



G5-A5-VEL-10 01/09/48

30 January 2009

Pr Advisor (FN)
Telecom Regulatory Authority of India
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New Delhi – 110 002

Kind Attention : Sh. Lav Gupta, Pr. Advisor (FN)

Subject : Consultation paper on "Review of Interconnection Usage Charges (IUC)"

Dear Sir,

This is with reference to Consultation paper on "Review of Interconnection Usage Charges (IUC)"

We thank the Telecommunications Regulatory Authority of India (TRAI) for the opportunity to respond to this important consultation and comments of Vodafone Essar Limited on the Consultation paper are detailed below:

Introduction: The most important recommendation the TRAI will make for many years:

Vodafone Essar Limited (VEL) considers that the current review of IUC charges will be the most important recommendation that the Authority will make for many years. A progressive approach could propel the sector forward and mark a turning point in the advancement of rural coverage.

We respectfully urge the Authority to focus on the impact of IUC charges on the urban rural teledensity divide. This is the most pressing public policy goal and IUC charges lie at the very heart of the issue.

A Growing Urban - Rural Divide:

Despite the tremendous advance in overall teledensity, the urban-rural teledensity gap in India is actually worsening. The chart below (fig 1) indicates that the differential between urban teledensity and rural teledensity continues to widen - right up to the most recent data point (September, 2008)

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A Vodafone Essar Company

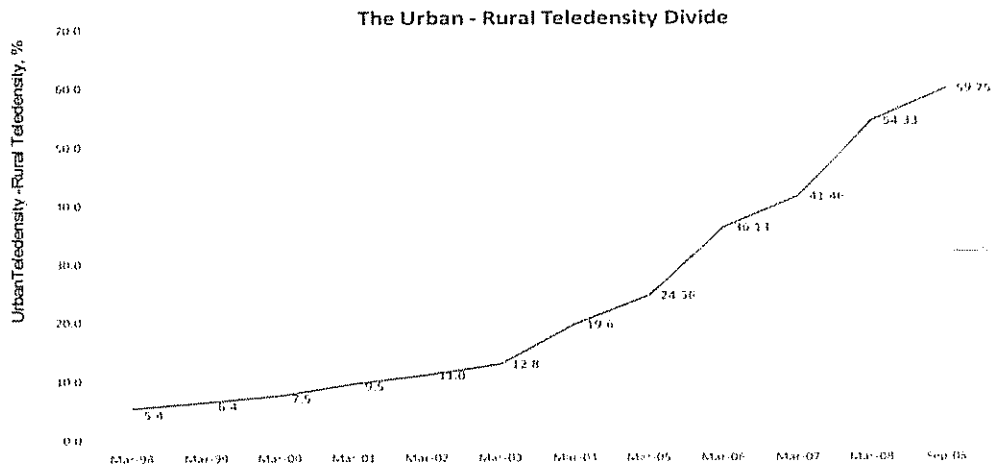


Figure 1

Source: TRAI Paper seeking suggestions/comments on **Measures to Improve Telecom Penetration in Rural India**: 16th December, 2008, page 5.

Why is this happening? What is the explanation the failure to narrow the gap between urban and rural subscribers?

The challenge is how to create economic incentives to accelerate investment in rural coverage. The Authority acknowledged this in its paper of December 16, 2008 seeking suggestions on "Measures to Improve Telecom Penetration in Rural India – The next 100 million subscribers." The Authority notes that the costs of operating and maintaining of networks in rural areas are much higher than urban (page 19). Furthermore, the paper notes that rural subscribers have lower income and potential usage (page 20). So, how can these higher investment and operating costs be recovered in rural areas where lower income subscribers are in the great majority?

The Authority notes in the IUC consultation that:

"competition is effective when service providers recover their costs mostly from their own end users, who can choose among competing service providers, rather than from subscribers of interconnecting networks for whom the terminating access provider is a de facto monopolist". [Section 3.1.4 p 14.]

We respectfully suggest that rural and urban customers need to be thought about very differently in this regard. If the higher costs of serving rural customers were to be recovered directly from rural users that would suggest that charges need to be higher, which would exacerbate the fundamental rural affordability problem.

An approach whereby the privileged urban customers continue to enjoy greater competition, expanding choice of operator and declining prices, while the rural customers will continue to face access and affordability problems, will not bridge the urban – rural divide.

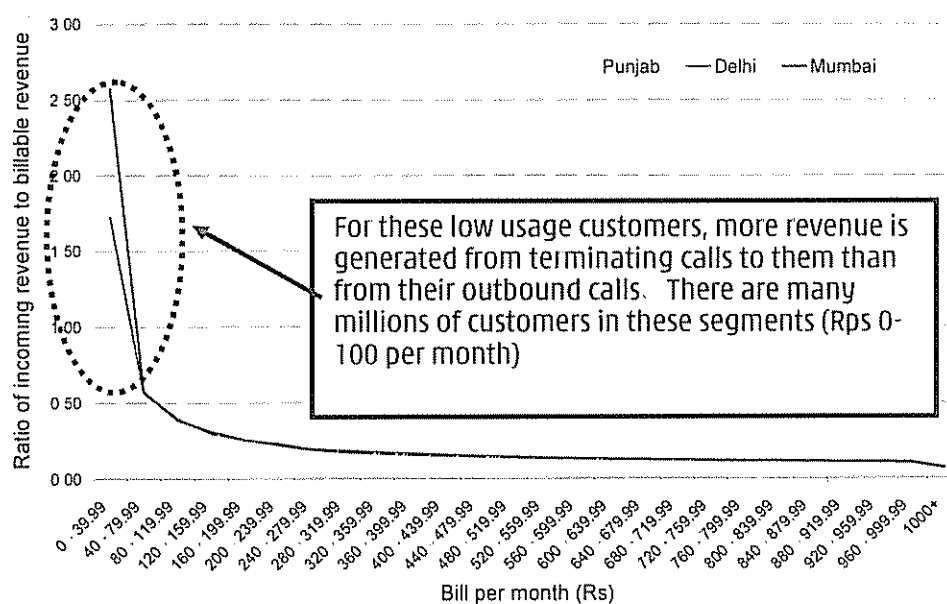
Lessening the rural affordability problem

There is an alternative approach to this problem contained in the analysis and recommendations in the World Bank Working Paper no.27 (Telecommunications Challenges in Developing Countries). This paper considers the key problem in rural tele-density as being how to adequately reward the investment of operators in rural coverage where costs are higher and prospective revenues lower. The paper sees termination rates as being central to the issue of rural investment incentives.

Termination rates are important because rural predominantly lower income subscribers tend to receive many more calls than they make. Thus, the revenue from providing service to these customers comes predominantly from inbound calls (i.e. termination revenue) than outbound calls.

This phenomenon occurs not just in rural areas. Even in metro areas, high usage customers make many more calls than they receive while a large proportion of customers make very few outbound calls. Termination rates are critically important to the economics of serving these customers, even though these customers do not pay the termination charges themselves. The following chart illustrates this point for VEL's customers in three typical circles:

Ratio of incoming to outgoing revenue for subscribers in each outgoing value band



The high value urban customers must contribute to the costs of providing network coverage to the subscribers that they wish to call. As the TRAI correctly notes in the consultation (3.1.4), "termination charges could alter the distribution of revenue." The Authority discusses the redistribution effect primarily in terms of incumbent operators and new operators. We respectfully suggest that cost-based termination charges should be thought of as allowing the **efficient distribution of revenue from operators with limited (and therefore lower cost) geographic coverage to those with extensive (and therefore higher cost) geographic coverage**.

To increase the coverage of networks and increase the proportion of rural subscribers, the revenue potential of these customers must be sufficient to cover the higher costs. The average cost of network deployment, maintenance and operation is going to rise as operators push out into rural

areas. It is worth noting that in 2003 when the last MTC were set, there were only 10 million rural subscribers. The target is to expand this to about 180-200 million rural subscribers by 2011. This is the fundamental reason why termination rates must not be reduced – because between 2003 and 2009, the "marginal subscriber" has totally changed in character. In 2003, only 1 in 10 of new subscribers being added was rural; in 2009 2 out of 3 are rural. The costs of serving the marginal, "new" subscriber has not gone down at all – indeed it has almost certainly gone up dramatically.

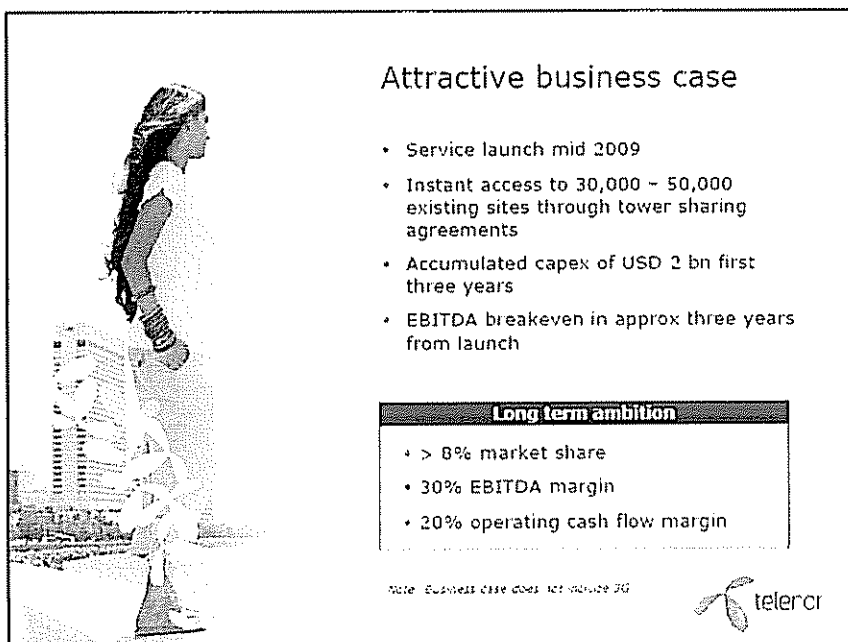
Economic efficiency requires that the termination rate reflects that change in the marginal cost. Assuming that all subscribers create the same cost to serve as urban subscribers is obviously incorrect and will lead to underinvestment in rural areas.

Why new operators want to see low termination charges

So if cost-based termination rates are efficient and promote teledensity, this begs the question as to why new entrant operators want to see lower termination rates. The answer is that their business model is not focused on rolling out networks into the rural areas.

We have used the of the hypothetical new entrant cost model submitted via the COAI. We have taken that model and simply analysed the implied capital investment case. The analysis (which is described in detail in attachment 1) points out the very high capital costs implied in this model that covers 31% of the population in the Circle A and 12% in Circle C. Even on these plans, extrapolated to a national 21-circle basis, the implied capital expenditures of the new entrant would be Rs 46000 crores (excluding the initial license fee) over the first four years.

However, the new entrants in their public statements speak very differently about their capital commitments. Telenor in announcing its acquisition of a majority stake in Unitech put forward the following slide to the investment community:




Attractive business case

- Service launch mid 2009
- Instant access to 30,000 – 50,000 existing sites through tower sharing agreements
- Accumulated capex of USD 2 bn first three years
- EBITDA breakeven in approx three years from launch

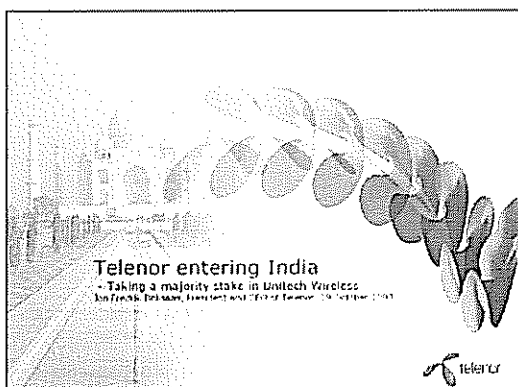
Long term ambition

- > 8% market share
- 30% EBITDA margin
- 20% operating cash flow margin

Note: Business case does not include 3G



Source:



The capital expenditure projection of \$2 billion over 3 years would be insufficient to fund a business delivering widespread service and coverage. The limited capital program will rather be directed to building network in the urban areas and to target the high-value urban customers. This is the only strategy that is consistent with their announced capital plans.

These targeted high value customers will initiate a lot more calls than they receive, in which case the lower termination rate will increase the margins on these customers to the cream-skimming operators. These operators obviously want lower termination rates to free-ride to the maximum extent possible on the network of the operators who have invested in the greatest coverage. Their strategy is clear. The implications of the Authority accepting their arguments are equally clear – the minority of high-value urban subscribers will continue to benefit from greater competition and lower prices; the rural subscribers will face persistent affordability problems and inadequate coverage.

Answers to specific issues raised by new entrants in their submissions

The new entrant networks, in their initial submissions to the Authority, have also justified lower termination charges because: on-net pricing discriminates against new entrants due to their lack of scale; and low termination charges will lead to a reduction in the per minute call rate, thereby increasing competition and increasing consumer welfare.

We will deal with these assertions in turn:

On-net discounts discriminate against new entrants due to lack of scale

Claim: AUSPI and other new entrants make the claim that the use of on-net discounts by existing operators discriminates against new entrants. It is claimed that new entrants need to match the pricing of existing operators but do not have the scale of existing operators. The new entrants argue that they will have a greater proportion of off-net traffic but must price this at the on-net price of the existing operators.

Reality: First, this claim can only be valid when the termination cost is above cost. A termination rate which is cost-based cannot by definition be discriminatory – it merely compensates the receiving

network fairly for costs imposed upon it by terminating the traffic from other networks. It is fair and reasonable for the terminating operator to recover these costs from the operators which cause them

With below-cost termination charges, the inability of the terminating operator to recover the costs imposed by its competitors will lead to a distortion of competition, and raises the possibility of connectivity breakdown – what incentive does an operator have to provide termination services, when for every minute of terminating traffic it incurs a cost? When connectivity is legally mandated, what incentive does an operator have to expand its network into rural areas, when its competitors are able to increase the network costs by promoting off-net calls? Below-cost termination charges actively discriminate against networks providing termination services. This is clearly counter to the national telecommunications objectives

There are three other necessary conditions for the new entrants' argument to hold, even with termination charges set above cost:

- the market share of existing operators must be significant;
- there must be a high proportion of on-net calling, and
- the calling profiles of new entrants must be solely due to its lack of scale, not because of the customers' it chooses to target

When these conditions hold, and termination rates are set above cost, there is a theoretical possibility that a dominant operator may be able to tip the market and effectively exclude new-entrants¹

However, these conditions do not hold in the Indian mobile market. First, only one operator has a national market share above 20%. All other operators have less than 20%. In such a competitive retail mobile market, on-net calls, unsurprisingly, do not represent a significant proportion of outgoing calls by Indian operators

It is just not possible within the Indian market, to use on-net discounts to damage competitors or to foreclose the market. The claims are inconsistent with the realities of the Indian mobile market

Low termination charges will lead to a reduction in the per minute call rate, increase competition and increase consumer welfare

Claim: The new entrants, in their initial submissions to the TRAI, make the claim that a low termination charge and will lead to:

- reductions in the per minute call rate; and
- increases in competition and consumer welfare

Reality: Such claims are only half the story. **Let us be clear about the impacts of lower termination charges**

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¹ See Elliott, D, 'Two-way access charges and on-net/off-net differentials', in Vodafone Public Policy Series, *On-net Pricing in Mobile*, No. 8, April 2008. Also note that such a strategy is only commercially possible when it results in the full exclusion of competitors. Once entry occurs, it is not commercially viable to undertake such a strategy (see Lopez, A., & Rey, P. (2008) 'Foreclosing Competition through Access Charges and Price Discrimination', mimeo, Toulouse School of Economics.)

- a small minority of Indian mobile users (urban based high users) may benefit from cheaper call charges. These would likely be users on high usage contracts and such a move would not help the policy of bridging the urban rural divide.
- the vast majority of Indian mobile users (prepaid medium to low users) will face increased call charges, less attractive deals (through lower discounts and special deals) and benefit from less network investment. This will particular affect users outside the central urban areas.

New entrants will find it profitable to limit network roll-out to urban areas and target high-spending, high-usage customers. Competition will increase for the highest value users and this may encourage churn among existing subscribers, but is unlikely to extend the benefits of mobility to the current underserved rural areas or consumers currently without a mobile subscription.

Lower termination rates will redistribute welfare from lower value, lower income users to high value, high income users. Lower termination charges will also benefit these new entrant firms but this is not our idea of welfare enhancing competition.

Answers to Specific Issues for Consultation

Q1-Q3.

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

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 charges or changeover to LRIC or its variant. Please provide full justification.

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 in your answer.

Termination rates

The Authority has not provided details in its consultation paper of its 2003 methodology of "fully allocated cost with appropriate assignments". Therefore, we have been unable to review the Authority's methodology on the basis of the information provided. We would be very appreciative if the details of the Authority's assumptions and calculations were made available to all stakeholders

What is clear however is that international regulators are moving towards LRIC prices as the preferred approach given its ability to incorporate operational efficiency and prospective market developments. Furthermore, there is increasing convergence in the methodology and assumptions used in these models that the Authority can base its own approach on.

In considering the methodology, the Authority needs to especially consider the diversity of India and the implications of the "averaging" impact of "high-cost" rural areas with "low-cost" urban areas. The COAI model developed by Spectrum Value Partners illustrated the very wide variation in the costs of providing termination between Metro, Circle A, B and C service areas. There will be even greater variations when regions within circles are considered. The optimal approach to setting termination charges must be considered in the context of the implications for the Authority's rural teledensity objectives.

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?

On the specifics of this question, it is incorrect to deduct retail from costs in a cost allocation model. The costs network services (origination, termination, etc) should be kept separate from other commercial retail activity. Since the TRAI incorporate the revenue of value-added services, what is the approach used by the Authority to allocate the associated costs of providing those services e.g., advertising? The LRIC methodology focuses on the allocation of network costs only and avoids this problem. In the LRIC model, all costs of the retail activities e.g., advertising, are similarly excluded.

This question emphasizes the benefits of the Authority disclosing its methodology to ensure that these issues can be identified, discussed and corrected as appropriate.

Q5/ Q6

Are asymmetric rates justified? If yes, which of the following should be the basis?

- (i) Existing service providers versus new entrant
- (ii) Urban lines versus rural lines
- (iii) Mobile termination charge versus fixed termination charge

Give justifications for your answer.

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

In the context of the policy imperatives facing the Authority, the only asymmetry that could be possibly justified is one that encourages rural rollout. However, we consider that the practical difficulties of introducing any asymmetries into the Indian IUC regime are too great. A deviation from the current policy of symmetry will invite numerous dimensions of asymmetry – e.g., 900 MHz vs 900/1800 MHz vs. 1800 MHz vs. 900MHz /2 1 GHz vs 900/1800 MHz/2 1Gz vs 1800MHz/2 1 GHz vs 2.1 GHz operators. It is a totally impractical strategy that will create numerous subsequent complications e.g. in the context of mergers.

Furthermore, there is no public interest case for customers of one efficient operator subsidizing the inefficiencies of another operator through an asymmetric termination charge. In the past, requests for asymmetries with respect to the incumbent operator, BSNL, have been rejected by the Authority and subsequent market developments have proved its decision to be correct. Asymmetries were commonly introduced in European markets to overcome the significant market power of incumbent players but it is inappropriate to extrapolate this to the circumstances of India. In Europe the existing operators possessed significant market power and the asymmetries were designed to assist the initial

new entrants compete against these dominant players. No player in the Indian market today possesses market power. There is a real difference between promoting competition and promoting competitors – asymmetric rates in India would be a direct and unjustified cross -subsidy to certain operators in an already competitive market. The COAI submission on asymmetric termination rates explained this fundamental difference very well

The same principles should be applied to fixed and mobile. The cost structure of fixed and mobile networks is very different and this should be recognized in the methodology. However, should the cost estimates prove to be in the same range, there is much to commend the approach of a common termination charge for the reasons described above

Q7.

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

The Authority needs to consider the impact on both tariffs and the incentives to invest in coverage in higher costs/ lower usage areas. Our proposal to maintain termination rates at the current level would sustain incentives for serious operators to bring service and competition to rural areas. At the present time, the potential rural subscriber does not enjoy the same choice of service provider that is available to the urban subscriber. That will change but only if operators see adequate investment returns.

In the event that the Authority decided to cut termination rates, it is worth describing the consequences. The new entrants will then drive the competitive dynamics. The entrants will then confine their network build to capture high-value customers only (consistent with the capital investment plans they have described to their investors). They will utilize the lower termination rates to offer lower prices to their target value customers – high value customers who make lots of calls. Lower usage customers who do not make many calls but receive many more will be of no interest to them (as the termination revenue from these customers will be low). The serious operators intent on rolling out network to rural India will then face declining incentives to invest in rural rollout (because of lower termination revenue) and increased revenue pressure in the urban areas. They will react accordingly; focusing resources and energy on retaining market share in the urban areas. The gap between urban teledensity and rural teledensity will widen still further (see Figure 1).

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 a reciprocal basis with other countries or left under forbearance?

Indian subscribers are paying an average cost of termination of outbound international calls that are many times greater than the cost of inbound calls. This is a natural consequence of Indian domestic termination rates being extraordinarily low by international standards – foreign callers benefit from these low rates

Competition and arbitrage will inevitably cause international termination rates to trend towards domestic termination rates; if there is any large sustained differential, the consequence will be a thriving grey market

However, since there is active negotiation and competition in the international termination market and overseas operators have an effective choice of terminating operator, there is no case for regulation of these rates by the TRAI. The TRAI should not assume the mandate of regulating rates paid by operators outside India and these rates should be brought under forbearance

Q9/Q10/Q11

What should be the ceiling of the carriage charge for long distance/TAX transit charges for intra SDCA transiting/transit and carriage from LDCA to SDCA calls?

- (i) **Maintain at the same level**
- (ii) **Increased/decreased on the basis of the current data**
- (iii) **Higher ceiling for remote/rural areas and one ceiling for the rest**

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

TAX transit charges

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 CMOs 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 paise 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 CMOs 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

Transit/carriage charge between LCDA to SCDA

Although the licenses on the NLD operators have been amended to permit them to carry intra circle long distance calls, the private cellular operators have not yet been able to take advantage of this facility and are constrained to continue to handover their traffic to BSNL at Level-II TAX. Consequently the private operators have to pay a transit charge of 20 paise per minute for the same even though the private NLDOs are willing to carry the same at a fraction of the price. This is not only making this segment non – competitive but is also against consumer interest.

It is submitted that increased competition in the intra circle carriage segment would lead to lower cost for access providers and hence more affordable tariffs for consumers. It is thus submitted that the Authority may either ensure increased competition in this segment by allowing the access providers to use private NLDOs for their intra circle long distance calls or review the cost downwards so that it is strictly cost based. Hence, there is need to review the cost based Transit/ Carriage charge between LDCA to SDCA.

In the alternative, the Authority may also like to consider a scenario where it may like to consider and decide that henceforth all interconnection may be prescribed at a common level, viz LDCA and that SDCA connectivity is done away with. In this context, it may be noted that LDCA connectivity is already applicable to UAS/CMSP. Further, the license of NLDO also prescribes connectivity at LDCA level despite which, BSNL insists on connectivity at SDCA level. With connectivity at LDCA level, it would be the responsibility of the terminating operator to carry the call between LDCA and SDCA at its own cost.

Q12/Q13

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

- (i) **3G termination charge same as 2G termination charge**
- (ii) **Forbearance of 3G termination charge**
- (iii) **Higher or lower termination charge?**
- (iv) **Should be considered at a later stage**

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?

We believe that for the reasons described above, there should be no differential for 3G or any other technology. The future development and introduction of other technologies will quickly render a policy of technology-specific termination rates to be unworkable.

Concluding Remarks


Different countries have different economic priorities. A recent study by researchers from ICRIER have highlighted the importance of reaching a critical mass of 25% teledensity. The network effects that enable the benefits of economic growth to trickle down to the whole population only appear when this threshold is surpassed. India's rural areas have a teledensity on average of only half that

critical threshold. Some of the least prosperous areas will certainly have a teledensity far lower than that.

The Authority's decision on IUC charges will be critical to those rural communities. A cut in the mobile termination rate will bring no benefits to rural citizens. It will surely benefit some operators and the high-value urban customers that they are targeting, but that is surely not the priority for India.

Thanking you,
Yours sincerely,

For Vodafone Essar Limited, Vodafone Essar Mobile Services Limited, Vodafone Essar South Limited, Vodafone Essar Digilink Limited, Vodafone Essar East Limited, Vodafone Essar Cellular Limited, Vodafone Essar Gujarat Limited and Vodafone Essar Spacetel Limited


Sundeep Kathuria
Authorised Signatory

Encl :a/a

Attachment 1

SVP New Entrant cost-model and

Executive Summary

Recently, the COAI submitted a new cost model prepared by Spectrum-Value Partners, modelling the costs of a new pan-Indian mobile entrant ("SVP new-entrant model")

In the attached analysis, the new entrant LRIC model has been converted into a capital expenditure case through the extrapolation of the data on a national basis (on the basis of circle population). On this basis, the hypothetical new entrants' capital investments over the first four years would be Rs 46,000 crores (excluding the initial license fees)

Detail

The new entrant is assumed to start operations in 2009, with 97% population coverage in metro circles in the first year, 31% in circle A, 20% in circle B, and 12% in circle C. The market share of the new entrant is assumed to start at 3-5% in 2009, growing to 11-14% in 2012. With these assumptions, the SVP new-entrant model estimates the cost of termination for the new entrant in 2009 will be Rs 0.69, falling to Rs 0.43 in 2012. This gives a weighted average LRIC of Rs 0.54 (in real terms) over the first four years of operations.

Calculating the yearly capital expenditure

The SVP new-entrant model directly calculates the yearly capital expense. The incremental capex in the model is shown in the table below. This represents the capital expenditure required to match the assumed coverage obligation and the traffic forecast for the year.

Incremental capex per Circle				
	2009	2010	2011	2012
	(Rs Cr)	(Rs Cr)	(Rs Cr)	(Rs Cr)
Metro Circle	521.4	87.9	311.2	275.6
Circle A	448.5	575.6	870.0	1,114.8
Circle B	364.8	444.2	399.6	605.2
Circle C	198.0	268.4	237.5	365.0

Source: 'capex' worksheet, rows 866-938.

These estimates are for individual circles (e.g. for a single metro circle). To show the cash flow of an Indian-wide new-entrant, operating in all circles, we have scaled the above figures based on population (e.g. the metro circle above has a population of 18.0 million; total metro circle population is 56.4 million).