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Telecom Regulatory Authority of India
Notification
New Delhi, the 23rd February 2006

No.409-5-2005-FN

In exercise of the powers conferred upon it under section 36 read with paragraphs (ii), (iii) and (iv) of clause (b) of sub-section (1) of Section 11 of the Telecom Regulatory Authority of India Act, 1997, the Telecom Regulatory Authority of India hereby makes the following regulation to further amend the Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003), namely:-

1. Short title, extent and commencement:

    (i) This Regulation shall be called "The Telecommunication Interconnection Usage Charges (Sixth Amendment) Regulation (1 of 2006)"

    (ii) This Regulation shall come into force with effect from 1st March, 2006

2. In Schedule II of the Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003) -

    (i) the following entries shall substitute the existing entries relating to paragraph (a), namely:-

"(a) Carriage charges for Long Distance calls within India

Table – I

(Amount in Rupees per minute)

Carriage charges per minute for Long Distance Calls within India	As per mutual agreement between the service providers subject to a ceiling of Rupees 0.65 per minute irrespective of the distance.

"

(ii) The following entries shall substitute the existing entries relating to paragraph (b) under the heading 'Notes to Schedule II' of the Telecommunication Usage Charges Regulation, 2003 (4 of 2003), namely:-

"The Carrier, as shown in Table II, would collect the applicable amounts for carriage and termination charge from the Originating Service Provider for various type of calls. The Carrier would pass on the termination charge for terminating the traffic to the Terminating Service Provider as per Schedule-I."

3. In Schedule III of The Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003), the following entries shall substitute the existing entries relating to paragraphs 3.1 and 3.2, respectively:-

"3.1 The Access Deficit Charges for International Outgoing and Incoming Calls shall be as per Table III.

Table III

Access Deficit Charge for International Long Distance Calls

Sl.No.	**Type of Call**	**ADC per minute (in rupees)**	**ADC to be paid to / retained by**
1.	All Outgoing ILD calls originated from Fixed wireline subscribers.	Rs.0.80	To be retained by originating Fixed wireline Service Provider.
2.	All Outgoing ILD calls originated from Cellular Mobile / Wireless including WLL (F) subscribers	Rs.0.80	To be paid to BSNL by originating access provider through ILDO
3.	All Incoming ILD calls	Rs.1.60	To be paid to BSNL by ILDO or NLDO

3.2 **ADC as a percentage of Revenue.**

3.2.1 In addition to the payment of ADC on international outgoing and incoming calls in terms of Clause 3.1, all licensees of Unified Access Service, Cellular Mobile Telephone Service, National Long Distance Service and International Long Distance Service and Basic Service Operators shall pay

1.5% of their Adjusted Gross Revenue as ADC to the BSNL. BSNL shall retain ADC chargeable as percentage of its Adjusted Gross Revenue.

Provided that if a service provider has Unified Access Service License/Basic Service Licence, it shall retain ADC as percentage of Adjusted Gross Revenue of Fixed wireline subscribers and the balance shall be paid to the BSNL. MTNL shall also retain ADC as percentage of Adjusted Gross Revenue for its Fixed Wireline subscribers and shall pay the balance to BSNL.

3.2.2. For calculating ADC , Adjusted Gross Revenue shall have the same meaning as given in the respective licences;

PROVIDED that in calculating the ADC as a percentage of Adjusted Gross Revenue (AGR) of a Universal Access Service Licensee/Basic Service Operator, the revenue from rural subscribers shall be excluded.

3.2.3 Adjusted Gross Revenue of Fixed Wireline subscribers for purpose of retention of ADC shall be calculated as given in Table IV.

Table IV

Calculation of AGR for Fixed Wireline Subscribers for retention of ADC

S.No	Particulars	Amount in rupees
	Revenue from Fixed Wireline subscribers: (i) Rentals (ii) Call revenue within service area (iii) National LONG DISTANCE CALL revenue (iv) International LONG DISTANCE CALL revenue (v) Pass thru revenue for usage of other networks	

	(vi) Service tax (vii) Service charges (viii) Charges on account of any other value added services, Supplementary Services etc. (ix) Any other income / miscellaneous receipt from Fixed Wireline subscribers. (x) Revenue from other OPERATORs on account of pass through call charges on fixed wireline subscribers (xi) Any other revenue for provisioning of Fixed Wireline subscribers	
A	**GROSS REVENUE from Fixed Wireline Subscribers**	
	DEDUCT: 1. Charges actually paid to other SERVICE PROVIDER for Fixed Wireline subscribers 2. Service Tax paid to the Government on Fixed wireline subscribers 3. Sales Tax paid to the Government on Fixed Wireline subscribers 4. Revenue from Rural subscribers.	

B	TOTAL DEDUCTIBLE REVENUE	
C	ADJUSTED GROSS REVENUE for Fixed Wireline Service on which ADC retention is admissible (A-B)	

3.2.4 Since this Regulation shall come into force with effect from 1st March, 2006, therefore, after payment of ADC in terms of percentage of AGR up to 31-3-2006, the subsequent payments shall be on quarterly basis so that it matches with the payments of annual licence fee. The ADC to be paid on the basis of revenue share between 1st March, 2006 and 31st March, 2006 shall be determined on the pro-rata basis of Adjusted Gross Revenue for the last quarter of year 2005-2006.

4. In Section (V) of the Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003), in Regulation 5, after paragraph (iii) and the entries relating thereto, the following paragraphs and entries relating thereto shall be inserted, namely:- .

“iv. Each service provider shall report to the Authority on quarterly basis, the ADC retained by it, wherever applicable, and also ADC paid by it to BSNL. In addition, BSNL shall report, on quarterly basis, ADC payments received by it from each operator. This shall include both the components of ADC, namely ADC paid in the form of percentage of Adjusted Gross Revenue and ADC on per minute basis for international incoming and outgoing calls. This quarterly report shall reach the Authority within 30 days of the end of the previous quarter.”

5. In Section VI of the Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003), in Regulation 6, the following paragraphs and entries relating thereto shall substitute the existing paragraphs and entries relating thereto:-

“(i) The Authority may, from time to time, review and modify interconnection Usage Charge and Access Deficit Charge.”

(ii) “The Authority may also at any time, suo-motu, or on the basis of reported information in terms of clause (iv) of Regulation (5) above or on reference from any affected party, and for good and sufficient reasons, review and modify any Interconnection Usage Charge and Access Deficit Charge.”

6. **Explanatory Memorandum**

This Regulation contains at Annex A, an explanatory memorandum to provide clarity and transparency to mattes covered under this Regulation.

BY ORDER

[RAJENDRA SINGH]
Secretary

ANNEX "A"

EXPLANATORY MEMORANDUM

I. Introduction

1. TRAI in its Regulation of 24th January, 2003 had put in place an IUC & ADC Regime which included origination, carriage and termination charges as well as the access deficit charges to cover the access deficit arising due to access tariffs being below costs. This Regime was reviewed in TRAI's Regulation of 29th October, 2003 and further amended vide Notification of 6th January, 2005. The Authority had enunciated this framework to promote lower domestic prices and give a greater impetus to subscriber growth. The subsequent growth in subscriber base and the fall in call charges has confirmed this stand. The monthly growth in mobile subscribers' base in India, has been among the highest and various Government policy decisions, regulatory initiatives and the competition have mainly contributed significantly to such growth. The number of mobile subscribers in the last five years are given in the table below :-

Table-1 : Annual Growth of Mobile Subscribers

Financial Year	No. of subscribers (in million)
March, 2002	6.54
March, 2003	13.00
March, 2004	33.69
March, 2005	52.22
December, 2005	75.92
January, 2006	81.00

2. The exceptional growth in Mobile subscriber base has resulted in substantial change in the situation which existed at the time of determining the ADC regime notified in the Regulation of 6th January 2005. In its Regulation dated January 6, 2005, the Authority had

examined the possibility of implementation of ADC recovery in terms of percentage of revenue of the service providers (Para-50 to 54 of Explanatory Memorandum). Due to its adverse impact on local calls tariffs and implementation problems discussed therein, the Authority at that time had decided to continue with per minute charging of ADC. The Authority considered that various issues including implementation of revenue share ADC Regime, review of carriage charge and termination charge could be addressed through a consultative process. The Authority in its above referred Regulations had mentioned that there is an overlap between the disbursed USO Fund and the ADC amount due. It had further proposed to address in the next Consultation Paper, the greater application of the Forward Looking Long Run Incremental Costs(FLLRIC) for ADC computation in the face of greater use of newer and less expensive technologies. It had noted the need to account for factors such as the net effect of depreciation in the gross CAPEX and allocation of costs to non-fixed line items, which are likely to decrease the overall costs per subscriber over time. Thus, the Authority has conducted another review of IUC / ADC based on its consultation paper of 17th March 2005. which addresses a wide range of issues including:-

a. Justification of ADC on Fixed Wireless Lines and admissibility of ADC for non-BSNL Fixed Line Operators.
b. ADC as Percentage of Revenue, and its various variants including mixed models, higher ADC on NLD and ILD calls etc.
c. Interconnection Usage Charges (Carriage and Termination issues) including those for Incoming International calls, and whether to have differential termination charges for National and International long distance calls.
d. Implications of increasing disbursement of USO Fund on the quantum of ADC payable.

The Authority had also noted that the disbursement from USO Fund in the last 3 years has been much less than the collection and at the end of 2004-05 the balance amount in USO Fund is Rs.5439 crore. The Authority had expected that the balance by end of year 2010 would be of the order of Rs.25,000 crore. This is indicated in the table given below:-

Table - 2: Collection and disbursement of USOF

Collection and Disbursement of USOF			
			(Rs. in Crore)
Financial Year	**Collection**	**Disbursement**	**Balance**
2002-03	1653.61	300	1353.61
2003-04	2143.22	200	3296.83
2004-05	3457.73	1314.58	5439.98
Total	7254.56	1814.58	5439.98
2005-10	37541	17936.80	25044.2

Note :
1. Figures for 2005-10 are based on projections
2. Growth in fixed service revenue – 10% p.a.
3. Mobile Growth to reach 20 crore by 31.3.2008. Therefore, mobile growth assessed at 10 crore by 31.3.2006 and 15 crore y 31.3.2007.
4. Projection for the year 2008-10 is 25% on absolute revenue of fixed and mobile services.

(Source: TRAI's Recommendation on Rural Telecom :Table 1.2)

Further DoT in USOF Guidelines have indicated that for household DELs installed prior to 1st April, 2002, the difference in rental actually charged from rural subscribers and rent prescribed by TRAI for such subscribers shall be reimbursed until such time the Access Deficit Charge (ADC) prescribed by TRAI from time to time take into account such difference. It is also noted that the Authority is not regulating fixed line tariffs in urban areas but only the rental, free call allowance and local call charges in rural areas are regulated by the Authority. It implies that after liberalisation of long distance services in the country, the Authority is giving sufficient time and opportunity to rebalance the tariff to various operators so that the cross subsidy between long distance charges and rental, etc. is minimized. In case, operators are not doing tariff rebalancing or if they are doing reverse tariff rebalance, i.e. they are reducing the rental and in turn increasing the long distance charges then the Authority is of the opinion that due to such action of the operators the ADC regime cannot continue in perpetuity. Keeping all these factors in mind, the Authority did not go into detailed calculations of admissibility of ADC but reduced it in such a way that the ADC Regime is ultimately merged with USO regime from the year 2008-09 onwards and accordingly estimated the ADC payable to BSNL and other fixed line operators including MTNL for the year 2006-07. The Authority had expressed the similar opinion in its IUC Regulation dated October

29, 2003 (para-24 of the Explanatory Memorandum) and also in its January 6, 2005 IUC Regulation (Para-25 of the Explanatory Memorandum).

3. The Authority would submit suitable recommendations to Government on this issue so that finally USO Regime takes care of support on account of ADC also.

4. The new regime notified in this Regulation takes into account all the inputs provided during the consultation process, which in a number of cases involved different stakeholders giving diametrically opposite views on certain issues. The responses to the Consultation Paper have been put in the TRAI's website (www.trai.gov.in). The revised IUC / ADC regime has been worked out with a view to allowing larger benefits to the Indian consumers and rapid growth of telecom services.

5. The Authority in its Regulation dated 6th January, 2005 had observed that the revised ADC regime should also be seen in the context of the overall policy framework being developed by the Authority for improving the availability of modern communication services across the country, with a special focus on rural areas. At that time mobile network were covering only around 20% of the population which is around 35% now. Still the mobile operators have to complete substantial rollout of their networks in rural areas. This is shown in the table below:-

Table- 3 : Present Coverage of Mobile Networks (Population Coverage around 35%)

	By area	Population Coverage
Towns	**~ 2000 out of 5200**	**~200 Million**
Rural areas	**Negligible**	**Negligible**
Proposed Network Coverage by 2006; operators plan (Population Coverage 75%)		
	By Area	**Population Coverage**
Towns	**~4900 out of 5200**	**~ 300 Million**
Rural areas	**~350,000 out of 607,000 villages**	**~450 Million**

6. As the coverage of service increases to include a larger area in the country, the contribution of lower domestic tariffs becomes crucial for

expanding subscriber base and providing the benefits of accessible communications service to our population in general. **The Authority is of the view that to provide a sustain boost to subscriber growth and teledensity while the operators cover more interior areas with lesser purchasing power, the prevailing tariff levels may have to go down further.**

7. In specifying its 6th January 2005 Regulation, the Authority had given particular emphasis to provide a strong basis for further decrease in domestic charges and death of distance. Relevant paragraph from the explanatory memorandum is reproduced below:

> *"Para-7 : In specifying its revised ADC regime, the Authority has given particular emphasis to provide a strong basis for a further decrease in domestic prices and boosting subscriber growth, as well as to pave the way towards as much similarity in long distance charges as possible (i.e. working towards a "death of distance" which the technological change is bringing about). Thus, the Authority expects that the regime notified under this Regulation will be followed by a competitive market response resulting in a reduction in call charges, which in turn should add to the subscriber growth and greater availability of telecom services. ……".*

In this IUC / ADC regime the Authority has again given particular emphasis to provide a strong basis for a further decrease in domestic prices and boosting subscriber growth, as well as to pave the way towards death of distance. Thus, the Authority expects that the regime notified under this Regulation will be followed by consumer-friendly different tariff packages and will boost the subscriber growth further.

8. The Authority in its January, 2005 Regulation had noted that the large increase in mobile subscriber base will also provide a substantial increase in traffic minutes which will lead to increased AGR. Further, this increase in AGR, to a significant extent, will be external to BSNL, i.e. the ADC funded by the BSNL itself will increasingly become a smaller portion. The Authority had also noted that if ADC is funded through a revenue share regime then this would lead to a lower percentage of revenue share imposed for funding of ADC. As already stated earlier by the Authority, the ADC

Regime will ultimately merge with the USO Regime. ***(Para-8 of Explanatory Memorandum of January, 2005 Regulation)***

9. The Authority had already suggested in IUC Regulation of 29th October, 2003 (para-89) that funding of ADC on a percentage of annual revenue of the operator could be an alternative option as also that it could become part of USO. In most countries, funding of access deficit has been merged with the universal service obligation (USO) program.

> *"Para -89 : Since this was only a review exercise of the IUC/ ADC regime notified in January 2003, the Authority has not undertaken any structural changes in the estimation methodology for ADC. Periodic (annual) ADC calculations based on audited results of all service providers are being proposed. The next exercise would consider changes in the ADC regime. In the subsequent years, the Authority would review both the size of the ADC payments as well as who should be the beneficiaries of the ADC regime. It may even consider funding ADC based on a percentage of the Annual Revenues of the operators. Further, the ADC regime should ideally be merged with the USO regime over time, say in about 3 to 5 years. This will also help implement the scheme in terms of a revenue share, and will further reduce any competitive distortions that may be introduced by loading the ADC regime on the minutes of use. However, such a regime can only be introduced after consultations with the Government, which the Authority would initiate. In the post-Accounting Separation scenario, the Authority would also be better equipped for Forward Looking Proxy Models. "*

10. The Authority also observed that data required for per minute regime is detailed and problems are being faced in reconciliation on this account. It has been reported that reconciliation issues also arise on account of the fact that whether a particular service qualifies for recovery of ADC or not and that verification of the information on such services is very difficult. Above observations suggest that it would be useful to evolve a simpler method of collecting ADC which does not involve distance based and call based ADC, and may also be subject to easier verification. In fact, the Authority had realised the problem of reconciliation and non-simplicity of the minute based regime in its consultation paper dated 23rd June 2004 and proposed ADC regime based on revenue share. The Authority's decision on

this issue finds a place in explanatory memorandum to the Regulation of 6th January 2005. Relevant paragraph from the explanatory memorandum is reproduced below:

> *"Para-51: In moving to the ADC regime based on revenue share, a crucial factor is the large transition that would be required if the ADC amount charged per minute for the international calls is converted into a revenue share. At present, this amount is Rs. 4.25 per minute. The transition will become easier if the corresponding ADC per minute amount is lower and can be distributed more easily on a larger base of minutes and revenues that will generate ADC funds. Over time, this will become possible as the increase in subscriber base results in much larger number of minutes that generate the ADC funds, and as the ADC amounts themselves decrease due to the reasons mentioned in the previous section. This would help us to avoid the "large transition" that would be presently required, and the Authority could consider moving to a revenue share regime with the ADC per minute charge for ILD calls being substantially below the Rs.4.25 presently in place."*

11. In the prevailing competitive scenario a revenue share regime would give a much greater flexibility to the operator to come forward with different packages than being bound by a fixed per minute charge on specific types of calls. Also, calculation and payment of ADC would become much easier since the service provider already makes payments for his license fee on the basis of the revenue share.

12. The Authority in its Regulation dated 29th October, 2003 had not treated other fixed line operators at par with BSNL because under that Regime only BSNL received the ADC from mobile-to-mobile calls and international calls to/from mobile. Further, in January, 2005 Regime also BSNL received ADC on all incoming international calls and all outgoing calls from mobile subscribes. The Authority even at that time felt that there is a good basis for this dissimilar treatment if one takes into account of the lower costs of access involved with fixed line with wireless terminals and the spread of subscribes in urban and rural areas. Please see the table below :-

Table – 4 : Percentage distribution of FWT Lines in the total Fixed Subscriber Base of Fixed Operators and Percentage of Rural lines in total Fixed Lines provided by Fixed Operators as on 30th Sept., 2005

Service Provider	Area of Operation	% of Fixed Wireless lines in Operator's Fixed Lines	% of Rural lines in Operator's Fixed Subscriber Lines
BSNL	All India (except Delhi & Mumbai)	3.93	37.42
MTNL	Delhi & Mumbai	3.81	0.00
BHARTI	AP,MP, Delhi, Haryana, TN , Chennai, Karnataka, Kerala, Gujarat, Punjab, Maharashtra, Mumbai, U.P. (W) including Uttaranchal, West Bengal and Kolkata	2.26	0.00
TATA	Maharastra (Inc. Mumbai), AP, TN, Chennai, Karnataka, Gujarat, Delhi, Bihar, Orissa, Rajasthan, Punjab, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, U.P. (E), U.P (W) including Uttaranchal, West Bengal and Kolkata	89.01	0.29
HFCL	Punjab	27.67	0.29
SHYAM	Rajasthan	16.29	5.16
RELIANCE	AP, Bihar, Delhi,Gujarat, Haryana, HP, KN, Kerala, MP, MH,Mumbai, Orissa, Punjab, Rajasthan,TN Chennai ,UP(E), UP(W), WB, Kolkata	92.04	0.64
TOTAL		**14.28**	**28.76**

It can be seen from the above Table that except BSNL most of the other operators including MTNL do not have any significant number of rural subscribers. In fact, operators like MTNL and Bharati have ‘NIL’ presence in rural areas. Further, operators like Reliance and TATA have almost 90% of their total subscriber base as wireless subscribers which as per DoT’s Order are to be treated at par with mobile subscribers as far as treatment of ADC is concerned. MTNL is providing service in two major metro cities. It is again reiterated that TRAI is not regulating tariff in urban areas. Mainly because of these reasons other fixed operators including MTNL are not eligible to get any ADC support and only BSNL which is having almost 37% of their total subscriber base in rural areas and only around 4% wireless subscribers is eligible to get support from ADC. But, since other fixed line operators have to compete in the market, therefore, they are being treated at par with BSNL as far as retention of ADC in terms of percentage of fixed line AGR and on outgoing international calls from their fixed line subscribers. In its consultation paper, the Authority had raised this question whether any operator other than BSNL should be provided funding for ADC. Relevant points in this regard include the fact that normally ADC funding is provided to the incumbent, prior to the regime being merged with the USO regime. Further, the transition of service providers from basic service licence to unified access service (UAS) licence has led to a reduction in the extent of roll out requirement for them. In addition, an important factor is that new entrants are operating with modern network, and MTNL which has a legacy network is an incumbent in the premium service areas of India. MTNL has both a more lucrative market and substantially higher monthly rental which has a major impact in reducing the access deficit.

13. In the existing regime BSNL and other fixed service providers are allowed to retain ADC from the calls originating from their network. ADC generated from all ILD incoming calls and all outgoing calls from mobile was paid to BSNL. The Authority has decided that under the new regime also the other access service providers providing fixed wireline services should be allowed to retain the revenue share percentage for their fixed wirelines only. They are also allowed to retain ADC generated from outgoing ILD calls originating from their fixed wireline subscribers. All other services shall be contributing a percentage of Adjusted Gross Revenue(AGR) as ADC directly to BSNL. ADC generated from ILD calls originating from mobile networks shall also be paid to BSNL. Therefore, there is no change in the principle of retaining the ADC for the wireline services by the other fixed service providers.

14. Revenues forecast for the period 2006 – 07 are calculated by taking the average subscriber base at the mid point of the period, namely mid of financial year 2006 – 07 and multiplying it by the monthly average revenue per user (ARPU) taking account of all revenues of access providers and the long distance operators, including both the

National and International Long Distance Operators. ARPU has been estimated after subtracting the pass through component so that its multiplication with subscriber base gives AGR figure.

II.

Background

15. The Authority notified on 24th January 2003, its first Regulation on Interconnection Usage Charges (IUC) and Access Deficit Charges (ADC). This regime came into effect from 1st May 2003. Even at the time of implementing the first IUC / ADC regime notified on 24th January 2003, the TRAI was looking further into the various comments on that regime's shortcomings, particularly regarding the sustainability of the regime and the underlying calculation of IUC / ADC. The estimated amount of ADC was large and to be collected only from calls involving fixed line subscribers either at one end or both ends. This meant that the IUC/ ADC charges differed widely for calls from and to fixed and mobile networks. With ADC being levied only on calls involving fixed line, the mobile service providers had greater flexibility in offering lower tariffs in comparison to fixed lines especially when fixed lines were involved at both ends. This would have adversely affected the competitive ability of fixed line to a very large extent. The sustainability of the notified IUC/ ADC regime had become questionable.

16. The results of the review were encompassed in the second IUC regime notified in the Regulation dated 29th October, 2003. The Authority at that stage, had taken note of the fact that even developed countries like the US, Australia, Canada, France with lesser compulsions of providing low rentals and tariffs for unviable services had to formulate ADC during initial years of liberalization and tariff re-balancing. The Authority had further noted that in the initial regime, ADC was about 30% of total AGR of Telecom Sector revenue. The major portion of the ADC was contributed by BSNL itself. BSNL's contribution in this total ADC was about 81% from itself and 19% from others. In the new regime of 29th October 2003, the ADC amount was kept at about 10 % of the total AGR of the

sector, a much more sustainable amount, and the BSNL's contribution was reduced to 47%. The revised (29th October, 2003's IUC) regime became effective from 1st February 2004.

17. Keeping in view the exceptional growth in subscriber base and traffic minutes, the Authority had notified a new ADC regime on 6th January 2005. The Authority's assessment in this regime was based mainly on increased minutes available to fund the ADC. In this regime the Authority had provided BSNL with the same ADC fund as were specified under the regime notified in the Regulation of 29th October 2003 but the per minute rates were reduced. The Authority has also experienced difficulties in getting detailed traffic data and its verification. The Authority had earlier stated in Para 89 of 29th October 2003 Regulation that it may consider funding ADC based on percentage of annual revenue of the operators and that the ADC regime should ideally be merged with USO regime over time, say in about 3 to 5 years.

> *"Para -89 - Since this was only a review exercise of the IUC/ ADC regime notified in January 2003, the Authority has not undertaken any structural changes in the estimation methodology for ADC. Periodic (annual) ADC calculations based on audited results of all service providers are being proposed. The next exercise would consider changes in the ADC regime. In the subsequent years, the Authority would review both the size of the ADC payments as well as who should be the beneficiaries of the ADC regime. It may even consider funding ADC based on a percentage of the Annual Revenues of the operators. Further, the ADC regime should ideally be merged with the USO regime over time, say in about 3 to 5 years. This will also help implement the scheme in terms of a revenue share, and will further reduce any competitive distortions that may be introduced by loading the ADC regime on the minutes of use. However, such a regime can only be introduced after consultations with the Government, which the Authority would initiate. In the post-Accounting Separation scenario, the Authority would also be better equipped for Forward Looking Proxy Models. "*

IUC being an annual review exercise, it was considered necessary to review IUC / ADC regime so that further growth in the telecom sector can be facilitated. Table below indicates the details of ADC funding in various IUC Regulations issued by TRAI.

TABLE-5 : Details of ADC Funding in various IUC Regulations

IUC Regime Applicable	Total Amount of ADC (in Rs. Crores)	Amount of ADC Funded to BSNL (in Rs . Crores)	Amount of self funding by BSNL Fixed (in Rs . Crores)	Net Amount of ADC to BSNL fixed funded by others (in Rs . Crores)		
				Net amount of ADC to BSNL fixed funded by mobile operators for domestic & inter-national outgoing calls	Funded by ILDOs for incoming inter-national calls on mobile and WLL (M)	Funded by ILDOs for incoming inter-national calls on BSNL fixed line
As per 24th Jan 2003 Regulation estimates	13518	12381	10084	762	0	1536
As per 29th October 2003 Regulation estimates	5340	4792	2264	1048	324	1156
As per 6th January 2005 estimates	5669	4954	1650	1641	708*	955
As per proposed regime	3335	3200	395	929 + 76**	1059*	741

*** Includes international incoming calls on fixed line also.**

**** This is a percentage revenue share from NLDO and ILDO.**

From the above table, the following observations are made:-

i. In comparison to January, 2005 Regulation, there is a reduction in contribution of ADC by mobile operators from Rs.1641 crore to Rs.929 crore. There is also a reduction of self funding by BSNL fixed from Rs.1650 crore to Rs.395 crore. In fact, there has been a continuous reduction in self-funding by BSNL in various Regulations. A larger reduction in self funding of BSNL is mainly on account of phenomenal growth of mobile sector.

ii. The contribution from ILD sector has been kept almost at the same level in various IUC Regulations.

18. Taking all these aspects into account, the Authority had released a consultation paper, dated 17th March 2005 to review the IUC regime and implement the ADC regime as a revenue share of adjusted gross revenue. In this paper the Authority had noted certain salient

points made in its Regulation of 29th October 2003 and 6th January 2005 and the difficulties that were reportedly arising in implementing the IUC regime.

19. The consultation paper recalled in particular vide range of issues including justification of ADC on fixed wireless line and admissibility of ADC for non-BSNL fixed line operators, ADC as a percentage of revenue and its various variants including mixed model, higher ADC on NLD and ILD calls, interconnection usage charges (carriage and termination issues) including those for incoming international calls, exclusion of rural lines from the ambit of the ADC and whether to have differential termination charges for national and international calls, implication of increasing disbursement of USO fund on the quantum of ADC payable.

20. The extensive comments covered the entire range, there is a no need of ADC, there is no basis for ADC, there is a need to continue with ADC regime and even higher provision of the ADC amount, forbearance in carriage charges, reduction in slabs for carriage charges, higher termination charge for international incoming calls, ADC for rural lines only, ADC should be merged with USO, ADC as a percentage of revenue. In this regard, it is important to recall the Authority's statement in its IUC Regulation of 29th October, 2003 that it will be gradually reducing the ADC, merging it with the USO regime in due time. The reduction of ADC is also implied by increasing implementation of the new technologies that are employable as substitutes for the fixed line network in place, have a much lower average cost. Likewise, the reasons for continuing with the ADC regime for some time were still relevant, and the Authority is of the view that it will continue with the ADC regime for certain number of years (maximum 5). With reference to these issues, it is pertinent to note, for example, the statement of the Authority in paragraph 24 of its Explanatory Memorandum to the IUC Regulation of 29th October, 2003.

> "*The Authority noted that the difference between historical costs and forward looking costs would be large, and relying on costs based only on modern and forward looking technologies would imply a large burden from the stranded*

costs for BSNL. While the Authority feels that change over to FLLRIC model is imperative, it examined the implications of a sudden changeover against a gradual changeover. Since BSNL is the major supplier of telecom services in the country and has also contributed the maximum for achieving the targets of rural tele-density and in supporting low paying subscribers, a changeover to FLLRIC at present would adversely affect the services provided not only to rural and low paying subscribers but also the telecom industry in the country as a whole. The Authority noted that BSNL is already deploying latest technology and lower cost equipment in its expansion programme. Since wireless technology is being used, it *is expected that some of the existing network will also be gradually replaced by such equipment. In short, the approach is to achieve full shift to FLLRIC cost in a gradual manner over a few years rather than a single year change. The latter would leave heavy stranded cost and would be quite impractical. The Authority therefore, decided to rely on costs for the current year, based on as recent audited costs as possible. For this purpose, it worked with more recent data than was used in the initial IUC exercise. The Authority was of the view that with the changes in technology and a reduction in equipment costs taking place rapidly, the amount of funding required for ADC would decline. Over time, within a few years, therefore, it may be possible to do away with the ADC regime, and the ADC regime could be merged with the USO regime. This would be similar to the situation in most other countries, where the ADC regime had been combined with the USO regime, rather than the ADC funding being provided through a separate ADC regime*."

III. <u>Summary of the main comments</u>

21. The various comments received are summarized below:-

a) ADC funding be provided only to BSNL or also to other fixed service providers.

- There is absolutely no justification for payment of any ADC to other basic service providers.

- ADC funding must be provided to all service providers including BSNL and should be based on the principle of below cost access provision.

- There can be no ground for discrimination between BSNL and private operators even in those areas where the TRAI has permitted forbearance in tariff fixation. Forbearance looses its significance because the private operator cannot fix the tariff above the tariff fixed for various services by BSNL. BSNL, being the dominant operator, is the price leader.

- ADC funding should be provided only to BSNL for the wireline subscribers in rural areas.

b) Would it be reasonable to consider not funding the ADC for other basic service operators but at the same time not charging from them for ADC also?

- ADC is to be provided to those operators who have a legacy network including BSNL.

- There should be level playing field. Hence, ADC should be provided to all fixed service providers irrespective of the nature of roll out i.e. urban or rural.

- In a competitive and open market, Regulation should be such as it is transparent and non-discriminatory and applicable equally on all service providers.

- Any charge on private fixed line service would be a severe blow to availability (competition), quality, and affordability of fixed line voice and broadband services, and to sector growth in general.

- There is no justification why the other fixed service provider should not contribute to ADC.

c) ADC should be given for WLL (F) lines

- ADC funding should be limited to those WLL (F) connections which are provided strictly in rural areas on rural tariffs.

- No ADC should be paid to fixed wireless networks.

- ADC should be provided irrespective of nature of access: wireless or wire line or location, viz. urban and rural.

d) ADC as percentage of revenue

- The imposition of ADC on the basis of percentage of total adjusted gross revenue of the operators is totally unworkable.

- It is time to move to revenue share ADC regime. As of today, the service providers face tremendous difficulty in servicing the per minute ADC regime in terms of inter-operator billing and settlements. A revenue share ADC regime would ease the collection and disbursement of ADC.

- The ADC on international calls should continue on a per minute basis till the overall requirement of ADC reduced significantly.

- The present method of collection has only resulted in abuse and misuse of ADC by some operators for unlawful gain or to subsidize their own services.

- ADC be contributed in two ways viz. out of the percentage of the revenue share from mobile revenue and call by call basis from the ILD incoming calls apart from self generated ADC which the fixed line operator keep.

e) Whether percentage could be different for long distance and international long distance calls

- This would involve very complicated accounting procedure and a great level of auditing, which will lead to more disputes and litigations.

- The percentage of revenue share should not be different for different services.

- A uniform percentage of revenue share regime should be applicable for long distance and international calls to avoid any grey market which is a threat to national security.

- It would be difficult to implement as local and long distance tariffs are often clubbed together by the service provider so as to attract high-end subscribers.

- A differential revenue share regime may be difficult to implement and could create the same problems of misreporting / bypass as have been witnessed in the current regime.

f) ADC regime could be part of the USO regime.

- The scope and the objective of the two are totally different and therefore, there is no rational for the merger of USO and ADC.

- ADC and USO funds should be combined and the ADC collected from the service provider should be deposited in the common fund. By combining the two funds, we can ensure that USO fund is fully utilized and no additional burden is unnecessarily imposed upon customers.

- ADC regime should become a part of USO regime immediately without imposing any additional burden on the subscribers in the form of additional levy beyond 5% which is presently paid for the USO.

- ADC could be part of USO in an about 2 to 3 years. Nonetheless, in the interregnum period it has to be ensured that the contribution to USO fund are fully disbursed and not utilized for boosting the general revenue of the government.

- Once ADC is recovered on revenue share basis, then there is a no rational for having a separate ADC and USO regime.

g) Should percentage of revenue for ADC cover all type of services?

- Internet telephony and VPN services provided by ISPs, provision of domestic bandwidth by IP category II service providers, domestic lease line services, international lease line services definitely call for levy of ADC.

- As we move towards phasing out ADC we should not bring more services under ADC.

- Non-imposition of ADC on Internet telephony has created a non-level playing field between ISPs and licensed ILDOs putting the later at a competitive disadvantage.

- Outgoing intra-circle mobile to mobile calls and revenue from roaming also call for levy of ADC.

h) Carriage charges

- The carriage charges should be left open for negotiation between NLDOs and access providers.

- Three slabs may be defined for carriage charges and 50% more than normal rates may be prescribed for J&K, NE, Orissa, Rajasthan, HP, A&L Island, Uttaranchal, Lakshwadeep.

- Carriage charge should continue to be regulated in the absence of implementation of services like carrier pre-selection and carriage access code.

- A ceiling as well as floor should be mandated by the regulator.

- TRAI should prescribe ceiling carriage charges for different slabs and leave it to access providers and NLDOs to negotiate the actual carriage charges payable from time to time based on market forces.

i) Termination charge on international incoming calls

- BSNL has all along advocated higher termination charges on ILD calls terminating on all networks. This would involve them in checking the grey market and better enforcement.

- Termination charge for incoming international calls should be higher than for domestic calls.

- Both domestic long distance and international long distance termination charges should not be negotiable as that would result in differential termination charges across various players thus putting to disadvantage the smaller / niche players' vis-à-vis those with a sizable market share.

- The Authority should allow the access provider to negotiate with the ILDOs for termination charges on ILD incoming calls.

- ADC on incoming international calls should be merged with the termination charges so as to eliminate grey traffic.

Above summary of comments indicate that there are divergent views expressed by various stakeholders on the issues raised in the consultation paper. All the comments received from various stakeholders are placed on TRAI's website: www.trai.gov.in.

IV. Examination of the issues

22. The Authority has taken the various comments and inputs into consideration, and analysed the matter further. The views of the Authority on the main issues are as follows:

a) Whether ADC should be provided

23. The Authority considered the existing situation, the prevailing tariffs and other relevant likely developments and observed that there is still a justification of continuation of ADC mainly for BSNL. The ADC regime has been put in place by the Regulator, within the context of the evolving situation in the telecom market, to manage the sustainability of the operations of the fixed line operators in a competitive environment, a transition to overall low tariff regime. This supports for transition is particularly important for network with large coverage and focus on important social objectives in the

telecom sector. However, the ADC is a depleting regime mainly to give time to incumbent, etc. for rebalancing of tariffs during a transition period and it will be phased out over time and will be merged with the USO Regime and any lines with below cost operation especially in rural areas with regulated tariffs having any justification for access deficit needs to be covered through USO. The Authority is of the opinion that by March 2008, i.e. next two years time frame any lines in rural segment having justification for funding access networks will be required to be considered through USO and ADC will be phased out. In view of this background and its above explanation relating to the ADC and USO regime, the Authority is of the view that at present ADC should continue to be provided though with a reduced amount.

b) How much ADC should be provided?

24. TRAI in its Regulation dated 29th October, 2003 (para-52 of Explanatory Memorandum) had indicated that the total access deficit amount to be funded for BSNL after correction for net revenue from local calls and including the deficit of 0-50 kms. is Rs.5335 crore. Further, TRAI vide its Regulation dated January 6, 2005 (para-36 of Explanatory Memorandum) had decided that the full ADC amount estimated would not be provided to the service providers and the overall ADC amounts were specified at a reduced level for several reasons. These included, inter alia, that there would be an increase in the subscriber base in the period when the ADC Regime would be implemented compared to the subscriber base actually used in the calculations. On this basis, though the estimation of ADC to BSNL was done at Rs.4790 crore but even at that time it was expected that because of increased traffic the total ADC amount payable to BSNL could go up to Rs.5,335 crores. The Authority had considered that since ADC Regime has to be reduced to zero in next 2 years, therefore, in the year 2006-07 the admissible ADC to BSNL would be reduced to 2/3 of Rs.4800 crore which is equal to Rs.3200 crore. It is again reiterated here that right from October, 2003 Authority has been emphasising on the point that ADC regime is a depleting regime and should be replaced by or merged with USO regime from

2008 – 2009 onwards. The ADC is given for a temporary period for rebalancing the tariff and it cannot continue in perpetuity if the rebalancing is not done or reversed rebalancing is resorted to. Presently the government is collecting the USO amount as 5% of adjusted gross revenue as a part of revenue share licence fee, but virtually the whole amount is not being given to the USF administrator as yet for disbursement. Over time, there would be increasingly large amounts of funds, available from the levy of USO. For instance, in the coming years, amount collected for USO would be more than Rs .5000 crores per year.

25. The Authority expects that in the near future the USF will be fully functional, that it will receive the relevant amount for disbursement under the USF, and that these funds will be disbursed to the service providers as per the procedures decided in that regard.

26. The Authority has given sufficient time for tariff rebalancing and the ADC is mainly for the historical cost and not for the futuristic cost. The Authority is of the opinion that if same amount of the ADC will continue for the incumbent or any other operator tariff rebalancing will never take place and this will put undue burden on the subscribers because of the continuity of ADC Regime in perpetuity. As mentioned above, Authority in its October, 2003 Regulation has done detailed calculations in consultation with BSNL for the total ADC amount based on historical costs and Authority does not consider it necessary to continue to do these calculations based on historical data again and again.

c) Should other fixed line operator continue to get ADC?

27. The Authority recalled that in the IUC Regulation dated January 24, 2003, all the fixed line operators were treated at par with BSNL. In the IUC Regulation dated October 29, 2003 the ADC was imposed on cell-to-cell inter-circle calls and on incoming international traffic to cellular phones which were to be paid to BSNL. The other fixed operators were getting ADC on the terminating traffic on their fixed wireline as well as retaining the ADC on outgoing calls originating from their fixed subscribers. In the Regulation of January 6, 2005 the

other fixed line operators were allowed to retain ADC on outgoing traffic from their fixed wireline subscribers and no ADC was paid to them on the traffic terminating in their fixed line network. This was done because the other fixed line operators were able to generate the estimated ADC from their originating traffic including international originating traffic itself. In this Regulation also the same principle of ADC retention by fixed line operators has been followed. In other words, the fixed line operators are not required to pay ADC in terms of percentage of revenue share from their fixed line operations and also from outgoing international traffic from their fixed line subscribers. The Authority has taken this decision on the basis of the two important criteria, namely the distribution of the wireline and wireless subscriber base and second the distribution of subscribers in urban and rural areas as may be seen from the table No. 4. , position of the BSNL and other fixed line operators is very different when they are compared on the basis of these criteria. Authority has also noted the recent decisions of Hon'ble TDSDAT and Licensor on fixed wireless telephony. Other fixed line service providers are mainly adding their WLL(F) subscribers in urban areas. Though there is no justification of ADC for other fixed line service providers yet since other fixed line operators have to compete in the market, therefore, they are being treated at par with BSNL as far as retention of ADC in terms of percentage of fixed wireline AGR and on outgoing international calls from their fixed wireline subscribers.

d) Should the revised ADC Regime move to Revenue Share Regime?

28. The Authority had mentioned as early as in 29th October, 2003 Regulation that they would like to migrate to a revenue share regime as far as ADC recovery was concerned but it was not possible to implement this regime earlier because it would have increased the burden on fixed line rental and local call charges. Now, since the revenue base has increased substantially and the Authority has also decided to reduce the ADC amount as it is a depleting Regime this percentage revenue share will be significantly

lower than before, and therefore, migration to revenue share regime will not have any significant impact on rental and local call charges.

Table -6: Year-wise Adjusted Gross Revenue

AGR (In Rs. Crores)				
	2003-04	**2004-05**	**2005-06**	**2006-07**
			Projected	
All Wireline	33911	32099	32604	**33228**
All Mobile (including WLL(F)	11604	20181	31747	**51825**
All NLD	1472	2837	3246	**3479**
All ILD	1525	1335	1468	**1615**
Total	48512	56451	69065	**90148**
Less Rural Revenue		4749	4850	**4981**
Net AGR for ADC recovery		**51702**	**64215**	**85167**

29. The main concern of the Authority was that the contribution of ADC from ILD sector should remain at the existing level so that the ADC burden on domestic sector would reduce further. The contribution from incoming international calls in January, 2005 Regulation was estimated at Rs.1662 crore and from outgoing international calls was estimated at Rs.442 crore. As explained earlier, the Authority has decided to bring down the ADC to BSNL from Rs.4,800 crore to Rs.3,200 crore. This would mean that after getting Rs.2,057 crore from ILD (incoming and outgoing) calls the remaining Rs.1,143 crore would be recovered from the domestic sector in terms of percentage revenue share on AGR of BSNL, private cellular operators, UASL operators, NLD operators and ILD operators. The Authority has also decided that the fixed line operators other than BSNL would be permitted to retain ADC in terms of percentage revenue share of the fixed line phones and ADC generated from outgoing international calls originating from their fixed line subscribers as was the principle in January, 2005 Regulation also. The Authority also observed

(Table-7 given below) with the policy initiative to reduce per minute ADC from time to time on incoming international calls (from Rs.5.50 to Rs.4.25 to Rs.3.25) there is substantial increase in minutes of international incoming calls. It shows that there was a high elasticity of demand in incoming international minutes but the same elasticity was not available in outgoing international minutes as mostly marginal subscribers are being added in the recent past. Authority would continue to monitor this trend and would initiate any further review, if required.

Table -7: International Long Distance Minutes

Minutes in Millions			
Based on Data reported by ILDOs			
Year	**Incoming Minutes**	**Outgoing Minutes**	**Total Minutes**
1999-2000	1769	473	2242
2000-2001	2167	527	2694
2001-2002	2546	575	3121
2002-2003	3110	764	3874
2003-2004	4043	1176	5219
2004-2005	5251	1661	6912
2005-2006*	7685	2308	9993
2006-2007**	11247	3208	14455

* Reported minutes from ILDOs for 7 months + Forecast for 5 months.
** Forecasted minutes taking the same growth rate of last year.

30. Further, the Authority also examined whether it would be possible to fix revenue share on all telecom services including ILD sector. The AGR of ILD sector is around Rs.1600 crore and ADC which is around Rs.2000 crore is not part of the AGR of the ILD operators. If this amount is to be recovered from ILD sector then percentage revenue share would be very high and unreasonable. Further, if the percentage revenue share on ILD AGR is very high in comparison to the percentage on domestic services then this would lead to a very high arbitrage and consequently the tendency of generating grey traffic. Keeping this in view, the Authority has decided that on ILD (incoming and outgoing) calls, the existing method of charging ADC in terms of per minute basis should continue.

31. ILDOs revenue is dependent on the settlement rate between international players and ILDO. ADC is the part of this settlement. The final transaction between them is on a net basis. If the ADC is changed to percentage revenue basis, ILDOs may reduce settlement rates for both incoming and outgoing calls thus reducing their AGR. Therefore, total amount of ADC on percentage revenue share will be affected severely, and this can be done without affecting their net revenues. ILD Operators may also load percentage of ADC on outgoing and incoming revenue as per their convenience and may distribute higher percentage on outgoing international traffic revenue thereby defeating the basic objective of the Authority to give relief to the domestic consumers.

32. Another alternative that was examined was fixing a higher termination charge on incoming international calls which would be passed on to the terminating access provider and then a percentage revenue share fixed on access provider's AGR such that the recovery from ILD sector still remained at the existing level. This alternative was not considered viable by the Authority because the practice of fixing higher termination charges for incoming international calls vis-à-vis domestic calls is not prevalent in any other country. Further the termination charges in India are cost based, and on the principal of work done, there is no difference between International calls and domestic calls terminating in the operators network. Higher termination charge would also increase the arbitrage and hence grey market. This higher arbitrage would also provide gain to integrated operators as they can transfer their revenues from one account to another.

33. The Authority also examined the feasibility of imposing a higher percentage on ILD revenue of access providers itself. It was found that operators may design different tariff schemes with high rental and low call charges for all kind of calls including ILD calls. Thus the ADC recovery on a percentage revenue share of ILD call revenue will severely fall.

34. Due to these reasons, the Authority decided that it would be better to charge ADC in terms of per minute basis both for incoming and outgoing international calls as is the prevailing practice. Since, the incoming and outgoing international call minutes have gone up substantially, therefore, per minute charges for both incoming and outgoing calls will come down.

35. Keeping in view the above, the Authority has decided to recover the ADC amount as follows:-

i. A per minute charge on incoming and outgoing international calls.

ii. Uniform percentage revenue share on the AGR of all telecom service providers, viz. UASLs, BSOs, CMSPs, NLDOs and ILDOs. While calculating AGR for purposes of percentage revenue share, the revenue generated from the rural subscribers will be deducted only from the access providers' revenue.

36. The main criteria adopted by the Authority while deciding the rates of ADC was to maintain the total collection of ADC at around the present Rs.2,000 crore from international traffic, as also to reduce the burden on domestic subscribers. The percentage revenue share should be fixed such that the remaining ADC was recovered from the percentage revenue share route.

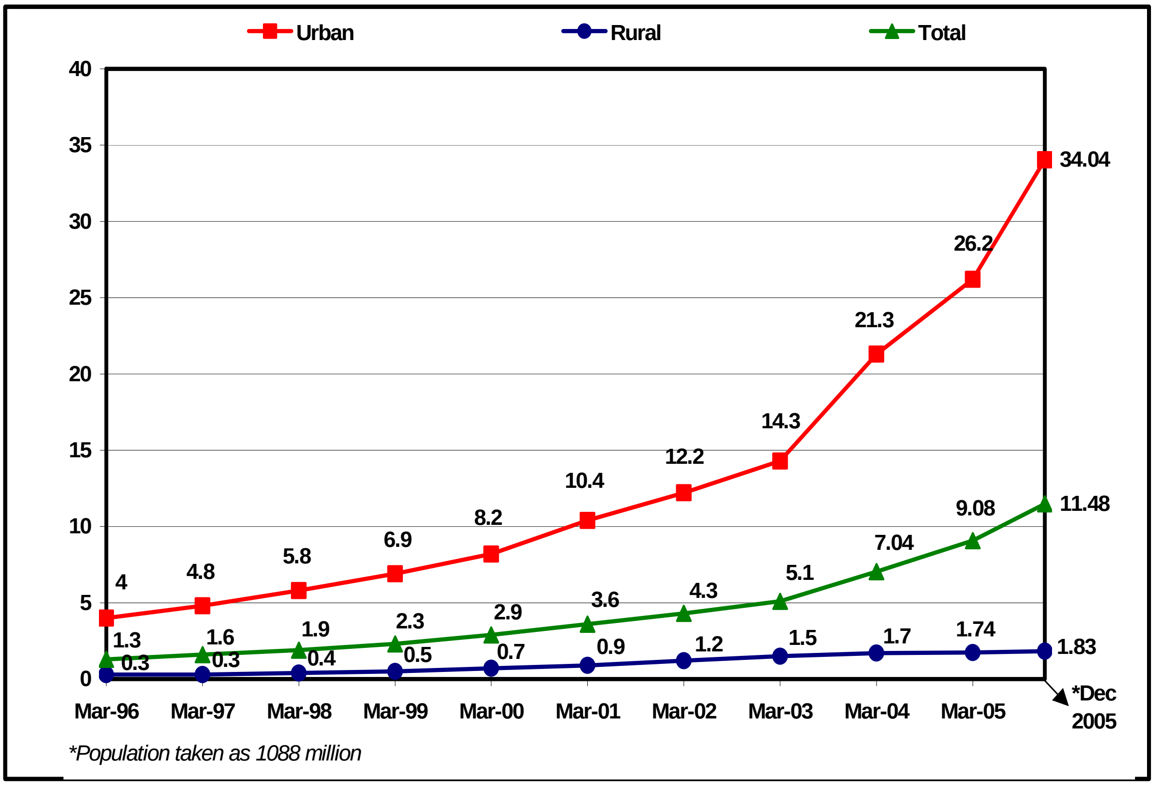
37. In its assessment of whether it is appropriate to move at present to a revenue share ADC, the Authority took note in particular that AGR will be around Rs. 90,000 crore in 2006-07. Therefore, it is an appropriate time to switch to Revenue Share as now there will be less percentage across the sector. But at the same time, the Authority has also noted that the ADC in the form of revenue share from the international traffic will come down drastically and this is not a desirable situation especially to give particular emphasis to provide a strong basis for further decrease in domestic prices so as to achieve the target of 250 million subscribers by December, 2007. Therefore, keeping in view both the objectives the Authority has decided that for international traffic (outgoing as well as incoming) the per minute regime shall continue but at a lower ADC rate since number of minutes of usages has increased in both outgoing as well as incoming international traffic but the contribution from ILD sector towards ADC would be retained

at the level estimated in January 6, 2005 Regulation which is approximately Rs.2,000 crores. There will not be per minute ADC on domestic Calls which will pave the way for reduction in domestic tariffs.

e) Substraction of the rural revenue

38. Inadequate access in rural India, where 70% of the population lives is always a big concern for the Authority. Therefore, it is vital that an enabling environment through policy and regulatory measures is created for the transformation of the existing ‘digital divide’ into ‘digital opportunity’. Widening gap between urban and rural tele-density may be seen from the following figure-1.

Fig-1 :Rural-Urban Tele-density – widening Gap



This graph clearly shows the huge success in our policies towards telecommunications services in urban areas and a failure in replicating the same for rural areas. The Authority has already given its recommendation to Government on growth of telecom services in rural India. This is one more endevour to provide incentive to the operators to develop their infrastructure in rural areas for narrowing the gap between urban and rural tele-density

39. TRAI in its consultation paper dated 17th March, 2005 has raised the issue whether ADC should be applicable for non-rural lines only. As explained above, one of the reasons for providing ADC to BSNL was that almost 100% rural subscribers have been provided by them, and therefore, in a percentage revenue share regime it is logical that revenue earned from rural subscribers should not be included while calculating the percentage revenue share. Keeping this in view, the Authority has decided that while calculating the percentage revenue share the revenue earned from the rural subscribers is to be subtracted from the total revenue AGR of the access providers, NLD and ILD operators.

40. BSNL will retain the ADC amount on its fixed wireline AGR services. While calculating the self generated ADC from BSNL fixed wireline operations, the amount will be a calculated as a percentage on its AGR after subtracting the revenue from rural subscribers . The ADC on outgoing international calls from fixed wireline subscribers will be additionally retained, and thus, the total self-generated ADC from BSNL wireline operations will be in three parts, i.e., percentage revenue share of wireline operations and ADC on outgoing international calls. The AGR of rural subscribers is not available with the Authority because BSNL has reported the consolidated revenue of rural subscribers. Since this amount (approx. Rs. 5000 crore) is being deducted from a larger revenue base of the order of Rs.90000 crore for estimation of percentage revenue share, therefore, even if equivalent AGR of rural subscribers is not available, it will not make a substantial difference in the calculation. Therefore, the Authority has not applied any correction on this amount.

f) Quantum of ADC

41. Break up of ADC funding to BSNL by other operators and the self funding by BSNL fixed operator for October, 2003 and January, 2005 regimes is given in Table-5,. 6th January, 2005 Regulation had retained approximately the same ADC amount and only per

minute ADC collection was adjusted due to increased minutes of traffic. Secondly, total ADC on incoming international calls was paid to BSNL in January, 2005 Regulation. In October, 2003 Regulation the ADC on incoming international calls was paid by ILDOs to the respective fixed line operators and ADC on incoming international calls to cellular operators was also being paid to BSNL. Further, on cellular calls terminating in fixed operators other then BSNL in October, 2003 Regulation, the ADC was being paid to terminating fixed line operator but in January, 2005 Regulation thus ADC was also to be paid to BSNL. This was mainly because of the fact that the retention of ADC by fixed operators other than BSNL was enough to meet their ADC requirement.

Table -8 :Summary Of Estimated ADC Calculation For Year 2006-07

Stream	ADC Rate	ADC in Rs. Crores
Revenue Share	1.5% of AGR for all service providers as given in Table-6 above	1278
International Incoming Calls	Rs. 1.60 per Minute	1800
International Outgoing Calls	Rs. 0.80 per Minute	257
Total		3335

42. ADC contribution from other operators to BSNL with reference to October, 2003 Regulation increased in January, 2005 due to following reasons:-

i. Total ADC on Incoming international calls was paid to BSNL.

ii. ADC on outgoing cellular calls terminating in fixed networks other than BSNL was also paid to BSNL

iii. Due to large growth of cellular subscribers beyond February, 2004 also increased the traffic minutes of cellular traffic which led to higher contribution of ADC to BSNL.

iv. Since BSNL fixed wireline growth was negligible and total ADC paid to BSNL was more or less same as in October, 2003 Regulation, therefore, BSNL's self generated ADC was lower in January, 2005 Regulation in comparison to October, 2003 Regulation.

43. Authority had already mentioned in October, 2003 Regulation that ADC will be a depleting Regime. Since ADC was mainly on account of deficit in the wireline cost based rentals and the number of wireline subscribers is not changing. Therefore, the ADC amount estimated earlier by the Authority need not be calculated again but since this is a depleting regime, therefore, the earlier calculated value of ADC has to gradually come down so that it becomes zero in the year 2008-09 and if at that stage the Authority feels that some support is required then that can be given from Universal Service Fund and the Authority would appropriately make a recommendation to the Government on this issue so as to increase the scope of USO Fund. Keeping this in view, the Authority has not done any fresh calculations for calculating the admissibility of ADC to BSNL and other fixed line operators. As per January, 2005 Regulation mentioned above, the ADC admissible had to be brought down to zero by 2008-09. Therefore, the ADC in the year 2006-07 should be Rs.3,200 crore to BSNL out of a total of about Rs.3,335 crore for all fixed line operators including BSNL. As per January, 2005 Regulation the contribution of BSNL towards total ADC collection came down to Rs.1651 crore as against Rs.2264 crore in October, 2003 Regulation. The funding from others increased from Rs.2528 crore to Rs.2805 crore. The increased contributions from others mainly came due to growth of cellular subscribers which in turn increased the incoming international traffic. Secondly, there was a larger contribution by cellular subscribers for domestic calls also.

g) Carriage Charges

44. The Authority considered the views of all stakeholders in the matter of carriage charges. The overwhelming opinion of the stakeholders in this regard is that the Authority should continue to fix carriage charges and regulate the same at least as a ceiling charge. The underlying reasons given by the operators for fixation of carriage charges are as follows:-

i. Implementation of CAC, Carrier pre-selection is yet to take place.

ii. It would check high charges that may be levied by incumbent where it is the only NLD operator.

iii. It would prevent the integrated operator from cross subsidizing on the long distance carriage charge resulting in a non-level playing field to stand-alone operator.

45 Going forward, the Authority also considered the views of the stakeholders regarding the level at which be carriage charges should be fixed. One industry association has pointed out that, in view of the sharp reduction of over 70% in the ceiling tariffs for domestic bandwidth, the cost of carriage would also need to be significantly revised downwards. And in their view, for distances over 500 kms, the carriage charges should be reduced from Rs.1.10 per minute to around Rs.0.30 per minute. This in their opinion would go a long way in hastening the death of distance and convergence in the cost of carriage for intra and inter-circle calls. A stand-alone player has in their written submission to the Authority stated that as on date carriage charges are on the higher side. Once the carriage charges are reduced the overall tariff will fall resulting in increase in affordability which in turn will fuel growth in tele-density.

46 The incumbent operator (BSNL) has stated that, it is operating in areas like North Eastern States, J&K, A&N Islands, Uttranchal, Lakshdweep Islands, H.P., Rajasthan, Orissa, etc., which meant higher carriage charges on account of high cost of operations. NLDOs are not disallowed to lay their own backbone for purposes of carrying long distance calls and to that extent there may be requirement for investments by the NLDOs in remote and inaccessible areas where BSNL is the only operator.

47 Evidence on retail tariffs for long distance calls charged by the service providers was also examined which suggests that there has been a substantial reduction in the tariffs for long distance calls since the implementation of the IUC Regulation, 2003. The Authority recalled a case of an NLDO seeking to offer a weighted average carriage charges way below the ceiling tariffs about a year back which also suggested

intense competition in this segment. The evidence on retail tariffs for long distance calls also suggest that, the Authority need not fix carriage charges for each of the distance slabs as a number of operators have brought in uniform long distance tariffs in the country.

48. The Authority also examined the cost structure of various NLDOs, including the incumbent with respect to their backbone infrastructure. The cost estimates of the network elements differed considerably across operators, particularly with respect to the incumbent. Deployment of long distance backbone by the new entrants is seen to be predominantly in routes covering metros and state capitals. Only the incumbent has the nationwide coverage with its backbone infrastructure. If carriage charge is left open to open ended mutual negotiation between Access Providers and NLDOs, negotiation may not take place as an operator who has monopoly in some remote areas may insist for unreasonable higher carriage charge.

49 The Authority took note of the recent developments in the licensing policy in respect of long distance telecommunication services in the country, which have facilitated much easier entry at a substantially lower entry fee with the reduced licence fee. This coupled with the steep reduction in the ceiling tariffs for domestic bandwidth will in all likelihood lead to more competition and reduced cost of carriage services during the implementation period. Keeping these factors in view the Authority considers appropriate to mandate only one carriage charge which is distance neutral ceiling. In this regard, the Authority has also reiterated its thrust to simplify the regulatory regime wherever competition is picking up and to create conditions, which would facilitate the ongoing convergence and death of distance that is increasingly taking place due to technological and market developments. In the meantime till the competition sets in completely in the market and till the backbone infrastructure is deployed by new entrants also in areas where the incumbent is the only operator, the Authority is of the view that at least a ceiling on carriage charge is necessary to be maintained. Towards this end, the Authority carried out a limited exercise of arriving at an appropriate cost estimate to fix a ceiling carriage charge for the implementation period.

Methodology of arriving at cost estimates for carriage charges

50. The Authority recalled that in its IUC Regulation 2003, it had used the cost data of BSNL because at that time BSNL was the pre-dominant NLDO having nationwide coverage for providing long distance call services within the country. Since then, other operators viz. Bharti, Reliance and VSNL have also started providing national long distance services.

51. The Authority has now used the data on costs of these operators based on the reports of the NLDOs submitted to the Authority under the Reporting System of Accounting Separation Regulation 2004. This data is now available for the financial year ending 2004-05. One major limitation of this data source is that the non-financial information pertaining to one major operator is not available as of now despite repeated reminders to that operator. Nevertheless, the Authority has derived the required non-financial information i.e. data on traffic based on information on other available parameters. The estimated minutes are given in the Table below:

Table-9 :Total Inter Circle Minutes (Carriage Minutes) in Crores

Year	Inter Circle Minutes
2004-05	3139
2005-06*	4790
2006-07**	7619

*Inter-circle Minutes as reported by Access Providers + Forecasted for later months
**Forecasted Minutes

52 The Authority has arrived at the cost estimates based on the average cost of BSNL and other NLDOs. The costs data as available in the Accounting Separation reports, has been used for purposes of arriving at the average costs of these operators. Further, the Authority has projected the cost of the provision of long distance services by the NLDOs by assuming 10% increase for the year 2005-06 and another 10% increase for the year 2006-07. This is justified on the ground that the NLDOs have firm plans to expand the coverage to areas which are likely to be other than the ones covering metros and State capitals. It is also expected that the operators are required to make investments in equipments and other infrastructure facilities that may be required to achieve the stipulated quality of services by the Authority. Further, the discussions with industry

sources and other experts indicate that the likelihood of spurt in the growth of national long distance minutes of usage is very high on account of the fact there is a sudden jump in the additions to overall subscriber base in the country. These factors are likely to result in increase in the order of investment required and therefore a likely increase in the total cost for the operators.

53. The average cost per minute after considering the cost in respect of all NLDOs comes to Re. 0.52. (For details see Table given after this paragraph)Considering the fact that the Authority is now fixing a ceiling for carriage in respect of all distances, all destinations and all terminating networks, it becomes necessary to build in a mark-up in the cost estimates. Discussions with the industry sources and the internal analysis in this regard suggest that the mark-up for the ceiling on these grounds could be in the region of 15-25%. Authority however decided to adopt the highest of the range i.e.25% for this purpose. This resulted in the ceiling carriage charge of Re.0.65 per minute. The Authority is aware that this ceiling limit is higher than the value of Rs. 0.20 per minute prescribed for calls up to 50 kms in the existing Regime and there may be tendency for some operators to charge this higher amount. One alternative before the Authority was to prescribe if fresh ceiling for distance up to 50 kms. The other alternative was that should such a situation arise, competitive forces will encourage other operators to set up infrastructure to cover such distances. Adequate break-up data was not available with the Authority to fix a fresh ceiling for these short distances, and therefore, the Authority has decided to retain only one distance independent ceiling for carriage charges. The Authority has also noted that already service providers are carrying their traffic through VOIP networks and this trend may increase, especially after issue of recent amendment in the license agreement of UASL/NLD by Department of Telecom and introduction of NGN by various service providers. The Authority could have utilized FLLRIC for estimation of carriage charges which could have led to a drastic reduction in ceiling, and therefore, as a transition that methodology was not adopted. It is also mentioned that detailed data for FLLRIC estimation was not available with the Authority. A situation will be kept under observation and if required, a review will be carried out.

Table-10: Calculation of Carriage Charge for 2006-07

Particulars	Unit	Value
Total estimated cost of all NLDOs (Inter Circle)	In Rs. Crores	3670
Total Forecasted Inter Circle Minutes (Carriage Minutes)	In Crores	7619
Cost per Minute	In Rs. Per minute	0.48
Add License Fee	In Rs. Per minute	0.03
ADD ADC (Revenue Share Percentage)	In Rs. Per minute	0.01
Total weighted average cost of carriage per minute	In Rs. Per minute	0.52
Add Mark up (25%)	In Rs. Per minute	0.13
Per Minute Ceiling for Carriage Charges	In Rs. Per minute	0.65

54. Although, several countries had used Forward Looking Long Run Incremental Cost (FLLRIC) i.e. a methodology under which only a portion of stranded costs is included in the calculation of costs, the Authority has once again refrained from adopting this methodology keeping in view the need to incentivize investment in infrastructure by the new entrants who are presently operating only in routes covering the metros and State capitals.

55. This ceiling charge shall facilitate flexibility to operators to arrive at appropriate carriage charges among themselves. With this the Authority has moved away from a regime of specified carriage charges introduced in 2003 to a regime where the carriage charges are fixed as ceilings.

56. Having taken this step towards deregulation of carriage charges, the Authority would closely monitor the trends and patterns of carriage charges that would be seen in the market during the implementation period. If there is any aberration or distortion in the market in the matter of carriage charges being levied and collected by the NLDOs with respect to their own traffic and with respect to the traffic of other access providers, the Authority would not hesitate to review this regulatory regime.

57. The interconnection agreements would continue to be filed by all the operators who are providing the carriage services and also those operators who are availing the carriage services from the NLDOs. The Authority

would also take necessary steps for implementation of Carrier Access Code (CAC)

h) Mobile Termination Charge and Fixed line Termination Charge

58. Due to increased volume of traffic, it is likely that the termination charges especially for mobile services may come down. The Authority has also estimated and found that mobile termination charges as well as fixed termination charges could be lower than the present specified level of Rs.0.3 per minute. In spite of this, the Authority did not reduce the mobile termination charges and fixed termination charges mainly on account of the following reasons:-

i. With the increased growth of subscribers, the addition in capacity of the network also has to match both in terms of the radio equipment capacity and also switching and transmission equipment capacity. If these additions in capacity do not match with the growth of subscribers then the quality of service deteriorates which is also a major concern of the Regulator. Regulator expects that along with the growth the service providers adds to the capacity of networks so that there is no deterioration in the quality of service which is being experience now for various parameters which has been laid down by TRAI in its QoS Regulation dated 8th July, 2005.

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

iii. As mentioned earlier, the mobile coverage in terms of population in India is only about 35% of the population which is lowest in the world and mobile operators have to increase their penetration into rural areas and therefore, large investments are to be made to cover even the 77% (world average) of the country's population. As networks penetrate into interiors and there is evidence that this is happening.

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

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

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

59. Further, the World Bank (InfoDev Division) in its Report on Regulating Competition, Interconnection and Prices dated December 23, 2005 has mentioned as follows:-

"***c. Mobile Termination Charges, Mobile Penetration and Universal Service Goals*** - Developing countries with low penetration levels are experiencing a growing tension between encouraging further penetration of mobile services with above-cost mobile termination charges and the downward pressures of mobile termination rates coming from market and regulatory forces. This is especially valid in low penetrated markets in which there could be theoretical and practical justifications of having mobile termination charges above cost in order to cross subsidized access to the service (basically the handset) and mobile-to-mobile and mobile-to-fixed calls……….

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

Keeping all these facts in view, the Authority decided not to review the termination charges and keep them same for both mobile as well as fixed termination charges. The Authority expects that mobile service providers would increase their penetration into rural and remote areas and the Authority would continue to monitor their progress in this regard.

i) Termination Charge on incoming international long distance call.

60. A proposition has been made by the access providers that they should be permitted to negotiate termination charges with the ILDOs. The Authority took account of all points made in favour and against allowing the access providers to negotiate the termination charges with the ILDOs.

61. The Authority recalled the situation few years ago, where such negotiation was allowed and the uncertainty and dispute that was created in the market at that time. In this context, the Authority noted that the moment the negotiation process becomes a dispute, which is likely; the prevailing legal framework is such that the Authority will not be in a position to take steps to address the matter. This will imply lack of certainty and increased possibility of discord in the market, which possibility may get further enhanced as BSNL has already entered the market as an ILDO itself. Termination is a monopoly , therefore, an access provider may ask for a high termination charge which could lead to non-settlement of termination charges between access provider and ILDO. This would result in the call not being completed because the network would be broken.

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

The Authority also noted that BSNL was already being provided adequate funding for ADC and there was a USO regime in place for funding investment in rural and other net cost areas. Hence additional funding through negotiations would have certain adverse effects and would be over and above the amounts already being provided. In none of the countries termination rates are different between local, long distance and international long distance calls.

63. The Authority then examined the argument that if mobile operators received higher termination charges from ILDOs, they would have greater incentive to curb the grey market traffic. The Authority recalled that under the DOT letter of 23rd June 2003, mobile operators had already been directed to monitor and take requisite measures, in co-ordination with DOT's Vigilance Department, to address the illegal international traffic. The above argument appeared to suggest that the mobile operators should be paid an incentive in order to follow the aforesaid Direction from DOT. This argument cannot be accepted by the Authority. In fact, as BSNL has strongly stated in a related context that monitoring and penalty are adequate for addressing grey traffic, such monitoring and penalty should also be effectively put in place for the mobile operators. Moreover, the Authority has examined the proposition further and it does not appear that the incentive so provided to mobile operators will effectively address grey traffic as such.

64. In this background, allowing BSNL or any other access provider to negotiate termination charges with ILDOs would not be appropriate. The Authority foresees the reduction in the arbitrage margin along with better monitoring and vigilant action, to result in growth of international long distance calls through the legal channels.

65. The Authority also observed that with the policy initiative to reduce per minute ADC from time to time on incoming international calls (From Rs.5.50 to Rs. 4.25 to Rs.3.25), the increase in minutes of international incoming calls (46% as compared to last year) have shown that there was a great elasticity in incoming minutes whereas the same elasticity was not available in outgoing calls. This, the Authority considered may be due to the addition in subscriber base being of the marginal subscribers and would keep a watch on this trend.

66. In this Regime the Authority expect that trend of increased incoming international calls as well as outgoing cellular traffic continued even beyond February, 2005. Subsequently, as per the definition given by Department of Telecommunication for WLL(F), most of the WLL(F) came in WLL(M) category. It is mentioned that in the earlier Regime, on the traffic originating from WLL(F) subscribers the operators were permitted to retained ADC but once it was defined as mobile i.e., WLL(M) then on the traffic originating from such mobile subscribers, the ADC payment has also to be made to BSNL. To summarize, the contribution of ADC from cellular mobile and WLL(F), which is treated as mobile, would go up and accordingly the self-generated ADC from BSNL would come down because the overall amount of ADC to be collected also has to come down.

Summary

67. In summary, while the Authority has addressed all the relevant issues and decided its IUC / ADC regime, it had to balance the achievement of various objectives. This can be seen in the context of certain key objectives emphasised during consultation process and previous IUC Regulation notified by TRAI. For example:

i) ADC is a depleting regime.

ii) ADC regime would be redued to zeo in next 2 years.

iii) Method of collecting ADC should be transparent, simple and easy to administer.

iv) Reducing the domestic call charges for general benefit of our consumers and death of distance.

v) Addressing grey international calls through a combination policies relating to incentives (arbitrage margin) and disincentives (monitoring and penalty) for such calls.

vi) Ensuring that benefit is not passed on to the foreign carriers and consumers at the cost of domestic consumers and operators.

vii) Enabling environment through policy and regulatory measures to reduce the widening gap between rural and urban tele-density.

68. A crucial factor in the assessment was that for funding a given ADC amount more reduction in per minute ADC charge on international call would require higher percentage of revenue share for domestic calls. Likewise any increase in per minute ADC charge on international calls would result in a lower ADC charge on domestic calls but will increase the arbitrage. In this situation a trade off among these objectives, the Authority has to choose the appropriate balance while specifying the new ADC regime.

69. As in its previous review the Authority has again given the highest priority or emphasised the objective of reducing domestic tariff to meet consumer interests, and spurring sustained growth, flexibility to the operators, incentives for the rural telephony.

70. The Authority further noted that changeover to complete revenue share regime and its merger with USO is indeed the final solution for taking care of all anomalies and issues associated with ADC. However, till such time as contribution of ILD and NLD traffic to fund ADC continues to be disproportionate, this solution is difficult to implement. This will be possible when disbursement from USO reach their full proportion for rural telecommunication. Taking account of the increase in the overall minutes, exceptional growth in subscriber base, reduction in admissibility of ADC, pave the way for uniform rate across the country and ensuring that benefit not passed on to the foreign carriers at the cost of domestic consumers and operators. The Authority amends the previous IUC Regulation on the following lines:

- There will not be any per minute ADC on National Long Distance calls.
- The method of collecting the ADC amounts from International Long Distance calls will be same as before.
- The basic service operators, cellular service providers and UASL will pay 1.5 % of their AGR after deducting the revenue generated from rural subscribers and the revenue generated from their fixed line operations to BSNL as a ADC.

- All NLDOs and ILDOs will pay 1.5 % of their AGR to BSNL as ADC.
- All UASL / BSOs will retain Rs. 0.80 per minute ADC of their outgoing international traffic.
- UASL / BSOs will not pay any percentage of revenue as ADC to BSNL for their revenue generated from fixed line operators.
- It will simplify the ADC regime.
- ADC on outgoing International Long Distance calls to be kept lower than ADC applicable on ILD incoming calls so that advantage of ADC reduction benefits Indian consumers more.
- Termination charge shall be at the existing level, i.e. Rs.0.30 per minute for mobile and fixed wirelines.
- Ceiling for Carriage charges shall be Rs.0.65 per minute. Service providers are allowed to negotiate within a ceiling value of maximum Rs.0.65 per minute for the long distance calls carriage charge for any distance.
- Revised regime will be implemented from 1st March 2006.
- The Authority will review the regime within six months of its implementation.
- The ADC rates and payment receipts of ADC for International Outgoing and Incoming Calls will be as per Table:-

Table-12 :ADC Rates and Payment Receipts for International Long Distance Calls

Sl.No.	Type of call	ADC Rate per minute	ADC payable to or retained by
1.	All Outgoing ILD calls originated from Fixed wireline Line.	Rs.0.80	Retained by originating Fixed Service Provider.
2.	All Outgoing ILD calls originated from Cellular Mobile / Wireless.	Rs.0.80	Payable to BSNL fixed by originating access provider through ILDO
3.	All Incoming ILD calls	Rs. 1.60	Payable to BSNL fixed by ILDO or NLDO

BY ORDER

[RAJENDRA SINGH]
Secretary