Date: 22/07/2022

To,

Shri Akhilesh Kumar Trivedi
Advisor,(Network, Spectrum and Licensing)
Telecom Regulatory Authority of India
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Doorsanchar Bhawan,
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Next to Zakir Hussain College,
New Delhi, Delhi 110002

Subject: Response to Consultation Paper on Introduction of Calling Name Presentation (CNAP) in Telecommunication Network Dated 29th November 2022

Respected Sir/ Madam,

We, **M/s Veeno Communications Private Limited** having our registered office at **No. 22, 2nd Floor, Commercial Building, Kensington Terrace, Kensington Road, Halasuru, Bangalore, Karnataka 560008**, are hereby submitting our response to Consultation Paper as in subject line.Please note that most of our recommendations are from UL-VNO / Enterprise perspective. Few areas like Privacy of individuals, Right to privacy, Data protection etc may also be applicable and may have impact on the CNAP which is not covered in our responses. Following pages contains our responses to consultation paper on CNAP, requesting you to consider

Thanking you in advance.

For, **M/s Veeno Communications Private Limited,**

Gaurav Agrawal
(Authorized Signatory)

Q1. Whether there is a need to introduce the Calling Name Presentation (CNAP) supplementary service in the telecommunication networks in India?
Veeno's Response : Yes there is a need for CNAP services considering the huge misuse of bulk numbers for telemarketer activities.

Q2. Should the CNAP service be mandatorily activated in respect of each telephone subscriber?
Veeno's Response : Yes. It should be made mandatory.

Q3. In case your response to the Q2 is in the negative, kindly suggest a suitable method for acquiring consent of the telephone subscribers for activation of CNAP service.
Veeno's Response : Not applicable as our response is positive.

Q4. Should the name identity information provided by telephone consumers in the Customer Acquisition Forms (CAFs) be used for the purpose of CNAP? If your answer is in the negative, please elaborate your response with reasons.
Veeno's Response :
For UL-VNO – Option should be given to either represent the organization / end user name as uploaded by UL-VNO. DOT should provide needful technical recommendation as part of the scope of CNAP to ensure uniform experience to all UL-VNO's

Q5. Which among the following models should be used for implementation of CNAP in telecommunication networks in India?

1. Model No. 1, in which a CNAP database is established and operated by each TSP in respect of its subscribers and the name information is sent by the originating TSP to the terminating TSP during the process of call set up; or

Veeno's Response : Considering multiple technologies, Urban-Rural implementation, STD / ISD calling etc. This option may have a larger impact and hence not be proposed.

2. Model No. 2, in which a CNAP database is established and operated by each TSP in respect of its own subscribers. The terminating TSP dips into its MNP database to determine the originating TSP of the calling party and then performs a CNAP lookup on the CNAP database of the originating TSP; or

Veeno's Response : This model may enable CNAP for mobile numbers, however for SDCA based wireline services and IP Telephony may not be really feasible and hence not recommended.

3. Model No. 3, in which a centralized CNAP database is established and operated by a third party with an update mechanism from each TSP in respect to their subscribers; the terminating TSP performs CNAP lookup from the centralized CNAP database at the time of receiving a call; or

Veeno's Response : This model seems mostly achievable except for rural telephone exchanges serving wireline.

4. Model No. 4, in which a centralized CNAP database is established and operated by a third party, and individual CNAP databases are established by all TSPs; the TSPs keep a copy of the centralized database and perform local CNAP lookup at the time of receiving a call; or

Veeno's Response : In this model, there is a potential for data leakage as all TSP's will have 100% of the data and also serves as an easy mechanism to extract Bulk customer names (if user list is not uploaded). Hence not recommended.

5. Any other suitable model for implementation of CNAP along with a detailed description of the model.

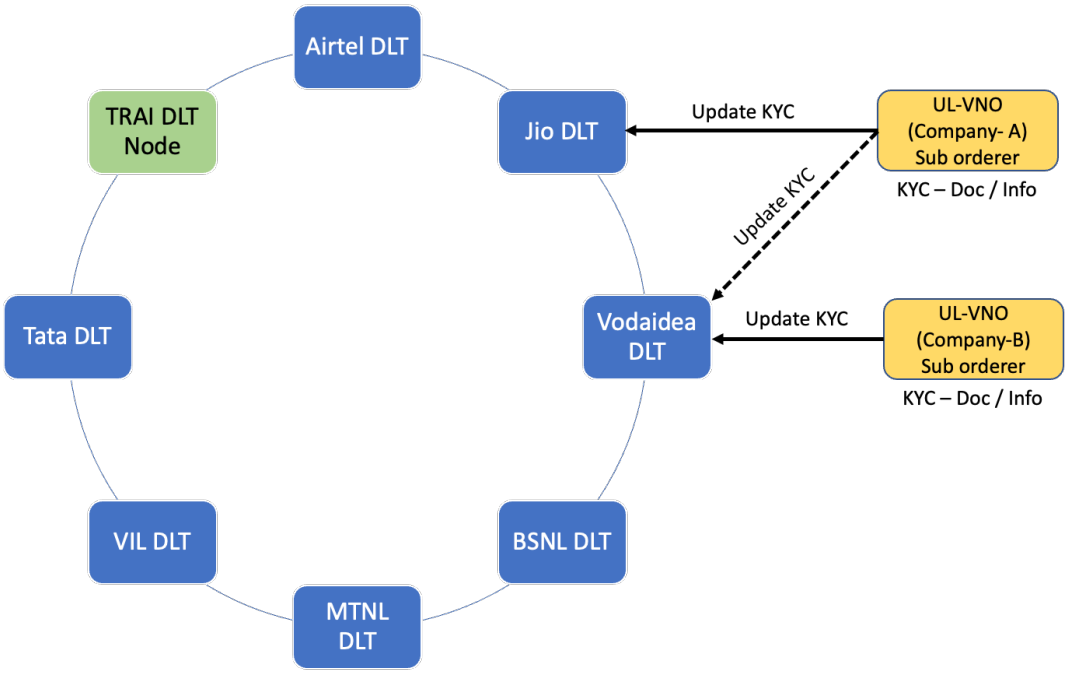
Veeno's Response : We propose use of DLT already implemented for TCCCPR 2018 regulation or similar architecture ensuring complete privacy for each stakeholder. Further to address UCC, there can be call flows similar to – Marking SPAM, Count of Number of SPAM, Regulations and checks around SPAM and definition of offenses for violation etc can be achieved. detailed network architecture is attached below.

In order to also ensure that there is no misuse of SPAM marketing for targeting innocent citizens, regulatory can try to protect interest of

1. Common citizens interest and avoiding UCC
    a. If a particular number is marked SPAM say by 100 unique called parties – TSP can investigate and block the user from using either Adhar, PAN or any other address proof and stop the SPAMMER from availing any further connection.
2. To protect targeting of individuals – By group of users.

    a. Investigate the SPAMMED number and equally define penalties to users who targeted the innocent individual

Network architecture



1. CNAP Database should be proprietary to Regulatory authority and operated by regulator
2. Implement the CNAP database on similar / existing platform of DLT for TCCPR 2018
3. Allow UL VNO and Bulk subscribers to to be sub-orderer to update the name post validation and Operator could do validation like number allocation, AS etc
4. All UL operators to query the database for CNAP and display as per the names uploaded by either UL / ULVNO / Bulk customer (User list)
5. Has the potential to identify actual end users for LEA's without having the need to reach out to multiple UL-VNO's to identify who is the actual customer - As of today, customers served from UL VNO can be identified only through manual process of mails to respective UL-VNO. The UL operator only has the data base of numbers allocated to UL-VNO and can identify the UL-VNO (Not the end customer).

Q6. What measures should be taken to ensure delivery of CNAP to the called party without a considerable increase in the call set up time?

Veeno's Response : In the DLT platform based model, each stakeholder will have their own API to identify the CNAP – TSP's can optimally invest on the infrastructure and build needful resources to avoid the latency. Further if the existing DLT can be scaled with one additional use case of CNAP, it will optimise the cost for existing TSP's.

Q7. Whether the existing telecommunication networks in India support the provision of CNAP supplementary service? If no, what changes/additions will be required to enable all telecommunication networks in India with CNAP supplementary service? Kindly provide detailed response in respect of landline networks as well as wireless networks.

Veeno's Response : Not all Telecommunication networks may currently support the CNAP. Implementation of blockchain based CNAP will enable lower dependency on originating switch, interconnect - POI technologies like SS7, R2MFC, Sigtran etc.

Blockchain will avoid the dependencies on the originating, transit switches and can gather data from OSS-BSS systems of the operator. Receiving Switch / devices continue to be challenge - Especially for landline and hence partial implementation may be considered to allow time bound adherence only to landline phones and networks like 2G etc.

Specific to landlines -

1. Landlines on GPON technology / SIP as the technology to serve landlines may be able to upgrade.
2. Operators working on POTS - may have to be excluded.
3. Similarly - Devices like Analog Telephones in both GPON (using IAD) and POTS - may not support the CNAP and may have to be excluded.
4. Considering the penetration of retail landline - they anyway are a smaller percentage of the overall market.

Q8. Whether the mobile handsets and landline telephone sets in use in India are enabled with CNAP feature? If no, what actions are required to be taken for enabling CNAP feature on all mobile handsets and landline telephone sets?
Veeno's Response : Not all technologies and devices support CNAP. To our best knowledge only 4G / 5G handsets may be supported - both Android and Apple. Hence, partial implementation / adherence to accommodate device compatibility may be allowed for 2G / feature phones. However recommendations to meet the CNAP should be established for all phones to be used in India including landlines.

All Device OEM should be recommended to follow hierarchy of display as either

1. Display from Phone directory as stored in device
2. CNAP as per this recommendation
3. CLI - irrespective of CNAP or directory stored name display.

Q9. Whether outgoing calls should be permitted from National Toll-Free numbers? Please elaborate your response.
Veeno's Response : Yes outgoing calls should be allowed on National Toll-free numbers as well. This will help better utilization of resources and provides more credibility to some use cases / organisations - However outgoing call from TFN number should be considered similar to normal number calling as this does not involve IN query and IUC rates applicable to wireline should be made applicable.

Q10. In case the response to the Q9 is in the affirmative, whether CNAP service should be activated for National Toll-Free numbers? If yes, please provide a mechanism for its implementation.
Veeno's Response : Blockchain based mechanism explained above will work for mobile, landline and TFN numbers as well.

Q11. Whether CNAP service should be implemented for 140-level numbers allocated to registered telemarketers?
Veeno's Response : Yes

Q12. If your answer to Q11 is in the affirmative, then kindly elucidate the technical considerations for implementing CNAP service for registered telemarketers so that the name identity of the principal entity may be presented to the called party.
Veeno's Response : Blockchain based mechanism explained above will work for mobile, landline and TFN numbers as well.

Q13. Whether the bulk subscribers and National Toll-free numbers should be given a facility of presenting their 'preferred name' in place of the name appearing in the CAF? Please elaborate your response.
Veeno's Response : Yes. This should be however associated with processes to change frequently by Authorised signatory. As it is a common phenomenon for employees changing roles, jobs, Merger of companies.

Q14. In case the response to the Q13 is in the affirmative, what rules should govern the implementation of such a facility?
Veeno's Response : Authorised signatory can validate himself with Adhar or it can be made part of the self care portal provided by TSP.

Q15. Whether there is a requirement of any amendment in telecommunication service licenses/ authorizations in case CNAP is introduced in the Indian telecommunication network? Please provide a detailed response.
Veeno's Response : Yes. The TSP should be mandated to facilitate UL-VNO licensee as well by some mechanism. All users / stakeholders like retail, Bulk and UL-VNO, Audiotex license holders should be given needful API, processes and any changes for the same should be clearly regulated.

Charges application between TSP, Charges from TSP's to UL-VNO / Audiotex and Retail should be clearly guided and not left to forbearance etc. to avoid any commercial issues and easier implementation and level playing field for all UL-VNO's / Audiotex license etc.

Q16. Whether there are any other issues/ suggestions relevant to the subject? If yes, the same may be furnished with proper justification.
Veeno's Response :Perspective of UL-VNO, Audiotex license, IP Telephony should be included to achieve CNAP for 100% of the subscriber base with exception of any traditional technology like rural telephony / USO etc which may gradually migrate to CNAP. CLIP should continue to be mandatory along with CNAP to ensure at all times either CNAP +CLIP or CLIP is presented to the end user.

To call back on any missed calls - CLIP will help easier calling back and hence both CNAP and CLIP should be made mandatory with CNAP implementation being slightly partial considering traditional technologies.