nd March 2012

Introduction

1. Access to Facilities at submarine cable landing stations (CLS) is an essential input for many telecom services. Any unnecessary access restrictions in any forms tend to limit operator's competitive scope to provide international telecom services at an affordable rate. Thus the submarine cable landing stations are critical telecom infrastructure and efforts should be made to ensure that they do not become bottlenecks to telecom service provision.

2. In recognition of the critical nature of Cable Landing Stations (CLS) and the importance of ensuring competitive access to these facilities, the Government of India took action in 2005 to amend the relevant clauses in all ILD Licenses to enable the TRAI to issue regulations to ensure efficient, transparent and non-discriminatory access to essential facilities (including landing facilities) for submarine cables at Cable Landing Stations. Subsequently, on June 7, 2007, the TRAI issued regulations, "International Telecommunications Access to Essential facilities at Cable Landing Stations Regulations, 2007," to increase competition and reduce international bandwidth charges by mandating access to submarine cable landing stations.

3. In the "Explanatory Memorandum to the International Telecommunications Access to Essential facilities at Cable Landing Stations Regulations, 2007," the Authority stated as follows:
"The Authority is of the view that adequate competition is not there at present in accessing international bandwidth. Therefore, to create effective competition in the sector, Cable Landing Station-

Reference Interconnect Offer (CLS-RIO) needs to be mandated for the owner of all cable landing stations including those would be commissioned in the future.” (Explanatory Memorandum to TRAI said Regulation at Page No. 36.)

The Authority also stated that it was “of the view that to have reasonable and fair charges, the need is to have such charges on cost oriented basis.” (Explanatory Memorandum to TRAI said Regulation at Page No. 42.) However, notwithstanding the procedures and costing methodology implemented by the TRAI to achieve this result, current charges for access facilities at cable landing stations are at unreasonably high and are at non-competitive levels. There is therefore an urgent need to revise the access facilitation charges of CLS facilities and their charging pattern.

Analysis of Cable Landing Station (CLS) segment and its Regulations

4. Presently, access barriers in form of exorbitantly high charges for access to facilities at Cable Landing station constrain the competitiveness of telecom operators and are detrimental to healthy growth of the telecom market. From the analysis of data / information provided in the consultation paper, it appears that the present/ proposed CLS access charges are not cost based and also not been determined as per TRAI’s established costing methodology for telecom network services. The Analysis of cost data also suggest that the proposed / present prices for STM64/10G in the case of consortium system are overpriced at least by more than Sixty (60) times and therefore the present CLS access charges should be reduced by 95% per 10G . Market analysis also suggests that in some cases CLS access charges are high by 251 times when compared with comparable jurisdictions.

5. The Authority has very rightly noted from the research report of Plum Consulting that presently, the cable landing station market in India is highly concentrated and two Cable landing station owners (Tata Communications and Bharti) together have a more than 93% market share in this segment. The report has further noted that the competition between international cables is likely to be limited by lack of competition at the cable landing stations.
6. Presently, there are 12 submarine cables which are landing at 10 different cable Landing stations in India, out of these, six are consortium cables, which constitute more than 85% of the Indian lit capacity of International Bandwidth as on 31st March 2011 and these consortium cable landing stations have been managed & controlled by two Cable landing station Owners (i.e. Tata Communications and Bhart). The present exorbitantly high CLS access charges on these cable landing stations have created bottleneck for access to facilities on these cable landing stations.
7. The present the Regulations on Cable landing station access charges / Co-locations etc, do not provide any clear regulatory systems to verify/monitor compliance Regulations and hence which ensure that there is no anticompetitive behavior/ activities from the incumbent operators who are responsible to manage the cable landing stations under the consortium model.
8. We have noted that presently stakeholders are not aware as to what precautionary measures have been taken by TRAI subsequent to issue of CLS Regulations, 2007 to desist the OCLSs, who are vertically integrated operators also, from adopting discriminatory practices while charging AFC / CLC from their own Access / ISP /Network services vis-à-vis access AFC / CLC

charged from other access seekers/ telecom service providers. In this connection attention is invited to TRAI's IUC Regulations dated 9th March, 2009 wherein with a view to ensure non-discrimination TRAI has mandated "reporting requirement" of carriage charges as well as SMS charges in prescribed formats on quarterly basis. Provision of reporting requirements for the OCLSs in the CLS regulations would ensure the principle of "non-discrimination" and would also ensure level playing field.

9. We understand that the present regulations prescribe a ceiling on the CLS access charges .That is to say that the owner of Cable landing station (s) may offer discount on the ceiling tariff i.e. CLS access charges/ Co-location charges, the present regulation does not mandate any reporting of discounts offered by the OCLSs to TRAI, if offered .
10. From the analysis of present CLS access charges and its costing information, it also appears that there was lack of transparency during the finalization of CLS access charges /Co-locations charges, as costing exercise and its results were not shared with stakeholders before notification.
11. The analysis of data/ information as available in the consultation paper indicates that the methodology & process adopted for determination of charges for facilities available at Cable landing station(s) are not consistent with the TRAI's established costing methodology and regulatory principles.
12. The analysis of costing methodology as indicated the consultation paper, it has been noted that there is visible contradiction in what TRAI has stated in Para 3.16 of its Consultation paper dated 22.03.2012 vis-à-vis Para 2.12.2 of the Explanatory Memorandum

to the CLS Regulations, dated 7th June, 2007. Para 3.16 of the consultation paper stipulates that the CLS Regulations, 2007 does not mandate any algorithm or a methodology to calculate AFC / CLC whereas Para 2.12.2 of the CLS Regulations, 2007 stipulates “.....*However, these charges will be approved by the TRAI on the basis of well-established costing methodology already in vogue in the Authority.....*”

13. It is also noted that the present costing methodology does not adjust/ deduct the reimbursements received by the OCLS from the consortium members to arrive the CLS access charges. The Analysis of costing information under consortium system suggest that on an average about Rs 7 Crore (US\$1.41 Mn) per year/ cable landing station is generally being reimbursed to the OCLS for S and T segment ,out of which Rs 4crore pertain to T segment.
14. In the Para 3.18 and 3.19 of the consultation paper , it has been indicated that the owner of cable landing stations have claimed depreciation under various methodology whereas the detailed calculation sheet of OCLSs as indicated in Annexure III to V, have not shown any amount of depreciation for determination of CLS access charges . The Annexure III to V has also not indicated the life of the system/ network elements and under which methodology depreciation has been arrived. It has also been noted that weighted Average Cost of Capital has been arrived on gross block/ cost where as it should be calculated on net block / cost.
15. It has been noted from the Para 3.6 of Consultation paper that the present Access facilitation charges have been 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**, whereas this fact has not been demonstrated in the cost

calculation information as provided in the annexure III to V of the consultation paper.

16. It has been further noted that the cost of building a cable landing station is a fraction of the cost required to build the international submarine cable system. Therefore, the charges for access facilities at cable landing station should also be in the same proportion. The industry information on international cable system suggest that the cost of building of a complete international submarine cable system between Asian countries to European countries are generally ranging from US\$700 Mn to US\$1000 Mn and cost of building a cable landing station (CLS) is also ranging from US\$4 Mn to US\$ 5 Mn.

17. We noted that there is continuous violation of regulation 3 (3) of CLS Regulations of 2007 as some of the CLS-RIOs of OCLSs have been lying pending since February, 2011 for approval with TRAI. We believe that as per the Regulations, it needs to be approved by TRAI within 60 days. We have learnt from the industry that TRAI has given verbal approval / interim approval to the OCLSs whose RIOs are lying pending with the TRAI. We understand that under the present regulations there is no such provision under which TRAI can provide verbal / interim approval to the OCLS. **In view continuous violation of the regulations, it is requested that the determination of the CLS access charges should be decided as soon as possible.**

Issue-wise comments of Cable & Wireless Worldwide(CWW) on TRAI's Consultation Paper on Access Facilitation Charges and Co-location Charges at Cable Landing Stations dated 22.03.2012

Questions

Q1: Which of the following method of regulating Access Facilitation Charges and Co-location charges (AFC & CLC) should be used in India?

- (a) The prevalent method i.e. submission of AFC & CLC by owner of the cable landing station (OCLS) and approval by the TRAI after scrutiny**
- (b) Submission of AFC & CLC by OCLS and approval by TRAI after consultation with other stakeholders**
- (c) Fixing of cost based AFC & CLC by TRAI**
- (d) Left for mutual negotiation between OCLS and the Indian International Telecommunication Entity (ITE)**
- (e) Any other method, please elaborate in detail.**

CWW Comments

1. The nature & services/products of submarine Cable landing station segment is almost similar to the services/ products provided under International Private leased circuit (IPLC) segment, therefore we believe that the same method and process for regulating the Access Facilitation Charges and Co-location charges (AFC& CLC) should also be followed.
2. It is important to recall that during the IPLC tariff fixation process, the Authority had collected the costing data (Financial & Non-Financial) from the incumbent operator i.e. Tata Communications Ltd (formerly VSNL) as well other operators who were providing the same services and same were analyzed. The costing details of incumbent operator (along with estimated cost based price of IPLC-Half Circuit) were also published in the consultation paper for the

comments of the stakeholders. After following the due consultative process, TRAI had decided the charges for IPLC (half circuit). The methodology for costing was also explained/ shared in the consultation paper and final determination of TRAI.

3. We believe that the Access to essential facilities at cable landing stations is a type of natural monopoly and presently it is considered as bottleneck to access the international capacities / bandwidth at the respective cable landing stations in India, especially in the case of those are managed & controlled under consortium system. Therefore, it should not be left for mutual negotiation between OCLS and ITE as incumbent operators (Tata Communications and Bharti) have market share more than 98% in this segment.
4. We would like to draw the attention of the Authority to its previous consultation paper on CLS access charges dated 13th April, 2007 in which similar issue was discussed at length. TRAI after due deliberations of the comments of the stakeholders have decided the following (as per para 2.12.2 of the CLS Regulations, dated 6th June, 2007) , the relevant portion is reproduced below:

*“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 have reasonable and fair charges, the need is to have such charges on cost oriented basis and also to provide first opportunity to the owner of the cable landing station. It is appropriate that OCLS determine the charges on the basis of cost oriented principles taking into account the cost involved in access facilitation, operation & maintenance, cancellation and in provisioning of co-location facilities including Co-location space and submit to the Authority. **However, these charges will be***

approved by the TRAI on the basis of well-established costing methodology already in vogue in the Authority. Prior-approval of the TRAI will ensure transparency, fairness and reasonability and also OCLS will not tend to adopt an arbitrary approach in prescribing various charges. Therefore, the Authority has made provisions in these regulations to address this issue."

5. **With a view to have fairness, transparency and non-discrimination in the fixation of AFC and CLC, we would support a combination of options (a) + (b) +(c), we believe that this process has already been followed by TRAI in the tariff/charges fixation of IPLC and other telecom network services in past .Therefore, it is suggested that TRAI should fix the cost based AFC&CLC by following the same process which has been followed in the case of IPLC (half circuit). As highlighted above, we believe that the most critical requirement is an urgent and immediate revision to the current AFC and CLC charges.**

Q 2: In case AFC & CLC are regulated using method (a) or method (b) above, is there a need to issue guidelines containing algorithm and network elements to be considered for calculating AFC & CLC to the OCLSs? If yes, what should be these guidelines?

CWW Comments

1. We believe that TRAI has already prescribed broad guidelines for telecom pricing through its various consultation paper/regulation/tariff on telecom pricing i.e. consultation paper on Telecom pricing (1997 and 1998) consultation paper on tariff fixation of Fixed and Mobile services (2002), Consultation

paper/Tariff Order on tariff fixation of IPLC (half circuit) (2004/05) Consultation paper/ Tariff Order on Roaming services (2007) , Consultation paper / Regulations on Interconnect Usage charges (2002/2003/2004/2005/2009) and guidelines on system on accounting separation etc.

2. In this connection TRAI has already decided in Para 2.12.2 of the CLS Regulations, dated 6th June, 2007 that It is appropriate that OCLS determine the charges on the basis of cost oriented principles taking into account the cost involved in access facilitation, operation & maintenance, cancellation and in provisioning of co-location facilities including Co-location space and submit to the Authority. However, these charges will be approved by the TRAI on the basis of well-established costing methodology already in vogue in the Authority.

3. **Since TRAI has already issued broad costing principals/ guidelines for determination of CLS access charges in its regulation (5 of 2007) as indicated above, therefore, there is no need for further issuance of any new guidelines for the same product if regulated using method (a) or method (b) as it would further delay the process of determination of revised CLS access charges which have direct impact on the sustainability of Access seeker's network services which are input for final network services . The need of the hour is that TRAI should ensure that the OCLS submit the RIO and the TRAI promptly approve the charges which should be based on the cost oriented principles and there should not be overcompensation. In this regard, we further urge the TRAI to approve the RIO in respect of the EIG cable, together with appropriate charges based on cost oriented principles.**

Q 3: In case, AFC & CLC are regulated using method (a), (b) or (c) above, please suggest the value of pre-tax WACC, method of depreciation and useful life of each network element? Please provide justification in support of your answer.

CWW Comments

1. We have noted that over the period of time TRAI has used pre-tax WACC in the range 12.21% to 15% for various telecom network services and it has also been noted that in the recent past for various telecom services TRAI has used 15% pre-tax WACC as benchmark , therefore, we also recommend the same for CLS access charges .
2. It has been noted that TRAI has taken weighted average life of various telecom network elements as 10 years by following the straight line method (SLM); we recommend the depreciation rate 10% by following the SLM for CLS access charges. It is important to mentioned that the information provided under Annexure III to V of the consultation paper indicate that in case CLS access facilities on IRU basis ,capital expenditure has been recovered in 3 year where for practical purpose IRU is considered for 10 to15 years .
3. **We recommend that WACC should be 15% on relevant Capital employed and depreciation rate should be 10% on SLM basis. We further recommend that under the consortium model, the amount of capital expenditure which has been reimbursed by the members should be deducted before computation of depreciation and WACC.**

Q 4: Which cost heads/ network elements should be included/ excluded while calculating Access Facilitation and Co-location charges? Please enumerate the items with specific reasons.

CWW Comments

1. We believe that only those cost heads / network elements should be considered for determination of AFC& CLC which are unavoidable to provide the AFC &CLC services and golden costing principle i.e. causation principal should be adopted for selection of cost heads / network elements etc.
2. It is important to note that in the consortium model, the capital expenditure and operating expenditure of Cable Landing station (in form of S and T segment) are reimbursed by consortium. Therefore, in the case of CLS access charges under consortium system, the amount received on account of Capex and opex should be deducted otherwise this would lead to overcompensation to the owner of cable landing station.
3. The analysis of information available in the consultation paper and regulations (2007) suggest that in the present costing exercise of CLS access charges under consortium model have not deducted the amount which have been received by the owner of cable landing station from the consortiums. However, TRAI has indicated in Para 3.22 of the consultation paper that they have taken only those cost items which were not being reimbursed by consortiums but it is not verifiable with information indicated in the annexure III to V of the Consultation paper and as results / cost based charges also not support the same .
4. We note that the Authority has already recognized in the 2007 consultation that access facilitation costs are already paid by

consortia. The relevant analysis of TRAI with respect to this issue is quoted in full below:

Extract from Chapter 4 of the consultation paper on “Access to Essential Facilities (including Landing facilities for submarine cables) at Cable Landing stations,” dated 13th April 2007 (our emphasis).

“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.”

5. As per generally accepted costing & accounting principles if any costs that have already been reimbursed to the cable landing station owner should *not* be included in the access facilitation charge. Contrary to this important principle, however, the present regulation on CLS indicates that RIO charges have been applied to compensate the landing party for expenditures that have been previously reimbursed by consortia.
6. CLS owners as members of various International Consortia (e.g. EIG, SMW4, etc) are signatories to the joint consortium agreements (C&MAs). As per generally accepted commercial practices in this segment, the costs (CAPEX and OPEX) to build and operate a

Cable Landing Station, in the C&MA, are billed out to all the consortium members, so that the terminal party (i.e. Cable landing station owner) is reimbursed for both the capital construction costs and the ongoing Operation and Maintenance Expenditure (O&M). Therefore, each consortium reimburses to CLS owners the cost associated with building and operating these stations.

7. Since the major costs are already reimbursed by the Consortium, there seems to be little justification for either charging higher and / or different charges namely, RIO/AFA and O&M from operators seeking access to the CLS. Expenditures that have already been reimbursed by any means shall not be part of the calculation of access facility charges. The Analysis of costing information under consortium system suggest that on an average about Rs 7 Crore (US\$1.41 Mn) per year/ cable landing station is generally being reimbursed to the OCLS for S and T segment ,out of which Rs 4crore pertain to T segment
8. It is also important to note that in the case of Mobile termination charge (MTC) the revenue generated through Value addeded services (VAS) has been deducted to arrived the final MTC payable by the service providers , it was also demonstrated on face of cost sheet/ information which has been used to arrive the final calaculaion in the IUC Regulation 2003/ 2009..
9. **In veiw of above analysis it is suggested that only those cost heads / network elements should be considered for determination of AFC& CLC which are unavoidable to provide the AFC &CLC services and have not been recovered/reimbursed through any other means/ sources. The golden costing principle i.e. causation principal should be adopted for selection of cost heads / network elements etc.**

The comments on network elements and cost heads of annexure III to V of consultation paper are attached as annexure "A"

Q5: What should be periodicity of revision of AFC & CLC? Support your view with reasons.

CWW Comments

1. With a view to ensure that the AFC & CLC remain in tune with international prices and comparable with similar economies it is suggested that the periodicity of revision of AFC & CLC should be once every year.

Q 6: In case, cost based AFC & CLC are fixed by TRAI, which costing methodology should be applied to determine these charges? Please support your view with a fully developed cost model along with methodology, calculation sheets and justification thereof.

CWW Comments

1. We believe that the nature of business and products of Cable landing station market are almost similar to products/ services offered under International Private leased circuit segment in India. As the review of present CLS access charges was due since October 2010 any further delay in the review of CLS access charges will provide undue benefit to incumbent operators i.e. owner of cable landing station under consortium system. Considering the present regulatory environment/market condition of cable landing station segment and present regulatory undue advantages to incumbent operators, due to delay in determination of Revised charges for facilities available at cable landing station (s), we believe that it

would be appropriate that the same costing methodology and process which has been applied in the case of IPLC (half circuit), should also be followed in this case for determination of cost based AFC&CLC by TRAI. It is also suggested that for the next review exercise, the forward looking costing methodology should be adopted by TRAI for determination of cost based AFC& CLC.

2. In this regard, it is important to note that the Authority has already decided in its regulation (5 Of 2007) vide para 2.12.2 that these charges (AFC &CLC) will be approved by the TRAI on the basis of well-established costing methodology already in vogue in the Authority. It is also learnt that TRAI has adopted forward looking costing methodology i.e. LRIC/Pure LRIC for determination of Interconnect usage charges (IUC)/MTC.
3. **In view of above, we suggest that TRAI may consider, cost oriented approach based on causation principle/ incremental costing for determination of CLS access charges,** We believe that the methodology should be such so as to bring down the charges at a level making it affordable for the ultimate end user so as to achieve the Government's objective to bridge the digital divide between rural and urban India and to further boost the Indian Economy.
4. The results of our costing models, (as per TRAI's costing methodology) suggest that the present CLS access charges are overpriced by more than 61 times in some cases, which are governed under consortium system and if the prices are determined based on cost oriented principle, there should be reduction of more than 95% from the present CLS access charges applicable for 10G/STM-64 per year.

5. We have estimated the revenue required per cable landing station based on the TRAI costing methodology and it has been worked out Rs 7.51 crore per year /per cable landing station . It is important to mention that about on an average Rs 3.90 crore is being reimbursed by consortium members to OCLS every year, as a part of C&M agreement, therefore only Rs 3.60 crore need to be recovered from those ILDOs, who are accessing the respecting cable landing station under the consortium system.
6. Further more, if the remaining amount (i.e. Rs 3.60 Crore) allocated over the LIT capacity¹ of LVSB (Tata Communications Ltd) and Santacruz (Bharti Airtel Ltd) cable landing station of Mumbai with Capacity utilization of 70% , we have worked out, cost based CLS access charge (with 8% revenue share license fee) in the range of Rs 0.05 crore to 0.07 crore per year / 10G/STM-64 capacity. Based on these calculations, **we request the Hon'ble Authority to reduce the present Charges for access facilities at cable landing station at least by 95%.**
7. The statement of estimation of revenue required per cable landing station per year is given below;

Table No 1

Statement of estimation of Required Revenue (RR)per Cable Landing Station (CLS) / T segment for Access facilities services under Consortium system			
SL.No.	Particulars	Unit	Amount
		A	Capex Recovery
	Depreciation by SLM	Rs in Crore	2.00
	RoCE	Rs in Crore	1.35
	Total Capex Recovery	Rs in Crore	3.35
B	Total Opex Recovery	Rs in Crore	4.16

¹ as on 31st March 2011

C	Total Cost (Capex +Opex) without license fee	Rs in Crore	7.51
D	Less : Average Amount Received from Consortium members for T Segment per year	Rs in Crore	3.90
E	Net Total Cost to be recovered per CLS	Rs in crore	3.60

Notes to Table No1:

- The capital cost for Cable landing Station (CLS)/ T segment has been considered Rs. 20 crore.
- Depreciation has been taken @10% per annual by straight line method (SLM)
- Return on capital employed / Pre-tax weighted Average cost of capital (Pre-tax WACC) has been considered @15% and an average RoCE has been derived over the period of 10years.
- Capex -Opex Ratio has been considered 45:55

Capex	45%
Opex	55%
Total	100%

- The estimation of average amount received from consortium members for T segment per year has been derived based on industry discussions/ information and Cable & wireless worldwide's experience in the segment.

Q 7: Whether Access Facilitation charges and O&M charges should be dependent on capacity (i.e. STM-1, STM-4 or STM-16) activated? Support your view with reasons.

CWW Comments

- It has been noted that the Singapore Telecom Regulator (IDA) has held that the charges for Cross -connect should be capacity independent.
- We believe that these charges should not be capacity dependent and it should be capacity independent as industry experts also

suggest that there is no nexus between the capacity and the cost for service provision.

Q 8: If Access Facilitation charges and O&M charges are fixed on the basis of capacity activated;

(a) Should the charges be linearly proportionate to the capacity activated; or

(b) Should the interface capacity as provided by the submarine cable system at the cable landing station be charged as a base charge while higher or lower bandwidth be charged as the base charge plus charges for multiplexing/ de-multiplexing?

CWW Comments

Please refer the answer to Q.7 above. We believe that TRAI should prohibit the continued use of linear pricing by the OCLS under which the charges for a SRM-64 connection are 64 times those for a STM-1. We believe that the present linear methodology result is an extraordinary non-cost oriented over recovery for the OCLS.

Q 9: Whether there is a need to fix Access Facilitation charges for all types of submarine cables? If no, which kind of submarine cables may be exempted and why?

CWW Comments

1. We believe that the scope of the present regulation should equally applicable to all types of submarine cables and therefore there is need to fix Access Facilitation Charges for Consortium Model, Private Model and Private / Public Partnership Model until the access charges are in line with the international trends. In the case

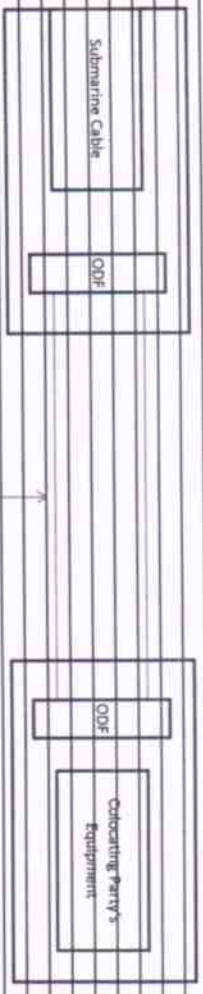
of the consortium model, access charges should be clearly identified in any bundled offering by the CLS Owner.

2. The Authority has also recognized in para 2.15.2 of its CLS Regulations dated 7th June, 2007 which says that *“The scope of the present regulation is to mandate access to the cable landing station on fair ,non-discriminatory and transparent manner. There is no rationale for TRAI to make any such separate provision in these regulations for integrated cable landing station owner having reference capacity for access facilities. All OCLSs are subjected to uniformly to these regulations. -----”*
3. We also suggest that all OCLSs are subject to uniformly to these regulations.

Q 10: Is there a need to introduce any new provision or to modify/delete any of the clauses of the ‘International Telecommunication Access to Essential Facilities at Cable Landing Stations Regulation 2007’, in order to facilitate access to essential facilities at cable landing station?

CWW Comments

We would like to submit that the AFC should not apply to the traffic that simply transits between two cable systems and does not touch the domestic Indian network. We believe that AFC is not justifiable on transit traffic as it is not accessed locally and the only network involved for transit is a cross -connect for interconnecting different submarine cables at the landing station. Therefore, the Authority is requested to regulate the prices for transit capacity along with the capacity being accessed in the country.



Individual the cables or multi fibre tie cables. These would be contained either under raised flooring, or in overhead trays

The diagram shown here reflects Cable&Wireless Worldwide's view of the equipment and facilities required to provide access to a submarine cable where a party's equipment is co-located in the cable station. It has been adapted from the diagram in Annexure III of the TRAI consultation document.

Generic Description of Items Considered by OCLIS for Calculating Access Facilitation Charges and Co-location Charges at CLS location

A. Access Facilitation Charges on IRU basis/ Annual lease basis		Cable&Wireless Worldwide Comment
(a) CAPEX components		
1 Total cost of DXC	a	DXC and associated ports are not required
2 Equipped number of ports in DXC	b	DXC and associated ports are not required
3 Ports dedicated for access facilitation in DXC	c	DXC and associated ports are not required
4 Apportioned cost for access facilitation = Line item 1 * Item 3 / Item 2	d=a * c/b	DXC and associated ports are not required
5 Apportioned cost of DXC at co-location space (AS, dedicated for Access Facilitation)	e	DXC and associated ports are not required
6 Apportioned cost of ODF/Test equipment (% dedicated for access facilitation)	f	DXC and associated ports are not required
7 Total equipment cost = line item 4 + Item 5 + Item 6	g=d+e+f	DXC and associated ports are not required
8 Transmission link cost (Cost of duct, fiber and services)	h	Only fibre tie cables and overhead trays required
9 Manpower cost for planning, installation, testing & commissioning (Cost of engineers and support staff)	i	
10 Miscellaneous cost (cost of cable, tools, hardware, materials)	j	Cable (fibre) already costed at 8
11 One time set-up cost = line item 9 + Item 10	k=i+j	
12 Apportioned one-time set-up cost = line item 11 * Item 3 / Item 2	l=k * c/b	
13 Total CAPEX cost = line item 7 + Item 8 + Item 12	m=g+h+l	no comments as % is not provided
14 Project Management Cost n	o=m*n	
15 Total cost including Project management cost = line item 13 + Item 14	p=o * (1+8%)	
16 Cost including pre-tax WACC @8% = line item 15 * (1+8%)	q	
17 Total number of STM-1s	r=p/q	Number of STM-1s is not relevant. A fibre pair can be used to connect any size of circuit.
18 Cost per STM-1 = line item 16 / Item 17	s%	
19 Revenue sharing rate	t=r/s	
20 Price with revenue sharing per STM-1 = line item 18 / (1-line item 19)	u=t / (1-s%)	
21 Access Facilitation Charges per STM-1 on IRU basis	v=u*t	
22 Access Facilitation Charges on leased basis (1/3 of IRU price)	w=v/3	
b) OPEX Components		
23 AAMC cost of equipment and transmission Link	x	No equipment required, and the fibres themselves consume no power
24 Cost of space and support infrastructure for equipment	y	No equipment required, and therefore no floor space consumed
25 Cost of manpower at CLS based on actual manning (dedicated and shared)	z=w+y*x	Manpower at the CLS is paid for by the consortium as part of the O&M for the cable station
26 Total opex (direct) = Line item 23 + Item 24 + Item 25	aa= z * %k	
27 Overhead charges = %k of line item 26	ab=2+aa	
28	Total = line item 26 + Item 27	

29	License fee	each		
30	Total above item 28/ (1-ack)	$ad = ab/(1-ack)$		
30	Annual O&M Charges per STM-1	$ae = a/d/q$		
B. Co-location Charges				
1	Power cost (basic) per rack per annum a	a		
2	O&M (AMC for AC, fire-fighting equipment, UPS, infra related items etc.) per rack per annum	b		
3	Rental (space occupied) per rack per annum c	c		
4	Manpower (to assist in installation & fault repair etc.) per rack per annum d	d		Manpower is only required to supervise this work, unless the colo lessee contracts the colo provider additionally to do installation and/or fault repairs. This is paid for separately under a bilateral agreement.
5	Security Service Charges per rack per annum e	e		
6	Depreciation per rack per annum f	f		
7	Co-location charges per rack per annum = line item 1 + item 2+item3+item 4+item 5+item 6	$g = a+b+c+d+e+f$		
	Cost of Overhead tray including installation	\$30 to \$50 per metre		
	Cost of individual the cables (each)	\$20		
	Cost of a 48 fibre pair the cable, including installation	\$20,000		2 required per circuit (any size of circuit) Will connect 48 individual circuits of any size

Annexure III of Consultation paper

Cable&Wireless Worldwide is in general agreement with the diagram showing the equipment required for access facilitation at an alternate location to the cable station. However, we believe that it should not be necessary to provide access in this way.

Cable&Wireless Worldwide Comment

Less ports, and therefore costs, required when higher order circuits are required
 This is an unrealistically small amount of capacity used for cost apportionment, which will give a much higher unit cost than necessary

Generic Description of Items Considered by OCLSA for Calculating Access Facilitation Charges and Co-location charges at Alternate Location

A. Access Facilitation Charges per STM-1 on IRU basis / annual lease basis

- (a) CAPEX Components
- 1 Apportioned digital cross connect equipment (DXC [at cable landing station and Co-location room]) for 128 STM-1s
 - 2 Apportioned DWDM equipment for 128 STM-1s b
 - 3 Apportioned link cost between cable station and co-location center for 128 STM-1s
 - 4 Apportioned Miscellaneous Equipment (Optical distribution frame cable ducts and other installation material) for 128 STM-1s
 - 5 Apportioned fibre distribution frame and accessories, patch cords etc. for 128 STM-1s
 - 6 Apportioned Test Equipment for 128 STM-1s f
 - 7 Total a/c line item 1 + item 2 + item 3 + item 4 + item 5 + item 6
 - 8 Basic Rate Per STM-1 IRU (Cost attributed to 128 STM-1s with 70% utilization factor)
 - 9 Project Management Fee (As % of Line Item 8)
 - 10 Weighted Average Cost of Capital @ 8% of (Line Item 8+item 9)
 - 11 Total = line item 8+ item 9 + item 10
 - 12 Rate of license fee
 - 13 Profit margin (taken as Zero)
 - 14 Access Facilitation Charges per STM-1 on IRU basis = line item 11/(1-item 12)
 - 15 Access Facilitation Charges on leased basis (1/3 of IRU price)
- (b) OPEX Components
- 15 Apportioned network operating charges for space (= number of rack space for equipment and D number of rack space for other NMS equipment), power etc
 - 16 Annual maintenance charges (equipment)
 - 17 Repair maintenance fiber pair
 - 18 Shared resource cost for engineers and supervisors
 - 19 Total = line item 15 + item 16 + item 17 + item 18
 - 20 Basic rate per STM-1 (attributed to 128 STM-1s with utilization factor 70%)
 - 21 Overheads (5% of Line Item 20)
 - 22 Total a/c line item 20+ item 21
 - 23 Rate of license fee
 - 24 Total O&M Price=line item 22/(1-item 23)

B. Co-location charges

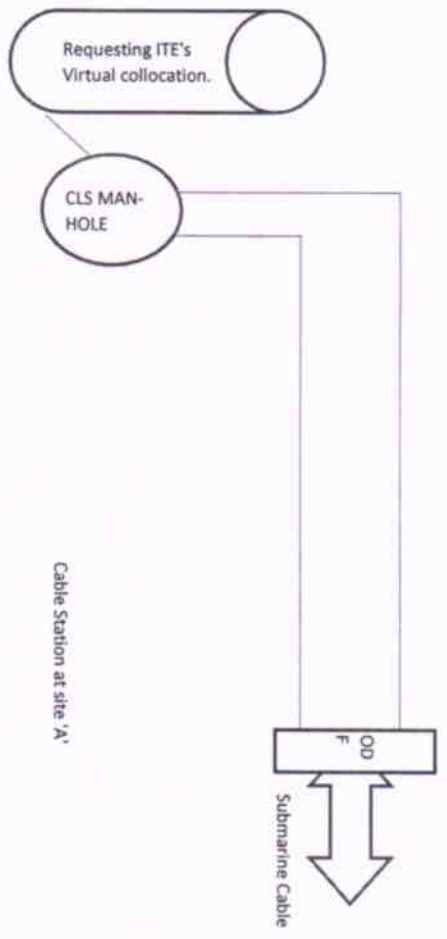
- 1 Rent/ lease charges
- 2 Infrastructure maintenance cost
- 3 Shared resource cost for engineers and supervisors
- 4 Fuel expenses
- 5 AMC charges
- 6 Security and housekeeping
- 7 Total cost = line item 1 + item 2+ item 3 + item 4 + item 5+ item 6
- 8 Apportioned cost for co-location = % of line item 7
- 9 Number of racks for which space is available
- 10 Cost per rack (70% occupancy) = line item 8/(70%*item 9)
- 11 Power charges per rack
- 12 Basic cost per rack = line item 10+ item 11
- 13 Overheads =5% of Line Item 12
- 14 Total= Line item 12 + item 13
- 15 Rate of license fee
- 16 Annual Co-location Charges per rack = line item 14/(1- item 15)

a
b
c
d
e
f
g
h
i
j
k
l
m
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o
p
q
r
s
t
u
v
w
x
y
z

aa
bb
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ccc
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eee
fff
ggg
hhh
iii
jjj
kkk
lll
mmm
nnn
ooo
ppp
qqq
rrr
sss
ttt
uuu
vvv
www
xxx
yyy
zzz

Annexure V of Consultation paper



The diagram shown here reflects Cable&Wireless Worldwide's view of the equipment and facilities required to provide a virtual co-location. It has been adapted from the diagram in Annexure V of the TRAI consultation document.

Generic description of items considered by OCLIS for calculating Access Facilitation Charges in case of Virtual Co-location

A. Access Facilitation Charges per STM-1 on IRU basis / annual lease basis

(a) CAPEX COMPONENTS

- 1 Apportioned cost of Digital cross connect equipment - DXC for 128 STM-1s
 - 2 In building ducting and cabling - One time setup cost
 - 3 2 Pair fibre cable from Manhole to Cable landing station - Ducting and cabling charge
 - 4 Miscellaneous Equipment (Optical distribution frame, patch cords and other installation material)
 - 5 Fibre Distribution frame and accessories, patch cords etc
 - 6 Test equipment
 - 7 Total = line item 1 + item 2 + item 3+ item 4+ item 5+ item 6
 - 8 Basic rate Per STM-1 on IRU Basis (Total amount attributed to 128 STM1 with 70% utilization)
 - 9 Project Management Fee (5% of Line item 8)
 - 10 Weighted average cost of capital (WACC) @8% of (Line item 8+item 9)
 - 11 Total =line item 8+item 9+ item 10
 - 12 Rate of license fee
 - 13 Access Facilitation on IRU basis= line item 11/ (1- item 12)
 - 14 Access Facilitation on annual Lease Price= 1/3 of IRU price
- (b) OPEX Components**
- 15 Apportioned Network Operating Charges for power, rack space for equipment other NMS equipment etc.
 - 16 Annual maintenance charges of equipment
 - 17 Repair maintenance fiber pair
 - 18 Shared resource cost of engineers and supervisors
 - 19 Total =line item 15+ item 16+ item 17+item 18
 - 20 20 OPEX cost (basic) per STM-1 (cost attributed to 128 STM-1s with 70% utilization factor)
 - 21 Overheads =0% of line item 20
 - 22 Total= Line item 20+ item 21
 - 23 Rate of license fee
 - 24 Annual O&M charges per rack = line item 22/(1-item 23)

Cable&Wireless Worldwide Comment

A DXC, or other transmission equipment is only required if the accessing party's equipment is more than 10Kkm away.

a
b
c
d
e
f
g=a+b+c+d+e+f
h=g/(128*70%)
i=h*A%
j=(h+1)*8%
k=h+i+j
l%
m=k/(1-l%)
n=m/3

o
p
q
r
s=o+p+q+r
t=s/(128*70%)
u=t*D%
v=t+u
w%
x=v/(1-w%)