



COAI Response to the Consultation Paper on “Revision of National Numbering Plan”

We thank the Authority for providing us with the opportunity to share the response to the Consultation paper on Revision of National Numbering Plan.

Preamble:

1. In the ever-evolving landscape of telecommunications, ensuring an efficient and forward-thinking numbering plan is crucial.
2. The revisions and recommendations presented in this document aim to address current constraints and future needs in the allocation and utilization of Telecommunication Identifier (TI) resources.
3. As we navigate the complexities of both fixed-line services, our focus remains on creating a numbering scheme that is scalable and flexible.
4. We believe that the Short Distance Charging Area (SDCA) based Telecommunication Identifiers for fixed line services should be reviewed. Under the fixed line services in certain towns industry is facing constraints in rolling out the services at a fast pace due to the inefficient methodology of SDCA based allocation.
5. The current fixed line series scheme at the SDCA level has created an artificial scenario with significant constraints. On one hand, a TSP cannot expand its service rollout in high-demand cities and towns because no new number series or levels are available. On the other hand, there are many SDCAs where the demand for fixed lines is negligible, yet those number resources cannot be redeployed by the TSP elsewhere.

Considering the above, our key submissions are as below:

- a. SDCA-based numbering scheme should be transitioned to a 10-digit closed License Service Area (LSA)-based numbering scheme prefixed with '0'. This LSA based allocation method will significantly enhance the availability of more numbering resources for TSPs.
- b. The existing Subscriber Numbers as well as the SDCA codes already allocated be allowed to continue for existing customers.
- c. There will be no need to migrate to an LDCA based scheme. Once transitioned to an LSA-based, both the SDCA as well as LDCA based constraints would get addressed.



- d. New LSA-based numbering series to be used for new connections and under this option the fixed-line numbering scheme to be a 10-digit closed numbering scheme. This will ensure significantly less customer inconvenience and reduce network impact.
- e. It should be mandatory for all TSPs (including BSNL) to establish interconnection at one location at the LSA level for exchange of voice traffic, within prescribed timelines and without any additional carriage charges for intra-LSA calls.
- f. The LSA based numbering series allocation will use Emergency Response Support System (ERSS) solution for emergency services call.
- g. We recommend that TRAI maintains a hands-off approach regarding the bulk allocation of Telecom Identifiers (TIs) for Session Initiation Protocol (SIP) and Primary Rate Interface (PRI)-based services. Allowing TSPs to handle these aspects independently will enable them to optimize their resource allocation and service delivery based on a specific use case they intend to serve.
- h. There is no need to introduce definition for 'inactive connection' for fixed line services. The dynamics and usage patterns of fixed line services differ significantly from those of mobile services. Further, there is also no need to revise the definition of 'inactive connection' in case of mobile services.
- i. Charges should not be introduced for existing and newly allocated TI resources. Telecom Industry already have multiple levies and any additional charges for the numbers already held by TSPs and for future allocations will be an additional burden on the operators.
- j. There should not be any financial disincentive imposed upon TSPs for retaining certain percentage of the numbers allocated TIs remaining as unutilized beyond a certain timeframe, rather Spare SDCA codes, unused sub levels out of the levels allocated to the TSPs be best utilized to cater for future requirements of TIs for fixed-line access services.

Our detailed response on the queries raised in the Consultation Paper are as below:

Q.1. Are there any TI resource shortages envisaged in the near future due to the presently adopted SDCA based fixed line Telecom Identifier scheme? Is there a need to revise the criterion prescribed by DoT for allocation of additional Telecommunication Identifier (TI) resources for fixed line access services? Please provide answers with detailed justification.



COAI Response:

1. Yes, the TI resource shortage is expected in near future. We believe that the SDCA based numbering scheme for fixed line services should be reviewed.
2. It is crucial to recognise that the long-term objective must be achieved, and the SDCA-based numbering scheme should be transitioned to an LSA-based numbering scheme.
3. This LSA based numbering scheme will significantly enhance the availability of more numbering resources for TSPs, from within the existing allocated resources itself.
4. In order to ensure significantly less customer inconvenience and reduce network impact, the existing Subscriber Numbers as well as the SDCA codes already allocated be allowed to continue for existing customers, while the new LSA-based numbering series is used for new connections. Under this option the fixed-line numbering scheme will be a 10-digit closed numbering scheme i.e. the customers will have to dial all the 10 digits prefixed with a Zero ('0'+ SDCA/STD code + Subscriber Number) even from within the same SDCA/LSA.
5. Further there will be two important considerations to be ensured:
 - a. It should be mandatory for all TSPs (including BSNL) to establish interconnection at one location in an LSA level for exchange of voice traffic.
 - b. The calls destined for emergency services and originated from fixed line numbers (irrespective of SDCA/LSA based numbering scheme) should be routed at ERSS helpdesk.
 - c. There would have to be a transition plan from existing SDCA based numbering scheme to LSA based numbering scheme.
6. It is important to emphasize that the proposed solution is contingent upon the involvement of BSNL. For the solution to be effective, it is imperative that BSNL's interconnection at a single location within each Licensed Service Area (LSA) is made mandatory, without any additional cost of carriage for intra-LSA traffic. This interconnection is a critical component of the solution, ensuring seamless integration and functionality across the network. Therefore, the implementation of this requirement should be enforced rigorously to guarantee compliance. By mandating BSNL's participation and interconnection at the LSA level, through suitable conditions in revised NNP, license agreement as well as TRAI Regulations, the solution can achieve its intended objectives, leading to improved network performance and service delivery.
7. We have analysed other approaches of change in numbering scheme (like using spare/unutilised codes, LDCA based numbering scheme, LSA based new series etc.) all of which have been found to contain more challenges, complexities and costs.



Q.2. How can the (a) Spare SDCA codes and (b) Unused sub-levels out of the levels allocated to TSPs be best utilized to cater for future requirements of TIs for fixed-line access services? Please provide a detailed answer.

COAI Response:

1. To efficiently manage and cater to the future requirements of TIs for fixed-line access services, the focus should be on the following strategies:
 - a. As highlighted above, we are of the view that the SDCA-based numbering scheme should be transitioned to an LSA-based numbering scheme.
 - b. Merely withdrawing and reallocating codes from underutilized or zero-subscriber SDCAs by merging them with adjacent SDCAs is a short-term fix that doesn't address the fundamental need for a more flexible and scalable numbering system. Transitioning to an LSA-based scheme will provide a more comprehensive solution, accommodating future growth and technological advancements.
 - c. To ensure a sustainable and efficient allocation of numbering resources for fixed-line access services, it is imperative to transition to an LSA-based closed 10-digit numbering scheme having '0' as prefix. This approach will provide a more adaptable framework, capable of meeting future demands and supporting the evolution of communication technologies.

Q.3. As is the case currently with mobile numbers, in order to ensure availability of TIs for fixed lines, should 10-digit closed numbering scheme be made applicable to fixed line also? Please provide answers with detailed justification.

COAI Response:

1. **Yes.** Transitioning to a 10-digit closed numbering scheme for fixed-line services, similar to that used for mobile numbers, is a logical step to ensure the availability and efficient utilization of numbering resources.
2. While the implementation will involve challenges, complexities and costs, though they are comparatively lesser than other approaches, and there are long-term benefits in terms of uniformity, simplicity, and alignment with technological advancements make it a worthwhile initiative.
3. Addressing these challenges through coordinated efforts between regulatory bodies, service providers, and consumers will pave the way for a smoother transition and a more robust telecommunications infrastructure in India.



4. Further, it is also to be noted that if the 10-digit closed numbering scheme is made available to fixed line, there shall also be the following benefits:

a. Uniformity and Simplicity

- i. A 10-digit closed numbering scheme standardizes the dialing process for all calls, eliminating the need for varying digit lengths for local and long-distance calls. This makes it easier for users to dial numbers and reduces confusion.
- ii. Consistent numbering across both fixed-line and mobile services simplifies the user experience, especially for those accustomed to the mobile 10-digit scheme.

b. Efficient Utilization of Numbering Resources

- i. A closed numbering scheme ensures that numbering resources are used efficiently. By adopting a uniform 10-digit format, the allocation process becomes more streamlined, preventing the underutilization seen with varying number lengths.
- ii. As telecommunication needs grow, a 10-digit scheme provides a larger pool of numbers, accommodating future demand without frequent changes to the numbering plan.

c. Alignment with Technological Advancements

- i. With the shift from TDM to IP-based networks, a consistent numbering scheme aligns better with modern network architectures including in fixed line networks, simplifying the integration and management of numbering resources.
- ii. The adoption of 5G, IoT, and M2M communication requires a robust and flexible numbering system. A 10-digit closed scheme supports these technologies more effectively.

d. Ease of Management and Regulation

- i. A uniform numbering scheme simplifies regulatory oversight. It allows for more straightforward monitoring, allocation, and auditing of numbering resources.
- ii. Managing a single, consistent scheme reduces administrative complexity, making it easier to implement and enforce regulations.



e. Global Best Practices

- i. Many countries have adopted closed numbering plans for both mobile and fixed-line services. Aligning with these international best practices ensures that India's telecommunications infrastructure remains competitive and standardized globally.
5. In-fact, we submit that our suggested approach in response to question 1 to move towards an LSA based allocation will address this requirement effectively.

Q.4. Will migrating to LDCA based TI scheme address the constraints in SDCA based fixed line TIs? Please provide answers with detailed justification.

COAI Response:

1. We are of the view that the migration to the LDCA based TI scheme will not serve the purpose and the issues currently being faced with the SDCA level scheme will remain unchanged. It will not be a sustainable or a long-term solution. In fact, even at present there are situations where LDCAs are constrained e.g. in case of Gurugram which is SDCA and LDCA both.
2. Therefore, as highlighted above, we believe that LSA-based numbering provides a more scalable and flexible framework, allowing for easier accommodation of new subscribers and services without frequent reconfiguration.
3. The LDCA based numbering scheme is very complicated and challenging and also not expected to release much additional resources, considering the shift to LDCA POIs would by itself be a huge activity and complex change in routing/configurations across network nodes/IT systems as such, it would not be possible to firstly shift to LDCA POIs and then, to LSA POIs in future.
4. Thus, we are of the view that the SDCA based fixed line Telecom identifiers should be migrated to the LSA based Telecom Identifiers. Once that is implemented, there will be no need to migrate to an LDCA based scheme, and in one go, both the SDCA as well as LDCA based constraints would get addressed.

Q.5. What are the other possible options, if any, to address the currently envisaged constraints in TI resources for fixed lines in an efficient manner? Please provide your answers with a detailed proposition (including technical challenges, changes required in handling, routing, interconnection and termination of emergency services and other essential calls and associated cost-benefit analysis). Supportive documents, if any, may also be provided to justify your answer.



COAI Response:

1. The constraints in TI resources for fixed lines can be addressed through various strategies as short-term fix, considering the technical challenges, necessary changes in handling, routing, interconnection, and termination of emergency services, and a cost-benefit analysis. The following are the propositions that may be taken into consideration in order to address the constraints in TI resources for fixed lines:

a. Utilization of Spare SDCA Codes:

- i. It is also important to note that a viable option is to utilize the spare SDCA codes. The National Numbering Plan 2003 includes a comprehensive list of spare codes such as '39,' '50,' '60,' and '70.' However, only '39' and '50' can be used for assigning to SDCAs, as the other codes have already been allocated to mobile numbers.
- ii. However, transitioning from a three-digit SDCA code to a two-digit code would require changing subscriber numbers from 7 digits to 8 digits. Implementing this change across all TSPs uniformly on a designated date would be challenging and might lead to temporary disruptions.

b. Merging SDCAs with Low Utilization:

- i. One effective strategy to address the constraints in telecommunication identifier (TI) resources for fixed lines is merging Short Distance Charging Areas (SDCAs) that exhibit low utilization.
- ii. It is clear that utilization rates stated that out of the total 2645 SDCAs in India, 58 have zero subscribers, and 275 have fewer than 100 fixed-line subscribers. This significant underutilization of numbering resources presents an opportunity to consolidate these SDCAs with adjacent ones to free up numbering resources.
- iii. The process of merging low-utilization SDCAs involves reallocating the subscribers and services from these underutilized SDCAs to neighboring SDCAs that have higher utilization rates. This reorganization would effectively release the numbering resources currently tied up in underutilized areas, allowing for their reassignment to areas with higher demand or for future growth. Such a strategy would not only optimize the use of existing resources but also enhance the overall efficiency of the numbering plan.
- iv. **However, even after adopting the above strategy the numbers freed will be limited and this cannot be said as a final step towards efficient utilisation of numbering resource. With the merging of adjacent SDCA codes, the SDCA codes of several SDCAs will get changed and subscribers have to face difficulties in this intermediate step.**



c. A sustainable solution – Implementing a Closed 10-Digit Numbering Scheme:

- i. Implementing a closed 10-digit numbering scheme for fixed-line services represents a significant strategy to address the current constraints in telecommunication identifier (TI) resources. In a closed numbering plan, all local and long-distance calls are dialed using the full 10-digit number, which includes the area code and the subscriber number.
 - ii. This approach contrasts with an open numbering plan, where local calls are dialed using a shorter number without the area code. The adoption of a closed numbering scheme offers several advantages in terms of resource optimization, system simplification, and future scalability.
 - iii. A closed numbering plan simplifies the dialling process by eliminating the distinction between local and long-distance calls, reducing user confusion and enhancing the user experience. It also provides a uniform dialling procedure that can be more easily managed and scaled as the telecommunication network grows.
 - iv. Furthermore, it ensures more efficient use of numbering resources, reducing the likelihood of resource exhaustion and the need for future renumbering efforts.
2. Accordingly, in line with our suggested approach in response to Q1 wherein we recommend that fixed line TI scheme should be allocated on the LSA basis, which only will be a sustainable and long-term solution. This approach will be non-disruptive to consumers, least disruptive in terms of network routing/IT implementations, if any.
3. Hence, we do not propose any other option other than the LSA based allocation.

Q.6. Is bulk allocation of TI by few TSPs for providing SIP and PRI based services likely to create TI resources shortage in near future? If yes, what are the suggested means to address this issue? Please, provide your answer with supportive data.

COAI Response:

1. We anticipate that, there may be quite significant demand for SIP based PRI service in future for which TI resources shortage may be reported. However, this shortage is not anticipated due to how TSPs allocate resources to the enterprise customers, but rather due to the present inefficient methodology of allocating fixed line series at SDCA level as highlighted in previous questions.
2. As a solution, we recommend that the LSA based fixed-line numbering resources allocation approach as proposed in response to Q1 should be followed. This will also help obviate the constraints on SIP based PRI allocations as TSP will be able to deploy the number



range as per market demand and business requirements. It is also pertinent to note that the transition to the LSA-based scheme should obviate the need to intervene in TSPs autonomy to manage their services as they see fit. This approach will also allow TSPs to leverage their expertise and operational knowledge to ensure a smooth and efficient migration

3. While through SIP & PRI service large number are demanded by the users, we believe that the substantial amount of Traffic will move to the 160 series (to be used for the transactional and service calls) negate the apprehension that SIP and PRI based services will create TI resources shortage in near future.
4. Further, we recommend that TRAI and DoT continue maintaining a hands-off approach regarding the bulk allocation of Telecom Identifiers (TIs) for SIP and PRI-based services. Allowing TSPs to handle these aspects independently will enable them to optimize their resource allocation and service delivery based on their specific needs and operational strategies

Q.7. Is there a need to introduce appropriate definition for 'inactive connection' for fixed-line services and the exact time duration after which, TIs associated with these inactive connections can be put to reuse? Is there also a need to revisit the definition of 'inactive connection' for Mobile services? Please provide your answers with detailed justification and suggested definition.

COAI Response:

1. We are of the view that there is no need to introduce definition for 'inactive connection' for fixed line services. The dynamics and usage patterns of fixed line services differ significantly from those of mobile services.
2. Further, it is pertinent to note here that in India, there are already stringent criteria **prescribed by DoT for allocation of additional Telecommunication Identifier (TI) resources for fixed line access services**. By revising the definition of 'inactive connection' the process for the allocation of TI for the fixed line service will become more stringent.
3. The rationale behind defining 'inactive connection' for mobile services was distinct and aimed at addressing specific consumer issues i.e. protection of consumer rights from disconnection due to non-usage, and hence, unrelated to deactivation or optimum utilisation of numbering resources.
4. However, if the Authority determines that defining 'inactive connection' for fixed line services is essential, we recommend that the process of deactivating numbers be separated from concerns about numbering resource constraints. The decision to



deactivate and re-use should remain within the purview of TSPs, allowing them the flexibility to manage their networks and resources effectively.

5. Further, as regards the definition of inactive connection for mobile series, the definition and practice are well settled, and all processes are well aligned.
6. As per the TCPR 2012, no prepaid mobile connection shall be deactivated due to non-usage for a minimum period of 90 days followed by deduction of Rs. 20 for 30 days, and a further 15 days of grace period. After this, the TSP is entitled to disconnect the connection. Such arrangement was prescribed in consumer's interest to protect their prepaid mobile number from deactivation due to non-usage, thereby providing them additional uniform time period and process.
7. Moreover, the paper does not contain any background of consumer experience in regard to the inactive period in mobile connection post TRAI prescribed period. The reference received from DoT also is restricted to the constraints being experienced in existing fixed line numbering resources and does not seek any recommendations w.r.t. mobile numbering series.
8. Further, there is neither any consumer interest involved nor any shortage of mobile numbering resources nor any loss to the Government, in fact the existing practices have been consumer friendly and provided an additional option to consumers.
9. Hence, there is no need to revisit this definition **of 'inactive connection' for Mobile services** as well.

Q.8. (a) Whether charges should be introduced for existing and newly allocated TI resources to ensure their efficient utilization? If yes, what should be the charging mechanism and applicable charges? Please provide detailed justification along with supportive documents, if any. (b) Should a financial disincentive be imposed upon TSPs for retaining X% or more of the allocated TIs remaining as unutilized beyond a certain timeframe? If yes, please specify the X% with suggested disincentive mechanism and retention timeframe with detailed justification?

COAI Response:

1. **No**, charges should not be introduced for existing and newly allocated TI resources.
2. Telecom Industry already have multiple levies and any additional charges for the numbers already held by TSPs and also for future allocations is uncalled for.
3. We would like to submit that the Indian operators are already offering the lowest tariffs to the subscribers and their ARPUs are also one of the lowest in the world. The service providers are already burdened with high levels of levies and duties which are in the range



of around 30% of the gross revenue. In this scenario, these charges for the numbering resources would act as an additional burden on the operators.

4. Further, as per the consultation paper the purpose of having charges for the numbering resources is that that this would encourage operators to use the numbers more efficiently.
5. In this regard we would like to submit that in India, there are already stringent criteria laid down for allocation of numbering resources, which becomes more and more stringent for additional numbering series within an LSA. **Numbering series are NOT readily available to the operators.** They can only apply for additional block, only after they demonstrate certain percentage of the utilization in case of mobile and fixed line.
6. Also, kindly note that these charges will be passed on to customers by the TSPs, increasing the average outgo of the customers.
7. Thus, the charge on numbering resource would be in fact counter-productive and would have undesirable impact on both TSPs as well as consumers. It is pertinent to mention here that the Authority had analysed over the charging of numbering resources twice previously, but had dropped the idea, basis the various submissions by the industry, including the facts that the ARPU and tariffs are already very low.
8. Further, the fact remains that the service providers are already paying License fee and Spectrum Usage Charge on the AGR and 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. As regards vanity numbers, it is a normal business activity and TSPs should continue to have flexibility in dealing with this. As a principle, the Government itself should not get into such commercial activities and rather let this flexibility remain with the licensed TSPs being market participants.
9. Further, in many of the global markets highlighted by TRAI where TIs/numbering resources are charged for, it is also a fact that the license fee is typically charged on administrative cost recovery basis and similarly other resources including numbering.
10. However, in India the TSPs are anyways contributing substantially more through License fee as a % of revenue the amount which will be significantly beyond the cost of administering the license or such resources. Hence there is no justification to apply any charges or disincentives on TSPs for usage of TIs.
11. It is crucial to emphasize that no charges should be imposed on numbering series that are already in existence nor for any future allocations. Implementing fees for these existing numbering series could create financial burdens and operational challenges for service providers who have already integrated these numbers into their systems. Therefore, the Authority should avoid any retrospective actions of imposing charges



regarding the numbering series that have been previously allocated to service providers. Maintaining the status without imposing new charges will ensure stability and predictability for the service providers, allowing them to continue their operations without disruption and avoid any unnecessary financial strain. This approach will foster a more stable regulatory environment, benefiting both service providers and their customers.

12. Considering the above, this would also act as an impediment in the growth and spread of telecom services in the country. We sincerely submit that there should not be any levy on allocation of numbering resources, since operators are already paying multiple levies and taxes to the Government.
13. Also, **no financial disincentive needs to be imposed** upon TSPs for retaining certain percentage of the numbers allocated TIs remaining as unutilized beyond a certain timeframe, rather Spare SDCA codes, unused sub levels out of the levels allocated to the TSPs be best utilized to cater for future requirements of TIs for fixed-line access services

Q.9. What is the minimum contiguous range of unutilized TIs which the TSPs should be allowed to surrender for mobile and fixed-line services.

COAI Response:

1. We would like to submit that in India, there are already stringent criteria laid down for allocation of numbering resources. It would be complex to utilise any surrendered range as such, it can at best be left to the discretion of a TSP and not a mandate.
2. Once the new numbering scheme is prescribed i.e. LSA based 10 digit closed numbering scheme or any other option as decided by the Authority, this can be reviewed post implementation and stabilisation.

Q.10. Are there any constraints envisaged in TI resources and its allocation for Machine-to-Machine (M2M) services? If yes, what changes should be incorporated to cater for its future requirements? Do support your answer with detailed justification.

COAI Response:

1. We do not foresee any constraints envisaged in TI resources and its allocation for Machine-to-Machine (M2M) services.

Q.11. What constraints/issues if any, are currently envisaged in the procedure being followed for allocation of Level-1 short codes by DoT? Should the level-1 short codes be reserved for government entities only? Will allocation of level-1 short codes on chargeable basis solve the issues identified in aforementioned question? What are the



other possible suggestions for judicious allocation and effective utilization of level '1' numbering resources? Please support your answer with detailed justification.

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Q.12. What are the global best practices being followed for judicious allocation and effective utilization of short codes (akin to Level-1 short codes in India)?

COAI Response:

1. We are of the view that reserving Level-1 short codes exclusively for government entities can ensure that critical services, particularly emergency and public welfare services, have guaranteed access to these essential resources. This reservation would prioritize public safety and essential services, ensuring they remain uninterrupted and effectively managed.
2. **But we do not recommend allocation of level-1 short codes on chargeable basis.** This is because, the Level-1 short codes are predominantly used for public welfare and emergency services and charging for these allocations could create financial barriers, particularly for government departments and non-profit organizations that provide essential services to the public. These services are critical for public safety and welfare, and introducing charges could limit their ability to access necessary numbering resources, potentially jeopardizing public safety. Furthermore, charging for Level-1 short codes may create an inequitable environment where only entities with sufficient financial resources can secure these codes, while smaller or financially constrained entities, including many government departments, may struggle to afford them. It is also important to note that implementing a chargeable system would also require establishing a mechanism, which could add administrative overhead and complexity for DoT. This could divert resources and attention away from more critical regulatory functions.
3. However, we agree that allocation of these codes to government or such departments, agencies should be based on some rational criterion and their utilisation should be monitored.
4. It is also important to highlight that level-1 short codes, due to their brevity, are easily memorable for customers. These codes have been sparingly allocated, enhancing their effectiveness and recall. To maximize their utility and avoid counterproductive outcomes, it is recommended that the use of level-1 short codes be restricted exclusively to government services, particularly those involving public welfare and assistance. Limiting their distribution to essential public services ensures that these short codes remain efficient, reducing the risk of misuse and ensuring they serve their intended purpose effectively.
5. The allotment criteria should be strict, and the aim should be to move all non-Government helplines to 1800 IN services or to digital solutions like chat services.



6. We also submit that the present scheme of reserving the range for TSP own use e.g. for self-care should be continued without any charge.

Q.13. Are there any constraints/challenges envisaged with regards allocation and utilization of TI resources for Service Control Point (SCP) codes and Signaling Point (SP) codes respectively? If yes, what changes should be incorporated to cater to future requirements of the aforesaid codes? Do support your answer with detailed justification.

COAI Response:

1. No constraint or challenges are envisaged as of now with regards allocation and utilisation of TI resources for Service Control Point (SCP) and Signaling Point (SP) codes.
2. However, we highlight that there are a significant number of SCP codes that remain unutilized due to the shutdown of services by certain licensees. This underutilization leads to inefficiencies in the management and allocation of these resources.
3. It is also important to note that DoT has initiated the withdrawal of SCP codes from licensees who have shut down, as outlined in their communication dated 02.11.2023 and is a step in the right direction.

Q.14. What constraints/ challenges are anticipated with regards TI resources for Location Routing Number (LRN) codes to cater for futuristic requirements? What changes, if any, should be incorporated to effectively address its future needs? Do support your answer with detailed justification.

COAI Response:

1. We believe that even if Location Routing Number (LRN) codes are allocated to Mobile Virtual Networks (MVNs) and IP-based networks, we do not foresee constraints/ challenges with regards TI resources for Location Routing Number (LRN) codes to cater for futuristic requirements.

Q.15. What constraints/ challenges are anticipated in the allocation of TI resources for Intelligent Network (IN) Services like Free Phone service, Premium services, International Toll-Free Service (ITFS), etc.? What changes, if any, should be incorporated to cater for its future requirements? Do support your answer with detailed justification.



COAI Response:

1. We do not foresee any constraints/ challenges in the allocation of TI resources for Intelligent Network (IN) Services like Free Phone service, Premium services, International Toll-Free Service (ITFS), etc

Q.16. What constraints are envisaged towards TI resources for MCCMNC codes being used for Captive Non-Public Networks (CNPNS)? What changes, if any, should be incorporated to cater for its future requirements? Do support your answer with detailed Justification.

COAI Response:

1. As per CNPN license, the CNPN networks are not allowed to interconnect with PSTN/PLMN network as such, their codes can remain independent of PLMN/PSTN networks and hence, would not cause any constraint.
2. In any case the DoT has created a separate numbering series for CNPNs that does not conflict with the TIs of public networks , however still, we envisage constraint in case of these TI resources for MCC-MNC codes being used for captive non-public networks (CNPNS). Presently DoT allocates one million MCC-MNC series to TSPs for CNPNs, that contains the MNC code length of 6 digits. This 6-digit length makes available the resource capacity of 1 million only which will be insufficient for network adoption and rollout by TSPs.
3. It may be noted that using the 3GPP standards, the MCC-MNC combination can make enough capacity available (of 1 billion resources) for allocation if the length of MCC and MNC code each are of 3 digits. But the DoT adopted allocation methodology wherein the MNC Code length is of 6 digit reduces this capacity availability.
4. Therefore, to alleviate this challenge, we recommend decreasing the MNC code to 3-digit from the present 6-digit format AAA-BBBBBB-XXXXXX wherein MCC is AAA and MNC is BBBBBB.
5. Reserving 6 digits length for such networks is inefficient while making MNC code of 3 digits will increase in the availability of number ranges with TSPs/CNPNS. Further, this approach would be consistent with the requirement of internal network consistency & management.

Q.17. Apart from the questions posed above, are there any additional issues being experienced by the TSPs regarding the aspects of the National Numbering Plan 2003 and TI resources allocation criteria? If yes, then the same may please be brought out in detailed elaboration with supporting documents.



COAI Response:

1. **Regulatory Impact Assessment:** Being such a long-term policy decision to ensure optimum utilization of numbering resources, it is vital to carry out a detailed Regulatory Impact Assessment of the probable changes being considered in the existing NNP. The same should be shared and discussed with the stakeholders, before finalizing any changes in existing numbering plan.
2. **Draft Recommendations to be shared by TRAI:** As the recommendations will address current and potential future challenges concerning availability of numbering resources, hence, the solution being proposed by TRAI should be shared with all stakeholders before making recommendations to DoT.
3. **Consolidated National Numbering Plan to be issued Post Finalization by DoT:** Consolidated regulations on various issues which incorporate all the amendments being made are helpful for the stakeholders to refer to single document and examine compliances in different point in time. Thus, we suggest that it should be recommended that DoT should issue a consolidated NNP, as and when any amendment is issued.
