



DIGITAL  
LIFE

RJIL/TRAI/2019-20/443  
13<sup>th</sup> November 2019

To,

**Shri U.K. Srivastava**  
**Pr. Advisor (Networks, Spectrum and Licensing),**  
**Telecom Regulatory Authority of India,**  
**Mahanagar Doorsanchar Bhawan,**  
**Jawaharlal Nehru Marg, New Delhi - 110002**

**Subject: Comments on TRAI's Consultation paper on 'Developing a unified numbering plan for fixed line and mobile services' dated 20<sup>th</sup> September 2019.**

Dear Sir,

Please find attached comments of Reliance Jio Infocomm Limited on the issues raised in the Consultation Paper on 'Developing a unified numbering plan for fixed line and mobile services' dated 20<sup>th</sup> September 2019.

Thanking You,

Yours sincerely,  
For **Reliance Jio Infocomm Limited,**

**Kapoor Singh Guliani**  
Authorised Signatory



Enclosure: As above.

**RELIANCE JIO INFOCOMM LTD'S COMMENTS ON TRAI'S CONSULTATION PAPER ON  
"DEVELOPING A UNIFIED NUMBERING PLAN FOR FIXED LINE AND MOBILE SERVICES"  
(Consultation Paper Dated 20<sup>th</sup> September 2019)**

**General Comments:**

1. We thank the Authority for issuing this consultation paper to take stakeholders views on the measures required to ensure adequate availability of numbering resources by developing a unified numbering plan for fixed line and mobile services. We submit that this measure will not only help address the perennial numbering crunch on a more permanent basis but will also help meet the strategic objectives under the National Digital Communications Policy, 2018 (NDCP-2018).
2. The Authority has rightly recognized the importance of the numbering plan and the fact that we have not taken any comprehensive steps to address the prevailing issues on the subject for quite a while now. As the Authority has noted, the current numbering plan is based on the antiquated concepts and needs to be revised at the earliest, in order to meet the genuine growing need of numbering resources.
3. As highlighted by the Authority, the service wise numbering allocation has served its utility, but with exponential expansion we have spent a better part of the last decade in freeing more and more numbering resources from the fixed line services, without making the adequate structural changes in the numbering plan to address this issue on permanent basis.
4. We agree with the Authority's assessment that, while the piecemeal freeing of numbers has been helping us tide over numbering crisis being faced in past few years, but in the medium- and long-term basis, we will be facing a severe shortfall of numbers for mobile services as we will require as much as 4.68 billion numbers in year 2050 against the current availability of only 2.1 billion numbers for mobile numbers. Thus, urgent intervention is required to address the numbering issues and the most feasible option remains the implementation of Unified Numbering Plan for fixed and mobile numbers, while maintaining a 10-digit numbering scheme.
5. The Authority, in its foresight, had already recommended the integrated numbering scheme in its recommendations dated 20<sup>th</sup> August 2010 on "Efficient Utilization of Numbering Resources", however the same was not implemented. We submit that the conditions are more congenial currently and most of the objections to Unified Numbering Scheme have either been addressed or are under review.



6. We submit that the main concern against Unified Numbering was the SDCA based numbering and POI architecture for wireline and fixed wireless calls, however the same is already under a review by the Authority under a separate consultation process. We submit that the only way to truly liberalize the fixed line sector and use it as a vehicle for digital inclusion and 5G penetration is by doing away with this archaic POI and numbering Architecture.
7. Besides being an archaic and cumbersome, the SDCA architecture-based numbering is not easy to implement as well. The lack of availability of verified SDCA boundaries with any authority or operator including BSNL, implies that the fixed line numbering allocation to consumers is done in a haphazard manner and it is practically impossible to have uniform and consistent implementation across all operators, thus even from implementation point of view this architecture needs to be replaced.
8. We understand that despite moving towards centralized switching architecture the PSU operators are not supportive of this move, however, we submit that perceived negative impact on the sector is nothing compared to the dividends of doing away with the SDCA based structure. It is pertinent to note that the Authority had already addressed this issue in its recommendations dated 20<sup>th</sup> August 2010 as extracted and reproduced herein below:

*“Whenever a country’s telecom network undergoes a major modification like migration to Next Generation Network or change in switching plan, POIs may have to be rearranged and some of them cannot be immediately reused. In many cases, however, they could be reused for expansion of their own network. One has to look at it as a POI rearrangement that leads to immense simplification and ease of future augmentation.”*
9. We submit that of all the suggestions provided by the Authority for implementing Unified Numbering Scheme, the solution of merging the fixed line number with STD Code is most optimum with least disruptions. Further, the concern regarding the overlapping with level 1 services can also be easily addressed by stripping the number “2” which is currently the prefix for all BSNL/MTNL numbers and adding it prior to the STD code. This solution will shift all old fixed line numbers to 10-digit numbers without much impact on the numbers and this will also provide a clear identifier for these numbers. The remaining fixed line numbers with the private service providers can be subsumed by them, under the allocated numbering resources.
10. This solution, wherein mobile numbers remain unchanged and the fixed line numbers are adjusted in a non-disruptive manner under the Unified numbering plan will free up the locked inventory and increase the overall number series to 6 billion within the current 10-digit numbering scheme.



11. The abundance of the numbering resources made available by the implementation of Unified Numbering Scheme, should be reflected in the simplification of the process of allocating numbering resources. We submit that the current process is stringent, time-consuming and unproductive. We request the Authority to recommend to replace this process with the operator self-certification based simplified automated number allocation mechanism.
12. We submit that the service providers should be allocated sufficiently large numbering resources that will not only be sufficient to tide over their immediate requirements but will also provide sufficient buffer for emergent needs. We further submit that the Authority should recommend a self-certification based annual assessment of the numbering resources allocated to a service provider to check the efficient utilization of the numbering resources. This is an easy check, as both the Authority and the Department of Telecommunication (DoT) have access to the subscriber base and VLR numbers of the service providers.
13. We submit that pricing of the numbering resources is neither feasible not consumer friendly in a telecom market where the sectoral ARPU is close to Rs.70/- only and taxes and levies already amount to over 30%. We submit that in case, such a burden is imposed, it will be passed on to the consumers and would not benefit the sector in anyway.
14. We further submit that the Authority should recommend for periodic publishing list of Short Codes by the DoT.
15. We once again reiterate that the Authority should recommend for immediate implementation of Unified Numbering Scheme as this will not only ensure the availability of numbering resources to meet the requirements for coming 25-30 years but will also help stimulate the fixed line sector by promoting competition and introduction of concepts like fixed number portability, fixed mobile portability and fixed-mobile convergence.

**16. Conclusion:**

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| <ol style="list-style-type: none"><li>1. The Authority should recommend for immediate adoption of Unified Numbering Scheme and free 6 billion numbers for use.</li><li>2. The Authority should merge the STD codes of the BSNL/MTNL fixed line numbers post stripping the prefix 2 and appending it in front of the STD code to form comprehensive 10 digit numbers.</li><li>3. The Mobile numbers should remain unaltered.</li></ol> |
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4. The criterion of allocating numbers should be simplified and should be based on the operator self-certificate and be done through an automated system.
5. The pricing of numbers should not be considered.
6. The National Numbering Plan should be revised periodically. The DoT should also publish the list of Short Codes periodically.

**Issue wise response:**

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

**RJIL Response:**

1. We firmly believe that Unified Numbering Scheme should be implemented in the country without any further delay and in line with available technologies. We submit that Unified Numbering Scheme is the only long-term solution to resolve the perennial numbering crunch. The Authority has already recognized this as a feasible, plausible and least disruption solution for the consumers, that will resolve the numbering related issues for at least next 25-30 years.
2. We further submit that all the previous objections against the Unified Numbering Scheme pertaining to SDCA based numbering, IUC and tariffs related concerns etc. are either already settled or are under review by the Authority and should be settled in a progressive manner in order to address all these issues cohesively. This would also boost the fixed line services as a segment and would promote new investments.
3. We submit that the implementation of the Unified Numbering scheme would also have the impact of galvanizing impact on the fixed line portability and fixed-mobile convergence, that would introduce competition in the sector and deliver the benefits of technology to the subscribers, while at the same time impart sufficient agility to fixed line services, further enabling the 5G deployment and delivery through fixed lines.
4. We submit that the Unified Numbering Scheme can be implemented in a very simplistic manner. Currently, the users vis-à-vis numbers allocated ratio is heavily skewed in favor of the fixed line. While there are less than 2.1 billion numbers available for over 1.1 billion mobile users, there are over 4.9 billion numbers reserved for less than 40 million fixed line connections in the country.



5. In order to make the Unified Numbering scheme least disruptive, we propose to keep the mobile numbers, which constitute 96% of total telecom consumer numbers, unchanged. The private operators offering fixed line services will be required to subsume their fixed line numbers under their allocated mobile levels.
6. The only issue will be faced with respect to the BSNL fixed line numbers, which at around 25 million constitute only 2% of the total numbers, will require special treatment and routing adjustments due to BSNL's circle and SDCA specificity.
7. We suggest the following modus operandi to convert these numbers to 10-digit numbers, without changing the STD code identifiers and the without clashing with the level 1 series, as below:
  - a. Strip off the number "2" which is currently the prefix for all BSNL numbers. Use this digit to prefix the current STD code for BSNL.
  - b. Step 1 will convert all 2,645 SDCAs into a single level 10-digit numbering plan – easy to communicate and execute.
    - i. Example for 4-digit STD codes– 8731-226000 will be 2-8731-26000
    - ii. Example for 3-digit STD codes– 761- 2266000 will be 2-761-266000
    - iii. Example for 2-digit STD codes– 22-22456000 will be 2-22-2456000
  - c. Levels 0,1 and 5 will be kept reserved and continue to be allocated for long distance, special services and short codes respectively.
  - d. No more separate level allocation for fixed numbers and these need to be allotted from the allocated set of numbers to service providers. The Operators may be permitted to keep a sub-level reserved for their fixed line numbers.
  - e. Thus, theoretically 6 billion 10-digit numbers will become available for consumer services i.e. levels 3,4,6,7,8 and 9.
8. We further submit that this change would not require any extensive routing changes, as well and the Routing management under this arrangement can be implemented using Mobile Number Portability (MNP) Database (DB) and the LRNs in the following manner.
  - a. Use of MNP DB to return the "fixed line LRN" for routing
  - b. Based on Fixed line LRN, call to Fixed line number can be routed to destination circle and then right operator and right Trunk Group (TG)



9. We submit that the above solution is the most optimum to resolve the numbering crunch for next 25-30 years. We are ready to further explain this to the Authority and to implement the same.

**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

**RJIL Response:** Not Applicable

**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?**

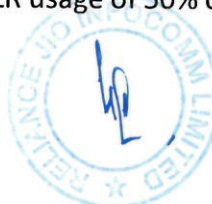
**RJIL Response:**

1. We submit that the current Visitor Location Register (VLR) based criteria for allocation of numbering resources is not optimum and is actually a byproduct of scarcity of numbering resources and the consequent need for restricted allocation. We submit that this criterion is heavily loaded against the fast-growing service providers and should to be revised with immediate effect.
2. We submit that, in case of this fast-growing service providers is also new in the market then the difficulties in allocation of new numbers are multiplied. In such cases, the demand of services is higher, the distribution networks are evolving, and these fledgling service providers do not have the benefit of large subscriber base and number series banks to support expansion of their services.
3. Further, even the process for applying for new MSC codes is very lengthy and cumbersome and the TERM Cells do not follow a uniform procedure. Many TERM Cells ask the service providers to approach them for certification only with 7 days averaged VLR figures qualifying the allocation criteria. Post evaluating the application for 2-3



days, the TERM Cells start testing the VLR for next 7 days. This is followed by TERM Certification, thus about 20 days are spent even before applying to the DoT for new MSC codes. This is invaluable loss for a new service provider.

4. Besides the policy and operational issues, the allocation block of one million numbers in a service area is too small for a rapidly growing service provider. In many cases, the service provider is eligible for next block of numbers, while the testing for one block is underway. There are times when the service provider has to slow down customer acquisition because of lack of numbering series, thus causing significant customer inconvenience as well as unnecessary delays for the service provider.
5. We submit that the current number allocation process is not consummate with the requirements of healthy proliferation rate of digital services. For the same to happen, a large number of SIM cards need to be kept at Point of Sales and Distribution channels, which is inhibited under the current process. Further, the prevailing restriction on recycling of numbers for 90 days, as per DoT letter dated 20<sup>th</sup> April, 2017, impose a further load on the operator's numbering resources. Additionally, as the service providers have to keep the churned numbers in abeyance for 3 months, the VLR, allocated numbers ratio is also adversely affected.
6. Furthermore, currently the new level allocation criterion for fixed line services is even more stringent, wherein the DoT is currently allocating new levels only on actual activation of 80% numbers allocated. Considering the fact that in fixed line segment, the level opening is another extensive exercise involving coordination with 2645 BSNL fixed exchanges at SDCA level, this number allocation criterion is extremely hard on new entrants and has become a bottleneck for the new investments.
7. We submit that the current criterion for allocation on new numbers needs to be comprehensively revised in order to spur faster adoption of digital services. The service providers need to be allocated large amount of numbers, in order to feed the ever-evolving distribution chains and meet the requirements of buffer stocks to meet the sudden spurt of demands. In recent times, we have seen that in cases of sudden user spurt in an area due to an event, ad-hoc arrangements are required to be made. We submit that, while the Authority is analyzing on how to increase the availability of numbers, it should also simplify the process of allocation of numbers and increase the quantum of numbers to be allocated at one go.
8. We submit that the allocation of numbering resources should be based on the active users only, however, the VLR ratio against the numbers allocated should be relaxed. The Authority should recommend, allocation of new number series, on the service provider's self-certification that it has reached VLR usage of 50% of the total allocated





numbers. The VLR testing requirements by TERM Cell should be done away with and the service provider may be required to submit a self-certified request for allocation of number series and the number series should be allocated in a block of 5 million numbers at one go, instead of the current practice of one million numbers.

9. In addition, we request the Authority to recommend flexibility in use of the numbering series. For a rapidly growing operator, there are occasions when the MSC codes in a circle may run out due to rapid customer addition. Under the current process, the operator has to wait for next allocation of numbers for continuing business, while he might be having free numbers available in another service area. We submit that in such situations, the operator may be allowed to use the MSC codes from another circle to the extent it has not been used yet, to meet the interim requirement. Given that numbering series are now fungible across service areas post implementation of national MNP, there is no issue in using them in another circle to the extent they are unused. It will provide much needed breathing space to the service provider to apply for and obtain a new numbering series in the concerned circle.

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

**And**

**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?**

**RJIL Response:**

1. We submit that all numbering resources lying idle with service providers should be put to the optimum use. Therefore, we feel that sparingly used MSC codes should be withdrawn from the service providers and included in the pool for allocation with the licensor.
2. We do not see any harm in submitting the annual numbering return with the numbering plan administrator. This return should be self-certified by the service providers and the numbering administrator can audit the same against the subscriber and VLR numbers declared by the service providers and can audit the utilization of numbering resources, in case of glaring discrepancies between the annual return and subscriber base/VLR base.
3. We submit that the numbering plan administrator may examine and identify the MSC codes being used sparingly by the service providers and map it with that service



provider's subscriber growth rate and take a decision on recalling the sparingly used numbering resources.

**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?**

**RJIL Response:**

1. We submit that pricing of numbering resources is not suitable for the India, especially in the current scenario, when the focus of the Government and Authority is to rationalize the current set of levies and taxes, in order to spur investments in the sector.
2. The NDCP– 2018 talks about reforming the licensing and regulatory regime to catalyse Investments and Innovation and promote Ease of Doing Business by reviewing of levies and fees including License Fee, Spectrum Usage Charges, the definition of Adjusted Gross Revenue and rationalization of Universal Service levy alongwith reviewing the concept of pass through charges to align the same with the principles of input line credit thereby avoiding double incidence of levies and so on so forth. Thus, a new levy in the current scenario will be out of place.
3. We further submit that the Authority in its 2010 recommendations had mulled over the pricing of numbering resources but had dropped the idea, basis the various submissions by the Industry, including the facts that the ARPUs and tariffs are already very low. Further, the fact remains that the service providers anyways pay License fee and Spectrum Usage Charge on the AGR and the any income from the miniscule number of vanity numbers is already included in the AGR, thus an indirect charge is already there and any additional levy for all numbers can and will be directly transferred to the consumers. Thus, it is not a feasible or consumer friendly concept.
4. We submit that in 2010, the Authority had rejected the proposal in favor of monitoring the efficient utilization of numbers, when the ARPUs and tariffs were much higher, thus it does not make any economic sense to introduce this system now. We are extracting and reproducing the Authority's views as herein below:

*A view is that a charge should inculcate better discipline and lead to higher efficiency in utilization of numbers. However, charging for numbers may have its own advantages and disadvantages. Though many countries today charge for numbers, pricing is a difficult decision to take the first time it is instituted. Also while reviewing the criteria of allocation, the Authority has recommended above that the service providers should not have more than 3 million unutilized numbers in a service area at*



*the time of requesting for new block of numbers. The Authority expects that the revised criteria should lead to better utilization of numbers. Therefore, the Authority is of the opinion that the efficiency of utilization of numbering resources by the service providers be watched and the issue of pricing may be revisited if considered necessary.*

**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.**

**RJIL Response:**

1. We agree with the proposal to use to software based automated numbering management system. This will remove the multiple and individual TERM Cell specific interpretation of the criterion for new series allocation. This will also improve timelines in allocating the numbing resources, thereby promoting the ease of business.
2. We do not see any merit in using an independent body for this purpose, as the licensor does have sufficient wherewithal to manage this work. The only concern is the ease in allocation of numbers and the uniform and timely implementation of the number allocation criterion and if that can be implemented in-house by the Licensor, the additional independent body would just be an additional burden on the exchequer, that should be avoided.

**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?**

**RJIL Response:**

1. We submit that the new Numbering Plan and a consolidated list of Short Codes allocated for various services may be issued by the DoT. The current numbering plan is over 15 years old and post that numerous allocations have been carried out by the DoT and there is an absence of consolidated list of all current numbers in operation.
2. We further submit that, as the number allocation and consequent configuration in the networks is a continuous process, there is a need for a corrected and validated list of all short codes issued by the Government at periodic intervals. Therefore, we submit that the list of Short Codes should be issued every year by the Government. As far as the Numbering Plan is required, the Government may issue a consolidated addendum every three years and issue the revised Numbering Plan every 10 years.



**Q9. Any other related issue.**

**RJIL Response:**

1. We submit that the prevalence of SDCA based numbering and POI architecture has inhibited the fixed line sector for a long time now, which has devoid the fixed line users from the benefits of the competitive forces, which can be unleashed by the fixed number portability (FNP) and fixed mobile portability.
2. The Authority is requested to take cognizance of the fact that implementation of the Unified Numbering Scheme is not only required for sparing more numbers for mobile services but that it is imperative for revival of the fixed line services. We submit that the implementation of Unified Numbering Scheme will facilitate FNP, which is also one of the strategies of NDCP-2018 in order to strategies to catalyse Digital Communications sector as mentioned below:

*“Creating a regime for fixed number portability to facilitate one nation – one number including portability of toll free number, Universal Access numbers and DID numbers”*

3. As the Authority is aware, the Fixed number portability is an idea that has been effectively implemented globally, even prior to Mobile Number portability, however, it was delayed in India primarily due to the fact that the existing numbering for fixed phones in India is SDCA based leading to limitation that FNP will be limited to SDCA until the numbering system is changed, as noted in the Authority’s recommendations on Mobile Number Portability dated 8<sup>th</sup> March 2006.
4. We submit that dismantling the SDCA based POI and numbering architecture followed by implementation of Unified Numbering Scheme would make the conditions ideal for implementation of FNP, that will be vital for introduction of competition in sector, consequently reviving the fixed line services. As the Authority is aware, globally, FNP is treated as a standard requirement, as this provides the proverbial ‘fire in the belly’ for competition. The competition can foresee a ready base with good ARPU that can be acquired with better service and quality. Thus, clearly the FNP would spur competition and growth in fixed line sector.
5. In view of the above, we request the Authority to follow-up the implementation of Unified Numbering Scheme with implementation of Fixed Number Portability.

