Bharti Airtel Limited's response to Consultation Paper on "**Review of Interconnection Usage Charge (IUC)"**

Q1 What components of Interconnection Usage Charge (IUC) should be reviewed?

Bharti's Response

A fair, transparent and progressive interconnection regime is the most crucial element for the growth of any telecom industry and thus, it is vital that any review of interconnection regime is done holistically.

In light of the above background, we would like to make the following submissions:-

1. Origination Charge

Currently, the origination charge is under forbearance. As per the Authority, the forbearance category helps the originating operator to retain the residual amount after paying the other requisite IUC charges.

As rightly observed by the Authority, the forbearance category has prolifically enabled the operators to adjust their tariffs based on prevalent market conditions, which could be construed as one of the reasons for high subscriber acquisitions.

Thus, we are of the view that this system is working extremely well in Indian telecom industry and accordingly, origination charges should continue to remain under forbearance category.

2. Termination Charge

Before submitting our views on the termination charge, we would like to draw the attention of the Authority on certain facts / issues, which we believe requires Authority's favorable consideration:-

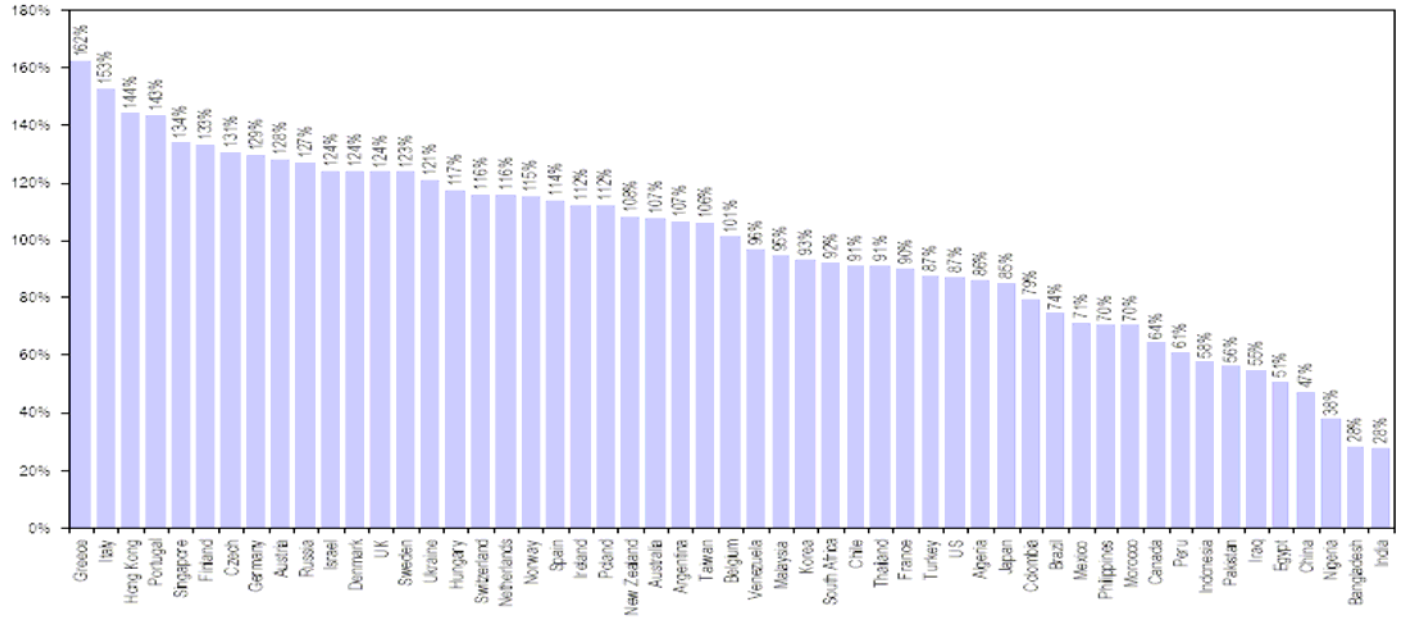
Financial Health of the Indian Telecom Industry

The Authority would appreciate that the financial sustainability & viability of the Indian telecom sector is required not only from companies' point of view but also from keeping a healthy and sustainable telecom sector. In this context, the Authority is also charged with the responsibility of protecting the interests of the service providers as also promoting and ensuring the orderly growth of the telecom sector. It is submitted that this would necessarily entail that the Authority takes necessary steps to ensure the viability of the sector as well as its sustained growth.

Standing of the Indian Telecom Market on Crucial Financial Parameters

a. Despite being the fastest growing market still India's wireless penetration is still below international standards. The penetration levels will have to increase at a much faster pace as compared to other markets. Rural penetration is quite low & majority of the net Adds will have to come from the rural areas:

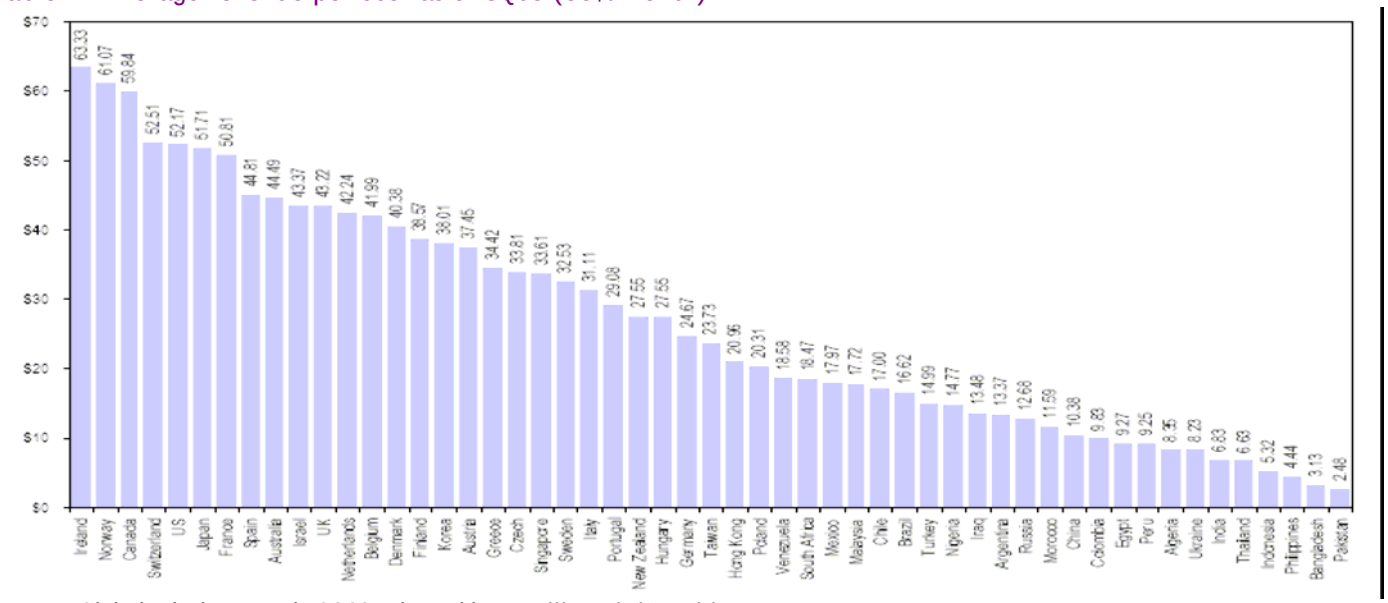
Table 1 Wireless penetration by Country as of 3Q08 (mobile subs/population)



Source : Global Wireless Matrix 3Q08 released by Merrill Lynch (Canada)

b. The Indian Operators' Average Revenue Per User (ARPUs) are already at a very lower levels in comparison to other telecom companies globally. It is consistently showing declining trend and further introduction of competition, which is already underway, will further impact ARPUs & Service margins.

Table 2 : Average revenue per user as of 3Q08 (US$/month)

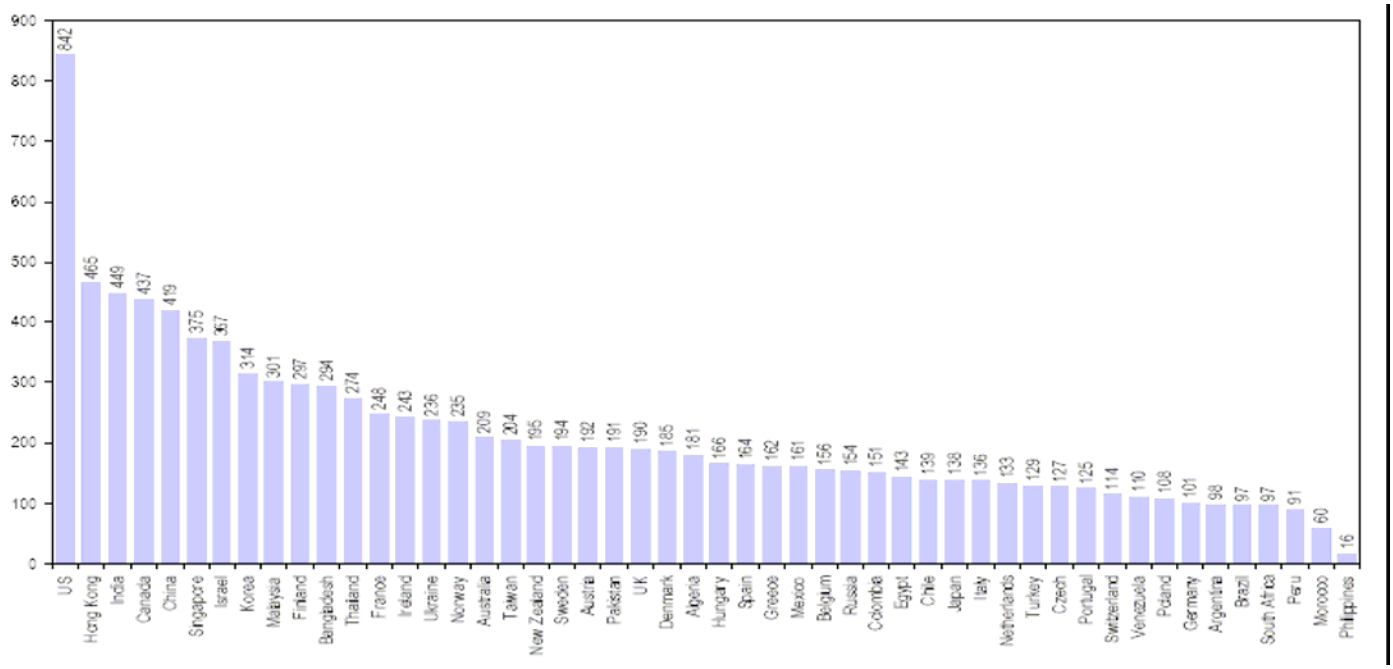


Source : Global Wireless Matrix 3Q08 released by Merrill Lynch (Canada)

c. Monthly Minutes of Usage per subscriber of India is among the top 3 at global level. This indicates that Indian telecom infrastructure is being well utilized and thus, the operators have to consistently invest in infrastructure to sustain the growth of the subscribers as well as to meet

defined QoS. This clearly has a huge requirement of CAPEX to be invested. Because of this, none of the telecom operators in India, despite after 10 years of operations, are "Cash Positive"

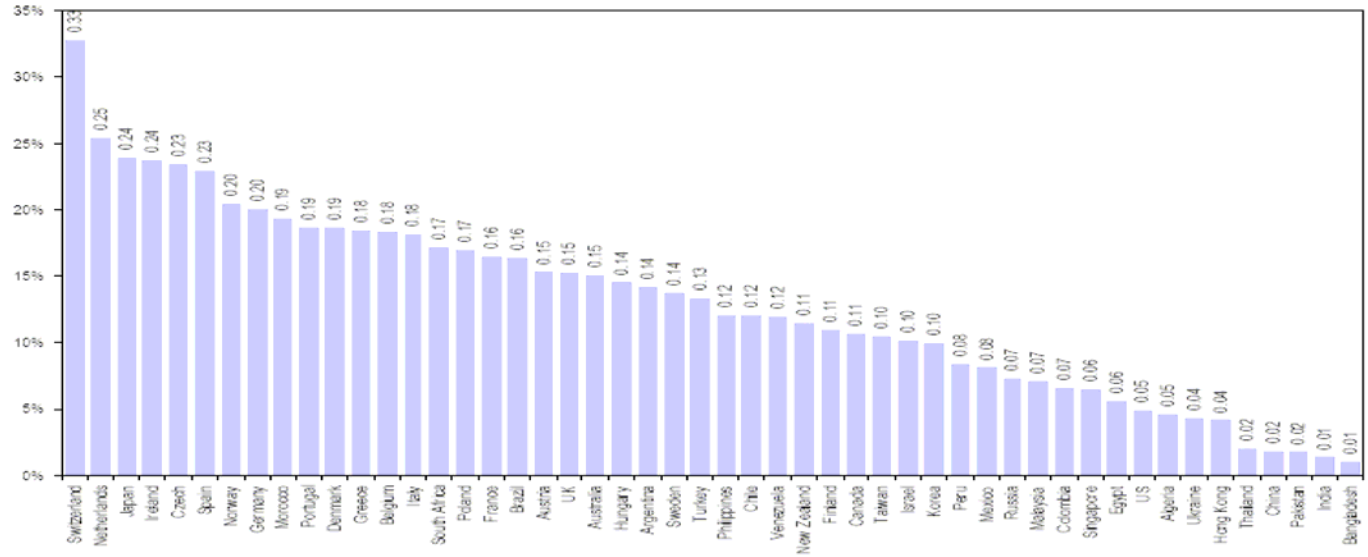
Table 3 : Monthly minutes of use per subscriber as of 3Q08



Source : Global Wireless Matrix 3Q08 released by Merrill Lynch (Canada)

f. Revenue Per Minute (RPMs) are also at the lowest level. Despite MOUs being among the highest, RPMs are among the lowest if compared globally.

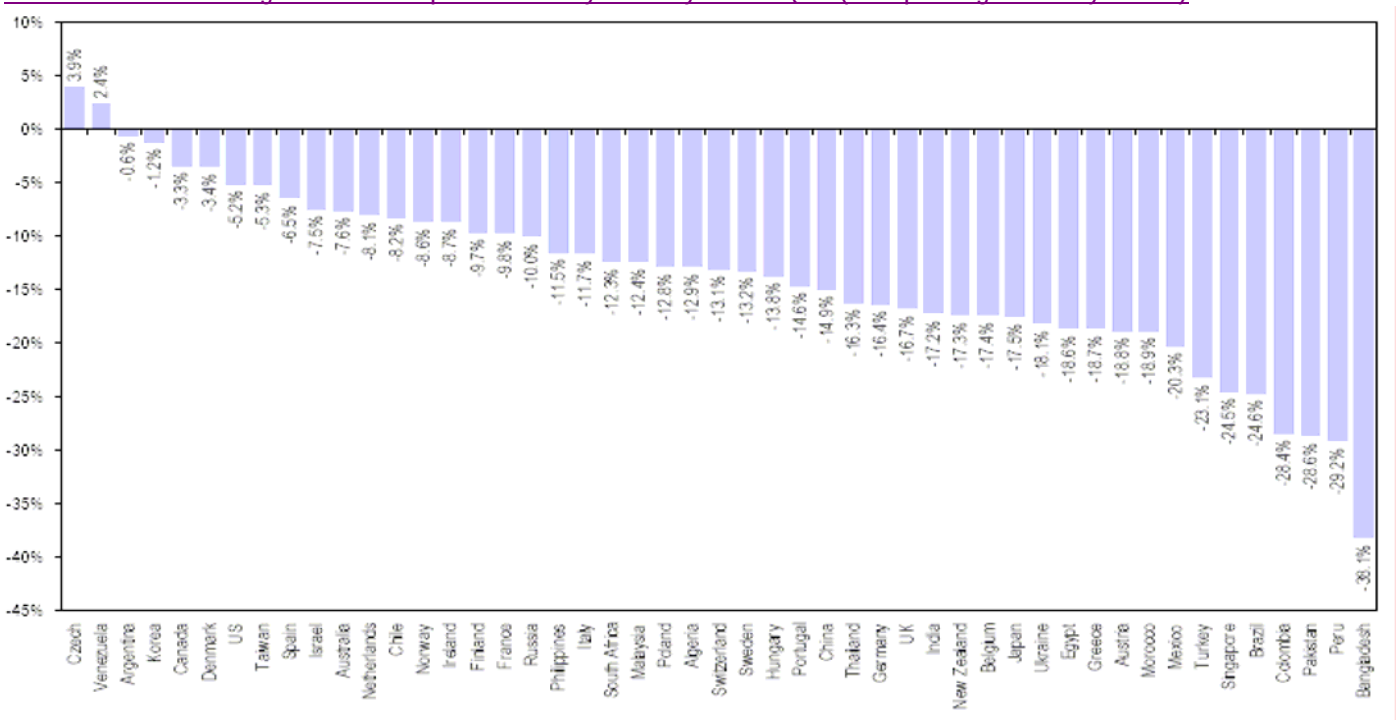
Table 4 : Revenue per minute by country as of 3Q08 (US$)



Source : Global Wireless Matrix 3Q08 released by Merrill Lynch (Canada)

g. Moreover, RPMs are under continous pressures & with the introduction of further competition, which is already underway, it is projected to be declined further:-

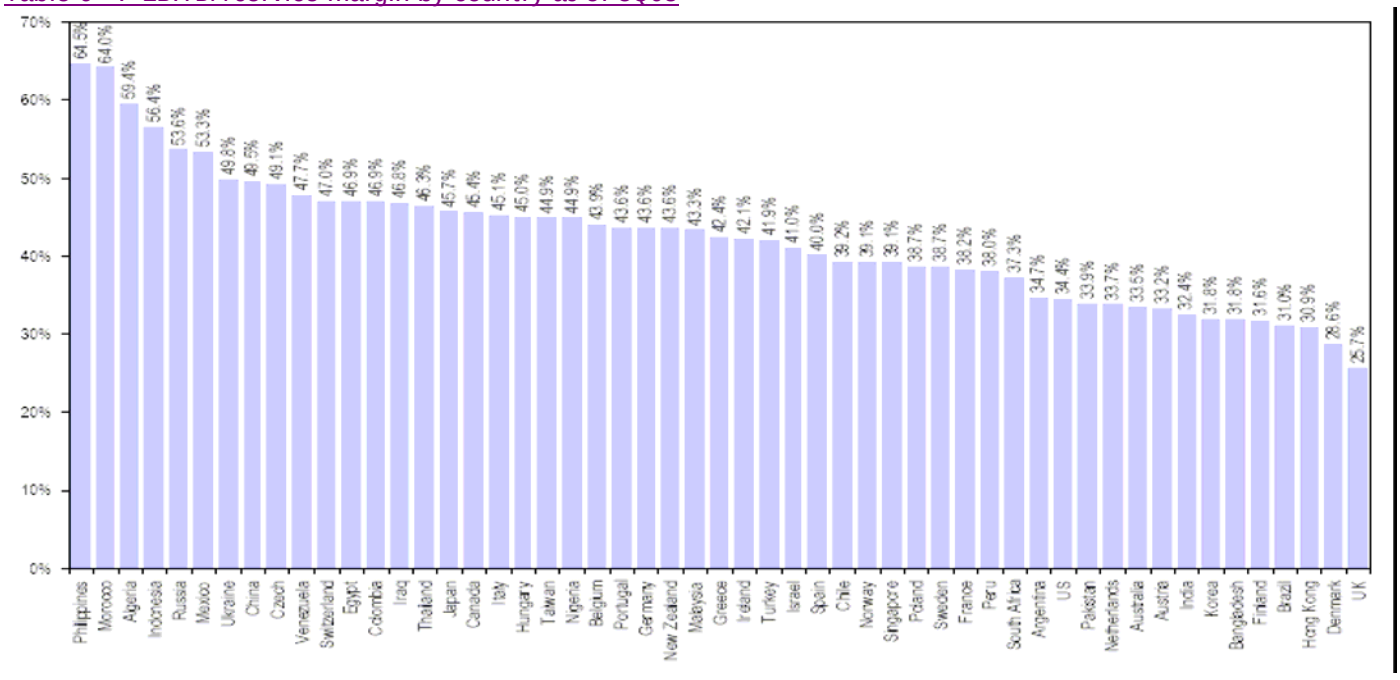
Table 5 : YoY % change in revenue per minute by country as of 3Q08 (in reporting currency terms)



Source : Global Wireless Matrix 3Q08 released by Merrill Lynch (Canada)

h. India is already operating at lower EBITDA margins in comparison to other Global Players in the Market.

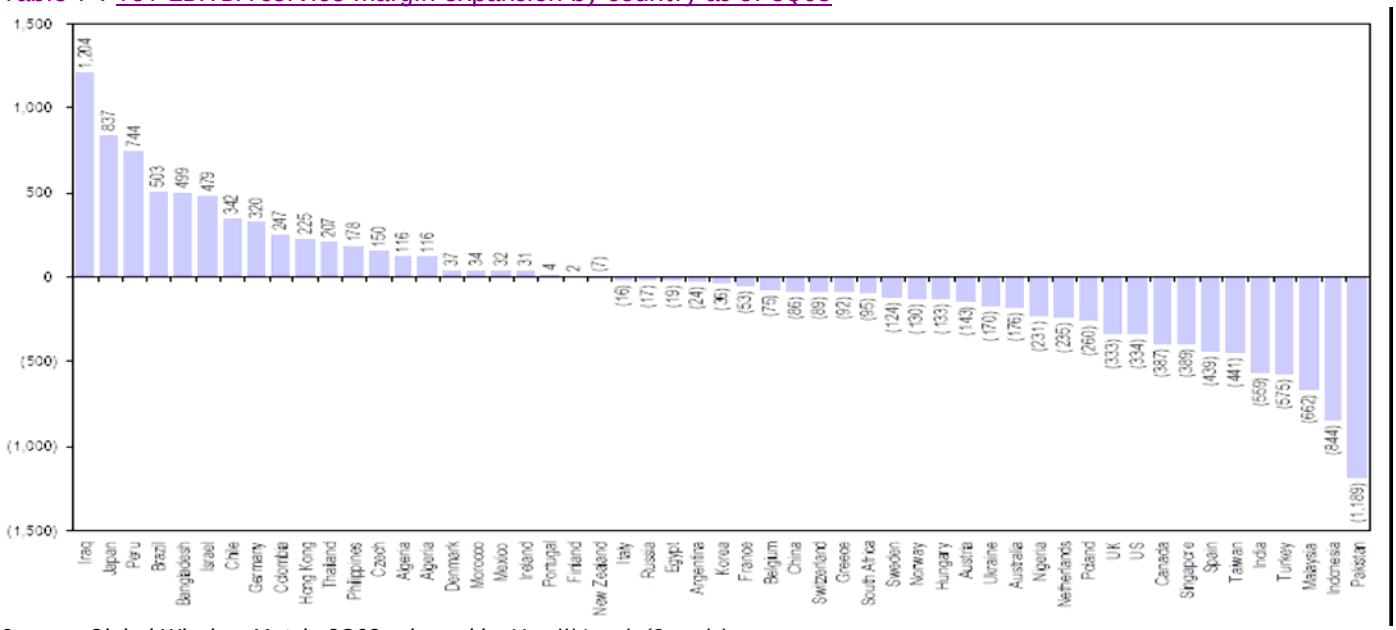
Table 6 : EBITDA service margin by country as of 3Q08



Source : Global Wireless Matrix 3Q08 released by Merrill Lynch (Canada)

i. Not only EBITDA margins are low, also the same are depicting a declining Trend.

Table 7 : YoY EBITDA service margin expansion by country as of 3Q08



Source : Global Wireless Matrix 3Q08 released by Merrill Lynch (Canada)

On a combined reading of the above mentioned graphs / data provided for Telcos across the Globe, following can be concluded:

- ✓ India is one of the highest growing Mobile Market.
- ✓ Wireless Penetration in India is already very low if we compare it globally. Fast penetration expected due to huge potential still existing but most of the Net Adds will have to come from rural areas.
- ✓ Overall ARPUs in India already at a very lower level if compared globally. India in the last 6 lower ARPU markets trap already.
- ✓ ARPUs declining trend can be observed.
- ✓ MOUs in India are at high levels, among the top 3 on a comparative basis but RPMs among the last 3 on a comparative basis. Indicative of extremely high Telecommunication infrastructure but lower realizations when compared globally.
- ✓ Indian Telcos' RPMs are also under continuous pressure & showing a declining trend.
- ✓ Indian Telcos' EBITDA margins already at low levels & showing a declining trend.
- ✓ Indian Telcos are all FCF negative. Capex requirements of Indian Telcos are far higher compared to their counterparts in other countries.

Challenges before Indian Telecom Industry

Since the privatization of the Indian Telecom Industry, the subscriber base has grown manifold. India crossed its 250 million subscribers base much before the target date and is now fully geared up to cross 500 million subscriber base by 2010.

During the last few years, the rate of growth of telecom penetration in urban India has been very high as compared to rural. Total subscribers as on Sept. 2008 are 353.66 million, out of which only 29% is the contribution from rural India, which constitutes 70% of the total population of the country. Rural

teledensity has just reached the two digit level i.e. 12.72% whereas the urban teledensity is heading towards the three digit level i.e. 72.47%. (*Source : TRAI website)*

In its recent paper on "Measures to improve Telecom Penetration in Rural India – The next 100 million subscribers", the Authority has made the following observations:-

"……..teledensity in the urban areas has reached satisfactory levels but the rural teledensity remains a serious challenge……

…….operators may require support to reach these markets. There is a need for providing the policy and regulatory environment necessary to encourage service providers to move to these apparently less lucrative markets. Sustained growth will only come when both the operators as well as the users see a value in the proposition..

While, a lot has been achieved, however, the biggest challenge before operators still remains to connect the unconnected. As the existing operators are investing thousand of crores to connect the unconnected, any regulatory principle followed should incentivize operators for investing in rural or unconnected markets.

Moreover, while reviewing the IUC regime, the long term sustainability of the telecom sector should be considered especially in the light of trend of falling ARPU, declining EBITDA margins, consistently reducing tariffs of Industry, the huge investments made by the operators to connect the unconnected and return of investments & availability of funds to invest, the existing government / regulatory high levies. As all these factors considerably affect the cost of providing the telecom services and therefore, a long-term view on the viability & sustainability of the telecom sector is to be thoroughly examined. It is the interest of the overall telecom growth that all the ongoing & future investments are encouraged in all respect.

Hence, it is imperative that the Authority takes a favorable view of the subject and provides a favorable IUC regime, which incentivizes the operators to connect the unconnected.

How the market of rural is different from urban?

In a country as vast as India, roll out of network in the rural areas via-a-viz a roll out in urban area, presents various challenges.

The challenges in such a roll out may be listed as follows:-

a) Undulating topography – hilly / rocky terrain, river delta, etc
b) Lack of adequate infrastructure – poor road network, lack of adequate power supply through electricity board
c) Lack of skilled manpower to BTS maintenance.
d) Dispersed population areas , leading to inefficient coverage of community of interest through greater number of sites
e) Disparity in purchasing power leading to ARPU of rural customers widely varying across states

In order to deploy a BTS site in a rural area, the operator may incrementally need to incur –

a) **One time Capex charge** – it could be upto 1.5 times to 4 times the capex cost of an average site in Urban area ; incremental costs mainly due to requirement of electronics for greater coverage area , along with need for backhaul at larger distances)

b) **Continuing Opex impact per annum** – it could be 1.4 times to 3 times the operating cost of an average site in Urban area ; incremental costs mainly due to higher dependency on DG running, lower productivity from Site Engineers due to greater distances to cover, and up-stocking of critical

spares to minimize site downtime. Costs also increase in case of coverage in inaccessible areas like Leh, Andaman and Nicobar Islands, etc where backhaul connectivity is possible through VSAT only)

Thus it is evident that the deployment of site in rural areas is cost intensive and requires additional support from the Authority, to connect the unconnected.

Whether TRAI objectives are yet to be achieved?

In its IUC Regulation dated 23rd February 2006, the Authority inter-alia made an observation, which is as under:-

a. *With the increased growth of subscribers, the addition in capacity of the network also has to match both in terms of the radio equipment and also switching and transmission equipment capacity. If these additions in capacity do not match with the growth of subscribers then the quality of service deteriorates which is also a major concern of the Regulator. Regulatory expects that along with the growth, the service providers adds to the capacity of networks so that there is no deterioration in the quality of service which is being experience now for various parameters which has been laid down by TRAI in its QoS Regulation..*

b. *Mobile Termination Charges in India are not only equal to fixed termination charges but they are even lower than one US cent per minute, which is not only lowest in the world but also it is 12 to 24 times lower than mobile termination charges in other countries in the world. This also should be noted that in all countries, the mobile equipments are supplied by the same set of vendors.*

Table - 11: Termination Rates per minute for mobile service in different countries (June, 2004)

Name of the country	Termination rates per minute	
	Fixed (US$)	Mobile (US$)
Australia	0.016	0.152
Brazil	0.020	0.080
China	0.010	0.025
Switzerland	0.017	0.163
Japan	0.022	0.130
India	0.007	0.007

c. *As mentioned earlier, the mobile coverage in terms of population in India is only about 30% of the population which is lowest in the world and mobile operators have to increase their penetration into rural areas and therefore large investments are to be made to cover even the 77% (world average) of the country's population. As networks penetrate into interiors and there is evidence that this is happening.*

d. *The exponential growth in mobile subscribers has been possible because of various innovative and competitive tariff schemes which may have a higher component of incoming calls. If mobile termination charges are decreased then the viability and sustainability of these tariff plans may not be possible and this may retard the growth of the mobile subscribers in the country. It should be noted that the main concern of the Authority here is not ensure the viability of a tariff plan because that is the main responsibility of the service provider in an unregulated tariff regime but the Authority has a responsibility to achieve a higher growth and teledensity in the country and therefore it is a matter of concern.*

Apart from the above, the Authority had also cited the World Bank (InfoDev Division) on Regulating Competition, Interconnection and Prices dated December 23, 2005, which stated:-

"c. Mobile Termination Charges, Mobile Penetration and Universal Service Goals - Developing countries with low penetration levels are experiencing a growing tension between encouraging further

penetration of mobile services with above-cost mobile termination charges and the downward pressures of mobile termination rates coming from market and regulatory forces. This is especially valid in low penetrated markets in which there could be theoretical and practical justifications of having mobile termination charges above cost …….

……..However, in most of developing countries where landline penetration is far less ubiquitous, mobile telephone development is enabling countries to achieve universal service goals to segments of populations where landline or other telecommunication services have not ever penetrated before. High-income segments of population within developing countries are easily penetrated in the first stages of mobile telephony. The great challenge of the mobile industry is to continue penetrating low-income segments of the population and …….. Any regulatory intervention to reduce mobile termination charges should weight the effects of reducing interconnection revenues that are used to …… access to the network to poorer segments of population and outbound mobile prices, against the purported benefits that a reduction of charges would produce."

Since the last IUC review of February 2006, the telecom growth has been phenomenal with favorable regulatory regime. In December 2005, total subscriber base was 125 million whereas in December 2008, it has reached 384.79 million, which means 308% growth. Similar, in December 2005, our teledensity was 11.43% whereas in December 2008, our teledensity has reached 33.23%, which means 291% growth (*source TRAI Data)*

The Authority would appreciate that in order to meet the huge subscriber growth, the operators are making huge investment to build the telecom infrastructure in the same proportions so that there is no deterioration in the quality of service to the subscribers as well as they are able to enjoy the benefits of enhanced network coverage.

In its paper on "Measures to improve Telecom Penetration in Rural India – The next 100 million subscribers", the Authority has observed that "……*in order to achieve the target of 500 million by 2010, 90-100 million new subscribers will have to come from rural areas. … the operators should be encouraged to view the rural market as an opportunity with potential for sustainable revenue.*

As also rightly observed by the Authority, the present rate of growth of rural subscribers is higher than that of urban as the telecom operators are making huge investment in rural infrastructure. Despite such an exceptional growth in the last more than 2 years, still our penetration is below than the international benchmarks and rural penetration is a concern area. Thus, it is vital at this crucial stage that the regulatory support is available with favourable IUC regime, which incentivizes the telecom operators to arrange and invest the huge funds for rural infrastructure wherein the cost of building as well as running the infrastructure is high and the return is low.

The cost of going mobile in India has also dropped substantially over the years, and currently it is possible for a subscriber to go mobile through a Life Time Validity connection at Rs99. However, the cost to support such a subscriber on the network remains high and will be recovered by only through the ARPU that he will generate in the future period. It is also to be noted that the OG% for a rural customer is low and the mobile connection is essentially used for Incoming calls, therefore termination charge play an important part in supporting the operator to roll out the Telecom Network in rural areas.

Moreover, in India, as compared to international markets, the termination charge is already low and any review of the termination charge at the lower level might affect the overall business viability as well as the investment plans of the telecom operators.

Thus, we request the Authority to kindly consider the above points favourably while reviewing the present IUC regime.

How termination charge can be a tool to enhance rural penetration?

International experience has shown that a high mobile termination charge can be a successful tool by which National Regulatory Authorities (NRA) can increase penetration in rural areas. There are successful examples of other developing countries such as in the Malaysian and Brazilian markets, where constant or slightly higher termination charges have resulted in increased penetration in rural areas. Further, a higher MTC has supported consumer interest by making mobile services more affordable to less affluent sections of the population. The key learning from the experience in these countries is relevant to India, since the telecom sector is faced with similar challenges related to low mobile penetration and low overall tele-density. We also believe the case studies of these countries have already been submitted by COAI to the Authority for its consideration. Moreover, in the case of developing market, World Bank also supports this approach.

The above practice as followed by the NRAs of these countries as well as supported by World Bank are also based out of an understanding that there is an additional cost associated with expansion of telecom in rural areas, which requires financial support from the existing regulatory regime, to succeed. In case the regulatory support in the form of a favorable IUC regime is not available to the operators, who venture out to expand into rural areas, the outcome may either lead to slow expansion into rural areas or increase in call tariffs to meet the need of incremental funding requirements, which the industry as well as the Authority would like to avoid.

Also, a significant proportion of rural customer base is migratory in nature, which makes calls to their families at regular intervals. It is the telecom sector, which provides the enables the families to stay in touch by providing the necessary technological support.

In such a scenario, when the Industry is taking continuous steps to connect the unconnected, the Government / Regulator must partner the Industry through enabling economic viability for providing rural connectivity through a fair and progressive IUC regime. The cost based plus termination charge, which acts as a key tool to incentivize the rural penetration is a need of today.

How On-Net & Off-Net will prevail in the market irrespective of any termination charge

In the Consultation Paper, some of the mobile operators are of the view that the lower termination charge will help a new operator to match its off-net tariff with on-net tariff of an established operator. The argument is misleading that On Net and Off Net pricing differences are on account of MTC rates. It is a fact, that On Net tariff also has a certain element of MTC built onto it, through the Operating costs lines and hence profitability for an On Net and Off Net call for an operator is not different.

Internationally, also, On Net and Off Net tariff is prevalent across all operators independent of the prevailing interconnect regime. The benefit on account of On Net tariffs primarily stems from the Marketing strategy to build a community of users within the network, to offer them various products for enhancement of usage.

In fact, the On Net tariffs help the new operators to gain a market share. For instance, when one of the CDMA players launched its services, it promoted On Net tariff as launch strategy and this helped them to gain a market share in a short span of time. Did the prevalent termination charge or the On / Off net tariff of other incumbent operators at that point of time affect this CDMA player to gain market share. The answer is NO.

As prevalent in other markets, this practice has also been allowed by the Authority in India. While allowing such tariffs in India, the Authority clearly indicated that they can intervene when the differential tariffs are anti-competitive or predatory aimed at lowering competition.

We are of the view that any concern of any operator on tariff related issues, if any, should be addressed through other regulatory policies rather than taking as one of the reasons to review the IUC regime. Moreover, irrespective of any termination charge, On Net and Off Net tariff will continue to prevail in the market and thus, this should not be reasons to review the IUC regime.

We are positive that while reviewing the termination charge, the Authority will consider the above points favourably. As far as our views on the termination charge is concerned, we are commenting on the same in the subsequent questions raised by the Authority.

3. Carriage Charge

We are of the view that the present ceiling of carriage charge is reasonable and does not require any change. Please see subsequent questions & answers for detailed reasoning.

4. Transit Charge

There is an immediate need to review the transit charge and the same should be lowered. Please see subsequent questions & answers for detailed reasoning.

5. TAX Transit Charge

There is an immediate need to review the transit charge and the same should be lowered. Please see subsequent questions & answers for detailed reasoning.

Q2 Whether TRAI should continue with the existing methodology of **fully allocated cost** with appropriate assignments for termination charge or changeover to LRIC or its variant?

Bharti's Response

Continuation of existing fully Allocated Cost methodology

As per the Authority, the existing methodology of **fully allocate cost** can be considered for determination of MTC with some fine tuning.

We are of the view that any suggestion on appropriate assignment / fine tuning can only be placed / suggested before the Authority once all the components considered for this methodology have been shared transparently with the operators. As the earlier FAC calculations / components made or considered by the Authority have not been made open to the public, it would be difficult for us to suggest as to how the appropriate assignments / fine tuning can be done by the Authority.

However, we humbly submit that the following costs should be captured in any methodology being considered by the Authority to determine the cost of termination:-

Capex Costs for the following Network elements:

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

The other operating costs that need to be captured for a fair and correct representation of the costs for setting up and running a Mobile network would need to include :-

I. **Network running costs** – Site running costs (Rent , Energy , Security , Rates and Taxes ,Repairs & Maintenance, AMC charges , MSC running expenses , Managed Service charges, Port / PCM charges, Autoroam signaling charges, Internet bandwidth charges, Stores and spares consumption, VSAT maintenance and Warranty charges, Site relocation and handling charges, Warehouse rent , Insurance charges , etc.)
II. **Other NW Costs –** Spends being incurred on account of additional amounts being charged by the Public telecom operator in areas such as Transit charges, POI augmentation costs, Port / PCM links, etc.
III. **IT costs** – Costs on IT based activities that are directly attributable to running a mobile network such as billing, etc should be incorporated.
IV. **Personnel and Administration costs** – Personnel and Administration costs directly attributable to running a mobile network including allied services such as billing, etc should be incorporated.
V. **License Fees and Spectrum Charges** – The annual charges to the P&L by the operator with respect to License Fees and Spectrum 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.
VI. **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) for setting up and operating the mobile telecom network should be captured in the costing model.
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 at a Pre-Tax rate, to ensure that adequate protection is given to the operator on his investments.

An examination of global best practices with regard to the costing principles for the determination of mobile termination charges suggests a clear shift to cost-based methodologies. The Long Run Incremental Cost Model (LRIC) has emerged as the preferred choice of regulators not only in Europe but also in several developing markets. With regard to the application of the LRIC model, certain best practices have emerged based on the experience of NRAs in countries which have deployed this model.

The Hybrid Forward Looking Long Run Incremental Costs (FLRIC) model, based on a hypothetical efficient operator is widely accepted to be the international best practice in cost modeling for MTC as it provides a view on likely costs of the network going forward, verified against actual past performance.

TRAI had also recognized in its notification (No. 409-5/2003/FN, dated 29th October 2003) that there is a need to eventually move to LRIC based MTC estimation model. An extract from TRAI's notification of 2003 is given below:

"*The Authority considered the framework used for calculating the IUC under the previous exercise, and noted that the cost basis used had been historical average costs from audited accounts of BSNL. It noted that for costing purposes, several countries had used Forward Looking Long Run Incremental Costs (FLLRIC), i.e. a methodology under which only a portion of stranded costs (or costs arising due to past high equipment prices or old technologies) is included in the calculation of costs."*

"The Authority noted that the difference between historical costs and forward looking costs would be large, and relying on costs based only on modern and forward looking technologies would imply a large burden from the stranded costs for BSNL. While the Authority feels that change over to FLLRIC model is imperative, it examined the implications of a sudden changeover against a gradual changeover"

In light of the above, we recommend the Hybrid FLLRIC model for determination of MTC in line with international best practices after taking into account all the relevant costs.

Our recommendations for methodology to be adopted for MTC

In continuation to our earlier letter dated November 3, 2008 (*preliminary response to IUC review*), we recommend that a **Hybrid Forward Looking LRIC Model** be put to use in the given context for determination of appropriate IUC Charges on a terminating call. This model not only works on efficiencies that accrue in future period due to constant evolution in the industry , but also takes into account the past investments and performances of the existing operators , thereby enabling to bring about a perfect balance between past , present and future scenarios.

The **advantages**, accruing from the use of the **Hybrid Forward Looking LRIC Model** may be listed down as follows :-

a) It is a forward looking model, which takes into account the advantages that will accrue to the operator in the future period through efficiencies brought about by scale of operations and advancement of technology.

b) The model also compares the likely costs of the network in the future period , while verifying the same against actual past performance and making adjustments , wherever necessary to maintain check with reality.

c) The model allocates the fixed, common and joint costs to the increments or services once the incremental costs have been allocated.

d) Increasingly regarded as international best practice.

e) Efficiencies for technological developments can be factored in , along with incorporation of anticipated changes in the Industry regulations (e.g. incorporation of 3G network , introduction of Mobile Number Portability , etc.) "

The above approach will beneficial to the existing as well as new entrants in the telecom sector through :-

i. Due recognition to the investments made by the existing operators to set up telephone networks in the country

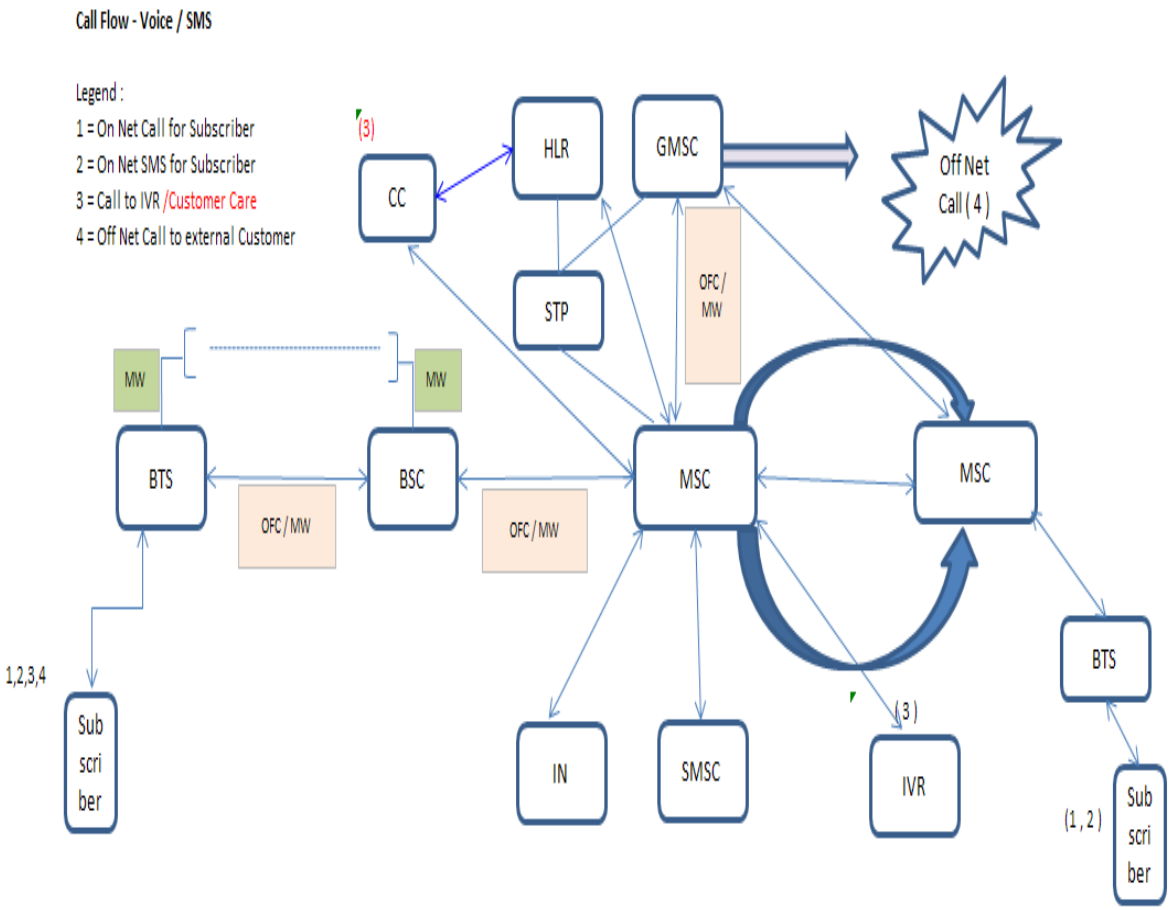
ii. Build in the efficiencies that would flow in the future period through the implementation of scale and technological advancements.

The costing Model should take into the account, the costs incurred on setting up a mobile network in various Telecom circles in India i.e :

1. Metro Circle
2. A Circle
3. B Circle
4. C Circle

as the operating model for each circle will be different and will have to be evaluated separately from the costing perspective to arrive at a weighted cost for Mobile termination charges.

Network Architecture / Call Flow Diagram



From an investment perspective, the costs for the following network elements that are to be included in the computations are as follows:-

i. HLR
ii. GMSC
iii. MSC
iv. STP
v. BSC
vi. BTS
vii. Microwave Hops
viii. SMSC
ix. IVR
x. OFC for Inter-node connectivity (Transmission)
xi. OFC for Ring – protection of sites and nodes

xii. IN (SCP and SDP)

xiii. Infrastructure costs

xiv. Associated IT Capex

The other operating costs that need to be captured for a fair and correct representation of the costs for setting up and running a Mobile network would need to include as has been explained in page nos. 10-11.

Thus, we request the Authority to please adopt the Hybrid Forward Looking LRIC Model for determination of MTC.

Q3 Should termination charge be strictly "cost-based" or should the principle of "cost-oriented" be applied taking into account other affecting factors? Give reasons in support of your answer?

Bharti's Response

We are of the opinion that cost-based pricing methodologies are argued to be more economically efficient because they more accurately reflect the true underlying cost of providing interconnection services compared to retail price based methodologies. Thus, they are more conducive to promoting market entry and competition. Consequently, most countries have moved or are moving towards cost-based determination of interconnection charges. This has been reinforced by the recommendation to adopt such approaches by the WTO, EC and IRG.

As stated above, the rural penetration in India is low and thus, there is a need to incentivize the operators to invest in rural market wherein the cost of providing the service is high and the return is relatively low. As stated above, in various developing countries, the regulator has used high MTC as a tool to incentivize the operators to invest in rural market. Thus, there is a need to encourage the Indian operators to invest in rural market with cost based plus termination charge.

Q4 In the absence of cost data for value added services, how should the revenue of such services be taken into account for determination of termination charge?

Bharti's Response

The Authority's comment on non-inclusion of Value Added Services (VAS) revenues in MTC estimation:

"*The method does not take into account the additional revenue generated by the service provider in the form of value added services, rentals etc. Transferring all costs to MTC makes MTC high and could be detrimental to the interests of the interconnecting new entrants and consumers.*"

In its earlier notification (No. 409-5/2003/FN, dated 29th October 2003), TRAI had opined that only a portion of value added revenues should be allocated against the costs relevant for call termination:

"*Value added revenues have been deducted from the relevant cost base, because these are an important revenue source for recovering costs. This would also give an incentive for the service providers to earn more from the value added services in comparison to the estimated costs that have been recovered from these revenues. Over time, with the reduction in costs due to falling equipment prices, and its higher capacity, as well as due to rapid subscriber growth, the Authority may in future consider allocating only a portion of the value added revenues against the costs relevant for call termination.*"

TRAI, in its FAC model, has deducted the revenues generated from value added services from the relevant OPEX. Following is the excerpt from its consultation paper (dated 31st December 2008):

"5.3.1.11 Another exercise was carried out where the revenue generated from value added services was deducted from the relevant OPEX, as done in October 2003. Based on the data available the estimated revenue of VAS is about 10 % of total revenue. These estimates suggest a cost based mobile termination charge from Rs 0.09 to Rs 0.22 per minute.

5.3.1.12 Apart from the above two methods, it also possible to consider the fact the actual calculations would involve taking into account the cost as well as revenue from value added services for calculating MTC. In the absence of actual data a good approximation can be deduction of 10% of relevant OPEX for calculating MTC."

In the Hybrid model, revenue generated from VAS is not deducted from MTC calculations. In this model, only those network OPEX costs are considered which are directly applicable to the service being modeled. The routing table captures SMS and data usage accurately only to the extent of the network elements that are considered in the model. For example, even though data might use a GSN, SGSN, PCU and other core GPRS network elements it is not included in the table, since they are not involved during voice termination, and are not part of the network elements considered in the model.

Revenues emanating from other value added services like ringtones, caller ringback tones, etc. is not required to be considered, as the model does not consider revenues generated from different services provided by the operator; the model is purely based on the cost associated with providing mobile termination. Moreover, provision of these values added services have costs associated with them, which have not been considered while developing the total cost of termination. For example, provision of value added services like ringtones involve significant costs in form of revenue share with the content provider. Further, the CAPEX costs associated with VAS platform have not been considered in the model. In order to maintain the "matching principle", revenues emanating from providing a value added service should not be reduced from the MTC, as the associated cost is also not considered in the MTC model.

Moreover, if VAS revenues are reduced from MTC, operators may increase the retail tariffs of value added services to make up for the reduced margins. This may not in the best interest of consumer welfare, especially in case of India, where the VAS uptake is already lower than comparable international benchmarks like Indonesia, Philippines, China, Malaysia, etc.

Thus, we request the Authority that the revenue of VAS should not be taken into account for determination of termination charge

Q5 Are asymmetric termination charge justified? If yes, which of the following should be the basis?

(i) Existing service providers vs. new entrant

(ii) Urban lines vs. rural lines

(iii) Mobile termination charge vs. fixed termination charge

Bharti's Response

In the past, the Authority had prescribed the separate termination charges for mobile & fixed line services due to legacy issues and subsequently, a uniform charge was prescribed by the Authority. When the international markets are moving to other better costing methodologies, it would not be appropriate to follow the same methodology, which had earlier been renounced by the Authority.

Also asymmetric pricing models would not be suitable in the current Indian scenario, as they may distort the tariffs offered by operators in the market, for what would be essentially the same service.

Thus, we are not in a favour of any asymmetric termination charge. Nevertheless, internationally, the mobile termination charge is always higher than the fixed termination charge.

Q6 Should the existing practice of applying the same principles and methodology for calculation of fixed and mobile termination be continued? If not then what should be the methodology for fixed and mobile termination charges? Give full justification?

Bharti's Response

Internationally, the termination rates between Mobile and Fixed Line networks are different, with termination charges for Mobile operators being significantly higher.

Europe – Mobile Termination is 14 times the fixed termination charge
Latin America - Mobile Termination is 11 times the fixed termination charge

(*for more international termination rates, please see page no. 7 & 19)*

The logic used in differentiating the terminating charges arise from the fact that the fixed line networks have been deployed many years back, and the costs of deployment have been recovered over a period of time, while mobile networks are new deployment s that bring in much more efficiency in the industry as well as have higher potential to impact the productivity of a country's economy by multiple times. Therefore, in order to encourage the further deployment of mobile networks, a favorable interconnect regime has been put in place.

In India, the current practice is to maintain the same termination charge for Mobile and Fixed line calling. Any change in the existing scenario in favor of the Fixed line termination shall further accentuate the disparity and significantly impact the telecom industry through:-

a) Increase in tariffs for Fixed line calling that will hurt the end consumer
b) Discourage further investment in the sector by new entrants and existing players
c) Slowdown the momentum of connecting the un-connected
d) Reduce the pace of revenue growths in the sector, which will have a ripple effect on the economy and government collections through taxation and regulatory charges.

It must also be noted that the additional financial support so generated for the incumbent fixed line operator, in turn will not offset any of the resultant disadvantages for the telecom sector.

The recommended solution to the issues raised by BSNL on account of being net Interconnect charges payer may lie in the alteration of the existing tariff structure at BSNL end, which currently is leading to a very high OG% and thereby, leading to a high payout of Termination Charges to the Mobile networks. Any change in the Mobile Termination Charge shall not lead to resolution of the current Net Payer status on Termination Charges by BSNL.

Moreover, the Authority has already reviewed the issue of separate termination charge for mobile & fixed line by stating that "*a review of the estimates of termination charge with more recent data shows that the costs per minute for various types of calls are now much closer to each other. The Authority therefore feels that it is possible to have identical termination charges for the access providing services in addition to simplifying the implementation of the regime, a similar amount for termination charge would facilitate moving towards similar tariff levels for calls from / to different access providers and would reduce imposition of cost items on certain types of calls merely on account of regulatory policy. Bearing this in mind, the Authority has decided that it will have a few rates as possible for the IUC regime, and would specify a common termination charge for all access services. To the extent that the common termination charge results in a surplus over costs for fixed line, the Authority has made adjustments for that amount in its calculations of the ADC*".

Thus, we are of the view that a uniform termination charge for mobile as well as for fixed line should exist rather than separate termination charge. Nevertheless, in those countries, wherever

the termination charge for fixed line & mobile is different, the termination charge for mobile is always high as compared to fixed line.

Q7 Explain in detail the impact of the proposals being submitted by you for mobile and fixed termination charge on tariff and why?

Bharti's Response

In India, the forbearance of the retail tariff has worked very well wherein the operators are allowed to adjust their tariffs based on market conditions.

We are of the view that this system should continue.

Q.8 Are asymmetric domestic and international termination charges justified? If yes, then whether international termination charge should be fixed higher / lower than domestic, should be on reciprocal basis with other countries or left under forbearance?

Bharti's Response

We are of the view that the higher termination charge for international incoming calls is an opportunity, which should be exploited for the overall growth of the Indian telecom sector. In this regard, we would like to place our submissions as under:-

What is the existing scenario?

Over a period of time, from a net receiver of foreign exchange from international traffic, India has now become a net payer despite the fact that India is a net importer of international traffic, with a near 3 to 1 ratio. This implies that for every minute that we send out, we receive 3 minutes for termination in India.

As next year we will be sending out about 9 billion minutes, at the rate of 8.8 cents per minute India will pay out $ 792 million. However, we will receive 25 billion minutes at an average rate of 1.5 cents, accruing revenue of about $ 375 million. Thus on the whole we will end up paying $ 417 million to International Carriers even though we will be receiving 16 billion minutes more than we send out.

Thus, there is a need to review the termination charge for incoming international calls where the Government of India is actually a net receivable of precious foreign exchange, due to its high incoming calls ratio rather than net payer.

Whether increase in termination charge on international incoming calls by India create imbalance vis-à-vis other countries?

The increase in termination charge on incoming international call would not create any imbalance with the termination charges levied by other countries. In fact the termination charges in India are one of the lowest in world. The following table clearly brings out this fact.

Rates in US Cents																
	Apr-07		Jun-07		Sep-07		Dec-07		Mar-08		Jun-08		Sep-08		Dec-08	
Country	Mobile	Fixed	Mobile	Fixed	Mobile	Fixed	Mobile	Fixed	Mobile	Fixed	Mobile	Fixed	Mobile	Fixed	Mobile	Fixed
UAE	10.00	10.01	10.02	10.03	10.08	10.03	10.08	10.15	10.03	10.04	10.03	10.02	10.11	10.05	10.08	10.03
USA	1.12	1.12	1.15	1.15	1.09	1.09	1.03	1.03	1.05	1.05	1.11	1.11	1.05	1.05	1.18	1.18
Canada	0.91	0.91	0.88	0.88	0.85	0.85	0.75	0.75	0.79	0.79	0.74	0.74	0.98	0.98	2.43	2.43
UK	14.44	2.55	14.54	1.89	13.11	2.07	13.26	1.86	12.38	2.20	12.87	14.02	13.11	3.23	12.53	5.03
Saudi Arabia	14.00	8.58	14.00	8.21	13.97	7.99	13.90	8.58	11.96	7.00	11.89	10.55	11.96	11.34	11.98	11.35
Oman	13.08	12.88	13.10	12.99	13.05	12.80	13.09	13.13	14.52	11.18	14.53	11.30	15.96	10.44	16.01	10.88
Qatar	16.64	12.59	16.58	12.64	16.50	12.51	16.50	12.50	16.50	12.51	15.11	12.51	15.07	12.51	14.87	12.53
Australia	12.35	1.50	11.67	1.39	11.46	1.43	11.56	1.82	11.84	1.36	11.49	1.35	11.51	1.24	10.91	1.59
New Zealand	23.12	1.67	22.93	6.09	23.08	1.52	22.97	1.34	22.42	1.28	22.93	1.39	21.33	12.32	20.29	1.53
Malaysia	2.71	2.28	2.61	2.43	2.60	2.47	2.53	2.42	2.77	2.20	2.80	13.51	2.59	10.29	2.67	1.68
Singapore	1.50	0.80	0.78	0.76	0.80	0.80	0.80	0.80	0.81	0.80	0.93	0.82	0.81	0.81	0.85	0.86
Kuwait	10.91	13.26	10.67	9.96	11.06	8.74	11.41	11.24	10.91	10.62	11.37	10.91	11.26	11.08	10.57	10.57
Germany	39.35	3.11	14.45	2.14	13.82	1.32	14.18	1.48	13.11	1.55	14.09	1.95	14.29	1.68	13.62	1.41
France	12.09	1.26	12.86	1.28	13.17	1.15	13.22	1.38	13.24	1.49	13.24	1.48	13.09	1.59	14.31	1.42
Bahrain	6.51	6.70	6.34	4.19	6.53	4.25	6.41	3.73	6.59	3.78	6.80	3.56	6.79	3.61	6.69	3.52
HongKong	1.74	1.89	0.43	1.67	0.55	1.81	0.50	1.75	0.41	1.69	0.70	1.85	0.64	1.77	0.63	1.80
South Africa	26.03	5.14	15.09	5.30	14.03	4.96	18.54	4.53	18.76	4.86	16.80	4.77	14.17	5.11	10.91	3.64
Nigeria	11.61	7.76	11.65	9.79	10.52	8.35	9.80	9.93	9.78	9.02	9.85	9.17	9.73	8.98	9.93	10.09
Indonesia	9.62	8.82	9.14	5.91	8.82	4.33	8.85	4.39	8.34	4.63	8.69	4.79	8.37	4.63	8.04	4.75
Nepal	13.65	14.12	13.52	13.27	13.44	13.34	13.53	13.60	12.46	12.37	12.54	12.28	12.93	12.31	12.70	12.69
Pakistan	7.35	6.79	6.64	5.59	5.04	3.80	4.39	3.29	3.00	2.69	8.72	8.87	5.00	7.80	7.33	5.60
Sri Lanka	9.77	9.05	9.81	8.64	9.55	8.55	9.77	8.71	10.14	8.80	10.71	8.05	12.38	7.96	8.73	8.23
Avg Rate	**11.11**	**4.47**	**10.86**	**3.33**	**10.55**	**3.65**	**10.39**	**3.91**	**9.36**	**3.34**	**9.74**	**5.26**	**9.91**	**4.38**	**9.64**	**4.76**
Wtd Avg Rate OG	8.18		8.15		7.77		8.09		8.9		8.72		8.19		8.93	
Wtd Avg Rate IC	6.18		6.09		5.95		5.26		4.85		4.23		3.49		2.21	

Since the termination charges are higher in other countries particularly European and Middle Eastern countries, it results in higher payout by Indian ILDOs to these countries and accordingly, it results in higher cost for the consumers calling from India.

Thus, any increase in termination charge on incoming international calls will not result into any imbalance as other countries' termination charge are extremely high as compared to Indian termination charge.

Whether the increase in termination charges for incoming ILD calls would impact the customer tariffs?

The increase in termination charge on incoming international calls would not impact the customer tariffs at all because the call is originated outside India. Additionally, the increased termination charge on incoming international calls will give an opportunity to the access service providers to review their tariff at lower level for outgoing international calls.

Whether the increase in Termination Charges would affect the Grey market / security issues / rerouting ?

Rerouting of international calls as national calls

This issue is basically when an operator regenerate the international calls as local calls and pay only the local termination charges.

We are of the view that this issue can be addressed as the anti grey market committee has mandated all access providers, NLDOs as well as ILDOs to give details of all ILD traffic handled by them every month. The Authority consolidate the data for the whole country and then see if there are any leakages from the reported number of traffic brought in by ILDOs. Thus to send international terminations as local calls, ILDO will have to officially submit forged traffic details. If they are caught doing this, they risk their ILD licence, in addition to the penalty that DoT may levy.

Moreover, in case of any suspicion, DoT has the right to inspect and check all the CDRs of the switches. Thus no ILDO is likely to do this.

2. Grey market

DoT has established a very large Vigilance network which has presence in all circles of the country. They will be monitoring the market closely and take action against such operators. With a large establishment, we are confident the Vigilance department will be able to tackle this issue. In the past, the Industry, as well as the Government, has also taken various steps to educate the end customer to report details of incoming international calls with local CLI to Vigilance authorities through a Toll Free Number. This support will continue to be extended by all operators and will help in identifying and shutting down grey operators.

Currently, all operators are submitting their traffic data. As per our understanding, reduction in ADC amount as well as phasing out of ADC has not resulted into any sudden abnormal growth of the incoming ILD calls in the country. This means that no substantial traffic was diverted from illegitimate route to legitimate route, despite the reduction of the incentive available to the grey operators. Similarly, in case, higher termination charge for incoming ILD calls is introduced, due to the strict Vigilance mechanism now in place, we believe that in future also no significant diversion will happen to grey routes.

However, as all operators submit their actual traffic data to the Authority on monthly basis, the Authority would be in the best position to see the actual full picture. The incoming traffic data should be seen along with the outgoing traffic data to understand the growth pattern.

3. Security

All traffic brought through ILDOs, even when rerouted in India, will necessarily pass through the LIM set up by each operator. Thus security concerns will be addressed. Also, even traffic brought in by grey operators for termination in suspect Indian numbers will be monitored at the access provider level. Only for grey traffic brought in from suspect international numbers, we will have to rely on vigorous monitoring of grey operators by DoT Vigilance wing to ensure that they do not constitute a significant volume. It is pertinent to note that even today there are a few grey operators with very limited volumes and their traffic is not subject to such monitoring.

Thus, the key to dismantle the grey market is the strict monitoring, vigilance, laws and the closer partnership of the Government & Industry. The Industry is fully committed to support the Government to curb the grey market.

Whether the Increase in Termination Charges would be beneficial for the Operators?

Yes! It will enable operators to invest more funds in the rural infrastructure as well as to offer affordable tariffs to the Indian subscribers.

Whether the Termination Charges should be under forbearance?

On this issue, the Authority had made an observation in its IUC review 2006:-

62. For incoming calls, since the end user is specified by the number on which the call comes, the access provider effectively has a monopoly position. In such a situation, the Authority is of the view that there is a major likelihood of the dominant operator exercising undue advantage through the negotiation process. The Authority further noted that allowing negotiations would permit a reduction of the ADC charge on international calls, but the total arbitrage margin would still remain high due to an increase in the termination amount retained by the access provider.

Thus, the Authority may prescribe a fixed termination charges for incoming ILD calls instead of allowing the negotiations on termination charges.

The Authority would appreciate that in the past, the high regulatory cost was in existence for incoming ILD calls in terms of ADC, which has recently been phased out. Over a period of time, the grey market has been minimized / curbed with the strict monitoring & vigilance by the Government, which also finds support from this fact that the reduction in ADC as well as phasing out of ADC regime has not resulted into abnormal growth of the incoming ILD calls.

We are of the view that the increase in termination charge on incoming international calls on the lines of what we pay to foreign operators will be a win win proposition for all the parities as it will result into (i) saving & earning of precious foreign exchange (ii) higher payouts to the Government on account of high licence fee & other Government levies (iii) additional funds for creation of rural infrastructure and an enabler to provide affordable tariffs to Indian subscribers.

Q.9 What should be the ceiling of carriage charge for long distance calls?

1. **Maintain at same level**
2. **Increased / decreased on the basis of current data**
3. **Higher ceiling for remote / rural areas and one ceiling for rest**

Please give sufficient reasons with data in support of your answer

Bharti's Response

The NLD carriage charge is only IUC component which has been reviewed since the inception of IUC Regulation. The Authority had fixed NLD carriage charges under IUC Regulations of October, 2003 which was based on the distance ranging from Rs.0.20 for 50 kms to Rs.1.10 per minute for distance of 500 kms and above. Subsequently, the NLD carriage charges were reviewed by TRAI in February 2006 and a new ceiling of Rs.0.65 per minute irrespective of the distance was specified.

Having taken this step towards deregulation of carriage charges, we are sure that the Authority would have closely monitored the trends and patterns of carriage charges since the last review. We are of the view that the present ceiling of Rs.0.65 paisa should be maintained on the following grounds:-

1. The current regulatory regime has ensured that there is no aberration or distortion in the market in the matter of carriage charges being levied and collected by the NLDOs with respect to their own traffic and with respect to the traffic of other access providers. Thus, this ceiling is not being misused by the integrated operators, who are access service providers as well as NLDO operators.

2. Due to progressive regulatory policies, the numbers of NLD operators have increased from 4 in 2006 to 21. The present ceiling of carriage charges will incentivize these new operators to rollout their networks and will not affect their business plans.

3. The carriage costs for high density routes like Delhi – Mumbai and traffic between large cities are lower due to the large volumes on them. However, as a national operator, we are growing our network to all parts of the country and have already established interconnections in more than 1250 SDCAs. Next year also we are planning a substantial roll out of fiber in remote areas. The cost of laying this fiber is huge and the traffic volumes are very small. The areas like North Eastern States, J&K, A&N Islands, Uttranchal, Lakshdweep Islands, H.P. Rajasthan, Orissa etc. NLDOs incur very huge cost to carrying traffic. While, large number of operators have signed the licence agreement and will be rolling out their networks, however, initially, their focus would be on lucrative areas whereas the private national operators like us would be focusing on rural / remote areas. Thus, these objectives can be achieved by continuation of the present ceiling and leaving the actual rates to the market conditions.

We are of the view that the NLD carriage charge is already competitive and thus, we request the Authority to not to distribute the present ceiling of carriage charge.

Q.10 Which of the following options should be the TAX transit charges for intra SDCA transiting?

1. Maintain at same level
2. Left to forbearance
3. **Increase / decrease on the basis of current data**

Please give sufficient reasons with data in support of your answer

Bharti's Response

1. As the Authority is aware, the Hon'ble TDSAT vide its judgment dated May 3, 2005, had directed that:

"……On considerations of level playing field, we direct that BSNL should stop charging 0.19 paise from cellular operators by way of transit charges for accessing BSNL CellOne subscribers, wherever the MSCs of both BSNL CellOne and Private CMSOs are connected to the same BSNL switch. We are of the view that our direction will take effect from the date of this judgment. We authorize TRAI to make this part of the regulatory regime."

The above order was given by the TDSAT in order to ensure level playing field after the Tribunal noted that BSNL CellOne has utilized the connectivity of BSNL PSTN with the other cellular operators for getting connected to their networks and thereby the related cellular subscribers. The Hon'ble TDSAT noted that cellular operators have paid port charges to BSNL for the Level-1 TAX connectivity, but that BSNL CellOne was getting the benefits of connectivity to the other cellular operators without paying the PSTN transit charges. TDSAT thus held that on considerations of level playing field BSNL was not justified in charging transit charges to the extent of 19 paisa for accessing BSNL CellOne subscribers.

Pursuant to the above Order of the Hon'ble Tribunal, TRAI, on June 8, 2005, issued its Regulation No. 10 of 2005 whereby the above directions of the TDSAT were made part of the interconnect / regulatory regime. Para 2 of the Regulation states as below:

"No transit charge shall be levied by BSNL (Bharat Sanchar Nigam Limited) on Cellular Operators for accessing BSNL's CellOne subscribers, wherever the MSCs of both BSNL's CellOne and Private CMSOs' are connected to the same BSNL switch."

It is therefore submitted that insofar as connectivity between the BSNL and the private operators is concerned, the law regarding the same has already been laid down by the Hon'ble TDSAT and has also been enshrined in the form of a Regulation by the Authority and thus, there is no case for any transit charges to be levied by BSNL in cases wherever the MSCs of BSNL's CellOne and Private operators are connected to the same BSNL switch.

As regards transit connectivity per se, it is submitted that the Authority has always held the same to be an exception and not a rule.

2. In any event, this charge should be review on the basis of applicable costs, which as per view is as under:-

Determination of Cost based Transit Charges

For carrying a call from the Mobile operator network to the Fixed Line network, the following network elements are put to use at the end of BSNL :

- There are 4 ports that are used in carrying the call from the Mobile operator's network to the BSNL Fixed line network. One port in BSNL L2 TAX towards Mobile operator, one port in BSNL L2 TAX towards BSNL's Local switch in SDCA, one port in BSNL's Local switch and BSNL L2 TAX and one port in BSNL's Local switch towards subscriber.
- Use of OFC bandwidth for the distance between LII Tax and local switch served by LII Tax.

The calculation of the cost is laid out as follows

Calculations for Transit Charge per Minute				
		Yr1	**Yr2**	**Yr3**
Avg distance from SDCA to LDCA	in Kms	20	20	20
Cost per Annum for 1 E1 @ TRAI Rate	in Rs	41,509	41,509	41,509
Efficiency Limit	in %	80.0	80.0	80.0
Traffic Capacity per annum per E1	in Mins	3,663,360	3,663,360	3,663,360
Fill factor considered	in %	65.0	70.0	75.0
Cost per Minute	in Rs	0.017	0.016	0.015
Margin Markup	in %	15.0	15.0	15.0
Carriage Rate per minute	in Rs	0.020	0.019	0.017
Average Rate per Minute	in Rs	**0.02**		

Note :

(i) The distance between SDCA and LDCA has been taken at an average band of 20kms

(ii) Efficiency limit of 80% and Fill factor of 65% to 75% has been assumed for the traffic carried on the E1

(iii) The charge for the E1 has been assumed as per TRAI rates
(iv) The derived charge per minute is grossed up for a payable margin of 15%
(v) Capex cost for Ports used in the call are not factored in the costing as they are separately payable to BSNL as per TRAI rates on a opex basis
(vi) A simple **average rate of 2p per minute** has been derived for the 3 years so projected

In light of the above, we request the Authority for the following:-

1. **After 90 days of the submission of request for enhancement of augmentation, in case, BSNL fails to meet the requisite capacity demands, no transit charge should not be levied by BSNL on overflow traffic.**

2. **The cost of the transit charge, which has not been reviewed since 2003, should be cost based, which as per our view, is not more than Rs.0.02 paisa.**

Q.11 What should be the transit / carriage charge from LDCA to SDCA?

1. **No need to specify separately**
2. **Under forbearance**
3. **Increase / decrease on the basis of current data**

Please give sufficient reasons with data in support of your answer

Bharti's Response

Open Competition for intra-circle segment

a. Inspite of the amendment to the NLD License on December 14, 2005, whereby NLDOs were permitted to carry intra-circle long distance traffic with mutual agreement and consent of originating service provider, BSNL has not yet permitted private NLDOs to handover intra-circle long distance calls originated from cellular networks to BSNL's PSTN network.

b. Due to non-existence of competition in intra-circle long distance segment, the Incumbent operator is charging 20 paisa TAX charge from the Access Service Providers. This 20 paisa TAX charge is significant in the current scenario when intra-circle mobile call tariffs are less than Rs. 1/min.

c. In present scenario, if the intra-circle long distance segment is opened for competition, it will exert downward pressure on this 20 paisa charge, resulting into further lower tariffs. Thus, the issue of competition in intra-circle long distance segment is merely an interconnection issue, as also recognized by the Licensor, which may easily be resolved with suitable clarification / amendment to the existing interconnection determination of 2001, which was issued at a time when the private NLD operators were not even in existence.

d. Today, in a competitive long distance market, access providers should not be disallowed to exercise their right to choose a private NLDO to handover their intra circle traffic which is meant for termination on BSNL's network.

e. As the private NLDOs are willing to carry these calls at even less than half the rates being charged by BSNL, this cost saving will help the cellular operators to pass on some benefit in the form of lower tariff for M2F calls to the consumers.

Thus, we request the Authority to issue necessary clarification, which enables the private NLDOs to carry and termination the intra-circle traffic of access service providers on BSNL's network.

Cost Based Charge

We also draw the attention of the Authority that the carriage rate of 20p per minute was defined in 2001, when the applicable carriage charges were defined at Rs1.10 per minute at the highest slab of greater than 500Km. Subsequently, the carriage charges have been reviewed in 2003, and the maximum charge applicable for all distances were pegged at 65p per minute. Therefore, it is requested that the Authority takes cognizance of the above facts, and review the carriage charges applicable on such calls originating from the Mobile networks to the BSNL fixed line network.

Determination of Cost based LDCA to SDCA Carriage Charges

For carrying a call from the Mobile operator network to the Fixed Line network, the following network elements are put to use at the end of BSNL :

- There are 4 ports that are used in carrying the call from the Mobile operator's network to the BSNL Fixed line network. One port in BSNL L2 TAX towards Mobile operator, one port in BSNL L2 TAX towards BSNL's Local switch in SDCA, one port in BSNL's Local switch and BSNL L2 TAX and one port in BSNL's Local switch towards subscriber.

Use of OFC bandwidth for the distance between LII Tax and local switch served by LII Tax.The calculation of the cost is laid out as follows

Calculations for Carriage Rate per Minute				
	Unit	**Yr1**	**Yr2**	**Yr3**
Avg distance from SDCA to LDCA	in Kms	45	45	45
Cost per Annum for 1 E1 @ TRAI Rate	in Rs	82,329	82,329	82,329
Efficiency Limit	in %	80.0	80.0	80.0
MOU Capacity per annum per E1	in Mins	3,663,360	3,663,360	3,663,360
Fill factor considered	in %	65.0	70.0	75.0
Cost per Minute	in Rs	0.035	0.032	0.030
Margin Markup	in %	15.0	15.0	15.0
Carriage Rate per minute	in Rs	0.040	0.037	0.034
Average Rate per Minute	in Rs	**0.04**		

Note :

(i) The distance between SDCA and LDCA has been taken at an average distance of 45KmsEfficiency limit of 80% and Fill factor of 75% has been assumed for the traffic carried on the E1

(ii) The charge for the E1 has been assumed as per TRAI rates

(iii) The derived charge per minute is grossed up for a payable margin of 15%

(iv) Capex cost for Ports used in the call are not factored in the costing as they are separately payable to BSNL as per TRAI rates on a opex basis

A simple average rate of **4p per minute** has been derived for the 3 years so projected.

In light of the above, we hereby submit that:-

1. The segment of intra-circle traffic should be opened for the competition as has been done for other segments. This will enable the access service providers to handover the traffic to any private NLDOs on the basis of market driven rates.

2. The cost of carrying the call from LDCA to SDCA is not more than Rs.0.04 paisa and thus, it is essential that cost based transit charge is levied by the operators.

Q.12 How new developments like WiMax, HSPA, FMC, NGN and further advancements in access technologies are expected to complicate the termination scenario further. What should be done in the current review to take care of these future developments?

Bharti's Response

We are of the view that it would be impetuous to say about the implications of new technologies on the termination charge in absence of any clarity as to how it will impact the termination charge. These future developments on which there is no clarity and no international practices are available on (i) how the new technologies have impacted the market (ii) what is the interconnection regulations etc.

Recently, the Authority has issued the consultation paper on NGN and sought the response of all stakeholders. In absence of any clarity, it will be very difficult to predict the level of complications due to advent of these technologies.

Therefore it is submitted that the interconnection scenario under these technologies should be considered at the later stage.

Q.13 As India is launching 3G services then
1. 3G termination charge same as 2G termination charge
2. Forbearance of 3G termination charge
3. Higher or lower 3G termination charge
4. Should be considered at a later stage?

Bharti's Response

The Authority would appreciate that the process of 3G auction is yet to start and thus, the operators are not aware about the overall cost for 3G services.

Hence, we are of the view that the issue of setting the termination charge of 3G mobile services should be considered at the later stage, when there is more clarity regarding the pricing of 3G spectrum.