सत्यमेव जयते

भारतीय दूरसंचार विनियामक प्राधिकरण
महानगर दूरसंचार भवन, जवाहर लाल नेहरु मार्ग,
(पुराना मिन्टो रोड), नई दिल्ली-110002

TELECOM REGULATORY AUTHORITY OF INDIA
Mahanagar Doorsanchar Bhawan, Jawahar Lal Nehru Marg,
(Old Minto Road), New Delhi-110002
Fax : 91-11-23213294

No. 413-1/2012-I&FN

Dated the 11th May 2012

To

The Secretary,
Department of Telecommunications,
Sanchar Bhawan,
20, Ashoka Road,
New Delhi.

Subject:- TRAI's Recommendations dated 20.08.2010 on "Efficient Utilisation of Numbering Resources".

Sir,

This has reference to the letter no. 16-16/2009-AS.III/49/100 dated 21.03.2012 (**Annexure-I**) seeking the response of TRAI on the prima facie comments and additional observations of DoT on TRAI's recommendations dated 20.08.2010 on 'Efficient Utilisation of Numbering Resources'.

2. The Authority has given careful consideration to the various comments as well as additional observations of Department of Telecommunications. The Authority notes that the Department of Telecommunications is in agreement with the proposal of the Authority that the 10 digit numbering scheme should be continued.

3. The Authority also notes that proposal of TRAI to migrate to an integrated 10 digit numbering scheme in a time bound manner as stated in para 2.26 of the recommendations and till the integrated scheme is implemented, recommendation of creating extra numbering space by prefixing `0' to calls from fixed to mobile within the same service area are referred back for reconsideration. In this regard, DoT suggested exploring the possibility of creating extra numbering space for mobile services by vacation of levels from the current allocations for some of the Basic Service Providers through migration of subscribers to other levels/sublevels.

4. The Authority is of the view that creating numbering resources through vacation of levels, as suggested by DOT, would be disruptive to already struggling fixed line segment. It would cause changes to a large number of working telephone numbers and create discontent among subscribers. The scheme of vacating levels, as suggested by DOT, would only affect some of the service providers and would therefore be discriminatory. Integrated scheme is an efficient way of bringing in uniformity and providing a long term solution. Withdrawing sparsely used levels out of 2,3,4,5 and 6 was one of the various methods considered by TRAI. However, the same was not recommended considering the advantages of the Integrated Numbering Scheme and method recommended for interregnum i.e. by prefixing '0' for all fixed to mobile intra circle calls.

5. Detailed response and recommendations on the comments of the DoT in the letter under reference are given at **Annexure-II**. In view of the above, the Authority strongly reiterates its earlier recommendations including that country should migrate to integrated 10 digit numbering scheme in a time bound manner as stated in para 2.26 and till the integrated scheme is implemented, recommendations in para 2.33 may be implemented.

6. In keeping with the transparency norms, a copy of this letter is being placed on the website of TRAI, www.trai.gov.in

7. This letter issues with the approval of the Authority.

Yours faithfully,

(Rajeev Agrawal)
Secretary, TRAI

Encl.: As above

ANNEXURE-I

Government of India
Ministry of Communications & IT
Department of Telecommunications
(Access Services Wing)
Sanchar Bhawan, Ashoka Road, 20, New Delhi-110001

No. 16-16/2009-AS.III/49/100 Dated : 21-03-2012

To

The Secretary
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg, Old Minto Road,
New Delhi-110002

Subject : TRAI Recommendations on "Efficient utilization of Numbering Resources" dated 20-08-2010- Regarding

This has reference to TRAI recommendation on "Efficient utilization of Numbering Resources" issued vide letter dated 20-08-2010.

2. The recommendations of TRAI were considered by DoT. Prima-facie comments of the DoT on these recommendations are enclosed as annexure-A.

3. In the matter, additional observations of DoT are enclosed as Annexure-B for re-consideration of TRAI.

It is requested that response of TRAI may be sent to DoT at the earliest.

21/03/12

(Rajiv Kumar)
Director (AS-III)
Ph : 23711909/ 23036387
Fax : 23322507

(3)

(8)

Annexure-A (7 pages)

Observations of DoT vis-à-vis the recommendations of TRAI on "Efficient utilization of Numbering Resources" dated 20-08-2010

S.No.	TRAI Recommendations	Comments of DoT
(1)	TRAI'S Recommendation 1 (as per Summary of Recommendations, Chapter IV) and Para 2.8 of main body- "The Authority recommends that 10-digit numbering scheme should be continued with the modification suggested in recommendations below." (i.e. as suggested in other parts of these recommendations)	(a) DoT agrees to the recommendation that the 10 digit numbering scheme should be continued. (b) However regarding the modifications suggested in Para 2.8 of the said TRAI recommendations to create a large numbering space by prefixing '0' to calls from fixed to mobile within the same service area, the following is noted: **(i)** All Wireline subscribers will have to be provided with dynamic STD facility, in order to access intra service area mobile calls. **(ii)** In rural areas where all subscribers are not enough aware to use dynamic STD, will face problem in dialing mobile call with mandatory prefixing of "0" in case of intra-service area calls. **(iii)** TRAI has observed in Para 2.11 of its recommendations, "----This would be another blow to the already struggling fixed line market----". **(iv)** As detailed in the annexure (A-I to A-IV) enclosed, additional capacity of 550 Millions by using working STD codes of Level 7 & 8 can be generated. Further 100 Million is envisaged by using spare STD code 70. Thus total of 650 Million will be available as additional capacity for Wireless. Considering the Wireless growth of 15-20 Million per month, the 650 Million capacity will cater for next almost 30 months.

(4)

(9)

(v) The Wireline subscriber base of all operators in different levels for March 2011 as per TRAI data is as below :

Sr. No.	Operator	Subs Base	Level Used	Net Addition in March 2011
1	BSNL	25224905	2	-153131
2	MTNL	3463969	2	5570
3	Bharti	3295919	4	15261
4	Reliance	1234191	3	2131
5	TATA	1282437	6	-6742
6	HFCL	189900	5	957
7	Sistema	38440	5	403

From the above table, it is clear that the numbering resources carmarked for Wireline subscribers are grossly underutilized.

(vi) It is therefore felt that some of the levels allocated for basic services can be withdrawn by asking the TSPs to share certain levels. The spared levels can be used for mobile services. The numbering levels which should be retained for basic service operations need to be determined.

The annexure (A-I to A-IV) enclosed shows the typical availability of numbering resources after sparing level 5, 6 & 3 from Wireline service providers in phased manner as an example as below:

S.No.	Level Spared	Capacity Generated
1	Level 5	947.5 Million
2	Level 6	1004.5 Million
3	Level 3	798.9 Million
Total		2750.9 Million

(vii) The allocation of Wireline numbering resource may be done to service providers for those SDCA's where Wireline service is to be started i.e. the numbering level to licensees should be allocated SDCA wise instead of PAN-India basis. Implementation

(5)

		plan for the same need to be evolved. (c) In view of above, TRAI may re-consider its recommendation of creating extra numbering space by prefixing '0' to calls from fixed to mobile within the same service area and also explore possibility of creating extra numbering space for Mobile services by vacation of levels from the current allocations for Basic Service through migration of subscribers to other levels/sublevels. Recommendations in this regard may be provided by TRAI.
(2)	**(a)**TRAI'S Recommendation 2 (as per Summary of Recommendations, Chapter IV) and Para 2.26 of main body- "The Authority recommends that the country should migrate to an integrated 10-digit numbering scheme at the earliest. All preparations should be complete by 30th September 2011 and actual migration to the integrated scheme be completed by 31st December, 2011" **(b)** TRAI'S Recommendation 3 (as per Summary of Recommendations, Chapter IV) and Para 2.27 of main body- "Detailed integrated numbering, routing plans and interconnection architecture would be worked out by TRAI after acceptance of recommendations by DoT. If required, a	(a) Regarding migration to integrated numbering scheme following is noted: **(i)** Barring USA, no other major country is following integrated numbering scheme. **(ii)** Making National (Significant) Number [N(S)N] as Subscriber Number (SN) (as recommended by TRAI), will lead to change in dialing scheme. Then, Wireline Customer shall have to dial 10-digit number even to get a local call instead of 6, 7 or 8 digits at present. **(iii)** Implementation of porting between fixed and mobile numbers is an issue to be examined separately at an appropriate time and that may not be a reason for affecting integrating numbering scheme **(iv)** A lot of changes are required to be done in Wireline exchanges for 10-digit integrated numbering and it will have impact on call routing also. In C-DOT and other legacy Wireline exchanges, it is not possible to implement 10-digit integrated numbering. This will immediately and adversely affect Rural Telephony. As mentioned at 1(b) (iii), above, this would also be another blow to already struggling fixed line market. **(v)** 10-digit integrated numbering scheme will also require changes in billing (including inter operator) system, operation support system etc.

	separate consultation would be carried out."	(vi) TRAI has observed that one of the methods (i.e. to merge the SDCA code with the subscriber number and form a 10-digit number for fixed line)) for implementation of 10 digits integrated numbering will not change subscriber number. But it is noted that all SDCA codes of Level '1' will have to be shifted to other levels to avoid overlapping of 10-digit subscriber number with Level 1 service codes. Further, dialing national long distance calls without prefix "0" is not supported by legacy exchanges of the Wireline network. In response to TRAI observation that a uniform space of 8 billion numbers would be available, it is noted that since subscriber number remaining unchanged, the utilisation of numbering space shall be restricted. Method 2 (i.e. to identify one or more unique codes for each service area/circle and fill up the remaining digits to make a 10 digit number) of implementation of integrated numbering is not supported even in the TRAI recommendations because of large scale changes in the numbers. (b) In view of above, TRAI may re-consider its recommendation regarding migration to integrated numbering scheme
(3)	TRAI'S Recommendation 4 (as per Summary of Recommendations, Chapter IV) and Para 2.33 of main body- "The Authority recommends that in the intervening period, till integrated numbering scheme is implemented, the following scheme should be adopted to create sufficient numbering space: (i) No change in dialling plan of fixed to fixed, inter-circle fixed to mobile and mobile to mobile	(a) Observations of DoT vis-à-vis recommendations of TRAI at Sl. No. 1 and 2 above may kindly be seen.

(7)

	calls. (ii) Dial intra circle fixed to mobile calls with prefix '0' (iii) Existing SDCA codes starting with 2, 3, 4 and 6 may be used for mobile services by suffixing with 0, 1, 8 and 9."	
(4)	TRAI'S Recommendation 5 (as per Summary of Recommendations, Chapter IV) and Para 2.34 of main body- - "The Authority recommends that codes defined as spare in the National Numbering Plan 2003 should be kept spare till the new numbering plan consisting of integrated numbering scheme is notified."	(a) Observations of DoT vis-à-vis recommendations of TRAI at Sl. No. 1 and 2 above may be seen. (b) DOT had already started allocating spare STD codes to Service Providers for Wireless services since long. Spare STD codes in level '7' and level '8' has already been consumed.
(5)	TRAI'S Recommendation 6 (as per Summary of Recommendations, Chapter IV) and Para 3.6 of main body- "The Authority recommends that the present arrangement for allocation of new blocks of numbers after demonstrating 80% utilization for fixed and 60% for mobile should be continued. However, in case of mobile numbers, service provider should not have more than 3 million unutilized numbers in a service	It was observed that there is a significant difference between the HLR figures and VLR figures of the mobile subscriber base. It is because the TSPs normally keep permanently inactive customers in HLR for long time and effective re-cycling of these numbers is not being done. Hence, DoT felt that in order to exercise better control of the scarce numbering resource, the allocation of MSC codes on the basis of VLR figures is better than the practice of allocation of new MSC codes based on HLR figures. In view of above, *The allocation criteria has already been changed from HLR based to VLR based as per DoT instructions dated 26.07.2011 (copy attached for ready reference as annexure-A-V)*

	area at the time of requesting for new block of numbers."	
(6)	TRAI'S Recommendation 7 (as per Summary of Recommendations, Chapter IV) and Para 3.8 of main body- "The Authority recommends that the details given by the mobile service providers for allocation of fresh block of numbers should be converted into an annual return consisting of the details already included and in addition details of numbers ported in and out, utilization of short codes and other codes and annual forecast for 3 years. In addition to annual submission, this return should be submitted every time the service providers make a request for fresh block of numbers."	(a) DoT agrees to TRAI recommendation regarding implementation of scheme of filing annual return for numbering resources. (b) Presently, there is no effective way to check the spare numbers/closed numbers from the allocated number-levels to the service providers. A mechanism is to be developed so that the numbers which have been closed/inactive for more than a certain pre-defined period may be 'permanently closed' and again be allocated to a new customer. (c) The annual return format should be able to resolve the problem of non deletion of the inactive numbers on the pretext of treating it as "commercially live". (d) TRAI may give its recommendation on detailed procedure to be followed for implementing scheme of 'annual return for numbering resources' and for development of a mechanism so that the numbers which have been closed/inactive for more than a certain pre-defined period may be 'permanently closed' and again be allocated to a new customer.
(7)	TRAI'S Recommendation 8 (as per Summary of Recommendations, Chapter IV) and Para 3.11 of main body- "The Authority recommends that automated allocation	(a)DoT agrees to TRAI recommendation of automated allocation of numbering resources. However, it will require development of suitable software to guard against its misuse.

	of numbering resources should be introduced along with proper checks and balances."	
(8)	TRAI'S Recommendation 9 (as per Summary of Recommendations, Chapter IV) and Para 3.12 of main body- "All allocated short codes, Mobile Switching Center (MSC) codes, Service Control Point (SCP) codes and exchange levels should be put on website to maintain transparency."	(a) DoT agrees to TRAI recommendation of up-loading the data-base of allocated numbering resources on DoT web-site.
(9)	TRAI'S Recommendation 10 (as per Summary of Recommendations, Chapter IV) and Para 3.16 of main body- "TRAI should be entrusted with the task of administering numbering plan to enable it to carry out all works relating to formulation of and amendments to numbering plan, allocation of numbers and ensuring effective utilization of numbers. (Para 3.16)"	(a)DoT is of the opinion that the present arrangement should continue, i.e. administration of numbering resources will continue to be done by DOT.

(Sample calculation to estimate the typical availability of mobile number resources after sparing level 5 from wire-line service providers) Annexure-A-I

(15)

At present land line numbers of level 5 have low utilisation. These numbers can be shifted to a single level say 'Level 4' so that level 5, can also be utilised for mobile numbers.

A. Spare STD codes of level 5 can be utilised for mobile numbers as shown below:

Using 2 digit spare STD code **50** : 5000000000 to 50999999999 : 100 M numbers

Using 3 digit STD code 513: 5130000000 to 5139999999 : 10 M numbers

Using 4 digit STD code **5141**:5141000000 to 5141999999 : 0.1 M numbers

Level	2-digit spare code	Mobile Numbers in Million	3-digit spare code	Mobile Numbers in Million	4-digit spare code	Mobile Numbers in Million	Total Mobile Numbers in Million
5	1	100	32	320	211	211	631
Total	1	100	32	320	211	211	**631**

B. Working STD codes of levels 5 can be utilised for mobile numbers as shown below:

2 digit PLMN Access Code	3 Digit MSC Code	5 Digit subscriber Number

Using 2 digit STD code **33** followed by digit **9** :3390000000 to 3399999999 : 10 M numbers

Using 3 digit STD code 731 followed by digit 3:7313000000 to 7313999999 : 1M numbers

Using 4 digit STD code **7324** followed by digit 6: 732460000 to 7324699999 : 0.1 M numbers

Following table shows the number of mobile numbers can be possible by utilising levels 5

Level	2-digit working code	Numbers using digits 5, 7, 8, 9, 0 in Million	3-digit working code	Numbers using digits 5, 7, 8, 9, 0 in Million	4-digit working code	Numbers using digits 5, 7, 8, 9, 0 in Million	Total Mobile Numbers in Million
5	0	0	14	70	218	109	179
Total	0	0	14	70	218	109	**179**

Refer Calculation regarding avalability of additional numbering space due sparing of single sub level '5' in working STD codes of 7 & 8 — 137.5

Total Mobile Numbers (in millions) possible with the release of landline level 5: **947.5**

After vacating Level '5' , Level '6' can be vacated

(Sample calculation to estimate the typical availability of mobile number resources after sparing level 6 from wire-line service providers) Annexure-A-II

(16)

A. Spare STD codes of level 6 can be utilised for mobile numbers as shown below:

Using 2 digit spare STD code **60** : 6000000000 to 60999999999 : 100 M numbers are possible

Using 3 digit STD code 623: 6230000000 to 6239999999 : 10 M numbers are possible

Using 4 digit STD code **6133:** 6133000000 to 6133999999 : 1M numbers are possible

Level	2-digit spare code	Mobile Numbers in Million	3-digit spare code	Mobile Numbers in Million	4-digit spare code	Mobile Numbers in Million	Total Mobile Numbers in Million
6	2	200	29	290	103	103	593
Total	2	200	29	290	103	103	**593**

B. Working STD codes of levels 6 can be utilised for mobile numbers as shown below:

2 digit PLMN Access Code	3 Digit MSC Code	5 Digit subscriber Number

Using 2 digit STD code **33** followed by digit **9** :3390000000 to 3399999999 : 10 M numbers

Using 3 digit STD code 731 followed by digit 3:7313000000 to 7313999999 : 1M numbers

Using 4 digit STD code **7324** followed by digit 6: 732460000 to 7324699999 : 0.1 M numbers

Following table shows the number of mobile numbers can be possible by utilising levels 5 & 6

Level	2-digit working code	Numbers using digits 5, 6, 7, 8, 9, 0 in Million	3-digit working code	Numbers using digits 5, 6, 7, 8, 9, 0 in Million	4-digit working code	Numbers using digits 5, 6, 7, 8, 9, 0 in Million	Total Mobile Numbers in Million
6	0	0	11	66	287	172.2	238.2
Total	0	0	11	66	287	172.2	**238.2**

Refer Calculation regarding avalability of additional numbering space due sparing of single sub level '6' in working STD codes of 7 & 8 — 137.5

Additional Numbering Space due to sparing of Lv 6 in working STD code of Lv 5 — 35.8

Total Mobile Numbers (in millions) possible with the release of landline level 5 and 6: **1004.5**

After vacation of Level '5' & '6', Level '3' can also be spared.

(Sample calculation to estimate the typical availability of mobile number resources after sparing level 3 from wire-line service providers) Annexure-A-III

A. Spare STD codes of level 3 can be utilised for mobile numbers as shown below:

Using 2 digit spare STD code **39**: 3900000000 to 3999999999 : 100 M numbers

Using 3 digit STD code 388: 3880000000 to 3889999999 : 10 M numbers

Using 4 digit STD code 3171: 3171000000 to 3171999999 : 1 M numbers

Level	2-digit spare code	Mobile Numbers in Million	3-digit spare code	Mobile Numbers in Million	4-digit spare code	Mobile Numbers in Million	Total Mobile Numbers in Million
3	1	100	1	10	135	135	245
Total	1	100	1	10	135	135	**245**

B. Working STD codes of levels 3 can be utilised for mobile numbers as shown below:

2 digit PLMN Access Code	3 Digit MSC Code	5 Digit subscriber Number

Using 2 digit STD code **33** followed by digit **9** :3390000000 to 3399999999 : 10 M numbers

Using 3 digit STD code 731 followed by digit 3:7313000000 to 7313999999 : 1M numbers

Using 4 digit STD code **7324** followed by digit 6: 732460000 to 7324699999 : 0.1 M numbers

Following table shows the number of mobile numbers can be possible by utilising levels 3

Level	2-digit working code	Numbers using digits 3, 5, 6, 7, 8, 9, 0 in Million	3-digit working code	Numbers using digits 3, 5, 6, 7, 8, 9, 0 in Million	4-digit working code	Numbers using digits 3, 5, 6, 7, 8, 9, 0 in Million	Total Mobile Numbers in Million
3	1	70	19	133	197	137.9	340.9
Total	1	70	19	133	197	137.9	**340.9**

Refer Calculation regarding avalability of additional numbering space due sparing of single sub level '3' in working STD codes of 7 & 8	137.5
Additional Numbering Space due to sparing of Lv 3 in working STD code of Lv 5 & 6	75.5
Total Mobile Numbers possible with the release of landline level 3:	**798.9**

(summary of Sample calculation as above to estimate the typical availability of mobile number resources after sparing level 5, 6 & 3 from wire-line service providers in phased manner) Annexure-A-IV

S.No.	Report	Level	Working/ Spare STD codes	Sub Level(First dugit of number as local number	Numbering Space (in Million)	Cumulative (in Million)	Remarks
1	Interim	7*	Spare	0 to 9	100.0	100.0	7 is not used as first digit in landline
2	Interim	7 & 8	Working	9, 8 , 0	412.5	512.5	
3	Interim	7 & 8	Working	7	137.5	650.0	
4	Final Ph I	5	Spare	0 to 9	631.0	1281.0	Only 228340 landline customers of HFCL & Sistema are working
5	Final Ph I	5	Working	5,7,8,9,0	179.0	1460.0	
6	Final Ph I	7 & 8	Working	5	137.5	1597.5	
7	Final Ph II	6	Spare	0 to 9	593.0	2190.5	1282437 landline customers of TATA are working
8	Final Ph II	6	Working	5,6,7,8,9,0	238.2	2428.7	
9	Final Ph II	7 & 8	Working	6	137.5	2566.2	
10	Final Ph II	5	Working	6	35.8	2602.0	
11	Final Ph III	3	Spare	0 to 9	245.0	2847.0	1234191 landline customers of Reliance are working
12	Final Ph III	3	Working	3,5,6,7,8,9,0	340.9	3187.9	
13	Final Ph III	7 & 8	Working	3	137.5	3325.4	
14	Final Ph III	5 & 6	Working	3	75.5	3400.9	

* Note : Only 70 is taken into consideration as other spare STD codes of Level 7 are being used for allocation

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Annexure – A-V

Government of India
Ministry of Communications & IT
Department of Telecommunications
(Access Services Wing)
Sanchar Bhawan, Ashoka Road, 20, New Delhi-110001

No. 16-16/2009-AS.III/(38)/576 Dated : 26th July 2011

To

All Access Service Providers

Subject : Issue of MSC codes on the basis of VLR data instead of HLR data – regarding.

In supersession of the DoT letter dated 7.02.2011 wherein instructions were issued to all Access Service Providers on the above subject, the undersigned has been directed to issue following instructions with immediate effect :

(i) The new MSC codes will be issued on the basis of VLR figure.

(ii) The total VLR figure (to be enclosed with requisition for new MSC codes) should be certified by concerned TERM Cell(s).

(iii) The Access Service Provider(s) will first approach the respective LSA TERM cell for certification of VLR figures and then submit their requisition for MSC codes to DoT, HQ enclosing therewith the TERM cells' certified figures.

(iv) The VLR database purging period should be fixed at 72 hours maximum.

(v) The criteria for allocation of new MSC Codes is as below :
   (a) Both attached and detached VLR figures are to be taken into account (added) to calculate the total VLR figure.
   (b) Further in case of intra-circle roaming agreements, the intra-circle out-roamers shall be added whereas intra-circle in-roamers should be deducted to arrive at net VLR figures.
   (c) To add further clarification, inter-circle in-roamers (of any operator) will be part of VLR figures while inter-circle out-roamers will not be counted (neglected).
   (d) The VLR figures may be taken as average of 7 days VLR count.
   (e) MSC codes will be issued if the VLR figure reaches the count (taking para (a) to (d) into account as below :

26/07/11

S. No.	Numbers Allocated (N)	VLR Figure (V) as %age of Number Allocated (V/N)	N-V
1.	Less than 3 Million	Subject to minimum of 40%	Not Applicable
2.	3 Million & less than 6 Million	Subject to minimum of 45%	Not Applicable
3.	6 Million & less than 8 Million	Subject to minimum of 50%	Not Applicable
4.	8 Million	Subject to minimum of 55%	Not Applicable
5.	9 Million	Subject to minimum of 60%	Not Applicable
6.	10 Million & less than 15 Million	Subject to minimum of 63%	Not Applicable
7.	15 Million & More	Not Applicable	Less than or equal to 5.5 Million

N = Numbers allotted
V = VLR figure.

26/07/11

(Rajiv Kumar)
Director (AS-III)
Ph : 23036387/23711909

Copy to

(i) Secretary (TRAI), Mahanagar Doordsanchar Bhawan, Jawaharlal Nehru Marg, (Old Minto Road), New Delhi-110002
(ii) Sr. DDG,. Telecom Engineering Centre, Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi – 110001.
(iii) DDsG of all TERM Cells with a request to also send the certified figures directly to Director (AS.III). LSA TERM Cell will coordinate with other TERM Cell in LSA.
(iv) COAI/ AUSPI
(v) CMD, MTNL/ CMD, BSNL.
(vi) Director (Security-I), Security-TERM Cell
(vii) Director (IT), DoT for uploading on web-site

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Annexure-B

Additional observations of DoT regarding 'efficient utilization of numbering resources' for consideration of TRAI

(a) Service providers express inability to delete customers from HLR on account of contractual obligations such as "Life Time" Plan etc., therefore there is an urgent need for service providers to determine "permanently inactive" customers in HLR database so as to remove and recycle such numbers. This aspect is very important for efficient utilization of numbering resources and needs immediate attention. TRAI may give its recommendations regarding procedure for identifying disconnected (service expired connections) and inactive customers and also misc. expired connections and eventually deleting the same from customer base.

(b) TRAI in its recommendations has mentioned the issue of "Pricing of Numbering Resources". TRAI may give specific recommendations in this regard.

(c) It appears that level '92' and level '93' which were allocated for CDMA customers are not being utilized efficiently. TRAI may consider the matter and give recommendations regarding part utilization of '92' and '93' levels for GSM customers.

ANNEXURE - II

TRAI's Response to DOT's Letter dated 21.03.2012			
Sr. No.	**TRAI's Recommendations**	**Comments of DoT vide its letter dated 21.03.2012**	**TRAI's Response**
(1)	TRAI's Recommendation 1 (as per Summary of Recommendations, Chapter IV) and Para 2.8 of main body: "The Authority recommends that 10-digit numbering scheme should be continued with the modification suggested in recommendations below". (i.e. as suggested in other parts of these recommendations)	(a) DoT agrees to the recommendations that the 10 digit numbering scheme should be continued.	-
		(b) However regarding the modifications suggested in Para 2.8 of the said TRAI recommendations to create a large numbering space by prefixing `0' to calls from fixed to mobile within the same service area, the following is noted:	-
		(i) All wireline subscribers will have to be provided with dynamic STD facility, in order to access intra service area mobile calls.	After withdrawal of use of '95' for dialling adjacent SDCA numbers, on recommendation of TRAI, prefix '0' is used for this purpose. Also for dialling inter-circle Fixed to Fixed or Fixed to mobile calls prefix '0' is required. Additionally, with plans like one India the STD charges have reduced to a low level. It is, therefore, expected that a high percentage of subscribers would be using '0' facility.
		(ii) In rural areas where all subscribers are not enough aware to use dynamic STD, will face problem in dialling mobile call with mandatory prefixing of "0" in case of intra-service area calls.	The rural subscribers should not always be under estimated. Rural subscribers are expected to use 1-800 service, understand all mobile plans and VAS. Besides the subscribers knows how to prefix '0' for all national calls and calls to mobiles in other service areas. For

(18)

<table>
<tr><td></td><td></td><td></td><td>example for calls from a village of Doddaballapur (an SDCA of Bangalore LDCA) to Bangalore City, rural subscriber dials '080'. Similarly rural subscriber of a village of Nuh (an SDCA of Gurgaon LDCA) dials '0124' for calls to Gurgaon. Evidently, the rural subscribers are used to dial '0'. Creating awareness to use dynamic STD, therefore, should not be a constraint.</td></tr>
<tr><td></td><td></td><td>(iii)TRAI has observed in para 2.11 of its recommendations. "____This would be another blow to the already struggling fixed line market____".</td><td>This has been quoted out of context. It was said in the context of vacating STD codes in levels 7 and 8.</td></tr>
<tr><td></td><td></td><td>(iv) ...</td><td>Considered with (vi) below</td></tr>
<tr><td></td><td></td><td>(v) The wireline subscriber base of all operators in different levels for March 2011 as per TRAI data is as below:
<table>
<tr><th>Sr. No.</th><th>Operator</th><th>Subs Base</th><th>Level Used</th><th>Net Addi-tion in March 2011</th></tr>
<tr><td>1</td><td>BSNL</td><td>25224905</td><td>2</td><td>-153131</td></tr>
<tr><td>2</td><td>MTNL</td><td>3463969</td><td>2</td><td>5570</td></tr>
<tr><td>3</td><td>Bharti</td><td>3295919</td><td>4</td><td>15261</td></tr>
<tr><td>4</td><td>Reliance</td><td>1234191</td><td>3</td><td>2131</td></tr>
<tr><td>5</td><td>TATA</td><td>1282437</td><td>6</td><td>-6742</td></tr>
<tr><td>6</td><td>HFCL</td><td>189900</td><td>5</td><td>957</td></tr>
<tr><td>7</td><td>Sistema</td><td>38440</td><td>5</td><td>403</td></tr>
</table>
From the above table, it is clear that the numbering resources earmarked for Wireline subscribers are grossly underutlised.</td><td>DoT has used wireline subscriber base only. However the SDCA based numbering scheme is also used for WLL services. Therefore WLL should also be taken into consideration. Revised Table including WLL subscriber base as on March 2011 is as follows:
<table>
<tr><th>Sr. No.</th><th>Operator</th><th>Subs Base</th><th>Level Used</th></tr>
<tr><td>1</td><td>BSNL</td><td>3,07,90,342</td><td>2</td></tr>
<tr><td>2</td><td>MTNL</td><td>37,43,776</td><td>2</td></tr>
<tr><td>3</td><td>Bharti</td><td>32,95,919</td><td>4</td></tr>
<tr><td>4</td><td>Reliance</td><td>1,24,72,960</td><td>3</td></tr>
<tr><td>5</td><td>TATA</td><td>62,79,762</td><td>6</td></tr>
<tr><td>6</td><td>HFCL</td><td>2,52,923</td><td>5</td></tr>
<tr><td>7</td><td>Sistema</td><td>86,671</td><td>5</td></tr>
</table></td></tr>
</table>

		(iv) As detailed in the annexure (A-I to A-IV) enclosed, additional capacity of 550 Millions by using working STD codes of Level 7 & 8 can be generated. Further 100 million is envisaged by using space STD code 70. This total of 650 Million will be available as additional capacity for Wireless. Considering the Wireless growth of 15-20 Million per month, the 650 Million capacity will cater for next almost 30 months.	(a) Calculations given in Annexure A-I to A-III are based on the assumption of sparing the levels 5, 6 and 3 respectively. (b) Creating numbering resources through vacation of levels would be disruptive to already struggling fixed line segment. It would cause changes to a large number of working telephone numbers, result in low call completion rate and create discontent among subscribers. Integrated scheme is a neat way of bringing in uniformity and providing a long term solution.
		(vi) It is therefore felt that some of the levels allocated for basic services can be withdrawn by asking the TSPs to share certain levels. The spared levels can be used for mobile services. The numbering levels which should be retained for basic service operations need to be determined. The annexure (A-I to A-IV) enclosed shows the typical availability of numbering resources after sparing level 5,6, & 3 from Wireline service providers in phased manner as an example as below:	(c) In addition to what has been said above, one of the industry associations has pointed out that sparing levels 5,6, & 3 from Wireline service and shifting existing subscribers from these levels to level '2' and '4' will only affect subscribers of some service providers and would therefore be discriminatory. (d) Wireline services are used for large corporates as well as for small and medium enterprises; any change in

S.No.	Level Spared	Capacity Generated
1	Level 5	947.5 Million
2	Level 6	1004.5 Million
3	Level 3	798.9 Million
Total		2750.9 Million

			numbering would be detrimental to their business and inconvenient to customers. (e) Withdrawing sparsely used levels out of 2,3,4,5 and 6 was one of the various methods considered by TRAI. However, the same was not recommended considering the advantages of the Integrated Numbering Scheme and method recommended for interregnum i.e. by prefixing'0' for all fixed to mobile intra circle calls. (f) With prefixing '0' for intra circle fixed to mobile calls, as recommended by TRAI, existing SDCA codes starting with 2,3,4 and 6 may be used for mobile services by suffixing with 0,1,8 and 9. This method is most easy to implement without causing inconvenience to most of the subscribers and, as observed in para 2.1.2.2 of the consultation paper dated 20.01.2010, it would make available about 3 billion numbers without disruption. This would give enough opportunity of planning and migrating to an integrated scheme.

			(g) Additionally, in some of the SDCA like Gurgaon, where number of corporate customers having PRI with DID facility is higher it may not be possible to shift all the operators to levels '2' and '4' as suggested by DOT.
		(vii) The allocation of Wireline numbering resource may be done to service providers for those SDCA's where Wireline service is to be started i.e. the numbering level to licensees should be allocated SDCA wise instead of PAN-India basis. Implementation plan for the same need to be evolved.	This is possible in the scheme recommended by TRAI.
		(c) In view of above, TRAI may reconsider its recommendation of creating extra numbering space by prefixing `0' to calls from fixed to mobile within the same service area and also explore possibility of creating extra numbering space for mobile services by vacation of levels from the current allocations for Basic Service through migration of subscribers to other levels/sublevels. Recommendations in this regard may be provided by TRAI.	For the reasons explained above, the Authority reiterates that the country should migrate to an integrated 10 digit numbering scheme in a time bound manner as explained in para 2.26. Till the integrated scheme is implemented, recommendations in para 2.33 may be implemented.

(2)	(a) TRAI's Recommendation 2 (as per Summary of Recommendations, Chapter IV) and Para 2.26 of main body- "The Authority recommends that the country should migrate to an integrated 10-digit numbering scheme at the earliest. All preparations should be complete by 30th September 2011 and actual migration to the integrated scheme be completed by 31st December,2011" (b) TRAI's, Recommendation 3 (as per Summary of Recommendations, Chapter IV) and Para 2.27 of main body- "Detailed integrated	(a) Regarding migration to integrated numbering scheme following is noted: (i) Barring USA, no other major country is following integrated numbering scheme.	(a) It is important to see the reason and merit of the scheme rather than how many countries have done it. We need to see how many countries need it. China, India and USA are three countries with the largest subscriber base in that order. As per ITU statistics the subscriber base as on Dec 2010 for China had 1153.39 million subscribers, India 787.28 million, and US 430.07 million. The fourth country Russia is having far less subscribers with a base of 282.61 million. China has implemented 11 digit scheme for mobile, USA has chosen 10 digit integrated scheme as moving to 11 digit is expensive. What does India do? TRAI has already recommended 10 digit scheme and DOT has agreed so it is natural to implement the second part of it ie the integrated scheme as a long term solution for scarcity of numbering resources. (b) During the consultation process a vast majority of stakeholders favoured moving to an integrated numbering scheme in the long run.

	numbering, routing plans and interconnection architecture would be worked out by TRAI after acceptance of recommendations by DoT. If required, a separate consultation would be carried out.	(ii) Making National (Significant) Number [N(S)N] as Subscriber Number (SN) (as recommended by TRAI), will lead to change in dialing scheme. Then, Wireline Customer shall have to dial 10-digit number even to get a local call instead of 6,7, or 8 digits at present.	Advantages of a 10 digit scheme far outweigh the small discomfort. In any case, for STD calls and for mobile subscribers are already dialling 10 digits.
		(iii) Implementation of porting between fixed and mobile numbers is an issue to be examined separately at an appropriate time and that may not be a reason for affecting integrating numbering scheme.	It is reiterated we should plan ahead and not implement a scheme that precludes portability or would cause change of number at the time of porting.
		(iv) A lot of changes are required to be done in Wireline exchanges for 10-digit integrated numbering and it will have impact on call routing also. In C-DOT and other legacy Wireline exchanges, it is not possible to implement 10-digit integrated numbering. This will immediately and adversely affect Rural Telephony. As mentioned at 1(b) (iii), above, this would also be another blow to already struggling fixed line market.	These have already been factored in by TRAI. In para 2.25 of the recommendations it was clearly mentioned that the service providers need time to restructure the network, re-arrange POIs, and change the routing and billing information. The service providers with legacy fixed network may take a little more time in this restructuring and upgradation process. TRAI had examined the activities required in preparation to migrate to

		(v) 10-digit integrated numbering scheme will also require changes in billing (including inter operator) system, operation support system etc.	integrated numbering scheme. Discussion with experts revealed that the subscriber data, routing, billing system and other support systems could be modified in 2-3 months. The physical work related to point of interconnection, enhancement of exchange equipment for terminating more trunks and other similar tasks may require 6-8 months. Testing and migration thereafter could be allowed 2-3 months more. A number of activities would be possible in parallel and not all the activities would be required by all operators. When it is decided by the Numbering Plan Administrator to implement the integrated scheme, a more detailed consultation will be carried out by the Authority to work out the modalities of implementation.
		(vi) TRAI has observed that one of the methods (i.e. to merge the SDCA code with the subscriber number and form a 10-digit number for fixed line) for implementation of 10 digits integrated numbering will not change subscriber number. But it is noted that all SDCA codes of Level `1' will have to be shifted to other levels to avoid overlapping of 10-digit subscriber number with level 1 service codes. Further, dialing national long distance calls without prefix	(a) Utilisation will not be restricted. The existing number remains same while the rest of the space can be used for new fixed or mobile numbers. Efficiency would be higher in the suggested integrated scheme. (b) TRAI had already recommended that detailed integrated numbering, routing plans and interconnection architecture would be worked out by

		`0' is not supported by legacy exchanges of the Wireline network. In response to TRAI observation that a uniform space of 8 billion numbers would be available, it is noted that since subscriber number remaining unchanged, the utilisation of numbering space shall be restricted. Method 2 (i.e. to identify one or more unique codes for each service area/ circle and fill up the remaining digits to make a 10 digit number) of implementation of integrated numbering is not supported even in the TRAI recommendations because of large scale changes in the numbers.	TRAI after acceptance of the recommendation by DoT.
		(b) In view of above, TRAI may re-consider its recommendations regarding migration to integrated numbering scheme.	TRAI further reiterates that country should migrate to an integrated 10 digit numbering scheme at the earliest and detailed integrated numbering, routing plans and interconnection architecture would be worked out by TRAI after acceptance of recommendations by DoT. If required, a separate consultation would be carried out.

(3)	TRAI's Recommendation 4 (as per Summary of Recommendations, Chapter IV) and Para 2.33 of main body- "The Authority recommends that in the intervening period, till integrated numbering scheme is implemented, the following scheme should be adopted to create sufficient numbering space: (i) No change in dialing plan of fixed to fixed, inter-circle fixed to mobile and mobile to mobile calls. (ii) Dial intra circle fixed to mobile calls with prefix `0'. (iii) Existing SDCA codes starting with 2,3,4 and 6 may be used for mobile services by suffixing with 0,1,8 and 9".	(a) Observations of DoT vis-à-vis recommendations of TRAI at Sl.No.1 and 2 above may kindly be seen.	Prefixing '0' for intra circle fixed to mobile calls is an innovative and a possible solution to meet the requirement for the interim period. This solution requires no change in the numbering scheme of subscribers. In contrast to above, the solution suggested by DoT requires large scale changes in subscriber numbers resulting in inconvenience to customers. Also as explained in para 1 (b) (ii), prefixing '0' would not create any problem for even the rural customer.

(4)	TRAI's Recommendation 5 (as per Summary of Recommendations, Chapter IV) and Para 2.34 of main body- "The Authority recommends that codes defined as spare in the National Numbering Plan 2003 should be kept spare till the new numbering plan consisting of integrated numbering scheme is notified."	(a) Observations of DoT vis-à-vis recommendations of TRAI at Sl.No. 1 and 2 above may be seen. (b) DOT had already started allocating spare STD codes to Service Providers for Wireless services since long. Spare STD codes in level `7' and level `8' has already been consumed.	TRAI reiterates that to give full flexibility to the planners of integrated scheme, the codes defined as spare in the National Numbering Plan 2003 should be kept spare till the new numbering plan consisting of integrated numbering scheme is notified. It is again advised that DoT should not allocate spare codes.
(5)	TRAI's Recommendation 6 (as per Summary of Recommendations, Chapter IV) and Para 3.5 of main body- "The Authority recommends that the present arrangement for allocation of new blocks of numbers after demonstrating 80% utilization for fixed and 60% for	It was observed that there is a significant difference between the HLR figures and VLR figures of the mobile subscriber base. It is because of TSPs normally keep permanently inactive customers in HLR for long time and effective re-cycling of these numbers is not being done. Hence, DoT felt that in order to exercise better control of the scarce numbering resources, the allocating of MSC codes on the basis of VLR figures is better than the practice of allocation of new MSC codes based on HLR figures. In view of above, *The allocation criteria has already been changes from HLR based to VLR based as per DoT instructions dated*	A reference could have been made to TRAI before effecting changes not in line with the recommendations.

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	mobile should be continued. However, in case of mobile numbers, service provider should not have more than 3 million unutilized numbers in a service area at the time of requesting for new block of numbers".	*26.07.2011 (copy attached for ready reference as annexure A-V)*	
(6)	TRAI's Recommendation 7 (as per Summary of Recommendations, Chapter IV) and Para 3.8 of main body- "The Authority recommends that the details given by the mobile service providers for allocation of fresh block of numbers should be converted into an annual return consisting of the details already included and in addition details of number ported in and	(a) DoT agrees to TRAI recommendation regarding implementation of scheme of filing annual return for numbering resources. (b) Presently, there is no effective way to check the spare numbers/closed numbers from the allocated number-levels to the service providers. A mechanism is to be developed so that the numbers which have been closed/inactive for more than a certain defined period may be `permanently closed' and again be allocated to a new customer. (c) The annual return format should be able to resolve the problem of non deletion of the inactive numbers on the pretext of treating it as "commercially live".	- Keeping in view that the regulator needs to set the rules governing diverse competitive issues with numbering implications, and importance of numbering as a regulatory instrument, the Authority recommended that TRAI should be entrusted with the task of administering numbering plan to enable it to carry out all works relating to formulation of and amendment to numbering plan allocation of numbers and ensuring effective utilisation of numbers. In this regard comments at sl no 9 may also be seen.

	out, utilization of short codes and other codes and annual forecast for 3 years. In addition to annual submission, this return should be submitted every time the service providers make a request for fresh block of numbers".	(d) TRAI may give its recommendation on detailed procedure to be followed for implementing scheme of 'annual return for numbering resources' and for development of a mechanism so that the numbers which have been closed/inactive for more than a certain pre-defined period may be 'permanently closed' and again be allocated to a new customer.	
(7)	TRAI's Recommendation 8 (as per Summary of Recommendations, Chapter IV) and Para 3.11 of main body- "The Authority recommends that automated allocation of numbering resources should be introduced along with proper checks and balances".	(a) DoT agrees to TRAI recommendation of automated allocation of numbering resources. However, it will require development of suitable software to guard against its misuse.	If TRAI is given the work of numbering resource administration then TRAI can get the allocation software prepared else DOT needs to engage an agency for this.
(8)	TRAI's Recommendation 9 (as per Summary of Recommendations, Chapter IV) and Para 3.12 of main body-	(a) DoT agrees to TRAI recommendation of up-loading the data-base of allocated numbering resources on DoT web-site.	-

	"All allocated short codes, Mobile Switching Center (MSC) codes, Service Control Point (SCP) codes and exchange levels should be put on website to maintain transparency".		
(9)	TRAI's Recommendation 10 (as per Summary of Recommendations, Chapter IV) and Para 2.34 of main body- "TRAI should be entrusted with the task of administering numbering plan to enable it to carry out all works relating to formulation of and amendments to numbering plan, allocation of numberings and ensuring effective utilisation of numbers, (Para 3.16)"	(a) DoT is of the opinion that the present arrangement should continue, i.e. administration of numbering resources will continue to be done by DoT.	Sufficient justification has already been provided in paras 3.15 of the recommendations to administer the numbering plan by TRAI. It is reiterated that TRAI be given the responsibility of administering numbering plan

Additional Observations of DoT regarding 'Efficient Utilisation of Numbering Resources' for consideration of TRAI

(As given in Annexure- B of the DoT's letter dated 16-16/2009-AS.III/49/100 dated 21.03.2012)

Sr. No.	Additional Observations of DoT	TRAI's Response
(a)	Service providers express inability to delete customers from HLR on account of contractual obligations such as "Life Time" Plan etc., therefore there is an urgent need for service providers to determine "permanently inactive" customers in HLR database so as to remove and recycle such members. This aspect is very important for efficient utilization of numbering resources and needs immediate attention. TRAI may give its recommendations regarding procedure for indentifying disconnected (service expired connections) and inactive customers and also misc. expired connections and eventually deleting the same from customer base.	TRAI is already examining the issue of deactivation criteria on the basis of non usage of SIM for a specified minimum period. Suitable direction/ Orders on the subject, would be issued by TRAI, if required.
(b)	TRAI in its recommendations has mentioned the issue of "Pricing of Numbering Resources". TRAI may give specific recommendations in this regard.	(i) In the recommendations the Authority said that efficiency of utilisation of numbering resources by the service providers be watched and issue of pricing may be revisited if considered necessary. (ii) DoT has implemented a new allocation scheme in July 2011 and effectiveness of the same is required to be monitored to decide further course of action.

(c)	It appears that level `92' and level `93' which were allocated for CDMA customers are not being utilised efficiently. TRAI may consider the matter and give recommendations regarding part utilisations of `92' and `93' levels for GSM customers.	In case integrated numbering scheme, as recommended by TRAI is agreed to, all the numbering levels and sub levels including 92 and 93 would be utilised efficiently and there would be no case of part utilisation in any of the level.