VN⊚AI

Ref: VNOAI/TRAI/F-003/11

Date:04.05.2018

To
The Secretary
Telecom Authority of India
Doorsanchar Bhawan, Old Minto Road
New Delhi-110001

Sub: Response to consultation paper Review of Mobile Number Portability.(MNP) Process.

Dear Sir,

We are thankful to provide opportunity to reply the questionnaire of the consultation paper and we herewith replying to the consultation paper questionnaire. Although as a VNO we are not sure that the existing MNP process and proposed for MNP process will be applicable to VNO's or not in India. As on date TRAI has not prescribed suitable Guide Lines specific for VNO's on MNP. How ever one of our member is having all India VNO license, having global experience as it is present in 26 countries as a MVNO.

Therefore, we are replying the questionnaire on the basis of our global experience.

Thanking You,
For VNO-Association of India
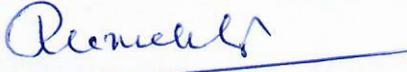
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Questionnaire with comments on the TRAI Consultation Paper on

"Review of Mobile Number Portability(MNP) process (03-05-2018)

(0Q1. Would it be appropriate that MNPSP be assigned the task of generating and communicating the Unique Porting Code (UPC) to the subscriber intending to port his mobile number as proposed in the Consultation paper?

Ans: MNPSP covering zone 1 & zone 2 need to actively processing the UPC generation after the necessary verification carried out with DO.

Q2. If you agree to assign the task of UPC generation to MNPSPs, whether the revised process outlined in the consultation paper is appropriate to address the relevant issues being faced in the existing MNP process?

Ans: Yes agree, MNPSP can be involved in the UPC generation and each of MNPSP which are connected to the respective Zones need to be available 24X7 to process the UPC upon request and deliver SMS to end customers.

Q3. Do you suggest any other methodology which can address the issues being faced in the existing MNP process? Elaborate your answer.

Ans: Generation of UPC to be done by One common body where all the MNPSP are connected to it and upon request sent from Donor operator it is to be responded by MNPSP with UPC and its validity date.

For Example as per our experience in UK, MNP process is carried out with the help of third party called "Syniverse" which is connected with all the mobile operators which are live in the market. Syniverse system provides with the services of creating the UPC code – ABC123456 in the format for our operators with validity of 30 days.

When a customer requests for UPC, DO will verify the customer details by means of their process. After verifying, DO which is connected with Syniverse system will initiate a SOAP request for creating the UPC code, Syniverse system will response with UPC along with Validity period for 30 days and places the UPC state as "Open"

DO will give the UPC to customer and customer will approach the RO for raising portin request. RO will be raise portin request in Syniverse system with the customer number and UPC.

Syniverse system will verify the received number and UPC code if it matches with the code created by Syniverse system then UPC state will be moved "Closed" & the next available Portin date will be sent to RO in the response message for the raised request.

After 5PM GMT, In Syniverse system, UPC status which are in "Closed" state will be moved to "Locked" state after the portin request can't be cancelled.

On Portin date, DO- deactivates the number and RO – Actives the number during the standard transaction time.

Q4. How can KYC information available with DO be verified during the MNP process to avoid fraudulent porting? Please elaborate.

Ans: When a customer purchases a New Sim card then he/she need to submit his KYC information to activate the sim card.
KYC information like Aadhar, Voter ID, Passport etc. details will be available in the DO so when customer raises a port out then DO can perform a verification based on the received KYC information received from RO.

If the received KYC details matches then DO will give a positive response or else the DO will give a negative response.

Q5. What are the challenges in implementing the proposed MNP processes / framework on the part of stakeholders' viz. TSP (as DO and RO) and MNPSP? Elaborate your answer.

Ans: TSP (as DO & RO) system need to connected to MNPSP at all times. If there is outage/connection failure then MNPSP will not be able to generate UPC as they can't able to query the status of customer number in the DO system. In case TSP system is shutdown/ unavailable for couple of days then MNPSP has to take responsibility of generation of UPC without DO confirmation.

Q6. Whether MNPSP should be compensated towards the cost of generation and delivery of UPC to the subscriber through SMS? If yes, what mechanism can be adopted?

Ans: Yes, as MNPSP are involved in the process of UPC generation and delivery of the SMS to the end customer. They can be compensated for it.
The Cost compensation can be done based on the number UPC generated for a particular operator on monthly reconciliation between MNPSP and operator as per the work done by the MNPSP in the process.

Q7. What would be the appropriate mechanism to reinforce the accountability and role of MNPSP in the proposed scenario?

Ans: MNPSP will be a single point of contact for all the operators and if operators face any issue with respect to UPC queries raised by the customers then MNPSP should be able to resolve the problem.

E.g : In UK – "Syniverse" is single common body and having a system where they takes care of the UPC generation for all the mobile operators in the UK market. All operators are connected to "Syniverse" system for request for UPC and Syniverse system will give in response with UPC with validity.

For all UPC related issue, Syniverse is only contact point for all the operators as they keep track of all the generated UPC.

Q8. What could be the mandatory obligations on part of the MNPSP?

Ans: MNPSP system should be connected with all the telecom service providers (TSP) at all time (24X7) as MNPSP will issue UPC based on the condition satisfaction with DO system.
If MNPSP system goes down or performs any planned / unplanned maintenance then during those period the TSP will not be able to give response to MNPSP UPC generation request.

Q9. In the event of large scale disruption or sudden shutdown of network, what could be the appropriate alternative mechanism to ensure delivery of UPC and completion of porting process?

Ans :In such case, the DO has request MNPSP to generate the UPC and share to DO and in return has to give the UPC along an authorization form to perform the porting process manually without DO Validation.

If the operator knows well before they are going to face disruption or planning for shutdown of network and then they need to send out circular to all the MNPSP/TSP/VMO to perform the porting process without the confirmation of the DO as their system is unavailable to perform such validation.

Alternatively, Its responsibility of the network operator(TSP) to keep the service ON or bring back the service for at least a period of 15-30 days in order for the customer to move out from their network. Or else customer will face service disruption and may raise legal complaints to regulatory for lost service.

Q10. (a) Do you agree with the process for transfer of the prepaid balance to the subscriber's account as described in the consultation paper? What changes do you envisage in licensing/ regulatory framework to
enable the provision? Please elaborate your answer.

Ans: Yes agreed, the customer's unused balance can be transferred to RO as information through any specified SOAP request / daily ported consolidated list of ported number between operators and credit to RO end. However if Blockchain technology is adopted then it will take care of all the involved processes and accountability.

(b) If the above process is not agreeable, please suggest alternate mechanism.

Ans: Above process is agreed.

Q11. What should be the regulatory requirements to monitor efficacy of the provision of transferring the unspent pre-paid balance? Please elaborate your answer.

Ans: Reconciliation can be done by monthly between the operators to process the payments. But in the Blockchain methodology the process is inbuilt with required protections as each entity is able to view the open ledger.

Q12. In the proposed scenario of reduced MNP timelines, should the validity of the UPC be reviewed? If yes, what should be the period of validity of UPC? Please elaborate your answer with justification.

Ans: No need to reduce the validity of the UPC, Once a successfully porting is completed with the given UPC then it's no longer required and used.

E.g: In UK – MNP porting process is carried out in X+1 day but the UPC has validity of 30 days. Once the portin request raise by the RO to DO then UPC is verified by DO to give the confirmation for accepting the port requests.

Q13. Whether it would be appropriate to review the existing structure of UPC? Please elaborate your answer with justification.

Ans: If the MNPSP are going to generate the UPC then UPC can be generated based on TSP codes.

Q14. If you agree to above, does the proposed structure as discussed above adequately serve the purpose or would you suggest any other mechanism? Please elaborate your answer with justification.

Ans: E.g: In UK – MNP – Lycamobile operator code is "LYC" so the UPC code will be LYC123456

               Vodafone UK Operator code is "VUK" so the UPC code will be VUK123456

Q15. Should the provision of withdrawal of porting request be done away with in the revised MNP process? Please state your answer with justification.

Ans: Yes, all the customer must be given with the option for withdrawal of the porting requests in the revised MNP process but the SLA for the porting process to be reduced from the existing timeline.

E.g When customer raises a portin request with RO after getting the UPC from DO. RO will send the request to DO and DO has 4 days' time to validate the received requests. DO will try to retain the customer by informing customer with new offers or promotions.

If Customer has agreed for remaining with DO then customer will contact RO to withdrawal/ cancellation of the portin request. But for RO it will be a lose of a new customer so they will not process the withdrawal/ portin cancellation.

In this Case, TRAI need to give strict instruction to all the operators as ROs for portin request should process withdrawal /portin cancellation if customer approached within the agreed time period

E.g: in UK – the MNP process is carried out in X+1 day and the customer is allowed to request for porting withdrawal till 5.p.m of the X day, beyond that time withdrawal is not possible and the number will be transferred from DO to RO.

Q16. What additional changes do you envisage in the MNP regulations? Elaborate your suggestions

Ans: Formation of One dedicated committee to look after all operators issues, activities, service closure etc to discuss among the forum on Monthly basis and give notification to all the operators and get a solution / feedback for unresolved problem among the operator groups..

E.g In UK MNP, there is committee called ORG – Organizational Resolution Group where all the mobile operators are mandatory members of this group. Whenever an operator faces any issue/problems/ lack of email response/ delay issue resolving/ planned activity, etc. with any other operators, then this be brought to the notice to ORG chief member. The Chief member will conduct a teleconference every month 15th where all the operators participate and give their view/suggestion/comments/ resolution to already raised issue.
This method helps all operator to resolve the problem in smooth manner.

Q17. Due to the difficulty envisaged, should the subscriber be allowed to reconnect his mobile number even after number return process is initiated? If yes, what could be the criteria? Please elaborate suitable method.

Ans: Yes, because a customer may not able to use his/her number for certain period due to several reasons then the number will have to be returned back to the original Operator for certain days it remained non-active. In such scenario then customer has to approach the Original operator for the same number and get it activated before the number is assigned to the another New customer.

Q18. Should the MNPSPs be allowed to charge for the ancillary services such as number return and bulk database download by TSPs? Please provide your comments with justifications.

Ans: MNPSP can be allowed to charge for the ancillary services as One time activity whenever TSP/VMO's request for Number return or bulk database download.

TRAI has to fix a nominal charge for these type of activity, based on the fixed charge all the operator can request the MNPSP for required services.

Q19. Would the new technologies, such as blockchain, be helpful for facilitating faster and transparent MNP process? What can be the possible advantages and challenges? Please elaborate.

Ans:
(a). In the proposed process, MNPSP takes the data required to generate the UPC from DO. If that data is present on a blockchain based database along with MNPSP, then MNPSP can access the data at any time and confirm the information to generate the UPC.

(b). It will also give MNPSP the advantage to audit DO on real time basis. This will make the process of generating UPC even faster.

(c)

i. A consortium can be made between all the service providers and MNPSP to maintain a common pool of KYC data of every subscriber. Every service provider will put the KYC documents on a blockchain. These documents can be accessed by other service providers by using a combination of public + private key on a request basis. The request can be granted to the RO when the porting request is made by a subscriber. This will help them check the KYC being submitted by the subscriber when he/she wants to change their service provider.

ii This consortium can further benefit the service providers by providing a platform for them to share any other information which they would like to share among themselves which would help in making the process of porting smoother.

(d).
i. In the current MNP process, when the DO shuts down their service, then the subscribers using pre-paid services lose their balance in the phone. As per the new process, it is being suggested that DO refunds the money to RO since they are not providing any services to the subscribers. We suggest to have a **smart contract** between DO and RO. It will state that if any pre-paid subscriber makes a porting request, then DO will pay RO the money equivalent to the pre-paid balance of its subscriber.

ii This money will be deposited in an **escrow account**. The same amount can be taken by RO to provide balance to its new subscriber. The escrow account should be implemented as a blockchain based wallet to store monetary balance of subscribers. This pre-paid balance was earlier kept with DO. In case of closure of services by any TSP, money can be claimed by the MNPSP or RO by a combination of digital signatures of both the stakeholders together. This would ensure that subscribers don't lose money in any such cases.

iii The data of the subscribers of DO would be shared on a blockchain which would be accessible to all the parties including MNPSP to monitor the transaction.

Q20. If there are any other issue(s) relevant to the subject, stakeholders are requested to offer comments along with explanation and justifications.

Ans :Recommending One single central body to control all MNP transaction's syncing with all Operators will help customer in long run.

Eg : UK Setup…. Syniverse is MNP Body for UK explained below.

In UK- "Syniverse" system is single system which is used by all the telecom service providers for generating UPC and generated UPC will be sent DO as response for UPC request. DO only sent the UPC details to customer via SMS.

RO will be raise portin request in Syniverse system with the customer number and UPC.

Syniverse system will verify the received number and UPC code if it matches with the code created by Syniverse system then UPC state will be moved "Closed" & the next available Portin date will be sent to RO in the response message for the raised request.

After 5PM GMT, In Syniverse system, UPC status which are in "Closed" state will be moved to "Locked" state after the portin request can't be cancelled.

On Portin date, DO- deactivates the number and RO – Actives the number during the standard transaction time.

If DO is the Original number owner will send RSP (Response) file to RO system with connected with one-to-one for informing the change of routing from the old network to New network.

If DO is not the Original number owner will send REQ (Request) file to ONO-Original number owner for changing the routing code. Once ONO process the file will give a RSP (Response) file to both DO and RO informing the change of routing code from old operator to new operator.

Note: in UK all operators are connects to each other one-to-one

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