AUSPI/12/2009/ 015 5th February, 2009

Shri Nripendra Misra,
Chairman,
Telecom Regulatory Authority of India,
Mahanagar Door Sanchar Bhawan,
Jawaharlal Nehru Marg,
New Delhi.

Sub: AUSPI response to TRAI Consultation Paper No.17/2008 on 'Review of Interconnection Usage charge (IUC)'

Dear Sir,

We are pleased to submit our response to TRAI Consultation Paper on **'Review of Interconnection Usage charge (IUC)'.** AUSPI recommends bill and keep regime as it is competitive and technologically neutral in the existing scenario in telecom sector.

We request the Authority to kindly take our views into consideration while coming out with its recommendations on the subject.

Thanking you,

Yours faithfully,

DILIP SAHAY
ADVISOR

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AUSPI'S RESPONSE TO TRAI CONSULATION PAPER NO. 17/2008 DATED 31/12/2008 ON REVIEW OF INTERCONNECTION USAGE CHARGE (IUC)

Q.1 What components of Interconnect Usage Charge (IUC) should be reviewed?

(i) The current IUC regime was framed in 2003 and since then only piecemeal changes have been carried out, mostly relating to carriage component. To genuinely enhance competition it is imperative that components of IUC should be reviewed. In today's environment it is clearly seen that mobile operators who have large subscriber base benefit a lot whereas the smaller and new/second network mobile operators pay large IUC charges month on month. Reviewing the IUC charges by the Authority which promotes competition & consumer welfare will go a long way for growth & affordability. Considering the rapid pace of advancement in technology, it is also recommended that the IUC be reviewed on a regular basis with a time schedule for this announced well in advance.

AUSPI supports the review of following components immediately.

- Termination Charges
- Transit charges
- Port Charges

There is a need to review these charges:

(ii) The NLD carriage charge is comparatively competitive and recently reviewed and therefore we believe there is no need to review the carriage charges. Further the prevailing market rates are below the ceiling which clearly establish that the **NLD carriage market is largely competitive and there is no need to review the present ceiling of Rs.0.65 per minute. This carriage portion should be considered as part of the termination and no charges should be payable for termination of calls.**

(iii) Port Charges

Port charges are part of the interconnection related charges and the Authority's port charges regulation is notified under the same powers used for IUC regulation. To maintain the homogeneity and consistency, it is essential to review the Port charges along with the present IUC review. The port related OPEX is recovered from the IUC but the capital cost is recovered from the separate port charges. The two costs for the same items are being recovered through two different principles - OPEX being recovered on the basis of usage and CAPEX directly from the interconnection seeker.

Even if inconsistencies between the port and other IUC charges are not considered and kept apart, the port charges review is still needed as the Authority's adopted costing methodology requires regular review. If the charges are not reviewed then there is an over recovery of costs which unnecessarily enrich port providers i.e. BSNL. In this regard the following submissions are relevant:

In the port charges review, the Authority did not reveal the total estimated cost for port systems. However using the notified port charges, depreciation rate , cost of capital and the reverse calculations one may obtain the rough estimate of the capital cost per E1 which may be around Rs 162 500. The calculation in table as follows shows that there would be over recovery of around 14% in the second year of the regulation even if we assume that the costs remain the same level when the regulation was notified:

Table

Year	**Depreciation**	**Net Block**	**Cost of capital**	**Total cost**	**TRAI charges**	**Over recovery**
1st year	16250	162500	22750	39000	39000	Zero
2nd year	16250	146250	20475	36725	39000	2275
3rd year	16250	130000	18200	**34450**	**39000**	**4550**
4th year	16250	113750	15925	32175	39000	
5th year	16250	97500	13650	29900	39000	
6th year	16250	81250	11375	27625	39000	

7th year	16250	65000	9100	25350	39000	
8th year	16250	48750	6825	23075	39000	
9th year	16250	32500	4550	20800	39000	
10th year	16250	16250	2275	18525	39000	

The above mentioned estimate clearly indicates that even if we considered that there is no reduction in cost and the cost recovery principles remain the same, even then it is a clear case to review the port charges as BSNL is over recovering cost which has implication of crores of rupees on the Industry. The Authority is therefore requested to review the port charges and align it with the actual costs.

Q2. In view of the details provided in the paper, please give your opinion 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. Please provide full justification.

Relevance of Calling Party Pays (CPP) regime in current scenario

The CPP regime is an inefficient mechanism for inter operator compensation for termination of calls especially when markets are fairly competitive and there is nearly balanced flow of traffic. The current regime of uniform reciprocal compensation of 30p is resulting in nearly negligible net revenues with the most operators although transactions worth thousands of crores of rupees take place. The current mechanism of compensation is in-efficient as it unnecessarily holds thousands of crores of rupees for inter-operator adjustments in the working capital which otherwise can be productively used by investing in the networks.

The Authority may like to review the current CPP regime as it is causing more problems in the current competitive market for the following reasons.

(i) When traffic is more or less balanced between operators then CPP regime only creates a notional termination costs as there is no net implication on revenues or margins. The net revenues available with service providers on account of termination are negligible to the overall inter-operator transactions.

(ii) The CPP regime creates unnecessary inefficiencies for measurement and settlement of inter-operator compensations. Gives rise to innumerable disputes which are settled by dominant operators through disconnection of POIs.

(iii) The inter-operator transactions are holding crores of rupees which can be productively used in the network expansion, particularly for rural areas.

(iv) Many technologies like CDMA, GSM, WiMax, HSPA, FMC, wireline etc will be available with own network costs, requiring detailed estimation, fixation of termination charges etc making it very complex to estimate and fix termination charges for proper compensation.

(v) It un-necessarily inflates off net call costs.

Bill and Keep Regime

A viable alternative to the CPP is the Bill and Keep regime. This provides a mechanism whereby subscribers pay for the benefit of making and receiving calls. The "Bill and Keep" regime has number of benefits which foster economic efficiency by reducing service providers administrative costs and releases the capital held for inter-operator settlement of IUC. The payment of reciprocal compensation of termination charges requires that service providers incur significant administrative costs to measure, record, and bill for exchanged traffic. The whole scenario will become increasingly complex with soon to be launched innumerable technologies having its own costs. The service providers also reconcile discrepancies in their traffic measurements, generating additional administrative costs for settlement of IUC bills. . Bill and keep reduces and nearly removes these costs by eliminating the need for service providers to measure, record, and bill every minute of every call.

The Bill and keep is also administratively easier from a regulatory perspective, because it would eliminate the need for the Authority to review among other things, cost studies, rates in interconnection agreements and also reduce the innumerable disputes between the operators. The frequent disconnection of POIs for settlement of compensations would also abate.

In a perfectly competitive scenario, operators have more or less balanced traffic and therefore compensation based on CPP regime is not required . The existing telecom scenario is much more competitive and therefore bill and keep is more relevant as compared to CPP regime.

In the CPP regime the service providers have the opportunity and incentive to transfer costs to their competitors which provides them economic and competitive advantage. Such regulatory manipulation is more evident in case of new entrant/network who has to depend on the incumbents for termination of calls and the incumbent service providers also are the primary competitor of the new networks. The service provider should recover their costs to originate and terminate traffic from their own subscribers and not from each other. Bill and keep imposes just such a requirement by eliminating the regulatory arbitrage available with the operators to price off net calls much higher (100% to 400%) than the on net calls.

In case the Authority still believes that the current CPP regime should be continued, then the international best practices for determination of IUC can be followed. The FLLRIC methodology is also being used for deciding IUC used by the regulators. The Authority has also supported this methodology in the consultation paper. However while using any methodology it may be kept in mind that the methodology should be in the interest of consumers and overall growth of the sector.

The philosophy behind the LRIC is more important in deciding the interconnection compensation. The LRIC has been adopted by regulators so that no inefficient costs which are sunk costs are transferred to the competitors. The FLLRIC also ensures that only current costs are used for estimation of costs and historical costs which are generally much higher than the current costs. The whole idea of LRIC or FLLRIC is to ensure that no operators have an advantage over their competitors by transferring more costs than what is required under efficient running of the business.

In case LRIC is used using the following approach which is apparent and correct for the present telecom scenario, then the cost estimates would be even less than around 10p per minute for which AUSPI had submitted details using the TRAI's current methodology:

(i) 100% passive infrastructure for new operators
(ii) Fair distribution of incoming and outgoing traffic i.e 55: 45
(iii) Economic depreciation considering true value of assets
(iv) Correct industry benchmarks for equipment cost and MoU.
(v) Correct cost apportionment drivers

Therefore AUSPI recommends that the Authority should adopt the Bill and Keep regime.

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.

The Indian telecom scenario would be increasingly more complex within a year when various technologies like CDMA, GSM, WiMax, HSPA, FMC, NGN etc would be available. Each network will have its own costs and related government levies like spectrum fee. In this scenario it is impossible to find termination charges purely based on costs. The inter operator settlements would also be very difficult. Therefore BILL and Keep regime is preferable.

In case the Authority is not convinced about the benefits of Bill and Keep regime then termination charges should be based on costs. However, we would like to emphasize that the cost orientation approach is not in line with the Authority's own Regulation which requires that the interconnection charges should be cost based.

The Authority has earlier allowed higher termination charges for rural rollout. This is not only a myth but also a huge cost for operators who are adversely affected by net payout for termination charges. The cost orientation cannot be used to allow higher termination charges. AUSPI does not support the view that the higher MTC can be used for rural rollout for the following reasons:

- Operators are spending at least Rs 15000 to Rs 20000 crores on networks in next fiscal year but net termination gives the leading operators only around Rs 500 crores i.e not even fraction of the total investment.

- Termination charges are borne by the competing networks. It would not be reasonable to expect creation of rural networks of few operators through funding from other operators.

- A network operator may have a reduced incentive to expand their network to some rural areas, road, train lines etc. The costs of building could be very expensive and the usage in these areas may not be enough to justify the cost. **However, it is not obviously the case that high MTRs are necessary to encourage network expansion.**[1] The rural rollout if it requires support then it is to be funded through USOF and not through the competitor's support through MTC.

In CPP regimes, **the Difference in Off-net and On-net calls is common mainly on account of the termination charge. The bill and keep will largely eliminate skewed off net and on net traffic pattern.**

FCC observation on Off-net and on-net differential

In many CPP countries, mobile phone customers have to pay higher charges for calls to subscribers of different mobile networks (off-net calls) than for calls to subscribers on their own network (on-net calls). According to at least one report, there **may be little incentive to keep the termination rates low because** a lower wholesale termination rate may lead to a lower retail rate, which would **help mobile network operator's rivals by reducing their costs**[2]**.**

Low Termination Charge reduces Tariffs benefit to consumers.

- Reduce input costs and reduce tariffs especially for off-net calls

[1] *Source: GSMA White Paper - The setting of mobile termination rates: Best practice in cost modeling*

[2] Source: http://fjallfoss.fcc.gov/edocs_public/attachmatch/FCC-04-247A1.doc

- Establishes a regime which is competitively neutral- Does not favour established large operators.

- Enhances competitions and consumer welfare.

- Mr Neelie Kores, European Commission Competition Commissioner[3] says:

  " Lower Mobile Termination rates have a positive impact on consumer's phone bills and on competition between mobile companies. It is therefore necessary that regulators bring the current high termination rates termination rates down to levels which reflect real costs"

Bill and Keep Regime would prevent transferring of costs to other operator and promote competition.

- In CPP regimes large operator exploits control over the access to the disadvantage of originating service provider. Transfer significant part of their costs to the competitor using MTC.

- MTC is like tax on the originating service provider.

- Lower Termination charge would largely eliminate the opportunity available with few large operators to burden competition by transferring their costs.

- Lower Termination charge would bring competitive neutrality where incumbents do not have advantage over the new operators in the terminating market.

In view of the above the Authority should consider adopting the Bill and Keep regime as this would mostly benefit the consumers and to promote competition. It will not allow transferring cost to the competitors. In case the Authority still considers that it should continue with the CPP regime then the termination charge should not be above cost i.e it should not be more than 10p per minute.

The Authority should never use the averaging of costs as it helps existing large operators as they generally have minimum costs. The Termination charges should always be based on most efficient operators. The termination is nothing but transferring costs to the competitors and therefore averaging would benefit the operators who are net recipients of termination charge and wish to transfer maximum possible cost to the competitor.

[3] *Source: European Commission Press Release dated 3.12.2008.*

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

The issue is only relevant in case the Authority wished to continue with the existing CPP regime.

The network costs are common for carriage of voice and other Value Added Services like SMS, MMS, content based services, GPRS etc. Since the network costs are common, the costs should be apportioned appropriately and attributed to the respective products and services.

Since the tariffs are under forbearance, it would be more appropriate to apportion the costs on the basis of revenue and not on the basis of network usage. The correct cost apportionment driver in the case of VAS is revenue and not the cost. Therefore there is no need to estimate costs for the VAS. In case the Authority allows minimal apportionment of costs on the basis of usage then on one hand more costs will be allocated for termination of calls which would not be beneficial for competition and customers and on the other hand it would minimize costs for the VAS service including premium services like tele-voting, ringtones, jokes etc.

Therefore the revenue likely to be earned from the VAS should be completely excluded from the revenue requirement estimated for the MTC.

Q5. Are asymmetric termination charges 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
Give justifications for your answer.

The issue is relevant only in case the Authority continues with the existing CPP regime.

The Bill and keep regime would help the Authority to overcome the problem of different costs attached to the different networks like GSM 900 MHz network, GSM 1800 MHz network, allocation of additional spectrum to few operators, problem and different entry points of cellular operators. The complexity in deciding the costs would increase with the launch of new technologies like WiMax, HSPA, LTE, FMC etc. Each network will have its own cost and as per the TRAI Regulation of 2001, the termination charges will be asymmetric depending on the cost of respective networks.

The Indian market structure today makes networks fall into two clear categories: Existing networks having large customer base in addition to inherent network advantages (spectrum in 900MHz allocation; and also allocation of spectrum beyond 6.2MHz)

- Mobile networks are classic two camp structure having different costs. The existing networks have following advantages over the new networks:

Characteristic of existing networks	Implication on termination charges
Large customer base	• Costs spread over a much higher base → *lower costs to terminate calls*
Typically with 900MHz allocation in some circles with 1800MHz in some other circles *CDMA operators on 850MHz*	• Up to 2-2.5 times lesser sites needed for coverage at 900MHz over 1800MHz • Additional need for indoor base stations (IBS) for 1800MHz • *Implication → up to 2-2.5 times lower costs to terminate calls on existing networks compared to new networks*
Typically 8 MHz per circle and even higher in few circles	• On a pan-India basis, per additional MHz of allocation beyond 6.2MHz implies a cumulative network saving over 3 years of Rs 1,200 crores per network • *Implication → 15% lower mobile termination costs for existing network per MHz additional spectrum allocated beyond 6.2MHz*

From the above, it is quite evident that the termination costs are different between new and old networks. Averaging of costs of different networks is not the correct method of costing. The cost orientation is not permitted under the TRAI's own Regulation to decide the common termination charges for all networks.

The best option would be to follow the Bill and Keep Regime so that all operators and technologies could co-exist without affecting the competition or providing level benefit to the any operator. The Bill and Keep regime is competitive neutral and is best option for inter-operator compensation.

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.

The issue is only relevant in case the Authority decides against the use of Bill and Keep Regime.

Symmetric or asymmetric rates, LRIC or FAC methodologies, Historic or current costs, economic depreciation or actual depreciation, most efficient or average, wireless or wireline and other innumerable questions are to be addressed in the CPP regimes. The current telecom scenario is adequately competitive and operators have fairly balanced traffic and therefore the Bill and Keep regime is the most optimum policy that should be adopted.

In case it is not possible to migrate to Bill and Keep regime then TRAI should use the same methodology for fixed and wireless networks but ensure that the costs are current, the sunk costs are not included in the cost estimation.

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

The Bill and Keep or lower termination charge of 5 paise to 10 paise will have no impact on the tariffs as operators have nearly balanced traffic. Though the interoperator transaction on account of IUC runs into thousands of crores of rupees, the net revenues available with few operators is negligible as compared to their total revenues.

We request the Authority to obtain the information from all the operators about net termination revenue or payout so as to understand the implication of any proposal. The Authority would notice that the amount with any operator is negligible compared to the total revenue to justify any change in the tariffs. AUSPI is of firm view that the competition will not allow any increase in tariffs even if Authority adopts Bill and Keep regime or reduces the termination charges to 0 paise or below.

In contrast, higher termination charges would continue to promote on-net traffic which is not competitively beneficial. The termination charge of even 5 paise to 20 paise is significant part of the retail tariff and will not have any beneficial impact of promoting the competition.

The termination charge for most Operators particularly new and smaller operators and second networks, is an item of cost and not of revenue as they are net payer of termination charge. Higher termination charge reduces their margins and their competitive ability to match established and larger operators. To enhance competition it is imperative that termination charges are reduced so that no operator has an advantage of transferring undue costs to other operators. The Bill and keep arrangement will bring innumerable benefits for the consumer without having any significant impact on the existing operators. The Authority can also study the impact of Bill and Keep on the EBITDA margins to establish and cross verify the AUSPI submissions. It is our firm view that there will be negligible impact on the EBITDA margins in case TRAI shifts to the Bill and Keep arrangements.

Bill and Keep regime would lead to a regime that is competitively neutral and provide the maximum consumer welfare. The competition significantly enhances in case termination charges are lowered. The increased competition and reduced prices resulting from lower termination charges are likely to bring down the prevailing tariffs. Therefore, the Authority should focus on the development of competition rather than allowing a higher termination rate which gives ability to the service providers to shift their costs to other service providers.

Therefore the Bill and Keep arrangements or lower termination charge of 5p to 10 paise will have no significant impact on operator's EBITDA margins or tariffs.

Q8. 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? Give justifications.

No Sir. The asymmetric domestic and International termination charges are not justified. All termination charges should be on cost basis and not on the reciprocal basis.

The proposal would again lead to the situation of grey market which is not desirable and will be against the national security. This will also result in loss of revenue for the government and promoting incoming calls without monitoring.

Q9. What should be the ceiling of carriage charge for long distance calls?
(i) Maintain at the same level
(ii) Increased/ decreased on the basis of current data
(iii) Higher ceiling for remote/ rural areas and one ceiling for rest
Please give sufficient reasons with data in support of your answer.

Carriage Charge

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. 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.

The NLD carriage charge is comparatively competitive and recently reviewed and therefore we believe there is no need to review the carriage charges. Further the prevailing market rates are below the ceiling which clearly establish that the **NLD carriage market is largely competitive and there is no need to review the present ceiling of Rs.0.65 per minute.**

The NLD network in the remote areas is still not available from large number of operators. The existing ceiling provides an incentive to rollout networks in the remote areas. However the revision may not help rollout and promotion of competition.

Q10.Which of the following options should be the TAX transit charges for intra SDCA transiting?

(i) Maintained at the same level

(ii) Left to forbearance

(iii) Increase/ decrease on the basis of current data

Please give sufficient reasons with data in support of your answer.

This carriage portion should be considered as part of the termination and no charges should be payable for termination of calls.

The carriage charges for a LDCA to SDCA call are mainly applicable for traffic terminating on BSNL networks. As per the TRAI's determination dated 8.1.2001, the cellular networks are required to handover intra-circle traffic for BSNL wire line network at Level II *TAX.* The handing over of calls at Level II TAX is at the instance of BSNL. The private cellular operators are not allowed to interconnect at the SDCA level and avoid this transit carriage charge. Although the Authority has considered it a special category of calls and prescribed separate transit carriage charge of 20p irrespective of distance but in the stated background it is unfair to charge any amount from the interconnecting service providers for carriage of calls from the Level II TAX to the SDCA. The Authority in these circumstances is duty bound to' protect the interest of the consumers.

TDSAT has already held that the transit carriage charges are not payable for accessing BSNL's Cellone subscribers, wherever the MSCs of both BSNL's Cellone and private CMSOs are connected, to the same BSNL switch. This carriage portion should be considered as part of the termination and no charges should be payable for termination of calls.

As regards transit connectivity, it is submitted that the charges should be cost based. It should be specified as a separate category.

Q11. What should be the transit/ carriage charge from LDCA to SDCA?

(a) No need to specify separately

(b) Under forbearance

(c) Increase/ decrease on the basis of current data

Please give sufficient reasons with data in support of your answer.

The carriage charges for a LDCA to SDCA call are mainly applicable for traffic terminating on BSNL networks. As per the TRAI's determination dated 8.1.2001, the cellular networks are required to handover intra-circle traffic for BSNL wire line network at Level II *TAX.* The handing over of calls at Level II TAX is at the instance of BSNL. The private cellular operators are not allowed to interconnect at the SDCA level and avoid this transit carriage charge. Although the Authority has considered it a special category of calls and prescribed

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the SDCA. The Authority in these circumstances is duty bound to' protect the interest of the consumers.

TDSAT has already held that the transit carriage charges are not payable for accessing BSNL's Cellone subscribers, wherever the MSCs of both BSNL's cellone and private CMSOs are connected to the same BSNL switch. This carriage portion should be considered as part of the termination and no charges should be payable for termination of calls. Even in case the Authority believes that the carriage from LDCC to SDCC has to be charged then the relevant termination methodology which can be used is as follows:

AUSPI believes that the Transit carriage charge should not be more than 3p per minute; Methodology for determining the cost based LDCA to SDCA carriage charges: For carrying a call from LDCA to SDCA, the following elements of the BSNL network are involved:

Use of two ports- one at BSNL L II TAX and another at BSNL's Local switch in the SDCA served by the same L II tax.

Use of bandwidth for the distance between L I Tax and local switch served by L II tax. The weighted average distance for LDCA to SDCA call is 30.25 Km. The total cost of establishing LDCC to SDCC leg has been considered as the bandwidth charges for this distance for one E1.Port charge cost can not be considered since these charges represent CAPEX which can not be recovered from IUC charges. Bandwidth charges are taken at TRAI determined rates. (**TRAI's TTO 36th amendment**)

In order to determine the per minute cost, the traffic carrying capacity of one E1 is calculated by using 85% efficiency, 10 busy hours per day and a capacity Fill factor of 50% for domestic leased circuits. Rate per minute has been determined by taking costs and minutes. The per minute rate, thus arrived, has been incremented by adding profit margin of 25%. The calculation is shown in the following table:

Table

	Average Distance (Km)	**Distance Proportion**	
	10	**55%**	
	55	**45%**	
Weighted Average Distance	**30.25**		
BSNL Coast	**Qty**	**Rate (Rs.)**	**Total (Rs.)**
LL Charges for 30.25 Kms	**1**	**59500**	**59500**

Scenario A			
MOU per E1 per year	**Rs. 3,909,150**		
Average Fill Factor	**50%**		
Cost per minute	**0.030 p**		
Add 25% margin	**0.008 p**		
Scenario B			
Average Fill Factor	**75%**		
Cost per Minute	**0.02 p**		
Add 25 % Margin	**0.01 p**		
Total rate per minute	**0.03 p**		

A per minute charge of 3 Paise per minute has been thus arrived from this calculation by using a Fill factor of 50%. If the fill factor is taken as 75% then the charges will further fall to 3 Paise per minute.

Methodology for determining the cost based Transit charges

For traffic terminating on BSNL's mobile subscribers in the absence of adequate direct interconnection, the traffic is routed through BSNL TAX POI. This also entails the transit charge of RS.0.19 per minute. Since TRAI is reviewing the origination and termination charges which were fixed in 2003, it is necessary that TRAI reviews and prescribes the ceiling for transit charges as well. The prevailing transit carriage charges do not protect the consumer interest and resulting in enriching of the incumbent operator. Therefore there is urgent need to review the charges so that minimal costs are transferred to the interconnecting networks.

The Authority should also review and decide the justification for imposing transit charges which is result of delay in BSNL providing the requisite POI or enhancing the POI capacity. **TRAI had reviewed the IUC regime in 2003**, and had issued a regulation on **29th October 2003**. On transit charges, the Authority had directed that transit charges for Intra SDCA calls will be under forbearance, subject to following condition:

"Direct Interconnection between Access Providers is mandatory. For exceptional cases of Intra SDCA transit, operators may decide the charges through mutual negotiation. However, this should be lower than Rs 0.20 per minute. "

Before the above mentioned regulation, the transit charges being levied at that time by BSNL were Rs 0.20 per minute. These charges were being paid to BSNL since there was no direct interconnection between BSNL's mobile service and private operator switch. Therefore, calls to BSNL mobile service were being handed over to BSNL'S PSTN (Fixed) network which used to transit the call to its cellular network. Since the direction from TRAI on transit charges was forbearance and had only mandated that these charges should be less than Rs 0.20 per minute; BSNL dropped these charges only marginally from Rs 0.20 to Rs 0.19 per minute, when this regulation was implemented in February 2004.

Since there was no distance or little distance element involved in transit of a call, the charges for transit should have been much lower than the LDCA to SDCA carriage charges. Yet, while the. LDCA- SDCA charge was 20 paise per minute; the transit charge was fixed only marginally lower at 19 paise per minute by BSNL.

Further, there was no chance for any operator to negotiate the charges with BSNL as BSNL as a dominant player, used to determine what price it is going to charge for the transit; since there was no other way to connect to BSNL mobile service till March 2006, when direct interconnection with BSNL was established. These charges continue to be same since last 4.5 years now. In the Explanatory memorandum, under Para 65 of the IUC regulation dated 29th October 03; the Authority had said that it will intervene if there is a regulatory concern in this regard.

Methodology for determining the cost based transit charge:
For transiting the call, the following elements of the BSNL network are involved:
Use of two ports- one at BSNL fixed network switch and the other one at BSNL's mobile network switch.

Use of bandwidth for the distance between mobile service switch and fixed service switch. The weighted average distance between LII tax and mobile switch is 10 Km. The total cost of establishing LDCC to SDCC leg has been considered as the bandwidth charges for this distance for one E1.

(TRAI's TTO 36th amendment) . Port charge cost can not be considered since these charges represent CAPEX which cannot be recovered from transit charges. .

In order to determine the per minute cost, the traffic carrying capacity' of one E1 is calculated by using 85% efficiency, 10 busy hours per, day and a capacity Fill factor of 50% for domestic leased circuits. Rate per minute has been determined by taking costs and minutes. The per minute rate, thus arrived, has been incremented by adding profit margin of 25%.

The calculations have been shown in the following table:

Table

L I to cell One (current rate per minute)	**0.19 p**		
Average distance KM	**10**		

		100%	
BSNL Cost	QTY	RATE	Total
LL charges for 10 kms	1	Rs. 25180	Rs. 25180
MOU per E1 per Year	Rs. 3,909,150		
Scenario A			
Average fill Factor	50 %		
Cost per minute	0.013 p		
Add 25% Margin	0.003 p		
Total rate per minute	0.016 p		
Scenario B			
Average fill Factor	75%		
Cost per minute	0.009 p		
Add 25% Margin	0.002 p		
Total rate per minute	0.011 p		

Summarizing, there should not be any transit/carriage charges and Service Providers be allowed its interconnection at SDCA level. In case the Authority believes that the carriage from LDCC to SDCC has to be charged then the relevant termination methodology can be used.

AUSPI believes that the Transit carriage charge should not be more than 3p per minute, if at all this charges have to be levied.

Q12 India is preparing for launch of 3G mobile services. Which of the following option would you consider best? Give reasons, practicality and method of implementation of your choice.

(i) 3G termination charge same as 2G termination charge
(ii) Forbearance of 3G termination charge
(iii) Higher or lower 3G termination charge?

(iv) Should be considered at a later stage?

The Authority should clarify the policy relating to termination on 3G networks before the spectrum auction. It will bring in clarity and help investors to bid appropriately.

The Bill and Keep regime is competitively and technologically neutral and will allow uniform compensation for all kind of networks. It will take care of most of the inter-operator disputes. This proposal will have bare minimum impact on existing operators in terms of their revenues. The Bill and Keep regime will promote competition and provide even new technologies like 3G, WiMax to effectively compete the existing technologies.

***Q 13. 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*?**

Yes, we agree that the termination scenario will be very complicated when various technologies will concurrently operate. Bill and Keep arrangement is a preferred solution to all the problems and will effectively address this complex scenario. Bill and Keep is very safe mode to adopt at this stage as it balances traffic flows on both directions and no termination payout from parties. The markets are competitive, the traffics are nearly balanced, the revenue from termination for few net receivers is negligible, and therefore it is appropriate time to adopt **bill and keep regime for IUC policy for the country.**

Regarding IUC charges for NGN, it is premature at this stage to comment. A brainstorming among stakeholders may be required and the Authority may initiate a consultation process.

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