bharti airtel ltd.
india & south asia
airtel center, plot no. 16,
udyog vihar, phase - IV,
gurgaon - 122 015

www.airtel.in
call+91 124 4222222
fax +91 124 4248063

No. Airtel/TRAI/2011-12/03

Date: 18th May, 2011

WITHOUT PREJUDICE

To,

Secretary
Telecom Regulatory Authority of India,
Mahanagar Door Sanchar Bhawan,
J.L. Nehru Marg, (Old Minto Road),
New Delhi – 110 002

Kind Attention:- Shri Arvind Kumar, Advisor (I &FN).

Subject: Response to the Consultation Paper No. 4/2011 on Review of Interconnection Usage Charges.

Ref: 1) Airtel's Letter No. Airtel/ TRAI/ 11-12 dated 06-05-2011
2) TRAI Letter No. 409-9/ 2010-I&FN dated 11-05-2011
3) Airtel's Letter No. Airtel/ TRAI/ 11-12 dated 13-05-2011
4) TRAI Letter No. 409-9/ 2010-I&FN dated 16-05-2011

Dear Sir,

This is with reference to the above referred consultation paper issued by the Authority on "Review of Interconnection Usage Charges".

1. At the outset we welcome the Authority's initiative to start the review of IUC regulations. We would like to reiterate that the continuation of the current IUC regime is affecting our business & investments at large and there is an urgent need to correct that position and ensure a cost-based termination charge regime, which would not only promote investments especially in rural areas, but would also enhance the viability & sustainability of the telecom sector. A cost based IUC regimes ensure fair compensation to all operators on the principle of "work done" which enables and motivates the operators to make right investments in the network to provide good quality of services to the consumers.

2. The IUC Regulation of 2009 was challenged before the Hon'ble TDSAT, by a majority of operators including the Industry Associations. Subsequently, the Hon'ble TDSAT vide its judgment dated 29th Sep, 2009, identified the "**underlying principles & framework**" and remanded the matter back to the Authority to complete the consultation process. This was also followed by an interim order of the Hon'ble Supreme Court, directing the Authority to ***implement the decision of the Hon'ble TDSAT.***

3. We have highlighted this in our letter dated 6th May 2011 and 13th May 2011 which may also be treated as part of our response to the Consultation Paper. Since the issues involved are very important for the sustenance of the telecom sector, we would at the cost of repetition like to highlight some of the key observations and directions of Hon'ble TDSAT which need to be taken into account while framing the IUC regulation. Some of these are as follows;

    a. **Termination Charge should be 'Cost based' and should be based on 'Work done principle'.**
    b. **'Bill and Keep' methodology should not be followed for the purpose of IUC.**
    c. **All Costs including OPEX, CAPEX, Depreciation, WACC etc. should be included in calculations of IUC.**
    d. **Termination rates should not be asymmetric.**
    e. **There should be higher termination charge for International Calls.**

The economic and business justifications of some important governing principles to be followed during the IUC review exercise are as explained below;

1. **The Bill and Keep methodology results in cross subsidization of one operator at the cost of the other:**

   Determination of Interconnection Usage Charge is required primarily because of different amounts of work done by different operators. This is due to imbalance in traffic, which is bound to exist in a diverse customer environment where different offerings are customized by operators to suit various market segments.

   'Bill and Keep' or below cost Interconnection Usage Charges could result in de-motivating the operators from investing in network infrastructure. The terminating operator is not adequately compensated for the resources utilized in its network, but at the same time is required to install and expand its network to meet the growing terminating traffic from other operators.

2. **Inclusion of all costs for calculation of termination charges leads to suitable compensation for the work done by the terminating operators:**

   Telecom is an industry where all operators collaborate towards betterment of network in order to provide seamless and end-to-end services to the customer. Telecom operators also incur costs in the form of both CAPEX and OPEX to provide services to customers belonging to other operators as well. **If the termination charges are not inclusive of all costs incurred, including CAPEX and OPEX, then it amount to subsidization of one operator by the other which we believe is not the intent of the Authority.**

   Thus interconnection usage charges are required to be cost based and on "work done" principle. The various cost items such as Capital Costs, adequate return on Capital employed etc. need to be included while arriving to the termination charges. Also in India, where teledensity is at a lower levels vis-à-vis the rest of the world, interconnection charges lower than the costs will be a disincentive to invest in network infrastructure to expand mobile penetration to rural and low income subscribers.

3. **Fixing IUC for SMS to act as a deterrent for SMS SPAMs:**

The SMS termination charge is very important to avoid abuse of the network of terminating operators by way of bulk (A2P SPAM) and free SMS (P2P), sold by the some originating operators. So, we suggest TRAI to either continue with the policy of forbearance i.e. to allow the operators to mutually agree on SMS termination charges or fix a termination charge at a level which enable recovery of the cost of terminating operator as well as acts as deterrent against any such abuse of the network of one service provider by the other service provider. This would also save the consumers from the menace of the SPAM and pesky SMSs over the network.

4. **No differential termination and carriage charge:**

Differential termination charges based on network/operator will lead to operators charging differential tariffs for calls to different network/operator thereby affecting the calling pattern to networks/operators with higher tariffs. The Authority will appreciate that any differential pricing will be detrimental to the very existence of the higher priced network/ operators. **Hence, there should not be any differential termination charges based on network/ operator.**

Also, any higher ceiling for carriage charges for remote and hilly areas will result in higher STD rates for these locations and will make these areas further inaccessible. So, we request the Authority to continue with **uniform carriage charges ceiling** which can be fixed based on an average.

5. **Requirement to amend the interconnect regulation to bring the Level playing field between operators:**

In order to comply with the direction of Hon'ble TDSAT, the IUC charges must be inclusive of the CAPEX, depreciations etc. Since, the interconnection charges such as Port Charges, Media Charges, Collocation Charges etc. are charged by operators including MTNL and BSNL, they would already have been subsumed into the IUC. There is hence no justification for recovery of these charges separately. So, we request the Authority to merge these charges in the interconnection usage charges. Also, we propose an interconnection regime where the cost of equipment is included in the IUC and the cost of common infrastructure such as transmission media is shared between the operators in proportion to their outgoing traffic.

6. The Cost Based Approach for the new P2P services such as Video Call etc.

With the launch of 3G services, Video calling will also get popularized. The operators are likely to launch the inter-operator Video Calling. So, there is a need to determine the Interconnection Usage Charges for Video Call. Thus it is suggested that the existing framework of Interconnection Usage Charges may also be extended to Video Call termination wherein the Authority may determine the terminating and carriage charges leaving the origination charges under forbearance. The Video call technically utilizes approximately 4-5 times the resources and bandwidth as compared to a normal voice call. It is therefore suggested that the Authority may accordingly **determine the charges for Video Calls as four times the charges determined in case of a voice call.**

Although the cost details being submitted are of the last year, but there is a need to factor in the new regulatory/compliance costs which are likely to be imposed over the next 3 years. Some of these are as follows:-

a. Revised UCC Regulation;
b. Stringent Subscriber verification norms;
c. Increase in spectrum charges;
d. EMF compliances
e. The Compliance to the equipment security
f. Amortization of the cost of 3G/BWA spectrum paid to the Government.

In light of the above, our detailed response to the aforesaid consultation paper is enclosed at **Annexure–I.**

It is imperative that the IUC exercise should be determined keeping the above factors in mind to encourage the growth of telecom and investment in telecom services. We hope that our submissions will merit your kind consideration and support.

With Warm Regards,

For Bharti Airtel Limited &
Bharti Hexacom Limited

Ravi P. Gandhi
Vice President (Corporate Regulatory)

airtel

ANNEXURE - I

Bharti Airtel Response to TRAI Consultation Paper on Review of Interconnection Usage Charges

1. **Do you agree that the IUC regime determined through this consultative process should be applicable for 3 years? If not please indicate your preferred time period with justification.**

Bharti Airtel Response:

We are fine with the IUC regime determined through the consultative process and in line with the current judicial directive being applicable for 3 years.

2. **Keeping in view the time period indicated by you in question 3.1, which of the following approaches would be most appropriate for the Indian telecom sector?**
(a) Cost oriented or cost based;
(b) Bill and Keep ;
Please provide justification in support of your answer. In case you feel that the approach should vary according to service, please explain why?

Bharti Airtel Response:

At the outset, we believe that the termination charge should be strictly **'cost based'**. However, before arguing upon the rationale for the termination charge to be cost-based, we would like to submit that the Bill and Keep approach was deliberated during the last IUC Review in greater details. After much deliberation; the Authority rejected Bill and Keep approach with the following significant observations:

> *5.3.11 Bill and Keep was another method suggested. In this method the service providers do not pay any termination charges to each other. This method has the advantage of the service providers not transferring costs of their network to interconnecting service providers and also of low regulatory costs.* ***This method does not work if the traffic flows are imbalanced or the service providers are at different stages of network deployment.*** *It may not properly compensate the service providers and may not encourage development of efficient networks.*

5.3.13 The bill and keep proposal of the service providers was analyzed and it was noted that this ***could mean return to situation prevalent before the present IUC regime was established i.e receiving party used to pay for incoming calls****. One of the fundamental principles of prescribing IUC regime was work done principle. It was also noted that tariff before the IUC regime were very high tariff. The service providers may again resort to charging their own subscribers for receipt of calls or increase fixed charges of providing the services.* ***As the service providers do not have to pay for termination of calls into other service provider networks they may offer plans with free calls which could load other service providers' networks. Bill and keep regime may also reduce call completion rate as the terminating network will not have any incentive to complete the call".***

Why termination charge should not be 'Bill and Keep'?

Traffic imbalance between interconnecting operators is inherent and the same has also been acknowledged by the Authority while rejecting 'Bill and Keep' during the last Interconnect Usage Charges Review in 2009. Some of the reasons for imbalance of traffic between operators are explained as below:

a) **Customer Profile:** Due to different marketing and positioning strategies, various operators cater to different market segments. For example, if one operator targets the high income segment with differentiated services and the other targets the lower income customers, the calling pattern of the two is likely to be different. This causes an imbalance of traffic between the two operators.

b) **Radio Coverage:** The operator who has better and larger coverage /footprint would have a higher probability of successfully terminating the calls and will become the net receiver. For example, if operator 'A' has better coverage /footprint than operator 'B' then probability of successful termination in operator A's network is higher than operator B's network. This would lead to an imbalance of traffic between operator 'A' & 'B', where traffic from operator 'B' to 'A' would be higher as compared to traffic from operator 'A' to 'B'.

c) **Tariff plan:** If one operator 'A' has a strategy to provide aggressive tariff plans such as free/bundle/low cost minutes than the other operator, it would lead to more minutes terminating in the other operator's network. Also, there is a large probability that smaller operators would tend to offer lower tariff plans to offset the acquisition cost and increase

the market share. Such tariff plans which are bundled with free minutes result in higher incoming traffic to the network of bigger operators.

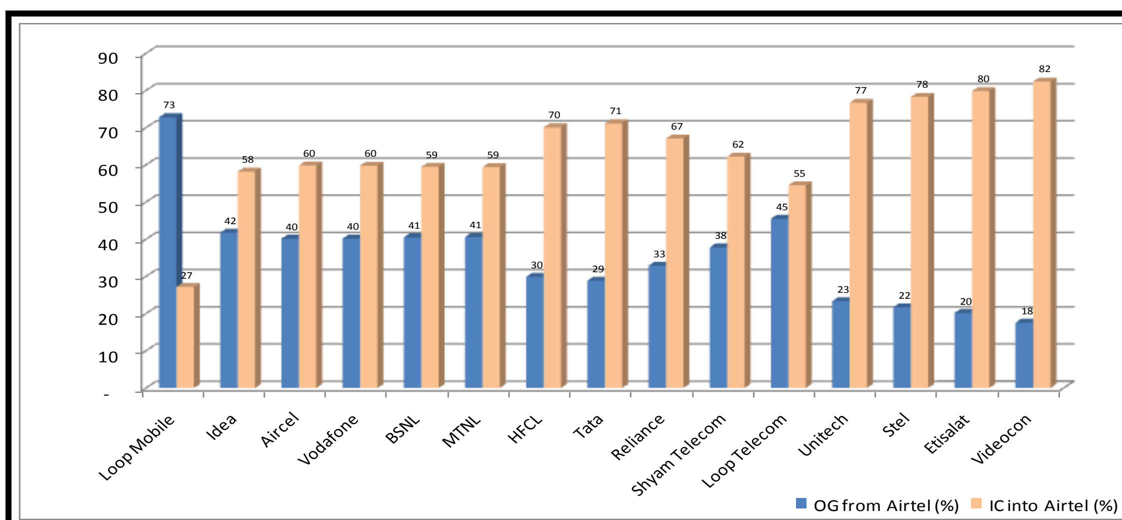

Fig 1- Graph showing the % of Incoming/ Outgoing MOUs exchanged between Airtel and Other Operators during FY 2010-11

The graph above shows that the MOUs terminated by Airtel in other operators' network vis-a-vis the MOUs received by Airtel from other operators' network during FY-2010-11. As is evident from above, the imbalance of traffic varies between 82% : 18% (IC : OG) to 27% : 73% (IC : OG). The above chart indicates that the traffic imbalance is not only between existing & new operators but also between those operators, who entered the sector at the same point of time. Thus, the major criteria of having balanced traffic required for implementing "Bill and Keep" is non-existent. Any Bill and Keep Regulation would not allow the compensation by one operator to the other for the work done and hence result in cross subsidization of one operator by the other, which we believe is not the intent of the Authority while carrying out this exercise of determination of IUC.

Some of the major drawbacks of 'Bill and Keep' are summarized as below:

1) Adverse Effect on Retail Tariff:

With the introduction of 'Bill and Keep' methodology, the terminating operator is required to invest in network infrastructure and incur costs to provide connectivity to calls / SMS originating from originating operator's network, without receiving any revenue for the same. The terminating operator would therefore be forced to re-structure the retail tariff plans so as to recover the increased financial burden from its own customers. Therefore, the retail

tariff plans will be designed in a manner to permit the terminating operator to recoup the costs incurred, which would have an adverse impact on the consumer interest.

Such an IUC regime would be unfair and discriminatory for the terminating operator, and such regime would put the terminating operator into competitive disadvantageous position.

2) Increase in SPAM Calls/SMS:

In Bill and Keep model, the termination charge becomes zero and the termination of calls and SMS can be done by the originating operator at no additional cost. This can provide an incentive to the originating operator to have a surge in traffic towards the terminating operator's network. This shall, in turn, result in an escalation of unsolicited calls and SMS to the terminating operator's network, given the reduced cost of making promotional calls to the subscribers.

A case in point would be Europe at the turn of the last century. The existence of termination charge for national SMS and the absence thereof for international SMS created an opportunity for local SMS providers to divert a majority of their SMS traffic to foreign countries. This reached a point where the mobile operators had to impose restrictions on the SMS incoming from foreign mobile operators that had developed this activity.

The situation in India is no better in case of SMS, wherein a select few operators are abusing the terminating operator's network by sending bulk A2P messages which are mostly SPAM for the end customers.

3) Decrease in the Quality of Service:

In India, the TRAI has been following a standard practice of keeping the retail tariff under forbearance, with a view to encourage competition and to promote higher quality of service to customers at lower prices. Over a period of time, the competition and QoS has only increased. However, once the 'Bill and Keep' model is adopted, given the zero termination charge payable to the terminating operator, originating operators may customize tariff plans with bundled minutes. This will result in a surge of incoming traffic to the terminating operator's network. Since the terminating operator under the Bill and Keep model is not adequately compensated for the investments required to set up, operate and maintain network infrastructure to receive this escalated one-way traffic, it is likely to result in reduced quality of service levels for voice calls.

Under the 'Bill and Keep' regime, the terminating operator does not receive any revenue for terminating the call / SMS on its network. This practice of zero termination charge motivates the originating operator to hand over the call/SMS to the terminating operator's network at the first available opportunity. On the other hand, the terminating provider may not invest adequately in its network infrastructure to carry the increased traffic terminating on its network, since it is not compensated for the same by the originating operator. This could lead to a situation where the traffic to the terminating operator's network increases exponentially and the terminating operator does not have the commercial and technical capability to handle this escalated traffic.

4) **Increase in Regulatory Disputes:**

With the advent of the 'Bill and Keep' regime and consequent compulsory interconnection, several economic, commercial and technical disputes are likely to arise owing to asymmetric exchange of traffic between the operators. This would impose an additional burden on the regulatory bodies to settle such disputes and to devise a scheme to ensure fair and equitable terms of traffic exchange between operators. As a result of the increase in the degree of regulatory intervention and acrimonious relationship between the operators, the future of telecom services might be in jeopardy.

The additional expenditure on both Capex and Opex is also incurred to enable the network to terminate the calls from other operators and maintain the QoS as required by its customers and also to comply with QoS benchmark set by TRAI. However, if the terminating operator is not fully compensated for the calls terminated in its network, then to terminate these additional calls, the terminating operator will have to expand its network at its own cost, whereas the revenue for such calls is collected by the originating operators in CPP regime, resulting in further imbalance and disincentive for the terminating operator.

So it is imperative that the termination charge must be cost based (including all costs such as CAPEX/OPEX, depreciation etc.) and on work done principle so that the terminating operator is able to recover the cost of the network being utilized by the originating operator and is able to expand its network as per the requirement.

From the above justifications, it is clear that the 'Bill and Keep' or 'Below cost termination charge' will act as a deterrent to the robust telecom growth. It is therefore recommended **that the Authority should only adopt 'Cost based' termination charge.**

Drop in On-net Calls from 2008 to 2010 is due tothe reduction in interconnection charge – A myth that need to be dismantled:

While we have already stated in our justifications for the termination charge to be cost based including all costs such as Capex, Opex, Depreciation etc. in the following paragraphs, we would also like to dismantle the myth that the drop in MTC from 30p to 20p has led to a drop in the percentage of On-net Calls .

In this regard, it is submitted that the reason behind the drop in on-net calls in India is the outcome of increase in the number of operators from 6-7 Operators per Service Area to 9-10 Operators per Service Area from 2008 to 2010 and the corresponding change in the market share of the operators.

The same is being explained below with the help of a simple illustration based on the following assumptions:

a. The calling pattern of all the subscribers is 50% out going and 50% incoming;

b. There are only two operators with market share of 60% and 40 % respectively;

c. Calling behavior of the customers is same.

Scenario – I Operator	Market Share (in %) M	On-net Calls (=M X M)	Off-net Calls (=M X (1-M))
A	60%	36.00%	24.00%
B	40%	16.00%	24.00%
Total	**100%**	**52.00%**	**48.00%**

From the above case, it is clear that the percentage of On-net Calls is 52% when there are only two operators. Now let us assume that the third operator enters the market with all other conditions remains the same, capture 5% market share of each to have a total 10% market share.

Scenario - II Operator	Market Share (in %) M	On-net Calls (=M X M)	Off-net Calls (=M X (1-M))
A	55%	30.25%	24.75%
B	35%	12.25%	22.75%
C	10%	1.00%	9.00%
Total	**100%**	**43.50%**	**56.50%**

The table above shows that the on-net call % drops from 52% to 43.5% with the addition of a new operator. Thus, the linkage of the on –net calls with the termination charge is wrong.

So, we believe that the drop in On-net calls is on account of increase in the number of operators operating in a service area from 6-7 to 9-10 from 2008 to 2010 and the drop in termination charge from 30p to 20p has no bearing on the same.

3. In case your answer to question 2 above favours the cost oriented approach, would it be appropriate to permit Bill and Keep between service providers who have symmetric traffic?

Bharti Airtel Response:

Since, we have suggested a 'cost-based' termination charge so the question of 'Bill and Keep' does not arise.

There is a very low probability of the balanced traffic in the present context as explained in reply to the Question No. 2. The traffic imbalance will always exist between two operators irrespective of the timings of the entry of any operator.

Further, this question is also irrelevant due to the fact that although the accounting of the IUC is done on the gross basis, the actual settlement is always done on the net basis.

4. If the cost-oriented or cost based approach is used for Interconnection Usage Charges, do you agree that fully allocated cost can be used with historical cost data submitted by various service providers in their audited Accounting Separation reports, published documents or any other information submitted to TRAI? If not, please give your alternate solution with explanation, required data and proper justification.

Bharti Airtel Response:

We agree with the 'cost based' methodology adopted by TRAI on the basis of Accounting Separation Reports (ASR) of the various service providers. However, while carrying out such an exercise we humbly suggest the Authority to:

i. Include CAPEX

ii. Include all OPEX

iii. No offseting of cost in proportion to any revenue such as VAS

iv. Undertake cost based transit and transit carriage

v. Subsume CAPEX items such as port charges, media charges, duct sharing, collocation in to the termination charges.

vi. The operators to bear the cost of media, collocation etc in proportion to their outgoing traffic.

Also, we firmly believe that any other source of data other than ASR would not be appropriate / suitable to determine the IUC cost as ASR data is audited, authenticated and easily available.

5. Should CAPEX be included in calculating/ estimating termination charge? If so, which network elements from the ASR data should be included in the cost base?

Bharti Airtel Response:

We would like to submit that the CAPEX including Depreciation, ROCE etc. should be included while calculating the termination charges.

The fundamental principle while driving termination charge is to **compensate the terminating operator for the various costs (both CAPEX as well as OPEX) incurred in order to facilitate the call termination in its network**. With the rapid expansion of the Indian telecom market i.e. monthly addition of around 18-20 million customers, increase in the exchange of traffic etc, even the **operators who do not add new customers are also required to invest heavily into network expansion so as to maintain Quality of Service levels and to support the increased incoming traffic from the other operators.** There are certain other factors which have resulted in increased CAPEX outlay for mobile operators. An illustrative though not a comprehensive list of these factors has been enumerated below:

- **CAPEX investment for coverage particularly in semi-urban and rural areas**

  The exponential increase in the subscriber numbers and the volume of traffic since 2003 has led to significant CAPEX investments for both coverage and capacity. Operators especially in developing countries like India need to invest a significant portion of EBITDA in CAPEX. On the other hand, the incremental CAPEX as a percentage of EBITDA is significantly lower in

developed markets like UK and Germany where network roll-out is more or less complete and the penetration is more than 100%.

Internationally, countries that have adopted cost based methodologies for determination of mobile termination charges have considered CAPEX costs as a relevant cost. Some such examples include United Kingdom, Malaysia, Pakistan, Brazil, Israel, France, Egypt, South Africa, Korea etc.

While deriving the termination Charge (both for Fixed & Mobile), the Authority during the last IUC exercise had considered only the Relevant OPEX. The Authority has not taken into account the various costs including CAPEX, Depreciation & Amortization, Sales & Marketing cost, Return on Capital Employed, with an argument that the same may be recovered using the rental & origination charge.

Thus, in view of above, it is essential that the Authority includes the CAPEX and other components of OPEX left out during the last IUC exercise to arrive at a final 'cost based' termination charge. A nominal Return on Capital employed should also be included while deriving the final 'cost based' termination charge so that the operators have enough incentive to facilitate the incoming traffic on its network and have sufficient margins to invest in augmentation of its network required to cater to increase in traffic flow.

Components to be considered while driving Termination Charge

We humbly submit that all cost elements including but not limited to the following should be captured in any methodology being considered by the Authority to determine the cost of termination:-

CAPEX Costs for the following Network elements:

- Core Network - HLR ,GMSC ,MSC, STP, BSC, IN (SDP and SCP), SMSC
- Radio Network -BTS, Microwave Hops,
- Backhaul - OFC for Inter-node connectivity (Transmission) , Redundancy through Ring protection
- Infrastructure costs
- Associated IT Capex
- Operating Expenses

The Authority should also take into account all **Operating costs** including but not limited to those deliberated below, for arriving at a fair and correct representation of the costs incurred for setting up and operating a Mobile network:

i) Network running costs – Site running costs (Rent , Energy , Security , Rates and Taxes ,Repairs & Maintenance, AMC charges , MSC running expenses , Managed Service charges, PCM charges, Signaling charges, Stores and spares consumption, Site relocation and handling charges, Warehouse rent, Insurance charges , etc.) should be incorporated

ii) IT costs – Costs on IT based activities that are directly attributable to running a mobile network such as billing, etc should be incorporated.

iii) Personnel and Administration costs – Personnel and Administration costs directly attributable to administering a network including allied services should be built in.

iv) License Fees and Spectrum Charges – The annual charges payable by the operator with respect to License Fees and Spectrum/Microwave charges paid as part of the Revenue share should be included to capture the costs that are attributable for setting up and operating the mobile telecom network.

v) Depreciation and Amortization Charges – The annual depreciation charges directly attributable and allocable to fixed assets and the annual amortization of License Fees (as part of one time Entry Charges) and spectrum charges for setting up and operating the mobile telecom network should be captured in the costing model.

vi) Sales & Marketing (S&M) Cost: Sales and marketing cost should be considered while deriving the call termination charges. It has to be kept in mind that Sales and marketing cost has a direct bearing on the number of subscribers & their behavior and hence leads to **imbalance** in traffic. S&M also helps the operator in customer retention and increase of MOUs. TRAI is also aware that, the bulk of the customer base today is prepaid and hence there is no alternate means to recover the cost incurred on S&M. It is therefore essential to include S&M costs while calculating termination charges.

vii) Cost of Capital – A fair return on the capital invested by the operator should also be considered in the costing model. The return should be based on Weighted Average Cost of

Capital (WACC) on the capital employed by the operator, to ensure that adequate protection is given to the operator on its investments. Further, we request the Authority to consider an additional rate of return over and above WACC so as to cover the risk of business especially in a vibrant regulatory environment.

viii) Bad Debts – Bad Debts are also required to be included while arriving at the termination charges as it is a normal cost attached to doing a business. The same is also recognised by the Authority itself in the petition filed in the AGR matter *"The Authority noted that bad debts is a normal cost attached to the business and is also one of the standard items of expenditure in the profit and loss account. These costs are part of the business and such risks including recovery of such costs is built in the tariff structure. Therefore inherent possibility of its occurrence is part of the business model….."*. Hence, costs on account of Bad Debts also need to be included.

ix) SIM Card Utilization - SIM card is essential component of network costs and thus costs on account of same need to be included

x) Bank Charges - Bank charges must also be considered as it is a normal cost attached to doing a business.

Xi) Other cost components to be considered/reviewed during IUC Review:

a) Port Charges, Media Charges and Colocation Charges:

Port Charges, Media Charges and Colocation Charges are the CAPEX Cost associated with the Interconnection Usage Charge. While taking the CAPEX cost in the termination charge, there is also a need to review and mandate that no extra charges are paid on account of the port charges, media charges and the collocation charges as the costs accruing to the same would have already been subsumed in the Interconnection Usage Charges determined by the Authority.

b) In order to address the issues arising out of these charges, we recommend that the Authority should re-examine the provisions of RIO regulations as the Interconnection Charges and IUC are interrelated. It is also crucial as around 10 years have lapsed since the last review of interconnection regulation.

c) **We therefore recommend that the charges corresponding to the Port, Co-location, transmission media, rack charges etc. be merged in the Termination Charge (IUC) as these are already included in the Capital Expenditure.** This will not only simplify the entire interconnection regime but shall also ensure level playing field between various operators.

d) **We also propose that it shall be the responsibility of each operator to bear the costs such as transmission media, collocation etc. in proportion to their outgoing traffic.**

Thus, it is humbly submitted that the Cost methodology followed by the Authority based on Accounting Separation Reports (ASR) needs to be suitably modified to:

a) Include all costs such as **capital costs (CAPEX) including Depreciation & Amortization along with adequate WACC.**
b) Include the **other components of OPEX such as Sales & Marketing left out in the last IUC Regulation.**
c) **Merge the interconnection charges such as Port Charges, Media Charges and Colocation Charges along with the IUC i.e. Termination Charge and Carriage Charge.**

Further, the Hon'ble TDSAT in its Judgement dated 29th Sep, 2010 has also upheld the inclusion of CAPEX, OPEX and depreciation in termination charges and our above request is in line with the same

We have already submitted our cost details to the Authority. We would also suggest that since, the cost data of all the operators is already available with the Authority in the form of ASR, the Authority should rely only on cost data from ASR rather than using any other methodology to determine the cost.

6. Do you agree that with inclusion of CAPEX in the calculation of termination charges, rental/ administrative or any other fixed charge component should be removed from the retail tariff by regulatory intervention? If not, please give reasons.

And

10. Do you agree that revenue can be used as a driver for segregating the cost pertaining to VAS services from the total cost indicated in the ASRs? If not, please provide a template with

appropriate method for separating the cost items for value added services from the cost data provided in the ASR.

And

25. Do you agree that with the inclusion of all costs in the calculation of Interconnection Usage Charges, the item "incremental cost for roaming services" should be excluded from the computation of tariff ceiling for national roaming? If not, please give reasons.

Bharti Airtel Response:

- It may be appreciated that the requirement to set cost based charge does not allow for alteration /adjustment of charges due to the method of collection of revenue from the customers. This implies that **any adjustment to the 'cost based' termination charge due to VAS revenue would be inconsistent and in conflict with 'cost based' and 'work done' principle.**
- The purpose of any fair IUC regime is that the originating operator should fairly compensate the terminating operator on the basis of work done.
- In CPP regime, the originating operator is required to collect the revenue from the customers, which is sufficient to recover the cost of both originating and terminating operator.
- The policy of forbearance allows the originating operator to recover these charges through various heads such as call charges, roaming, rental, fixed/ administrative charges etc. Out of these charges, the service provider is required to pay the termination charge to the terminating operators which are strictly cost based irrespective of the method of collection of revenue, for example these may be collected in the name of rental, fixed/ administrative charges, roaming, call charges etc.
- The actual cost of operators is known from ASR and hence, the same may be used on 'as is basis' for fixing the termination charge. So, any adjustment in cost by the revenue itself is not right as per the accounting principles and hence, we recommend that no item of revenue should be used to offset any cost.

- We would also like to explain this with the help of a simple example. Let's say, that the Authority while working out the costs, determines that the cost is Rs. 50 each for the originating and terminating operator. As per IUC, it mandates Rs. 50 to be paid to the terminating operator as the same is required to be compensated for the work done and the resources utilized in its network. At the same time, the tariffs are left under forbearance by the Authority so in a fairly competitive environment, the amount that the operator is able to earn from the customer under various heads like rental, fixed/ administrative charge, roaming, call charges etc. is solely dependent on its ability to retain the customer with that much of revenue. For a fair compensation for the work done, the originating operator is required to pass on Rs. 50 to the terminating operator, irrespective of whether it earns Rs. 80 or Rs. 120 from the customer.

- So, we believe that removal of rental, roaming or any other administrative/ fixed charge component would be an accounting error and would not result in the right calculation of the cost for termination.

The Authority would also appreciate that the current policy of keeping the tariff has enabled the operators to devise innovative tariff plans and cater to various segments. This has also played a major role in the growth of the Indian telecom market which is growing at a stupendous pace of 18-20 million customers per month.

So, the revenue from rental, roaming, administrative/ fixed charges etc. should not be reduced from the cost for the purpose of calculation of IUC as it would amount to going back to the regime of regulated tariffs.

7. Should TRAI continue with the existing rate of return of around 15% in the form of pre tax WACC as adopted in other regulations? If you do not agree with the above, please state what should be the rate of pretax WACC, along with justification for your proposed rate.

Bharti Airtel Response:

It is learned that the present WACC for operators is in the range of 15-20% however with hardening of interest rates in recent past and rising inflationary pressures, we expect the WACC to go up significantly in the next 3 years.

So, we request the Authority to consider a WACC of at least 20% for the purpose of calculation of IUC.

8. **Would it be appropriate to adopt Straight Line Method with an average life of 10 years for all network elements for taking into account depreciation? If you do not agree with this proposal, please give your alternative method with justification**.

Bharti Airtel Response:

It is highlighted that the figure of depreciation for any financial year is already appearing in the ASR, which is audited & matched with the published accounts of the operators. Therefore, we do not find any merit in computing the depreciation afresh.

Moreover, the average life of network assets varies from 7 to 10 years and the life of IT equipment is approx. 3 years. Therefore, it is recommended that the Authority should take the depreciation figures from the ASR only and should not adopt straight line method.

9. **Do you agree with the proposal for treatment of the cost items as indicated in Table 3.2? If not, please give your proposal with justification.**

Bharti Airtel Response:

We do not agree with the proposal for treatment of cost items as indicated in table 3.2. In this regard, it may be noted that TRAI has considered only a part of OPEX while determining termination charge during the last IUC exercise and the capital cost was not included. It is therefore requested that the termination rates must be set on cost basis and work done principle and should include capital and operating costs as mentioned above in our detailed response to Question 5.

Further, we would also like to highlight the elements which need to be considered while calculating the MTC, as below:

	Model Calculation for determination of MTC		
			(Rs in lacs)
S.No.	Particulars	(ASR)	Wireless & Wireline
A	**Operating expenditure :**		
	Employee cost	Proforma B	
	Administration Cost	Proforma B	
	Sales and marketing cost - Bad debts / Sim Utilsation	Proforma B	
	Sales and marketing cost - Others	Proforma B	
	Maintenance cost	Proforma B	
	Network operating Cost	Proforma B	
	Other cost	Proforma B	
	Bank charges	Proforma B	
	Total Opex (A)		
B	**Relevant Capital expenditure charge :**		
	Depreciation	Proforma B	
	Amortization of License fee	Proforma B	
	Return on Capital Employed at WACC (Net Block) :		
	Average Capital Employed - ((Opening + closing capital employed) /2) (a)	Proforma G	
	Weighted Average cost of capital (WACC) (b)	@ 20%	
	Return on Capital Employed (Net Block) = (a) x (b)	Proforma G	
	Total Capex (B)		
C	**Total Cost (C) = (A + B)**		
D	**MOU (in Lakhs)**		
	Wireless MOU's ((D(a))		
	Wireline MOU ((D(b))		
D	**Total MOU's (D) = D(a) + D(b)**		
E	**Termination charge without LF & WPC charges (E) = (C / D)**		
F	**Rate of LF & WPC Charge (F)**		
G	**Termination charge with LF & Spectrum charges (G) = (E) / (1-F)**		

Notes:

1. RoCE is calculated on the basis of Average Capital Employed (Net Block) and WACC@ 20%
2. Finance Cost is nothing but Bank Charges and is not in the nature of interest on borrowings
3. Relevant Opex includes the following:
   - Bad Debts
   - SIM Utilisation Cost
   - Finance Charges (Bank charges)
   - Sales & Marketing
4. LF & WPC rates are taken as average of the Current Rates for all circles taken together.

11. Should termination charges be asymmetric in respect of existing operators and new entrants or between different types of networks? What should be the criteria to distinguish between an existing operator and a new entrant? Please justify your answer.

Bharti Airtel Response:

The termination charges should be symmetric in respect of existing operators and new entrants.

Why termination charges should be Symmetric in respect of existing operators and new entrants?

- There is no public interest case for customers of one efficient operator subsidizing the inefficiencies of another operator through an asymmetric termination charge. In the past also, requests for asymmetries with respect of BSNL have been rejected by the Authority and the market developments have proved its decision to be correct.

- Operators are competing on the basis of retail tariff and Quality of Service. Also, the new operators have been allocated the licenses at the same price at which these were provided to operators in year 2001-2002 without adding any time value for money. So we see no reason to support the new operator through the mechanism of IUC.

- Thus, for aforementioned reasons, **the termination charges should be Symmetric in respect of existing operators as well as new entrants.**

Why termination charges be Symmetric with respect to different types of network?

- We also propose that the charges for termination of calls into mobile and fixed line networks should not be asymmetrical, as the same would force the service providers to raise the tariffs for calls terminating onto fixed line network of other operators and hence would discourage the subscribers from calling onto fix line numbers.

- Keeping in view that a large number of fixed line phone are fully substitutable with mobile phones, may lead to a drastic change in the usage pattern of the subscribers wherein they will prefer calling mobile numbers as against a fix line number. Such a scenario will be detrimental for the subsistence of fix line business itself which is already under intense competitive pressure from mobile operators and would ultimately lead to large scale churning of the fix line customers in favour of mobile phone.

- So, we request the Authority to keep **uniform termination rates for both fixed line and mobile** to foster growth and sustainability in the fixed line business**.**

The matter was also deliberated by the Authority during the last IUC Review in the year 2009 and observed the following:

"The Authority examined the matter in detail and also noted that non-uniform termination charge for partly substitutable services, like fixed and mobile telephone calls, would skew the traffic, increasing it towards the service with lower termination charge. This reduction of traffic to/from one particular type of the network would further reduce the number of minutes travelling on that network. This reduction in minutes of usage would lead to further increase in cost based termination charge for that network. The Authority has also noted that a number of licensees have started their services since the inception of IUC regime in 2003 as new service providers, well aware of the existing IUC environment, and they all have been able to sustain and grow with the existing IUC regime that does not introduce any asymmetry towards the new entrant. From the data it is also evident that most of the existing service providers are making reasonable rate of return on their investment. ***In fact, symmetric termination charge has created a level playing field for all operators for all types of the services****."*

As there has been no material change since the last review, we do not see any reason why the above stated position of TRAI needs a revision. The telecom policy and licenses do not allow any kind of discriminatory treatment for any operator. So, we strongly believe that the Authority should keep symmetrical termination charges for all types of operators/ networks as one of the functions of the Authority is to ensure compliance with the terms & conditions of the Licence.

12. Should the TRAI treat the work done in origination and termination of a call as identical for the purpose of determining termination charges? If not, please provide justification in support of your answer.

Bharti Airtel Response:

Yes, the Authority **should treat the work done in origination and termination of a call as identical for the purpose of determining the termination charges**. In fact, this has been the consistent view of the Authority.

It may be noted that the work done in origination and termination of calls is practically equal except for some components like Intelligent Networks which are primarily required for call handling when the call is originated. However, the cost of such elements is minimal as compared to the overall network cost and hence for determination of termination charges, the Authority

should treat the work done in origination and termination of call for the purpose of calculation of IUC.

13. What should be the criteria to estimate the traffic minutes for the fixed line network as actual traffic minutes for the fixed network are not available with TRAI? Please provide justification in support of your answer.

Bharti Airtel Response:

As already deliberated in the response to Question 11, there shall be uniform termination charge for both fixed line and mobile to foster growth and sustainability in the fixed line business. Hence, there shall not be a requirement to estimate the traffic minutes of fixed line network separately.

The entire aggregated MOUs available with the Authority for both fixed line and mobile may be used to calculate a uniform termination charge.

Alternatively, in the absence of the cost and MoUs for fixed line services provided by one or two operators, TRAI should do the calculations on the basis of the cost and MoUs data provided by other balanced fixed line operators. In any case, when cost of termination for the fixed line and mobile is kept the same, then the total cost of the operator, irrespective of its break up between mobile and fixed line should suffice.

14. Do you agree with the policy that origination charge should be under forbearance? Please provide justification in support of your view.

Bharti Airtel Response:

Yes, we are **in agreement with the Authority's policy of forbearance with regards the Origination charge** and the same should be continued.

The policy of forbearance for origination charges extends the much needed flexibility to the operators to roll out different tariffs to attract diverse segments of the subscriber base. In fact,

the market forces are working extremely well and have resulted in exponential growth of the telecom sector by way of affordable tariffs.

So, we are of the view that there is no need of regulating the Origination charge.

15. Which of the following is the best option for International Termination Charge?

(a) Left for mutual negotiation between access providers and ILDO

(b) Reciprocal arrangements with other countries

(c) Higher than the domestic termination charge

(d) Same as domestic termination charge

Bharti Airtel Response:

It is submitted that the ILD termination charge should be **higher than the domestic termination charges** and should be **in line with the charges payable for termination in foreign countries.** In this regard we would like to submit as follows:

- The Indian Access Providers are at a huge disadvantageous position vis-à-vis the foreign operators due to the fact that the foreign operators charge almost 8-10 times higher than the Indian termination charges of Rs. 0.40/- fixed by the Authority during the last review of IUC.

- At present India is a net importer of international traffic, with an Incoming to Outgoing ratio which is as high as 6.6 to 1 i.e. for every minute of an outgoing call, we receive a call about 6.6 minutes. With such a high ratio in favor of India, the country should earn precious foreign exchange from other countries for incoming ILD traffic. On the contrary, the operators in India are net payers of foreign exchange. This is because while the average cost of sending the traffic ranges between 8 - 10 US cents, our termination charge for incoming ILD calls has been fixed by the Authority at only 0.9 US cents (Rs. 0.40) and settlement price is approximately 1.1 - 1.2 US Cent . As a result, India is a net payer in terms of the actual flow of money even though we receive more traffic.

- It is estimated that in FY 2010-11, India received approx 40 Bn Mins of international incoming traffic while it sent out approx. 6 Bn Mins of outgoing international traffic. Despite

receiving additional approx. 34 Bn Mins of international traffic, India would have ended up paying (net of incoming revenue) about $60 - $70 Mn to foreign operators.

- Thus, the increase in Termination Charges for incoming international calls in line with the charges payable for termination in foreign countries is highly warranted. This will ensure a win -win proposition for all the parties as it will result into:

  a. Saving & earning of precious foreign exchange for the country;
  b. Higher earnings to the Government/exchequer on account of high licence fee & other increased Government levies;
  c. Additional funds for the creation of rural infrastructure and an enabler to provide affordable tariffs to Indian subscribers.

In light of the above, we request the Authority to fix higher termination charge for incoming international calls which are in line with the charges payable for termination in foreign countries.

We also propose to have a step wise increase in international termination charge for example Rs. 1 in first year, Rs. 1.50 in second year and Rs. 2 in third year so that there is a clear visibility over the prevalent market conditions at each step of increase

16. Is there a need to specify separate ceilings for carriage charges for remote and hilly areas? If yes, how should the costs corresponding to remote/ hilly areas be segregated for carriage charges to/ from remote/ hilly areas, as the Accounting Separation Reports of the NLD operators provide only a consolidated cost for pan India operations?

Bharti Airtel Response:

The objective of the Government is to connect the unconnected and provide affordable telecom services in the remote/ hilly areas. At present, the access providers are in the process of rolling out services in the remote/ hilly areas. However, the success of the same is dependent on the provision of reasonably priced services.

The Authority itself is aware that a high ceiling is a powerful tool in the hands of the operator with a dominant position in the market in carriage rate negotiations, particularly in poorly connected geographical areas or wherever these dominant operators can dictate connectivity.

In today's scenario, only few operators have their networks in the remote/ hilly areas for carriage of calls to these regions. So, in case the Authority comes up with a differential and higher ceiling for carriage charges for remote and hilly areas, the same will result in these operators charging the ceiling rates for NLD Carriage to these locations, thereby resulting in differential tariffs by the access operators for carrying calls to and from these locations and increase in cost for providing services in these areas.

Such a differentiated/higher STD tariff for the remote and hilly areas would further alienate them from the main stream of the Country.

So, we request the Authority to continue with **uniform carriage charges ceiling**. We would also like to highlight that a ceiling of 65 paise is high enough to compensate for provision of services in remote/ hilly areas as the NLD operators then charges higher rates for other routes. Since, the carriage rates on all other routes are comparably lower, the high cost of carriage to the hilly/remote areas gets compensated.

It is also highlighted that DoT has taken up the project of having Optical Fiber connectivity in all villages, we expect this will be available to all NLD operators at reasonable rates in the near future. In such a scenario, it may be positively assumed that all NLD operators will start services in these areas and the competition will eliminate the need for any regulatory intervention on carriage charges.

17. Do you feel that TRAI should intervene in the matter of International Settlement Rates? If so, what should be the basis to determine International Settlement Rates?

Bharti Airtel Response:

- It is highlighted that fixing of the settlement price by the authority for incoming international call termination without changing the ILD termination charges will not serve the desired purpose. In a fairly competitive market, the settlement price set by the authority becomes

the default settlement price at which the Indian termination will be offered by ILDO to the foreign carriers. Such a situation does not leave any room for an ILD operator to offer competitive prices and hence would be seen as cartelization.

- Also, any fluctuations/ changes in the foreign termination charges directly affect the Indian access providers as the same is passed on to them by the ILD operators. Thus, any increase in foreign termination charges will lead to an increased out-pay by the Access Service Provider without affecting their in-flow if the ILD termination rates are kept the same.

- In our view instead of setting a settlement price for settlement by ILDOs, the termination rates for the ILD calls to be charged by Access provider should be increased. The fixing of the international termination rates by the Indian Access Providers will automatically eliminate the need of setting the floor price for the ILD operators.

- We also like to submit that fixing differential termination rates for calls from different countries may not be advisable as the traffic of the Countries for which the termination charge is higher would start flowing through the Countries having lower termination charges.

- Moreover, since the ILD operators would be collecting the higher termination rates, paying domestic carriage charges and would also bear the risk of bad debts etc., so they are required to be suitably compensated.

- In light of the same, we request the Authority to a set some pricing mechanism which protects the interest of the ILD Carriers and the sector at large.

In light of the above and as referred in our response to Question 15, we request the **Authority to fix higher termination charge for incoming international calls in line with the charges payable for termination in foreign countries and a suitable mechanism for compensating the ILDO for the carriage of ILD calls.**

18. How can the cost of providing transit carriage be segregated from the cost data in the ASR? Please provide a method and costing details to separately calculate this charge.

And

19. If the cost of all relevant network elements are taken into account in the calculation of the fixed line termination charge, is there any further justification to have a separate transit carriage charge? Please give reasons for your answer.

Bharti Airtel Limited:

With regards the above, we would like to submit as below:

- As per the present IUC regime, the terminating operator is entitled to the termination charge for calls terminating in its network. The regime envisages the principle that the originating network has the choice to either directly terminate the call in to the terminating network or route the call via the carrier operator for further termination into the terminating network.

- The choice of the carrier operator shall solely lie with the originating operator.

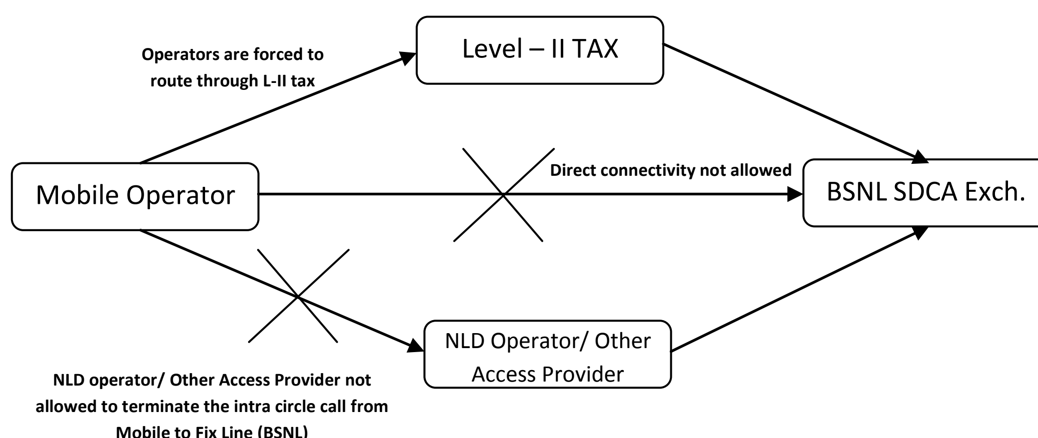

Fig 2- Diagram showing monopolistic behavior by BSNL w.r.t. Intra-circle Mobile to Fixed Line Termination

- However, as a deviation to the above principle, BSNL has declared their L-II TAX as the terminating point for the calls originating from the mobile network of the private operators for termination to their fixed line network (as shown above). Having declared L-II TAX as the terminating point, ideally, it should be the responsibility of BSNL to carry the call further to

the terminating SDCA without any additional charges. However, BSNL had been consistently charging it under the disguise of transit carriage charge which is grossly wrong because of the following reasons:

- ✓ They do not provide POI at SDCA and declare their LDCC TAX (L2 TAX) as the only point of termination of calls from mobile networks to their fixed line network;
- ✓ The originating operator i.e. the Mobile operator is denied the rightful flexibility to choose the carrier which leads to mandatory carriage charges payable to BSNL .

- So, in our view, the Authority should regulate this element by either directing BSNL
  - ✓ to provide connectivity at all '**Declared termination points'** in their network.
  - ✓ should bear the cost of carriage within its own network i.e. from '**Declared termination point'** (L 2 TAX) to the actual point of termination (SDCA Switch).

- The Authority may also allow carriage of calls by any other NLD/Access provider with whom BSNL have already established the POI at SDCA level or point of actual termination. Allowance of other NLD/ Access provider to terminate directly at the POI at SDCA level will introduce the much needed competition and eliminate the need to determine transit carriage charge. In fact, this is the only element where today no competition exists.

- Going forward, we also propose that the termination point for the fixed line should also be circle based i.e. the mobile operator should terminate at circle level L1 tax in case of BSNL. Also, it shall be the responsibility of any operator including the fixed line operator to carry the calls from the Declared termination point to the actual point of termination at its own cost. This will simplify the interconnection between mobile and fixed line operators and would enable the fixed/mobile convergence and Fixed Number Portability.

- Notwithstanding the above, if the originating operator (Mobile operator) voluntarily opts to terminate the call at L-II TAX of BSNL instead of SDCA, BSNL may be allowed to charge the carriage charges but the said charges must be strictly cost based, as defined by the Authority.

20. Is there a need to regulate the TAX transit charges or should it be left for mutual negotiations? In the event transit charge is to be regulated, please provide complete data and methodology to calculate TAX transit charges.

Bharti Airtel Limited:

We are of the view that introducing competition in this segment is the key to solve the issues related to monopolistic TAX Transit charges levied by BSNL. We have the following submissions in this regard:

- Ideally transit charge may be applicable wherein an operator is not in a position to establish direct interconnection with all service providers and therefore there may be a need to allow transit connectivity in the interim. It must however be emphasized that such facility **should be cost based** so that burden of the transit charge does not get transferred in the form of higher Termination charges

- However, as a deviation to the above principle, BSNL charges the transit charge where it is not able to provide PoI at their Cellone MSC and asks the operators to transit the call through the L1TAX. In our view, the cost of BSNL's inability to provide the direct PoI should not be transferred to the other operators. So, i**t is submitted that the Transit charges should not be applicable where BSNL is unable to provide POI demanded by the operator** within 30 days.

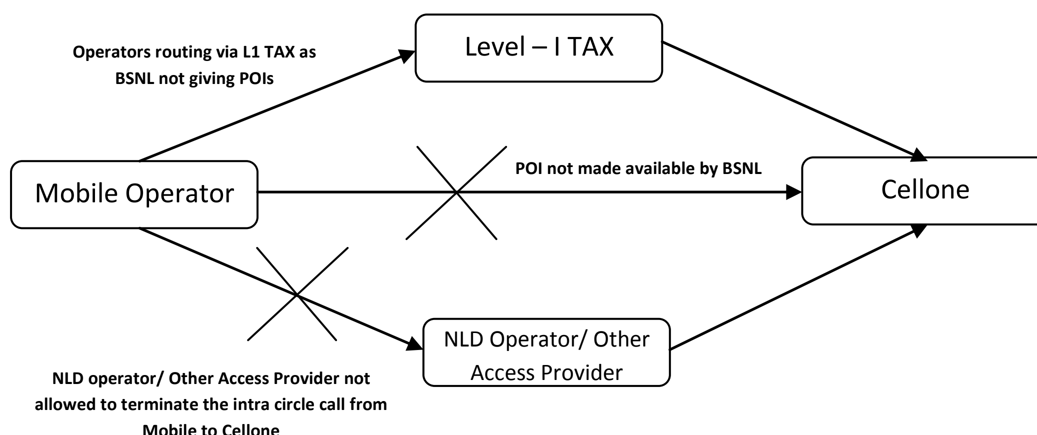

Fig 3- Diagram showing monopolistic behavior by BSNL w.r.t. Intra-circle Mobile to Mobile Termination

- Moreover to ensure level playing field, private operators both Access/NLD should also be allowed to provide the transit services for termination of calls to BSNL's network. This will bring competition from other NLD/Access Provider by providing a free choice to the

originating operator to either use BSNL L -I TAX or alternatively choose another operator to terminate the call on BSNL's Mobile.

21. Is there any need to prescribe separate termination charges/ carriage charges for video calls? If yes, how should this charge be calculated in the absence of cost data? Please provide the methodology and data to be used.

Bharti Airtel Response:

With the launch of 3G Service, the operators are likely to launch the inter-operator Video Calling. So, there is a need to determine the Interconnection Usage Charges for Video Call. Thus it is suggested that the existing framework of Interconnection Usage Charges may also be extended to Video Call termination wherein the Authority may determine the terminating and carriage charges leaving the origination charges under forbearance.

A video call utilizes more resources in the network as compared to a normal voice call. The utilization of the network elements for the video call vis a vis the voice calls are explained below:

- **<u>Radio Access Network : (RNC/NodeB)</u>**

  In Node B, video call requires more Channel elements than voice. A voice call requires only 1 Channel Element whereas a video call requires 4 Channel Elements. A video call also uses a higher order code from the code tree compared to a voice call. Hence a video call utilizes much more capacity in the Node B as compared to a voice call.

  The bandwidth requirement for a video call is also high compared to voice call. It requires minimum 64kbps where as a voice call can be made with 12.5kpbs.

- **<u>Core Network:</u>**

  In the core network, special feature is required to support video calls as it is not a basic feature like Voice. It utilizes additional resources (data devices) in MGW to handle video calls. Protocol 3G.324 is used for video calls.

The bandwidth requirement for a video call in the core network is also high as compared to voice call. It requires minimum 64kbps where as a voice call can be made with 12.5kpbs using AMR-HR (Adaptive Multi-Rate – Half Rate)

- **Lawful Interception:**

Interception of video calls requires 2 timeslots whereas for voice call, only 1 timeslot is required. In addition to this, Video Recording Server & Software is required to capture & play the video call content

- **Impact on CDR/ Billing System:**

Additional Impact on Mediation/billing system as it is required to capture the Video Fields in CDR and hence populate as a video call in subscriber bill.

- **Prepaid IN System:**

Prepaid IN systems require additional feature to charge video call separately on top of Voice call.

- **International Long Distance:**

Video Call requires end to end uncompressed 64kbps unrestricted channel unlike voice which can be transmitted in compressed mode and hence increased BW cost. Also dedicated trunk group is required to have separate billing for video calls

As is evident from above, the Video call technically utilizes approximately 4-5 times the resources/ bandwidth as compared to a normal voice call. It is therefore suggested that the Authority may accordingly **determine the charges for Video Calls as "four times" the charges determined in case of a voice call** considering the fact that the consumption of the network resources is four times than the resources consumed for voice call.

22. Do you agree that a deterrent termination charge should be imposed for commercial SMS? In your view, what would be the most appropriate level of termination charge for commercial SMS?

And

23. Do you agree that Bill and Keep regime should be put in place for other types of SMS (non-commercial SMS)? Please provide justification for your response.

24. Bharti Airtel Response:

Before answering to the above question, we would like to share the flow of A2P and P2P SMS to elaborate on the concept of work done principle in each of the scenarios.

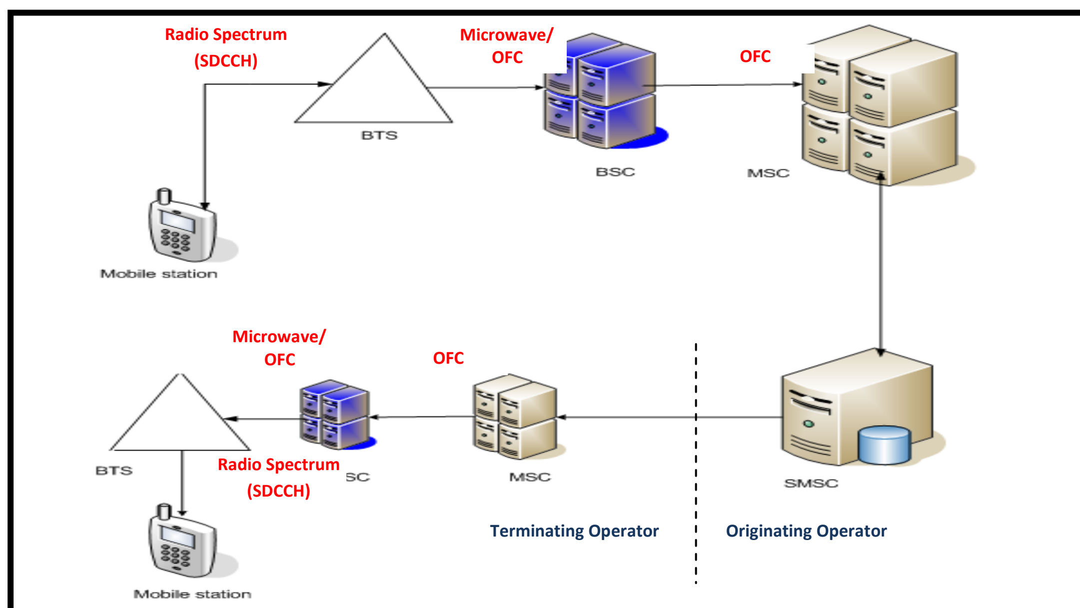

Fig 4 - Diagram showing P2P SMS delivery

In the above pictorial representation depicting the flow of P2P SMS from originating network to the terminating network, the network resources of both the originating and terminating network are equally utilized. Applying the work done principle in this context, the obvious conclusion is that the terminating operator is entitled to equal share in the revenue earned by the originating operator since equal work has been done by the originating and terminating operator for delivery of SMS from the originating end to the terminating end.

Thus any arrangement for 'Bill and Keep' in P2P SMS may not be effective in a scenario where the smaller originating operators offer SMS tariff either free of cost or below cost as a part of their acquisition strategy thus creating SMS traffic imbalances between the terminating and originating networks. As reiterated earlier in our response, the 'Bill and Keep' is not effective in traffic imbalances but also encourages the blatant abuse of terminating operator's network.

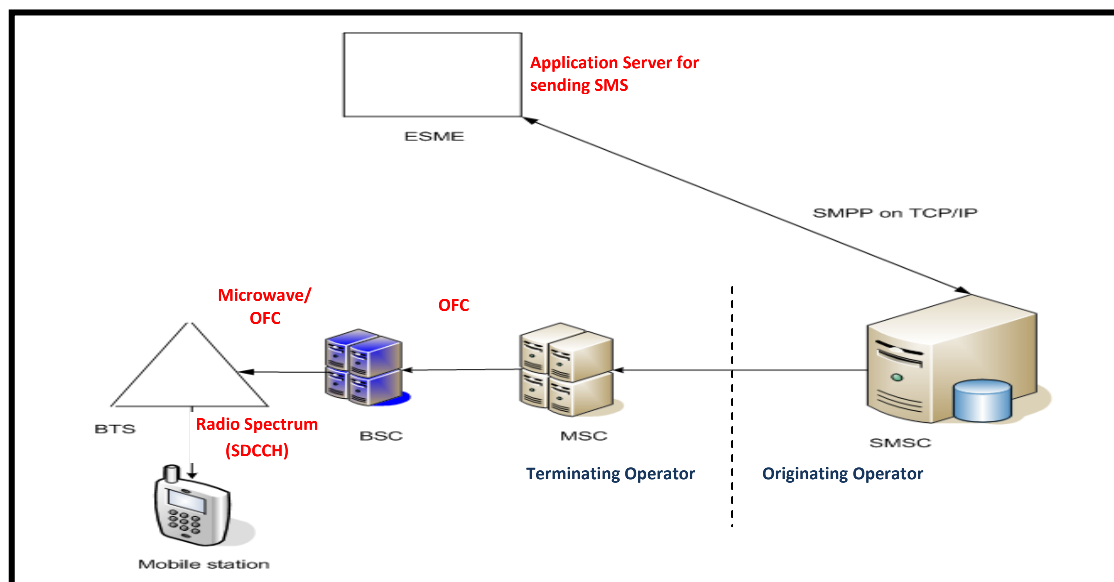

Fig 5 - Diagram showing A2P SMS delivery

In the A2P SMS flow as shown in figure 9 above, it is evident that the majority of network elements utilized are of the terminating operator. Practically, it can be presumed that almost all the cost of A2P SMS is borne by the terminating operator. While the cost incurred by the originating operator is negligible as compared to the cost of the terminating operator, but the pricing and revenue of the SMS is still in direct control of the originating operator. The originating operator is thus in a commanding position to decide about the tariffs for A2P SMS and offers the A2P SMS at costs which are adequate to cover their Sales and Marketing cost while completely ignoring the network costs incurred by the terminating operator to install, operate and maintain its network.

Therefore, there is no rationale in the fact that the terminating operator is deprived of any revenue in A2P SMS when the majority of network resources utilized in routing the A2P SMS belong to the terminating operator. On the contrary, the terminating network is rather penalized by way of additional expenditure incurred by it in augmenting its resources for handling the additional SMS traffic generated by the originating operator. This not only amounts to unjust enrichment of the originating operator at the cost of terminating operator but is also in gross in violation to the work done principle.

The Authority is also well aware that the current SMS statistics explicitly confirms that the market is flooded with A2P SPAM SMS as they are being used as a channel for advertisement. Few operators are predominant players in the market offering the A2P SMS at a very low price which is just sufficient to compensate their own Sales and Marketing cost and thus disturbing the entire eco system of SMS.

Considering the current practice in market, it is evident that the probability of SMS being used as SPAM is higher than voice. Therefore, there is a need to introduce checks and balances in the form of termination charges on SMS to avoid the abuse of the network of terminating operators as well as avoid inconveniences caused to the customer due to SPAM SMSs. A termination charge, which can act as a deterrent to such misuses is the need of the hour. Moreover, the termination charges on SMS shall also put a check on indiscriminate flooding of SMS but will also contribute in enhancing the customer confidence.

Thus, keeping in view the above facts, we submit to the Authority that **a termination charge for all types of SMS (commercial as well as non commercial) should be prescribed at a level, which allows the terminating operator to recover their cost as well as successfully address the concerns of SPAM and pesky SMSs.**

We would also like to bring to the notice of the Authority that most of the operators have a relatively balances P2P SMS traffic. The traffic imbalance is primarily on account of A2P SMS. However, the Authority would appreciate that it is very difficult and cumbersome to segregate the P2P and A2P SMS traffic for the purpose of traffic routing and billing and also adding A2P SMSs to balanced P2P SMSs will have no impact on the net settlement between the operators. It is also worthwhile to mention that while the accounting of the IUC is done on the gross basis, the actual settlement is done on the net basis. So the net cash flow in case of operator having balance traffic would be almost NIL.

Hence, **we propose SMS termination charges be defined uniformly for all the SMSs types irrespective of whether these are A2P or P2P SMSs**

24. Is there any need to prescribe SMS carriage charges or should it be left for mutual negotiation? If SMS carriage charges are to be calculated, what methodology should be used to calculate these charges? Please provide all cost details and methodology.

Bharti Airtel Response:

We believe that NLD operators have to be compensated for the carriage of SMS traffic. Since, there are large number of NLD operators who have the ability to carry SMS/ SCCP traffic, so the SCCP carriage charges should be left under forbearance.

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