Telecom Regulatory Authority of India

New Delhi March 9, 1999/ Phalguna 18, 1920

In exercise of the powers conferred upon it under sub-section (2) of section 11 of the Telecom Regulatory Authority of India Act, 1997 to notify, by an Order in the Official Gazette, tariffs at which Telecommunication Services within India and outside India shall be provided, the Telecom Regulatory Authority of India hereby makes the following Order.

THE TELECOMMUNICATION TARIFF ORDER 1999

Section I
Title, Extent and Commencement

1. Short title, extent and commencement:

   i. This Order shall be called "The Telecommunication Tariff Order 1999."

   ii. The Order shall cover tariffs for all Telecommunication Services throughout the territory of India as also those originating in India and terminating outside India.

   iii. The Order shall come into force on the date of its notification in the Official Gazette.

Section II
Definitions

2. In this Order, unless the context otherwise requires:

a. "Act" means the Telecom Regulatory Authority Act of India, 1997.

b. "Authority" means the Telecom Regulatory Authority of India.

c. "Basic Telecommunication Services" mean services derived from Public Switched Telephone Network (PSTN).

d. "Ceiling(s)" mean(s) the upper limit(s) for tariff for telecommunication services as specified by the Authority from time to time.

e. "Domestic Long Distance Telecommunication Service" means the telecommunication services required to connect one local area of a public telecommunication network to another within the territorial limits of India so as to allow for transmission of voice and non-voice signals across different geographical areas.

f. "Floor" means the lower limit of a tariff for a telecommunication service as specified by the Authority from time to time below which such tariffs may not be offered.

g. "Forbearance" denotes that the Authority has not, for the time being, notified any tariff for a particular telecommunication service and the service provider is free to fix any tariff for such service.

h. "International Long Distance Telecommunication Service" means telecommunication services required to connect a local area of a public telecommunication network within India to a local area of a public telecommunication network in another country so as to allow for the transmission of voice and non-voice signals.

i. "International Subscriber Dialing" means direct interconnection between an end user in India with another end user in another country by means of direct dialing through public networks.

j. "Leased Circuits" mean telecommunication facilities leased to subscribers or service providers to provide for technology transparent transmission capacity between network termination points which the user can control as part of the leased circuit provision and which may also include systems allowing flexible use of leased circuit bandwidth.

k. "Non-discrimination" means that service providers shall not, in the matter of application of tariffs, discriminate between subscribers of the same class and such classification of subscribers shall not be arbitrary.

l. "Reporting Requirement" means the obligation of a service provider to report to the Authority at least five working days before implementing any new tariff for telecommunication services under this Order and any changes thereafter.

m. "Special Services" mean those support and other ancillary services like phonogram, directory enquiry, manual trunk service, assistance, emergency services such as police, fire and ambulance provided by service providers through special interfaces located at the edge of the PSTN.

n. "Standard package" means a package of tariffs which *inter-alia* comprises rental, call charges, free calls, deposits and other charges as may be determined by the Authority for specific telecommunication services from time to time.

o. "Subscriber" means an end user of telecommunication services.

p. "Subscriber Trunk Dialing" means direct interconnection between two end users within India by means of direct dialing through public networks.

q. "Supplementary Services" mean services which are provided specific to a subscriber's directory number and controlled either by the subscriber or by the service provider such as automatic alarm call service, call waiting, call diversion on busy or no reply, and any other such service.

r. "Tariff(s)" mean(s) rates and related conditions at which telecommunication services within India and outside India may be provided including rates and related conditions at which messages shall be transmitted to any country outside India, deposits, installation fees, rentals, free calls, usage charges and any other related fees or service charge.

s. Words and expressions used in this Order and not defined but defined in the Act shall have the same meanings respectively assigned to them in the Act.

Section III
Tariffs for Telecommunication Services

3. **Tariffs**

Tariffs for various telecommunication services and their dates of implementation shall be as set out in Schedules I to IX.

4. Forbearance

Where the Authority has, for the time being, forborne from fixing tariff for any telecommunication service or part thereof, a service provider shall be at liberty to fix any tariff for such telecommunication services;

Provided that the service provider shall comply with the reporting requirements in respect of such tariff.

5. Deposits

Unless otherwise provided for, no service provider shall seek or obtain from any subscriber in any form any amount as deposit for any telecommunication service in excess of one year's rental chargeable from the subscriber for the particular telecommunication service as specified in the relevant standard package.

6. Flexibility and Packages

i. The service provider shall offer the standard package(s) to all subscribers.
ii. Where a tariff has been specified as a ceiling, no tariff shall be fixed in excess of such ceiling.
iii. Where a tariff has been specified as a floor, no tariff shall be fixed below such floor.
iv. In all other cases, a service provider may, in addition to the standard package, offer alternative combinations of tariff to different classes of subscribers in a non-discriminatory manner.

7. Reporting Requirement

(i) All service providers shall comply with the Reporting Requirement in respect of tariffs specified for the first time under this Order and also all subsequent changes.

ii. No service provider shall alter any tariff of any telecommunication service or any part thereof without complying with the Reporting Requirement.

iii. Unless the Authority intervenes within the mandatory notice period of five working days, the service provider may implement the proposed tariff.

8. Review of Tariffs

i. The Authority may, from time to time, review and modify a tariff for any telecommunication service or a part thereof.

ii. The Authority may also at any time, on reference from any affected party, and for good and sufficient reasons, review and modify any tariff.

Section IV
Transparency and Consumer Protection

9. **Publication of Tariffs**

i. Tariffs to be charged by service providers from subscribers for telecommunication services along with the conditions thereof shall be published in such manner as the Authority may from time to time direct.

ii. Information of tariff packages that a service provider may choose to offer to subscribers shall be accompanied by a comparison of the financial implications to subscribers under each package vis-à-vis the specified standard package(s).

10. Non-discrimination

No service provider shall, in any manner, discriminate between subscribers of the same class and such classification of subscribers shall not be arbitrary.

11. Terms and Conditions of Service

Service providers shall clearly indicate the terms and conditions of the provision of telecommunication services to subscribers which shall not in any manner be inconsistent with the provisions of this Order. Such terms and conditions shall *inter-alia* include the following:

a. Terms and conditions under which such services may be obtained, utilised and terminated;

b. Terms and conditions relating to the use of service, billing, repair, fault rectification and the like;

c. choice of tariff packages available to a subscriber and the procedure available for revising the choice along with the conditions thereof.

Section V

12. Explanatory Memorandum

This Order contains at Annex A, an explanatory memorandum to provide clarity and transparency to the tariffs specified in this Order.

Section VI
Residuary Clauses

13. Over-riding Effect

In respect of matters covered by this Order the provisions thereof shall have over-riding effect over Rules framed under the Indian Telegraph Act, 1885, as also the terms and conditions of the licence of a service provider and any tariffs or conditions as may have been set by the service providers for provision of telecommunication services to subscribers.

14. Interpretation

In case of dispute regarding interpretation of any of the provisions of this Order, the decision of the Authority shall be final and binding.

BY ORDER

Harsha Vardhana Singh,
Economic
Adviser,
Telecom Regulatory Authority

of India

SCHEDULE I

BASIC SERVICES (OTHER THAN ISDN)

ITEM	TARIFF
(1) Date of Implementation	01 April, 1999
(2) Registration Charges	Prevailing charges as on the date of this Order as ceilings
(3) Installation Charges	
(3.a) Fixed line telephony service using other than wireless in local loop technology	Prevailing charges as on the date of this Order as ceilings
(3.b) Fixed line telephony service using wireless in local loop technology	Forbearance
(4) Deposits	
(4.a) Fixed line telephony service using other than wireless in local loop technology	Not to exceed twelve months' rentals as specified from time to time
(4.b) Fixed line telephony service using wireless in local loop technology	Forbearance Provided that,

The maximum period for deposit higher than at (a) above (i.e. higher than for fixed line telephony other than using wireless in local loop) is one year. At the end of one year of obtaining a wireless in local loop connection, unless the subscriber specifically demands the continuation of that connection on wireless in local loop, the additional deposit involved shall be refunded to the subscriber or interest paid on such additional deposit at the annual rate of interest for one year deposits prescribed by the State Bank of India.

(5) Monthly Rentals For Rural Subscribers

(5.a) Rural Low User Subscribers

Exchange System Capacity (Number of Lines)	**From 1 April, 1999 to 31 March, 2000 (Rs.)**	**From 1 April, 2000 to 31 March, 2001 (Rs.)**	**From 1 April, 2001 to 31 March, 2002 (Rs.)**
Up to 999	70	70	70
1,000 to 29,999	120	120	120
30,000 to 99,999	180	180	180
1 lakh and above	250	250	250

(5.b) Rural General User Subscribers

Exchange System Capacity (Number of Lines)	**From 1 April, 1999 to 31 March, 2000 (Rs.)**	**From 1 April, 2000 to 31 March, 2001 (Rs.)**	**From 1 April, 2001 to 31 March, 2002 (Rs.)**
Up to 999	70	95	120
1,000 to 29,999	120	140	160
30,000 to 99,999	180	200	220
1 lakh and above	250	280	310

(5.c) Rural Commercial User

Subscribers

Exchange System Capacity (Number of Lines)	**From 1 April, 1999 to 31 March, 2000 (Rs.)**	**From 1 April, 2000 to 31 March, 2001 (Rs.)**	**From 1 April, 2001 to 31 March, 2002 (Rs.)**
Up to 999	120	120	120
1,000 to 29,999	160	160	160
30,000 to 99,999	220	220	220
1 lakh and above	310	310	310

Notes:

1. Rural subscribers are those who reside in rural areas. For the purpose of this schedule, the definition of rural area shall be the same as used in conducting the Census of India.
2. Low user subscribers are those making not more than 500 metered calls per month of a billing cycle.
3. General user subscribers are those other than low user subscribers or commercial user subscribers.
4. The procedures for migration of subscribers from one category to another (i.e. low user subscribers to general user subscribers, and vice-versa) on the basis of the extent of usage will be notified before 30 September, 1999, as this issue becomes relevant only with effect from 1 April, 2000.
5. The rules for classifying subscribers as commercial user subscribers will be laid down by the Authority after due consultation. In the interim, commercial user subscribers are those who opt for the rental category specified for "Commercial user subscribers". The classification as commercial user subscriber shall be effective from the commencement of the next billing cycle after the date of option.

6. Exchange system capacity is the sum of the capacities of all exchanges in a local area, except that for rural subscribers the relevant exchange system capacity to be reckoned for this purpose is the one as existed prior to 15th August 1998, i.e. before the local call area became co-terminus with the short distance charging area (SDCA) for purpose of local calls. Any augmentation of the exchange capacity after the date of implementation of this Order shall automatically be taken into account for re-classification for purposes of tariffs.

7. Short Distance Charging Area (SDCA) is the area which, with few exceptions, coincide with revenue tehsil/taluk.

(6) Monthly Rentals For Urban Subscribers

(6.a) Urban Low User Subscribers

Exchange System Capacity (Number of Lines)	**From 1 April, 1999 to 31 March, 2000 (Rs.)**	**From 1 April, 2000 to 31 March, 2001 (Rs.)**	**From 1 April, 2001 to 31 March, 2002 (Rs.)**
1,000 to 29,999	120	120	120
30,000 to 99,999	180	180	180
1 lakh and above	250	250	250

(6.b) Urban General User Subscribers

Exchange System Capacity (Number of Lines)	**From 1 April, 1999 to 31 March, 2000 (Rs.)**	**From 1 April, 2000 to 31 March, 2001 (Rs.)**	**From 1 April, 2001 to 31 March, 2002 (Rs.)**
1,000 to 29,999	120	140	160
30,000 to 99,999	180	200	220
1 lakh and above	250	280	310

(6.c) Urban

Commercial User

Subscribers

Exchange System Capacity (Number of Lines)	**From 1 April, 1999 to 31 March, 2000 (Rs.)**	**From 1 April, 2000 to 31 March, 2001 (Rs.)**	**From 1 April, 2001 to 31 March, 2002 (Rs.)**
1,000 to 29,999	160	160	160
30,000 to 99,999	220	220	220
1 lakh and above	310	310	310

Notes:

1. Urban subscribers are those who reside in urban areas. For the purpose of this schedule, the definition of urban area shall be the same as used in conducting the Census of India.

2. Low user subscribers are those making not more than 500 metered calls per month of a billing cycle.

3. General user subscribers are those other than low user subscribers or commercial user subscribers.

4. The procedures for migration of subscribers from one category to another (i.e. low user subscribers to general user subscribers, and vice-versa) on the basis of the extent of usage will be notified before 30 September, 1999, as this issue becomes relevant only with effect from 1 April, 2000.

	5. The rules for classifying subscribers as commercial user subscribers will be laid down by the Authority after due consultation. In the interim commercial user subscribers are those who opt for the rental category prescribed for "Commercial user subscribers". The classification as commercial user subscriber shall be effective from the commencement of the next billing cycle after the date of option. 6. Exchange system capacity is the sum of the capacities of all exchanges in a local area.
(7) Tariff per metered call for rural subscribers	see table below
(8) Free calls (or uncharged calls) for rural subscribers	75 metered calls per month of a billing cycle
(9) Tariff per metered call for urban subscribers	see table below

(7) Tariff per metered call for rural subscribers:

First 500 metered calls per month of the billing cycle (except for free calls) **(Rs.)**	**Metered calls in excess of the first 500 metered calls per month of the billing cycle** **(Rs.)**
0.80	**1.20**

(9) Tariff per metered call for urban subscribers:

First 500 metered calls per month of the billing cycle (except for free calls) **(Rs.)**	**Metered calls in excess of the first 500 metered calls per month of the billing cycle** **(Rs.)**
1.00	**1.20**

(10) Free calls (or uncharged calls) for urban subscribers	60 metered calls per month of a billing cycle
(11) Pulse Rate for local calls **(11.a) Exchanges where pulses can be applied to local calls** **(11.b) Exchanges where pulses can not be applied to local calls**	180 seconds Forbearance Notes: 1. Local Area is the area co-terminus with a Short Distance Charging Area (SDCA). 2. Short Distance Charging Area (SDCA) is the area which, with few exceptions, coincide with revenue tehsil/taluk.
(12) Pulse rates for peak hours **(12.a) For subscriber trunk dialed domestic long distance calls**	

Radial distance between any two exchanges or between any two charging centres	From 1 April, 1999 31 March, 2000 (Seconds)	From 1 April, 2000 31 March, 2001 (Seconds)	From 1 April, 2001 31 March, 2002 (Seconds)
Up to 50 kms	180.0	180.0	180.0
Above 50 kms. and up to 200 kms.	14.0	15.0	18.0
Above 200 kms. and up to 500 kms.	5.0	6.2	6.8
Above 500 kms. and up to 1000	3.5	4.1	4.6

kms.			
Above 1,000 kms	2.5	3.0	3.5

These pulse rates imply the following peak hour tariffs for an STD call of 1 minute duration:

(12.a.i) At pulse charge of Rs. 0.80 per metered call

Radial distance between any two exchanges or between any two charging centres	**From 1 April, 1999 31 March, 2000 (Seconds)**	**From 1 April, 2000 31 March, 2001 (Seconds)**	**From 1 April, 2001 31 March, 2002 (Seconds)**
Up to 50 kms	0.8	0.8	0.8
Above 50 kms. and up to 200 kms.	4.0	4.0	3.20
Above 200 kms. and up to 500 kms.	10.40	8.0	7.20
Above 500 kms. and up to 1000 kms.	14.40	12.00	11.20
Above 1,000 kms	20.00	16.80	14.40

(12.a.ii) At pulse charge of Re. 1.00 per metered call

Radial distance between any two exchanges or between any two charging centres	**From 1 April, 1999 31 March, 2000 (Seconds)**	**From 1 April, 2000 31 March, 2001 (Seconds)**	**From 1 April, 2001 31 March, 2002 (Seconds)**
Up to 50 kms	1.0	1.0	1.0
Above 50 kms. and up to 200 kms.	5.0	5.0	4.0
Above 200 kms. and up to 500 kms.	13.00	10.00	9.00
Above 500 kms. and up to 1000 kms.	18.00	15.00	14.00
Above 1,000 kms	25.00	21.00	18.00

(12.a.iii) At pulse charge of Rs. 1.20 per metered call

Radial distance between any two exchanges or between any two charging centres	From 1 April, 1999 31 March, 2000 (Seconds)	From 1 April, 2000 31 March, 2001 (Seconds)	From 1 April, 2001 31 March, 2002 (Seconds)
Up to 50 kms	1.20	1.20	1.20
Above 50 kms. and up to 200 kms.	6.0	6.0	4.80
Above 200 kms. and up to 500 kms.	15.60	12.00	10.80
Above 500 kms. and up to 1000 kms.	21.60	18.00	16.80
Above 1,000 kms	30.00	25.2	21.60

Notes:

1. Charging centres are classified as "Long Distance Charging Centre" (LDCC) and "Short Distance Charging Centre" (SDCC).

2. Long Distance Charging Centre is a particular Trunk Exchange in a long distance charging area as presently defined for the purpose of charging for trunk calls. Headquarters of a Secondary Switching Area are generally LDCCs.

3. Short Distance Charging Centre is a particular exchange in short distance charging area as presently defined for the purpose of charging trunk calls. Headquarters of Short Distance Charging Areas are generally SDCCs.

4. Secondary Switching Area (SSA) is a territory, whose boundaries, generally but not necessarily, are co-terminus with those of a revenue District and in which normally one Secondary Trunk Automatic Exchange is located.

(12.b) Inter-national Subscriber Dialed calls

Country Category	From 1 April, 1999 31 March, 2000 (Seconds)	From 1 April, 2000 31 March, 2001 (Seconds)	From 1 April, 2001 31 March, 2002 (Seconds)
SAARC and other Neighbouring Countries	2.5	2.8	3.3
Countries in Africa,. Europe, Gulf, Asia and Oceania	1.5	1.8	2.3
Countries in American Continent	1.2	1.5	1.8

and Other Places in Western Hemisphere			

These pulse rates imply the following peak hour tariffs for ISD calls of 1 minute duration:

(12.b.i) At pulse charge of Rs. 0.80 per metered call

Call made to:	From 1 April, 1999 31 March, 2000 (Seconds)	From 1 April, 2000 31 March, 2001 (Seconds)	From 1 April, 2001 31 March, 2002 (Seconds)
SAARC and other Neighbouring Countries	20.00	16.80	14.40
Countries in Africa,. Europe, Gulf, Asia and Oceania	32.80	27.20	21.60
Countries in American Continent and Other Places in Western Hemisphere	40.80	32.80	27.20

(12.b.ii) At pulse charge of Re. 1.00 per metered call

Call made to:	From 1 April, 1999 31 March, 2000 (Seconds)	From 1 April, 2000 31 March, 2001 (Seconds)	From 1 April, 2001 31 March, 2002 (Seconds)
SAARC and other Neighbouring Countries	25.00	21.00	18.00
Countries in Africa,. Europe, Gulf, Asia and Oceania	41.00	34.00	27.00
Countries in	51.00	41.00	34.00

American Continent and Other Places in Western Hemisphere			

(12.b.iii) At pulse charge of Rs. 1.20 per metered call

Call made to:	From 1 April, 1999 31 March, 2000 (Seconds)	From 1 April, 2000 31 March, 2001 (Seconds)	From 1 April, 2001 31 March, 2002 (Seconds)
SAARC and other Neighbouring Countries	30.00	25.20	21.60
Countries in Africa,. Europe, Gulf, Asia and Oceania	49.20	40.80	32.40
Countries in American Continent and Other Places in Western Hemisphere	61.20	49.20	40.80

Note: The coverage of country categories shall be used as per the present classification by the Department of Telecommunications.

(13) Peak hour tariff **(13.a) For manual trunk calls** **(13.a.i) From and to places with STD facilities**	(i) Rs. 5 per call **Plus** (ii) Tariff for subscriber trunk dialed domestic long distance calls, as applicable, Provided that, the minimum tariff under this plan may be the amount applicable to a one minute subscriber trunk dialed domestic long distance call. The above tariffs are ceilings.
(13.a.ii) From/to places without STD facilities	Tariffs shall be the same as in (i) above, assuming as if these places have STD facilities.
(13.b) For trunk	Forbearance

calls with special features such as demand call, person to person call, lightning call, etc.	

(13.c) For operator assisted international calls **(13.c.i) From and to places with ISD facilities**	(i) Rs. 5 per call **Plus** (ii) Tariff for ISD calls, as applicable,

(13.c.ii) From/to places without ISD facilities	Provided that, the minimum tariff under this plan may be the amount applicable to a one minute ISD call. The above tariffs are ceilings. Tariffs shall be the same as in (i) above, assuming as if these places have ISD facilities.
(13.d) For operator assisted international calls, with special features such as demand calls, person to person call, lightning call, etc.	Forbearance
(14) Peak Hours: **(14.a) For domestic long**	i. For distance slab "Up to 50 kilometers", there need not be any division of the calendar day between peak and off-peak hours.

distance calls	ii. For all other distance slabs, peak hours shall not exceed 11 hours during a calendar day. Peak hour tariffs specified in this schedule cannot, therefore, be charged for more than 11 hours in a calendar day for distance slabs beyond 50 kms. iii. Forbearance with respect to the choice of timings for peak hours.
(14.b) For international calls	i. For country categories in the Table specifying peak hour pulse rates for international calls, peak hours shall not exceed 11 hours during a calendar day for each of the three country categories. Peak hour tariffs specified in this schedule for international calls cannot, therefore, be charged for more than 11 hours in a calendar day for any of the three country categories. ii. Forbearance with respect to the choice of timings for peak hours of 11 hours during a calendar day for each of the three country categories.
(15) Off-peak hours **(15.a) For domestic long distance calls**	i. For all distance slabs other than "Up to 50 kms.", off-peak hours shall not be less than 13 hours during a calendar day. ii. On Sundays and National Holidays (i.e., 26th January, 15th August and 2nd October), all the 24 hours during the calendar day shall be off-peak hours. iii. Forbearance with respect to the choice of timings for off-peak hours during a calendar day. iv. Forbearance for off-peak hour tariffs subject to the condition that these tariffs shall

(15.b) For international calls	be below the relevant peak hour tariffs specified in this schedule. i. For country categories in the Table specifying peak hour pulse rates for international calls, off-peak hours shall not be less than 13 hours during a calendar day for each of the three country categories ii. On Sundays and National Holidays (i.e., 26th January, 15th August and 2nd October), all the 24 hours during the calendar day shall be off-peak hours. iii. Forbearance with respect to the choice of timings for off-peak hours during a calendar day for each of the three country categories. iv. Forbearance for off-peak hour tariffs, subject to the condition that these tariffs shall be below the peak hour tariffs specified in this schedule.
(16) Franchised Group PBX, or PABX and EPABX with DID Facility (for Multistory Buildings, Other Buildings, Co-operative Housing Societies) **(16.a) For the franchisee** **(16.a.i) Registration and Installation charges** **(16.a.ii) Monthly**	

rental per junction line	
(16.a.ii.1) For outgoing and both-ways junctions	Prevailing charges as on the date of this Order as ceilings
(16.a.ii.2) For incoming junctions	
(16.a.iii) Other Matters Relevant to Tariffs	
(16.b) For extension user	Same rental as for outgoing and both-ways junctions less a minimum rebate of Rs. 50 per month.
(16.b.i) Regis- tration and	

Exchange system capacity (Number of lines)	**Rural Franchisees (Ceilings of Rs.)**	**Urban Franchisees (Ceilings of Rs.)**
Up to 999 lines	120	160
1,000 to 29,999 line	160	160
30,000 to 99,999 lines	220	220
1 lakh and above lines	310	310

Installation charges **(16.b.ii) Monthly Rental** **(16.b.iii) Security Deposit** **(16.b.iv) Call Charge** **(16.b.v) Free Calls (or uncharged calls)** **(16.b.vi) Other Matters Relevant to Tariffs**	Forbearance Prevailing charges as on the date of this Order as ceilings Rs. 125 per month Ceiling of twelve months' rental charged to the extension user Rs. 1.20 per metered call

	Nil Forbearance Note: Alternative tariff packages may be offered by franchisees. For explanation of "alternative tariff packages", see Explanatory Notes at the end of this schedule.

(17) Subscriber Owned Group PBX, PABX, EPABX (for Office Buildings, Hotels, and Other Parties) **(17.a)Registration and Installation charges** **(17.b) Monthly**	- - - - - - - -

Rental	
Per Junction Line:	Prevailing charges as on the date of this Order as ceilings
(17.b.i) For outgoing and Both-Ways junction lines	Ceiling of Rs. 620 per month
(17.b.ii) For incoming junction lines	Ceiling of Rs. 620 per month less a minimum rebate of Rs. 50 per month
(17.c) Call Charge	Rs. 1.20 per metered call
(17.d) Free Calls (or uncharged calls)	Nil
(17.e) Other Matters Relevant to Tariffs	Forbearance

(18) Service Provider Owned Group PBX, PABX, EPABX (for Office Buildings, Hotels, and Other Parties) **(18.a) Registration and Installation charges for junctions** **(18.b) Monthly Rental** **Per Junction Line** **(18.b.i) For outgoing and Both-Ways junction lines** **(18.b.ii) For incoming junction lines**	Prevailing charges as on the date of this Order as ceilings

(18.c) Call Charge **(18.d) Free Calls (or uncharged calls)** **(18.e) Other Matters Relevant to Tariffs**	Ceiling of Rs. 620 per month Ceiling of Rs. 620 per month less a minimum rebate of Rs. 50 per month Rs. 1.20 per metered call Nil Forbearance Forbearance

(19) PCOs/VPTs	
(19.a) Coin Collection Boxes **(CCBs)**	
(19.a.i) Tariff in rural areas	Re. 1.00 per metered call
(19.a.ii) Tariff in urban areas	Re. 1.00 per metered call
(19.b) Tariff for local call from PCOs/VPTs (including STD/ISD PCOs/VPTs)	
(19.b.i) in rural areas	
(19.b.ii) in urban areas	
(19.c) Tariff for STD/ISD calls from STD/ISD PCOs/VPTs	Ceiling of Re. 1.00 per metered call
(19.c.i) in rural areas	
	Ceiling of Rs. 1.20 per metered call

(19.c.ii) in urban areas	
(19.d) Long distance public telephone with flat rate	Ceiling of Rs. 1.20 per metered call plus Ceiling of Rs. 2 for each STD/ISD call (irrespective of duration) Ceiling of Rs. 1.20 per metered call plus Ceiling of Rs. 2 for each STD/ISD call (irrespective of duration) Forbearance

(20) Fascimile	Forbearance
(21) All Other Matters Relevant to Tariffs, including billing cycle, and special and supplementary services not elsewhere specified	Forbearance

EXPLANATORY NOTES:	
(a) Low User Subscriber	A subscriber making not more than 500 metered calls per month of a billing cycle.
(b) General User Subscriber	A subscriber other than low user subscribers or commercial user subscribers. The procedures for migration of subscribers from one category to another (i.e. low user subscribers to general user subscribers, and vice-versa) on the basis of the extent of usage will be notified before 30 September, 1999, as this issue becomes relevant only with effect from 1 April, 2000.
(c) Commercial User Subscriber	The rules for classifying subscribers as commercial user subscribers will be laid down by the Authority after due consultation process. In the interim commercial user subscribers are those who opt for the rental category prescribed for "Commercial user subscribers". The classification as commercial user subscriber shall be effective from the commencement of the next billing cycle after the date of option.
(d) Rural subscribers	Subscribers residing in rural areas. For the purpose of this schedule, the definition of rural area shall be the same as used in conducting the Census of India.
(e) Urban subscribers	Subscribers residing in urban areas. For the purpose of this schedule, the definition of urban area shall be the same as used in conducting the Census of India.
	A standard tariff package provides basic services at the tariffs specified in the schedule, and includes the specified number of free calls. Different rentals prescribed for the three categories of subscribers in (a) to (c) above imply that three different standard tariff packages are specified in this schedule.
	Tariff and free call allowance offered to subscribers by service providers, in addition to those offered in the standard tariff packages. In the "alternative tariff packages", items for which tariffs are specified in terms of a ceiling will continue to be subject to the specified ceiling. Items for which a specific amount of tariff is shown in this schedule (e.g. rentals and call charges) may have any alternative tariff in the "alternative tariff package". Similarly, an alternative free call allowance may be provided in an "alternative tariff package".

(f) Standard tariff package(s)

Subscribers must have the option of getting basic services (other than ISDN) at tariffs and free call allowance specified in this schedule. In addition, the service provider may offer alternative tariff packages to the subscribers. The subscriber shall be free to choose among various tariff and free call offers available.

The sum of the capacities of all exchanges in a local area, except that for the purpose of offering tariffs applicable to rural subscribers (including rentals) the relevant exchange system capacity to be reckoned is the one as existed prior to 15th August 1998, i.e. before the local call area became co-terminus with the short distance charging area (SDCA) for purpose of local calls. Any augmentation of the exchange capacity after the date of implementation of this Order shall automatically be taken into account for re-classification for the purposes of tariffs.

(g) Alternative tariff packages

Short Distance Charging Area (SDCA) is the area which, with few exceptions, coincide with revenue tehsil/taluk. The local area is co-terminus with an SDCA for the purpose of tariffs.

Charging centres are classified as "Long Distance Charging Centre" (LDCC) and "Short Distance Charging Centre" (SDCC).

Long Distance Charging Centre is a particular Trunk Exchange in a long distance charging area as presently defined for the purpose of charging for trunk calls. Headquarters of a Secondary Switching Area are generally LDCCs.

(h) Mandatory provision of standard packages

Short Distance Charging Centre is a particular exchange in short distance charging area as presently defined for the purpose of charging trunk calls. Headquarters of Short Distance Charging Areas are generally SDCCs.

(i) Exchange system capacity

Secondary Switching Area (SSA) is a territory, whose boundaries, generally but not necessarily, are co-terminus with those of a revenue District and in which normally one Secondary Trunk Automatic Exchange is located.

(j) Short Distance Charging Area (SDCA) **(k) Charging Centres** **(l) Long Distance Charging Centre (LDCC)** **(m) Short Distance Charging Centre (SDCC)** **(n) Secondary Switching Area (SSA)**	

Schedule II
Cellular Mobile Telecom Service (CMTS)

ITEM	TARIFF
1. Date of implementation	01 April, 1999*
2. **Deposit**	Prevailing charges as specified in the present licence as ceiling
3. **Installation charges**	Prevailing charges as specified in the present licence as ceiling

4. Categorisation of hours in a calendar day	Standard Hours and Concessional HoursK
5. Duration of Standard Hours and Concessional Hours	Standard Hours shall not exceed eleven hours in a calendar day, except as provided otherwise All other hours shall be Concessional Hours
6. **Timing of Standard Hours and Concessional Hours**	Forbearance
7. **Pulse rate for calls**	20 seconds

ITEM	**TARIFF**
8. Rental	Rs. 600 per month
(9) Airtime charges	

(9.a) Standard Hours	Rs. 6 per minute
(9.b) Concessional Hours	Forbearance; Provided that airtime during Sundays and three National Holidays (26th January, 15th August, and 2nd October) shall be priced at Concessional rates
Tariff for different category of calls	
10. **Calls from PSTN to Mobile**	The called party to pay airtime
11. **Calls from Mobile to PSTN**	Tariff to comprise: i. Airtime; plus ii. PSTN charges for local or long distance as applicable from time to time to the fixed network
12. **Calls from Mobile to Mobile within Metro Licensee Service Areas**	Both called and calling party to pay airtime
(13) Calls from Mobile to Mobile not included in item (12) above	**Tariff to comprise airtime plus a supplementary long distance charge based on distance** The Service Provider shall make the calling party aware of the quantum of the supplementary charge to be paid by the party, by making appropriate technical arrangements

ITEM	**TARIFF**
(14) Additional Items	
(14.a) Roaming	Forbearance
(14.b) Other Supplementary Services	Forbearance
(14.c) Value Added Services	Forbearance
(14.d) All other matters relevant to Tariff, including billing cycle	Forbearance
Explanatory Notes	
a. **Standard Tariff Package**	The Standard Package provides Cellular services at the tariffs specified in the schedule
b. **Alternative Tariff Packages**	Tariff offered to subscribers in addition to that offered in the Standard Package

c) Mandatory provision of standard packages	In these Alternative Tariff Packages, items for which tariffs are specified as ceilings cannot be exceeded. Items for which a particular amount is specified in the schedule viz. rental and airtime charge may have a different tariff in the Alternative Tariff Package Subscribers must have the option of getting Cellular services at tariffs specified in this schedule. In addition, the service provider may offer alternative tariff packages to the subscribers. The subscriber shall be free to choose among various tariff packages available

Schedule III
Radio Paging Services

ITEM	TARIFF
1. **Date of implementation**	01 April, 1999
2. **Deposit**	Prevailing charge as specified in the present licence as ceiling
3. **Registration Fee**	Prevailing charge as specified in the present licence as ceiling

4. **Rental**	
(4.a) Alphanumeric Service	Rs. 300 per month as ceiling
(4.b) Numeric Service	Rs. 175 per month as ceiling
5. **All other matters relevant to tariff, including supplementary services, value added services, billing cycle**	Forbearance

Note: The Authority will review the tariff and other conditions specified in this schedule once the detailed study on viability assessment of Radio Paging Services Providers that is currently in progress is complete. If the results of the study warrant, the tariffs will be changed.

SCHEDULE IV
LEASED CIRCUITS

ITEM	**TARIFF**
(1) Date of Implementation	01 April, 1999
(2) Coverage	a. All tariffs specified as ceilings b. It is mandatory for leased circuits to be provided through utilization of spare capacity when such capacity is available and when not available, on rent and guarantee terms

	c. The tariff for leased circuits shall be calculated either i. As a combination of tariff given under "Ready Reckoner Tariff" and tariffs given under "Other additional costs, as applicable"; Or, (ii) On rent and guarantee terms
(3) Ready Reckoner Tariff for leased circuits of speed:	
(3.a) 64 Kbps	As specified in Annex 1 to this schedule
(3.b) 2 Mbps	As specified in Annex 2 to this schedule
(3.c) Below 64 Kbps	Forbearance

<table>
<tr>
<td>(3.d) N Times 64 Kbps</td>
<td>Ceiling tariffs for capacity ranging from 128 Kbps to 960 Kbps shall be determined by multiplying the ceiling tariff for leased circuits of 64 Kbps by the coefficients specified below:

<table>
<tr><th><u>Capacity (Kbps)</u></th><th><u>Coefficient</u></th></tr>
<tr><td>960</td><td>7.6</td></tr>
<tr><td>768</td><td>6.4</td></tr>
<tr><td>512</td><td>4.8</td></tr>
<tr><td>384</td><td>4.0</td></tr>
<tr><td>320</td><td>3.6</td></tr>
<tr><td>256</td><td>3.1</td></tr>
<tr><td>192</td><td>2.5</td></tr>
<tr><td>128</td><td>1.8</td></tr>
</table>
</td>
</tr>
<tr>
<td>(3.e) N Times 2 Mbps</td>
<td>Ceiling tariffs for N Times 2 Mbps leased circuits shall be N times the ceiling tariff for leased circuit of 2 Mbps, except that in calculating the ceiling tariffs:

(i) N = 16 for 34 Mbps, and
i. N = 64 for 140 Mbps.</td>
</tr>
<tr>
<td><u>(4) Other Additional Costs, As Applicable</u></td>
<td>If these additional items are charged, they must be specified separately and individually in the bill</td>
</tr>
</table>

(4.a) Local leads or end links	Tariff for local lead (or end links) to be charged as i. Charge for leasing these local leads, or ii. If such leasing is not possible then 1. On rent and guarantee basis, or alternatively 2. On contribution basis
(4.b) Payment for right of way / way leave charges	The service provider may also charge for the amount paid, if any
(5) Tariff for leased circuits provided on rent and guarantee terms	a. To be based solely upon costs b. Rent and guarantee tariffs under this schedule to apply to prospective leased circuits

(6) Tariffs for circuits leased for short duration	

(6.a) For a period up to 3 months	Double the pro rata rental as specified under the category "Ready Reckoner Tariff"
(6.b) For a period exceeding three months but less than one year	Full year rental as specified under the category "Ready Reckoner Tariff"
(6.c) Charge for local leads, or end links	Costs incurred in addition to the existing local leads and long distance medium, including additional costs incurred for any special constructions, may be added to the short duration rentals specified under items (a) and (b) above
(7) Tariff when capacity addition is required to provide leased circuits	Parties providing and renting circuits to share costs based on bilateral negotiations
(8) Other Matters Relevant to Leased Circuits Tariffs	Forbearance

(Annex 1 to Schedule IV)

READY-RECKONER CEILING TARIFF FOR 64 Kbps LEASED CIRCUITS BASED ON 140 Mbps SYSTEM

Distance(km)	TOTAL(Rs.)	Distance(km)	TOTAL(Rs.)	Distance(km)	TOTAL(Rs.)
5	24,558	205	55,091	405	82,623
10	25,632	210	55,770	410	83,302
15	26,707	215	56,449	415	83,981
20	27,781	220	57,129	420	84,661
25	28,856	225	57,808	425	85,340
30	29,930	230	58,487	430	86,019
35	31,005	235	59,167	435	86,699
40	32,079	240	59,846	440	87,378
45	33,154	245	60,525	445	88,057
50	34,319	250	61,295	450	88,827
55	34,442	255	61,974	455	89,506
60	35,121	260	62,653	460	90,185
65	35,800	265	63,332	465	90,864
70	36,480	270	64,012	470	91,544
75	37,159	275	64,691	475	92,223
80	37,838	280	65,370	480	92,902
85	38,518	285	66,050	485	93,582
90	39,197	290	66,729	490	94,261
95	39,876	295	67,408	495	94,940
100	40,646	300	68,178	500	95,710
105	41,325	305	68,857		
110	42,004	310	69,536		
115	42,683	315	70,215		
120	43,363	320	70,895		
125	44,042	325	71,574		
130	44,721	330	72,253		
135	45,401	335	72,933		
140	46,080	340	73,612		
145	46,759	345	74,291		
150	47,529	350	61,475		
155	48,208	355	75,740		
160	48,887	360	76,419		
165	49,566	365	77,098		
170	50,246	370	77,778		
175	50,925	275	78,457		
180	51,604	380	79,136		
185	52,284	385	79,816		
190	52,963	390	80,495		
195	53,642	395	81,174		
200	54,412	400	81,944		

Beyond 500 kms Rs.9600(
fixed irrespective of distanc

(Annex 2 to Schedule IV)

READY-RECKONER CEILING TARIFF FOR 2 Mbps LEASED CIRCUITS BASED ON 140 Mbps SYSTEM

Distance(km)	TOTAL(Rs.)	Distance(km)	TOTAL(Rs.)	Distance(km)	TOTAL(Rs.)
5	55,820	205	971,810	405	1,797,763
10	88,056	210	992,189	410	1,818,141
15	120,291	215	1,012,567	415	1,838,520
20	152,527	220	1,032,946	420	1,858,899
25	184,763	225	1,053,325	425	1,879,278
30	216,999	230	1,073,704	430	1,899,657
35	249,235	235	1,094,083	435	1,920,035
40	281,471	240	1,114,461	440	1,940,414
45	313,706	245	1,134,840	445	1,960,793
50	348,642	250	1,157,919	450	1,983,872
55	352,345	255	1,178,298	455	2,004,251
60	372,724	260	1,198,677	460	2,024,630
65	393,103	265	1,219,056	465	2,045,008
70	413,482	270	1,239,434	470	2,065,387
75	433,860	275	1,259,813	475	2,085,766
80	454,239	280	1,280,192	480	2,106,145
85	474,618	285	1,300,571	485	2,126,524
90	494,997	290	1,320,950	490	2,146,902
95	515,376	295	1,341,328	495	2,167,281
100	538,454	300	1,364,407	500	2,190,360
105	558,833	305	1,384,786		
110	579,212	310	1,405,165		
115	599,591	315	1,425,544		
120	619,970	320	1,445,923		
125	640,349	325	1,466,301		
130	660,727	330	1,486,680		
135	681,106	335	1,507,059		
140	701,485	340	1,527,438		
145	721,864	345	1,547,817		
150	744,943	350	1,163,319		
155	765,321	355	1,591,274		
160	785,700	360	1,611,653		
165	806,079	365	1,632,032		
170	826,458	370	1,652,411		
175	846,837	275	1,672,790		
180	867,216	380	1,693,168		
185	887,594	385	1,713,547		
190	907,973	390	1,733,926		
195	928,352	395	1,754,305		
200	951,431	400	1,777,384		

Beyond 500 kms Rs.22 Lakhs fixed irrespective of distance

Schedule V
ISDN Services

ITEM	TARIFF
1. **Date of implementation**	01 April, 1999
(2) Initial Deposit and **Registration Deposit**	Aggregate of all deposits (excluding security deposit for equipment) cannot exceed one year's rental The registration deposit should be combined with the initial deposit for th purpose of comparing with the maximum limit on deposits
(3) Installation and Testing Charges	Installation and testing charges are one time charges
(3.a) Wiring charges upto Network Terminal (NT) for Primary Rate Access (PRA)	Rs. 4,000 as ceiling
(3.b) Wiring charges upto NT1 for Basic Rate Access (BRA)	Rs. 600 as ceiling
(3.c) Subscriber Interface Bus	Rs. 500 as ceiling
(3.d) For ISDN Terminals	
(3.d.i) Ordinary ISDN Phone	

(3.d.ii) ISDN PC Card **(3.d.iii) ISDN Feature Phone** **(3.d.iv) Terminal Adopter** **(3.d.v) ISDN PBX per port** **(3.d.vi) G4 Fax Terminal** **(3.d.vii) Videophone** (4) Monthly Rental for ISDN Equipment (optional) **(4.a) Ordinary ISDN Phone** **(4.b) ISDN PC Card** **(4.c) ISDN Feature Phone** **(4.d) Terminal Adopter** **(4.e) ISDN PBX per port** **(4.f) G4 Fax Terminal** **(4.g) Videophone**	Rs. 275 as ceiling Rs. 400 as ceiling Rs. 550 as ceiling Rs. 475 as ceiling Rs. 800 as ceiling Rs. 6,000 as ceiling Rs. 1,350 as ceiling The rates for monthly rental for individual ISDN equipment are applicable only if the equipment is hired from the service provider Rs. 550 as ceiling Rs. 800 as ceiling Rs. 1,100 as ceiling Rs. 950 as ceiling Rs. 1,600 as ceiling Rs. 12,000 as ceiling Rs. 2,700 as ceiling
(5) Monthly Rental for Access **(5.a) For PRA**	A ceiling of Rs. 5,000 per month upto 3 kms and Rs. 2,000 for each additional km or part thereof

(5.b) For BRA	Rs. 1,000 as ceiling
(6) Usage Charges	
For every B channel	Rates as applicable to PSTN as ceilings. **There shall be no minimum usage charge** Any change in the PSTN tariff will automatically imply a corresponding change in the usage rate applicable for every B channel
(7) Rental for supplementary services	
(7.a) Direct Dialing in	NIL
(7.b) Calling Line Identification Presentation (CLIP)	NIL
(7.c) Line Hunting	NIL
(7.d) Closed User Group (CUG)	NIL
(7.e) Advice of Charge	NIL
(7.f) User to User Signalling	NIL
(8) Minimum period of hire for temporary ISDN connection	One month

	One month
(9) Rental for temporary ISDN connection	
(9.a) For PRA	
(9.b) For BRA	A ceiling of Rs. 10,000 per month upto 3 kms and Rs. 4,000 for each additional km or part as thereof
(10) Surrender before provision	Rs. 2,000 per month as ceiling
11. Security Deposit for equipment hired from the Basic Service Provider	Actual expenses incurred are chargeable
	The security deposit cannot exceed the equipment's prevailing market price
(12) All other matters relevant to tariff, including billing cycle	
	Forbearance

Schedule VI
Internet

ITEM	**TARIFF**
(1) Date of implementation	01 April, 1999

(2) Tariff for all Internet Services other than Internet Leased Circuits (Port Charges)	Forbearance
(3) Charge for Internet Leased Circuits (Port Charges)	
	Speed — **Tariff as Ceiling (Rs. Lakhs per annum)**
	2.4 Kbps — 0.7
	9.6 Kbps — 2 .5
	64 Kbps — 5
	128 Kbps — 7.6
	256 Kbps — 10.5
	512 Kbps — 15.1
	1 Mbps — 25.1
	2 Mbps — 41.8
(4) All other matters relevant to Internet Tariff, including billing cycle	Forbearance

Schedule VII
Value Added Services

ITEM	TARIFF
(1) Date of implementation	01 April, 1999
(2) Value Added Services	These services include *inter-alia,* i. Electronic Mail ii. Voice Mail iii. Closed Users Group Domestic 64 Kbps Data Network via INSAT Satellite System iv. Videotex Service v. Video Conferencing
(3) All matters relevant to tariff, including billing cycle	**Forbearance**

Schedule VIII
Telex and Telegraph Services

ITEM	TARIFF
(1) Date of implementation (2) All matters relevant to tariff	**01 April, 1999** **Forbearance**

Schedule IX
Global Mobile Personal Communication by Satellite (GMPCS)

ITEM	TARIFF
(1) Date of implementation	01 April, 1999
(2) All matters relevant to Tariff, including billing cycle	Forbearance

ANNEX A

EXPLANATORY MEMORANDUM

A. INTRODUCTION

1. This Order is the culmination of a process, both extensive as well as intensive, which involved two Consultation Papers (one on concepts, principles and methodology, and the other containing tariff proposals for various telecom services), written & oral comments on these papers and Open House Meetings in different parts of the country. The Authority consulted with all stakeholders in the sector, including service providers, consumers, potential investors, Ministry of Communications, and Members of Parliament. On some of the issues involved, other Telecom Regulatory Bodies and international experts were also consulted. In arriving at the decisions contained in this Order, the Authority gave serious consideration to all comments, including those contained in the Report of the Lok Sabha's Standing Committee on Communications (hereinafter "Standing Committee") that addressed the Authority's tariff proposals.

2. **The purpose of this Memorandum is to lend clarity and transparency to this Order and give reasons for decisions taken with regard to tariffs. The Authority wishes to emphasize that this Order is only a first step in the process of tariff reform which is essential to prepare for competition and for introduction of new services. Without such tariff reform, telecom development, in particular for basic services, is not sustainable. The revised tariffs will not only reduce the vulnerability of the incumbent basic service provider (DOT) to competition, but will also provide adequate resources for the DOT to achieve its network expansion. These tariffs will also sustain the viability of the new entrants in different service areas.**

3. **Through this Order, the Authority also wants to send a signal to investors in this sector about the direction of telecom pricing reform, the main elements of which will be:**

   - **tariffs will be further re-balanced towards costs while emphasizing the social objective of encouraging low users of telecom to get connected and use the system more intensively; and,**
   - **service providers, and through them customers, will be provided enhanced flexibility for pricing and giving alternative tariff packages to customers.**

1. **Universal Service Obligations (USO) will be dealt with separately. The Authority is working on estimating the costs of USO, and ways in which the same could be met. A Consultation Paper on this issue will be released later this year.**

2. **The various comments and consultations held by the Authority clearly reflected that differing, and sometimes conflicting, objectives were emphasized by different stakeholders. For example, several customer groups felt that the surplus of the Department of Telecommunications (hereinafter "DOT") was inordinately high at about Rs. 7,000 crores in 1997-98, and should be scaled down so as to avert any need for a price increase. In contrast, the DOT, and even the Standing Committee, were not in favour of reduction in this surplus on the grounds that it was needed for expansion of the telecom network. The Authority has examined the various concerns, including mutually conflicting ones, and has come out with what, in its view, is a balanced tariff package which lays the foundation for achieving the main objectives of consumer protection on the one hand, and, network expansion and viability of the industry, on the other.**

3. **The Authority has addressed the concerns of subscribers, including those raised specifically with regard to rural subscribers. The aim has been to reduce the burden of adjustment on low users of basic telecom in comparison to the proposals contained in the Authority's Consultation Paper of 9 September, 1998 (Consultation Paper No. 98/3; hereinafter "Second Consultation Paper"). Moreover, the Authority has emphasized the provision of shared access, including through franchisee EPABX, which will imply rentals lower than those specified for Direct Exchange Lines (DELs) in most cases. Further, flexibility has been provided to the service provider to offer any alternative rental, call charge, and/or free call allowance in addition to those specified by the**

Authority. Such flexibility will be beneficial to both subscribers and service providers.

4. **The tariff re-balancing exercise also has to be seen in the context that:**

   - **Tariffs have not increased since early 1993, while consumer incomes and prices have risen substantially since then;**
   - **Affordability implies not just a consideration of tariffs for rentals and local calls but also long distance calls;**
   - **Tariffs for long distance calls will decrease for three reasons (i.e. extension of the local area to become co-terminus with SDCA as a result of the DOT's Order implemented on 15 August, 1998, the treatment of calls to adjacent SDCAs as equivalent to local calls under that Order, and the reduction under this Order of STD calls to distances "above 20 and up to 50 kms" so that these calls are charged at the rate for local calls);**
   - **The tariff decrease for long distance calls would benefit in particular rural subscribers because a larger portion of their calls are long distance calls;**
   - **The reduction of long distance call charge will also benefit those making calls from STD PCOs/VPTs. These are mainly the less well to do users of telecom. It is noteworthy that about 30 per cent of revenues from STD calls are contributed by STD PCOs/VPTs.**

1. **The Authority believes that the tariffs are fair also to the service providers, and will ensure their viability. It is true that the DOT surpluses are significant but the Authority's opinion is that at the present stage of India's telecom development, it is necessary for the DOT to have substantial surpluses for expanding the network and to meet other social obligations.**

2. The present exercise was based on information which was not adequate to make detailed estimates of some elements. The process, based on better data inputs, will have to be refined in the future, in particular to determine cost based access or interconnection charges. Such charges need to be decided for a more complete treatment of interconnection, and will be a crucial input also to prepare for any liberalization of the long distance sector.

3. The Authority has begun a process to determine these charges, including an exercise to achieve separation of accounts for service providers to obtain more detailed information on the cost base, and achieve greater transparency of operations, especially with regard to cross-subsidization.

4. There is a major disagreement between the Authority and the DOT on the revenue implications of the tariffs for basic services (excluding ISDN) specified in this Order. The DOT is of the opinion that price decreases in domestic long distance and international calls will not give rise to any increase in volume of these calls, while the Authority expects there to be a substantial volume response to such price decreases. More details on this matter are provided later in this Memorandum.

5. The Authority will monitor and assess the situation regarding revenues after the implementation of the new tariff regime. In particular, the Authority will follow the situation for basic services, and compare the

actual revenues with its own projections of the revenue implications for the DOT. **If the actual scenario at the end of first year turns out to be significantly different from the one envisaged by the Authority, the situation will be reviewed and necessary corrective measures taken**.

6. Section B of this Memorandum addresses certain general aspects which apply to more than one category of service. This is followed by Section C which addresses the specific items covered in various Schedules of this Order. It begins with a discussion of the Schedule on basic services (excluding ISDN), followed by cellular mobile telecom services, radio paging services, leased circuits, ISDN services, internet, value added services, telex and telegraph services, and Global Mobile Personal Communication by Satellite.

B. GENERAL ISSUES

7. A number of issues addressed in the Order pertain to more than one service, e.g. definition of tariff, reporting requirement, transparency and customer protection, deposits, registration and installation charge, flexibility granted to the service provider in fixing tariffs, and peak and off-peak hours. These are addressed in this scenario.

Coverage of the term "tariff"

8. It may be recalled that the term "tariff" is defined in the Order and includes charges as well as related conditions and free call allowance.

Different types of tariff specifications

9. Broadly, there are three types of tariffs specified in the Order:

    - An amount or level is specified for certain tariffs (for example, rentals, call charges and free call allowance);
    - A tariff ceiling for some others, such as deposits or registration charges;
    - Tariff forbearance for others, i.e. at present, the service provider has the freedom to apply any tariff.

Flexibility of Tariffs, Standard Tariff Package and Alternative Tariff Packages

1. It is mandatory that options offered to a subscriber include a tariff package that is specified in the schedules: such tariff package(s) are defined as "standard tariff package(s)". In addition, a service provider will be free to offer alternative tariff packages in which:

    - Any alternative tariff is allowed for those items for which the Authority has specified tariffs as amounts or levels;
    - With regard to items for which tariffs are specified as ceilings, tariffs in the alternative package are also constrained by the specified ceilings;
    - Service providers are free to offer any tariff for items subject to forbearance;

- Subscribers shall have the freedom to choose among the available tariff packages, including the standard tariff package.

1. Forbearance has generally been applied to tariffs for:

   - Value added services, and other services with competitive markets;
   - New or emerging services; and,
   - Services which require to be studied further.

Reporting Requirement and Intervention by the Authority

1. Tariff flexibility provided to service providers is subject to two types of safeguards in the Order:

   - the requirement that all tariffs (including in the alternative tariff packages or those subject to forbearance), and any subsequent changes in them, are notified to the Authority five working days prior to implementation;
   - the Authority's right to intervene and alter any tariff at any time, either *suo moto* or on the basis of a reference to it from any affected party.

Transparency for the Customer

1. The Order also provides that subscribers (including potential subscribers) are provided information on tariffs (including terms and conditions) through publication of these tariffs in a specified format(s). These publications should also include a comparison of the standard and alternative tariff packages.

2. In this regard, another significant condition specified in the Order is that service providers shall not discriminate between subscribers of the same class.

   Registration Charge, Installation Charge, and Deposits

3. It is important that the conditions of access to the network do not constrain subscribers from getting connected to the network, in particular those providing relatively low revenues. To address the possibility of segmentation of the market in this manner, the prevailing charges for registration and installation have been specified as ceilings.

4. A similar concern has led the Authority to specify that deposits must not exceed twelve months' rentals, as applicable. In the Second Consultation Paper, the Authority had recommended that interest be paid on these deposits. This Order has not done so for two reasons. One, for a large proportion of subscribers, i.e. those making 1,000 metered calls bi-monthly and which account for above 70 per cent of the total, the specified rental is much lower than that proposed in the Consultation Paper. Hence, there is already a considerable reduction in rentals compared to the proposed rentals for these subscribers. Secondly, payment of interests will impose substantial financial burden on the service providers. An alternative way of providing financial return on deposits is to lower the price of access or use for the subscriber. Such a policy has been adopted in the Order.

5. There are certain exceptions to the policy enunciated above:

   - tariff forbearance has been specified regarding installation charge and deposit for fixed line telephony using wireless in local loop technology. For this technology, the installation charge could involve a higher cost than for other technologies, and hence flexibility for the service provider. For deposits, the flexibility is to help offer quick connections to those subscribers who wish to get linked quickly, but such flexibility is provided in effect for only one year;
   - tariff forbearance has been specified for deposits for STD/ISD calls. These calls are likely to provide high revenues for service providers and they would therefore not fix too high an amount for such deposits. In any event, the deposits are also subject to reporting requirements and the possibility of review by the Authority.

1. The Authority recognizes that the above-mentioned safeguards could be diluted by tariffs specified for items for which tariff forbearance has been specified. However, the two safeguards, including the reporting requirement, will be used to address any such situation.

Peak hours/Off-peak hours

2. The Authority has specified tariffs only for peak hours and not off-peak hours. Thus, it is necessary also to clarify the duration and timing of peak and off-peak hours.

3. In the Second Consultation Paper, for basic and cellular mobile services, the Authority had proposed peak hours for 8 hours during a calendar day, leaving the service providers free to decide the timings thereof. During consultations, basic service providers sought at least 11 hours as peak hours for domestic long distance calls (i.e. the present situation), and pointed out that at present the duration of peak hours for international calls was 17 hours. Cellular mobile service providers asked for 12 hours as the duration of peak hours.

4. Based on these consultations and to foster higher usage, a total of 11 hours per calendar day has been specified as peak hours for domestic long distance and international calls, and for cellular mobile service.

5. In the case of domestic long distance, an exception is made for the first distance slab, i.e. 0 to 50 kms., for which the call charge is same as for local calls. Service providers have the option of not giving any off-peak hours for this distance slab, similar to the situation for local calls.

6. Further, the service provider is given flexibility to decide which hours of the day will be treated as off-peak hours. Any such decision on the timings for peak hours shall apply to all the distance slabs other than 0 to 50 kms.

7. For international calls also, the service provider has been provided with the flexibility of choosing the timings of peak hours. In addition, the service provider may have separate timings for peak hours for each of the three country categories mentioned in the Schedule.

8. For domestic long distance (except distance slab 0 to 50 kms.) and international calls, and for cellular mobile service, off-peak tariffs have to be provided for the entire calendar day on Sundays, and on three national holidays, i.e. 26th January, 15th August, and 2nd October.

9. Tariffs for off-peak hours have to be less than the corresponding tariffs for peak hours. The exact level of such tariffs has been left to the service providers to decide.

C. <u>ISSUES SPECIFIC TO SERVICE SECTORS</u>

(1) <u>Certain General Issues Relating to Basic Services (Excluding ISDN)</u>

10. In addition to the general issues mentioned above, certain matters were raised regarding basic services (excluding ISDN) with a focus wider than any specific tariff item. These were: whether there is a need to re-balance tariffs for basic services, affordability of the revised tariffs, and revenue implications for basic service provider.

(a). <u>Whether there is a need to re-balance tariffs</u>

11. Re-balancing of tariffs involves reducing tariffs which are above costs while increasing those below costs. Thus, re-balancing implies a reduction in the extent of cross-subsidization within the basic services sector. Such a rationalization is required as a condition precedent to conversion of a single operator system into a multi-operator one. This was recognized, *inter-alia*, even in the initial phase of the Authority's consultations on telecom tariffs. The views expressed in these consultations showed a consensus in favour of re-balancing tariffs for basic services.

12. Subsequently, when specific proposals on re-balancing were made by the Authority in its Second Consultation Paper, there were some who opposed any re-balancing at present. Several comments were in favour of re-balanced tariffs provided improvements were made in the quality of service. In this regard it is worth noting that the Authority has commenced its consultation process on quality of service parameters, and will in due time specify quality parameters and the process for ensuring that they are implemented.

13. Those opposing re-balancing of tariffs for basic services did so mainly on four grounds:

   - If tariff re-balancing is required to address the situation of competition, it should not be carried out because for some years there is unlikely to be any competition in basic services;
   - The DOT was earning huge surplus and this should be passed on in the form of lower tariffs for all services, instead of re-balancing tariffs which involves an increase in certain tariffs;
   - The reduction in domestic long distance and international call charges adversely affects revenue earnings;
   - Re-balancing tariffs involves an increase in rentals, which makes it more expensive for subscribers to join the network. This would in turn adversely affect teledensity and growth of telecommunications in India.

1. **The Authority has considered the pros and cons of undertaking tariff re-balancing now. It came to the conclusion that tariff re-balancing cannot be achieved in one step, and further that the first step in this regard cannot be postponed if the policy of introducing private service providers has to succeed. In fact, the Authority believes that this should have been undertaken even before introducing competition in this sector. The growth and development of this sector will not be sustainable without this reform (see below).**

<u>Presence of competition</u>

2. According to the IXth Plan, the private sector is expected to provide more than 13 per cent of the DELs by 2001-2002. By 2006-2007, this share is expected to be 30 per cent. Even if the estimate of 13 per cent is an optimistic one, private sector share of the DELs will not be insignificant, as shown below, with regard to competitive pressure on the incumbent's revenues and surplus.

3. The downwards pressure on revenues and surplus of the incumbent service provider will be stronger when the long distance segment of basic services is liberalized. In that situation, the long distance service provider will be exclusively focusing on those subscribers providing relatively high revenues and surplus. To address that situation and to sustain the viability of the established basic service providers after liberalization of the long distance segment, it will be necessary to further re-balance tariffs.

4. Substantial competition for the incumbent's market share is also envisaged in the draft Telecom Policy 1999, which indicates that competition to basic service providers will arise not only from other basic service providers but also from those providing other services (including, for instance, internet service providers).

Competition and possibility of maintaining high prices

5. It is not possible to have healthy competition in any market and sustain prices which are substantially above costs, such as India's tariffs for long distance and international calls. The practical consequence of such pricing regime will be to draw the attention of the competitor towards weaning away subscribers making such high priced calls, and hence to "cream skim" the market. Such a likelihood is particularly high when a very small subscriber base accounts for a large share of call revenues. This is the situation in India, where 2.7 per cent of suscribers account for 46 per cent of the call revenue, and 5.2 per cent subscribers account for about 56 per cent of call revenue (see Table 1). The contribution of these subscribers to surplus is likely to be even larger. This shows that the incumbent is highly vulnerable to loss of these subscribers, and loss of these high revenue subscribers to competitors will seriously affect network expansion.

Table 1. Share of subscribers making total number of calls, 1996-97

Number of bi-monthly metered calls à	**0**	**1 to 150**	**151 to 500**	**501 to 1,00**
(a) Share of total subscribers making calls bi-monthly (%)	4.2	12.6	34.9	21.3

(b) Share of total metered calls by the subscriber categories given in row (a) above (%)	0	0.7	7.4	10

Source: DOT

Note: This is based on data from large cities. According to the DOT, the shares are similar for a larger sample of subscribers.

6. Addressing the potential loss of revenue and surplus base due to competition requires reducing the charges for long distance and international calls. In any event, if prices are flexible, competition for this "creamy layer" of subscribers will involve a reduction in these tariffs. If the only tariff change is a reduction in these tariffs, it will imply a loss of revenue and surplus base, mitigated to some extent by the increase in volume due to the price decline. Making up for the revenue loss requires that certain other tariffs have to increase, i.e. those tariffs which are below costs or are not high enough to attract competition from other operators. This is the process of tariff re-balancing.

7. The need for tariff re-balancing arises also for another reason, namely, the ongoing decline in the accounting rates applied to international calls. With reduction in these rates, and the consequent fall in international call charges, pressures will generate for making a compensating increase in local call charge and/or rentals.

8. Two important considerations provide limits to any tariff re-balancing exercise, namely, affordability of the revised tariffs, and the need to ensure that the revenue base is not reduced so much that the development plans for the sector are jeopardized. Both these limitations, addressed in greater detail below, influenced the Authority's decision in specifying tariffs in this Order. For example, even after the full implementation of the new tariffs, the ratios of long distance and international calls to local calls for India will remain very high in comparison to those prevailing in certain countries where substantial tariff re-balancing has already taken place (see Table 2 below).

Table 2. Ratio of upper end of charges for domestic long distance calls and international calls to local calls

Ratio of:	**India**	**India**	**UK**	
	Present	**New**		
Charge for highest domestic long distance call to charge for three minute local call	90 (150, with five minute local call)	52	10	
Charge for highest international call charge to charge for three minute local call	180 (300, with five minute local call)	101	20	

Source: Tables AII.4 and AII.25 of the Second Consultation Paper; and discussions with the Telecom Regulator for South Africa.

(b). Affordability of Tariffs

9. **Specified tariffs have been so devised as to mitigate the effect of adjustment, in particular for low callers, and to continue giving an impetus to increased teledensity. In addition, the Authority would encourage greater promotion of shared access to the network (including through franchisee EPABX), greater promotion of the PCO network, and improving the quality of service available to subscribers.**

10. The Authority is of the considered opinion that the specified tariffs will not have any adverse effect on affordability. A number of factors relevant in this context have been mentioned earlier. In addition, since 1993, incomes have risen, and a reduction in long distance call charge increases affordability, particularly for rural subscribers and those using STD PCOs/VPTs. Furthermore, call charges under this Order will remain unchanged (for local calls) or will decline (for STD/ISD) during the next three years, while incomes will continue increasing. For more than 70 per cent of the subscribers, i.e. those at present making up to 1,000 calls bi-monthly, rentals will remain unchanged for the next three years. Affordability will therefore improve for these subscribers during the next three years.

11. While it is clear from the above that affordability has increased for those using STD PCOs/VPTs, for others an assessment of affordability requires a consideration of the impact on the bills of subscribers, in comparison to their incomes. However, certain complications are introduced in any such comparison because of the extension of local call area and due to this Order specifying that local call charge will apply to STD calls up to a distance of 50 kms. These changes imply that with an average call holding time less than three minutes, **a metered call after implementation of this Order will in all likelihood be equivalent to more than one metered call under the present tariffs. For example, previously one call of just less than three minutes for the distance range 36 to 50 kms. counted as five local calls. With the revised tariffs, such a call will be equivalent to only one local call.**

Estimates of the Bills Due to the New Tariffs

12. Any comparison of the present bills and those arising due to the new tariffs must also bear in mind the possibility of reducing expenditures for low users through the option of shared access. In addition, the tariff policy under this Order provides for a possibility of different tariff packages that can be used by the service provider to address particular needs of certain low users. The Authority has also kept in view the provision of high quality PCO services.

13. The Tables below give certain illustrative monthly charge for two subscriber categories, i.e., those in rural areas currently paying the lowest rentals, and those in metro areas.

Table 3. Monthly Charges For Rural Subscriber At Present Paying Bi-Monthly Rental of Rs. 100

No. Of Metered Calls Bi-Monthly	Equivalent to Number of Metered Calls Per Day (First column divided by 60)	Present Monthly Charge (Rs.)	Monthly Charge With New Tariffs (Rs.)	
120	2.00	50	70	
150	2.50	50	70	
200	3.33	50	90	
250	4.17	50	110	

300	5.00	65	130	
350	5.83	80	150	
400	6.67	95	170	
450	7.50	110	190	
500	8.33	130	210	
600	10.00	180	250	
700	11.67	230	290	
800	13.33	280	330	
900	15.00	330	370	
1000	16.67	380	410	
2000	33.33	1,005	1,010	
3000	50.00	1,705	1,610	
4000	66.67	2,405	2,210	
5000	83.33	3,105	2,810	

Note: Impact of new tariffs on subscriber's monthly charge is calculated under the assumption that no long distance calls are being made. With such calls, the bill under new tariffs will be lower than shown in the Table. For general subscribers, i.e. those making more than 1,000 metered calls bi- monthly, compared to the estimates in the Table, monthly bills will be Rs. 25 more in second year and Rs. 50 more in the third year of implementation. The charge above does not include service tax.

Table 4. Monthly Charges For Metro Subscribers

No. Of Metered Calls Bi-Monthly	Equivalent to Number of Metered Calls Per Day (First column divided by 60)	Present Monthly Charge (Rs.)	Monthly Charge With New Tariffs (Rs.)	
120	2.00	190	250	
150	2.50	190	265	
200	3.33	210	290	
250	4.17	230	315	
300	5.00	250	340	
400	6.67	290	390	
450	7.50	310	415	
500	8.33	330	440	
600	10.00	380	490	
700	11.67	430	540	
800	13.33	480	590	
900	15.00	530	640	
1000	16.67	580	690	

2000	33.33	1,205	1,290	
3000	50.00	1,905	1,890	
4000	66.67	2,605	2,490	
5000	83.33	3,305	3,090	

Note: Impact of new tariffs on subscriber's monthly charge is calculated under the assumption that no long distance calls are being made. With such calls, the bill under new tariffs will be lower than shown in the Table. For general subscribers, i.e. those making more than 1,000 metered calls bi-monthly, compared to the estimates in the Table, monthly bills will be Rs. 30 more in second year and Rs. 60 more in the third year of implementation. The charge above does not include service tax.

14. As expected in a tariff re-balancing exercise with high long distance and international call charges and low rentals and local call charges, subscribers making fewer number of metered calls experience an increase in bills and subscribers making larger number of calls, reduction in their bills.

15. The above estimates of monthly bills due to new tariffs can be considered together with the estimates of the proportion of households which can afford specific levels of monthly expenditure on telecom. These are given in the next section, where the data and analysis suggests that, for example, 42 per cent of rural households will likely be in a position to afford making up to 300 calls bi-monthly (or 150 calls monthly). **And these calls are in effect larger in number than the equivalent number of calls in the previous situation because of the extension in local call area and reduction in long distance call charges**. Similarly, in the metro area, 37 per cent of the households are likely to be able to afford a telephone, and about 17 per cent likely to be able to afford up to 400 calls bi-monthly (or 200 calls monthly). Since incomes will keep increasing during the next three years but tariffs for these households will remain unchanged, a larger proportion will be able to afford these number of calls. This suggests that with a present teledensity of 2 per hundred in India, there is likely to be adequate demand for basic services under the new tariff regime.

Income Levels of Households

16. Affordability of telecom tariffs depends on income levels, the proportion of income normally spent on telecom (i.e. income "available" for spending on telecom), and the amount of monthly charges in comparison with the income "available" for spending on telecom.

17. The National Council for Applied Economic Research (NCAER) has conducted a survey which, *inter-alia*, covers changes in Indian rural and urban household incomes over time. This survey brings out that there has been a substantial increase in household incomes over time, both for urban and rural households. The survey also gives information on the proportion of total households with different income levels.

Table 5. Average Annual Growth of the Household Membership of Different Income Categories, 1992-93 to 1995-96

Category of Monthly Income at 1995-96 prices	**Average Annual Growth Rate of Urban Households (%)**	**Average Annual Growth Rate of Rural Households (%)**
Up to Rs. 2,083 per month	- 7.03 %	- 3.03 %
From Rs. 2,083 to Rs. 4,166 per month	+ 5.46 %	+ 10.22 %
From Rs. 4,166 to Rs. 6,416 per month	+ 11.96 %	+ 3.11 %
From Rs. 6,416 to Rs. 8,833 per month	+ 11.90 %	+ 12.25 %
Above Rs. 8,833 per month	+ 18.22 %	+ 15.68 %

Source: From Table 3.3 of I. Natarajan, 1998, India Market Demographics Report, 1998, NCAER, New Delhi.

18. The income levels in the NCAER analysis are in terms of 1995-96 prices. To obtain a more accurate current picture with regard to affordability of tariffs, these levels need to be adjusted by a factor showing an increase in nominal income for 1998-99 or 1999-2000. We consider here a factor of about 25 per cent (an underestimate) to get the equivalent income levels in terms of 1998-99 prices.

Table 6. Proportion of Households in Urban and Rural Areas in Different Income Groups, 1998-99

Monthly income levels (Rs., estimated 1998-99 prices) Up to Rs. 2,600 per month	27.9 %	57.2 %
From Rs. 2,600 to Rs. 5,200 per month	34.9 %	29.0 %
From Rs. 5,200 to Rs. 8,000 per month	20.3 %	8.6 %
From Rs. 8,000 to Rs. 11,000 per month	9.6 %	3.1 %
Above Rs. 11,000 per month	7.3 %	2.0 %

Source: Based on Table 3.2 of I. Natarajan, 1998, India Market Demographics Report, 1998, NCAER, New Delhi.

19. The income levels for different household categories in the Table above are estimated for 1998-99 prices, but the share of households for these income levels are those for the year 1995-96. Since incomes have been increasing over time, the actual share of households in higher income slabs will be more than the shares depicted in the Table. This underestimation of the share of households in higher income groups would increase if we consider the income levels in terms of 1999-2000 prices, i.e. in terms of the prices in the first year of implementation of the new tariffs.

Affordable Monthly Bills Calculated on the Basis of Share of Income Spent on Telecom

20. To get a better idea about affordability, income levels have to be combined with the proportion of income

spent on telecom. Specific information on this aspect is not available for India. The International Telecommunications Union has estimated that on average households spend 5 per cent of their incomes on telecom in developing countries (see for example, page 36 of ITU, "World Telecommunication Development Report 1998"). This provides us with a basis to calculate the amount of monthly expenditure on telecom by the income categories given above. Alternatively, five per cent of the monthly income levels in the Table above shows the amount of monthly bills that households with the above income levels are likely to find affordable (see Table below for this estimate). However, since income levels are increasing, the estimates of households with capacity to pay specified levels of monthly telecom bills are likely to be under-estimates of the situation in 1999-2000.

Table 7. Estimated distribution of households with capacity to pay various levels of monthly telecom bills

Monthly Telecom Billss (Rs., 1999-2000 estimates)	Share of urban households with estimated capacity to pay the monthly bill (%)	Share of rural households with estimated capacity to pay the monthly bill (%)
Up to Rs. 130 per month	27.9 %	57.2 %
From Rs. 130 to Rs. 260 per month	34.9 %	29.0 %
From Rs. 260 to Rs. 400 per month	20.3 %	8.6 %

From Rs. 400 to Rs. 550 per month	9.6 %	3.1 %
Above Rs. 550 per month	7.3 %	2.0 %

21. At present, total teledensity in India is estimated at 2 per hundred, while that of the rural areas is about 0.4 per hundred. Taking average household size into consideration, the above estimates and the bills arising from the new tariffs suggests that there is likely to be more than adequate demand for the telephone service provided at present and planned for the near future.

(c). Revenue implications of the specified tariffs

22. With regard to revenue implications, there were two dominant views expressed in various comments. One, expressed by service operators, most importantly the DOT, was that there will be a decline in revenues due to the tariffs that were proposed by the Authority. The other view, expressed mainly by consumers, was that there should be a decrease in revenues of the DOT because it had a high surplus and some of it should be passed on to the subscribers. In contrast, the DOT argued that in effect there is no surplus because all its funds are re-invested to extend the network.

23. The Authority is of the view that one must distinguish between a surplus and its use. Thus, the DOT has a particular surplus, which it then utilizes for specified expenses. The Authority recognizes that the DOT has to play a major role in the development of India's telecom network , and it should have sufficient resources for that purpose. According to the Authority's estimates of the effect of new tariffs, resources available with the DOT will be sufficient to finance, without resort to excessive market borrowing, their expansion programmes which are envisaged in the Perspective Plan for the years 1997-98 to 2006-2007 (see below for details).

24. Before considering the effect of new tariffs on DOT's revenues, it is necessary to consider the estimates of DOT anticipated revenues if prevailing tariffs were to continue for the next three years. These amounts are estimated as follows, using assumptions similar to those underlying the DOT's calculations provided to the TRAI.

Table 8. Projected Revenues for DOT Under Prevailing Tariffs (i.e. Current Tariffs Being Maintained Also for Next Three Years)

Year →	1999-2000	2000-2001	2001-2002
Projected Revenues (Rs. Crore)→	23,181.23	27,119.17	31,463.35

Comparison of DOT's and TRAI's estimates of revenue implications of the new tariffs

25. The DOT has provided the Authority with its estimate of the revenue implications of the new tariffs for the next three years. These estimates are based on the premise that the decrease in tariffs for domestic long distance and international calls will not result in any increase in the volume of these calls. Such an assumption tantamounts to suggesting that the Indian subscribers is price insensitive, even when the extent of tariff decline is substantial. Though there is no direct evidence of the price response of Indian subscribers, there is some anecdotal evidence which suggests that the volume response to price decline will be substantial. In fact, even the DOT in its presentation before the Standing Committee had acknowledged that there may be a volume increase of 10 to 25 per cent due to the decline in tariffs proposed by the Authority. In specific, the Report of the Standing Committee states at paragraph 16 that:

"The Committee desired to know the basis for this optimism. In reply representative of the DOT stated in evidence that Demand cannot rise hundred per cent. Tariffs have been reduced by 50 per cent. In order to stay at the same level of revenues, demand must rise by hundred percent or more which is not possible. *Demand may rise only about 10 to 25 percent*" (emphasis added)

26. The Authority is of the view that volume of STD/ISD calls is likely to increase by at least 10 to 25 per cent, if not more, when tariff reductions for these calls come into effect. Therefore, though the Authority's estimates of revenue implications given below include the scenario of no volume change, the relevant estimates to be considered are those with 10 per cent increase in volume of long distance and international calls in the first year of tariff reform, and 25 per cent volume increase in subsequent years.

Table 9. DOT's and TRAI's Calculations of the Revenue Implications for DOT

	DOT's estimate of revenue response to new tariffs (Rs. Crore)	TRAI's estimate with no change in volume of traffic in response to tariff decline for STD and ISD calls (Rs. Crore)	TRAI's estimate with 10 per cent increase in volume of STD and ISD traffic in response to decline in their tariffs (Rs. Crore)	TRAI's estimate with 25 per cent increase in volume of STD and ISD traffic in response to decline in their tariffs (Rs. Crore)
Increase in revenue from rentals				
1999-2000	1,275.813	1,432.40	1,432.40	
2000-2001	1,827.93	1,911.25	1,911.25	1,911.25
2001-2002	2,355.30	2,491.13	2,491.13	2,491.13
Revenue change for local call calculated on the basis of change of overall average price				
1999-2000	- 253.82	- 264.63	- 264.63	
2000-2001	- 296.96	- 309.60	- 309.60	- 309.60
2001-2002	- 344.51	- 359.18	- 359.18	- 359.18
Additional revenue from calls that exceed more than three minute pulse (10.9 % of total local calls)				
1999-2000	574.31	600.18	600.18	
2000-2001	671.90	702.16	702.16	702.16

2001-2002	779.50	814.60	814.60	814.60
Additional revenue from reduced free call allowance				
1999-2000	375.55	362.81	362.81	
2000-2001	439.01	427.37	427.37	427.37
2001-2002	512.08	500.36	500.36	500.36
Revenue change for domestic long distance				
1999-2000	-2,050.14	-2,265.07	-1,444.56	
2000-2001	-4,038.08	-4,193.25	-3,387.73	-2,179.05
2001-2002	-5,820.40	-5,939.44	-5,112.31	-3,871.12
Revenue change for international calls				
1999-2000	- 646.95	-683.11	-453.11	
2000-2001	-1,247.66	-1,270.83	-1,048.80	-714.83
2001-2002	-1,975.88	-1,983.52	-1,776.52	-1,465.52
TOTAL OF ABOVE				
1999-2000	- 725.24	- 817.42	233.09	
2000-2001	-2,643.85	-2,732.90	-1,705.42	- 162.70
2001-2002	-4,493.91	-4,476.05	-3,441.92	-1,889.73
TOTAL OF DOT'S ESTIMATE INCLUDING LEASED LINES REVENUE				
1999-2000	-1,075.24	NA	NA	NA
2000-2001	-3,067.69	NA	NA	NA
2001-2002	-5,006.75	NA	NA	NA

Notes:

i. NA = Not Applicable for reasons given below;
ii. DOT's estimates of rentals do not include any "commercial user subscribers", while TRAI's estimates include them. The share of commercial users subscribers does not affect the estimates in the third year, i.e. in year 2001-2002. For the other two years, if there were no business subscribers, the revenues would decrease, respectively by Rs. 157.51 crores in 1999-2000, and Rs. 92.12 crores in 2000-2001;
iii. For domestic long distance calls, DOT's estimate does not explicitly include any revenue implication of altering the last off-peak pulse rate from one-fourth to one-third. The TRAI estimate includes it on the basis that during discussions with DOT, it had been mutually agreed that such a change would be taking place.

1. The Table above shows that without considering leased line revenues, the estimates provided by the DOT correspond closely to the aggregate effect calculated by the Authority under the assumption that a price decline for long distance and international calls will have no impact on volume of calls. Such an assumption is, however, not correct and revenue implications have to be seen on the basis of some estimate of volume response. As explained above, we do this for a range of 10 per cent for the first year, and 25 per cent for the next two years.

2. The Authority does not share the DOT's perception of revenue loss for leased lines. It is the view of the Authority that the significant price decline for leased lines will give rise to a greatly enhanced demand for this service, which will more than compensate for the price reduction. At any rate, any alleged revenue loss from leased lines cannot be sought to be made good from increased tariffs for basic services.

3. This conclusion is further strengthened by the fact that the Authority's estimates above are likely to show a lower positive effect on revenues than is likely to be the position because:

   - With an increase in the local call area and rise in the use of internet, the share of local calls in total metered calls will increase. Both the higher share of local calls, and the increase in calls of more than 3 minute duration due to internet use, will imply lower revenue loss than calculated in the Table above;
   - The off peak rates might not be half and one-third as at present but higher;
   - The Authority expects a greater surge in telephone use than that considered above. This will be due to greater flexibility provided to service providers and greater expansion of PCOs for the public which does not have access to DELs;
   - The revenue estimates are calculated on the basis of constant revenues per DEL. However, there is now a tendency towards a reduction in revenues per DEL because, *inter-alia*, the additional DELs are being used less intensively than average. Factoring this aspect in the calculations would imply a lower estimate of the revenue loss than is shown in the Table above;
   - A major point that is missed in the estimates of revenue impact is that re-balancing of tariffs would result in the DOT losing lower amounts of revenues when they lose their high paying subscribers to competitors.

1. The discussion above suggests that:

   - In the first year of new tariffs, there is likely to be a surplus for the service provider;

- In the second year, there might be a surplus or a small deficit;
- In the third year, the reduction in DOT revenues might be about 3 to 5 per cent.

Adequacy Of the DOT Revenues With New Tariffs

1. If the requirement of revenue for any investment is lower than otherwise estimated, this is equivalent to an increase in revenue available for that expenditure.

2. The reason for DOT's concern that its revenues should not decrease significantly is that it needs these revenues (and surpluses) to meet the plan targets for expanding the network. In this context, it is noteworthy that an amount of Rs. 49,362 on a per DEL basis was estimated as revenue requirement for the ten year Perspective Plan (see, for example, paragraph 13 of the Report of the Standing Committee). Later, for the IXth Plan, this amount was Rs. 45,000. A closer consideration of the data shows Rs. 43,000 as the per DEL revenue requirement to meet the plan outlay during the five year period up to 2001-2002. In contrast to these estimates, the actual annual capital expenditure per new DEL added by DOT/MTNL is given in the Table below.

Table 10. DOT/MTNL's annual capital expenditure per new DEL added

Year →	1991-92	1992-93	1993-94	
Amount (Rs. Thousand) →	46.2	46.7	45.4	

Source: DOT, Annual Report 1997-98.

3. The actual annual capital expenditure per additional DEL was as low as about Rs. 33,000 in 1996-97. This is drastically below the figure of Rs. 43,000 mentioned above, which implies a large saving of costs (and hence of revenues required) even if we consider the annual capital expenditure per additional DEL for the year 1995-96. Hence, if we take Rs. 38,000 instead of Rs. 43,000 as the revenue required on a per DEL basis, and combine this reduction in investment requirement for the proposed number of additional DELs to be installed by the DOT during each of the next three years, we obtain a reduction in revenue requirements for DOT ranging between Rs. 1,850 crore to Rs. 2,250 crore. Adjusting the revenue implications given above by these amounts shows that in the first year there is excess revenue even if volume does not change in response to price decline for STD/ISD, in the second year there is excess revenue if volume response is 10 per cent, and in the third year such excess revenue arises with a volume response of 25 per cent. The excess revenue would be even higher if the revenue requirements were taken as Rs. 33,000, i.e. the amount of actual capital expenditure per additional DEL

in 1996-97.

4. The Authority considers the scenarios with lower revenue requirements as very plausible, and is therefore of the opinion that the DOT will have adequate resources to fund its expansion plans after the new tariffs are implemented. And this would be so after the DOT has met all its investment requirements in rural areas, even under operational cost conditions that are likely to be less advantageous than those for the private sector. The Authority has noted that the revenue requirements to cover the expansions of larger network, which constitute a significant share of the total, will be steadily going down.

Revenue implications for other basic service providers

5. The Association of Basic Service Operators (ABTO) had provided certain estimates for cost-based tariffs; they had calculated a cost based tariff of Rs. 2.38 to Rs. 2.97 per call. However, with these estimates, the cost based average tariffs for long distance and international calls would be much lower than those estimated in the Second Consultation Paper. The Authority is of the view that the ABTO's estimate gives an over-estimate of the cost based charge for local calls. Even otherwise, in effect, the ABTO submission shows a larger extent of tariff re-balancing than is embodied in the tariffs in this Order, or in the proposals contained in the Second Consultation Paper. The Authority is of the opinion that the private sector will continue to be viable under the new tariff regime.

A general review by the Authority after one year

6. **The Authority has decided that it will monitor the situation in regard to revenues and traffic and, if necessary, intervene provided the actual situation differs substantially from the expectations assumed in this exercise.**

(2) Items Addressed in Various Schedules

I. Items Addressed in Schedule I : Basic Services (Other than ISDN)

Rural/Urban Subscribers, and Low User Subscribers and Others

7. The Second Consultation Paper had distinguished between rural and urban subscribers with respect to rentals but not for call charges or free calls. The Order extends the distinction to include also call charges for those subscribers making up to 1,000 metered calls bi-monthly. In addition, the prevailing registration and installation charges as ceilings ensure that these conditions of the present rural package continue to apply. Further, a higher free call allowance is provided for rural subscribers than for urban subscribers. This is mainly to smoothen the extent of adjustment required for rural subscribers, and to provide them with relatively higher concessions for access to and use of the telecom services.

8. The objective of reducing the adjustment burden for subscribers in general is one of the reasons for the Authority creating the category of "low user subscribers", and providing them with both a lower rental and call charge. The coverage of "low user subscribers", i.e. those making up to 1,000 calls bi-monthly, is an attempt to address another objective that was emphasized by many during the consultations, i.e. separation of the group of residential subscribers and business subscribers.

9. The Authority had consulted on (and had expressed a need to establish) a category for business subscribers. The normal methodology would be to charge a higher rental but a lower call charge for such subscribers in comparison to residential subscribers. With the Order giving flexibility to the service provider to offer alternative tariff packages, the service provider is free to provide any business tariff package with higher rentals and lower call charges. If service providers so desire, they are free to provide the existing tariffs as an alternative package to low end subscribers.

10. In addition to the flexibility mentioned above, the Authority has decided to provide for a tariff package for business subscribers under the category "Commercial users subscribers". The rules for classifying subscribers as commercial user subscribers will be laid down by the Authority after a consultation process to consider the various issues involved. In the interim, commercial subscribers will be those who opt for the rental category specified for this category.

11. "General user subscribers" is another category specified by the Authority. This category is at present distinct from of that of commercial user subscribers only in the first two years of implementation, i.e. during April 1999 to March 2001. Further, in the first year of implementation it coincides with the category "low users subscribers" subscribers, so that there is easier adjustment to the specified rental increases for these subscribers.

12. Since the subscriber categories "low user subscriber" and "general user subscriber" are defined in terms of number of metered calls, it is possible that a particular subscriber might be part of more than one category during any year. However, this problem does not arise in the first year of implementation because, as mentioned above, these two categories are in effect combined during that period. **The procedures for addressing this problem will be decided later this year so that the issue can be adequately dealt with when it becomes relevant after 31 March, 2000**.

Rentals

13. Though the rentals proposed in the Second Consultation paper were not cost based they were commonly perceived to be as such. In its proposals, the Authority had rejected cost based estimates of rentals on the ground that they were very high. Instead, rentals were proposed in general by increasing the levels prevailing in 1993 to account for the inflation rate and some of the real income increase since then. The consequent rentals proposed by the Authority were substantially below the cost based rentals, mainly with the objective of making them affordable.

14. The issue of affordability of rentals has already been discussed in above. This aspect was widely emphasized during the Authority’s consultations, and rental was one of the issues emphasized in this regard. The Authority therefore has devised a category of "low user subscribers" with lower rentals for those with relatively lower bills. The increase in rentals for this category of subscribers ranges between 30 to 40 per cent for most subscribers. These rentals have been increased after 1993, and they will remain unchanged for the three year period 1 April, 1999 to 31 March, 2002. About 70 per cent of subscribers will not have any increase in rentals after the first year because they will be low users.

15. Since the constraint of affordability is not as binding for business subscribers, rentals for commercial user subscribers have been fixed at the levels proposed in the Second Consultation Paper. For others, i.e. general user subscribers, a transition to the proposed rental has been provided. In year 1999-2000, rentals for general users are the same as for low users. They will increase in the second and third year towards the levels which were proposed as rentals in the Second Consultation Paper. It should be noted that general subscribers are those making more than 1,000 metered calls bi-monthly and are among the upper 30 per cent of the subscribers in terms of their bills. These subscribers have a greater capacity to bear the increase in rentals. For example, with the above-mentioned statistic that on average five per cent of income is spent on telecom, income levels for general user subscribers in metro areas would be above Rs. 13,800 per month, and in rural areas above Rs. 8,200 per month.

16. With regards to the cost basis for rentals, one comment was that the basis considered in the Second Consultation Paper for costs was an over-estimate. **It was stated that the relevant capital base to be considered for costs was that for the local loop, and not the whole local network as considered in the Second Consultation Paper. The Authority is continuing to look into which network elements should be taken into account to determine the cost basis for rentals. With a lower capital cost base, there is also a need to take account of a portion of the operating costs in the relevant cost base for rentals. That too is a matter for further consideration by the Authority, and will also be a part of the analysis regarding cost based access charges. It is worth recalling that the rentals specified (or earlier proposed) by the Authority were much less than the amounts derived on its estimate of the relevant cost base.**

Rentals for PBX, PABX and EPABX

17. Three categories have been considered for PBX, PABX and EPABX. Rentals for both-ways and outgoing junctions taken by franchisees of Group PBX, PABX or EPAX has been specified to be ceilings equal to the rentals for commercial user subscribers. A minimum reduction of Rs. 50 per month has been specified for incoming junctions. For extensions taken by users, rental of Rs. 125 monthly has been prescribed, thus providing a possibility to have cheaper access than for the higher rental categories for DELs. The schedule also specifies that in addition to service providers, franchisees will be allowed to give alternative tariff packages to extension users.

18. Rentals for both-ways and outgoing junctions for Subscriber Owned, and Service Provider Owned, Group PBX, PABX and EPABX have been specified as ceilings equal to the highest cost based rentals calculated in the Second Consultation Paper. A minimum reduction of Rs. 50 per month has been specified for incoming junctions. For Service Provider owned PBX, PABX and EPABX exchanges, the Authority has forborne with regard to rentals and installation charges for those exchanges. **In the Authority's view, the present tariffs for these two items are high, and further study and consultation are needed to decide on revised tariffs for them. This will be done later this year.**

Pulse Rate and Call Charge for Local Calls

19. The Second Consultation Paper had proposed a ceiling tariff of Rs. 1.30 per metered call. This was based on the information available earlier that the share of local calls in total metered calls was close to 25 per cent and the holding time for local calls was 2.5 minutes. Further information received from the DOT during the consultation process showed that the share of local calls in total is closer to 30 per cent, and the holding time is less than 3 minutes and may not be less than 2.5 minutes.

20. The Second Consultation Paper's proposal of 3 minute pulse for local calls is now specified in the schedule as the pulse rate for local calls.

21. Further, as mentioned in the Second Consultation Paper, the Authority intends to introduce a pulse rate of 60 seconds for local calls after two years, together with the corresponding reductions in pulse rates for long distance calls and the call charge per pulse.

22. On the basis of the operational costs allocated to local calls in the Second Consultation Paper and 30 per cent as the share of local calls in total, the cost of a three minute local call (without margin) is as follows:

    - Rs. 0.86 to Rs. 0.93 if average holding time of local calls is 3 minutes;
    - Rs. 0.92 to Re. 1.00 if average holding time for local calls is 2.8 minutes;
    - Rs. 1.03 to Rs. 1.12 if average holding time of local calls is 2.5 minutes.

1. The Authority has specified three different charges per metered call

    - For the first 500 metered calls per month in a billing cycle, Rs. 0.80 per metered call for rural subscribers;
    - For the first 500 metered calls per month in a billing cycle, Re. 1.00 per metered call for urban subscribers;
    - For more than 500 metered calls per month in a billing cycle, Rs. 1.20 per metered call for both rural and urban subscribers.

1. The call charge for the first 500 metered calls per month in a billing cycle for rural subscribers is less than the lowest estimated cost based charge without any margin. The corresponding call charge for urban subscribers (again without margin or with a small margin) is equivalent to that estimated with average call holding time of 2.8 minutes. With a call holding time of 2.5 minutes, this tariff would be below cost.

2. For calls in addition to the first 500 metered calls per month in a billing cycle, a margin of 20 per cent has been provided above the upper limit of the cost based charge with holding time of 2.8 minutes. This also provides a margin on the upper limit of cost cased charge (Rs. 1.12) estimated for average holding time of 2.5 minutes.

<u>Call charge for PBX, PABX, EPABX, and PCOs/VPTs</u>

3. A call charge of Rs. 1.20 has also been specified for calls from PBX, PABX, EPABX and STD PCOs/VPTs.

4. The Second Consultation Paper had suggested a lower call charge for rural PCOs in comparison to urban PCOs. The comments on this issue suggested the Authority not to have dis-similar call charges for rural and urban STD PCOs, because otherwise there will be increasing instances of tariff bypass through call forwarding from rural PCOs. The Authority has therefore specified the same tariff for PCOs in both urban and rural areas, i.e. Rs. 1.20 per metered call. In the case of STD/ISD calls from PCOs, an additional charge of Rs. 2 per call (irrespective of duration) is specified as service charge collected by the PCO operator, similar to the prevailing situation.

5. In contrast to the situation for STD/ISD calls, the Authority has specified different tariffs for local calls from rural and urban PCOs/VPTs. The tariff from rural areas will continue to be Re. 1 per metered call, with the pulse duration being 3 minutes. For urban areas, Rs. 1.20 per metered call is specified for a pulse rate of three minutes.

6. Together with a reduction of local call charge from the proposed Rs. 1.30 to Rs 1.20, the Authority has reduced the charge for coin collection boxes (CCBs) from the proposed Rs. 2 per three minute call to Re. 1 per three minute call. This is in line with the lower call charge for urban subscribers, and the constraint of the coin unit to be used for CCBs.

7. A number of other issues were raised during the consultation process with regard to PCOs. These include, for example, commissions, additional lines for PCOs/VPTs, quality of service, license fee, and allotment of PCOs/VPTs. **The Authority will deal with these issues separately.**

Domestic long distance call charge

8. In the Second Consultation Paper, there was a link between the proposed rentals and long distance and international call charges. The difference between cost based rentals and the proposed rentals was added to the cost base for calculating these charges. Using this methodology, the lower rentals now specified for low user subscribers imply an increase in long distance and international charges. Thus, the final levels specified for these tariffs are now slightly more than those proposed earlier for most distance categories. In addition, the transition to these levels has been made more gradual in the first year of implementation to address the revenue implications that might arise on account of lower rental increases. This latter change addresses the suggestions by service providers for a slower implementation of tariff declines for domestic long distance and international calls.

9. Service providers had strongly argued for retaining the distance slab of "Above 1,000 kms." The Authority has at present decided to maintain this slab because it makes it possible to achieve a smoother implementation of the reduced tariffs for long distance. Retaining this distance slab implies a separate distance slab of "Above 500 to 1,000 kms." with a tariff lower than the tariff ceiling that was proposed for the combined distance slab of "Above 500 kms."

10. There was also a suggestion to retain the distance slab of "36 to 50 kms.". The Authority has decided not to alter its initial proposal of having the first distance slab of 0 to 50 kms., and of applying to this slab an STD tariff same as for a local call. This STD tariff policy brings the distance based tariffs more in line with the tariffs arising after the extension of the local area to become co-terminus with the SDCA. In other

words, it makes the application of the Order extending the local area to SDCA more consistent with a distance based charging principle.

11. **The Authority will closely monitor the developments with regard to domestic long distance and international calls. The information will provide a basis for any further policy responses of the Authority in this context, including the tariffs and interconnection charges that should apply for preparing for any liberalization in the long distance segment of the market.**

International call charge

12. For reasons similar to those mentioned for domestic long distance calls, tariffs for international call charges have also been increased slightly, and their pace of implementation has been made slower than that proposed earlier for the first year. As in the case of the proposal in the Second Consultation Paper, tariffs for calls to SAARC and other neighbouring countries are the same as those for the highest distance slab in the case of domestic long distance calls.

Charge for manual trunk calls (domestic)

13. Comments received by the Authority argued for a fixed charge (e.g. Rs. 5), plus an additional charge calculated for units of three minutes each. The Authority has considered three different categories of trunk calls:

   - ordinary booked calls;
   - other booked calls with special features such as demand calls, lightning calls, person to person calls, etc.

1. The first category of calls is treated analogous to subscriber trunk dialed calls, with the difference that they should be charged some additional amount because of the use of an operator to assist in making the calls. The additional amount specified for these calls is in two parts. One part is a fixed charge of Rs. 5 per call. The other gives a minimum duration and charge for a call. For the latter, the Authority has specified that the charge be the same as for a subscriber trunk dialed call, but the call be charged in units of one minute. Thus, the minimum charge will be Rs. 5 plus the STD charge for a one minute call. For calls more than one minute duration, the time period for charging will be calculated in discrete units of one minute each.

2. The prevailing booked trunk call tariffs are lower than the tariff for a three minute STD call for certain prevailing call charges. With a decline in tariffs for STD calls, there should be a decline also in booked trunk call charges. This would also encourage the use of such calls by the large number of subscribers which have not taken STD facilities on their DELs. The Authority has reduced the minimum duration for charging booked trunk calls from three minutes to one minute not only to reduce the minimum call charge but also to give greater flexibility to the users in making these calls.

3. For other booked calls, such as demand calls, lightning calls, etc., the Authority has forborne with regard to tariffs.

4. **The service providers will have to maintain a Table of charges for trunk calls. Users, including potential users, will have the right to see this Table when required by them.**

Charge for operator assisted international calls

5. The basis for tariffs specified for operator assisted international calls is the same as for domestic calls, i.e. Rs. 5 plus the ISD call charge as appropriate, with the ISD charge being levied for discrete units of one minute each.

6. The Authority has forborne with respect to the other types of international calls dialed using operator assistance, such as demand calls, lightening calls, etc.

7. **The service providers will have to maintain a Table of charges for operator assisted international calls. Users, including potential users, will have the right to see this table when required by them.**

Free call allowance

8. The Second Consultation Paper had proposed a free call allowance of 120 metered calls bi-monthly, or 60 calls monthly. This was done by providing double the average number of metered calls made per day by subscribers making up to 150 calls bi-monthly.

9. There was a strong body of opinion that the number of free calls should not be reduced, in particular for rural subscribers. However, with the extension of the local area to coincide with the SDCA, and a reduction in long distance call charges, each metered call after the new tariff is equivalent to more than one metered call prior to these tariffs. This would be particularly true of the rural area where a larger portion of total calls are long distance calls. Thus for example, a call just below three minutes duration to the relevant distance of 36 to 50 kms. would have counted as five metered calls earlier, it is equivalent to only one call after implementation of the new tariffs. Moreover, the overall impact of any reduction in free calls has to be seen in terms of affordability, an issue which has already been addressed earlier.

10. Thus, for urban subscribers, the Authority has maintained its proposal on free calls, and has specified a free call allowance of 60 metered calls per month of the billing cycle. For rural subscribers, in view of the larger share of long distance calls in total, and that the present free call allowance is much larger (250 metered calls bi-monthly), the Authority has decided to provide 75 metered calls per month of the billing cycle.

11. For all subscribers linked to PBX, PABX and EPABX, the Authority has not given any free call allowance. It must be borne in mind, however, that for these as well as for subscribers to DELs, alternative packages

can be devised by service providers to give different combinations of rentals, call charges and free calls.

Billing cycle, fascimile, and other matters relevant for tariffs not specifically addressed in the Schedule

12. For all these matters, the Authority has decided for forbearance. The reason for forbearing with regard to billing period is that different service providers and subscribers may desire billing periods different from the present bi-monthly period used by the DOT. All these matters, however, will be subject to the reporting requirement and the Authority will intervene if there is any necessity for doing so.

II. Items Addressed in Schedule II: Cellular Mobile Telecom Service (CMTS)

Introduction

116. The existing tariff regime for cellular services, which is uniform across circle and metro operations, specifies prices in terms of ceilings. A conspicuous feature of the cellular market at present is the relatively low access charge (i.e. monthly rental) and a comparatively high usage charge. The maximum price that operators may charge for access is set at Rs. 156 per month. For the three time categories, peak, standard and off-peak specified in the licence conditions, maximum prices for usage are set at Rs 16.80/8.40/4.20 per minute respectively.

117. Empirical evidence on the cellular market suggests that the low monthly rental of Rs. 156 has allowed "easy" access to the cellular service, while the relatively high usage charge does not promote its usage. The price package thus obtainable attracts several subscribers who do not spend a large amount on the cellular service.

118. To a certain extent, operators have been able to circumvent the low access charge by way of *tariff plans* that charge a higher fixed fee, generally in addition to the monthly rental. It is likely that subscribers to these tariff plans will be those who in any case are the moderate to high users of the service. Thus the ceiling of Rs.156 could, and according to many operators and commentators does, result in a group of subscribers who are a "net cost" to the operator.

119. At any given time, each operator generally has more than one tariff plan on offer. A careful examination of various tariff plans reveals that free airtime comes "bundled" with membership fee, and the amount of free airtime varies positively with the membership fee of the plan.

120. For calls originating from the cellular network and terminating on the fixed one, the subscriber, in addition to the air time charge, pays call charges as applicable to PSTN for local, STD or ISD. For mobile to mobile calls within the same cellular service area, only airtime charges are levied. Within the existing tariff structure, calls terminating on the cellular network have to be paid for and are subject to the same price ceilings as outgoing calls.

121. At present, the security deposit is Rs. 3000 and the installation charges Rs. 1200.

Tariff Proposals

122. Against this backdrop, the Authority issued tariff proposals for CMTS in the Second Consultation Paper on Telecom Pricing. Among the salient features of the proposals were increases in the monthly ceiling of rental from Rs. 156 to Rs. 600 and a reduction in the highest airtime usage charge from Rs. 16.80 to Rs. 6 per minute.

123. The Second Consultation Paper showed that cost based tariff for circles taking into account circle licence fee would result in unacceptably high tariff levels. As a result, circle data was left out and the proposals were based on data of only the metros. The cost basis for deriving the tariff for rental included capital expenses and 50% of the licence fee. The cost basis for deriving airtime charges included operating expenses and 50% of the licence fee. Thus rental and airtime prices included a 50:50 split of the licence fee into capital and operating expenses.

124. A move toward the Calling Party Pays (CPP) regime in line with international practice was also proposed. In the proposals, *tariff packages* were allowed, provided that prices offered as part of a tariff package could not exceed the specified ceilings. In addition, a 45-day reporting requirement was proposed for tariff changes that the CMTS operator desired to introduce in the market.

Summary of the main comments

125. Of the comments made on the proposals for cellular, an overwhelming majority was from service providers and the Cellular Operators Association of India (hereinafter COAI). Subscribers and Consumer Associations responded mainly to the proposals for Basic Services. The response can be broadly summarised as follows:

125.1 Extension of the tariff arrived on the basis of metro data to circles not justified

The approach of extending the metro data derived tariffs to circles is questionable since there are large differences in the cost structure between circles and metros. Any decision regarding circle tariff must also take into account the high licence fees payable, which crucially affects the viability of the service providers.

125.2 Proposals that increase the degree of regulation and limit the flexibility of the CMTS operator

The 45-day reporting requirement for all tariff changes was perceived as being restrictive. The service providers submitted that tariff changes could be filed with the Authority within 3 days of introduction. Besides, it was stated that service providers be allowed the freedom to offer alternative tariff packages, provided that the package proposed by the Authority was always available to the subscriber.

125.3 Issues relating to the implementation of the CPP regime

Apart from the technical difficulty, service providers felt that implementing the CPP regime along with the attendant tariffs would result in a revenue loss to the service providers in the short term.

125.4 Revenue implications of certain proposals

Since the prime source of revenue for cellular operators is airtime, service providers submitted that the highest rate for airtime use of Rs. 6 per minute is low and would decrease revenues.

126. **The Authority has given serious consideration to all the views expressed by service providers with regard to the proposed regime for CMTS. In addition, consumer interest has been kept in focus while deciding the tariffs for cellular services.** The prices for certain category of calls viz. mobile to mobile long distance calls, which were not made explicit in the proposals, have also been addressed.

Differential Tariff Regime

127. As has been mentioned above, circle data were left out and the proposals based on data of only the metros. This was initially disputed by certain parties, who preferred the existing regime to continue in the circles until further review of the economics of circle cellulars. The COAI and the Industry have since had time to evaluate TRAI's tariff proposals in detail and they too now support the implementation of these tariffs for metros as well as circles

128. **Although a differential tariff regime for metros and circles can be theoretically conceived, the Authority, at present, favours a uniform tariff regime across the Industry.**

Deposits and Installation charges

129. **The prevailing charges as specified in the licence shall be the ceiling for Deposits and Installation charges. With regard to STD and ISD deposits, the Authority has decided to forbear (refer to the section on general issues for more details).**

Standard Hours and Concessional Hours

130. In the second Consultation paper, the Authority had proposed a classification between peak and off-peak hours, with peak hours being subject to a ceiling of eight hours in a calendar day. **It has now been decided to adopt a different nomenclature for categorisation of hours for CMTS. Instead of peak and off-peak hours, the categorisation for tariff setting purpose shall be Standard and Concessional hours respectively.** Moreover, to allow the CMTS operator more flexibility in pricing, the Authority has also decided to increase the number of Standard hours (which correspond to peak hours in the Second Consultation Paper) from eight to eleven.

131. The CMTS operator shall also have flexibility in determining the timing of standard and concessional hours provided that standard hours do not exceed eleven in a calendar day. Airtime during the entire calendar day on Sundays and three national holidays, i.e. 26th January, 15th August and 2nd October shall be priced at concessional tariffs. Tariffs for concessional hours have to be less than the corresponding tariffs for standard hours. The exact level has been left free for the service provider to decide.

Pulse Rate for Calls

132. In the tariff paper, TRAI proposed that calls be charged on the basis of a "flag down" of 30 seconds and subsequently at intervals of 10 seconds. In their comments the operators had suggested a uniform billing interval of 60 seconds. This proposal is restrictive, especially when considered in the context of the average call holding time, which is considerably less than 120 seconds. **The Authority has decided that the charging pulse for airtime will be at a uniform interval of 20 seconds in consumer interest.**

Rental and Airtime Charges

133. In the second Consultation paper, the Authority had proposed a ceiling for monthly rental and "peak" (redefined as Standard in this Order) airtime tariff of Rs. 600 and Rs. 6 per minute respectively. Flexibility to exceed either of these ceiling amounts in alternative price packages was absent in TRAI's tariff proposals. **In response to the Industry's suggestion, the Authority has agreed that flexibility in offering alternative price packages is a desirable condition for service providers as well as subscribers. As a result, such flexibility shall be available to the CMTS operator (refer to the section on general issues for more details)**.

134. Such flexibility in pricing, however, cannot meaningfully coexist with price ceilings. **Hence, the Authority has decided that the tariffs of Rs. 600 for monthly rental and Rs. 6 per minute for standard airtime shall be part of the standard package (see below for details) always available to the subscriber.** Certain conditions shall apply to the alternative price packages that are offered by the operator. These conditions are elaborated in the section on general issues.

Free Airtime

135. **The Authority has decided that no free airtime will be available as part of the standard package**.

Calls from PSTN to Mobile

136. **Until CPP is introduced, the called party shall pay airtime charges.**

Calls from Mobile to PSTN

137. **The Authority has decided that the tariff for such calls shall comprise two elements:**

   i. **Airtime charges; plus**
   ii. **PSTN charges for local or long distance as applicable from time to time to the fixed network.**

Calls from Mobile to Mobile

116. The TRAI directive of August 19, 1998 allows for direct inter-connectivity between cellular networks operating within the same region. The issue of direct inter-connectivity of cellular networks operating in different regions is being examined separately under the domestic long distance liberalisation initiative.

117. **It has now been decided that the price for mobile to mobile calls will consist of:**

   - **Airtime charges; plus**
   - **A supplementary long distance charge based on distance.**

   This shall apply in the case of all mobile to mobile calls **except** for those that fall within the Metro Licensee Service Area. For these calls, only airtime shall be charged. In addition, the service provider shall make the calling party aware of the quantum of supplementary charge, if any, to be paid by making appropriate technical arrangements. This is necessary because the called party may be at a different location, thus altering the charges to be paid by the calling party. This will ensure that there are "no surprises' when the party receives the bill.

Roaming, Pre-paid cards and other VAS

116. **The Authority has agreed to forbear the additional charge levied for roaming, except for the general reporting requirement. This condition shall also apply to pre-paid cards, other supplementary services, value added services within the cellular service and to the periodicity of the billing cycle.**

117. **The Authority is contemplating a detailed assessment of pre-paid card services as applicable to cellular mobile. If necessary, the tariff conditions for pre-paid cards decided in this Order shall be changed.**

Standard Tariff Package

118. The Standard Tariff Package shall always be available to the subscriber at the tariffs specified in Schedule II for CMTS.

Alternative Tariff Packages

119. In the alternative tariff packages, items for which tariffs are specified as ceilings in Schedule II for CMTS cannot be exceeded. Items for which a particular amount is specified viz. rental and airtime may have a different price in the Alternative Tariff Package, subject to the general reporting requirement.

CPP

120. The response to the proposed introduction of the Calling Party Pays (CPP) regime has been favourable. The DoT has indicated that it will take some time to make the technical adjustments required to implement the CPP system. The proposed date for implementation of CPP is fixed for August 1999.

121. Until CPP is introduced, the existing regime in which the subscriber pays for incoming calls to cellular shall prevail. The price for these calls shall be the same as for outgoing calls i.e. Rs. 6 per minute at the standard rate.

Revenue sharing from Long Distance

122. During the open house discussions, opinions sharply differed with regard to sharing of revenues from long distance and international calls originated by the cellular network. While the cellular operators favour sharing of these revenues, not surprisingly the basic operators are opposed to it. **The Authority has decided that, for the present, the existing non-sharing arrangement between the basic and cellular networks shall continue for domestic long distance and international calls. Since this is an interconnection issue, the Authority will take a decision with regard to revenue sharing under Interconnection Regulations to be issued separately.**

Review of Cellular Mobile Tariffs

123. **In view of the circumstances surrounding the cellular industry at present, the Authority will review and modify notified tariffs, should that become necessary as a result of policy changes.**

III. Items Addressed in Schedule III: Radio Paging Services

Introduction

148. **Radio Paging Services are available in two variants, the Alphanumeric Service and the Numeric Service. The existing tariff for access i.e. monthly rental to the service is specified as a price ceiling. For the Alphanumeric Service, this ceiling is Rs. 250 per month, while the corresponding figure for the Numeric Service is Rs. 150. There is no extra charge for operator assisted calls.**

149. **A deposit of Rs. 2000 is levied at the time of provision of the service. The registration fee of Rs.500 is adjusted against the deposit. There is no installation charge.**

150. **In the Second Consultation Paper on Telecom Pricing, the Authority had proposed to revise the tariff ceiling for the Alphanumeric Service to Rs. 300 per month and that for the Numeric Service to Rs.175 per month. In addition, the Authority had proposed to introduce revenue sharing between the Paging and Basic Service Providers (and Cellular service providers). For every call made to the Paging Control Terminal (PCT), Rs. 0.20 was proposed to be passed on to the**

Radio Paging Operator. This was sought to be achieved by adding a surcharge of Rs. 0.20 to each call made to the PCT by PSTN (or cellular mobile).

Summary of the responses

151. Of the comments received on the proposals for Radio Paging Services, the majority were made by the Paging service providers and the Basic service providers including the DoT. The DoT stated that since metering of local calls cannot be separated in the present system, implementation of the revenue sharing formula proposed by the Authority was not possible at this time. Two options were suggested by the DoT in this regard:

- **Either the existing non-revenue sharing arrangement should continue or**
- **Each call made to the PCT be charged at twice the local call rate with the amount for one call passed on to the Radio Paging Operator**

152. **The latter proposition was opposed by the Radio Paging Service Providers, who wanted an increased revenue share of the prevailing local call charge.**

The Authority has seriously considered all the comments made and decided as under.

Deposits and Registration Fee

153. The prevailing charges as specified in the licence shall be the ceiling for Deposits and Registration Fees.

Rental

154. As in the current pricing structure, the rentals for Alphanumeric and Numeric services shall be different. The ceiling rate for Alphanumeric service shall be Rs. 300 per month while the corresponding rental for the Numeric service shall be Rs. 175. These are the same as proposed in the Second Consultation Paper where an elaboration of the basis is available.

Revenue Sharing

155. For the present, the existing non-sharing arrangement shall continue.

156. **In the absence of revenue sharing, the Authority had derived cost based monthly price ceilings of Rs. 325 for the Alphanumeric Service and Rs. 195 for the Numeric Service. Although revenue sharing is ruled out for the present, the Authority has decided to retain the lower estimates of monthly rental that were derived on the assumption of revenue sharing. This has been done for two reasons:**

i. **The notified tariffs are considerably higher than the prevailing prices; and**
ii. **The Authority will shortly review the tariffs for the Radio Paging Industry (see para 158)**

Other Matters

157. With respect to all other matters relevant to tariff including supplementary services, value added services within the Paging Service and the periodicity of the billing cycle, there will be forbearance, subject to the reporting requirement.

Review of Paging Tariff

158. The Authority released on 21st December, 1998, a detailed assessment of the viability of the Radio Paging Industry in cities that addresses, *inter-alia*, the issue of quantum of licence fee payable by operators from the fourth year on. Public consultations on this issue are underway. Once this process is complete, the Authority will review the tariff for Radio Paging Services decided in this Order and make changes, if necessary.

IV. Items Addressed in Schedule IV: Leased Circuits

Summary of the basis for proposed tariffs in the Second Consultation Paper

159. In the Second Consultation Paper, proposed tariffs for leased circuits were estimated on cost basis for 64 Kbps and 2 Mbps leased circuits, mainly with reference to equipment of 140 Mbps. For the first 50 kms., costs were calculated for cables laid in bituminous soil, and after that for soft soil. Since the cost of laying cables in soft soil is less than that in bituminous soil, the tariff for 50 kms. was kept constant for about 25 more kms., i.e. the distance at which the cost of laying cables in soft soil became equal to that for bituminous soil. Beyond that distance, soft soil costs formed the basis of leased circuit tariffs.

160. On the basis that the catchment area for leased circuits in the shorter distance was 500 kms., costs for beyond 500 kms. were calculated on the basis of equipment with higher capacity, i.e. STM4 system. Such equipment implies substantially lower unit costs than those derived from equipment of 140 Mbps. Given the large reduction in unit cost for such high capacity equipment, cost based price for leased circuits for even 1,500 kms with this capacity are lower than the cost based tariff for 500 kms using 140 Mbps; 1,500 kms. was suggested in certain comments as the distance that should be treated as cap for leased circuit tariffs. Thus, the Second Consultation Paper had proposed tariffs applicable for 500 kms. with capacity 140 Mbps as the upper limit of leased circuit tariffs.

161. In view of the ongoing decrease in costs of leased circuits, all tariffs for leased circuits were proposed as ceilings.

162. Tariff ceilings calculated for 64 Kbps and 2 Mbps leased circuits, together with the coefficients suggested by Recommendation D.8 of the International Telecommunications Union for pricing N Times 64 Kbps leased circuits, were used to propose certain tariff ceilings in the Second Consultation Paper for N Times 64 Kbps leased circuits. Other tariffs were considered together in a basket, and a weighted average reduction of 50 per cent was proposed for the tariffs for this basket. Apart from these tariff ceilings, it was proposed that costs for end-links or local leads could be charged in addition, as could some other cost elements such as the payment for use of National Highways land.

Summary of the main comments

163. During consultations, there were some queries regarding the validity of certain cost items. Except in one case, these doubts were addressed through clarifications made by the Authority during detailed discussions with those raising these queries, which showed that the estimates used in the Second Consultation Paper had taken account of points raised by these parties. For the one exceptional case, very high cost estimates had been provided to the Authority and the initial discussions could not be taken further because no clarification was provided to the Authority when the basis for these higher costs was questioned. Some other submissions to the Authority have shown that the cost estimates used in the Second Consultation Paper reflect the prevailing situation.

164. A number of other important points mentioned by prospective providers of leased circuits include:

- the relatively low tariffs for leased circuits will result in by-pass of long distance traffic;
- after 50 kms., tariffs should not be kept constant for a distance of about 25 kms. Instead, the cost of laying cables in soft soil should be added from 50 kms. itself so that the tariffs keep increasing beyond 50 kms. and are not unchanged for any distance;
- a higher profit margin, such as 40 per cent, should be provided to cover adequately for different technologies in use and to give an incentive for providing leased circuits;
- tariff ceilings for certain N Times Kbps capacities are more than those for 2 Mbps, which implies that the customer will take an over capacity of 2 Mbps rather than N Times 64 Kbps;
- the conditions under which leased circuits are provided should become more user friendly.

159. The Authority is of the view that service providers should devise methods to monitor the use of leased circuits so that by-pass does not take place.

160. The point regarding costs of soft soil being added at 50 kms. itself was made on the basis that soft soil costs do not include any element of the costs of laying cable in bituminous soil. That is not correct; even for soft soil, the cost components include cable laid in a certain proportion of bituminous soil which takes account of the concern raised in this context. However, for maintaining continuity of tariff increases till the distance of 500 kms., and to give some additional profit margin to encourage the provider of leased circuits, the additional costs for laying cable in soft soil is added from 50 kms. onwards. This is equivalent to a situation where for the first 50 kms. the cable is considered as being laid in bituminous soil and subsequently in soft soil. An important point in this regard is that since even for soft soil the Authority's cost estimates include a component of laying the cable in bituminous soil, the Authority has taken an over-estimate of the actual cost incurred by taking the higher cost of laying a cable in bituminous soil for the first 50 kms. This is particularly because the terrain under which cables are laid normally involves less than 50 kms. of bituminous soil. This in effect implies an additional profit element being given to the providers of leased circuits.

161. Regarding the demand for a higher profit margin, in addition to the points mentioned above, it should be noted that the cost based tariffs include various elements which raise profits above the explicit profit margin of 10 per cent considered in the calculations. For instance, the annual recurring expenditure is taken about 2 to 3 per cent higher than the average, an interest rate of 15 per cent is taken fully on total expenditure while in reality the amount subject to interest would be decreasing over time, and expenses for maintenance are considered in costing while these are already incorporated for basic service providers in the cost based tariffs calculated for local, long distance and international calls.

162. Further, a large portion of the total cost base for leased circuits is accounted for by cable costs and the cost incurred in laying those cables. This is so in particular for distances beyond 5 kms. and the share of these cost elements in total keeps increasing with distance. Though depreciation has been applied to the total cost base, depreciation does not apply to some of these cost elements (e.g., labour cost). For some other cost items (e.g., cables), as stated in the Second Consultation Paper, the depreciation rate taken into account is higher than that likely to be actually applicable. In effect, both these aspects imply a higher profit margin than explicitly considered. In view of these features, and that the costs of installing leased lines is continuing to decline, the Authority has decided that there is adequate profit margin in the cost based tariffs proposed for leased circuits. **In fact, as mentioned in the Second Consultation Paper, the Authority will review leased circuit tariffs again after one year in order to take account of the decline in costs during that period**.

163. Furthermore, the Authority is of the opinion that the reduced leased circuit tariffs will give rise to a very strong demand for them, resulting in a surge in revenues from leased circuits and in a strong impetus for related economic activity. Such opinion was very strongly expressed also by several commentators.

164. For tariffs of N Times 64 Kbps leased circuits, the Authority recognizes the apparent anomaly in their tariffs and that for 2 Mbps circuit. However, the Authority is of the view that it is better to encourage customers to lease capacity of 2 Mbps or more, in order to consider a greater use of the capacity available. Further, tariffs are ceilings and lower tariffs can be provided for N Times 64 Kbps capacities.

165. **The present Order is only a first step in addressing tariff issues for leased circuits. The Authority is next going to address in detail the conditions under which leased circuits are provided and will in due time give its decision on this matter.**

Tariffs ceilings for 64 Kbps and 2 Mbps leased circuits

166. In view of the above, the Authority has specified virtually the same tariff ceilings for 64 Kbps and 2 Mbps leased circuits as were proposed in the Second Consultation Paper. These tariff ceilings are provided in ready reckoners annexed to Schedule IV. As mentioned above, the provider of leased circuits may add to these tariff ceilings a cost based charge for local leads and any other additional cost element such as way leave charges.

167. The tariff ceilings in the ready reckoner are provided for distances of 5 kms. For distances lying in between the distances specified in the ready reckoner, tariff shall be charged on a *pro rata* basis, taking for this purpose the tariff ceilings for the two distances of the ready reckoner between which the relevant distance lies.

168. It should be noted that tariff ceilings for certain other capacities of leased circuits has been specified in terms of the ready reckoner tariff ceilings for 64 Kbps and 2 Mbps leased circuits. These derived tariff ceilings are therefore in the nature of ready reckoner prices. Hence, to these tariff ceilings also, the provider of leased circuits may add a component to account for the charge for local leads and for payments made such as way leave charges.

169. Similar to the specification for the charging for leased circuits, the Authority has specified for local lead tariffs that the first option for charging for local leads should be to provide them on lease. If this is not possible, then tariffs could be either on rent and guarantee terms, or on the basis of a mutual agreement between the parties concerned about the extent of contribution to costs that will be made by the party leasing the circuits.

Tariff ceilings for capacities below 64 Kbps

176. The Authority has decided to forbear with regard to tariffs for these leased circuits.

Tariffs for capacities N Times 64 Mbps

177. The Authority has decided to use coefficients in Recommendation D.8 of the International Telecommunications Union for these capacities. The tariff ceilings for these capacities are determined by multiplying these coefficients with the tariff ceiling for 64 Kbps leased circuits.

Tariffs for capacities above 2 Mbps

178. Specific requests were made to the authority to decide tariff ceilings for leased circuits for capacities above 2 Mbps. Calculations made for this purpose showed that the tariff ceilings for N Times 2 Mbps capacities should be N Times the ceiling tariff for 2 Mbps, with the exception that N should be 16 for 34 Mbps, and 64 for 140 Mbps. These tariff ceilings reflect the fact that equipment costs are a small portion of the total leased circuit costs, in particular for distances above 10 kms. Most of the costs arise due to cables and laying of those cables, and these costs for N Times 2 Mbps capacity are about N Times the relevant costs for 2 Mbps.

Mandatory provision of leased circuits

179. The Authority has specified that leased circuits must be provided using excess capacity, or when such capacity is not available then on rent and guarantee basis.

Rent and guarantee basis

180. The Authority has specified that rent and guarantee terms should be based upon costs. **The Authority proposes to review at a later date various other aspects of rent and guarantee terms in greater detail.**

Application of tariffs specified in Schedule IV in relation to prevailing tariffs

181. Rent and guarantee tariffs will apply only to leased circuits taken from the date of implementation of these tariffs. However, for other prevailing tariffs, tariffs specified by the Authority will replace them from the date of implementation. *Pro rata* corrections must be made to any advance payments that might have been made for leased circuits on the basis of the prevailing tariffs.

Tariffs for temporary connections

182. For temporary connections, twice the ready reckoner tariffs have been specified on a *pro rata* basis for a period up to three months. For circuits leased for more than three months, the annual ready reckoner tariff is specified as the ceiling tariff. In addition, the costs for local leads, if applicable, and any other relevant additional costs that might be incurred, will be part of the total tariff.

Tariffs when additional capacity has to be provided for meeting demand for leased tariffs

183. It is possible that extra capacity might not be available for leased circuits, and the party demanding leased circuit might not want the total capacity that is established on rent and guarantee basis. Instead, the demand might be only for a portion of the additional capacity that might be installed, and the provider of leased circuits will then have to assess its own use of the extra capacity. In such a situation, the Authority has specified that the tariffs be decided through bilateral negotiations among the parties concerned.

V. Items Addressed in Schedule V: Integrated Services Digital Network (ISDN)

Introduction

184. The Authority views ISDN services as a crucial input in promoting efficiency of business. Pursuant to this objective, the Authority had proposed cost based tariff ceilings for ISDN services in the Second Consultation Paper. These tariff ceilings were derived on the basis of available information; where information on costs was not available, existing rates charged by the DoT were proposed as the ceilings.

185. ISDN is available in two types of interface referred to as Basic Rate Access (BRA) and Primary Rate Access (PRA). The difference between BRA and PRA is in the number of B channels that each can support. BRA divides the phone line into three digital channels: 2B channels and 1D channel. PRA in India is configured to 30 B+D. Each of these channels can be used simultaneously so several communication tasks can be performed at the same time.

186. ISDN is a relatively new service, introduced for the first time in India in 1996. At present, usage is very low. Since the service is relatively new, and the market is developing, **the tariffs will be reviewed once a detailed consultative process on the subject is complete.**

Tariff Proposals

187. In the Second Consultation Paper, the tariff proposals were based on cost wherever possible. The prices thus derived were proposed as ceilings. As a departure from DoT's prevalent pricing regime, the Authority had proposed that a minimum charge for usage of ISDN services should not exist. Another significant departure proposed was an increase in the rate per pulse when using ISDN media to Rs. 1.50 as opposed to Rs. 1.30 per pulse for Basic services. This was proposed on the basis that significant usage of the ISDN facility will be for internet services and the user should therefore be charged a premium for enhanced speed and quality as a result of using ISDN.

Response to the Tariff Proposals

188. Only the DoT responded to the proposals for ISDN defined in the Second Consultation Paper. The DoT agreed with all the proposals.

Initial Deposit and Registration Deposit

189. The Authority has decided that the aggregate of all deposits (excluding security deposit for ISDN equipment) shall not exceed one year's rental. The registration deposit shall be combined with the initial deposit for the purpose of comparing with the maximum limit on deposits.

Installation and Testing Charges

190. These shall be one time charges and the Authority has decided to retain the price ceilings outlined in the Second Consultation Paper

Monthly Rental for ISDN Equipment

191. These rates shall be applicable only when the equipment is hired from a service provider. These shall not apply in case the subscriber procures the equipment from an alternative source.

Monthly rental for Access

192. The Authority has decided to retain the price ceilings outlined in the Second Consultation Paper. For the PRA service the rental is linked to distance, while for the BRA, the monthly rental is independent of distance.

Usage Charges

193. **In their response to the Radio Paging Tariff proposals, the DoT mentioned that a higher charge for calls from PSTN to PCT could not be implemented, as it is not possible at present to separate the metering for local calls. Although no comment was received with regard to the higher rate proposed for using ISDN media, the Authority has decided that, for the present, the ceiling rate for usage for every B channel shall be the same as applicable to PSTN. Any change in the PSTN tariff will imply a corresponding change in the ceiling rate applicable for every B channel.**

194. **In addition, it has been decided, as proposed in the Consultation Paper, that there shall be no minimum usage charge for either the BRA service or the PRA service.**

Rental for Supplementary Services

195. With a view to foster growth of ISDN services, the Authority has decided that there shall be no charge for these services, as is now prevalent.

Rental for Temporary Connection and Minimum Period of Hire

196. The Authority has decided that the minimum period of hire shall be one month for BRA and PRA and the rental for a temporary connection shall be twice the regular connection for the particular service.

Surrender before provision

197. The Authority has decided that in this case actual expenses incurred shall be levied.

Security Deposit for Equipment Hired from the Basic Service Provider

198. The Authority has decided that security deposits for equipment shall not exceed their prevailing market price.

Other Matters

199. With regard to all other matters relevant to tariff for ISDN services the Authority has decided, for the present, to forbear.

VI. Items Addressed in Schedule VI: Internet

Introduction

200. The Second Consultation Paper emphasised that Internet tariff should encourage the supply, use and expansion of Internet services, and promote innovation in these services. The Internet sector in India is likely to have several competing Internet service providers (ISP's), with both large as well as small private sector ISP's. The large ISP's who possess their own network or Internet backbone are referred to as the major providers.

201. For Internet leased circuits (port charges), the second consultation paper had proposed cost based tariffs. This was done with a view to improving the viability of the private sector ISP's and enhance competition.

202. For tariff regarding Internet TCP/IP dial up, the Authority had proposed two alternatives

- No price restriction on any ISP, including DoT and VSNL
- Fix tariffs for all major operators, including DoT and VSNL

Comments and Responses

203. Of the comments made on the proposals for Internet, a majority were from current and prospective private sector ISP's. Accordingly, the comments related to the price and quality of

inputs for the private sector ISP's.

204. The comments can be summarised as under:

- Alternative media viz. VSAT may also be made available at competitive prices
- Although charges have been reduced, these are still higher compared to international prices
- The hosts should guarantee the quality of service, in terms of availability and uptime as well as end to end bandwidth
- There should be a separate numbering plan for Internet access as in the case of Radio Paging and Cellular mobile
- PSTN lines for Internet should be made available on demand
- There should be PSTN connectivity through ISDN, E1 and higher capacity lines with exchange of choice

205. The issue of availability and uptime of the leased circuits is being addressed by the Authority separately under quality of service. Likewise the recommendation with regard to a specific numbering plan for Internet is being looked at separately by the Authority.

206. With regard to the reduction in price of alternate media like VSAT, the Authority has decided to forbear with regard to VSAT tariff (refer to the explanatory memorandum for VSAT for more details). Accordingly, these prices will be determined by the market. Special concessions for ISP's who use VSAT cannot be justified within the framework of the Authority's decision to forbear with regard to VSAT tariff.

207. On-demand availability of PSTN and connectivity through higher capacity lines for ISP's are issues that go beyond the scope of tariff determination. The Authority is of the opinion that such issues should be settled between the parties involved within the framework of the tariffs specified in this Order.

208. As regards the issue of input prices being still higher than international norms, the Authority believes that a significant reduction has resulted from this Order and that the issue will be addressed in the next review of this Order in respect of Leased Circuits (Port charges) which may take place in about a years time.

Tariff for all Internet Services other than Internet Leased Circuits (Port Charges)

209. **The Authority has decided to forbear with regard to these tariffs, subject to the reporting requirement.** This decision is based on the premise that competition already exists in the provision of these services, and such competition is likely to increase in the future. Indications to that effect are already evident in the market.

210. Although the Order does not specify concessionary schemes of the kind that are available at present, **the Authority encourages ISPs to offer concessionary schemes to academic and research institutions and the media.**

Charge for Internet Leased Circuits (Port Charges)

211. In view of the need to provide a boost to Internet services and also based on the discussion above, the Authority has decided to retain the prices that were proposed on the basis of the lowest cost in the Second Consultation Paper. **These prices shall be in the form of ceilings.**

212. With regard to all other matters relevant to Internet Tariff the Authority has decided to forbear.

VII. Items Addressed in Schedule VII: Value Added Services

Introduction

213. The DoT has defined Value Added Services as "enhanced services which add value to the existing basic tele-services and bearer services". This is in conformity with International Telecommunications Union's (ITU) definition of Value Added Services.

In India, these services include, inter-alia,

i. Electronic Mail
ii. Voice Mail
iii. Closed Users Group Domestic 64 Kbps Data Network via Insat Satellite System
iv. Videotex Service and
v. Video Conferencing

Tariff Proposals

214. In the Second Consultation Paper, the Authority had proposed to forbear with regard to the tariff for these services subject to the general reporting requirement. This was based on the *very nature* of Value Added Services as also the fact that there was likely to be considerable competition in the supply of these services.

Summary of the main comments

215. Most Value Added Service providers did not comment on the tariff proposals. The Authority regards this

as support for the proposed regime for Value Added Services.

216. There were, however, detailed comments made by VSAT service providers and a few by the Mobile Trunked Radio Operators Association (MTROA). During consultations, VSAT service providers mentioned that there were several constraints affecting the growth and viability of their business. A number of points mentioned by VSAT service providers, inter-alia, include:

- the relatively low tariffs for leased circuits will seriously affect the viability of the Industry
- High transponder charges and additional licence fee for 64 Kbps VSAT links also have an adverse impact on viability
- Non-availability of transponders and non-provision of space segment transponders in frequency bands other than extended C-Band affect the Industry
- PSTN connectivity, presently not allowed, be permitted

215. The last point was also raised by MTROA. In addition, MTROA also recommended that a floor price be imposed on CMTS operators for offering the Closed User Group (CUG) facility. This point was made on the basis that the CMTS operators are cross subsidising the CUG service and thus, these prices were predatory in nature. Additional points relating to the high licence fees payable to WPC and the restrictive nature of the 45-day reporting requirement were also mentioned.

216. The Authority is of the opinion that reduced leased circuit tariffs will result in a very strong demand for them, resulting in a fillip to related economic activity. Such opinion was also expressed by several commentators, including by several Value Added Service providers. In view of this, the Authority does not support the contention that leased circuit tariffs should be raised to support the VSAT technology. Likewise, the Authority does not agree with the imposition of a price floor for the CUG service offered by the cellular operators.

217. Many of the other comments raised viz. lack of PSTN connectivity and high WPC charges relate to licence conditions for that particular service and therefore cannot be addressed by the Authority at present. On the point of the very high transponder charges levied on the VSAT service providers, the Authority has agreed to make a recommendation to the appropriate authority for review.

Tariffs for Value Added Services and all Services not Specified Elsewhere for example Intelligent Network (IN) Services

220. The Authority has decided to forbear, subject to the reporting requirement.

VIII. Items Addressed in Schedule VIII: Telex and Telegraph Services

Tariff for Telex and Telegraph Services

221. In the Second Consultation Paper, no tariffs were specified with regard to Telex and Telegraph Services. **The Authority has decided to forbear with regard to such services, subject to the reporting requirement.**

IX. Items Addressed in Schedule IX: Global Mobile Personal Communication by Satellite (GMPCS)

Tariff

222. The tariff for GMPCS was not addressed in the Second Consultation Paper. Subsequent to the publication of the Second Consultation Paper, Iridium India Telecom Limited (IITL), who provide GMPCS services in India, approached the Telecom Regulatory Authority of India (TRAI) for approval of provisional tariff for GMPCS Commercial Services in India.

223. The Authority is currently looking at the terms and conditions of the GMPCS licence.

224. The Authority has noted the fact that GMPCS services are in their nascent stage of development and that their utilisation for the present would be restricted to certain high end users. **Keeping this in view, as also the need to provide flexibility in pricing at this stage, the Authority has decided to forbear with regard to tariff for GMPCS for the present, subject to the general reporting requirement.**