

Bharat Sanchar Nigam Limited
(A Government of India Enterprise)
Regulation Cell, Corporate Office
504, Bharat Sanchar Bhawan, Janpath, New Delhi-110001

No: 314-1/2008-Regln

Dated: 30th January 2009

To,

**The Secretary,
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawahar Lal Nehru Marg,
(Old Minto Road), New Delhi-110002.**

{**Kind Attn:** Shri Lav Gupta, Principal Advisor (FN), TRAI}

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

Kindly refer to TRAI's Consultation paper on "Review of Interconnection Usages Charges (IUC)" dated 31.12.2008 wherein the comments of various stakeholders including BSNL have been sought. The comments of BSNL on the various observations/ approaches discussed in this Consultation Paper including that on the specific issues raised in chapter 6 are submitted in the subsequent paragraphs.

2. At the outset we highly appreciate the present review exercise being carried out by TRAI as the same was urgently required due to significant developments in the telecom sector during the last five years, when the various components of IUC were prescribed by the TRAI.

3. The present IUC regime is highly in favour of cellular mobile operators and causing their undue enrichment at the cost of wireline operators and their customers. Further, the present IUC regime is also extending undue advantage to the tune of about Rs. 4000-5000 crores per annum to the international operators/carriers and causing huge losses to national exchequer and Indian service providers/consumers.

4. It had, therefore, been the continuous and consistent request of BSNL, starting from 2006 itself, for, inter-alia, reviewing and prescribing the cost based termination charges for wireless & wireline networks and also for permitting higher termination charges from the incoming international calls at par with what access providers are paying for termination of their outgoing international calls in other countries.

5. It is submitted that the scope of present consultation paper is to review/determine the IUC only. However, certain licensing/interconnection issues have also been mingled with the same. It is requested that the present exercise may kindly be restricted to fixation of IUC only and not to review/determine any licensing/ interconnection framework. Further, in the consultation paper, some comments have been made with respect to other issues like the commercial arrangements between BSNL and other operators for IN calls and its linkage with the fixation of cost based termination charges. In this regard, it is submitted that these are totally out of context and has no correlation whatsoever with the present exercise of determination of cost based IUC.

6. Further, in response to the pre-consultation process carried out through the communication dated 12.09.2008, BSNL had provided the information sought by TRAI to the extent it had become feasible in the limited time period provided for submitting such information. Other telecom operators and their associations were also required to provide the same information to TRAI in response to the letter dated 12.09.2008. However, as is evident from the present consultation paper, it seems BSNL only has provided the revenue and traffic information to TRAI and none of the other operators has submitted the costing, revenue and traffic details. In spite of this, an impression has been created in this consultation paper as if it is only the BSNL who has not provided the required information and rest of the operators have submitted all the information sought by TRAI, which is not correct and is contrary to the factual position. In case the other operators have submitted the entire data as sought by TRAI, it is requested that the TRAI may kindly publish the same for enabling BSNL and other stake holders to examine and comment thereupon with a view to ensure transparency.

7. It is also observed that the TRAI in this consultation paper has pointed out shortcomings in the information submitted by BSNL without seeking any clarification in this regard. In fact, these observations of TRAI are not correct. On the contrary, no comment has been offered by the TRAI on the information/data, if any, submitted by other operators. Further, the data submitted by BSNL against the letter dated 12.09.2008 of TRAI as well as its accounting separation report have been discussed and published by TRAI throughout the present consultation paper whereas no such discussion has been done with respect to accounting separation reports of any other operator. It is the humble request of BSNL that all the operators should be treated uniformly by the Authority while analyzing their data and sharing/disclosing of their financial and commercially sensitive information with a view to ensure transparency and level-playing field.

8. TRAI has relied on certain data provided in table 5.1 and 5.3 wherein the names of the operators have been withheld. Based upon this data, TRAI has provided/calculated the range of mobile termination charges varying from Rs 0.09 to 0.22 per minute in para 5.3.1.11, fixed wireline termination

charges varying from Rs 0.19 to 0.28 per minute in para 5.3.2.4 and carriage charges varying from Rs 0.16 to Rs 0.72 per minute in para 5.5.2 of present consultation paper. However, TRAI has not provided/shared any calculation/data, methodology whatsoever used in arriving on these charges. In the absence of the names of the operators and methodology/calculation/approach adopted by TRAI, it is not possible for BSNL or any other stakeholder to comment on these values. Prima facie these values are not consistent with the network costs. It would have been just and fair to transparently provide the operator wise data/methodology/calculation/approach etc. in the consultation paper itself while seeking the comments of stakeholders. **It is requested that the same may kindly be made available to BSNL at the earliest, before prescribing the IUC, so that BSNL can examine and provide its comments on the same.**

9. In para 5.3.2 of consultation paper, it has been observed by TRAI that BSNL has made higher booking in fixed wireline networks and lower costs in wireless networks resulting into abnormal decline in EBIDTA of fixed lines from 65% in 2001-02 to 2% in 2007-08. In this regard, it is submitted that TRAI has made its calculations based on the information taken from two different sources i.e. accounting separation report for the year 2007-08 and financial report for the year 2001-02, which is not proper as the same are not comparable. Therefore, the conclusions drawn from this are not correct and can not be relied upon.

10. For the sake of record, BSNL would like to point out some of the policies used in arriving at the EBIDTA margins in the respective years. For calculation of EBIDTA margins of the year 2001-02, other income of Rs 2681 crores has been included as the income from basic services despite the clear disclosure in the accounts that Rs 2300 crores out of the total other income is on account of reimbursement of license fee and spectrum charges as per the Cabinet decision which from any logic can not be a part of EBIDTA calculation of a segment since it is not related to specific service i.e. wireline or wireless or to specific license i.e. either Basic service or CMTS. Therefore, taking this into consideration, the revised EBIDTA margin of 2001-02 will be 55% only and not 65% as published in the consultation paper.

11. Further, it has been alleged that the motivated booking has been done by BSNL in the fixed line to artificially show a low EBIDTA margin which is against the facts and perhaps TRAI has failed to take note of the deviation in income which has taken place from 2001-02 to 2007-08 in various segments of business of BSNL. The income from telephone in 2001-02 was Rs 22630 crores against the income of Rs 12668 crores in 2007-08 and thus there is a decline of Rs 9962 crores in income from telephone in the corresponding periods. **This is mainly due to favourable regulatory regime towards mobile operators and non-provisioning of requisite amount of ADC to BSNL during the relevant period.**

12. Similarly, the expenses have increased from Rs 3848 crores in the year 2001-02 to Rs 8808 crores due to implementation of IDA pay scales in place of CDA pay scales and time to time revision of DA rates and also due to transfer of liability of leave encashment for the period during which the employees served in the DoT, to BSNL without any financial compensation by DoT. **Therefore, the decline in EBIDTA on account of these two items alone amounts to Rs 14922 crores leading to drastic reduction in EBIDTA margin.**

13. Further, it is pertinent to mention here that BSNL had started the cellular services in the year 2002-03 and as per the cost structure of the various operators in India, the employee cost constituent is of the order of 6-8% of their revenue. Even, by taking the employee cost at higher side to 10% of the revenue generated from the cellular services, the allocated cost on account of employee remuneration comes to about 1057 crores as per the industry norms and salary structure prevailing in BSNL. After, deducting the allocated cost of staff expenses on account of mobile services, the decline in EBIDTA in 2001-02 to 2007-08 comes Rs 13865 crores [14,922 – 1,057].

14. **Therefore, the observation of the TRAI that BSNL has allocated more costs to basic services segment is grossly incorrect, without any basis and therefore denied. It appears that TRAI has drawn such observation to justify its calculations for fixation of equal mobile and fixed wireline termination charges without taking cognizance of the actual costs of the respective networks, which will lead to undue favour of cellular/wireless operators.**

15. Further, TRAI has considered only OPEX for calculating the termination charges which is totally incorrect and skewed. It is because of this methodology adopted by TRAI, that there is huge variation in the termination charges determined for different mobile operators. This is also leading to an anomalous situation wherein although the wireline networks are much more expensive than wireless networks, the consultation paper arrives at almost same termination charges for both the networks.

16. As mentioned by TRAI in the present consultation paper, different operators employ different business models i.e. outsourcing, owning, franchising etc. Some of the major GSM operators have changed their business models from buying to hiring thereby shifting the CAPEX recovery to OPEX resulting into higher termination charges as per the approach adopted by TRAI and thus passing on their CAPEX cost recovery to the interconnecting operators, which is contrary to the basic tenets of cost based IUC regime.

17. Authority is well aware that the approach being adopted by mobile operators for shifting of CAPEX recovery into OPEX is not possible in case of wireline networks being legacy networks and highly CAPEX centric. Authority is also aware that it is not feasible for the wireline operators to recover their entire CAPEX through rental/ fixed monthly charges. It is

further submitted that Authority itself has regulated the rural tariffs for wireline networks which permits recovery of only Rs 70 per month per subscriber against the cost based rentals of Rs 542 per month per subscriber for most of the rural lines. It is pertinent to mention here that BSNL is able to recover only Rs 50 per month per subscriber due to reasons of affordability. In urban areas also, due to very high CAPEX involved in the wireline segment and intensive competition in the access market, it is not at all feasible and justified to recover the CAPEX through fixed monthly charges only.

18. In such a scenario, identical treatment of the wireline and wireless networks for the recoveries of CAPEX and OPEX through fixed charges and IUC respectively is highly erroneous, discriminatory and contrary to the principles of level-playing field and cost based IUC regime. Similar, anomalies shall arise within the wireless networks also which is evident from the wide range of termination charges varying from Rs. 0.09 to Rs 0.22 per minute determined by TRAI as mentioned in the consultation paper.

19. It is, therefore, submitted that CAPEX and OPEX both should be taken into account for calculation of termination charges as CAPEX and OPEX are transferable from one to another depending upon the business model of the operators, as mentioned above. For the purpose of uniformity and equitable treatment of all networks/ services, it is suggested that a fixed percentage of the total annual cost recovery i.e. annual CAPEX recovery including Depreciation & OPEX should be attributed to be recovered through fixed charges and rest should be attributed to be recovered through IUC. For example if for wireless services 20% of the total annual cost recovery is attributed to be recovered through fixed charges and 80% is attributed to be recovered through IUC, then, for the wireline services also, only 20% of the annual cost recovery should be attributed to be recovered through fixed charges and balance 80% through IUC.

20. Based on the above suggested approach as well as that adopted by TRAI, BSNL has carried out the calculations to determine the cost based termination charges for wireline and wireless networks. In these calculations, financial data of the year 2007-08, as submitted to TRAI, has been taken into account. The minutes of Usages (MOUs) for fixed line services have been arrived at by using the latest sample traffic data collected during the month of Jan'2009. In respect of mobile services, the MOUs considered are for the month of September'2008.

21. As per the suggested approach in para 19 above, BSNL has calculated the annual cost recovery by summing up the annual CAPEX recovery, depreciation and OPEX. From this annual cost recovery, amounts attributed to be recovered through fixed charges @ 20% for both, wireline and wireless networks, has been deducted. The rest of the annual cost recovery to be made through IUC has been divided by the annual Minutes of usages (MOUs) for calculating the termination charges. By applying this principle, cost based termination charges for fixed wireline and

mobile/wireless services of BSNL comes to about Rs 0.94 per minute and Rs 0.20 per minute respectively, as per the detailed calculations enclosed at **Annexure-II**.

22. BSNL has also carried out the calculations for determining the termination charges based on the methodology adopted by TRAI i.e. on the basis of recovery of OPEX through IUC. On this basis, termination charges come to Rs 0.48 per minute and Rs 0.07 per minute for wireline and wireless networks respectively. For the purpose of OPEX, in this case the adjustments towards employees cost of Rs 1057 crores have also been made as mentioned in para 13 above. The detailed calculations in this regard are enclosed at **Annexure-III**.

23. In both the calculations given in Annexure -II and Annexure-III, no mark up has been taken into account. Further, the sales and marketing costs also have not been taken into consideration. It may be seen that in both the cases, the termination charges for wireline networks is much higher in comparison to the wireless networks, thereby, fully justifying the asymmetric termination charges for two networks.

24. While reiterating our views that the termination charges should be fully cost based following an equitable treatment of CAPEX and OPEX as explained above, it is submitted that it will make cellular to fixed line calls expensive in comparison to cellular to cellular calls. It may, therefore, be in the interest of Indian consumers that termination charges are kept at the same level for all types of domestic calls except for wireline to wireless calls, for which there should not be any termination charges. This is also in conformity to the terms and conditions of the license agreements of basic service operators (BSOs) which does not prescribe any termination charges to be paid by them to wireless networks while making a call by former to later's network. In addition, the wireline networks may be compensated for recovery of their costs by fully exempting their revenues from the payment of license fee including USO fund contribution.

25. Further, in such case when there are same termination charges for wireless-to-wireless and wireless-to-wireline calls, there remains no justification for discriminatory/differential tariffs by cellular operators for calls to wireline subscribers. The Authority will have to intervene and ensure the same.

26. There are no regulations on the carriage and termination charges payable by the access providers to the ILDOs for outgoing international calls. The access providers have to negotiate these charges with the ILDOs. The access providers have to pay weighted average charges of about Rs 3-4 per minute for termination of their calls in foreign countries. However, the access providers are not permitted to negotiate the charges with ILDOs for termination of incoming international calls on their networks, as the same has been fixed @ Rs 0.30 per minute by TRAI at par with the domestic calls. This is highly discriminatory and incapacitates the access providers to

negotiate and arrange the competitive rates to their consumers for carriage and termination of their ISD calls thereby totally depriving them of the benefit of competition in the international segment.

27. Further, the above regulatory regime for international calls has resulted in drastic reduction in revenue from incoming international calls whereas there is significant increase in the outflow of revenue to other countries, as foreign telecom operators have not reduced their termination charges because of the favorable and protective regulatory regime in their countries. This has not only adversely affected the financial viability of telecom service providers in India but has also deprived the country of the valuable foreign exchange to the tune of Rs 4000-5000 crores per annum.

28. It is submitted that all along TRAI has been reducing the ADC on the international calls with the sole argument that it will decrease the grey market and in turn will increase the white market. This argument of TRAI holds no water as there has not been any discernible increase in the incoming international traffic in spite of total phase out of ADC regime. This reduction in ADC has only caused undue enrichment of the international carriers at the cost of Indian consumers/operators.

29. Therefore, in order to maintain the parity and reciprocity for termination charges of incoming and outgoing calls, TRAI may forbear and allow the access providers to negotiate the termination charges with ILD operators for incoming international calls also. Alternatively, TRAI may prescribe the higher termination charges of the level as are paid by the Indian access providers for termination of their outgoing international calls. The amounts recovered by way of higher termination charges by the access providers on incoming international calls may be passed on by them to the consumers by way of lower termination charges for domestic calls and reduced and innovative tariffs for ISD calls.

30. The present carriage charges having a ceiling of 65 paise per minute irrespective of distance and terrains needs to be reviewed on the actual cost basis as these charges are above cost on high traffic density routes and below cost for the hilly, remote and difficult terrains, particularly in the areas where the calls are carried over the satellite media. As per the cost and traffic figures of BSNL for the month of Sept-Oct'2008, the average cost of carriage of NLD calls is to the tune of Rs 0.69 per minute without any mark-up and Rs 0.87 per minute with 25% mark-up. This is because of the high cost of the NLD network in hilly, remote and difficult terrains.

31. There appears to be no need of reviewing the present ceiling of carriage charges on high traffic routes as NLD operators are already offering lower carriage charges than prescribed on such routes. However, there is a need for upwardly revising the carriage charges on the actual cost basis for hilly, remote and difficult terrains areas wherein in many cases calls are carried through costly satellite media. Alternatively, as sufficient competition

is existing in the NLD segment, it is suggested that these charges may be forborne for all areas.

32. With regard to the transit charges for the calls from one network to another network when the switches of both the network operators are connected to the same switch of BSNL, it is submitted that the same need not be reviewed and regulated. Authority is kindly aware that transiting of calls is not a mandatory services and is based upon the mutual arrangement between the operators as per their techno-commercial decisions. Therefore, transit charges should be left for mutual negotiations.

33. As far as the issue of review of carriage charges from LDCC TAX to SDCC Tandem exchange is concerned, it is submitted that the same is not a case of transit as has been mentioned in the consultation paper but it is the case of carriage of calls from LDCC TAX to SDCC Tandem over transmission links of distances more than 50 Kms in most of the cases. The average cost of such carriage is to the tune of Rs 0.24 per minute, as per the calculations given in **Annexure-IV**. However, BSNL has been consistently of the view that it should be allowed to recover these charges as per the IUC framework prescribed for carriage of long distance calls.

34. Reiterating our views as above, para-wise comments on the issues raised in the Consultation Paper are enclosed as **Annexure-I**.

Yours faithfully,

(Ashok Kumar Rawat)
DGM (Regulation-II)

Annexure-I

No	Issue for Consultation	Comments of BSNL
Q1.	What components of Interconnect Usage Charge (IUC) should be reviewed?	As submitted above, only termination charges and the carriage charges need to be reviewed on the actual cost basis. Further, there is no need of reviewing the transit charges as it is not a mandatory service and, therefore, should be left for negotiation between the concern parties themselves.
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.	<p>While reiterating our views submitted in para 15-23 in the main letter, it is submitted that Top Down Costing approach with historical cost should be used to arrive at the cost of the various network segments for the purpose of determination of IUC.</p> <p>TRAI should not follow the LRIC model or its variant as it is extremely difficult to implement these models in a transparent manner as the same require a micro level data/information, which will not be practically feasible to collect. Further, these models are based on a number of hypothetical assumptions which need to be established and proved before adoption of the same for such exercise.</p>
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.	Our detailed comments on this issue are submitted in paras 15-29 in the main letter. The same may kindly be considered.
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	<p>BSNL is of the view that termination charges for value added services may not be regulated, as at present.</p> <p>Revenue from value service services may be deducted from the annual cost recovery comprising of annual CAPEX</p>

	termination charge?	recovery , depreciation and OPEX while fixing the voice termination charges for wireline and wireless networks.
Q5	<p>Are asymmetric termination charges justified? If yes, which of the following should be the basis</p> <p>(i) Existing service providers vs. new entrant</p> <p>(ii) Urban lines vs. rural lines.</p> <p>(iii) Mobile termination charge vs. fixed termination charge</p> <p>Give justifications for your answer.</p>	<p>(i) As submitted above, in a multi-operator, multi services regime, termination charges for wireline and wireless networks need to be strictly cost based. Accordingly, there should not be any difference between the termination charges for existing service providers and new entrants for the similar networks/services.</p> <p>Apprehension of TRAI that CAPEX for new entrants is higher in comparison to the incumbents and thereby termination charges for the former may be lower in comparison to the later can be very well addressed by following the methodology of calculating the termination charges as suggested by BSNL in para 15-19 in the main letter i.e. taking into consideration CAPEX and OPEX both for calculations of termination charges.</p> <p>(ii) Further, although there is a justification for higher termination charges for rural networks in comparison to urban networks on the actual costs basis, however it is technically not feasible to implement the same in the present framework. Therefore, there is no alternative but to prescribe the same termination charges for both rural and urban areas.</p> <p>(iii) With respect to the issue of Mobile termination charge vs. fixed termination charge, our detailed comments submitted in para 15-29 in the main letter may kindly be considered.</p>
Q6	Should the existing practice of applying the same principles and methodology for calculation of fixed and mobile termination be continued? If not then	The existing practice of calculating the termination charges based on OPEX only is not correct due to the reasons explained in paras 15-29 of the main letter. As explained in these paras, CAPEX and OPEX both have to be taken into account while calculating the termination charges

	what should be the methodology for fixed and mobile termination charges? Give full justification.	for wireline and wireless networks.
Q7	Explain in detail the impact of the proposals being submitted by you for mobile and fixed termination charge on tariff and why?	The proposals submitted by BSNL are transparent and equitable and will greatly benefit the Indian consumers/operators at large. This will also level playing field. Further, these proposals will bring in the valuable foreign exchange to the tune of Rs 4000-5000 crores per annum for the country. This will also help in improving viability and growth of wireline and broadband services.
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.	The detailed comments in this regard are submitted in paras 26-29 of the main letter. The same may kindly be considered.
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	The detailed comments on this issue are submitted in paras 30-31 of the main letter. The same may kindly be considered.

	support of your answer.	
Q10	<p>Which of the following options should be the TAX transit charges for intra SDCA transiting?</p> <p>(i) Maintained at the same level</p> <p>(ii) Left to forbearance</p> <p>(iii) Increase/ decrease on the basis of current data</p> <p>Please give sufficient reasons with data in support of your answer.</p>	<p>In this context it is submitted that no TAX switch involved in intra SDCA transiting. Therefore, the question is ambiguous.</p> <p>With regard to the transit charges for the calls from one network to another network when the switches of both the network operators are connected to the same switch of BSNL, it is submitted that the same need not be reviewed and regulated. Authority is kindly aware that transiting of calls is not a mandatory services and is based upon the mutual arrangement between the operators as per their techno-commercial decisions. Therefore, transit charges should be left for mutual negotiations.</p>
Q11	<p>What should be the transit/ carriage charge from LDCA to SDCA?</p> <p>(a) No need to specify separately</p> <p>(b) Under forbearance</p> <p>(c) Increase/ decrease on the basis of current data</p> <p>Please give sufficient reasons with data in support of your answer.</p>	<p>As far as the issue of review of carriage charges from LDCC TAX to SDCC Tandem exchange is concerned, it is submitted that the same is not a case of transit as has been mentioned in the consultation paper but it is the case of carriage of calls from LDCC TAX to SDCC Tandem over transmission links of distances more than 50 Kms in most of the cases. The average cost of such carriage is to the tune of Rs 0.24 per minute, as per the calculations given in Annexure-IV. However, BSNL has been consistently of the view that it should be allowed to recover these charges as per the IUC framework prescribed for carriage of long distance calls.</p>
Q12	<p>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.</p> <p>(i) 3G termination charge same as 2G</p>	<p>The 3G services worldwide are in the process of evolving, with new Specification Releases being defined by the Standardization bodies on one hand and the development of new and innovative 3G service portfolios on the other hand. The situation is even more evolving and fluid for India, where the 3G services are yet to be introduced.</p> <p>Unlike 2G services, where the services being offered were primarily fixed</p>

	<p>termination charge</p> <p>(ii) Forbearance of 3G termination charge</p> <p>(iii) Higher or lower 3G termination charge?</p> <p>(iv) Should be considered at a later stage?</p>	<p>bandwidth ‘voice-centric’ type, 3G services are designed to cater to the ‘data-centric’ applications requiring flexible bandwidth. This basic difference between the two services allows later to have a plethora of applications requiring varying bandwidth in a smooth manner.</p> <p>A non exhaustive list of the services that can be provided by 3G networks could be categorized into large number of categories ranging from Peer-to-Peer Services or Person-to-Person Service – both Circuit switched and Packet Switched, Content-to-Person Services, Business Connectivity Services, Location or Presence based Services.</p> <p>Each of these categories has a large number of sub category services under them. Many of these services are fully evolved and in use in mature 3G markets and many are in the process of evolving. The highly evolved service scenario for 3G is in sharp contrast to the present 2G services, which are more like plain vanilla services.</p> <p>Apart from the services, the 3G technology itself is evolving with the Standardization bodies releasing new Specification Releases every few years. The services provided by these new improved Releases are obviously higher and forms a super set of the services of all the lower Releases.</p> <p>Indian 3G market is in its nascent stage and is yet to evolve. Moreover, the service provider are yet to announce their technology versions and most importantly the services that they plan to launch. In view of above, our views on this issue are submitted as below:</p> <p>(i) Most of the operators will be launching 3G services in a gradual manner covering one set of geographical location initially and expanding</p>
--	---	---

		<p>gradually. In such a situation, for a subscriber on move, more then often, the subscriber might have to toggle between 3G and 2G networks. Thereby a single call would not necessarily complete its currency in 3G network only. It is therefore felt that, as of now, the 3G termination charges be kept same as that of 2G for narrowband voice calls.</p> <p>(ii) Since the technology releases as well as the planned services to be launched by various probable 3G operators is not known. It is felt that for other 3G applications, terminating charges may be allowed to be negotiated between the operators desirous to launch these services.</p>
Q13	<p>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?</p>	<p>As for HSPA (High Speed Packet Access) access technology, the reply for Question 12 above suffices, as HSPA would be an extension of the 3G services only allowing high speed uplinking and downlinking.</p> <p>However, for other access technologies like WiMaX, FMC or NGN, again the implementation of these technologies and services being offered by them is in evolving stage. Unless, the services planned by these technologies along with the technical compatibility between contrasting technologies is examined, it is felt that any step taken now would be futile and need be looked into at the later stage.</p>