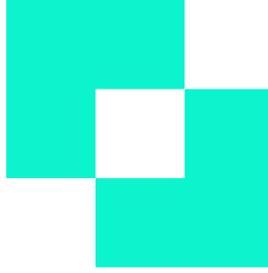


syniverse[®]



7th Amendment Comments



Syniverse's Comments to TRAI's Proposed 7th Amendment for MNP
24 October 2018

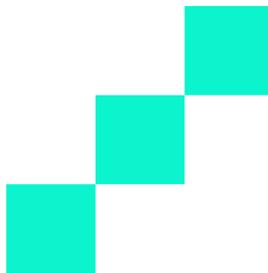
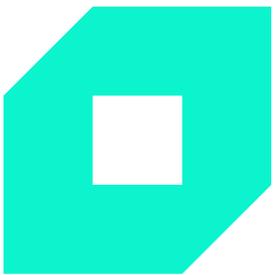




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1 Summary of Syniverse Response

Syniverse thanks the Authority for a chance to provide our comments and opinions on the Draft Telecommunication Mobile Number Portability (Seventh Amendment) Regulations, 2018 as published by the Authority on 25 September 2018. Syniverse prefaces its comments with the following points of paramount importance:

- First, that any modifications will be done post renewal of MNPSP licenses at a price to support a sustainably high-quality number portability clearinghouse to serve subscribers and operators efficiently and effectively. This price must not only adequately address the current needs of the MNPSP to cover costs but also the considerable incremental costs brought about by the Draft Regulations. The proposed 7th amendment requires MNPSPs to provide much of the functionality currently provided by Donor Operators. As such there must be equitable adjustments in the price to cover these new significant costs.
- Second, this price must be guaranteed for the term to ensure that the services can continue for the term in a predictable manner. Any potential changes in price – in either direction – must be known to all parties up front.
- Third, we humbly request that the Authority ensure that there are license conditions placed on operators and ensure that the operators meet the conditions in the order. Without this assurance it is doubtful the goals of the regulation can be met.

While Syniverse largely agrees the Draft Regulations as set forth by the Authority we believe that there are some specific improvements which can be made to the process to better define it and improve the process to benefit Indian mobile subscribers and the operators. At a high level, our response covers the following points:

- 1) MNPSPs should not directly interact with subscribers except via SMS.
- 2) Porting timelines in J&K, Assam and North East circles must be clarified
- 3) Details on Donor Operator Response Period to a Query from MNPSP when a UPC is Requested must be Clarified
- 4) How to deal with Repeated Requests for UPCs must be defined
- 5) The six-month implementation timeline is very aggressive and may need extensions
- 6) Fines should not be levied against MNPSPs except in cases of repeated severe issues or wilful misconduct.
- 7) The MNPSPs should not be charged for terminating messages to the subscribers
- 8) The UPC to Port Request ratio must be monitored and maintained within set boundaries or prices adjusted.
- 9) All Parties should observe a weekly coordinated, industry wide maintenance window
- 10) Web-Based Portal for checking UPC and Port Status should be required
- 11) What happens when a Donor Provider Fails to Provide Concurrence within 4 days for a Corporate Port
- 12) How is the 36 hours to set a porting date for a corporate port determined?
- 13) MNVNOs role in porting must be clarified
- 14) Fees for Ancillary Services by the MNPSP are welcome but are not a replacement for a fair and adequate tariff.



- 15) Both MNPSPs should be allowed to Provide Dipping Services
- 16) Payments by Operators within fifteen days should be enforced
- 17) Bulk Data Download definition should include partial as well as full data downloads
- 18) Processing of non-payment Suspension Requests should be an Ancillary Service and subject to an ancillary tariff

2 Syniverse Point by Point Response

Our response is detailed below

2.1 MNPSPs should not directly interact with subscribers except via SMS.

Syniverse is adamant that end user communications should be left in the hands of the operators. Mobile Number Portability Service Providers (MNPSPs) are not oriented to communicating directly and intimately with over a billion end users in multiple languages. Operators do this all day every day and have immense resources and call centres to manage this. By comparison, MNPSPs, such as Syniverse have an office of only a handful of engineers and programmers. Consequently, the Authority must prohibit the operators from directing end user subscribers from calling the MNPSP. Any issues should be raised as a business-to-business discussion between the concerned MNPSP and the operator directly or via order by the Authority. We accept that there are benefits to the subscribers from having a neutral party such as the MNPSP generate the UPCs and communicate it to the subscriber via SMS, but since the Donor shall know that a UPC is being generated they can still provide the status to the concerned subscribers as they do today.

We do believe that the MNPSP should provide a portal for an operator to obtain the status of a UPC on behalf of a subscriber – but not the UPC itself. Due to security reasons the actual UPC could not be given this way. For example, if a subscriber requests a UPC but after some time no UPC arrives and no delay message has been delivered to him, he could call the operator who can check the portal on his behalf to see if the UPC request has been received by the MNPSP, and whether the MNPSP is waiting for a response from the Donor Operator (DO) or has sent the UPC to the subscriber via the Donor Network. So, anyone attempting to port the number improperly would not be able to obtain the UPC without access to the handset.

If the MNPSPs are to manage end user communication, there will need to be a substantial increase in price provided to the MNPSP.

There would be great risk to the MNPSPs in taking on direct conversations with end user subscribers.

- First, as UPCs are currently generated by the Donor Operator, we do not have any knowledge on how many UPCs are generated.
- Second, we do not know how many of the UPCs result in a call to the Donor Operator today.
- Third, we do not have any insight into the duration of the calls.

All three factors pose a great risk into calculation of costs that might have to be borne by the MNPSPs. Even a very small miscalculation, or change in any of these three factors, could have a huge impact on the costs of the MNPSPs. If this process is foisted off to the MNPSP by the operators the MNPSPs cost would increase dramatically to staff call centres to speak many possible languages.



Therefore, Syniverse firmly believes that the Authority must prohibit operators from forwarding or referring calls to the MNPSPs. Instead they should attempt to instruct the subscriber on the reason for the failure (the concerned operator(s) shall be copied on any such messages) and the suggested next steps. This is like what they do today, so this poses no increased costs relative to the operators' current businesses.

2.2 Porting timelines in J&K, Assam and North East circles must be clarified

The Draft Regulations set forth by the Authority do not discuss the porting time frame for certain circles which have previously been treated separately. Only in the Explanatory Memorandum in paragraph 28 on page 23 is it mentioned that the existing period for porting a mobile number as seven days for Jammu and Kashmir, North East and Assam where it is fifteen days. That section goes on to note that the UPC will be generated by the MNPSP immediately so that subscriber shall know the status of their port in much less than four days, but it does not say if the timeline for these three circles should be treated as the rest of the country or continue to be special cases.

Jammu & Kashmir and North East (but not Assam) are also mentioned within the Explanatory Memorandum in paragraph 56 on page 31 of the Draft Regulations speaking about UPC validity period. But this same paragraph seems to contradict itself in that it says, "the validity of the UPC shall be four days for all the license service areas" while at the same time saying, "The validity of UPC for the license service areas of Jammu & Kashmir, North East shall remain unchanged till further decision". This point must be clarified.

2.3 How Long can a Donor Operator take to Reply to MNPSP's UPC Information Query

In item 4 of Proposed Regulation (7th amendment) in item 4 referring to Regulation 6, the Authority inserts a new Regulation 6A in which sub-item 7 states the following:

If the Mobile Number Portability Service Provider is not able to check the information from the database of the Donor Operator, as provided in the sub-regulation (3), for any technical reason, it shall send an SMS to the subscriber acknowledging his request for Unique Porting Code and informing him that delivery of Unique Porting Code is delayed due to technical reason and the same shall be delivered shortly.

The details about how long the MNPSP must wait for the Donor to reply to a query from the MNPSP when a subscriber has requested a UPC has not been specified. The MNPSP must know how long the Donor should be allowed to take in order know when to send a notice to the subscriber that the UPC has been delayed for technical reasons.

Care must be taken in setting this interval. Setting this period as too short and will generate too many "technical delay" messages leading to subscriber dissatisfaction. Setting it as too long will lead to many repeated UPC requests by subscribers who lose patience. We would suggest that the donor operator respond with 20 seconds 99.9% of the time and that the technical delay message be sent only after 30 seconds.

In addition, we believe that in cases where the donor operator has not responded the "technical delay" message should specifically state that the donor network has not responded to the query in time, so the subscriber knows that the message reached the MNP System but the donor itself is not responding.

Furthermore, the Draft Regulation is also silent on what happens after the delay notification is sent to the subscriber. Essentially the subscriber has been told they have an "IOU" for the UPC. But the subscriber is stuck at this point and must wait for the Donor Operator to respond at some point. Should the subscriber be forced to remain stuck waiting for the UPC indefinitely? The Draft Regulations do indicate that the MNPSP



shall keep a record of the various messages and responses (or lack thereof) but do not contain instructions on removing the UPC request from this “stuck” status. We believe a process should be put in place for the subscriber to escalate these kinds of cases with the Authority directly.

In theory the Authority may decide to order the appropriate MNPSP to issue a UPC despite the Donor Operator’s lack of response. However, in this case the MNPSP would not know key facts mentioned by the Draft Regulation. For example, should the UPC be in corporate format or use the format for a non-corporate subscriber? Likewise, the MNPSP would not know if the subscriber is prepaid or post-paid or whether there was a past-due amount.

Therefore, in this case we would suggest that in cases of an Authority-provided waiver that the MNPSP issue a non-corporate UPC and further suggest that the donor operator, by lack of response to the UPC query, has waived its right for non-payment disconnect process.

2.4 How to deal with Repeated Requests for UPCs must be defined

In addition to the preceding point, the MNPSPs must have clear rules about how to treat any repeated UPC request. If the repeated request for a UPC is sent before the first request is responded to with either the UPC or a technical delay notification, should the repeated request be ignored and logged only, or should the repeated request be rejected back to the subscriber.

If the repeated UPC request comes during the UPC validity period, should the repeated UPC request be rejected back to the subscriber, ignored, or should the previously generated UPC be resent. If so, should that ‘re-set’ the UPC validity period?

2.5 The six-month implementation timeline

In item 32 of the Explanatory Memorandum on page 24 of the Proposed Regulations the Authority concludes that the Amendment shall become effective six months after publication in the official gazette.

Given the significance of the changes being introduced, the number of entities making the changes, and the need for rigorous testing the Authority must be prepared for inevitable requests from some parties for an extension. For its part, Syniverse believes it can prepare its changes within the timeline given clear requirements and commercial agreement are provide before publication and the Authority ensures collaboration and prioritization from the operators. However, we are concerned about making extreme efforts at increased costs to be ready on time only to have last minute delays outside of our control delay the benefit for the subscribers and the MNPSPs such as Syniverse.

2.6 Fines Against MNPSPs Must be Reasonable

Although our goal is to meet every requirement in the regulations, an occasional mistake or outage is inevitable. However, in item 14 on page 13 and 14 of the Draft Regulation which proposes replacing Regulation 17A with a new Regulation 17A, the Authority proposes fines applicable to the MNPSP which appear unduly harsh and punitive. To avoid this Syniverse would suggest the following:

- First, Syniverse would suggest that a percentage-based service level agreement (SLA) be reached so that for example, for example a fine should be assessed only if less than 99.0% of all UPCs requests in a reporting period are generated on time. This can be produced as a standard report to the Authority monthly and the fines levied in due course.



- Second, the fines should be assessed to become more significant only if there are repeated incidents in consecutive months.
- Third, the fines should have a grace period of ninety days before becoming effective.
- Fourth, care must be taken to define any SLAs to make them specific to the party in question. For example, the MNPSP must not be held accountable and fined if the donor operator did not respond to the request for the basic account information or deliver the UPC to the subscriber.

2.7 The MNPSPs should not be charged for terminating messages to the subscribers

As the use of SMS to communicate with subscribers is mandated by the Draft Regulations these should be set up as no-charge SMTP connections between the operators and the MNPSPs to be used specifically for MNP transactions. Both parties should bear their respective costs.

2.8 The UPC to port requests ratio

Per the Draft Regulation there is no clear party to be responsible for paying the MNPSP for generating the UPCs. Consequently, Syniverse, as a MNPSP, expects to see this significant and incremental costs in generating the UPC. We understand that this ratio is currently near 2 UPC request to 1 port request. However, some sources have told us that this ratio is closer to 3 or 3.5 UPC request for every port request submitted. Further, we would expect this ratio to increase if the UPC validity period is reduced to four days as some subscriber may request the UPC intending to use it the next day but then may become busy for a few days.

Therefore, we believe that the MNPSP should be paid a reasonable tariff for each UPC request processed separate from the porting request. We believe the donor operator should be assessed this fee, but we are open to reasonable alternatives such as dividing the fee based on annually adjusted subscriber counts or other methods.

If the Authority ultimately rules that the tariff for successful ports should include the costs of the UPC generation then the fee must be adjusted accordingly. However, in this case, if the UPC to successful port request ratio changes significantly it will change MNPSPs costs *without* changing revenue. Therefore, this ratio must be monitored over time and changes in price made accordingly.

2.9 A weekly coordinated, industry wide maintenance window is needed

All systems need preventative, routine maintenance at regular intervals. With the expanded interaction between the operators and MNPSP and between subscribers and MNPSP via SMS there should be coordinated, limited, weekly maintenance window where operators and MNPSP alike can maintain systems without penalties. This window should be in the period with the least traffic for a few hours each week (e.g., 01:00 Sunday to 04:00 Sunday). This window can be made public so that *some* subscribers might be aware of it. In any event those who are unaware and try to initiate ports during the window can be told to repeat their request during regular hours. Any penalties should be waived during these maintenance periods.

2.10 Web-Based Portal for checking UPC and Port Status should be required

Each operator should maintain a web-based portal to check status of a UPC and port. The operators may provide the Human-to-Machine (H2M) web or Integrated Voice Response (IVR) or touch-tone interface and send the query to the MNPSP in a Machine-to-machine (M2M) automated interface to obtain the status to relay



to the user. If each Donor Operator maintains a web site which can relay the status from the MNPSP as updated by M2M then the subscriber will be able to know the status of his or her request. This would minimize calls to the Donor Operator and preserve privacy.

We repeat our note from above that only the status of the request may be made via this method, the UPC itself should not be provided in this method as it would allow anyone to obtain a UPC for any number even if the phone is not in his possession. The MNPSP should maintain data validations so that an operator may only check status of its own current subscribers' UPC requests via this method. This way a donor operator who is called by a subscriber who requested an UPC can say that the UPC request reached the MNPSP or not and whether the UPC was generated or not – and if not, why. This would prevent other operators from randomly or systematically querying phone numbers to see if a UPC has been generated to target that subscriber. The power should be in the hands of the subscriber not the donor operator, recipient operator or MNPSP.

2.11 Donor Provider Failing to Provide Concurrence for a Corporate Port

In item 6 sub-item 9 on page 9 which modifies Regulation 9, the Draft regulations do not specify what should occur when Donor operator fails to respond to a port out request within the four-day timeline. Sub-item (9) (b) discuss clearance by the Donor and sub-item (9) (c) discusses non-clearance by way of rejection, but no provision is stated about what happens if the Donor fails to respond at all.

Should the MNPSP assume that by its lack of response within the four-day timeline that the Donor has provided consent and thus the MNPSP should schedule the port within thirty-six hours? Or must the MNPSP and subscriber continue to wait indefinitely. We do note that the four-day timeline should exclude intervening Sundays and public holidays as noted in the Draft Regulation.

2.12 How is the 36 hours to set a porting date for a corporate port determined?

In item 6 of the Draft Regulations, which modifies Regulation 9, sub-item (9) (b) on page 9 mentions that upon clearance of the (corporate) porting request by the Donor operator that the MNPSP shall schedule the porting within the next 36 hours. But this is not clear how the 36 hours are measured. Do intervening Sundays and public Holidays affect the 36 hours? Does the 36 hours start at the moment of the response, or when no response is received by the time when the response was due. And in certain cases where the clearance by the DO arrives late on Friday, 36 hours may expire Sunday when there is no porting window. Does this port carry over until the Monday which may be outside of the 36-hour window? Or if there are consecutive holidays or combinations of Sunday preceded by or followed by a holiday, the entire 36-hour window may be unavailable for porting. We suggest that the Authority simplify this by adhering to the same time frames as non-corporate ports once the approval has been provided. Namely, two days for Intra-circle and four days for Inter-circle whether the port is corporate or individual.

2.13 MNVNOs role in porting must be clarified

The consolidation of many network providers into a few is not unique to India. This has happened in many countries. The market has responded by increasingly relying on Mobile Virtual Network Operators (MVNOs) who provide the mobile service by reselling the network of a network provider. We recognize that the Authority in its draft regulations has defined terms to add "Virtual Network Operator" in certain clauses, however, the effect of this is unclear.

We anticipate that MVNOs will grow in importance in India and strongly suggest a proactive approach. In some countries, MVNOs also known as resellers must interact with other network providers and mobile service



providers only through their underlying network provider. In other countries, MVNOs are treated as equals with network providers and are provided with their own operator IDs, LRNs and number ranges.

Either approach could work but understanding the method to be used in India is important to MNPSP's developing a greater understanding costs and opportunities in the future. As such, we encourage the Authority to indicate its policies on this point now.

2.14 Fees for Ancillary Services

While we are pleased to see that the Authority recognizes that MNPSPs is in fact exposed to costs for services outside of the process of porting a number and is willing to allow the MNPSP to be compensated for these services (including number returns, bulk data downloads, port cancellation and subscriber reconnection). However, Syniverse believes that these fees should not be viewed as a solution to the severe financial hardships set by a price at 4 Rs well below the long-term costs of the MNPSP to port a number successfully. We therefore assert that TRAI and the MNPSPs should set a fair, but reasonable tariffs for all the following:

- the successful porting requests which covers current costs applied immediately
- ancillary services as mentioned above and
- new costs such as UPC generation and validation of ports previously provided by the donor operator.

Specifically, on the new ancillary service tariffs we recommend these be applied to the operator who benefits. This means the following:

- Number returns should be assessed to the donor operator
- Bulk data downloads should be assessed to the operator requesting the bulk data download
- Port cancellation (also known as withdrawal of a port request) should be assessed to the donor operator
- Subscriber reconnection fees should be assessed to the recipient operator

2.15 Both MNPSPs Should be allowed to Provide Dipping

Syniverse is pleased to see in item 13.a) on page 12 of the 7th amendment that the Authority proposes in sub-regulation 2 of regulation 16 that MNPSPs will be allowed to use the data in the MNP data bases for purposes of allocating and verifying the Unique Porting Code. This is required. However, we also note that today only one of the MNPSPs is allowed to perform dipping services despite the license terms and conditions. We hope and expect that this can be modified at the same time as the 7th amendment is adopted.

2.16 Payments by Operators

Syniverse also notes that in item 12.a) on page 12 of the 7th amendment that the Authority proposes in Sub-regulation 1 of regulation 15 that Subscriber Reconnection Charges shall be added and therefore require payments in fifteen days. However, two items must be brought to the Authority's attention.

First, other ancillary tariffs (including Data Downloads, Withdrawal or port cancellation fees, and number return fees) proposed by the Authority are not mentioned leaving in doubt as to whether these are also to have payments rendered in fifteen days as well. To simplify accounting for all parties we believe all payments on the invoice should be due and payable at the same time.



Second, there have been cases where an operator didn't pay its invoices with the fifteen days (or at all) causing financial hardship for the MNPSPs and increased expenses. Accordingly, we suggest that the Authority either allow the affected MNPSP to assess a late payment fee on these operators and/or that the Authority fine the operator if the MNPSP can show it evidence of the invoice outstanding beyond the fifteen-day limit.

2.17 Bulk Data Download Definition

On page 2 of the 7th amendment item 2 (b) adds clause (bb) for ancillary service charges. Sub-item (ii) is as follows: *"bulk download charge" means charge paid by the Access Provider for downloading the complete Number Portability database*; which Syniverse believes this should be amended to address also partial bulk data downloads when requested.

2.18 Processing Non-Payment Suspension Requests Should be an Ancillary Service

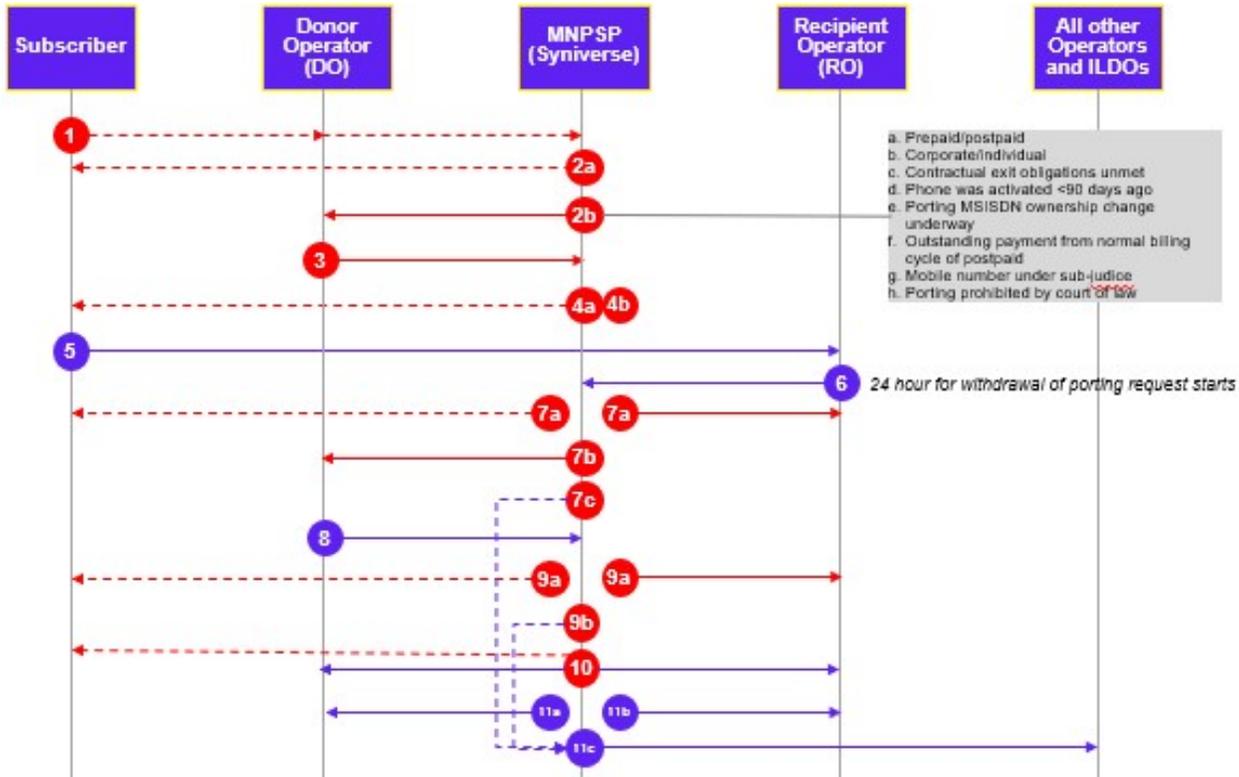
We note that the Authority on page 2 of the 7th amendment under item 2 (b) inserts clause (bb) sub-item (i) to Regulation 2 which states: *"number return charge" means charge paid by the Number Range Holder for returning the mobile number after disconnection due to any reason including non-payment*. However, Syniverse believes that since not all number suspension requests result in a non-payment disconnect that an additional ancillary service charge for requesting a number return should be added as sub-item (v) with the ancillary charge levied against the Donor Operator making such request. In effect, the MNPSP serves as a collection agent by enforcing suspension of the number and thus the MNPSP should be compensated for this service and its efforts in this activity on behalf of the Donor Operator.



3 Background Information

3.1 Proposed Porting Process Illustrated – Entities and Roles

Syniverse’s view of the proposed process outlined in the draft regulation by TRAI is depicted below:



3.2 Proposed Porting Process Narrative

This flow is described as follows:

- 1) Subscriber sends UPC request via SMS Short code to DO which forwards the request to the MNPSP
- 2) MNPSP validates number (1) hasn't ported within the past 90 days and (2) has no other request pending and depending on the results either:
 - A. If either test fails, the MNPSP sends the subscriber an SMS with the reject reason ending the porting process (a record of the request is maintained for a minimum of six months)
 - B. If both tests pass, the MNPSP sends query to the Donor Operator (DO) to obtain certain account info from DO via API (to be defined). These shall be stated as yes/no questions to the following questions:
 - a) Is the subscriber Prepaid (a no answer implies post-paid)?



- b) Is the subscriber a Corporate account (a no answer indicates the subscriber is an individual)?
 - c) Are there contractual exit obligations which are unmet?
 - d) Was the phone activated less than 90 days ago? (this implies the phone has not been ported because if such were the case the MNPSP would notify the subscriber via SMS in 2a) and not send the query to the DO
 - e) Does the porting mobile number have an ownership change underway?
 - f) Does the mobile number under porting have a past due amount under the normal billing cycle of post-paid?
 - g) Is the mobile number under sub-judice?
 - h) Has the mobile number been prohibited from porting by court of law?
- 3) The Donor Operator (DO) responds (or not) with account info via API. *(Note the Draft Regulation is silent on the detail of how long the DO has to respond.)*
- 4) MNPSP sends the subscriber an SMS with either:
- a. An acknowledgment of the UPC request and delay notification if DO doesn't respond in time *(note: as mentioned the Draft Regulation is silent on how long to wait for the donor or what happens after sending a "technical delay" notification).*
 - b. The UPC if DO responds and none of the conditions (c) through (h) apply. In this case, the information obtained in the response from the DO is retained for at least six months.
 - c. A reject reason if DO responds and one or more of the conditions (c) through (h) applies (the MNPSP will retain a record of this for at least six months)

Assuming step 4 c has been reached the process moves into the porting phase.

- 5) Subscriber takes the UPC and Customer Acquisition Form (CAF), etc. to Recipient Operator (RO) and asks to port
- 6) The RO sends request to MNPSP via API (within 24 hours)
- 7) The MNPSP validates the request to ensure there is (1) no UPC/MSISDN mismatch, (2) no other port is in progress for the MSISDN, and that (3) the UPC has not expired. The UPC shall be valid for four days, except J&K, NE which shall remain unchanged *(note: Assam is not mentioned in the Draft Regulation).* then either:

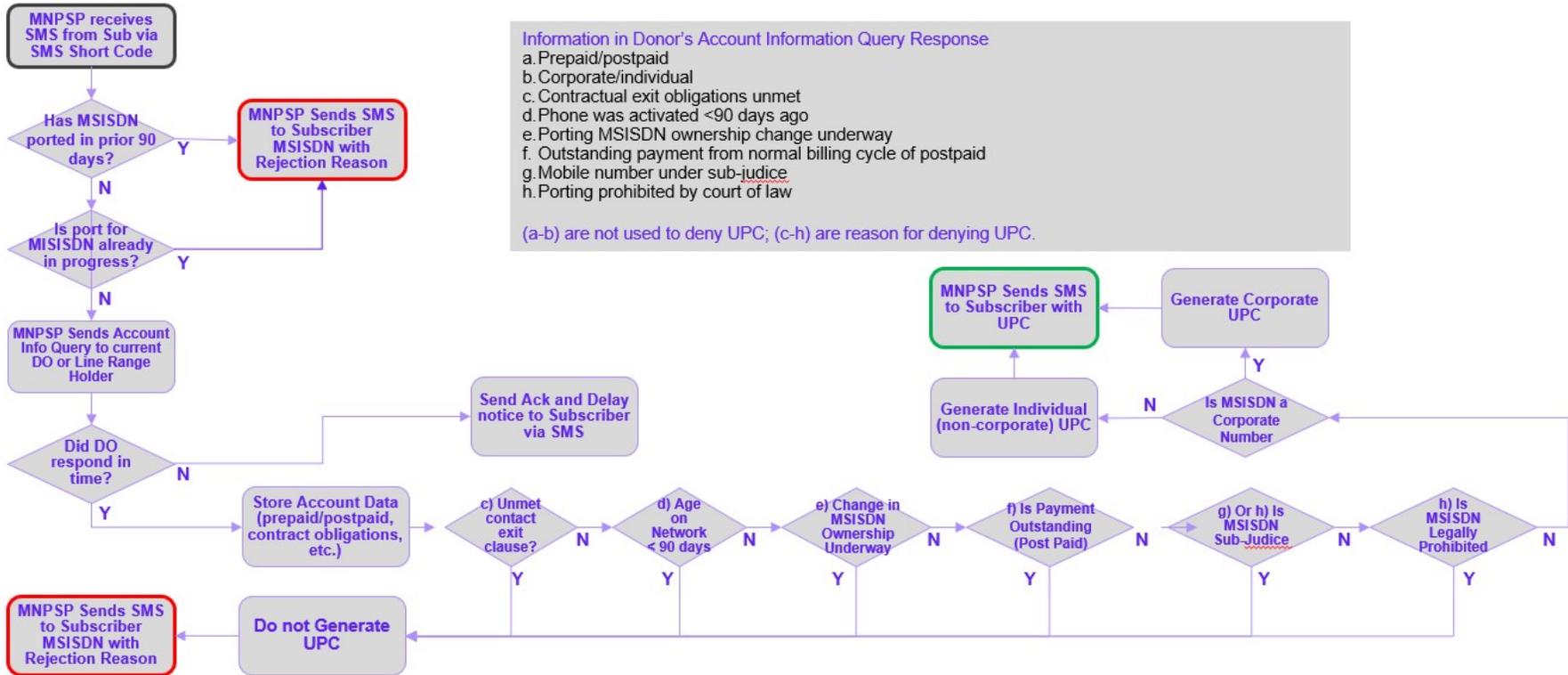


- a. Sends reject reason(s) to subscriber and RO to end port process and retains record for six months, or;
 - b. Sends Request for corporate validation of corporate authorization letter to DO, (skip to step 8), or;
 - c. Schedules port (skip to step 10) with port date in two days for intra, four days inter, and a different value for certain circles just as J&K, NE and Assam. *(Note: The Draft Regulations are silent on the timings for these circles.)*
- 8) (Corporate ports only) The DO shall, within four working days, determine if the corporate authorization letter is correct and replies to MNPSP with either clearance or rejection of the corporate porting request. *(Note the Draft Regulation does not stipulate what happens if the Donor Operator fails to respond within the four days. Should the MNPSP then assume concurrence by the Donor and schedule the port for within 36 hours?)*
- 9) (Corporate ports only) MNPSP either:
- a. Passes Reject reason to RO & subscriber ending port; or
 - b. Schedules port (skip to step 10) for 36 hours after DO clearance of the corporate porting request
- 10) MNPSP informs DO, RO and Subscriber via SMS of time to port (2 days for intra circle, 4 days for inter, 7 for J&K and NE, 36 hours for Corporate ports) *(note: The Draft Regulations do not specify how the 36 hours applies)*
- 11) MNPSP, at scheduled time:
- a. Informs DO to disconnect;
 - b. Informs RO to connect; and,
 - c. Broadcasts LRN to all other operators



3.3 UPC Generation Process Logical Flow

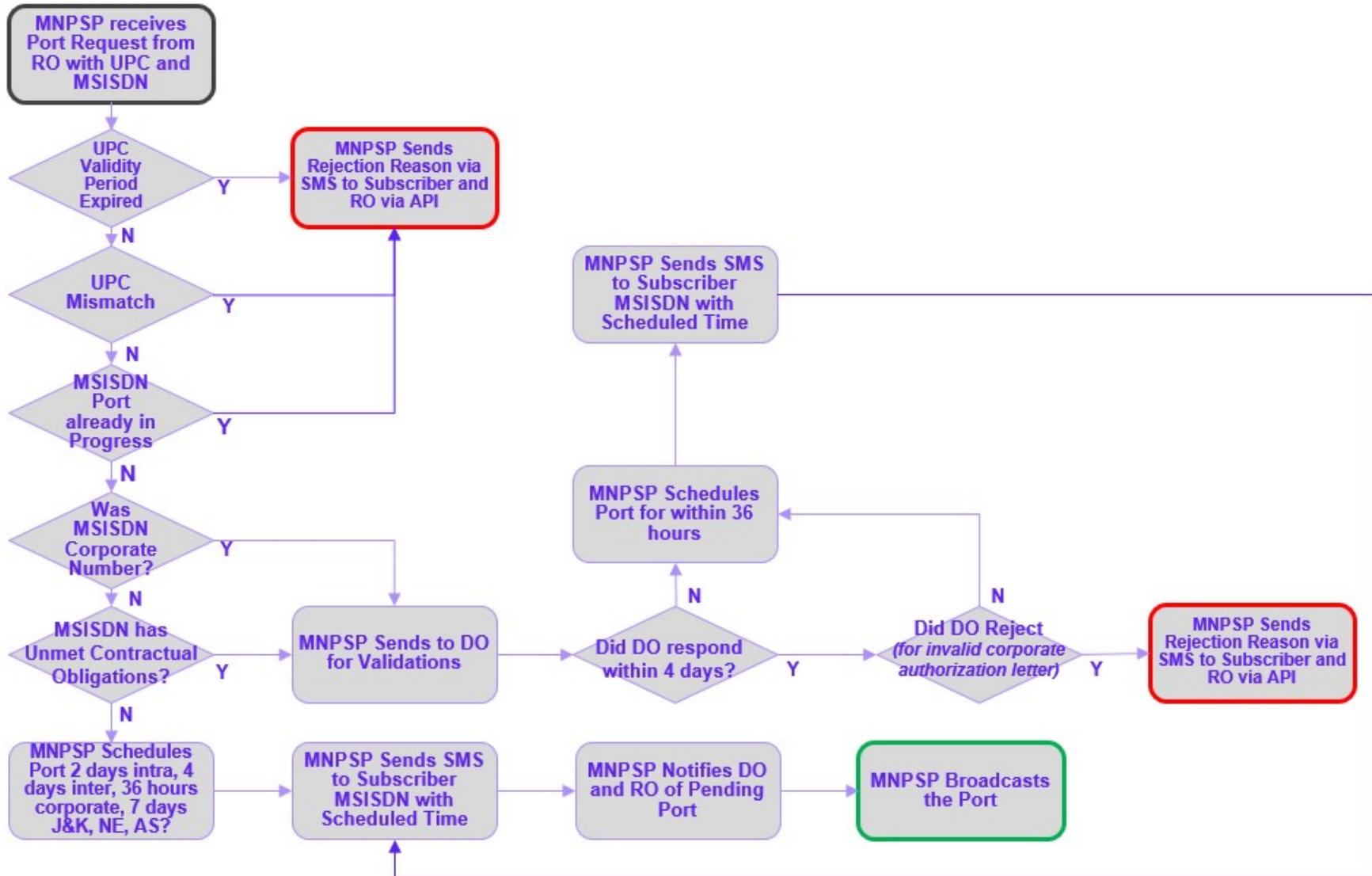
A logical process mapping of the UPC process (steps 1-4 above) is displayed below:





3.4 Porting Process Logical Flow

A logical process mapping of the Porting process (steps 6-11 above) is displayed below:





4 About Syniverse

Syniverse is the world's most connected company—we pioneer innovations that take businesses further. Our secure, global network reaches billions of people and devices. Our engagement platform powers the customized experiences of the future. And the millions of secure transactions we drive every minute are revolutionizing how goods and services are exchanged. We have always led companies to reimagine the boundaries of possibility. Today we're delivering on opportunities with the power to change the world.
www.syniverse.com