Telecom Regulatory Authority of India

Notification

New Delhi, the 6th January 2005

No.409-8/2004-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 further amends the Telecommunication Interconnection Usage Charges Regulation, 2003, as follows, namely :

1. Short title, extent and commencement:

    (i) This Regulation shall be called "The Telecommunication Interconnection Usage Charges (Fourth Amendment) Regulation (1 of 2005)"

    (ii) This Regulation shall come into force with effect from 1st February, 2005

2. The following entries shall substitute the existing entries relating to Regulation 8 in Section VIII (Interpretation) of The Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003):

    "In case of any doubt regarding any provision of this Regulation, the clarification given by the Authority shall be final."

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

3.1 Access Deficit Charge shall be applicable for the specified category of calls as mentioned in **Table III**. The ADC will be payable on a per minute basis, and retained collected and distributed as per section 3.2 of schedule III below.

The ADC applicable for different types of calls are mentioned in **Table III**. The rates are shown on a per minute bulk settlement basis.

TABLE III

Access Deficit Charge in Rs. Per minute applicable for various type of Calls

Access Deficit Charges	Local calls	Intra-Circle calls		Inter-Circle calls	ILD calls	
in Rs per minute		0-50 kms	>50 kms	All Distances	Outgoing	Incoming
Fixed – Fixed	0.00	0.00	0.30	0.30	2.50	3.25
Fixed - WLL(M)	0.30	0.30	0.30	0.30		
Fixed – Cellular	0.30	0.30	0.30	0.30		
WLL(M) – Fixed	0.30	0.30	0.30	0.30	2.50	3.25
WLL(M) – WLL(M)	0.00	0.00	0.00	0.30		
WLL(M) – Cellular	0.00	0.00	0.00	0.30		
Cellular – Fixed	0.30	0.30	0.30	0.30	2.50	3.25
Cellular – WLL(M)	0.00	0.00	0.00	0.30		
Cellular – Cellular	0.00	0.00	0.00	0.30		

3.2 **Collection and distribution of ADC**

The amount given above is to be collected/ paid as follows:

a) For all Intra-Circle calls from Cellular Mobile/ WLL(M) to fixed line, BSNL to be paid the access deficit amount.

b) For all Intra-Circle calls from fixed to Cellular Mobile/ WLL(M), the originating service provider to retain the access deficit amount

c) For Intra-Circle calls from fixed line to fixed line, the originating Service Provider to retain the access deficit amount (local calls and calls within “0 to 50 kms.” do not have any access deficit charge). No access deficit charge is payable to the terminating fixed network.

d) For all outgoing Inter-Circle and ILD calls from fixed line, the originating service provider to keep the access deficit amount. No access deficit charge is payable to the terminating fixed network.

e) For all ILD calls to fixed line, BSNL to be paid the access deficit amount by the ILDO (directly or through NLDO, wherever applicable), and the termination charge should be paid to the terminating network.

f) For all Inter-Circle calls from Cellular Mobile/ WLL(M) to fixed line, the access deficit charge and termination amount is to be collected by the NLDO from the originating service provider and the access deficit charges should be paid to BSNL and the termination charge should be paid to the terminating service provider.

g) For all Inter-Circle calls from Cellular Mobile and WLL (M) to Cellular Mobile/ WLL(M), the access deficit amount is to be collected by the NLDO from the originating service provider and paid to BSNL.

h) For all ILD outgoing and incoming calls from/ to Cellular Mobile and WLL (M), the access deficit amount is to be collected by the ILDO and paid to BSNL.

4. Explanatory Memorandum

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

BY ORDER

[DR. HARSHA VARDHANA SINGH]

Secretary-cum-Principal Advisor

ANNEX “A”

EXPLANATORY MEMORANDUM

I. Introduction

1. The ADC regime has evolved over time, notified first in TRAI’s Regulation dated 24th January 2003, and reviewed in TRAI’s Regulation of 29th October 2003. In that notification, the Authority had emphasized a policy framework, which would promote lower domestic prices and give rise to strong subscriber growth. The expectations of the Authority with respect to both these objectives have been validated in the subsequent period. India at present has among the cheapest mobile call charges in the world, as is shown, for example, in Table 1 below. Likewise, the monthly growth in mobile subscribers base in India, has been among the highest, and the price decline has contributed significantly to such growth.

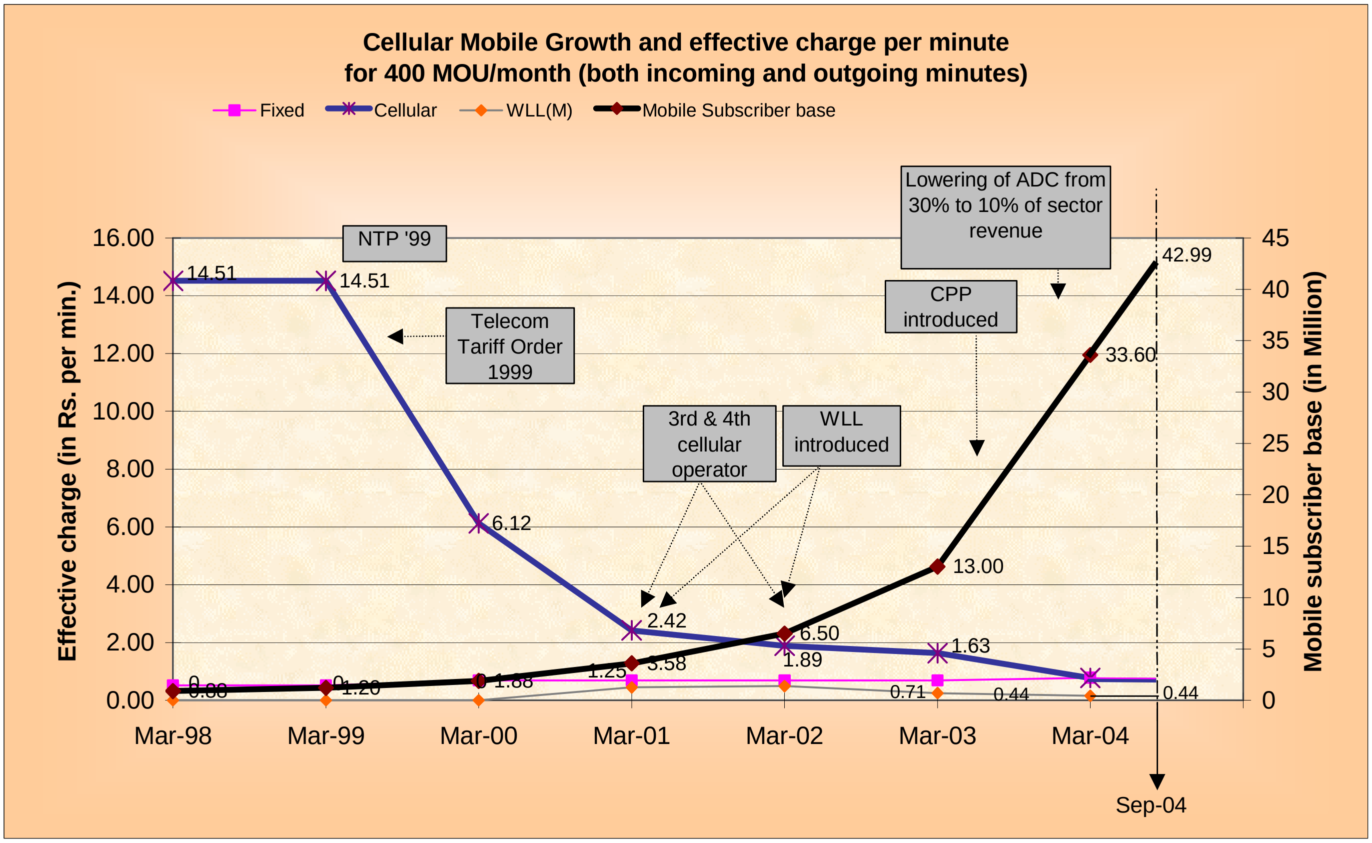
2. To have a large effect on growth of demand and subscriber base in India, the price level has to decrease to a level below a certain threshold value beyond which there is a possibility of a huge expansion in the market base. This would become clear from Figure 1, which shows that the tariffs, particularly for Mobile services, have declined sharply over time. Since last year when the effective price of mobile service reached close to that for fixed line, the decline in tariffs was accompanied by an exceptional rise in the subscriber base. This suggests that the price level has now dropped to reach a special threshold level, which results in a fundamental change in the accessibility of the service to the Indian people. Consequently, further price decreases can give rise to additional large increase in subscriber base, and a better possibility of achieving our tele-density objectives much before the target dates.

Table 1: Comparison of Call Charge per minute, Minutes of Use and ARPU in different countries and Average Values for countries

The Industry Spanshot – 2 Q 04			
Name of the Country	ARPU (Average Revenue Per User)	Minutes of Use per Subscriber per month	Rate per Minute
	US$	Minutes	US$
Argentina	13	121	0.11
Australia	43	159	0.24
Austria	40	127	0.27
Belgium	42	108	N.A.
Brazil	11	92	0.11
Canada	39	344	0.11
Chile	12	105	0.12
China	10	261	0.04
Colombia	11	106	0.10
Czech	21	80	0.22
Denmark	32	155	0.17
Egypt	17	167	0.10
Finland	43	247	0.15
France	40	213	0.16
Germany	28	74	0.31
Greece	34	117	0.25
Hong Kong	27	380	0.07
Hungary	25	118	0.22
India	11	309	0.04
Indonesia	11	N.A.	N.A.
Ireland	54	198	0.21
Israel	36	297	0.11
Italy	32	118	0.24
Japan	63	156	0.33
Korea	35	316	0.09
Malaysia	20	185	0.11
Mexico	18	105	0.17
Netherlands	38	137	0.24
New Zealand	33	147	0.20
Nigeria	48	N.A.	N.A.
Norway	49	191	0.21
Philippines	8	N.A.	N.A.
Poland	19	71	0.24
Portugal	30	120	0.23
Russia	13	130	0.09
Singapore	31	277	0.09
South Africa	27	140	0.18
Spain	37	132	0.25
Sweden	28	119	0.22
Switzerland	59	119	0.45
Taiwan	19	193	0.09
Thailand	9	N.A.	N.A.
Turkey	14	66	0.19
UK	39	144	0.22
US	57	619	0.09
Venezuela	16	77	0.21
Total/AVG	30	235	0.13

Source : Merril Lynch Report of 29th September 2004

Figure 1 : Mobile Growth and TRAI initiatives



3. The exceptional growth in subscriber base has resulted in a substantial change in the situation that was considered for determining the ADC regime notified in the Regulation of 29th October 2003. The large unanticipated increase in Mobile subscriber base has led to a much higher number of total minutes, which fund the overall ADC amount. Thus, even with the same amount of ADC funds to be collected, the per minute ADC charge can be lower due to the increase in minutes on which the ADC charge is applied. Inter alia, taking this important factor into account, the Authority has conducted another review of the ADC regime based on its Consultation Paper of 23rd June 2004.

4. The regime notified in this Regulation takes account of all the inputs provided during the Consultation process, which in a number of cases involved

different stakeholders giving diametrically opposite views on specific issues. The Authority thus had to weigh the various inputs and positions and its attempt has been to provide a revised ADC regime which allows larger benefits to the Indian consumer and rapid growth of telecom services, while taking complementary or supplementary steps to mitigate the factors likely to have adverse effects.

5. 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. As part of such initiatives, the Authority has had several discussions with service providers on plans for extension of the network to various parts of the country. These discussions show that with tariffs becoming attractive even for rural consumers, the market is rapidly expanding to such areas and the subscriber base is likely to increase also due to a large rise in the coverage of the mobile network in the near future. Mobile coverage is likely to increase from 1700 towns to about 4900 towns in next two years, and about 60% of rural villages are likely to be covered under Mobile Network during this period (please see Table 2 below).

Table 2 : New Areas to be brought in Mobile Coverage by Service Providers to further accelerate Mobile Growth

Present Coverage of Mobile Networks (Population Coverage 20%)

	By area	*Population Coverage*
Towns	~1700 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 the domestic tariffs need to consistently decline below the threshold level that has been reached, in order to provide a sustained boost to subscriber growth and tele-density in the country.**

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. The Authority will be monitoring the prices, including through the special Software that it is developing for comparison of tariff packages.

8. The large expected increase in subscriber base will also provide a substantial rise in the minutes that will fund the ADC for fixed service providers. Further, these minutes will, to a significant extent, be external to the BSNL, i.e. the ADC funding by the BSNL itself will increasingly become a smaller portion. These major developments will give us with an additional basis to further decrease the ADC per minute charges, or if the ADC is funded through a revenue share regime then for a decrease in the revenue share imposed for funding ADC. As already stated earlier by the Authority, the ADC regime will ultimately merge with the USO regime.

9. **In the present review, the Authority's assessment is based mainly on the increased minutes available to fund the ADC. The main focus of the**

ADC regime has been BSNL, and in the revised regime, the Authority has provided BSNL with the same ADC funds as were specified under the regime notified in the Regulation of 29th October, 2003. However, even with the same amount of ADC funding, the per minute ADC charge would go down due to the larger base of subscribers and consequently of the relevant minutes of use.

10. In reviewing the ADC regime, the Authority also examined the ADC regime that should apply to all fixed line service providers other than BSNL. The Authority recalled that even in the ADC regime notified in October 2003, these service providers were not treated at par with BSNL because under that regime only BSNL received the ADC from mobile to mobile calls and international calls to/from mobile. In the revised ADC regime too, the other fixed line service providers are not treated in the same manner as BSNL. The Authority feels that there is good basis for this dissimilar treatment, if one takes account of the lower cost of access involved with fixed lines with wireless terminals, i.e. fixed line with radio link in the last mile and the spread of subscribers in urban and rural areas (please see Table 3 below).

11. However, BSNL and the other fixed service providers are being treated in a similar way by the Authority if we consider that in the revised scheme, the Authority is providing to BSNL the same overall amount of ADC as in the regime notified in October 2003 and all other fixed operators also, are being given overall similar ADC values as was specified in that Regulation.

Table 3

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 September 2004

Service Provider	Name of the Circle/ Service Area	% of Fixed Wireless lines in Operator's Fixed Lines	% of Rural lines in Operator's Fixed Subscriber Lines
BSNL	All India (except Delhi and Mumbai)	2.60	35.20
MTNL	Delhi & Mumbai	1.09	0.00
Bharti	Delhi, Madhya Pradesh, , Tamil Nadu, Karnataka, Haryana, Chennai	3.46	0.08
TATA	Maharashtra, Mumbai, Andhra Pradesh, Tamil Nadu, Chennai, Karnataka, Delhi, Gujarat	77.39	0.23
Shyam	Rajasthan	18.49	3.37
HFCL	Punjab	24.53	0.45
Reliance	All Circles except Assam and North East	97.27	0.66
TOTAL		7.70	28.93

Source : Operators' Submission to TRAI

12. Based on the above, the Authority has decided that operators other than BSNL should be treated differently from BSNL in terms of the ADC support provided to them. In this background, and keeping also the objective of providing the same overall ADC funding to BSNL as in the estimation provided in the Regulation of 29th October 2003, the Authority has conducted further calculations and has decided that **all the operators other than BSNL should get ADC funding only from their outgoing calls. The ADC generated by all the incoming calls that were earlier provided to these (non-BSNL) operators, would now be provided to BSNL.** This is required to keep the incidence of the ADC charge low, to make the ADC regime

sustainable, and to obtain the requisite funds for the ADC being provided to the operator who is presently providing virtually the entire rural telephony.

13. The Authority has also noted that in the future there will be greater disbursement of the USO funds from the Government to the USF Administrator, who in turn will implement its USO schemes that will be in the pipeline. With smooth and early disbursement of USO funds, the amount of ADC funding required will keep going down, because the methodology used by the Authority is such that as the USO funding increases, the amount of ADC funding requirement decreases. Thus it is extremely important that the amount of USO funds collected by the Government should be disbursed for this purpose by providing the amounts to the USF Administrator. Otherwise while the USO funds would be collected by the Government from the License Fee, but due to their non-disbursement, it will not be possible to reduce the ADC charge by the maximum amount possible, and the consumer will continue to bear a relatively higher ADC burden.

14. In addition to its main objectives of sustained price decline and rapid subscriber growth, the Authority has also emphasized greater certainty in the telecom market, and strengthening the mechanisms for addressing grey traffic in international calls. The issue of certainty arose when BSNL and the cellular mobile operators sought flexibility to negotiate termination charges for international calls with the International Long Distance Operators functioning in India. A number of other stakeholders were of the opinion that this would give rise, inter alia, to greater chaos in the market and also to the dominant operator getting a preferred position in the market. Based on its overall analysis of the situation, the Authority has decided in favour of specifying the ADC charges and not allowing negotiations for termination charges. The Authority has also taken note of the fact that TRAI’s Consultation Paper dated 23rd June 2004 was reviewing only Access Deficit and not Interconnection Usage Charges (which include termination charges).

15. With respect to the grey traffic in international calls, the Authority recalled that in its Regulation of October 2003, it had taken account of the Report of the Committee on Grey Traffic with members from TRAI, several service providers (including BSNL, MTNL) and DOT, TEC, etc. The Authority recalled a number of relevant points in that context, namely that:

- BSNL and a number of others in the Committee were of the view that grey traffic would be addressed not by changing the arbitrage opportunity available to illegal international call providers, but by stronger monitoring and penalty mechanisms;
- Vide its letters of 23rd and 24th June, 2003 the DOT had established mechanisms to monitor illegal international traffic, with its Vigilance Department acting as a nodal point;
- Any attempt to address the arbitrage opportunity must not overlook the objectives of affordability of local calls in particular and higher telecom growth as contained in NTP 1999;
- The Authority had in paragraph 87 of its 29th October 2003 Regulation stated that: "*At present, the revenues available from such calls for the objectives of tele-density have been given greater emphasis in view of the need to specify affordable tariffs in the market along with an ADC regime*."

16. As mentioned above, the Authority has in its review again emphasized low prices and consequent subscriber growth. The ADC regime notified in this Regulation has been specified taking into account the view re-iterated by BSNL that grey market can be addressed only through monitoring and not by reducing the arbitrage opportunity that arises due to the margin between the ADC on domestic and international calls. BSNL has also emphasized in its meetings with the Authority that the established monitoring mechanism of the DOT has started showing results. Furthermore, the Authority has already established an expert group so that a set of recommendations are available covering a new monitoring and vigilance mechanism that can ensure that the traffic of legitimate international call providers is not under-reported and grey

market calls on this count are kept in check. In this context, it is noteworthy that under the revised proposed regime, ADC from all incoming international calls is to be given to BSNL. The Authority has nonetheless also reduced the arbitrage margin for Incoming and Outgoing International Long Distance calls (please see Tables 4A and 4B below). The situation with respect to the number of Outgoing and Incoming International Long Distance minutes is shown in Table 5 below.

TABLE 4A

Potential Arbitrage Margin (on ADC + Termination Charge) per minute for Incoming ILD calls

Sr. No.	IUC Regime	ADC + Termination Charge per minute on Incoming International Call (Rs.)	ADC + Termination Charge per minute on Local/ NLD Call (Rs.)	Potential Arbitrage Margin if Incoming ILD call is converted to Local/ NLD (Rs.)
1	29th October 2003	4.55	0.30 to 1.10	3.45 to 4.25
2	Regime notified under this Regulation	3.55	0.30 to 0.60	2.95 to 3.25

TABLE 4B

Potential Arbitrage Margin (on ADC + Origination) per minute for outgoing ILD calls with Origination Charge taken same as Termination Charge

Sr. No.	IUC Regime	ADC + Origination Charge per minute on Outgoing International Call (Rs.)	ADC + origination Charge per minute on Local/ NLD Call (Rs.)	Potential Arbitrage Margin if outgoing ILD call is shown as Local/ NLD call (Rs.)
1	29th October 2003	4.55	0.30 to 1.10	3.45 to 4.25
2	Regime notified under this Regulation	2.80	0.30 to 0.60	2.20 to 2.50

TABLE 5

INTERNATIONAL LONG DISTANCE MINUTES

Minutes in Million							
Sector	Based on data reported by ILDOs						Reported for 6 months + Forecast 6 months
International	Minutes	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05
	Outgoing	473	527	575	764	1176	1720
	Incoming	1769	2167	2546	3110	4043	4843
	Total	2242	2694	3120	3875	5219	6564

17. To specify the revised ADC regime, the Authority has conducted detailed analysis of the data submitted to it on traffic flows and subscriber base. The Authority noted gaps and inconsistencies in the data provided, and gave the service providers an opportunity to make relevant corrections. However, instead of being subject to regulatory capture due to provision of late, incomplete or inconsistent data by operators, the Authority has used reasonable normated estimates wherever required. The Authority has also noted that ADC payments to BSNL including those from its internal traffic are likely to be higher than anticipated as the current cycle gets completed in January 2005. **The new regime will be implemented from 1st February 2005, which implies that the present regime will continue till 31st January 2005. The revised regime is based on forecasted data for the period beyond September 2004.** The Authority will be conducting a review of the ADC rates within 3 to 6 months of its implementation and consider whether the underlying data used by it in the present set of calculations including forecasts has been robust and matches with the subsequent monthly long distance traffic minutes and ADC submissions. The Authority will review the ADC rates without going in for any consultation process in case new figures of data suggest that revision of ADC values is justified for the last two quarters of the new annual cycle of ADC.

18. Section II gives the background, Section III gives a summary of the main comments, Section IV addresses a key point made repeatedly that the ADC regime should be merged with the USO regime and should not be in place as a separate regime. Section V summarizes the examination of the issues by the Authority, and Section VI gives the main decisions of the Authority.

II. BACKGROUND

19. The Authority notified on 24th January 2003, its first Regulation on Interconnect Usage Charge (IUC) and Access Deficit Charge (ADC). This regime came into effect from 1st May, 2003. The implementation followed an agreement among all operators on the method for assessing the IUC/ ADC amounts, based on the results of a special Committee that had been established by TRAI to address this matter, with BSNL as the convenor of the Committee. That meeting decided the method of implementing the IUC regime, but treated it as an interim one. It was further decided at the meeting that the interim phase will end by 31st March 2004 with implementation of CDR based billing system by all operators including BSNL. However, CDR based billing system has still not been implemented by BSNL.

20. 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 calculations of IUC/ ADC. The estimated amount of ADC was large and was 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. Moreover two ADC regimes were specified, one uniform and another escalating with distance. 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. This as well as a number of other comments justified a review of the regime (please see below).

21. The results of the review were encompassed in the second IUC regime notified in a 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 Telecom Sector revenue. The total ADC was mostly for BSNL. 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 sectoral revenue, a much more sustainable amount, as against 30% in the initial regime. In the revised (second IUC) regime with Authority deciding to give a total ADC of Rs. 5340 Crores, BSNL was expected to get about Rs. 1152 Crores from Mobile Service Providers covering all outgoing long distance traffic including Outgoing ILD traffic, Rs. 1376 Crores from ILDOs for incoming international long distance traffic, and fund the rest of ADC of around Rs. 2264 Crores from its fixed line operations. All other Fixed Service Providers taken together were likely to get Rs. 81 Crores from Mobile Service Providers, Rs. 168 Crores from ILD incoming traffic and Rs. 300 Crores from their outgoing traffic. Table 6 below gives a summary. The Authority also had taken note of the tariffs reported by the incumbent in comparison to the IUC / ADC amounts and concluded that the earlier regime was not sustainable and therefore on a request from BSNL in its tariff report had allowed BSNL to operate tariffs, which were below cost (including IUC and ADC), and hence in one way would have been predatory. Similar decisions for this reason were taken in respect of tariff requests received from other fixed line service providers. The revised regime was to be implemented from 1st December,

2003 but this was delayed on account of requests from Service providers while seeking clarification on certain issues. The revised (second IUC) regime became effective from 1st February 2004.

TABLE 6

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)
As per 24th Jan 2003 Regulation calculations	13518	12381	10084	2298
As per 29th October 2003 Regulation calculations	5340	4792	2264	2528

22. The revised IUC/ ADC regime was based on, inter alia, an underlying mobile subscriber base in September, 2003 which was 21 Million only (17 Million Cellular and 4 Million WLL(M) which became CDMA Mobile subsequently)***;*** top down estimates of costs of BSNL which need to be adjusted over time for depreciation; costs allocated to non-fixed line items covered by the accounts (including mobile telephony); and USO amounts given to BSNL by the Government. A major development has been an unprecedented increase in the overall mobile subscriber base including the subscriber base of BSNL mobile. For example, the Mobile subscriber base has reached about 46 million as on 30th November 2004. This has provided a much larger base of total minutes contributing to ADC. In addition, the Authority had received reports of implementation difficulties, which would need to be addressed. For these reasons, there was a need to review and revise the prevailing *ADC* regime.

23. Taking all these aspects into account, the Authority released a Consultation Paper, dated 23rd June 2004 to review the ADC regime and implement the ADC regime as revenue share of Adjusted Gross Revenue. In this paper, the

Authority noted certain salient points made in its Regulation of 29th October, 2003, and the difficulties that were reportedly arising in implementing the ADC regime**.**

24. The Consultation Paper recalled in particular that the Regulation of 29th October, 2003 had mentioned factors such as the principle of gradual implementation of forward looking long run incremental costs (FLLRIC) in the ADC regime, accounting for benefits arising from the incumbent being allowed entry into cellular market, and that the ADC regime should ideally be merged with USO regime in about 3 to 5 years time. The Consultation Paper had proposed a revised ADC regime to be implemented from 1st October, 2004. Based on its approximate calculations, and forecasting the situation likely in March 2005 (i.e. the mid-point of the period October, 2004 to September, 2005), the Paper had provided a range of revenue share for ADC, namely 2.2% (with average monthly rental revenue of Rs. 200/-) and 5.3% (with average monthly rental revenue of Rs. 156/-). The Authority has received comments in writing as well as in the Open Houses and other meetings on this issue. The issues relating to ADC regime being based on Revenue Share is addressed in Section V below. The Authority has also taken note of the fact that most of the new Fixed lines being added by BSNL are in the Rural Area and as such BSNL's average monthly fixed services rental as Rs. 200/- may not be achievable in the near future. The Authority has further noted that Audited Results of BSNL and other Service Providers have just been announced. It will take some time to examine the issues like admissibility and quantum of ADC for Fixed Service Providers as detailed analysis of the relevant network elements data, including the verification of the cost items presented in the annual reports of service providers will be required. As discussed in detail, the Authority proposes to address these issues through a Consultation Paper when related issues like implementation of the USO regime, differential termination charges for International and national long distance charges are also addressed. In this background adequacy of a uniform percentage related to AGR vs higher percentages of revenue share percentage

for National Long Distance and International Long Distance traffic streams may also be relevant.

25. The extensive comments cover the entire range from there being no need or basis to provide ADC, to a need to continue with the ADC regime and even consider higher provision of the ADC amount. 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 FLLRIC costs because 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. 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*."

26. Thus we need to bear a number of factors in mind in the context of a revision of the ADC regime. The net effect of depreciation in the gross CAPEX and allocation of costs to non-fixed line items is likely to decrease the overall costs per subscriber over a period of couple of years. Issues relating to BSNL being given Mobile Licenses without entry fees, increasing application of Forward Looking Long Run Incremental Costs to estimate the ADC and an increase in the disbursements made through USO are also needed to be taken into consideration. These factors will be considered in greater detail in the Authority's forthcoming Consultation Paper. In the current exercise, the Authority has focussed mainly on the change in overall minutes funding the ADC amount with the ADC amount being the same as that used for the regime notified on 29th October, 2003.

III. Summary of the main comments

27. The various comments received are summarized below:

(a) **<u>ADC regime should be done away with or its scope should be reduced:</u>**

- A number of operators said that the amount of ADC had been grossly over-estimated. BSNL on the other hand stated that the correct ADC amount should be much higher.

- Several comments, including from most private operators, were that when USO is in place for rural telephony, then ADC is not justified and it should not be given at all.
- One view was that BSNL is not a deserving candidate for the suggested ADC. It noted that BSNL is concentrating now only on GSM, and that no significant increase has been proposed by it in its switching capacity for the year 2004-2005.
- The ADC regime could be changed in such a way that ADC is:
    - provided only for rural fixed telephone line (where regulated tariffs are in place).
    - implemented as a percentage share of the NLD and ILD revenues only.
    - recovered from commercial subscribers who can afford it.
    - abolished from the cell to cell calls so that one does not have two levies on the service providers. i.e. ADC as well as USO.
    - charged as a fixed amount of cess per month subscriber from all subscribers except the Rural fixed subscribers.
    - linked with a TRAI specified rollout of rural lines and for better implementation should be merged with USO regime.
    - calculated so that un-utilised funds already available with the USO fund should be taken into account.

- Current regime is unfair as a fixed line phone used by a rich / commercial fixed urban consumer should not be subsidized by a poor pre-paid mobile user.
- There is no private FSP at present. All have migrated to Unified Access Service Regime. If required, BSNL only could be funded for Rural fixed lines.

(b) **<u>Revenue share ADC regime should be put in place:</u>**

- If ADC is to be given, it should be on the basis of revenue share as it would help operators to settle their accounts with BSNL. The proposed revenue regime is a far superior regime than the earlier regime as it is transparent, easy to calculate, easy to identify and administer.

- Since the Authority has already implemented USO as a Revenue Share regime, it should be possible for it to also implement ADC as a revenue Share regime.

(c) **<u>Revenue Share ADC regime could result in increase in local call charge:</u>**

- If at all any ADC is given, it should be structured in such a way that it does not affect the call charges for the poor.
- Removing ADC from the international calls would lead to charges for local calls etc. being raised, especially due to competition in the long distance and international call segment pushing down the possibility of keeping a buffer in the prices for these calls.
- If the ADC on incoming ILD calls is removed, then the benefit will go towards the International Operators (Carriers) and the domestic call charge will increase.

(d) **<u>Grey Market traffic:</u>**

- Revenue Share ADC regime would also address the issue of ILD grey market .
- The issue of grey traffic is not new and in no way related to the present ADC regime. The traffic being terminated into BSNL's network also does not indicate any decline in the incoming ILD minutes. Some variation in minutes over previous year is a seasonal fluctuation and does not give rise to grey market traffic.
- Another view was that the difference between overall charges imposed on international and national calls provides an arbitrage opportunity, and promotes grey international traffic.

(e) **All Basic Service Operators should get ADC:**

- BSNL and private basic operators bear the same cost. Therefore, all the private operators who are providing the services at prices at which BSNL is also providing services, should be given ADC.

(f) **Present regime should continue:**

- The comments under this category are earlier submissions by BSNL, which stated that there is no need for change in present ADC regime, only a proper recovery mechanism is required to be put in place by the regulator so that reporting and accounting of the traffic is done accurately and transparently and the share of BSNL is transferred in a timely manner. It is also stated that there is practically no increase in the urban DELs. In fact there has been negative growth in such DELs. The DELs added by BSNL during the year 2003-04 have been primarily in semi urban and rural areas where the per line capital required is undoubtedly higher than capital required in the urban area.

- Other comments include:
    - it is just four months since the new IUC regulation along with the ADC recovery mechanism has been implemented. The process has just started getting stabilized and it should not be disturbed. Any teething problem in this process can be attended to in due course.
    - the present regime may be allowed to continue for at least one year. The revised regime, if any, may be implemented only after 1st February preferably from 1st April 2005 so as to coincide with the financial year.
    - the calculation sheet for ADC amount, termination charges, carriage charges etc. was not provided for scrutiny. This made the entire exercise non-transparent and clearly in conflict with the

statutory mandate on TRAI to ensure transparency in its functioning.

  - TRAI has stated that due to substantial variation of the ADC for domestic and international calls, the underlying data required for collections is detailed and that TRAI's experience has shown that problems are being faced in reconciliation on this account. This is purely an arbitrary assumption.
  - No comparison of revenue share vis a vis ADC on call by call regime has been done.

(g) **Access providers should be allowed to negotiate with ILDOs the termination charge on incoming international calls**

- This comment was made primarily by BSNL and subsequently by cellular mobile operators, in the last part of the process. It was stated that termination charges in other countries were high, were going up, and by limiting the termination charge that can be received for incoming international calls, the Authority was denying revenues to access providers which were legitimate business revenues and would contribute to spread of the network in rural areas.
- By allowing the access providers to negotiate with ILDOs, the regime would provide adequate revenues to pay for the high termination charges that apply in other countries. Otherwise, the Indian consumers would be burdened in a major way.
- Such a negotiating possibility should be given to mobile operators because the higher termination charges obtained through negotiation would give them an incentive to curb those who use their facilities to carry grey market traffic.
- A contrary view of ILDOs and some access providers, was that negotiation should not be allowed because it would lead to chaos in the market, would give rise to undue benefits to the dominant operators, and would continue

to encourage grey traffic. This view was that certainty was very important in the market, and allowing negotiations would take away such certainty.

(h) **Other:**

- ADC amount applicable for ILD services should be in two slabs. These slabs could be between Rs 1 and Rs. 2. This will also remove the incentive to Grey Market operators.
- The costing details, traffic and revenue pattern could be studied based upon detailed and audited data of the various operators as envisaged in the IUC Regulation dated 29th October 2003 for review of the ADC regime.
- There should not be any ADC. Instead, the relevant assistance should be provided through the USO regime.

IV. A Key Clarification Regarding Merging of the ADC and USO Regimes

28. An important comment made above is that the ADC regime should be replaced by or merged with the USO regime, and that the concurrent implementation of these two different regimes is not appropriate. While there is a considerable overlap among the objectives of the USO and ADC regimes, these regimes do not have identical objectives. But overtime, with the USO regime being implemented in terms of net cost SDCAs as was notified by the USF Administrator in early 2004, the overlap between the ADC and USO will in effect increase. Two points are worth noting in this context. First, the Authority has already stated that the ADC regime will be phased out over time and will be merged with the USO regime. Second, the framework used by the Authority to calculate the ADC amounts integrally links the USO and the ADC regimes in a way that as the USO disbursements increase, the ADC amounts will decrease, taking account of the assistance received from the Universal Service Fund (USF).

29. Presently, the Government is collecting the USO amount as 5% of Adjusted Gross Revenue as part of revenue share License 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 for USO. For instance, in the next couple of years, the amount collected for USO would be more than Rs. 3,000 crores per year. With bulk of the funding under USO for projects linked to access being likely to be completed by 2005, the USO amounts focusing on DELs in net cost SDCA's would have a corresponding impact in terms of reducing the ADC amounts calculated by the Authority.

30. The Authority expects that in the near future the USF will be fully functional, that it will receive the relevant amounts for disbursement under the USF, and that these funds will be disbursed to the service providers as per the procedures decided in that regard. In the methodology used by the Authority to calculate ADC, these disbursed USO amounts would be reflected in a fall in the ADC estimates. Conversely, if the USO amount, which is being collected every year, is not disbursed, the ADC estimate would be higher and due to such non-disbursement the ADC regime will impose an avoidable burden on the consumer, which would involve higher prices, lower overall growth and below potential achievement of the Universal Service objectives.

31. Under the framework used by TRAI, at least five factors can lead to a merger of the ADC and USO regimes.

- As the USO funding increases it will cover more and more of the ADC amounts estimated, thus contributing to a decrease in the ADC amount to be funded through a regime other than the USO.
- The amount available for USO funding will increase over time as the revenue base providing the USF rises.
- If net capital employed per subscriber continues to decrease in the manner that it has declined in 2003-2004 compared to 2002-2003 (due to a large depreciation on existing assets and relatively small increase in new subscriber base), the cost based monthly rental will decrease. This will contribute to a reduced ADC per subscriber.

- As the ratio of mobile subscribers increases, the joint and common costs in the overall costs that will be allocated for the ADC purposes will be a lower proportion of the overall costs.
- The Authority has already stated that it will be gradually using more of the Forward Looking Long Run Incremental Costs (FLLRIC) to estimate the ADC.

32. With these factors, the framework used by the Authority for estimating ADC already provides a basis for merging of this regime into the USO regime. Of course, the extent of USO funding necessary would depend on the scope and coverage of the USO programme, which may in future include additional services that may require compensation of access deficit.

V. Further Examination of the Issues

33. In addition to the comments on merger of USO and ADC regimes, the Authority has also taken the various other 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

34. The Authority considered the existing situation, taking account of the latest balance sheet of BSNL, the prevailing tariffs, and other relevant likely developments. The Authority recalled that even with certain optimistic assumptions in its Consultation Paper on ADC, there was a sizable amount of ADC which remained. 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.

(b) How much ADC should be provided

35. The Authority has decided that since the present review is in the nature of an interim review based on the limited data, the revised regime should result in providing the same amount of ADC as specified under its Regulation of 29th October, 2003. This was about Rs. 5,300 crores in aggregate, with about Rs. 4,800 crores for BSNL and about Rs. 550 crores for other fixed line operators. This would be appropriate in the Authority's view, based on its assessment of the underlying costs and revenues, as well as the various other relevant factors mentioned in this Explanatory Memorandum, that relate to inter alia the structure and growth of the networks of the operators and the pattern of investment undertaken by them.

36. In the above context, the Authority recalled that in its October 2003 Regulation, it had decided that the full ADC amounts 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. Traffic minutes reported suggest that overall annual ADC collections by 31st January 2005 are expected to be higher than the ADC amount allowed in the regulation.

37. The revised ADC regime too would be subject to the factors underlying some of these reasons, such as those mentioned earlier on the basis of which the Authority expects the ADC to become lower over time. These include, for example, the Authority's observation from BSNL's balance sheet that its capital cost base for determining the cost based rental has been declining over time. The effect of such a decrease presently has been mitigated because of the combined effect of an increase in tax rate applicable to BSNL and a decrease in the overall long distance minutes per subscriber. The tax rate for BSNL has been increased from its earlier preferential status rate, and results in a large effect on the capital cost base (BSNL is appealing the change in tax rate). This

effect of a tax rate, however, is a one time effect and will not occur in subsequent years. Hence, the overall trend of lower cost based rental will continue, with obvious implications for reducing the access deficit. In the background of these several factors, the Authority is providing the same amount of ADC funding as given under the IUC Regulation of 29th November, 2003. The total amount of ADC was Rs. 5,341 crore, of which BSNL's share was about 90% i.e. about Rs. 4800 Crores.

38. Thus, the regime notified under this Regulation is continuing with the present mechanism for ADC collection in such a way that the overall amount of ADC funding estimated for BSNL is the same as that was the basis of the regime notified in the IUC Regulation of 29th October, 2003. **The total amount of ADC is hence not being changed by the Authority.**

(c) Should Private fixed line operators continue to get ADC and if so, should they get it on the same basis as BSNL?

39. The Authority recalled that BSNL and the other fixed line operators were not treated in the same way even under the existing ADC regime notified in the Regulation of 29th October, 2003. In the existing regime, therefore, all the ADC arising from mobile/ WLL(M) to mobile/ WLL(M) calls, as well as from international calls to or from mobile/ WLL(M), was being given only to BSNL. The other fixed line operators did not receive any ADC from these calls.

40. However, if we consider the Authority's decision that in the revised ADC regime, BSNL and the rest of the fixed line operators will respectively get the same ADC amounts as specified for the existing ADC regime, both BSNL and the other operators are being treated similarly. The Authority also noted that with the same ADC amounts to be funded and the minutes of use having gone up, the ADC charge per minute can be reduced.

41. The issue of whether the ADC regime applicable for BSNL and other fixed line operators should be the same can also be seen in terms of two important criteria,

namely the distribution of subscriber base for which access deficit would arise, and second the distribution of subscribers in urban and rural areas. As shown by Table 3 given earlier in this Explanatory Memorandum, the position of BSNL and the other fixed line operators is very different when they are compared on the basis of these criteria.

42. The first criteria is linked to the fact that ADC funds have been provided to fixed line service providers to cover the shortfall in revenues for access (i.e. the deficit), and in a situation of incomplete tariff re-balancing, sustain the service even with intense competition in the long distance market. The Authority recalled in this context that either due to the Regulator or the Government, an upper limit was imposed on the fixed line rental charged by BSNL, and the other fixed line service providers were also constrained since BSNL has been the market leader in this regard. Consequently an access deficit arises because the revenues from rental charged are much below the cost based rental, with the latter being calculated based on the capital cost for the local call portion of the network (please see the Regulations of 24th January and 29th October, 2003 for more detail). A major portion, i.e. about three-fifths of the cost base for estimating the cost based rental is accounted for by the capital expenditure in the last mile portion of the network. Thus, when fixed line service providers give last mile connections through radio, there is a major decrease in the capital costs for the last mile, and hence in the overall costs used to calculate the cost based rental. In this regard, the Authority does not agree with the point that consumer equipment cost should be included for estimating overall Access Deficit.

43. The second criteria is linked to provision of rural services, and the likely average monthly rental revenue received by various operators. Table 3 also shows the relative presence of the subscriber base of various operators in rural and urban areas, and it is evident that compared to BSNL, the other operators are based in relatively lucrative areas. This also implies relatively higher monthly rentals, and even ARPUs, for the other fixed line operators compared to BSNL.

44. Based on the above, the Authority has decided that operators other than BSNL should continue to be treated differently from BSNL in terms of the ADC regime applicable to them. This implies preferential treatment in terms of ADC funds for the operator who is presently providing virtually the entire rural telephony. As mentioned earlier, when the USO regime becomes operational and the USO funds collected are disbursed for the net cost SDCAs, the ADC amounts estimated will correspondingly become lower.

45. In this background, and keeping also the objective of providing the same overall ADC funding to BSNL as in the estimation provided in the Regulation of 29th October 2003, the Authority has conducted further calculations and has decided that all the operators other than BSNL should get ADC funding only from their outgoing calls. The ADC generated by all the incoming calls that earlier provided them with ADC funding, would now be provided to BSNL. The calculations of the Authority show that such a regime would be more than adequate to provide the other fixed line operators with the relevant ADC funds.

46. The Authority did consider whether the other fixed line operators should not be provided any ADC at all, but reached the conclusion that till some method is implemented for distinguishing calls to/ from WLL(F) from other fixed lines, it is important that for maintaining the sustainability of the ADC regime the "other fixed line operators" should continue to retain the relevant ADC charge for their outgoing calls. The Authority will soon conduct a review of the regime and then consider any further changes that may be required in the regime.

47. The Consultation Paper will cover issues such as

a) Admissibility and extent of ADC to BSNL after review of data,

b) Allowing other fixed line operators to retain ADC out of outgoing call tariff,

c) Admissibility of ADC for WLL(F),

d) Stage at which ADC can be charged as Revenue Share,

e) IUC (carriage and termination issues) including those for Incoming International calls.

48. Within 3 to 6 months of the implementation of the new ADC regime from 1st February 2005, the Authority will review and adjust ADC rates for the subsequent quarters based on new minutes of usage and ADC collection data. This review will not call for any new consultation process.

(d) What should be the shape of the new revised ADC regime consequent to the growth in subscriber numbers and the call minutes

49. The issues which arise as a result of increased subscriber numbers and call minutes while retaining the same quantum of ADC are (i) whether the ADC regime should be a revenue share regime or per minute rate regime and (ii) if the per minute regime is retained whether the international call ADC rates should be reduced more or the domestic call ADC rates should be reduced more, keeping in mind the three associated factors viz. (a) impact on Grey market traffic, (b) reduction in domestic call rates which benefit the national consumers more and (c) benefit to foreign carriers and customers instead of domestic customers. These aspects have been discussed in the following two sections d(i)) and d(ii).

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

50. In its assessment of whether it is appropriate to move at present to a revenue share ADC, the Authority took note in particular of the comment that such a transition could create problems of adverse impact on local call tariffs. Currently a large component of ADC is collected from the revenues of the International and National Long Distance calls. In order to maintain the same quantum of ADC receipts to BSNL and other Access Providers in a uniform revenue share regime, the contribution of International and National Long Distance traffic revenues will fall and that of local calls will increase which will impact local call tariffs upward. For the other possibility of unequal revenue share for different segments of the

traffic, it was found that much more information on traffic and revenue generated and its separation in the accounts of various service providers is necessary, which is currently not available. The Authority has also taken note of BSNL's submission dated 14th July 2004 wherein it had stated that

"*The impact of changeover from call based ADC to revenue share based ADC on long distance call revenue has not been considered by the regulator. For example, currently the IUC compliant NLD tariff is minimum Rs. 2.50 and ADC component of this is Rs. 0.80. This represents ADC as 32% of the revenue. In case the ADC is prescribed as percentage of revenue, this 32% share cannot be maintained and as per TRAI's own calculation and may fall down to 2% to 5%. This will amount to a free fall in the long distance tariff. In case the tariff for this segment falls by 25% to 30%, the entire surplus in the sector will vanish. This surplus has been effectively used in the past for financing the growth of telecom sector by BSNL. This will not only affect the BSNL's capability to expand the telecom network but will also adversely affect all other access providers.*"

The Authority has further noted that since the charges for shorter distance calls in general are higher for mobile, and these operators have additional sources of revenues from value added and supplementary services, they have greater flexibility than fixed service providers for adjusting to a situation when the present regime for ADC is changed to a revenue share regime. An important factor in this context is also that even though the Authority has given tariff forbearance with respect to urban monthly rentals and local call charges, the incumbent operator is not really in a position to take advantage of such flexibility because of the limits imposed by the Government on its rental and local call charge for reasons of affordability and social objectives.

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.

52. The Authority also noted that further unbundled Network Element data would be required to fully address the matter of allocation of common costs etc. to different services provided by any service provider, with primary focus on the incumbent. Such information would be important to determine the relevant revenue share. In this context, implementation of Accounting Separation by the Service Providers including BSNL is a positive signal. Of course, one possibility when there is paucity of adequate information is to decide an appropriate ADC amount, with any residual amount being notionally covered by the fact that the Authority is increasingly introducing Forward Looking Long Run Incremental Costs (FLLRIC) for estimating ADC, and has also decided that the ADC will be progressively decreased to be phased out in a few years time. Nonetheless, it would be useful to obtain more updated and detailed unbundled network element costing data for an exercise which would facilitate making a transition to a new methodology for collecting/ disseminating the ADC.

53. With respect to the point that USO has been implemented as Revenue Share and hence, it should be possible to also introduce ADC as Revenue Share, the Authority noted that the USO regime is designed to re-allocate a portion of the current License Fee Revenue Share for the USO funds. Thus, with USO there is no additional funding involved, only re-allocation of the existing funds. In the case of ADC, additional funding is involved and all the points mentioned above with respect to Revenue Share become relevant.

54. The Authority, therefore, decided that it would not presently implement ADC Regime as a percentage of Revenue Share. It would continue with the Per Minute Charge based regime.

(d(ii)) With Per Minute Rate ADC regime, how should the rate of adjustments be handled?

55. Availability of relevant traffic data and actual ADC collections including notional collections from calls originating in Fixed Line Operators is pertinent to this issue also. Data issues are addressed in a subsequent section separately. The Authority has taken note of the fact that BSNL is a major party from which full data as per the prescribed formats has not been received. BSNL has submitted that it is not in a position to give the requisite data on traffic parameters because it does not have CDR based system. The Authority recalls in this context the TRAI Press Release 2/2003 dated 19th April 2003 which had, on the basis of BSNL's input, stated that: "The interim phase will end by 31st March 2004 with implementation of CDR based billing system, by all operators including BSNL".

56. The Authority also recalls the complaints from service providers that BSNL is using the revenues from ADC to cross-subsidize its tariffs in lucrative segments and out-compete the others. The Authority had examined the international call tariffs of BSNL, and had found that the BSNL tariffs covered costs. This matter, however, does continue to be a concern with the industry and the Authority will be examining situations where tariffs are specified resulting in an anti-competitive situation.

57. Further, Authority has received a letter dated 30th August, 2004 from COAI stating:

"*it would be very severe blow on the Indian domestic telecom industry providing an advantage only to the international carriers – who have no stake in creating infrastructure or obligation to increase tele-density in our country…..*

… We need to first and foremost protect Indian subscribers and consumers from the burden of ADC rather than giving such relief to foreign carriers and consumers…

… Reduction of ADC on international calls without a corresponding removal from the domestic segment would be to the detriment of Indian consumers and operators".

58. A similar communication has been received from AUSPI on 1.9.2004. The Authority asked both the parties to substantiate their points with facts and figures. They had a meeting with the Authority on 2.9.2004. The main point that emerged from the meeting was that while these operators were in general against the imposition of ADC, they were of the view that reduction in ADC should take place not only for ILD calls but also for national calls.

59. The Authority recalled in this context that its primary emphasis has been to reduce domestic market prices and boost domestic growth. The Authority is of the view that a reduction in the ADC charge on domestic calls would meet such objectives, and thus the Authority is in favour of taking such action, while balancing the achievement of its other objectives (e.g., grey market traffic). In this regard, the Authority has also continued to focus on its general thrust to simplify the regulatory regime and to create conditions, which facilitate the ongoing convergence and "death of distance" that is increasingly taking place due to technological and market developments. The decisions of the Authority in the revised ADC regime reflect all these considerations.

60. The Authority also noted the statement of Chairman, BSNL in a recent meeting (24th December 2004) with the Authority that BSNL would begin implementing CDR based system for Interconnect arrangements in the near future.

(e) Relative considerations of Grey market International calls and lowering of domestic call ADC rates

61. The issue of grey market international calls continues to be relevant, as is indicated by anecdotal evidence and complaints submitted to the Authority, and possibly also by the decline in the incoming international call minutes per subscriber. The Authority has now seen that a more focused attempt to introduce incoming grey traffic may have begun in the market, and this needs to be addressed both by decreasing the incentive provided by the arbitrage margin and increasing disincentives through monitoring and penalties. The Authority has already provided the relevant complaints from service providers (which submitted information on grey traffic), to the Licensor to further examine the matter utilizing its established mechanism that was already in place. In the Authority's opinion this was the quickest way to address the matter, given the existing set-up of the Regulator in comparison to that of the Licensor, the existing legal framework within which the Regulator has to operate, and the fact that the Licensor has powers to quickly impose penalty, if it so desires. The Authority's assessment has been shown to be valid, as the licensor has already begun to take certain preventive and corrective actions in this regard and this should be reflected in the Minutes of usage (MOUs) for International calls and ADC collections.

62. A major point made in the context of the recent complaints regarding grey market traffic has been that the Authority's ADC regime has resulted in a large arbitrage opportunity, because of the large difference between the ADC on international and national calls. It has even been stated that in comparison to the ADC regime notified in January 2003, the revised ADC regime notified in October 2003 made the grey market situation worse because it increased the arbitrage margin, particularly for cellular mobile calls.

63. In this context, the Authority noted that in its revised ADC regime notified in October 2003, it had emphasized the sustainability of the regime and reducing

prices to spur growth. Sustainability required a reduction in the overall ADC amount and collecting it from both fixed line and cellular mobile calls, rather than imposing it only on calls involving fixed line. Thus, if the ADC charge would not have been imposed on mobile calls, the survival of fixed line networks, for whom the ADC regime had been put in place, would have been jeopardized, due to the ability of mobile operator's to substantially reduce tariffs to levels which would require competitive fixed line tariffs to be less than those required to sustain ADC earnings.

64. Moreover, the initial ADC regime, which was revised through the October 2003 notification, had relatively high ADC charges for domestic calls, which would imply correspondingly high domestic prices. The Authority recalls that in its revised ADC regime it had emphasized a reduction in domestic call charges and consequent growth. It had also ascertained that while the revised regime imposed ADC on mobile operators, it was possible for these operators to sustain their non-ADC prices even after the new regime. This implied keeping the domestic component of ADC as low as possible. To fund a given amount of overall ADC, reducing the arbitrage margin by imposing a lower ADC charge on international calls would have meant having higher ADC charge and increased prices for domestic calls. The Authority had to choose between its various objectives, and in this context the Authority recalls its statement in paragraph 87 of the Explanatory Memorandum to its IUC Regulation of 29th October, 2003, i.e.:

"*The Authority considers that the origination/ termination charge for international calls has to serve the objectives of both a reduction of the grey area traffic and provision of revenues for achieving the objectives of New Telecom Policy 1999. The Authority has considered these objectives, and has decided to keep this balance in mind. At present, the revenues available from such calls for the objectives of tele-density have been given greater emphasis in view of a need to specify affordable tariffs in the market along with an ADC regime. The Authority has thus decided to specify an access deficit charge of Rs. 4.25 per minute for these calls for both outgoing and incoming minutes.* ***The Authority will consider***

***lowering this amount over time. This amount would be collected by fixed line service providers on their outgoing/incoming calls as mentioned above in the method for collecting the ADC. For ILD calls to/from cellular mobile and WLL (M), the ILDO will collect the relevant access deficit from the the access provider for outgoing calls, and pay from its settlement rate for incoming calls, and pass on the ADC amount to BSNL*."** (emphasis in original)

65. The above-mentioned decision of the Authority also took into account the views of a number of participants that were expressed in the Committee on Grey Market Traffic that had been established by the Authority. According to BSNL, supported by MTNL, TEC, DOT and Vigilance Cell of DOT which had participated in the Committee, grey traffic had been around even prior to any ADC regime (in fact, even VSNL's submission to the Committee shows this), that grey traffic was not increasing according to the data on international traffic received by BSNL, and a change in the arbitrage margin would not address the issue of grey market traffic. According to this view, grey traffic would be addressed through a monitoring and penalty mechanism. The Authority had also noted that a major new monitoring mechanism had been put in place by the DOT vide its letter of 23rd and 24th June, 2003. Moreover, in the context of reducing the arbitrage margin, an important point emphasized by the Committee was that the objectives of affordability and growth of tele-density encompassed in NTP 1999 should not be lost sight of.

66. Thus, the decision of the Authority on the ADC regime has involved a balancing of the different objectives, while taking account of supplementary measures that could address the achievement of any objective (e.g. grey market traffic) that are not addressed with equal emphasis in the revision of the ADC regime. It is noteworthy that even now, the view of BSNL has not changed, and in its recent submissions to the Authority, both BSNL and the mobile operators are seeking changes in the ADC regime that may increase the arbitrage margin even further. This last aspect will be discussed in greater detail in the following section.

67. The Authority now has had to again face similar questions as it did in the context of its previous review of ADC. **Once again, the relative emphasis of the Authority is much greater on reducing domestic prices and encouraging growth. In addition, the supplementary monitoring process is already in place, as seen for example from the recent actions of the DOT. In its submissions to the Authority, BSNL has also emphasized this fact, and has re-affirmed that it is monitoring and penalty mechanism and not the reduction of the arbitrage margin which will address grey traffic.** It is noteworthy that under the revised scheme all the ADC from incoming international calls will be provided to BSNL, and any loss of ADC due to grey traffic will be incurred by BSNL alone.

68. The Authority has kept these points in mind, but at the same time, the Authority will continue to decrease the ADC on international calls and ultimately impose a revenue share regime, so that incentives for arbitrage generated in the regime will be reduced. Meanwhile, in addition to the DOT's existing monitoring mechanism, which has been further strengthened by DOT in recent months, the Authority has established an Expert Group to put in place a system which will allow examination of the possibility of under-reporting of international call minutes by ILDOs.

69. The ADC on international calls needs to be reduced for another reason, which at present is not as important as it may become in a few years time, namely use of ISPs for making outgoing international calls due to their price advantage. The Authority has seen that the outgoing minutes reported by all the four licensed ILDOs, for the year 2003-04 are 1176 million, while the ISPs have reported 70 million outgoing ILD minutes (for internet telephony), i.e. about 6 % of the outgoing minutes of ILDOs. The Authority has further noted that this level of traffic was being carried by ISPs when their tariff rates for internet telephony calls were around Rs. 5 per minute. The Authority has been informed that the tariffs per minute have subsequently declined even further. Further the quality of

service offered by ISPs has improved and as a result more minutes are likely to flow through the ISP network in the coming months. The Authority noted that ADC is not applicable on such calls at present, and therefore there is a possibility of ISPs attracting calls away from the access providers. At present, however, the overall outgoing international call minutes are growing relatively rapidly at more than 3 per cent per month, and there may be some scope of having a transition period before establishing a regime which could address these aspects also. The Authority is bringing in higher reduction in ADC for outgoing ILD calls as compared to incoming ILD calls.

(f) Allow access provider to negotiate termination charge with ILDO

70. A proposition was made by BSNL and later supported by COAI that on incoming international calls the rate could be reduced but the Access Providers be permitted to negotiate the termination charges with the ILDOs. The Authority took account of all the points made in favour and against allowing the access provider to negotiate the termination charge with ILDOs. The Authority considered ITU-T Recommendation D-140 and its subsequent information notes, and discussed the matter with relevant ITU experts also. It was noted that these documents provided ceilings for the rates negotiated between the ILDOs of two countries, akin to a settlement rate. To begin with, it was clarified with BSNL that it was not seeking for negotiations being allowed between the ILDOs of two countries. Such negotiations already take place. Rather, BSNL as Access Provider is seeking the possibility of negotiating with the ILDOs which bring international calls to India, so as to obtain a larger amount as termination charge from those operators.

71. The Authority recalled the situation a few years ago, when such negotiation was allowed and the uncertainty and dispute that had marked 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.

72. 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. The Authority noted that these points were relevant also in the context of the submission made by BSNL with respect to the ceiling given in ITU-T Recommendation D-140 and its information notes.

73. The Authority then considered in detail BSNL's submission that mobile termination charge in other countries was much higher than in India, and that in particular in Italy these charges were being increased. It is evident, as shown for example from Table 1 given earlier, that compared to India, these higher termination charges (which are also similar or same as the domestic mobile termination charges), result in much higher tariffs for the mobile service in these countries. The tariffs for India are substantially below the levels for these countries, and in fact in Table 1, they emerge as the lowest among the countries covered there. Moreover, the minutes of use by Indian customers are relatively high compared to the other countries. A major reason for this situation is the

effort by the Authority to devise a regime which results in low domestic tariffs, and also paves the way for convergence that is approaching fast. In addition, the Authority has checked further on some of the specific points made by BSNL about the termination charges increasing, and there is evidence which contradicts these submissions.

74. 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 present 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. It is incorrect to pick and discard one's principles and factual positions depending on which objectives they meet in specific cases. 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.

75. 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.** The Authority has taken note of the fact that reduction in Mobile tariffs and decrease in excise duties on Mobile handsets has led to a major increase in the demand for mobile segment. The Authority will keep a close watch on the developments and hopes that reduction in ADC rates will bring in more minutes through licensed ILDOs.

76. The Authority did, however, consider that as part of its next Consultation process ,it would later consider whether to use a differential (and even flexible) termination charge as a regulatory policy tool within a framework which included the objectives of higher domestic growth and addressing international grey market traffic.

(g) Summary

77. In summary, while the Authority has addressed all the relevant issues in deciding its revised ADC regime, it had to balance the achievement of various objectives. This can be seen in the context of certain key objectives emphasised during the consultation process, for example:

(1) Reducing the domestic call charges for the general benefit of our consumers.

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

(3) Ensuring that benefit not passed on to foreign carriers and consumers at the cost of domestic consumers and operators. (A number of stakeholders have said that if ADC on incoming International calls is reduced, this would imply lower charges and hence greater benefits for foreign operators and consumers.)

78. A crucial factor in the assessment was that for funding a given ADC amount, any reduction in the per minute ADC charge on International calls would require an increase in ADC charge on domestic calls. Likewise, any increase in per minute ADC charge on International calls would result in a lower ADC charge on domestic calls. This means that a change in ADC charge to meet objective (1) or objective (3) would compromise achievement of objective (2). In this situation of a trade-off among these

objectives, the Authority has to choose the appropriate balance while specifying the new ADC.

79. As in its previous review, the Authority has given the highest priority or emphasis to the objective of reducing domestic tariffs to meet domestic consumer interest, and spurring sustained growth. While doing so, it has also kept in mind certain supplementary measures (monitoring and penalty) that will address the objectives, which have been given relatively lower emphasis.

80. The Authority further noted that changeover to 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 compared to the contribution from the other traffic, this solution is difficult to implement. This will be possible when disbursement from USO reach their full proportions for Rural telecommunication and as a result the total ADC amount reaches much lower values because of cost reduction or tariff rebalancing and necessary segmented data is available.

81. Taking account of the increase in the overall minutes since the previous ADC exercise, the Authority has decided that:

- **The method of collecting the ADC amounts will be same as before,**
- **Amount of ADC for the BSNL and other fixed line operators will be the same as specified in October 2003 Regulation, i.e. the ADC amount has not been changed,**
- **ADC charges per minute for domestic long distance calls should be reduced,**
- **All ADC from Mobile Networks to be paid to BSNL irrespective of terminating network,**

- **Fixed service providers to retain ADC only from their outgoing traffic including ILD segment,**
- **ADC on International calls will be reduced to lower the margin which encourages arbitrage through grey market traffic,**
- **All ADC from incoming International Long distance calls irrespective of terminating network to be paid by ILDOs to BSNL only,**
- **ADC on outgoing international long distance calls to be kept lower than ADC applicable on incoming ILD calls so that advantage of ADC reduction benefits Indian consumers more,**
- **It will simplify the ADC regime, and bring in greater convergence across different distance categories,**
- **A new consultation paper will be brought out on admissibility and quantum of ADC for Fixed Service Providers based on an examination of the relevant network elements data, including the verification of the cost items that are presented in the annual reports of service providers, the implementation of the USO regime, and other factors which have been mentioned above as affecting the ADC estimates.**

82. The Authority will review the ADC rates within three to six months of its implementations on the basis of examination of new data. This will be done without a new consultation paper.

(h) The quality of data used by TRAI

83. For its ADC review, the Authority had asked service providers to give relevant data covering ADC collections and traffic minutes along with distribution into various distance slabs covering intra and inter circle, the overall subscriber base and revenues/ costs. Data was collected for the period February to September, 2004, i.e. the first eight months for which the ADC regime notified in October 2003 has been in place. Traffic data and subscriber data was available for fixed as well as mobile services corresponding for the following six categories covering a period of eight months:

(a) Traffic minutes with no ADC.

(b) Traffic minutes with ADC (Intra circle).

(c) Inter circle (distance upto 50 Kms.) traffic minutes

(d) Inter circle (distance slab 50 to 200 Kms.) traffic minutes

(e) Inter circle (distance 200+ Kms.) traffic minutes

(f) International Long Distance.

84. The Authority has also sought information under Section 12 of the Act to obtain authentic data quickly. The Authority has been provided substantial data, but there have been gaps and even inconsistent data in certain cases. It was noted that for international call traffic, the data provided by ILDOs to DOT was comparable to that provided by them to TRAI. In a number of cases, the problems with the data were pointed out to service providers in order to get better data. The response of MTNL was far from satisfactory. Many of the traffic streams contributing towards ADC were shown with data not available or with abnormally low values. If MTNL's representative tariffs were applied on the reported minutes, computed ARPUs were also abnormally low. MTNL in its communication dated 3rd December 2004 has stated that

"… data can be supplied in the prescribed format only after completion of CDR based billing, which is likely to be completed by Jan, 2005."

BSNL was also not able to provide data as per TRAI requirements (please see below for more detail. Since the data submitted from different operators was collected separately, it was necessary to examine the information for consistency including with respect to outgoing / incoming minutes and the estimates of ADC based on these minutes. The Authority could have tried to get more detailed data through recourse to legal action against the operators, but this process would have resulted in more delay in the finalisation of new ADC regime and would have denied the consumers the advantage of lower tariffs as a result of reduction in ADC charges for National and International long distance services. The Authority has weighed the different options and reached the conclusion that it has adequate basis to take the decision notified here.

85. In situations where adequate information was not provided by the service provider, the Authority has applied the well-known technique of using normated data, using reasonable checks to consider that the results are robust. Normated estimates are used both to ensure that there is no regulatory capture by the service providers in terms of misleading the Regulatory Body by delaying data or giving data without proper examination, and that the framework for data collection includes an incentive to service providers to take the requisite steps in a timely manner. Such a practice also involves a reasonable presumption that if the service provider is not giving certain information, especially if it has submitted similar information earlier in some other context, then it is deliberately trying to affect the results to be in its own favour by not providing data. The Regulator had informed all the Service Providers on 23rd December 2003 to re-examine their data on traffic and ADC furnished on monthly basis from February 2004 onwards and make necessary corrections, if any, or explain the consistencies of their traffic vis-à-vis ADC data. TRAI had further stated that in case correct and reconciled data is not received, the Authority would be constrained to use normated data, which may be to the disadvantage of the operators. The regulator has to resort to normation in such cases; and the estimate used in the regulatory exercise may be one which is to the disadvantage of the operator so that it does not have an incentive to not hide its information in the future. If such a policy is not adopted, the regulatory policy can be easily hijacked by the service providers and the regulatory progress can be hindered immensely.

86. The Authority has been provided traffic data by access providers and ILD operators separately, which were examined and it was observed that data furnished by Access Providers was comparable though lower than the one furnished by ILDOs. The Authority has combined actual data with normated data and conducted consistency analysis for reaching reasonable estimates with respect to National Long Distance minutes.

87. BSNL was not able to provide data at circle level covering all the eight months as it stated that this was technically not feasible in the absence of CDR based billing

system in their Network. In its letter dated 11th November 2004 BSNL has stated *"…. In BSNL, where we have 36,852 telephone exchanges spread across the country having interconnections with multiple operators at 2647 SDCA locations, 301 Level_II TAX locations and 21 Level-I TAX locations, it is simply not feasible to generate, collect and submit the traffic details service-wise, segment-wise for each component of the IUC on monthly basis for each service area…. BSNL, therefore, proposed that it will take some sample observation at selected POIs wherever it is technically feasible to generate and analyse the CDRs. Based upon this sample observation, the traffic information has already been submitted to TRAI on 11th October 2004 itself……* ". An important point in our context is that BSNL in its letter dated 21st October 2004 has stated that the data sent by them on 11th October 2004 may be treated as representative data of BSNL from February 2004 onwards. As such BSNL data for IUC/ADC exercise calculation, (out-going traffic per subscriber) is taken as identical for all the months from February 2004. BSNL was also not able to provide any data on notional ADC collections from the outgoing long distance minutes from its fixed line network. The Authority in its letter dated 20th January 2004 had clearly asked BSNL to measure all traffic streams so that complete data is available for ADC calculations including those originating from its Network.

88. Some of the steps taken for estimating reasonable data, where gaps existed, include:

a. For MTNL, a usage pattern similar to other Access Providers providing services in Metro areas and in certain distance slabs with BSNL was used.
b. For some mobile operators who had not given their incoming traffic data, two methods were used for estimating the incoming minutes. For mobile to mobile intra-circle traffic, incoming minutes were taken to be same as outgoing minutes (data on this was available). For other traffic categories, the traffic pattern for incoming and outgoing calls shown by the average representative values of other operators for the same month was applied on outgoing minutes to derive incoming minutes.

c. BSNL did not provide incoming traffic data, with the exception of ILD traffic data. This was addressed based on the overall, i.e. total for all operators, domestic outgoing call minutes being taken as equal to the incoming call minutes. The results were found to be reasonable and consistent.

d. Further, it may be noted that once we have information on all outgoing minutes and ILD incoming minutes (both of which for which we have data), these minutes are sufficient for calculating the ADC amounts. Other minutes are not required for such calculation, as they do not contribute to the ADC amount funded. However, data on incoming minutes will be relevant for BSNL's reconciliation for ADC payments for calls originating in Mobile Networks. These minutes shall also be relevant for IUC exercise when carriage and termination rates are to be determined the next consultation process.

89. The Authority also checked for data consistency by comparing different sources for particular information. For instance,

- Total Outgoing and Incoming minutes in each month to or from all Access Providers as reported by International Long Distance (ILD) minutes were matched with the ILD minutes reported by access providers.
- For each operator in his service area, there are 6 type of traffic streams corresponding to Intra-Circle with no ADC, Intra-Circle with ADC, Inter-Circle upto 50 Kms, Inter-Circle 50 KMs+ to 200 Kms , Inter-Circle 200+ Kms and International Long Distance and there are 8 data entries for 8 months from February to September, 2004. In cases where one or two values were found to be not consistent with the other values, the values were changed so that they reflect the pattern as shown by other values.
- The consistency of data on minutes etc. was also checked by considering the implied average revenues per user.

- Similar consistency analysis was carried out in other ways to verify the robustness of the results, including estimates based on information for each month, as well as using the averages during period.

90. The Authority considered the estimates for each month and also examined whether any estimates showed an inconsistent behaviour, and conducted an analysis to see the impact of such estimates. Together with its other exercise on consistency of the information used, the Authority examined the robustness of the results taking account of several different scenarios. Based on this examination, the Authority has used the estimates for each month of the period concerned, and reached the conclusions given in section VI.

(i) ADC calculated on data forecast for the period when regime would be in place (Details are included in Annexure B Tables I to XXII)

91. For the ADC review, the Authority has noted that after the previous exercise, which resulted in the notification of the IUC Regulation on 29th October, 2003, there has been a major and more than anticipated increase in the subscriber base. Taking for comparison the subscriber base of mobile in September, 2003 as a reference point, i.e. the month for which the subscriber base was considered in the October 2003 Regulation, the mobile subscriber base has increased by 100% in September 2004, and is likely to increase by about 230% by September 2005. Basing the ADC regime on a period prior to that for which the regime is actually implemented, therefore, introduces a major bias if growth rates of the underlying estimates are high. Tables in Annex B I, VI, XI and XVI provide subscriber base for Fixed and Mobile (active subscribers) for the periods February 2004 to January 2005 and February 2005 to January 2006 respectively.

92. A much higher total number of minutes will be available for funding the ADC during the period February 2005 to January 2006, as compared to the period covered by the previous exercise. For instance, calculations by the Authority show that within the first six months of the period for the new ADC regime, the

ADC amount for BSNL would be about half the requisite amount (with the minutes continuing to increase thereafter), and the other fixed line operators would have much more than half the amount due to them. The Authority has decided to calculate the new ADC per minute amounts taking account of the increase in minutes, based on the relevant minutes as forecast for the period beyond September 2004. In view of the estimates of likely ADC received by BSNL and the other fixed line operators, the Authority will be reviewing the regime within six months of its implementation, for making corrections in rates.

93. To obtain the forecast, the data from February to September, 2004 was analysed and the average monthly percentage change for the period was worked out for traffic and subscriber base. Applying these estimates, these variables were forecast over the period up to January 2006. The results show an increase in mobile subscriber base and total minutes of usage, but a decrease in the minutes of use per subscriber.

94. As mentioned above, the consistency of the results obtained from these forecasts was further examined, and estimations were made for reasonable variations in these estimates. This exercise showed the robustness of the results, taking account of various scenarios including lower growth in subscriber base and minutes of use.

95. Minutes data covering all subscribers for the period February 2004 to January 2005 is given in Annex B Tables II to V and VII to X as below. Minutes data covering all subscribers for the period February 2005 to January 2006 is given in Annex B Tables XII to XV and XVII to XX.

<u>(j) Period of application of the revised ADC regime</u>

96. The Authority had earlier considered implementing a revised ADC regime from October, 2004 onwards. Collection, examination and consistent treatment of data has taken additional time. The Authority has decided that the present ADC

regime will continue till 31st January 2005 i.e the existing regime will complete a period of one year. The regime notified under this Regulation will thus be implemented from 1st February 2005.

(k) Other issues

97. A number of other issues raised, e.g. that ADC should be applied only for calls by the rich or only on rural calls, and that the ADC be applicable on National and International calls, etc. have been dealt with in the course of the above discussion on other points. The Authority's decision in the following Section is based on due consideration of various submissions and the points made in the various sections.

VI. Decision of the Authority:

98. The Authority has examined the various alternative ADC per minute charges that would give rise to the requisite total ADC amounts. In examining the different possibilities for revising the ADC per minute amounts, the Authority has kept in mind the points mentioned above, including the need to reduce domestic call charge and the arbitrage margin, simplify the ADC regime, prepare it for convergence and signal the ongoing "death of distance", and facilitate the transition towards a revenue share regime. In this process, the Authority has reduced ADC charge per minute for those calls, which account for most of the ADC funding.

99. In view of the above, the Authority has decided as follows:

(a) The amount of ADC to be provided to BSNL is estimated to be around **Rs. 2348 crores for a period of 6 months** from February 2005 to July 2005 and the aggregate ADC from other fixed line operators for their outgoing long distance traffic minutes is estimated as being above Rs. 330 Crores which is higher than Rs. 275 Crores in the last ADC calculations as per details contained in Table

XXII. ADC Forecast figures for the full year including next two quarters as contained in Table XXIII, gives BSNL's ADC as Rs. are Rs. 4954 Crores for BSNL and Rs. 715 Crores for non-BSNL Fixed Line Operators provided there is no change as a result of proposed Consultation Process and review. Actual results will be reviewed by the Authority for the subsequent quarters after mid-year review is carried out. If justified ADC corrections will be made based on differences between forecasts made for traffic and actual subsequently reported traffic inputs.

(b) This implies that the ADC amount will be similar to that specified in the Regulation of 29th October, 2003.

(c) The present methodology of charging ADC in per minute terms on the calls subject to ADC, will also remain unchanged.

(d) The ADC charge per minute to be collected will be revised downwards, in view of the higher number of minutes available. In comparison to the regime notified under the IUC Regulation of 29th October, 2003, the ADC amounts will be collected as per the following charges,

- The ADC charge of Rs. 0.30 per minute will remain Rs. 0.30 per minute.
- The ADC charge of Rs. 0.50 per minute will be Rs.0.30 per minute.
- The ADC charge of Rs. 0.80 per minute will be Rs.0.30 per minute
- The ADC charge of Rs. 4.25 per minute applicable for International Long Distance services will be Rs. 2.50 per minute for outgoing calls and Rs. 3.25 per minute for ILD incoming calls.

(e) The distribution of ADC collected will change. The “other fixed line operators” will retain ADC only generated by them their outgoing calls. BSNL will get the ADC from all other relevant calls (i.e. calls subject to ADC charge), including from all incoming international calls and all calls made by mobile.

(f) The revised regime will be implemented from 1st February, 2005.

(g) The Authority will review the regime within six months of its implementation.

(h) Per minute ADC applicable for different type of calls is given below in Table 7.

TABLE 7

ADC CHARGES PER MINUTE

<table>
<tr><th>Access Deficit Charges</th><th>Local calls</th><th colspan="2">Intra Circle calls</th><th>Inter Circle calls</th><th colspan="2">ILD calls</th></tr>
<tr><th>in Rs per minute</th><th></th><th>0-50 kms</th><th>>50 kms</th><th>All distances</th><th>Outgoing</th><th>Incoming</th></tr>
<tr><td>Fixed – Fixed</td><td>0.00</td><td>0.00</td><td>0.30</td><td>0.30</td><td rowspan="3">2.50</td><td rowspan="3">3.25</td></tr>
<tr><td>Fixed – WLL(M)</td><td>0.30</td><td>0.30</td><td>0.30</td><td>0.30</td></tr>
<tr><td>Fixed – Cellular</td><td>0.30</td><td>0.30</td><td>0.30</td><td>0.30</td></tr>
<tr><td>WLL(M) – Fixed</td><td>0.30</td><td>0.30</td><td>0.30</td><td>0.30</td><td rowspan="3">2.50</td><td rowspan="3">3.25</td></tr>
<tr><td>WLL(M) – WLL(M)</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.30</td></tr>
<tr><td>WLL(M) – Cellular</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.30</td></tr>
<tr><td>Cellular – Fixed</td><td>0.30</td><td>0.30</td><td>0.30</td><td>0.30</td><td rowspan="3">2.50</td><td rowspan="3">3.25</td></tr>
<tr><td>Cellular – WLL(M)</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.30</td></tr>
<tr><td>Cellular – Cellular</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.30</td></tr>
</table>

100. Collection and distribution of ADC

The amount given above is to be collected/ paid as follows:

- For all Intra-Circle calls from Cellular Mobile/ WLL(M) to fixed line, BSNL to be paid the access deficit amount.

- For all Intra-Circle calls from fixed to Cellular Mobile/ WLL(M), the originating service provider to retain the access deficit amount

- For Intra-Circle calls from fixed line to fixed line, the originating Service Provider to retain the access deficit amount (local calls and calls within “0 to 50 kms.” do not have any access deficit charge). No access deficit charge is payable to the terminating fixed network.

- For all outgoing Inter-Circle and ILD calls from fixed line, the originating service provider to keep the access deficit amount. No access deficit charge is payable to the terminating fixed network.

- For all ILD calls to fixed line, BSNL to be paid the access deficit amount by the ILDO (directly or through NLDO, wherever applicable), and the termination charge should be paid to the terminating network.

- For all Inter-Circle calls from Cellular Mobile/ WLL(M) to fixed line, the access deficit charge and termination amount is to be collected by the NLDO from the originating service provider and the access deficit charges to be paid to BSNL and the termination charge should be paid to the terminating service provider.

- For all Inter-Circle calls from Cellular Mobile and WLL (M) to Cellular Mobile/ WLL(M), the access deficit amount is to be collected by the NLDO from the originating service provider and paid to BSNL.

- For all ILD outgoing and incoming calls from/ to Cellular Mobile and WLL (M), the access deficit amount is to be collected by the ILDO and paid to BSNL.

101. The Authority's decision on ADC rates and its payment is summarized in Table 8 as below.

TABLE 8

SUMMARY OF ADC RATES and PAYMENT RECIPIENTS

Sr.No.	Traffic Category	ADC Rate per minute	ADC Payable to or retained by
Local/National Long Distance Calls			
1	i) Fixed to Fixed Local and Fixed to Fixed Intra Circle within 50 Km. ii) Intra Circle Mobile to Mobile	0.00	Not Applicable
2	i) All calls from Fixed Line to Cellular Mobile/WLL(M) ii) All Intra Circle above 50 Km and all Inter Circle calls from Fixed to Fixed	0.30	Originating Fixed Service Provider
3	i) All calls from Cellular Mobile/WLL(M) to Fixed Line ii) All Inter Circle Calls from Cellular Mobile/WLL(M) to Cellular Mobile/WLL(M)	0.30	BSNL Fixed
International Long Distance Calls			
1	All Outgoing ILD Calls originated from Fixed Line	2.50	Originating Fixed Service Provider
2	All Outgoing ILD Calls originated from Cellular Mobile/WLL(M)	2.50	BSNL Fixed
3	All Incoming ILD calls	3.25	BSNL Fixed

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ANNEX B :
DATA and ADC TABLES

DATA and ADC TABLES

TABLE I

FIXED SUBSCRIBERS (Active) as Reported by Service Providers for the period Feb'04 to Sep'04 and forecasts upto Jan'05

All Fixed	Fixed subscribers per month in Crores											
Month	Feb'04	Mar'04	Apr'04	May'04	Jun'04	July'04	Aug'04	Sep'04	Oct'04	Nov'04	Dec'04	Jan'05
All Fixed Subscribers	4.19	4.23	4.24	4.24	4.26	4.27	4.28	4.29	4.31	4.32	4.34	4.36
BSNL Fixed	3.58	3.61	3.61	3.60	3.60	3.61	3.61	3.61	3.62	3.63	3.63	3.64

TABLE II

OUTGOING MINUTES from ALL FIXED SUBSCRIBERS FROM FEB'04 TO JAN'05

All Fixed Subscribers	Outgoing Fixed Minutes per month in Crores												
Traffic Category	Feb'04	Mar'04	Apr'04	May'04	Jun'04	July'04	Aug'04	Sep'04	Oct'04	Nov'04	Dec'04	Jan'05	Total
No_ADC	1027.6	1043.4	1042.0	1042.7	1044.2	1046.0	1047.8	1049.3	1052.4	1055.6	1058.8	1062.0	12571.8
Intra with ADC	337.6	347.6	348.4	349.8	352.5	359.2	360.5	363.3	367.1	371.0	374.9	378.9	4310.7
Inter upto 50 Kms	21.1	21.8	21.4	21.6	21.7	22.0	21.9	21.9	22.0	22.1	22.3	22.4	262.3
Inter_50-200 Kms	50.9	51.5	51.5	51.4	51.4	51.7	51.8	51.9	52.0	52.2	52.3	52.5	621.0
Inter_200+ Kms	81.1	82.6	82.7	83.2	83.9	84.9	85.6	85.8	86.5	87.2	87.9	88.6	1020.1
ILD	8.5	8.7	8.6	8.8	8.8	8.9	8.9	9.0	9.0	9.1	9.2	9.3	106.7

TABLE III

OUTGOING MINUTES from BSNL's FIXED SUBSCRIBERS FROM FEB'04 TO JAN'05

BSNL Fixed Subscribers	Outgoing Fixed Minutes per month in Crores												
Traffic Category	Feb'04	Mar'04	Apr'04	May'04	Jun'04	July'04	Aug'04	Sep'04	Oct'04	Nov'04	Dec'04	Jan'05	Total
No_ADC	805.1	812.9	812.5	811.3	811.1	811.5	812.0	813.7	814.9	816.1	817.4	818.6	9757.2
Intra with ADC	304.4	307.4	307.2	306.8	306.7	306.9	307.1	307.7	308.2	308.7	309.2	309.7	3689.8
Inter upto 50 Kms	8.3	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.5	8.5	8.5	101.1
Inter_50-200 Kms	37.9	38.3	38.3	38.2	38.2	38.2	38.2	38.3	38.4	38.4	38.5	38.6	459.5
Inter_200+ Kms	45.5	46.0	46.0	45.9	45.9	45.9	45.9	46.0	46.1	46.2	46.2	46.3	552.0
ILD	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.1	6.1	72.2

TABLE IV

INCOMING MINUTES to ALL FIXED SUBSCRIBERS FROM FEB'04 TO JAN'05

All Fixed Subscribers	Incoming Fixed Minutes per month in Crores												
Traffic Category	Feb'04	Mar'04	Apr'04	May'04	Jun'04	July'04	Aug'04	Sep'04	Oct'04	Nov'04	Dec'04	Jan'05	Total
No_ADC	1028.2	1044.2	1043.9	1044.1	1045.4	1048.1	1050.7	1056.9	1061.1	1065.3	1069.5	1073.8	12631.2
Intra with ADC	264.5	272.1	281.1	282.4	287.5	282.3	282.5	281.0	283.5	286.0	288.5	291.1	3382.7
Inter upto 50 Kms	21.1	21.8	21.3	21.5	21.5	21.9	21.8	21.7	21.8	21.9	22.0	22.1	260.2
Inter_50-200 Kms	52.7	53.6	54.5	53.7	53.5	53.0	52.8	53.2	53.3	53.4	53.5	53.5	640.8
Inter_200+ Kms	76.8	77.9	78.9	78.8	75.5	76.5	76.8	76.4	76.4	76.4	76.3	76.3	923.1
ILD	28.9	29.3	29.2	29.2	29.3	29.4	29.5	29.7	29.8	29.9	30.0	30.1	354.3

TABLE V

INCOMING MINUTES to BSNL's FIXED SUBSCRIBERS FROM FEB'04 TO JAN'05

BSNL Fixed Subscribers	Incoming Fixed Minutes per month in Crores												
Traffic Category	Feb'04	Mar'04	Apr'04	May'04	Jun'04	July'04	Aug'04	Sep'04	Oct'04	Nov'04	Dec'04	Jan'05	Total
No_ADC	820.4	832.0	833.8	833.2	833.2	835.7	836.9	845.6	849.3	853.0	856.7	860.4	10090.2
Intra with ADC	238.5	243.2	251.2	254.3	258.4	252.5	259.0	258.2	261.1	264.2	267.2	270.3	3078.1
Inter upto 50 Kms	10.7	11.2	11.0	11.2	11.1	11.5	11.5	11.5	11.6	11.8	11.9	12.0	137.1
Inter_50-200 Kms	46.6	47.9	49.0	48.6	48.3	47.6	47.3	47.8	47.3	46.8	46.3	45.9	569.5
Inter_200+ Kms	53.7	53.2	57.1	57.5	53.8	54.6	54.7	54.4	54.5	54.7	54.8	54.9	658.0
ILD	23.8	24.1	24.1	24.0	24.0	24.0	24.0	24.1	24.1	24.2	24.2	24.2	289.0

TABLE VI

MOBILE SUBSCRIBERS (Active) as Reported by Service Providers for the period Feb'04 to Sep'04 and forecasts upto Jan'05

All Mobile	Mobile subscribers per month in Crores (active)											
Month	Feb'04	Mar'04	Apr'04	May'04	Jun'04	July'04	Aug'04	Sep'04	Oct'04	Nov'04	Dec'04	Jan'05
All Mobile Subscribers	3.1	3.3	3.4	3.6	3.7	3.9	4.0	4.2	4.4	4.6	4.8	5.0
BSNL Mobile	0.50	0.53	0.54	0.55	0.58	0.62	0.69	0.75	0.80	0.85	0.90	0.96

TABLE VII

OUTGOING MINUTES from ALL MOBILE SUBSCRIBERS FROM FEB'04 TO JAN'05

All Mobile Subscribers	Outgoing Mobile Minutes per month in Crores												
Traffic Category	Feb'04	Mar'04	Apr'04	May'04	Jun'04	July'04	Aug'04	Sep'04	Oct'04	Nov'04	Dec'04	Jan'05	Total
No_ADC	114.5	122.3	129.0	141.4	150.7	158.0	156.2	167.3	176.7	186.6	197.1	208.1	1907.7
Intra with ADC	118.9	128.2	143.0	142.0	142.1	149.4	147.7	155.0	161.1	167.5	174.1	181.0	1810.0
Inter upto 50 Kms	4.2	4.4	5.0	5.3	5.7	4.8	4.8	5.0	5.2	5.3	5.5	5.7	60.9
Inter_50-200 Kms	13.8	14.8	15.6	16.3	16.6	16.4	16.6	17.3	17.9	18.5	19.1	19.8	202.7
Inter_200+ Kms	66.8	71.7	74.2	78.2	76.7	81.8	87.2	90.9	95.0	99.3	103.8	108.5	1034.1
ILD	3.8	4.0	3.8	3.8	3.9	4.0	4.0	4.2	4.3	4.4	4.5	4.6	49.3

TABLE VIII

OUTGOING MINUTES from BSNL's MOBILE SUBSCRIBERS FROM FEB'04 TO JAN'05

BSNL Mobile Subscribers	Outgoing Mobile Minutes per month in Crores												
Traffic Category	Feb'04	Mar'04	Apr'04	May'04	Jun'04	July'04	Aug'04	Sep'04	Oct'04	Nov'04	Dec'04	Jan'05	Total
No_ADC	35.1	37.3	38.0	39.2	41.1	44.2	48.7	53.4	56.7	60.2	63.9	67.9	585.6
Intra with ADC	21.8	23.1	23.6	24.3	25.5	27.4	30.2	33.1	35.1	37.3	39.6	42.1	363.2
Inter upto 50 Kms	0.9	0.9	1.0	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	14.7
Inter_50-200 Kms	1.1	1.2	1.2	1.3	1.3	1.4	1.6	1.7	1.9	2.0	2.1	2.2	19.1
Inter_200+ Kms	18.0	19.1	19.5	20.1	21.1	22.7	25.0	27.4	29.1	30.9	32.8	34.8	300.6
ILD	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	4.1

TABLE IX

INCOMING MINUTES to ALL MOBILE SUBSCRIBERS FROM FEB'04 TO JAN'05

All Mobile Subscribers	Incoming Mobile Minutes per month in Crores												
Traffic Category	Feb'04	Mar'04	Apr'04	May'04	Jun'04	July'04	Aug'04	Sep'04	Oct'04	Nov'04	Dec'04	Jan'05	Total
No_ADC	113.9	121.5	127.1	140.0	149.5	155.9	153.4	159.6	167.6	176.0	184.8	194.0	1843.3
Intra with ADC	191.9	203.7	210.3	209.4	207.2	226.4	225.7	237.2	244.6	252.3	260.2	268.4	2737.2
Inter upto 50 Kms	4.2	4.5	5.1	5.3	5.9	4.9	5.0	5.3	5.4	5.6	5.8	6.1	63.1
Inter_50-200 Kms	12.0	12.7	12.6	14.0	14.5	15.1	15.6	16.0	16.7	17.4	18.1	18.9	183.4
Inter_200+ Kms	71.2	76.3	78.1	82.6	85.1	90.2	96.0	100.2	105.3	110.6	116.1	122.0	1133.8
ILD	6.3	7.0	6.9	7.0	7.0	7.4	7.5	8.0	8.3	8.6	8.9	9.2	92.1

TABLE X

INCOMING MINUTES to BSNL's MOBILE SUBSCRIBERS FROM FEB'04 TO JAN'05

BSNL Mobile Subscribers	Incoming Mobile Minutes per month in Crores												
Traffic Category	Feb'04	Mar'04	Apr'04	May'04	Jun'04	July'04	Aug'04	Sep'04	Oct'04	Nov'04	Dec'04	Jan'05	Total
No_ADC	25.2	26.8	27.8	32.1	32.2	33.7	38.0	39.7	42.5	45.4	48.5	51.8	443.4
Intra with ADC	21.8	23.1	23.6	24.3	25.5	27.4	30.2	33.1	35.1	37.3	39.6	42.1	363.2
Inter upto 50 Kms	0.9	0.9	1.0	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	14.7
Inter_50-200 Kms	1.1	1.2	1.2	1.3	1.3	1.4	1.6	1.7	1.8	1.8	1.9	1.9	18.5
Inter_200+ Kms	18.0	19.1	19.5	20.1	21.1	22.7	25.0	27.4	29.1	30.9	32.8	34.8	300.6
ILD	0.6	0.7	0.7	0.7	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.2	10.3

TABLE XI

FIXED SUBSCRIBERS (Active) Forecast for the period Feb'05 to Jan'06

All Fixed	Fixed subscribers per month in Crores											
Month	Feb'05	Mar'05	Apr'05	May'05	Jun'05	July'05	Aug'05	Sep'05	Oct'05	Nov'05	Dec'05	Jan'06
All Fixed Subscribers	4.37	4.39	4.40	4.42	4.44	4.45	4.47	4.49	4.50	4.52	4.53	4.55
BSNL Fixed	3.64	3.65	3.66	3.66	3.67	3.67	3.68	3.69	3.69	3.70	3.70	3.71

TABLE XII

OUTGOING MINUTES forecast from ALL Fixed SUBSCRIBERS for the period Feb'05 to Jan'06 and ADC calculated in Rs. Crores

All Fixed Subscribers	Outgoing Fixed Minutes per month in Crores														Feb-July 2005		Feb-Jan 2006	
Traffic Category	Feb'05	Mar'05	Apr'05	May'05	Jun'05	July'05	Aug'05	Sep'05	Oct'05	Nov'05	Dec'05	Jan'06	Feb-Jul'05	Feb-Jan'06	ADC Rate	ADC in Cr	ADC Rate	ADC in Cr
No_ADC	1065.1	1068.3	1071.6	1074.8	1078.0	1081.2	1084.5	1087.8	1091.0	1094.3	1097.6	1100.9	6439.1	12995.2	0	0	0	0
Intra with ADC	382.9	386.9	391.0	395.2	399.3	403.6	407.8	412.1	416.5	420.9	425.4	429.9	2358.9	4871.4	0.3	708	0.3	1461
Inter upto 50 Kms	22.5	22.6	22.7	22.9	23.0	23.1	23.2	23.4	23.5	23.6	23.7	23.9	136.8	278.1	0.3	41	0.3	83
Inter_50-200 Kms	52.6	52.8	52.9	53.1	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	317.9	641.0	0.3	95	0.3	192
Inter_200+ Kms	89.3	90.1	90.8	91.5	92.3	93.0	93.8	94.5	95.3	96.0	96.8	97.6	546.9	1120.9	0.3	164	0.3	336
ILD	9.3	9.4	9.5	9.5	9.6	9.7	9.8	9.8	9.9	10.0	10.1	10.1	57.1	116.8	2.5	143	2.5	292

TABLE XIII

OUTGOING MINUTES forecast from BSNL's Fixed SUBSCRIBERS for the period Feb'05 to Jan'06 and ADC calculated in Rs. Crores

BSNL Fixed Subscribers	Outgoing Fixed Minutes per month in Crores														Feb-July 2005		Feb-Jan 2006	
Traffic Category	Feb'05	Mar'05	Apr'05	May'05	Jun'05	July'05	Aug'05	Sep'05	Oct'05	Nov'05	Dec'05	Jan'06	Feb-Jul'05	Feb-Jan'06	ADC Rate	ADC in Cr	ADC Rate	ADC in Cr
No_ADC	819.9	821.1	822.4	823.6	824.9	826.2	827.4	828.7	829.9	831.2	832.5	833.8	4938.1	9921.7	0	0	0	0
Intra with ADC	310.2	310.7	311.2	311.7	312.2	312.7	313.2	313.7	314.2	314.7	315.2	315.7	1868.4	3754.9	0.3	561	0.3	1126
Inter upto 50 Kms	8.5	8.5	8.5	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.7	51.2	102.9	0.3	15	0.3	31
Inter_50-200 Kms	38.6	38.7	38.7	38.8	38.9	38.9	39.0	39.1	39.1	39.2	39.3	39.3	232.7	467.6	0.3	70	0.3	140
Inter_200+ Kms	46.4	46.5	46.5	46.6	46.7	46.8	46.8	46.9	47.0	47.1	47.2	47.2	279.5	561.7	0.3	84	0.3	169
ILD	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.2	6.2	6.2	6.2	36.6	73.5	2.5	91	2.5	184
Total																821		1650

TABLE XIV

INCOMING MINUTES forecast from ALL Fixed SUBSCRIBERS for the period Feb’05 to Jan’06 and ADC calculated in Rs. Crores

All Fixed Subscribers	Incoming Fixed Minutes per month in Crores														Feb-July 2005		Feb-Jan 2006	
Traffic Category	Feb'05	Mar'05	Apr'05	May'05	Jun'05	July'05	Aug'05	Sep'05	Oct'05	Nov'05	Dec'05	Jan'06	Feb-Jul'05	Feb-Jan'06	ADC Rate	ADC in Cr	ADC Rate	ADC in Cr
No_ADC	1078.0	1082.3	1086.6	1090.9	1095.2	1099.5	1103.9	1108.3	1112.7	1117.1	1121.5	1125.9	6532.5	13221.8	0	0	0	0
Intra with ADC	293.7	296.3	298.9	301.5	304.2	306.9	309.6	312.3	315.1	317.8	320.6	323.5	1801.3	3700.2	0	0	0	0
Inter upto 50 Kms	22.2	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	23.0	23.1	23.2	134.3	272.2	0	0	0	0
Inter_50-200 Kms	53.6	53.7	53.8	53.8	53.9	54.0	54.1	54.1	54.2	54.3	54.4	54.4	322.8	648.3	0	0	0	0
Inter_200+ Kms	76.3	76.2	76.2	76.2	76.1	76.1	76.1	76.0	76.0	76.0	75.9	75.9	457.1	913.0	0	0	0	0
ILD	30.2	30.4	30.5	30.6	30.7	30.8	30.9	31.1	31.2	31.3	31.4	31.5	183.2	370.6	3.25	595	3.25	1205
Total																595		1205

TABLE XV

INCOMING MINUTES forecast from BSNL’s Fixed SUBSCRIBERS for the period Feb’05 to Jan’06 and ADC calculated in Rs. Crores

BSNL Fixed Subscribers	Incoming Fixed Minutes per month in Crores														Feb-July 2005		Feb-Jan 2006	
Traffic Category	Feb'05	Mar'05	Apr'05	May'05	Jun'05	July'05	Aug'05	Sep'05	Oct'05	Nov'05	Dec'05	Jan'06	Feb-Jul'05	Feb-Jan'06	ADC Rate	ADC in Cr	ADC Rate	ADC in Cr
No_ADC	864.2	867.9	871.7	875.5	879.3	883.1	886.9	890.8	894.7	898.5	902.4	906.4	5241.6	10621.3	0	0	0	0
Intra with ADC	270.7	271.1	271.5	272.0	272.4	272.8	273.2	273.6	274.0	274.5	275.6	276.8	1630.5	3278.3	0	0	0	0
Inter upto 50 Kms	12.1	12.1	12.2	12.2	12.3	12.3	12.4	12.4	12.5	12.5	12.6	12.7	73.2	148.3	0	0	0	0
Inter_50-200 Kms	45.4	45.0	44.5	44.1	43.6	43.2	42.7	42.3	41.9	41.5	41.0	40.6	265.7	515.8	0	0	0	0
Inter_200+ Kms	55.1	55.2	55.3	55.5	55.6	55.7	55.9	56.0	56.2	56.3	56.4	56.6	332.4	669.8	0	0	0	0
ILD	24.3	24.3	24.4	24.4	24.4	24.5	24.5	24.5	24.6	24.6	24.7	24.7	146.3	293.8	3.25	475	3.25	955
Total																475		955

TABLE XVI

MOBILE SUBSCRIBERS (Active) Forecast for the period Feb’05 to Jan’06

All Mobile	Mobile subscribers per month in Crores (active)											
Month	Feb'05	Mar'05	Apr'05	May'05	Jun'05	July'05	Aug'05	Sep'05	Oct'05	Nov'05	Dec'05	Jan'06
All Mobile Subscribers	5.2	5.4	5.6	5.9	6.1	6.4	6.7	7.0	7.3	7.6	7.9	8.3
BSNL Mobile	0.96	1.02	1.08	1.15	1.22	1.29	1.37	1.46	1.55	1.64	1.75	1.85

TABLE XVII

OUTGOING MINUTES forecast from ALL MOBILE SUBSCRIBERS for the period Feb’05 to Jan’06 and ADC calculated in Rs. Crores

All Mobile Subscribers	Outgoing Mobile Minutes per month in Crores														Feb-July 2005		Feb-Jan 2006	
Traffic Category	Feb'05	Mar'05	Apr'05	May'05	Jun'05	July'05	Aug'05	Sep'05	Oct'05	Nov'05	Dec'05	Jan'06	Feb-Jul'05	Feb-Jan'06	ADC Rate	ADC in Cr	ADC Rate	ADC in Cr
No_ADC	219.8	232.2	245.2	259.0	273.5	288.9	305.1	322.2	340.3	359.4	379.6	400.9	1518.6	3626.2	0	0	0	0
Intra with ADC	188.2	195.6	203.3	211.4	219.8	228.5	237.5	246.9	256.7	266.8	277.4	288.4	1246.7	2820.3	0.3	374	0.3	846
Inter upto 50 Kms	5.9	6.0	6.2	6.4	6.6	6.8	7.0	7.3	7.5	7.7	8.0	8.2	38.0	83.7	0.3	11	0.3	25
Inter_50-200 Kms	20.4	21.1	21.8	22.6	23.3	24.1	24.9	25.7	26.6	27.5	28.4	29.3	133.3	295.7	0.3	40	0.3	89
Inter_200+ Kms	113.4	118.6	124.0	129.6	135.4	141.6	148.0	154.7	161.7	169.1	176.7	184.7	762.6	1757.5	0.3	229	0.3	527
ILD	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	29.2	61.6	2.5	73	2.5	154
Total																727		1641

TABLE XVIII

OUTGOING MINUTES forecast from BSNL’s MOBILE SUBSCRIBERS for the period Feb’05 to Jan’06 and ADC calculated in Rs. Crores

BSNL Mobile Subscribers	Outgoing Mobile Minutes per month in Crores														Feb-July 2005		Feb-Jan 2006	
Traffic Category	Feb'05	Mar'05	Apr'05	May'05	Jun'05	July'05	Aug'05	Sep'05	Oct'05	Nov'05	Dec'05	Jan'06	Feb-Jul'05	Feb-Jan'06	ADC Rate	ADC in Cr	ADC Rate	ADC in Cr
No_ADC	72.1	76.5	81.3	86.3	91.7	97.3	103.4	109.8	116.6	123.8	131.5	139.6	505.2	1229.9	0	0	0	0
Intra with ADC	44.7	47.5	50.4	53.5	56.8	60.4	64.1	68.1	72.3	76.8	81.5	86.6	313.3	762.7	0.3	94	0.3	229
Inter upto 50 Kms	1.8	1.9	2.0	2.2	2.3	2.4	2.6	2.8	2.9	3.1	3.3	3.5	12.7	30.8	0.3	4	0.3	9
Inter_50-200 Kms	2.4	2.5	2.7	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.3	4.6	16.5	40.2	0.3	5	0.3	12
Inter_200+ Kms	37.0	39.3	41.7	44.3	47.1	50.0	53.1	56.4	59.8	63.6	67.5	71.7	259.4	631.4	0.5	130	0.3	189
ILD	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	3.6	8.7	2.5	9	2.0	17
Total																241		457

TABLE XIX

INCOMING MINUTES forecast from ALL MOBILE SUBSCRIBERS for the period Feb’05 to Jan’06 and ADC calculated in Rs. Crores

All Mobile Subscribers	Incoming Mobile Minutes per month in Crores														Feb-July 2005		Feb-Jan 2006	
Traffic Category	Feb'05	Mar'05	Apr'05	May'05	Jun'05	July'05	Aug'05	Sep'05	Oct'05	Nov'05	Dec'05	Jan'06	Feb-Jul'05	Feb-Jan'06	ADC Rate	ADC in Cr	ADC Rate	ADC in Cr
No_ADC	203.7	213.9	224.6	235.9	247.6	260.0	273.0	286.7	301.0	316.1	331.9	348.4	1385.8	3242.9	0	0	0	0
Intra with ADC	276.8	285.5	294.5	303.7	313.3	323.1	333.2	343.7	354.5	365.6	377.1	388.9	1796.9	3959.9	0	0	0	0
Inter upto 50 Kms	6.3	6.5	6.7	7.0	7.2	7.5	7.8	8.0	8.3	8.6	8.9	9.3	41.2	92.1	0	0	0	0
Inter_50-200 Kms	19.7	20.6	21.5	22.4	23.3	24.3	25.4	26.5	27.6	28.8	30.0	31.3	131.8	301.4	0	0	0	0
Inter_200+ Kms	128.1	134.6	141.3	148.5	155.9	163.8	172.0	180.7	189.8	199.3	209.3	219.9	872.2	2043.2	0	0	0	0
ILD	9.6	9.9	10.3	10.7	11.0	11.4	11.9	12.3	12.7	13.2	13.7	14.2	62.9	140.9	3.25	205	3.25	458
Total																205		458

TABLE XX

INCOMING MINUTES forecast from BSNL’s MOBILE SUBSCRIBERS for the period Feb’05 to Jan’06 and ADC calculated in Rs. Crores

BSNL Mobile Subscribers	Incoming Mobile Minutes per month in Crores														Feb-July 2005		Feb-Jan 2006	
Traffic Category	Feb'05	Mar'05	Apr'05	May'05	Jun'05	July'05	Aug'05	Sep'05	Oct'05	Nov'05	Dec'05	Jan'06	Feb-Jul'05	Feb-Jan'06	ADC Rate	ADC in Cr	ADC Rate	ADC in Cr
No_ADC	55.4	59.2	63.2	67.6	72.2	77.1	82.4	88.1	94.1	100.6	107.5	114.9	394.6	982.2	0	0	0	0
Intra with ADC	44.7	47.5	50.4	53.5	56.8	60.4	64.1	68.1	72.3	76.8	82.0	87.7	313.3	764.3	0	0	0	0
Inter upto 50 Kms	1.8	1.9	2.0	2.2	2.3	2.4	2.6	2.8	2.9	3.1	3.3	3.5	12.7	30.8	0	0	0	0
Inter_50-200 Kms	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.5	2.6	12.7	27.4	0	0	0	0
Inter_200+ Kms	37.0	39.3	41.7	44.3	47.1	50.0	53.1	56.4	59.8	63.6	67.5	71.7	259.4	631.4	0	0	0	0
ILD	1.3	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.1	2.2	2.3	2.5	8.9	21.7	3.25	29	3.25	70
Total																29		70

TABLE XXI

SUMMARY OF ADC CALCULATIONS FOR PERIOD February 2005 to July 2005 in Rs. Crores

Traffic Stream	BSNL Fixed	Non-BSNL Fixed	Total
Non-BSNL Outgoing including ILD Outgoing	0	330	330
BSNL Outgoing including ILD Outgoing	821	0	821
Mobile Outgoing	595	0	595
ILD Incoming	932	0	932
Total	2348	330	2678

TABLE XXII

SUMMARY OF ADC CALCULATIONS FOR PERIOD February 2005 to January 2006 in Rs. Crores

Traffic Stream	BSNL Fixed	Non-BSNL Fixed (if no change after Consultation Process/ Review)	Total (If no change after Consultation Process/ Review)
Non-BSNL Outgoing including ILD Outgoing	0	715	715
BSNL Outgoing including ILD Outgoing	1650	0	1650
Mobile Outgoing	1205	0	1205
ILD Incoming	2099	0	2099
Total	4954	715	5669