THE MOBILE ASSOCIATION

NO: 108-19B-6301

Date : 13.11.2019

To,
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Ref : Consultation paper dated 20.09.2019

Sub : Comments on consultation paper dated 20.09.2019.

Respected Sir,

We, The Mobile Association, are delighted to present our comments to the consultation paper on "Developing a unified numbering plan for fixed line and mobile services" dated 20.09.2019.

Thanking You

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ISSUES FOR CONSULTATION

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

Ans: We are of the opinion that the unified numbering scheme should be implemented in India for fixed line and mobile services, being one of the strategies as per the National Digital Communications Policy, 2018 (herein after referred to as "**NDCP, 2018**), which *inter-alia* includes "ensuring adequate numbering resources, by developing a unified numbering plan" for fixed line and mobile services.

Digital infrastructure and services are increasingly emerging as key enablers and seems critical determinants of a Country's growth with both significant capabilities in both telecommunications and software. India needs to particularly ensure that its communications infrastructure supports the entire population, whose demographic profiles vary widely across various indices.

Digital India is already unfolding. India's digital profile and footprint is one of the fastest growing in the world. With over a billion mobile phones and digital identifies and half a billion internet users, India's mobile data consumption is already the highest in the world. At the current pace of digitisation and digitalisation, it is estimated that India's digital economy has the potential to reach one trillion USD by 2025. The rapid and unprecedented proliferation of the mobile phone, the internet, social media platforms, and the rapid expansion of digital payments, data consumption and generation across India indicate that the data economy and digital technologies and services are no longer the prerogative of the privileged few; but that they have indeed evolved into widespread instruments of access and empowerment for more than a billion Indians.

One of the major functions will be to take measures to facilitate competition and promote efficiency in the operation of telecommunications services to facilitate growth in such services. The regulator needs to set the rules governing other competitive issues with numbering implications. The incumbent operators would fiercely safeguard their possession of large blocks of numbers and are unlikely to share numbering resources fairly with new competitors even though the utilization may be low. When deciding technology and timing of services the regulator need to envision potential capacity shortages and suggest changes in the scheme architecture. If a major modification is being examined, the regulator needs to consider views of all the stakeholders and act in the interest of the consumers. It must be kept in mind that the proposed changes should not put a set of service providers to disadvantage from the competitive viewpoint. From the consumer's point of view the numbering scheme should be easy to understand and use.

Through this paper, the telecom regulators will ideate upon whether or not the same number can be given to fixed-line and a mobile phone. The telecom sector has undergone many changes and development which have been brought upon by new network architecture and services. Further, these new advancements in telecom technology have brought better, faster and cheaper services for the consumers. This has also increased the compatibility of services across platforms as now any service or technology can be accessed on any device, anytime, anywhere. Now the prime method to use these services and to identify and differentiate between the end-users remains the phone number. As per TRAI, "the numbering plan is one of the important 'fundamental plans' along with Switching, Routing, Transmission, Charging and Synchronisation Plans that govern the functioning of telecommunications networks."

UNIFIED NUMBERING PLAN:

As mentioned above, the NDCP, 2018 refers to unified numbering plan for fixed line and mobile services whereas, presently India follows an Short Distance Charging Area (herein after referred to as "**SDCA**") linked numbering scheme for fixed telephones in which the country is divided into 2645 SDCAs with unique SDCA code. On the other hand, the mobile numbering series is not geographical. The Indian Telecom Network is divided into 22 Service Areas for the purpose of Licence. Although, the Mobile Switching Centre (herein after referred as "**MSC**") code allocations are made Licensed Service Area (herein after referred to as "**LSA**") wise to the cellular mobile service providers there is no geographical link. All India mobile number portability has also been introduced in the country.

In order to implement the unified numbering plan, the need to re-look into the architecture of the SDCA based numbering and Point of Interconnect for handing over wireline or fixed wireless calls. There are broadly two ways to migrate to an integrated numbering scheme, one would be to merge the SDCA code with the subscriber number and form a 10-digit number for fixed line and the second would be to identify one or more unique codes for each service area/circle and fill up the remaining digits to make a 10 digit number.

The first method offers the advantage of keeping the subscriber number unchanged. There would be no change in the digits dialed for calls to any subscriber in another SDCA or another service area (national long distance calls). The method would give a uniform 10 digit numbering scheme for fixed and mobile and all 10 digits would always be dialed whether the subscriber dials a local number of a long digit number. Short Distance Charging Area (SDCA) codes of 2, 3 and 4 digits would be merged with the fixed line subscriber numbers which are correspondingly of 8, 7 and 6 digits to form a unique 10 digit subscriber number. For example, a Jodhpur number 2474567 becomes 2912474567 as the SDCA code of Jodhpur is 291. No change would be

required in the existing mobile numbers. The initial digits may still have geographical significance and with some discipline in allocation, geographical significance can be maintained for future allocations. Inter- modal number portability may also become possible between fixed and mobile systems in the future. Inter-modal portability means number portability between fixed to mobile and vice versa. However, intermodal number portability is prevalent in very few countries like U.S.A. and Chile.

The main difference between the two methods is that in the second method the service area could be uniquely identified by the first two digits at the cost of large-scale change of subscriber numbers. In the first option also the SDCA codes of level '1' will have to be shifted to other levels to avoid overlapping of 10-digit subscriber number with level '1' short code numbers. However, if dialing with access code '0' is made compulsory for all fixed line numbers, then no change will be required in SDCA codes 19 starting with level '1'. Considering all the aspects it is felt that the first method would be easier and more consumer friendly to implement. The service providers need time to restructure the network, re-arrange Point of Interconnections, 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.

We hereby agrees with the TRAI that the numbering resources should be created by vacating fixed line levels since few fixed line numbers are grossly underutilized. By using this process we will be able to generate numbering resources for a few years.

However, switching over to 11 digits numbers from 10 digits scheme would be something which will affect the entire mobile communications. As discussed in this paper switching from 10 to 11 digits with the fixed first digit as 9 would give a total capacity of 10 billion numbers. However, we agree to the representations of TRAI about the challenges anticipated with the change in the mobile number from 10 digits to 11 digits. This would require modification in all fixed and mobile system software and number storage involving exemplary cost. This will also lead consumers to inconvenience in the form of (a) dialing extra digit, (b) updating whole phone memory. This would definitely lead to more dialing errors, infructuous traffic and loss of revenue in the digital economy. However, we would also opined that this system can be adopted after exhausting all the efforts to continue with 10 digit numbering.

Lack of Numbering Resources Now Surfacing in India

The need of implementation of unified numbering policy is the lack of numbering resources which is coming up again because the National Numbering Plan 2003 had created a numbering space for a total of 750 million telephone connections which included 450 million cellular mobile phones and 300 million basic phones. The National Numbering Plan (NNP) in 2003 had projected a 50% tele-density by the

year 2030. However, the 450 million cellular mobile connections by 2030 had already been achieved in 2009.

But after 16 years of the National Numbering Plan (NNP) of 2003, the availability of numbering resource is now scarce, and this is especially true for the mobile segment. Currently, India has a total of 1186.63 million subscribers with a tele-density of 90.11%. It was in May 2019, when TRAI received a reference from the DoT on strategies of National Digital Communications Policy, 2018 which included "ensuring adequate numbering resources, by developing a unified numbering plan for fixed-line and mobile services".

Therefore, it is the need of the hour to adopt such policy which can strengthen the digital sector of India.

Q2: Do the present criteria of utilization for allocation of numbers ensure efficient utilization of the numbering resources or would you suggest some other criteria?

Ans: The present criteria of utilization of allocation of numbers ensure utilization of numbering resources but it needs to be changed with certain new policies. The capacity of present numbering scheme is limited to the levels which exists and some levels which are unusable for mobile network. However, some million numbers cannot be used for working connections but because of the reasons of granularity of allocation for each Mobile Switching Center (herein after referred to as "**MSC**"), numbers blocked in the distribution chain, administrative processing time for allocation of new blocks of numbers and other inefficiencies of the system, utilization cannot reach 100%.

DoT allocates new blocks of number to service providers demonstrate a specified percentage utilization of the already allocated numbers. Therefore, the present capacity of 2100 million number resources with DoT are exhausted after nearly 1.2 billion connections have been given and after that there are no new numbers left for allocation unless more levels/sub-levels are freed up for mobile network use. Recently, DoT has also started withdrawing the scarcely utilized MSC code numbering series allocated to the TSPs in different LSAs and reallocated them to TSPs who need it more. Few sub-levels of '6' which have been vacated by the wireline service providers have also been allocated for mobile services.

We are also of the opinion that for making allocation of numbers more efficient there should be automation of the allocation process which can be governed with the new policy making. Also, in case of the present mergers in the telecom sector, the previous allocations of numbering resources which are not in use may also be taken back and can be utilized along with the new allocation. This way we can manage to have more

resources and can provide it to new growing TSPs.

Q3: Do you feel that sparingly used MSC codes may be withdrawn and reallocated to another TSP whose subscriber base is growing?

Ans: Answer as above

Q4: 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?

Ans: Yes. We are of the opinion that by filing a detailed an "Annual Return on Numbering Resource Utilization" by the service providers so that it can be find out about the usage of numbers allocated.

Q5: 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?

Ans: As we know that the service providers do not pay for numbering resources as of now, however, the charges has been levied upon the customers who has been allotted the preferred numbers.

We are of the opinion that even a modest charge should be levied upon the service providers so that the service providers will be kept motivated to efficiently use the numbering resources. It may be noted here that this process would also be in line with the practices followed internationally regarding charging of numbers.

However, we agree with the suggestions of TRAI about the different forms of charging, which is reproduced herein for the sake of convenience:

1. A one-time charge per number
2. A one time charge per block of numbers
3. An annual charge per number held
4. An annual charge per block of numbers held
5. An annual charge per active number held.

Q6: 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.

Ans: We are of the view that an automated allocation of numbering resources using number management system software is now become the need of the hour not only to speed up the process of allocation and collecting returns in an efficient and transparent manner but also the issues related to the delay in opening new routes for the allocated numbering resources in all networks, which can also be solved if a consolidated dynamic database is maintained by the numbering resource administrator in the number management system which should be open and accessible to all stakeholders.

Yes. We feel that for the above mentioned work is to be done as soon as possible for the stability of the sector, it should be given to an independent body by the licensor after a meeting of the concerned and the stakeholders.

Q7: 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?

Ans: We agree that a new and revised National Numbering Plan should be enacted along with the detailed rules about the allocation and usage of Numbering Resources. A new plan should be enacted with a view to have all the solutions to the problems faced by the sector at present which were not expected when the last Plan was drafted.

A consolidate list of short code allocation should be issued and also the codes which has already been issued and allocated to networks which are not being used should be allocated to other organization. In such existing circumstances a detailed database of all the short codes should be maintained by the number administrator and monitored for implementation.

Q8: Any other related issue?

Ans: Discussed as above.