airtel

TRAI/FY22-23/109
Dated: 17.01.2023

To,
Shri Akhilesh Kumar Trivedi,
Advisor (Network, Spectrum and Licensing)
Telecom Regulatory Authority of India,
Mahanagar Door Sanchar Bhawan,
JawaharLal Nehru Marg,
New Delhi – 110 002.

Subject: Response to Consultation Paper on "Introduction of Calling Name Presentation
(CNAP) in Telecommunication Networks"

Dear Sir,

This is in reference to TRAI's Consultation Paper on "Introduction of Calling Name Presentation (CNAP) in Telecommunication Networks" dated 29.11.2022 (CP No. 13/2022).

In this regard, please find enclosed our response for your kind consideration.

Thanking You,

Yours' Sincerely,
For Bharti Airtel Limited

Rahul Vatts
Chief Regulatory Officer

Encl: a.a

Response to TRAI Consultation on
Introduction of Calling Name Presentation (CNAP) in Telecommunication Networks

Executive Summary

Airtel thanks the Authority for initiating this important consultation paper on the "*Introduction of Calling Name Presentation (CNAP) in Telecommunication Networks*".

We note that this consultation has been issued with a two-fold purpose: i). to ensure that there exists a framework/mechanism that allows the called party to identify the caller party (CNAP); and ii). to offer solutions to implement the said requirement along with allowing outgoing calls from National Toll Free Numbers in the telecom sector starting with 1800. This will ensure that the name of the caller entity is disclosed during the call set up phase, thereby increasing the likelihood of the called party accepting such calls, and this will, in turn, result in the better utilisation of network resources.

Given the proliferation of unsolicited commercial communications / spoofed / spam calls, the CNAP will be a welcome solution for consumers as it will allow them to identify callers when deciding whether to accept a call. However, for this to be truly universal, the solution should be a value add for all the stakeholders– customers, enterprises, TSPs – and should therefore be implemented only in a phased manner with industry consensus.

The need for such a solution has primarily arisen due to the issue of incessant SPAM. Our ballpark estimates suggest that there are anywhere between 5 to 8mn entities /users engaged in telemarketing / A2P / commercial calling, excluding the P2P users/numbers who indulge in misuse.

Hence, the immediate and primary target of CNAP should be such A2P / Telemarketing / UCC calling, which is the major volume driver of SPAM today. Once the solution is tested successfully on this universe, a wider roll-out could be deliberated over the larger subscriber base, if needed.

The importance of definition and ambit: Since there is misuse of the P2P route (individual SIMs / Bulk SIMs), the solution lies in creating a definition of UCC that is able to incorporate and identify such unscrupulous callers who make use of the P2P route. We recommend that such **misusers** of the service (on identification) should be classified based on rational criteria, e.g., analytics or predictive dialing patterns or calls/messages beyond certain thresholds/ volumes that may be defined as SPAM. Typically, a rule can be framed such that numbers of calls/messages from a P2P user beyond a specific threshold would be blocked by TSPs and they would then necessarily come under the CNAP. **Accordingly, the definition of A2P for the purpose of CNAP implementation should cover all commercial / UCC type scenarios.**

The critical importance of the learning curve: Based on learnings from the A2P framework of CNAP, a national level roll out should be considered. Without it, implementing any fresh change on the entire base of 1bn+ subscribers without any tests would be unsystematic and economically imprudent as it would force heavy costs/investments without any visibility into the effectiveness, while also impacting latency/call-set up issues for the consumer base.

The effectiveness of CNAP can only be ensured within the Telco ecosystem: We are also of the opinion that only a Telco owned, operated and neutral KYC'ed solution will benefit consumers and legitimate business entities, and generate the confidence and trust required to ensure that this as a solution is effective. The Telcos, amongst them, can create a neutral, privacy-safe, maker-checker of information for the best representation to the customer.

Response to TRAI Consultation on
Introduction of Calling Name Presentation (CNAP) in Telecommunication Networks

The model for implementation: Given that data of a telecom subscriber is highly sensitive, the right model would have to evolve from Model 1, where each Telco keeps its own database and synchronises calls for users with each other so that solution is effective end-to-end across all networks.

The techno-commercial challenges involved: There are likely to be techno-commercial challenges involved in implementing the CNAP viz.

- Not universal– not all handsets and landline phones may be capable of supporting CNAP functionalities; currently only 4G enabled devices are enabled, i.e., 65-70% coverage on smartphones.
- Issue of privacy – of the consumers as CNAP would need to adhere to the privacy laws.
- Longer call setup times – may make customers unhappy / dissatisfied.
- Significant costs – server, separate storage of customer data specifically for CNAP.

The importance of leveraging the existing DLT investment: Given the huge investments already made by TSPs in DLT platforms, the CNAP solution should leverage the existing investment of Telcos in DLT, and not add on any additional incremental cost without any practical justification.

Balancing user privacy will be key: Privacy is an important consideration, and the framework is going to have to address the genuine concerns of users who may not be keen to share their details. However, if a consent mechanism is brought in (i.e., an opt-in approach), the chances of the CNAP becoming ineffective will become high as violators may choose to opt for it, i.e., not revealing their name/identity in a P2P call scenario.

Allow outgoing (OG) calls on national tollfree numbers along-with CNAP: Due to business necessities and ease of customer access, the 1800 domestic tollfree numbers (also called as UAN) have become the identity of enterprises using such numbers. Therefore, permitting OG calls from these numbers will enable the call recipient customer to be aware of the origin of the incoming call from a trusted enterprise; thereby enhancing confidence on both sides. This will also be in line with Ease of doing business (EoDB).

Let market dynamics determine the pricing of CNAP: While the DoT and TRAI have rightly acknowledged CNAP as a supplementary service, given the limited potential and uncertainty over customer opt-ins, we recommend that the option of charging the customer for CNAP should be left to market dynamics, i.e. under forbearance.

Address risk of increased SPAM through VoIP calling: With entry of a numbers of players for internet telephony / VoIP based solutions, there may be potential risk of increased SPAM calls/ frauds. Hence the Authority would need to consider this aspect.

The TRAI also needs to do a detailed cost benefit analysis and Regulatory Impact Analysis (RIA) before deciding whether to adopt CNAP in India. Additionally, it should be implemented in a phased manner with the focus on A2P/Telemarketer/UCC as the main objective of CNAP is to address fraud/spoofing/UCC.

In summary, before we carry on to answer each of questions in as exhaustive manner as possible, we recommend the following w.r.t CNAP:

Response to TRAI Consultation on
Introduction of Calling Name Presentation (CNAP) in Telecommunication Networks

- CNAP should be considered only for Telemarketer/ Commercial users / A2P callers in the initial phase.

- The individual callers who mis-use P2P numbers should be blocked unless brought under CNAP. Such callers should be identified based on predictive analytics/ call/SMS patterns.

- Post learnings from the A2P implementation only, CNAP may be rolled-out across the entire subscriber base, if the need arises.

- The model for CNAP should be controlled and operated within the Telco network ecosystem only. Each TSP should retain its own subscriber database while synchronising calls across TSPs.

- Outgoing calls on UAN / Toll free (1800) numbers should be allowed.

- CNAP for 140 telemarketers should be allowed.

- Privacy of a subscriber / user should be addressed within the CNAP framework.

- The charging of CNAP supplementary services should be left under forbearance.

With the above background and submissions, please find below our response to the questions raised in the Consultation Paper.

Response to TRAI Consultation on
Introduction of Calling Name Presentation (CNAP) in Telecommunication Networks

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

Airtel Response:
At the outset we request the Authority to kindly take note of our detailed submission in the Executive Summary section, wherein we have recommended that:

- CNAP should be considered only for Telemarketer/Commercial users /A2P callers.
- The individual callers who mis-use P2P numbers should be blocked by default unless operate under CNAP. Such callers should be identified based on predictive analytics/ call/SMS patterns.
- Post learnings from A2P implementation, CNAP may be rolled-out across the entire subscriber base.
- The model for CNAP should be controlled and operated within the Telco network ecosystem only. Each TSP should be able to retain its own subscriber database while synchronising calls across TSPs.
- Outgoing calls on UAN / Toll free (1800) numbers should be allowed.
- CNAP for 140 telemarketers should be allowed.
- Privacy of a subscriber / user should be addressed within the CNAP framework.
- The charging of CNAP supplementary services should be left under forbearance.

In addition, the identity of the caller is very important and considering the same, the DoT, in the license conditions for TSPs, has stated the need to display the Calling Line Identification (CLI) and transfer the same without any modification.

It is important that the called customer be provided with information about the calling party. We believe this will help address customer concerns about the following:

- not attending calls from unknown numbers wherein most of the calls pertains to unsolicited commercial communications (UCCs) from un-registered telemarketers.
- robocalls, spam calls, and fraudulent calls.
- CLI spoofing.
- calling party name presentation facility for protection of consumer interests.
- empowering subscribers to take an informed decision while receiving an incoming call, and to reduce the harassment of subscribers from unknown/ spam callers.

However, we recommend that a CNAP solution should be primarily targeted at A2P, Telemarketing, UCC calling, which are the major drivers of SPAM volume today. Since the P2P route (individual SIMs / Bulk SIMs) is continuously misused, the solution should cover the unscrupulous callers who misuse the route.

Hence, yes, there is a need to introduce the CNAP supplementary services. They should, however, be introduced for the limited purpose of commercial/A2P calling activities only, covering the P2P misuse callers. A roadmap must be created in consultation with TSPs by which the challenges around Network Readiness, Point of Interconnection, Customer handset (Mobile as well as fixed) can be addressed. This would also act as pilot to identify any potential challenges that could occur when implementing CNAP on a wider scale in the future.

Lastly with likely entry of a numbers of players for Internet telephony / VoIP based solutions, there may be potential risk of increased SPAM calls/ frauds. Hence the Authority would need to consider this aspect.

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

Airtel Response:

As stated in the Executive Summary section of this response, we reiterate that the **CNAP should be implemented for A2P, Telemarketers, Commercial communication callers, including the users who misuse the P2P route** to SPAM / Spoof calls. Such P2P users should be blocked by default after being identified by predictive calling / analytics of call/SMS patterns until and unless they mandatorily subscribe under the CNAP framework, through which they should be identified.

There are multiple techno-commercial and practical reasons why we believe CNAP should not be mandatorily implemented for the entire subscriber base at present.

1. **No specific value add for putting CNAP on entire base** – If the primary reason to give CNAP is to give the called party greater control over which call to pick and which not, a situation which is fundamentally driven by the fact that a huge number of SPOOF/SPAM/UCC/A2P/Telemarketing calls/messages bother genuine receivers, then implementing CNAP on an entire base of 1bn+ subscribers without first addressing this misuse aspect would not only be illogical but also economically imprudent. Furthermore, it would be ineffective and would impact latency/call set-up issues for the consumer base.

2. **Handset Readiness** – The CNAP feature is handset dependent and not all handsets and landline phones are capable of supporting this functionality. In most part, it is only the handsets that have come into the market after 2021 that support this, and we estimate that currently only 4G enabled devices are enabled to do so, i.e., 65-70% coverage on smartphones. CNAP is specifically a limitation on a feature phone. The User Equipment (UE) should be capable of analysing the CNAP header and display for allow CNAP to work for consumer.

3. **Network Readiness** – It is important to ascertain whether CNAP can be implemented in multi-technology networks across telecom service providers without the need for internet or smartphones/ devices. We understand that the circuit switched (CS) network is not evolved enough for CNAP but the VoLTE network is so long as it is employed with PANI header information.

There is also the need for a Database through which the TSP will be able to mount a query with the specified protocol to fetch CNAP information. The DB would need to be updated on a real-time basis as well.

All these aspects would need to be addressed and call-flows to be identified, which may cause latency, QoS issues.

Given the above, and the fact that we have no visibility into storage capacity and network flow changes, and further that all of this together will likely lead to investment and other practical issues, we recommend it not be implemented mandatorily for the entire base. Rather, as suggested, a long-term roadmap be prepared that incorporates learnings from the post A2P implementation.

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.

Airtel Response:
Yes, the name provided in CAF should be used for CNAP purposes since the effectiveness of CNAP can only be ensured within the Telco ecosystem if TSPs have KYC-based customer information.

Hence, only a Telco owned, operated and neutral KYC solution will benefit consumers and legitimate business entities, generate confidence and trust, and make CNAP effective. The Telcos, within themselves, can create a neutral, privacy-safe, maker-checker of information that best represents the customer.

Having said that, there are certain scenarios wherein the name in CAF and that of the actual user may be different for genuine use cases and these will need to be addressed. Examples are enumerated below:

    A.   Number procured by guardian/head of family for their family members or for family help.
    B.   COCP numbers – Exempted categories without end user details.

These issues require a deeper discussion for any planned implementation of CNAP.

Q5. Which among the following models should be used for implementation of CNAP in telecommunication networks in India?
    a. **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**
    b. **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**
    c. **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**
    d. **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**
    e. **Any other suitable model for implementation of CNAP along with a detailed description of the model.**

Response to TRAI Consultation on
Introduction of Calling Name Presentation (CNAP) in Telecommunication Networks

Airtel Response:
As suggested in the Executive Summary section and in response to Q1 above, we recommend implementing the CNAP in a very limited and focused scenario of A2P / Commercial SPAM controlling scenario than for the entire base at first. The model thus should be thought in that context.

Apropos, there are two basic parameters that will need to be considered before we can even begin to decide which model would be best suited for CNAP implementation. These are:

1. As stated in our response to Q4 above that the name of a subscriber as provided in CAF should be used for CNAP purpose since the effectiveness of CNAP can only be ensured within the Telco ecosystem, and

2. There is sensitive personal information of a telecom subscriber (MSISDN and name) that will have to be displayed.

Given above two considerations, the right model should be from Model 1 where each Telco keeps its own subscriber database. *Additionally*, for CNAP to work across TSP networks end-to-end, each Telco DB should remain updated and send name for each call to the terminating TSP during the process of call set up.

In any case the Authority will have to plan for a similar uniform model for it to work across the ecosystem.

Such a Model requires each TSP to maintain a CNAP database of its own subscribers. This would necessitate call flow changes for accessing own database and sync-up with other TSPs, and setting-up or upgrading intermediary nodes for the passage of CNAP data.

This exercise may pose certain challenges in execution as illustrated next (not exhaustive):
- Latency issues
- The database maintenance at one location will be a huge activity, requiring uploading of POI, i.e., name from the CE database.
- Legacy network (CS based) nodes will need to be upgraded/replaced
- Intermediate network nodes need to be upgraded to cater to the passage of CNAP data on the signaling path over the telecommunication network
- End-to-End interconnecting path from calling to called customer needs to be on IP – requiring interconnection to be all IP in case of inter operator calls.

In addition to these challenges, there will be involvement of costs and investments in implementing the CNAP Model and functionality. With entry of a numbers of players for Internet telephony / VoIP based solutions, there may be potential risk of increased SPAM calls/ frauds. Hence the Authority would need to consider this aspect.

The CNAP database to be established and operated by TSPs will have to contain three fields: (i) telephone number of the subscriber, (ii) name of the subscriber and (iii) a field indicating if name identity is available, unavailable, or restricted.

The analysis of an appropriate model needs to be figured out before making the final decision for the implementation of CNAP. We therefore request the Authority to perform a Regulatory Impact Assessment (RIA) covering the technical and cost implications. We further urge the authority to restrict this exercise of CNAP implementation to A2P/Telemarketer/commercial scenarios only at this stage.

> **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?**

Airtel Response:
We believe it will be a very theoretical assessment unless the requirement of CNAP, the Model and network/handset capabilities are assessed fully. Nevertheless, in all the models proposed in the TRAI CP, the concern around call set up time issues will be there, which may cause QoS concerns.

To mitigate increase on call-set up time, we reiterate the following:

1. Implementing CNAP only on A2P/Telemarketer/UCC users, including P2P users who misuse (identified basis predictive analysis). Rolling-it out over entire 1bn+ base will have downsides.

2. CNAP should be managed within the Telco/TSP network ecosystem only, with each TSP keeping its own DB. This will help keep on-net latency low and reduce dependency on multiple nodes/entities.

> **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.**

Airtel Response:
No, the existing telecom networks do not support CNAP functionality and significant development is required for implementation. The challenges are explained next:

- Mobility & Fixed Line Services offered through:
  - **Circuit Switch Network**: The Circuit Switch (2G) is not equipped for handling CNAP transit as this functionality is not available in the CS network node.
  - **VoLTE / IMS Network:** Although the SIP header supports this facility for calls within the IMS network, the CNAP functionality will have to be enabled in all core nodes (HLR; HSS; MSC/VLR; GMSC; SBC; TAS) along with the definition of service profiles for customers in HSS.
- Change in existing call flow for A/B party API/CNAP Query.
- Device Ecosystem dependency as explained in response to Q8.
- CNAP will not be passed on the TDM interconnect.

> **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?

Airtel Response:

Not all handsets and landline phones can support CNAP functionalities. For CNAP to work in handsets and landlines phones there may be dependency on a lot of permutations and combinations in the handset ecosystem such as manufacturing date, display capability and software-based controls.

Further as per our understanding:
- existing PSTN UEs do not have the capability to provide 15-digit alphanumeric CNAP.
- feature phone devices need to be verified for their display capability.
- currently only 4G devices are enabled which would mean ~65-70% smartphone coverage.
- VoLTE supported devices rolled out post Q1'21 do feature CNAP as part of the display. However, call logs will record only the numeric value for out-dialing.

Given these complexities, and market limitations, we request that the Authority conduct a rigorous RIA, including checking the status of this specific question from handset and landline device manufacturers.

In case the CNAP is to be implemented in India even on A2P, Telemarketer, UCC type scenarios, and to bring P2P misusers under this, the DoT will have to mandate required modifications to support CNAP functionality across OEMs and set a cutoff date that predates the implementation and launch of CNAP.

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

Airtel Response:

Yes, we recommend that outgoing (OG) calls be permitted from national toll free (NTF) numbers, due to the reasons provided below.

Currently, all TSPs offer IN based Universal Access Numbers ("UAN") services using the SCP Codes. These SCP Codes are being utilised for provision of IN based services, i.e., 1800-SCP-XXXX for toll-free and 1860-SCP-XXXX as chargeable services. The enterprise customers currently use these UAN numbers for availing of incoming calls.

Due to business necessities and ease of customer access, these UAN numbers have become the identity of these enterprises. Therefore, permitting OG calls from UAN numbers will enable the call recipient customer to be aware of the origin of the incoming call from a trusted enterprise; thereby enhancing confidence on both sides.

This enablement will be further helpful:

- As customers will be aware of the genuineness of the call and thus the potential reduction in financial frauds for the public at large in cases of banking and finance related services.

- For enterprises by exercising better control on the numbers being used to contact their customers, thereby increasing their contact rate.

In future, wherein all enterprises (especially banks and financial institutions) can be mandated to make calls only through the designated UAN numbers, resulting in dissuading spammers/fraudsters from phishing. This can be further publicized through press/media/websites/SMS/OBD to educate end-customers.

Further, since as per our understanding in this paper the Toll-free services is considered a commercial / A2P connectivity service, **we recommend that CNAP be activated for these services as well, provided the related changes involved in the customer profile are incorporated.**

Note that limitations w.r.t handsets/devices/networks in previous questions will also be applicable here.

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

Airtel Response:
Yes. As stated in our preamble and in response to Q2 & 3, the implementation of CNAP should cover all such A2P/Commercial/Promotional calls / users as it has clear consumer benefits.

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.

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

Airtel Response:
Yes, the facility for presenting preferred name should be extended to all entities / corporates under bulk and National Toll-Free number category in order to utilize the envisaged benefits post CNAP implementation.

However, to authenticate the information being presented as preferred name, the preferred name:
- should be left for market to decide on the method for deciding the name, and
- shall be obtained only from CAF out of 3 options namely:
    - the authorized signatory name,
    - the Company name,
    - the end username

> **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.

Airtel Response:

Since the license already prescribes passing on the CLI end-to-end without any modification, we do not see any need to make further amendment in this regard. More than a licensing condition, this is driven by market needs, network, and handset capabilities.

The amendment in licenses will make it mandatory for the licensee to provide CNAP service. Because of practical challenges highlighted in answers to previous questions, the amendment may make licensees non-compliant. Further, individual privacy is a big concern that will need to be given careful thought.

Therefor it is suggested that an amendment in the license should not be made unless and until all the issues outlined are resolved.

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

Airtel Response:

We would like to highlight two core aspects of CNAP implementation:

1. The issue of privacy of a subscriber
2. The charging of supplementary services by market forces

Privacy: Mobile operators believe that customer confidence and trust can only be fully achieved when users feel their privacy is appropriately protected. The mobile customers are concerned about their privacy and want simple and clear choices for controlling how their private information is used.

Now if CNAP allows an opt-in scenario for a subscriber to decide if her name can be displayed or not, then there may be chances of misuse of this opt-in scenario by misusers of P2P callers. However, under CNAP, there may be genuine cases wherein some users are not keen to share their name, e.g., women or someone vulnerable in some cases.

This misalignment between privacy concerns and CNAP requirements will make it difficult for TSPs to provide customers with a consistent user experience. It may also cause legal uncertainty for TSPs, which could deter investment and innovation.

Charging of supplementary services: The DoT and the Authority have rightly acknowledged that CNAP is a supplementary service. Given the techno-commercial and practical challenges highlighted in previous questions, and the limited potential and uncertainty (on customer opt in), we recommend that the option of charging the customer for CNAP should be left to market forces. Further, since TSPs will have to invest in creating databases and modifying call-flows (depending upon the Model to be implemented), there should be a charging mechanism which may be left under forbearance.