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Shri Arvind Kumar,
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Mahanagar Doorsanchar Bhawan
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New Delhi 110002

Subject: Submission of counter comments on responses to IUC consultation

Reference: Telewings (Uninor) response to **Consultation Paper on Interconnection Usage Charge** (CP No. 13/2014)

Dear Sir,

This is further to our response to the Consultation Paper submitted on 11 Dec 2014 and submission of pure LRIC model on 23 Dec 2014 (not for circulation).

We have kept our counter comments on the responses to the consultation on IUCs brief and have focused on factual inaccuracies and what we believe to be unjustified assertions in the other submissions. Our counter comments are organised around the following five key issues:

- FAC versus LRIC
- ASRs as the basis for establishing costs
- SLM depreciation
- scope of relevant costs
- allocation of costs to non-voice services

We hope that the Authority will find our counter comments, response and model useful and consider our inputs while formulating the recommendations on the subject.

Thanking you,

Yours sincerely,
For **Telewings Communications Services Private Limited**

(Pankaj Sharma)
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Uninor counter comments on responses to consultation on IUC (2014)

1 Introduction

Uninor has kept its counter comments on the responses to the consultation on IUCs brief and has focused on factual inaccuracies and what we believe to be unjustified assertions in the other submissions. Our counter comments are organised around the following five key issues:

- FAC versus LRIC
- ASRs as the basis for establishing costs
- SLM depreciation
- scope of relevant costs
- allocation of costs to non-voice services

2 FAC versus LRIC

Uninor's view is FAC should not be used to allocate costs. LRIC, and specifically pure LRIC is much better suited to the market, and is more economically efficient.

A number of the other operators, including the three largest operators, argue in favour of fully-allocated costing (FAC).

Consistency of approach

Vodafone *“Generally the approach should be consistent over the period of time with similar approaches used for services that are provided in combination unless there is a change in the underlying principles”*

- It is not necessary for consistency over time to be an over-riding approach to regulation. Many regulators have specifically sought to increase the rigorousness of the regulatory approach over time, for example moving from negotiated settlements, to simpler forms of cost-orientation (e.g. FAC), to more rigorous forms of cost orientation (LRIC, bottom-up LRIC), to more exclusive forms of cost orientation (Pure LRIC, reflecting only long-run marginal costs). This evolution has been driven by a decisive change in the underlying principles and regulatory best practices.

Vodafone Table 5: *“in the past and some very recent determinations, the TRAI has used FAC” including: half-circuits, port charges, cable landing access, outgoing calling card access. “FAC... may be more appropriate”.*

- The reference services and decisions listed are for ‘**one-sided markets**’ and therefore fundamentally different from the two-sided mobile termination market. In a one-sided market, the wholesale buyers of the one-sided service rely solely on the purchase of the wholesale input to produce the retail product and therefore could face a margin squeeze or excessive price if the wholesale product was unregulated. Also in such cases, the buyer has a choice of multiple operators and can negotiate the terms better. **Two-sided markets** involve the buying *and* selling of the same service *between* players, and therefore prices can be set at any level and do not need to be set at total cost or FAC. Two sided markets with zero wholesale charges or wholesale charges which are cost based (lower than total cost function) are effectively and efficiently most suitable in the long-term in many situations (pure LRIC termination services, B&K termination markets, bilateral unpaid internet peering).
- Interconnection with all licensed service providers is mandatory in our license and IUC is an example of ‘two-sided service’, the table is a compilation of ‘one-sided services’ (IPLC, access charge, roaming etc.), hence the comparison is not relevant.

Effect of IUCs

Idea *“The TRAI has itself acknowledged in the past that if the interconnection price is set “too low” then inefficient competitors may enter the market. Any reduction in current MTC will in all likelihood facilitate entry of inefficient competition that may look for opportunities to profit by purchasing services at low regulated prices and simply re-selling them, instead of developing innovative new product offerings. Naturally, such a development would not be in the long term interest of the telecom sector which is already in need to become more efficient.”*

- “Too low” wholesale prices encourage inefficient entry if the market is one-sided and the resale of the service is the main function of the entrant. The competitor MNOs in India are **not seeking to simply re-selling an interconnection service** for calling mobile subscribers on the other networks, but primarily to offer a package of origination, SMS and data services, including the ability to receive calls from all networks mandatorily interconnected as per license condition.
- Long-term efficiency in the mobile market is achieved by the choices of operators in the competitive and contestable areas of buying spectrum, operating networks, staffing effectiveness, serving customers and maximising volumes of traffic on the network and thereby lowering tariffs for the benefit of customers. These investments are based on individual business plans and need not be recovered from other service providers.

Vodafone *“Setting of IUC has a direct impact on promoting growth of subscribers (namely, the low income subscribers due to their specific traffic profile) and investment in rural areas as they represent a critical revenue source for operators who continue to deepen the reach of their networks. By adopting these strategies for network deployment, operators have a significant role to play in the promotion of the enormous economic benefits by allowing a broader range of*

consumers to access mobile communication services”... “The IUC regime should be established in such a manner so that it promotes the closing of the digital divide”.

- The incumbent operators’ current strategy of using IUCs charged to competitors to subsidise the claimed higher costs/lower prices needed for new subscribers and new coverage is a weak method of ensuring efficient and competitive supply to underserved areas and populations. It would be more efficient for a large operator to charge its own urban and wealthy subscribers more to subsidise the operator’s own rural coverage and low-user plans. It would also be more efficient to utilise USO funding or a form of active network sharing rather than wholesale voice IUCs to directly target the claimed higher costs of rural coverage, rather than to universally levy higher incoming wholesale call charges on other-network subscribers. Rural coverage provides both voice and data service, and data service inclusion (internet access) is increasingly important and therefore not related to the utility of incoming voice calls.
- All service providers are individually mandated rural coverage (BHQ), an attempt to cross-subsidize rural coverage of incumbent at the expense of new entrant is not a sound argument.

Idea “the most important element that allows an operator to invest and rollout for rural and low income users...is the level of termination charge that it collects from the calls coming in to such users”.

- This implies that the most important element allowing an operator to invest in rural and low income subscribers should be from the termination charges. Another pre-assumption behind this argument is that only incumbents are the torch bearers of providing services to rural and low income users, we place on record that Uninor’s stated market position is ‘mass market in voice and affordable data’.

Idea “If MTC is reduced, there would be large geographical pockets in India that will suffer a blackout of mobile services, the coverage will shrink and a large portion of existing rural customers will go out of service or quality of service will suffer as Incumbent operators will not have any incentive to invest in their network or maintain its quality.”

- A **‘blackout of mobile services’ is a dramatization** and does not reflect the incentives, including competition, licences and USO funds, to provide coverage. Mobile termination charges do not solely support the running and investment costs of rural networks. Instead, mobile termination charges contribute to the entire operator’s revenue base. Operators will fund their running costs from a range of revenue sources, including voice origination charges and data charges. Upfront deployment costs also represent a significant proportion of the lifetime cost of providing rural service so hypothetically even if lowering MTCs will discourage further roll-out by the incumbent operators it seems unlikely that it would lead to existing rural networks being turned off. Therefore a ‘blackout’ though dramatic will not occur as suggested. Instead, operators will need to adjust their revenue and costs to a lower IUC situation. This would include both the savings on outgoing interconnection costs, and lower incoming IUC revenues.

- It is incorrect to say that there would be no incentive to invest in infrastructure or quality if MTC is reduced. Incumbent operators have many incentives to invest in their network and to maintain an efficient level of quality. These incentives come from the origination and data services which are the main services and main sources of revenue (and share of cost) for the players. Incentives to deploy coverage also arise directly from licence requirements.
- The mobile market is competitive therefore is it not appropriate to focus the debate only on the (purported negative) impact on incumbents and large players. Rather, the debate should also include the (positive) impacts on smaller challenger operators catering to the ‘mass market’.
- The incentives to invest for entrant operators are likely to increase if IUCs are reduced symmetrically for all players, particularly if using pure LRIC. In case incumbents (and their shareholders) might choose to relook at future investments, the challengers (and their shareholders) will have an improved business model with which to consider innovative investments including the opportunity to better serve the rural population with challenger network infrastructure and service offers.

Modelling

Idea “We feel that the LRIC model thus is theoretical. It is thus quite evident that the estimation of an hypothetical efficient operator whose network dimensioning is modelled on a thumb rule combination of coverage and capacity for an ideal cell radii and BTS requirements in an LSA ignores the realistic problems of passive infrastructure availability, last mile connectivity, local regulation issues, overhyped EMF radiation issues, lack of stable power supply in major rural areas across India and regulatory litigations which currently impact telecom operators for their Capex and operating costs in a very significant way. Given that telecom service providers do not operate in ideal conditions and do not have the required spectrum that operators in developed countries have access to for servicing the sizable subscriber base applicable to India, any computation of termination cost by using LRIC model will to that extent be a distortion and will not reflect the right interconnection costs.”

- It seems there is a presumption that the model shall apply only to large incumbents. However this is not the case, as the model is intended to be based on a specified market share¹ and is uniformly applicable to all operators in a market.
- A LRIC model does not use a rule of thumb. It uses transparent network design calculations based on actual technical rules (e.g. signal propagation, spectrum reuse factor, TRX channels, etc.)
- No operator can be seen to operate in ideal conditions therefore all LRIC models should reflect reasonable, efficient operating conditions. The acceptance of LRIC models in other jurisdictions demonstrates that these models can successfully accommodate non ideal

¹ TRAI proposes a HHI method, but in Uninor’s submission we argued for a different approach (1/N).

conditions. A LRIC model can easily incorporate factors to reflect realistic networks: this has been done in many LRIC modelling cases in Europe and elsewhere. Calibrating a LRIC model against real networks ensures that issues such as realistic cell radii, deployment constraints and actual spectrum allocations can be accommodated. Checking a LRIC model against historically incurred costs and opex can ensure that realistic cost levels are accommodated in the subsequent LRIC calculations. Lack of stable power supply can be modelled easily in a LRIC calculation by including realistic costs for generators/diesel, etc.

- Regulatory and litigation costs which are unreasonable, or unrelated to wholesale services, should not be incorporated in an efficient cost base (please see section 5 of our response for a further discussion of relevant costs).

Airtel “There are 7-12 operators in each service area with a heterogeneous profile in terms of their length of operations, network deployment, network coverage and customers served. Some of the operators have a vastly deployed network encompassing urban and rural areas whereas the others are largely present in urban areas. The LRIC modeling for the two set of operators is largely different and will yield varying results. LRIC is normally used only in those markets where the operator profiles are more homogenous.”

- It is not necessary to undertake LRIC modelling for two sets of operators, as TRAI imposes a single IUC on all players. Therefore, it is only necessary to define a LRIC model for one operator, an efficient operator.
- No market contains multiple homogeneous operators; they are always different in some major or minor way. Therefore LRIC is always used in markets with non-homogeneous operator profiles. The LRIC approach is not dependent on the existence of “a reasonably homogeneous market”.
- The successful application of LRIC in other markets with divergent players demonstrates that homogeneity is not required for LRIC. Examples of non-homogenous markets include, Norway (large/small coverage mobile operators), Israel (GSM and CDMA technologies), Jamaica (different spectrum bands and very different market share), Sweden (shared, joint-venture, and self-owned networks in different urban and rural areas).
- The application of FAC to the Indian situation is not simple and will result in a set of highly confidential unit cost results, by operator and by LSA. These cost results will all be affected by **scale** (large or small), **coverage** (large or small), **cost efficiency** (excessive or efficient expenditures), **voice traffic levels** (high or low usage), **data traffic levels** (high or low usage), etc. This means that the application of a FAC method is not straightforward and is highly obscured by the confidentiality of results by operator by LSA. There is little opportunity for the industry to challenge the (in)efficiency of each other operator’s costs, because of this lack of transparency. This means that FAC results will also be highly non-homogeneous. FAC results will also be equally disputable because the process of determining the IUC is non transparent.

Airtel “Further, the LRIC model is based upon a large set of assumptions on network parameters and any wrong assumption will result in an unrealistic Termination Charge. Given that such a model effectively starts from a blank piece of paper, there is a risk that relevant costs will be omitted from the model. Further, the model requires extensive data, not all of which is easily available.”

- Small inaccuracies in the assumptions driving the cost model do not necessarily mean the result is unrealistic. This applies to both LRIC and FAC models which require assumptions on the allocation of costs to services. If the wrong assumptions are small or immaterial to the calculation, then the result can still be realistic. The judgement of expert modellers and operator insight in this situation is beneficial.
- It is straightforward to ensure that relevant costs are included within the LRIC model, by taking reference to the operators’ efficiently incurred expenditures, for example by comparing the outputs of the calculation to last year’s audited ASR data.
- A LRIC model does not start from a blank piece of paper, but from the best-practice rules and equations applied in similar situations, by expert regulatory staff, including TRAI’s existing knowledge and existing LRIC model. In many cases, operators have the opportunity to comment on the inputs to a LRIC model, and this can be used to reduce the risk of any material omission to realistic costs.
- It may not be easy to obtain all data points needed for a model, but it is possible. All material and necessary data points for a LRIC model are available within the operator’s management information or from comparable reliable sources. This requires some effort to be invested by industry players at the time of model set-up, but it does not invalidate a LRIC approach. TRAI has sought input data on network and costs from all operators in May 2014, and this is readily available as an input to the pure LRIC model for HEO. Therefore, there is not a requirement for extensive data.

Airtel “The Termination Charge for each operator should be calculated on the basis of their audited ASR data. To take care of inefficiencies, the calculated termination charge of the “actual efficient operators” should be selected for fixing the Termination Charge. Further, while selecting an actual efficient operator, it is recommended that the Authority consider the cost models for operators meeting certain minimum criteria of coverage in terms of both rural population and geographic coverage, i.e., DHQs/ BHQs.”

- The process suggested by Airtel will be opaque to the industry, as it will rely on definitions in relation to minimum coverage criteria which will be assessed privately for each actual operator. Defining efficient coverage is better done in a transparent LRIC model.

Airtel “In the LRIC model, if modelling and assumptions are not carried out properly then inefficiencies of the operators may creep in.”

- This risk is much more significant in an FAC method, where the inefficiencies of the operators are already embedded in the audited costs and need to be found, and then excluded. For example, a ‘gold-plated’ network deployment would not be modelled in a LRIC model (because it would be modelled according to the efficient standard), whereas if an operator has deployed a higher than required quality of network or staffing then its audited costs would include related costs throughout the cost base. It would be challenging to identify and remove these costs throughout an audited cost base.

Cost recovery

Airtel “There is a huge imbalance of traffic between operators and therefore, any method suggesting incremental cost would lead to subsidization of one operator by the other.”

- Any method of setting IUCs which results in a single price for termination for all players in the market involves an amount of subsidy (one way or another) depending on the net flow of traffic and whether the operator has higher or lower costs than the regulated rate. Therefore, the flow of revenues compared to actual cost varies in all situations and implies subsidisation, and this would be more prominent in case of FAC where smaller players would have to bear the cost of cross subsidy to accommodate dominant players.

Airtel “LRIC cost modeling does not allow recovery of historical costs incurred by the operators. As a consequence, it could result in an unfair situation where the marginal cost is pegged at a level which does not realize the true cost and erodes margin and subsequently roll out capabilities.”

- There is no requirement for a regulator to guarantee that its pricing method should recover the full historical costs incurred by an operator.
- Historical costs incurred by an operator can be high or low (e.g. if net book values are low). LRIC results can be higher than historical costs: for example, if the LRIC result assumes lower economies of scale and scope (market share) compared to the real operator, or where current costs are higher than past costs (e.g. due to inflation).
- Historical costs which are inefficiently incurred should not be recovered through regulated prices, as it sets the wrong incentive for efficiency.

TCL “Since computation under LRIC is based on present cost basis, there is no incentive for entrants or new operators to build own network and would prefer using the incumbent’s network. In a way it introduces inappropriate incentives for entrants or new operators.”

- LRIC does use “present” costs as the basis for cost calculation, however it aims to calculate on a ‘build or buy’ approach, considering all the long-run costs necessary to produce the increment of traffic. The build or buy approach of considering all the relevant current costs means that entrants or new operators have an equal incentive to build the infrastructure, or to buy it on the wholesale market. Since only termination services are bought on the wholesale

market, and wholesale origination services are not bought in tandem with termination, then an entrant or new operator cannot use the incumbent's network for origination. Therefore, entrants and new operators have a strong incentive to build their own efficient infrastructure in order to offer voice origination and data services which are sold on the retail market.

- Carriage networks (viz. TCL) are transparent to MTC; these are collected on behalf of terminating network and passed on transparently without withholding any component.

Pure LRIC

Vodafone “Access service providers would not be able to achieve full cost recovery if all of its services were priced using a pure LRIC approach”.

- The Authority should not consider pricing all services using a pure LRIC approach; it should only consider the wholesale voice termination services ('two-sided'). The full cost recovery can be achieved by operators because they have commercial pricing freedom on all other services.

Vodafone “We also note that the telecommunication experts are of the view that a Pure LRIC approach is generally suited to highly penetrated, mature mobile markets, such as those in Western Europe, and less well suited to developing markets that have less penetrated markets, such as India. The experts have noted that while it may lead to short-term reductions in retail prices, it would reduce operator profitability and hence may lead to a reduction in investment and innovation incentives to the detriment of the longer-term development of the sector and the broader economy. Further, it may lead to retail price increases to recover costs not covered by the IUC regime.”

Vodafone “Even under the pure-LRIC methodology, the European Commission recommended that part of the spectrum costs should be included in the MTC (footnote reference 24)”.

- The view of “telecommunication experts” indicated by Vodafone is speculative and lacks any evidence or cross-reference, and suggests consensus amongst experts when we do not believe there is a consensus on this point.
- Pure LRIC does not reduce operator profitability. It reduces the amount of revenue received per minute of termination, while at the same time it reduces the amount of cost incurred per minute of outgoing off-net traffic.. Profitability may be increased or decreased in the longer term as network operators respond to the competitive situation arising from a regime of pure LRIC-based MTRs.
- The increase in retail prices is factor of competitive situation in the market place and inelasticity of market, since lowering of IUC will lead to more competition, it is likely that retail prices will decrease and not increase.

- Vodafone’s reference to the European Commission neglects to include the explanation of the “part of the spectrum costs should be included.” The relevant text on Page 11 of the EC Recommendation states (our emphasis):

The costs of spectrum usage incurred in providing retail services to network subscribers are initially driven by the number of subscribers and thus are not traffic-driven and should not be calculated as part of the wholesale call termination service increment. The costs of acquiring additional spectrum to increase capacity (above the minimum necessary to provide retail services to subscribers) for the purposes of carrying additional traffic resulting from the provision of a wholesale voice call termination service should be included on the basis of forward-looking opportunity costs, where possible.

...

In addition, the additional spectrum costs and wholesale commercial costs directly related to the provision of the wholesale termination service to third parties would also be taken into account.

Airtel “Below-cost termination charges or B&K... Will result in collapse of Tariff tables leading to overall loss to the Industry: Termination charge is a revenue shared between originating and terminating operator, therefore, any reduction in the termination charge does not result in reduction of the overall cost for the Industry.”

- Termination charges are a wholesale charge per minute, and not a revenue share. Retail revenues will be accrued in a variety of ways including monthly subscriptions, bundle charges and usage charges. Retail revenues also contribute to the overall cost base of the originating operator (e.g. sales and marketing, common costs, subsidy to less profitable services). Furthermore, wholesale revenues are received by the same operators. This means that wholesale termination charges and revenues are a minor contributor to the overall tariff levels in the market, and there are many other more significant decisions on setting retail tariffs (such as retail revenues, data service revenues, incurred costs, etc).

3 ASRs as the basis for establishing costs

Uninor’s view is that historic ASRs are not appropriate for calculating costs for IUC.

A number of operators argue for ASRs to be the relevant costing base.

Airtel “The costs taken from the ASR for the FAC model are duly audited and are available for all operators, thereby leaving no scope for dispute by any stakeholder.”

- The Reporting System on Accounting Separation Regulations, 2012 permits each operator to devise its own manual containing the policies, principles, methodologies and procedures for accounting and cost allocation. It is therefore likely that there are significant variations in the

approach used by different operators. Any lack of consistency in the choices and service cost allocations made by operators in developing a FAC method based on the ASR would result in distortions to the final cost results.

- Auditing of the ASR reports is intended to ensure their numerical accuracy and conformance with the operator's own ASR manual, not their conformance to a standard industry-wide approach.
- There will be considerable inconsistency in the level of net book value present in each operator's ASR, because operators will be at different stages of asset roll-out and replacement. Therefore, there is inherent significant inconsistency in the results obtained from multiple FAC models, even if they are based on audited financial data. The "most efficient" (lowest cost) operator in one year may be the "least efficient" (highest cost) operator the next year due to the phasing of a major capex upgrade. This means there can be significant distortions and disputes over seemingly obvious results.

Idea "We believe that as mobile operators penetrate further into the rural areas within our country, there would be added element of operational costs and capex costs involved for rollouts in sparse and rough terrains. This will require to be factored in the overall cost while undertaking this exercise." And "FAC cost data would obviously need to be based on industry costs of just concluded annual periods. Where there exists strong reason to believe that costs would be very different going forward vis-à-vis the available historical costs (such as the case of auction determined spectrum prices vis-à-vis the bundled start up spectrum available as per previous basis), the determined foreseeable impact of such higher costs should be an addition to the respective historical costs. We believe that the authority has reasonable historical operating data from the industry to calculate the IUC after considering the significant upward impacts related to the spectrum prices and upward impacts in capital expenditure due to rural roll out dimensioning / technology / obsolescence etc. It would obviously be appropriate for the authority to use the relevant historical data available from public / submitted documents to the extent applicable for this exercise."

- All USO funding should be taken into account to reduce the cost of rural network roll-out, for both the real operators and the hypothetical efficient operator. This project is already being rolled out by DOT for unviable rural villages.
- Costs from just-concluded annual periods can only reflect the costs incurred in the past. They do not provide the cost of the IUC service in 2015 or onwards for which the present consultation is underway.
- Is it inconsistent to argue for future upwards impacts (e.g. spectrum) without the inclusion of predictable downwards impacts (e.g. voice traffic growth, explosion in data traffic, technology improvement, cost improvement and network sharing).

4 SLM depreciation

Uninor's view is that straight line depreciation is not appropriate for economic costing.

A number of other operators argue that SLM depreciation should be applied.

Various "We recommend SLM since it divides deprecation expenses evenly over the life of the asset...on a uniform basis".

Airtel "the depreciation for any financial year is already part of the ASR, which is audited and matched with the published accounts of the operators. Therefore, we do not find any merit in changing the methodology and computing the depreciation afresh."

- Applying an audited historical financial depreciation method, and a uniform depreciation method, is inconsistent with a forward-looking economic costing application, especially in the situation where equipment costs and demand are changing rapidly from past to future periods.

The para 3.4 of the consultation paper is self explanatory.

"There are differences in the estimation of useful life of the assets used and the rates of annual depreciation adopted by various service providers. However, for the purpose of setting IUC, it is imperative that a normative measure for costing of relevant network elements is developed, quite distinct from what the statutory regime prescribes for taxation purposes."

5 Scope of relevant costs

Uninor's view is that only wholesale network costs are applicable to the 'work done' in carrying wholesale termination traffic.

The view of the three largest operators is that numerous retail and indirect costs should be included in the fully-allocated cost base.

Call centre costs

Airtel "All cost items including...Customer Service: The call center for complaint resolution caters to all the issues in the network and service delivery. It is incorrect to assume that a network complaint for an incoming call will not be entertained by an operator in the call center; IT costs: Costs on IT based activities, such as billing, etc. are directly attributable to running a mobile network therefore should be incorporated."

- While a call centre may discuss incoming calls, it does this for the operator's own retail customers, and not for other wholesale buyers of termination (neither the wholesale network, nor its customers). Each operator will have its own call centre for customer queries relating to calling other networks and receiving calls. This call centre activity does not represent 'work

done for the incoming traffic’ and it would be unrealistic to attempt to cross-charge other operators (and their customers) for call centre inquiries relating to incoming calls.

- Airtel’s call centre will not be contacted by customers of other operators to discuss calls terminated on Airtel’s network.²
- All operators including Uninor and Airtel charge calls to the call centre apart from those calls related to redressal of grievances of its customers as mandated by TRAI.
- Retail billing activities (such as rating, prepaid charging systems, credit systems) are not directly attributable to interconnection traffic. Only the wholesale/network billing aggregation systems are relevant for IUCs.

Bad debts

Idea *“We believe that ... bad debts ... should form part of the operational expenses that is required to be considered.”*

- Bad debt is not caused by the wholesale incoming call traffic: it is only related to the operator’s own retail customers for originating voice and data calls. Wholesale operator bad debt is negligible (i.e. where a network operator won’t pay the voice termination charge).

Sales and marketing costs

Vodafone *“some proportion of sales and marketing could be related to wholesale”.*

Idea *“We would like to also submit that the Authority keep sales and marketing costs within the purview for calculation of IUC. We say so because sales and marketing costs are today a substantial portion of an operator’s operating expenditure in view of the hyper-competitive environment prevailing in Indian market. Further, with operations going more and more rural / Bottom of the Pyramid, the need to communicate and promote mobile telephony has increased in view of the limited understanding of the rural subscriber who by and large is an incoming call oriented customer. It is also a fact that distribution costs which form a substantive part of the overall sales costs rise substantially in rural terrains because of the large distances involved. We would therefore urge the Authority that it includes sales and marketing costs also while calculating IUC.”*

- Including sales and marketing costs in IUCs is essentially cross-charging operators for their competing service activity; it would be a form of double-counting which is partly net-balanced-out due to the two-sided nature of interconnection markets.

² If a call centre is contacted by the subscriber of another network, the call centre activity would most likely be reimbursed through the retail price charged to call the contact number.

- The fact that sales and marketing costs are a substantial proportion of cost does not make them an applicable cost for IUC.
- No sales and marketing ‘work is done’ for an incoming call minute; instead sales and marketing work is done to acquire subscribers from other operators or as new users. Sales and marketing work done to acquire subscribers from other mobile operators is a competitive cost unrelated to the need to educate a rural subscriber of the benefits of becoming a subscriber and unrelated to the ability to receive calls.
- The rural subscriber does not receive credit for receiving minutes therefore the rural subscriber is not exposed to the price signals associated with being called. In addition, it is the other operator which has incurred its own sales and marketing cost for the customer who is originating the cross-network call. This traffic flow is by definition settled as interconnection traffic charges between operators at a wholesale (not retail) level.
- Rural transmission costs incurred to carry the interconnected voice traffic to the rural areas would be considered network ‘work done’, if caused by that minute of traffic. Rural distribution costs to send handsets and/or prepaid scratch-cards, etc. to rural areas should be considered retail distribution costs rather than network related costs.
- The use of term ‘could be’ suggests exploring possible ways of increasing costs. Once the IUC is prescribed by TRAI, no sales and marketing is involved at wholesale level.

6 Allocation of costs to non-voice service

Uninor’s view is that network costs should be allocated to packet data and other services on the basis of network loading and ‘work done’ by each element of the network, as opposed to being ignored or allocated based on ARPU.

A number of operators discuss how costs should (or should not) be allocated to non-voice services.

Idea “India is a predominant voice call driven market and we believe that it would remain this way for several more years. It is currently therefore too premature to view the need to adjust costs associated with products other than voice calls for the purposes of computing termination cost using the FAC method.”

- Idea’s assertion is incorrect. It is evident from Idea’s own website that mobile data is an important aspect of the current competitive market place and therefore a voice-and-data market should be assumed in 2014 and increasingly in the future as 3G/ 4G becomes available.
- Idea’s landing webpage is illustrated below:
 - ‘Idea Internet Network’ is the main banner on the website
 - ‘Voice’ is considered alongside ‘Mobile Internet’ and ‘Value Added Services’
 - Mobile data dongles and smartphones are prominently displayed

- Non-voice promotions (Movies and Mobile Money) are advertised.
 - “What’s new” includes 3G service announcements, supporting smartphone and dongle mobile data services.
- Similar advertisements of other incumbents promoting Data as primary driver is in public domain.

Airtel “Data is also like VAS and constitute a small proportion of revenue of mobile operators. Further, it is difficult to calculate a driver for deriving Data cost. We therefore recommend cost in proportion to the revenues be deducted from the overall cost.”

- The choice of operators to price mobile data at a relatively low level is a strategic commercial decision of the network operators, and is not imposed by regulation. Therefore, regulation should not impose a higher price on wholesale termination because operators choose to recover a small proportion of revenues from mobile data services.
- There are transparent and easy to understand methods for calculating cost drivers for voice and data traffic services. These consider the amount of traffic in Mbytes, converted to an equivalent number of voice minutes on the basis of the occupied channel rate (air interface, or transmission channel as appropriate). These types of conversions for GPRS, EDGE and UMTS data have been applied for many years in comparable regulatory costing situations, and are well understood by regulatory modellers and radio engineers.³

Vodafone “Yes, costs pertaining to non-voice products can be segregated based on resource utilization or activity based costing (ABC) i.e. converting the non- voice usage (Data/SMS) into minutes equivalent, and then relevant total cost can be attributed to the total equivalent minutes. The approach and modalities of conversion factors can be discussed among all relevant stakeholders.”

- The method agreed for reaching equivalent units of traffic loading (work done) will be important to the overall result. This is particularly the case for spectrum costs, which represent a large proportion of the total costs of the mobile operators. A large proportion of the air interface capacity (i.e. spectrum channels) is consumed by data bearers, and this should be reflected in the allocation of spectrum costs to voice and data in the event that TRAI decides to adopt a costing methodology other than pure LRIC.

³ See for example page 76 of <http://www.pts.se/upload/Ovrigt/Tele/Prisreglering/Draft-LRIC-model-of-mobile-110210.pdf>