

RJIL/TRAI/2022-23/394

17th January 2023

To,

Sh. Akhilesh Kumar Trivedi

Advisor (Networks, Spectrum and Licensing)

Telecom Regulatory Authority of India

Mahanagar Doorsanchar Bhawan

Jawaharlal Nehru Marg, New Delhi - 110002

Subject: RJIL's Comments on TRAI's Consultation Paper dated 29.11.2022 on "Introduction of Calling Name Presentation (CNAP) in Telecommunication Networks"

Dear Sir,

Please find enclosed the comments of Reliance Jio Infocomm Limited on the consultation paper dated 29.11.2022 on **"Introduction of Calling Name Presentation (CNAP) in Telecommunication Networks"**.

Thanking you,

Yours Sincerely,

For **Reliance Jio Infocomm Limited**

Kapoor Singh Guliani

Authorized Signatory

Enclosure: As above

**Reliance Jio Infocomm Limited's comments on TRAI's Consultation Paper on
"Introduction of Calling Name Presentation (CNAP) in Telecommunication Networks"
dated 29th November 2022.**

Preface:

1. Reliance Jio Infocomm Limited (RJIL) thanks the Authority for issuing this consultation paper to deliberate on the possibilities of introducing Calling Name Presentation (CNAP) in Telecommunication Networks.
2. We appreciate the telecom consumer's concern on not being able to know the person behind the calling party number and understand that such a solution is required by a section of customers, which is also evident from the popularity of many crowd sourcing apps providing similar solution. **However, we understand that there are multiple technical and data privacy related concerns with this solution.**
3. The primary technical challenge is at device level. We have done a thorough analysis of the devices available in the Indian market and can summarize that **there is no definitive record of feature phones being enabled with CNAP feature. Further the smart feature phone working on 4G networks also do not support this feature.** Furthermore, as far as smartphones are considered, the feature is likely available in all new devices being a 3GPP feature, however, as it is not a mandatory requirement in most jurisdictions, **the feature is kept off by most Original Equipment Manufacturers (OEMs). Thus, how this can be implemented for the devices currently in the market, would also require analysis at OEM level.**
4. Thus, while a large number of mobile devices i.e. feature phones and smart feature phones, clearly do not support the feature, there can be another large segment of smart phones that will require an intervention at OEM level, in form of testing and Firmware over the air (FOTA) update or otherwise, to enable the feature. **There is also a possibility of issues at Operating System (OS) level. Further, although this feature might be available at Home Gateway level in modern FTTX networks, there are no available records to check the availability of this feature with landline phones.**
5. Another technical issue would be in the form of increasing load on signaling and consequent increase in call set-up time that will not only increase the network load but will impact the latency. **In addition, there are no technical standards available for sharing CNAP information over TDM Points of Interconnection (POIs). This is particularly important for India wherein there is a heavy usage on the wireless networks due to the combination of higher subscriber count and high usage per customer. Moreover, as per Indian licensing framework, the Point of**

Interconnection between Access Providers are at LSA/ LDCA/ SDCA level depending on the type of traffic. Further, as of now, most of the inter-operator POIs are TDM based or using Media Gateways. Therefore, the above complicates the situation as compared to other countries.

6. From Data Privacy aspect, we submit that the name of the telecom consumer is his personal data and under the prevalent jurisprudence on the subject, **we understand that there is a requirement of telecom consumer's consent in sharing his name with a third party.**
7. There can be myriad reasons for the customers not being willing to share their name with the called party. A few of these can be potential fraud and risk of abuse, misbehaviour, social media stalking etc. We are already witness to multiple cases where the abuse and inappropriate behaviour starts the moment called party is speaking to a person of opposite sex, which can only increase when the name is also available.
8. Therefore, it will be important to take a consent of the calling party before sharing his/her name with the called party. However, this provision for consent can also be misused by the people for whom CNAP is intended for. **For instance, we cannot expect the unregistered telemarketers or fraudsters to give consent for sharing their name with their victims.**
9. Further, the name of a customer can be considered to be acquired by the Telecom Service Providers (TSPs) by virtue of providing telecom service to the customer, therefore, mandatory provision of this information to another customer (and through another third party TSPs, in case of inter-operator calls) can be deemed to be violative of **Unified License Chapter-V-Operating Conditions on Confidentiality of Information**. We are extracting and reproducing the relevant condition for your ready reference.

37.2 Subject to terms and conditions of the license, the Licensee shall take all necessary steps to safeguard the privacy and confidentiality of any information about a third party and its business to whom it provides the Service and from whom it has acquired such information by virtue of the Service provided and shall use its best endeavors to secure that:

a) No person acting on behalf of the Licensee or the Licensee divulges or uses any such information except as may be necessary in the course of providing such Service to the Third Party; and

b) No such person seeks such information other than is necessary for the purpose of providing Service to the Third Party.

Provided the above para shall not apply where:

- a) The information relates to a specific party and that party has consented in writing to such information being divulged or used, and such information is divulged or used in accordance with the terms of that consent; or*
- b) The information is already open to the public and otherwise known.*

10. Thus, while the **CNAP solution seems desirable at face-value, there persist technical challenges in mandatorily implementing the solution as well as data privacy concerns. On the other hand, there are** no restrictions on introduce this supplementary service as an opt-in value added service (VAS) for intra-network communications by the TSPs.
11. Under this optional and supplementary VAS service implementation, **all the consumers opting to share their name details can be allowed to receive the name details of similar opt-in consumers as calling party. All the consumers not opting to share their names will not be able to receive the CNAP service as well.** This will be in line with popular privacy practices adopted by the OTT communication services and social media precedents and would sufficiently address privacy concerns.
12. International experiences of countries like Turkey may appear relevant at face values, however, the operational difficulties cannot be ascertained with less than 10% telecom subscribers. **Especially since we understand that in Turkey, the CNAP requirement is only for SMS and MMS and not for voice.** Further, in both United States and Canada, the service is known as CNAM and we understand that it is not mandatory for TSPs to provide this service for mobile numbers. The service is supported for local numbers only basis customer consent. In UAE, the **CNAP service is known as Kashif¹** and it is implemented only for all economic establishments and government entities (optional) and not on private numbers. **Therefore, considering the vast variations in implementation, it would not be prudent to mandate this requirement.**
13. Further, as far as the concerns regarding unregistered telemarketer are noted in the Consultation Paper, we submit that a mechanism to curb this menace is already set-up by the Authority. We have deployed the latest technology and at a great cost to the service providers, and it should be allowed to function to address the problem. The industry should not be saddled with additional cost of setting up CNAP facility to address the same problem that can be handled with Distribution Ledger Technology (DLT) based solution to address the Unsolicited Commercial Communications (UCC).

¹ <https://tdra.gov.ae/en/FAQs#kashif>

14. Additionally, it is worthwhile to highlight here that at present, Indian telecom sector is going through a phase of technology enhancement and all TSPs are actively engaged in rolling out 5G services across the country and delivering the latest technology to all mobile customers. Therefore, it is requested that Authority may not contemplate any network level changes such as CNAP that have profound impact on QoS, call set-up time, POIs and interconnected working of operators and can consequently impact 5G roll-out.
15. Therefore, considering all the above issues, it would be prudent that CNAP solution should not be mandated.
16. To summarise, we submit as under:

1. The CNAP facility is a good to have facility, however, there are multiple challenges for implementation
2. The CNAP facility will definitely increase call set-up time and affect latency
3. There are large device segments that do not support CNAP
4. There will be interconnection related issues in case inter-operator CNAP is implemented
5. Due to customer privacy concerns, CNAP facility should not be mandated and if voluntarily implemented by TSPs, should be based on opt-in consent

Issue wise response:

Q1. Whether there is a need to introduce the Calling Name Presentation (CNAP) supplementary service in the telecommunication networks in India?

RJIL Response:

1. We submit that the CNAP facilities is a good to have supplementary VAS service, however, in a country where over 375 million users (over 350 million mobile non-broadband users and over 25 million wireline users) are unlikely to possess a CNAP enabled device, in addition to a sizable portion of the wireless broadband users that may not be possessing CNAP enabled devices as well, it can safely be said that it should not be a mandatory service.
2. Further, we have already explained that there will be many technical issues like increased load on signaling and possible impact on latency and interconnection related issues, therefore, a cautious approach is recommended.

3. As also mentioned in preface, we believe that a consent based intra-network voluntary solution by TSPs would be optimum with the current level of device proliferation in the country. Notwithstanding the same, it is reiterated that CNAP type changes involving massive technical efforts should not be contemplated when the Indian telecom networks are extensively engaged in delivering 5G services all across the country.

Q2. Should the CNAP service be mandatorily activated in respect of each telephone subscriber?

RJIL Response:

1. There are privacy related concerns with mandatory activation of the CNAP service on every device. As mentioned in the preface, the presentation of name at the time of calling can lead to various social and criminal issues. It can and will lead to increased social media stalking. **Therefore, it is imperative that the consent of customer is taken before activating CNAP service on his/her device.**
2. The mandatory CNAP facility will also not be immune from litigation by privacy activists. **The Hon'ble Supreme Court had earlier denied the mandatory linking of Aadhaar data with subscriber verification, despite of multiple security and bonafide use related advantages.** Therefore, it is safe to assume that mandatory CNAP activation will not survive legal scrutiny.
3. Furthermore, when a large section of telecom subscribers i.e. users on 2G-3G feature phones, 4G feature phone, smartphones not enabled with CNAP, smartphones requiring major update for CNAP, landline users etc. will anyways be not able to avail this service, **then the mandatory activation is a moot point and should be avoided.**

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.

RJIL Response:

1. The Authority has already explored multiple modes for consent under various other requirements for instance VAS activation, DND registry opt-in, and all these methods can be used for CNAP opt-in.
2. **The customers can be provided a short code, wherein they can opt-in and opt-out from CNAP, using IVR option and/or a keyword-based SMS response or TSP's app**

based option. In addition, the subscribers can be given an option to opt-in for CNAP service at the time of activation of a new connection.

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.

RJIL Response:

Yes, the name identity provided in **CAF is verified against Government recognized Identity proofs, therefore, it should be deemed most authentic and used in CNAP.** Further, as most of the CAFs are now filled using Aadhaar based authentication, there is no reason to consider any other option for name identity.

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

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

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

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

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

RJIL Response:

1. We submit that none of the suggested models can address the technical requirements to implement CNAP at network level, as explained in following paras.
2. **Model No.1:** While CNAP is a 3GPP feature, **we have not come across any standard reference that defines a methodology for sending CNAP to terminating network over TDM Point of Interconnection (POI) using Integrated Services Digital Network User**

Part (ISUP) signaling protocol. Therefore, this model will require additional network engineering. Moreover, as mentioned in the preface, India specific challenges and complex interconnection framework including several TDM based POIs and presence of transit switches/networks will certainly pose complications in the implementation.

3. **Model No.2:** We submit that this model will lead to increased call setup time as an additional dip over and above MNP dip will be required. Further, there will be customer privacy, network security and business case related concerns as the TSP's CNAP database (DB) will be exposed to other TSPs. **Additionally, developments will be required to incorporate a CNAP DB dip and then route the call.**
4. **Model No. 3 and 4:** These models will also increase the call set-up time. Additionally development in the form of logic in network to dip CNAP DB and route call further will be required. Further in Model No. 4, Central database need to be updated by each TSP and central DB needs to synchronize the updates with all TSPs, this will be an additional activity with cost implications.
5. We understand that another model could have been possible in case all interconnection in the country was IP based, which is not the case presently. **In such a scenario, it might have been possible to provision calling in the subscriber profile at HSS level and then relay the information through Origination operator PCSCF.**

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?

RJIL Response:

We submit that under the current circumstances, considerable increase in the call set up time is inevitable. However, as discussed above, there might have been a possibility in case of availability of IP interconnection, however, the same is irrelevant, as IP interconnection is not implemented all across.

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.

RJIL Response:

As mentioned in the previous responses, CNAP facility should not be mandatory. **There will be considerable design and network development required, however, the**

exact changes/additions and associated timelines can only be ascertained post the implementation model is finalized. As already submitted in the preliminary submissions, there are over 350 million mobile non-broadband users and over 25 million wireline users, who are unlikely to possess a CNAP enabled device.

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?

RJIL Response:

1. We submit that CNAP is a 3GPP feature and defined in VoLTE / VoNR standards for devices. Therefore, it will be available in 4G/5G smartphone devices. **As per our discussion with OEMs, as this feature is mostly not required, it is not switched on in a normal state. However, for these devices, it should be possible to roll out this feature with a gradual FOTA update.**
2. Further, on many other devices like smart feature phones working on 4G networks, this feature is not available. **We also understand although this feature may be available on modern FTTX Home Gateway devices, however, the likelihood of its availability in feature phone and landline phones is negligible. Nevertheless, a detailed study is required to ascertain the actual status.**

Q9. Whether outgoing calls should be permitted from National Toll-Free numbers? Please elaborate your response.

And

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.

RJIL Response:

1. We submit that there is no concern in permitting outgoing calls from the toll-free numbers. However, from the perspective of CNAP, international experience shows that this service has not been enabled for toll-free number.
2. **Nevertheless, it is a good to have feature and would help consumers to identify the corporates, even on basis their phonebooks, in absence of CNAP and can be implemented as a part of voluntary consent based intra-network solution. We submit that in this case, an additional step of calling name validation will be required at the TSPs end.**

3. Further, as mentioned above, there are multiple technical challenges in implementing full CNAP service. However, as and when and whichever form the same is implemented, there is no reason why National Toll-Free numbers be kept out of its purview. **We submit that in the proposed initial intra-network consent-based implementation, National Toll-Free numbers can also be included post calling name validation.**

Q11. Whether CNAP service should be implemented for 140-level numbers allocated to registered telemarketers?

RJIL Response:

As noted by the Authority, **140 series have customer recall of being a telemarketer service. This has helped customers in not responding to these numbers.** Thus, even if these numbers are brought under CNAP, there needs to be a mechanism to ensure that customer is made aware that the caller is a telemarketer. **Otherwise, enabling these numbers with CNAP would defeat the whole purpose of creating a new series for registered telemarketers.**

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.

RJIL Response:

We submit that in case it is decided to enable CNAP for 140 series, The Authority can leverage the DLT based solution under Telecom Commercial Communications Customers Preference Regulations 2018 (TCCCPR). **The telemarketer with 140 series can register the name to be displayed against the SIP link, which can be implemented post TSP validation. However, the bigger challenge will be to educate the consumers on these display names, as otherwise it can lead to massive increase in complaints.**

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.

And

Q14. In case the response to the Q13 is in the affirmative, what rules should govern the implementation of such a facility?

RJIL Response:

We submit that subject to validation of display name to be used and consumer awareness, this is a good to have solution.

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.

RJIL Response:

We submit that under the Unified License, there is no restriction on implementing a consent based CNAP solution and no amendment will be required. **However, in case the CNAP facility is implemented mandatorily across the networks, then owing to the customer data privacy related requirements, a suitable amendment will be required.** Further, relevant clauses like clause 37.2 mentioned in preface will need to be amended.

Q16. Whether there are any other issues/ suggestions relevant to the subject? If yes, the same may be furnished with proper justification.

RJIL Response:

We understand that the CNAP solution is not defined for SMS under current standards and may not be possible to implement. **However, we understand that the current requirement pertains to voice calls only and is not applicable for SMS services and the same may be acknowledged.**