

Bharti Airtel Ltd.

India & South Asia
Airtel Center, Plot No. 16,
Udyog Vihar, Phase - IV,
Gurugram - 122 015

www.airtel.in
Call +91 124 4222222
Fax +91 124 4248063



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Dated: 13.11.2019

To,
Shri U.K. Srivastava
Pr. Advisor (NSL)
Telecom Regulatory Authority of India,
Mahanagar Door Sanchar Bhawan,
Jawahar Lal Nehru Marg, Old Minto Road,
New Delhi - 110002.

Subject: Consultation Paper on 'Developing a unified numbering plan for fixed line and mobile services.'

Dear Sir,

This is with reference to your above-mentioned consultation paper. In this regard, please find enclosed our response for your kind consideration.

Thanking You,
Yours' Sincerely
For **Bharti Airtel Limited**

A handwritten signature in blue ink, appearing to read 'Ravi P. Gandhi', with a horizontal line underneath.

Ravi P. Gandhi
Chief Regulatory Officer

Encl: a.a.

Response to TRAI's Consultation Paper on Developing a Unified Numbering Plan for Fixed Line and Mobile Services

At the outset, we would like to thank the Authority for providing us the opportunity to express our views on the matter of "Developing a Unified Numbering Plan for Fixed Line and Mobile Services."

The present consultation paper has been issued to address the scarcity of new mobile numbering resources for allocation to the existing TSPs. Presently, 2.1 billion numbering resources are available. However, considering various factors, this will be able to meet the requirement of only 1.2 billion customer base. Based on current population trend, TRAI has estimated future requirement till 2050 for 4.68 billion mobile numbering resources. The aim therefore, is to have sufficient numbering resources available for meeting this requirement while ensuring minimal disruption in the network and zero inconvenience to customers.

India presently has 1161 million mobile connections and 22 million fixed line connections. Migration to the Unified Numbering Plan will require complex changes, which would be made at the network level, i.e., changes in the fixed and mobile network, changes in regulatory provisions for fixed line interconnection and changes for the customer, resulting in increase in associated costs of transition. Further, international experience also reveals that there are very few countries which have implemented the Unified Numbering scheme. Considering the miniscule number of fixed line connections as on date, there seems to be no logical requirement of having the unified numbering plan unless the future requirement for mobile numbering series cannot be met using any alternative approach.

In this context, our response to the consultation paper is as below:

Q1. Whether, the unified numbering scheme should be introduced in India? If yes, please provide the possible ways of implementing it with justification.

Bharti Airtel's Response:

Presently, the interconnection regime for fixed line is SDCA-based, whereas for mobile it is circle-based. Further, there are only 22 million fixed line connections in India as compared to 1161 million mobile connections.

Migration to the unified numbering scheme whether by option 1 or 2 as suggested in the consultation paper involves complex changes in the network and significant additional costs for implementing the changes in the fixed line network. Further, it requires changes in the interconnection regulations as well as changes in the customer engagement.

As mentioned previously in the consultation paper, there are very few countries internationally who have implemented the Unified Numbering scheme.

Considering the complexity involved in migration to the unified numbering series, we believe that there is no justification to introduce the unified numbering scheme in India at this stage,

unless, the future requirement for mobile numbering series cannot be met using any alternative approach with lesser complexity.

Q2. If the answer to the preceding question is in the negative, which of the following options can be tried out? Please provide details and justification considering the advantages and disadvantages.

- (i) Vacating the sparingly used fixed line levels '3','5' and '6' for allocation for mobile services**
- (ii) Accessing intra-service area as well as inter-service area mobile from fixed line by dialing prefix '0'; for generating more numbering resources for mobile services?**
- (iii) Shifting Data only mobile numbers from 10 digit to 13 digit numbering**
- (iv) Moving on to 11 digit numbering scheme for mobile and continuing with 10 digit numbering for fixed line services**
- (v) A combination of some of the above**
- (vi) Any other option**

Bharti Airtel's Response:

The immediate requirement is to make available the numbering resources for mobile considering the scarcity. Further, an adequate number of mobile numbering resources should be made available considering the present as well as future requirement.

In this reference, we recommend that **'0' + STD code be made mandatory for accessing fixed line from mobile/ fixed line and Mobile number to be dialed without '0' from mobile/ fixed line (hereinafter referred to as 'Prefixing '0'+SDCA before Fixed Line Number')**. The aforesaid change will make available significant mobile numbering resources to TSPs without major changes required in the network & the interconnection regime and no major customer inconvenience as stated below:

- Currently, '0' and STD code is mandatory for accessing inter-SDCA fixed line from fixed line and well as intra-circle and inter-circle fixed line from mobile.
- The suggested change will mandate dialing fixed line with '0' and STD code for intra-SDCA calls also.
- With this change, the dialing pattern for fixed line is to be made mandatory with inclusion of '0' + SDCA code and the number ("0"+STD code + Number) viz; a mobile/ fixed line subscriber whether in Gurgaon or anywhere in the country will have to dial 0124XXXXXX, while dialing both inter and intra service area.
- Further, mobile number from fixed line/ mobile to be dialed without prefixing '0'.

- The suggested change will allow mobile numbers allocation starting with '2' to '9' excluding '5' (viz. '2', '3', '4', '6', '7', '8' and '9'), thereby making available a total of 7 billion mobile numbering resources, which is significantly higher than the 4.68 billion envisaged by TRAI for meeting the requirement of mobile numbering resources till 2050.
- This will involve minimal change and negligible revenue implications in handling the Local/STD calls. The implementation will lead to common digit length for fixed line across the country. All number string starting with '0' will be considered as fixed line while mobile numbers will continue in the existing pattern. There will also be some changes in ILD switch for "0" based numbering pattern in fixed lines.
- The implementation of the plan requires extensive circulation regarding:
 - Dialing '0' and STD code for accessing any fixed line from fixed line/ mobile as well as intra-circle and inter-circle fixed line from mobile
 - Mobile number dialing from fixed/ mobile needs to be done without prefixing '0'
 - International dialing pattern needs to be conveyed for appending "0" to the existing fixed line number. (e.g. for Gurgaon- 00910124XXXXXX)

The suggested solution while being non-discriminatory to any existing operator also makes available a total of 7 billion mobile numbers as against TRAI's adjudged requirement of 4.68 billion by 2050. For the aforesaid reasons, we believe that the above solution may be implemented by TRAI to cater to the future requirement of mobile numbering series. While we recommend the solution as indicated above, our response to various suggestions given in the consultation paper is as below:

(i) **Vacating the sparingly used fixed line levels '3', '5' and '6' for allocation for mobile services**

- The present utilization under levels '3', '5' and '6' as worked out, is sparsely used to up to 0.1% only
- Vacating these levels for allocation of mobile services will make available a substantial count of number resources for mobile. But this will involve one-time modification and changes for network (mobility and fixed) and subscriber dialing pattern, respectively. This will also require restructuring of POIs, database memory, routing and billing information.
- Vacating the sparingly used fixed line levels '3', '5' and '6' will also impact the customer base of 3 million who have been presently assigned fixed line numbers in the said series. Hence, this is not recommended unless there is no other option available.

(ii) **Accessing intra-service area as well as inter-service area mobile from fixed line by dialing prefix '0'; for generating more numbering resources for mobile services**

- Currently both the dialing pattern with/without '0' for mobile access from Fixed line is already allowed, which can be further leveraged for intra/inter mobile service area access.
- This will invite change in subscriber dialing pattern from fixed phones to Mobile numbers, although the pattern would be uniform across SDCAs in the country.
- Numbering resources under the levels '2', '3', '4' & '6' can also be made available for MSC codes excluding the allocated SDCA codes.
- This approach will provide approx. 2.5 billion number resources with changes incorporated for levels '2', '3', '4' & '6', which would meet the required capacity of approx. 4.68 billion mobile numbering resources.
- To comply with the above, there will be certain changes involved in Fixed network configurations (Ex; block mobile access without "0"). Although, we do not foresee any major changes in mobility switches.
- Dynamic lock/unlock facility needs to be complied across all wireline switches to control inter SDCA wireline calls with segregation to handle intra and inter circle mobile calling.

This change is also able to cater to TRAI's requirement of approx. 4.68 billion mobile resources but will require considerable changes as against the method suggested by us for mandating **Prefixing '0'+SDCA before Fixed Line Number**.

In view of same, this method is only recommended if we see any major issue in implementation of **Prefixing '0'+SDCA before Fixed Line Number**.

(iii) **Shifting Data only mobile numbers from 10 digit to 13 digit numbering**

- Pure internet user/data only connection users occupy a negligible count of numbering resources. Shifting of Data only mobile numbers from 10 digit to 13 digit numbering is, therefore, not likely to release significant numbering resources.
- Further, there is always a customer tendency to move on all telephony services (voice/sms/ data) while retaining the same MSISDN.
- For the aforesaid reasons, shifting data only mobile numbers from 10 digit to 13 digit is not recommended.

(iv) Moving on to 11 digit numbering scheme for mobile and continuing with 10 digit numbering for fixed line services

- Moving to 11 digit numbering scheme would incur massive configuration modifications across all telephony domains inclusive of software and hardware, storage etc. involving additional cost impact.
- This will also entail confusion and inconvenience to customer and unnecessary changes to application (APIs) and all databases involving phone memory.
- Further, the changes will not be limited within the country but will also impact routing by International operators and subsequent incorrect dialing by subscriber.
- In view of the changes involved at the network and customer level, moving to 11-digit numbering scheme is not recommended.

In view of the submissions above, we are of the opinion that **Prefixing '0'+SDCA before Fixed Line Number** is the best alternative, which involves the least complexity in implementation and impact to customer, while meeting the requirement of making available 7 billion mobile numbering resources to the TSPs.

Q3. Do the present criteria of utilization for allocation of numbers ensure efficient utilization of the numbering resources or would you suggest some other criteria?

Bharti Airtel's Response:

The present criteria of allocating MSC codes to the operator is VLR-based as stated below:

S.No.	Numbers Allocated (N)	VLR Figure (V) as %age of Number Allocated (V/N)
1.	Less than 3 Million	Subject to minimum of 40%
2.	3 Million to less than 6 Million	Subject to minimum of 45%
3	6 Million to less than 8 Million	Subject to minimum of 50%
4	8 Million	Subject to minimum of 55%
5	9 Million	Subject to minimum of 60%
6.	10 Million to less than 15 Million	Subject to minimum of 63%
7.	15 Million to less than 20 Million	Subject to minimum of 66%
8.	20 Million to less than 25 Million	Subject to minimum of 68%
9.	25 Million and above	Subject to minimum of 70%
N= Number allocated V= VLR figure		

We believe that the present criteria for assigning mobile numbering series is very stringent and ensure efficient utilization of spectrum. Hence, the same may be continued without any changes.

Q4. Do you feel that sparingly used MSC codes may be withdrawn and reallocated to another TSP whose subscriber base is growing?

Bharti Airtel's Response:

In case, it is not possible to meet the requirement of new MSC codes from the existing available series, DoT may consider withdrawing the sparingly used MSC codes.

We believe that the MSC codes with utilization less than 10% may be considered for withdrawal subject to the condition that sufficient numbering series excluding the series being withdrawn is available to the operator for his future expansion needs. Further, reallocation of this withdrawn series to other operator can be performed with MCH (MNP process) alignment.

Q5. Do you feel that there is a need to file an "Annual Return on Numbering Resource Utilization" to the numbering plan administrator for monitoring and ensuring efficient utilization of number?

Bharti Airtel's Response:

It is pertinent to note that whenever the operators apply for a new numbering series, a lot of information regarding the utilization is sought by the Licensor and the same is readily furnished by the operators.

Further, considering the dynamic nature of the industry, it is not possible to furnish an operator level three-year forecast with any level of accuracy. The industry level growth as evident from the total subscriber base reported by operators to TRAI & Licensor may be taken as a reasonable growth forecast on an industry basis to ascertain the future demand for numbering resource.

For the aforesaid reasons, we recommend that there should be no requirement to file an "Annual Return on Numbering Resource Utilization".

Q6. What are your views on the pricing of numbering resources? If pricing is implemented should it be for all resources held by the service provider or only for future allocations?

Bharti Airtel's Response:

We are not in agreement for ascribing any charges for allocation/ holding of numbering series for the reasons as per below:

- Allocation criteria for mobile numbering series is already stringent and ensures efficient utilization of mobile numbering resources.
- The levies and taxes in telecom sector are already exorbitant and there has been a continuous demand for reduction in these levies. Proposal to introduce one more levy for allocation/ holding of numbering series is, therefore, not justified.

Q7. Do you feel that an automated allocation of numbering resources using number management system software is necessary to speed up the process of allocation and collecting returns in an efficient and transparent manner? Do you feel that this work may be assigned to an independent body by the licensor? Please provide details.

Bharti Airtel's Response:

We feel that automated allocation of numbering resources is required to speed up the process of allocation of numbering resources. Number allocation needs to be done based on the NNP document and this data can be provided in public domain to TSP/MNP service providers for checking the billing and routing of levels. Further, the monitoring of this system should be done by the owner of NNP, which is a government entity (Department of Telecom).

Q8. Do you agree that a revised and new National Numbering Plan and a consolidated list of short code allocations should be issued? If so, what should be the periodicity?

Bharti Airtel's Response:

Since, many changes and amendments have been made to the NNP-2003, there is a need for a revised National Numbering Plan capturing the short and long term plan.

It is also recommended that this plan be updated once every two years to ensure that all the changes are captured and mentioned in a single consolidated document.

Further, all the short codes allocated as well as number levels (mobile, fixed, M2M and UAN) currently assigned to TSPs/stakeholders for respective services may also be updated on a regular basis and uploaded on the DoT's website.

Q9. Any other related issue.

Bharti Airtel's Response:

No comments