CONSUMER PROTECTION ASSOCIATION
HIMMATNAGAR
DIST. : SABARKANTHA
GUJARAT

Comments
On
Introduction of Calling Name Presentation (CNAP)
in Telecommunication Networks

Introduction :

The extent of scam and spam calls in India is so great that well-known caller identification and blocking app True caller generates **70 percent of its 100 million dollar annual revenues from the Indian market** despite being a publicly listed company in Sweden that has 330 million monthly active users worldwide. Displaying the name of the originating party on the handset of the person receiving a call, will reducing the risk that the recipient will be fooled by scammers pretending to work for the recipient's bank or other institutions. It will also leverage registration information already collected by service provider whenever a subscriber obtains a new SIM.

Protecting consumers from harm should be the priority for TRAI and we are happy to see that they are concerned about the growing problem of scams facilitated by calls and texts. A common tactic used by scammers is to 'spoof'

telephone numbers to make them appear to be from a trusted person or organization, such as a bank. Where scam calls appear trustworthy, it means victims are more likely to share personal information or make a payment, which can lead to significant financial and emotional harm.

Service providers should provide information about the caller available to help the recipient of a call understand who is calling them and if they wish to answer the call. However, changes in technology have made it easier for scammers to manipulate this data to spoof numbers. This includes scammers who are based abroad using spoofed numbers to make it look like they are calling from India.

The key elements of the response for the scam calls and texts should set out below :

• Aim to **disrupt scams** by making it harder for scammers to use communications services to reach consumers. TRAI should propose to strengthen the rules and guidelines, while at the same time supporting providers to develop their own technical solutions to detect and prevent scam traffic.

• Scams are increasingly complex, often involving different companies and sectors. So, a coordinated approach is vital to ensure more scam attempts are blocked or disrupted. TRAI should **collaborate and share information** more widely, including with Government, other regulators, law enforcement and consumer groups.

• Given the pace at which scammers change their tactics, we understand that it will not be possible to stop all scams reaching consumers. We can work to **help**

consumers avoid scams by raising awareness so consumers can more easily spot and report them.

The misuse of Calling Line Identification (CLI) data can lead to significant harm for consumers, for example where scammers mislead the recipient of the call about their identity in order to encourage them to give away sensitive information or money. We have found that the problem of scam calls (and texts) is now widespread, with attempted scams affecting the vast majority of consumers. In the UK fraud now accounts for 40% of all reported crime incidents. In a survey carried out in September 2021, 82% of UK adults reported being exposed to some form of suspicious call or text in the three months prior to the survey.

The misuse or spoofing of CLI data can also have wider effects, such as reducing consumer trust in voice calls. Any loss of trust in communications services may mean that legitimate communications from businesses are ignored or not received.

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

Comments :   Yes.   Without any financial burden on the consumers.

Aim:

Should be to ensure that telephone subscribers are able to make an informed choice about incoming calls and curb harassment by unknown or spam callers.

Need to introduce the Calling Name Presentation (CNAP) supplementary service :

✓ Given the scale of the harm from scams today, even a modest reduction in scam calls can deliver significant benefits. The number of incidents and amount of loss incurred by the customers due to Phising, Vishing and Credential/OTP comprise attributed to breach on part of the customers between 1-4-2020 to 31-3-2022 stood at 9,34,109 and 1434.75 crore respectively, as per the Government's statement in parliament.

✓ Victims are also likely to experience anxiety and emotional distress and, although these are less readily quantifiable, such harms are likely to be significant. Any reduction in the volume of scam calls will also reduce harms to those who receive these calls but are not ultimately scammed, as unwanted calls can be annoying, disruptive and waste of people's time.

✓ These changes will also improve the accuracy of data provided on calls which do connect to consumers, helping them decide which calls they wish to answer.

✓ It will make it easier to trace problematic calls.

✓ India is currently the world's second-largest telecommunications market.

✓ There were 114.55 crore wireless subscribers and 2.65 crore wire line subscribers in the country as on 30 September 2022.

✓ Under the current technology, the potential receivers do not get the name and identity of the caller entity.

✓ According to Local Circles' survey, 64% of respondents stated that they receive at least 3 spam calls each day, with 95% of respondents receiving them despite registering on Do-not-Call Directory (DND).

- ✓ According to True caller's '2021 Global Spam and Scam Report', average number of spam calls per user each month (in India) stood at 16.8 while total spam volumes received by its users were in excess of 3.8 billion in calls in October alone.

- ✓ Smartphone users, at present, rely on in-built features (such as 'silence unknown numbers' on Apple phones) or third-party apps to mark and tackle spam calls.

- ✓ Crowd-sourced data can not be reliable.

- ✓ Automatic caller name presentation is one of the main features that telephone consumers feel that it will be useful. However, it's also a solution that's frequently used by call centers and businesses too - to help them offer the best possible services for their customers.

- ✓ In a communication-rich environment, caller name presentation can help to boost conversion rates, increase profits, and reduce costs, by automatically choosing the best phone number to display on the recipient's ID system.

- ✓ For the average person, caller name presentation allows them to selectively screen calls and not answer "unknown" numbers. For a business, caller name presentation can help companies to learn more about who is calling them most, where their biggest consumers come from, and how to increase connection rates and call backs. This assists in the process of reporting and analytics, which gives companies access to vital information that could allow them to target their marketing strategies towards the most profitable customers in their niche.

- The telephone consumers are unable to correctly identify the calling party. It is batter to get details of the caller so that consumers can judge if he needs to take the call or call back if he/she missed.

- Telephone users prefer not to attend calls from unknown telephone numbers as most of such calls from unknown numbers are unsolicited commercial communications from unregistered telemarketers, because of which even genuine telephone calls or clients call go unanswered.

- Despite the introduction of the DND registry, customers continue to get such calls.

- It will empower subscribers to take an informed decision while receiving an incoming call, and reduce the harassment of subscriber from unknown/spam callers.

- There have been rising concerns about the Robocalls, Spam calls and Fraudulent calls to financially dupe them. There are also complaints of spoofing to make a call from a government agency or a known company to defraud the called party.

- It is cognizant of the need for the "calling party name presentation facility" to protect consumer interests by introducing in the Indian telecommunication network the facility of the "Calling Name Presentation (CNAP).

- It will protect subscribers from scammers by helping them to understand who is calling.

- Caller Name presentation will allows customer to selectively screen calls, and not answer those that generate "unknown" members that don't display an actual phone number or Name. In most cases, the calls from

"unknowns" are from four sources: charities, political candidates, survey agencies or telemarketers. You can be on the **Do Not Disturb Call List,** but this doesn't guarantee one will never receive a call. In fact, Do Not Call List doesn't block surveyors, most charities or political candidates from calling you. If one don't want to receive these calls, a quick glance at your phone can tell you whether or not to pick up.

✓ One also might be in a position where they are receiving harassing calls, obscene calls, or others. Identifying the phone number of people harassing one with caller name presentation can make short work of such calls if they're reported to the phone company. There have been cases where this doesn't work, or people can hack into systems and make numbers appear to come from another number. Typically, caller name is certainly going to discourage the mundane obscene caller and kids who make crank calls.

✓ Somebody probably wants to pick up those caller name's calls that read "private name, private number." These are most frequently calls from doctors or therapists at their private residences. These almost always read this way, and can thus be distinguished from the "unknown" telemarketers that just want to sell you something.

✓ It can help others if the name displays when one call someone. A call from relative with the name means that there may be some specific reason.

✓ There are also service providers with caller identification from a business perspective, but it's also worth noting that this service isn't complete and trustworthy by itself.

✓ This ensures that calls are not inadvertently blocked or marked as spam.

- ✓ This will benefit consumers, legitimate businesses and other genuine users of telephone services, as their calls are more likely to be answered.

- ✓ There may also be benefits to service providers as they may find that a reduction in the number of scam calls leads to fewer calls from end customers to their customer service teams.

- ✓ Over all we feel that the changes proposed and associated changes to the calling line identification, are likely to deliver material benefits as a result of a reduction in scam calls and improved confidence and trust in telephone services in general.

Legal issue :

Privacy Breach :

Recently Supreme Court refused to entertain a Public Interest Litigation against the app, True caller, owing to the app allegedly being "intrusive". Apart from this it complies with data privacy laws and practices 'data minimization'. It does not sell or share user data, and securely handles and processes data as per the privacy policy.

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

Comments : Yes. Along with the number as there can be so many people with same name.

There are some vulnerable groups to whom the mandatory activation of CNAP can be up to some degree harmful. But it can be managed.

(A)   Women and Girls :

Gender based violence or violence against women and girls is a global pandemic. That effect 1 in 3 women in their lifetime.   But

1.   The promising entry points for public actions to promote women are useful for the women empowerment. These entry points include policies that change social norms and the law, alongside programs to promote economic opportunities, social protection and education, where well designed interventions and new approaches to implementation are demonstrating significant benefits for women.

2.   Addressing social norms is critical because adverse norms underpin and reinforce the multiple deprivations that many women and girls experiences. Although there is no silver bullet for promoting changes in norms, evidence suggests a need for public actions that both enhance women's and girl's aspirations and change behaviors of women and men, boys and girls, so that social norms become gender equal.

3.   Progressive constitutions and legal reforms can support the transformation of social norms. One should focus on three core areas :

(i) Ensuring that all sources of law adhere to principles of gender equality.

(ii) Supporting effective implementation and enforcement of laws   and

(iii) Expanding access to justice for all women, including through customary processes.

4.   Promoting awareness of progressive laws can help stimulate changes in norms and behavior. Evidence across different countries found that men

who were aware of laws addressing violence against women were nearly 50% more likely to prevent a stranger's act of violence.

5. Nearer and dearer, friends and as such, they placed a certain level of trust in them etc. are responsible for the violence, sexual harassment and exploitation for the women. Different Apps and some inbuilt services in the devices to prevent such situations etc. are able to prevent such type of harassment.

CNAP will empower women as :

(i) MNAP can bring a wide range of social and economic benefits to women and their families.

(ii) Women are using the power of mobile phone to unlock economic opportunities.

(iii) Women business owners in particular perceive the phone an essential productive tool, with more and more are saying they have used a mobile phone to earn additional income.

(iv) 85% women report feeling more independent because of their mobile phone.

(v) Women represent nearly 2/3 of the untapped market for mobile growth.

(vi) Tomorrow's subscribers will largely be women.

(B) Activists like :

(i) Human rights activists

(ii) Environmental activists

(iii) Animal right activists

(iv) Politicians

(v)   Social activists

(vi)   Advocacy Groups

(vii)   Journalists

(viii) Civil Society activists   etc..

It should be service provider's responsibility to register such type of customers and make proper mechanism to deactivate them if necessary with proper documentation.

(C)   The calling name identification presentation can be withdrawn for administrative reasons or at the request of the vulnerable subscribers.

There can be some cases where the calling name is not presented to the served user (This should be properly managed) :

1) If the network has been unable to determine the appropriate name information to deliver to the called party (e.g. due to interworking with a non-ISDN network), then name information with an indication of unavailability can be delivered.

2) When the calling party has an arrangement whereby presentation of calling name is not allowed, in which case an indication of privacy can be delivered.

3) The delivery of the calling name to the called party may be affected by other services subscribed to by the calling party : For example, if the calling party has subscribed to Calling Line Identification Restriction (CLIR), then the calling line identity as well as the calling name identity shall not be presented to the called party.

➢ The service should be made unavailable to an individual subscriber only after the necessary arrangements and documentaions have been made with the service providers.

➢ This should be evaluated after some period of time.

(D) It will enable an area of potential innovation.

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.**

Comments :

In addition to the telephone number of the caller, some calling technologies, such as SIP, also permit the inclusion of an optional display name field. CLI data is defined in the General Conditions as "*the contents of all signaling messages which can be used between Communications Providers and/or between Communications Providers and End-Users to signal the origin of the call and/or the identity of the calling party, including any associated privacy markings.*" Hence, CLIs may include the display name information.

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.**

Comments :   **Can Be, which are digitalized.**

There should be a third party operating a centralized database.

The onus should be rests on the receiver's operator to delve into the centralized database to retrieve and present the caller's data.

It would require that TSPs inform the database while enrolling new subscribers or deactivating existing ones.

This model will set up of a Digital Intelligence Unit at the central level and Telecom Analytics for Fraud Management and Consumer Protection (TAFCOP) for every licensed operating area.

Calling Name Presentation (CNAP) should provides the name identification of the calling party (e.g., personal name, company name, "restricted", "not available") to the called subscriber. The calling name identification (CNA) may be provided to the terminating network by the originating network or the terminating network may retrieve it or derive it using the calling number identification (CNI) which is generally provided to the terminating network from the originating network. The CNA should be considered public when presentation of the calling name is allowed, and private when presentation of the calling name is restricted. Optionally, the date and time of the call may also be provided to the called subscriber.

Redirecting Name Delivery (RND) should be a CNAP subscription option. When CNAP with RND is active and a call has been forwarded, CNAP provides the CNA of the last redirecting party and the original calling party to the called subscriber.

CNAP should not impact a subscriber's ability to originate calls or to receive calls.

CNAP may support more than one character set. It shall be possible to support more than one character set in a CNAP message. The transmitting network should indicates the character set(s) used to present the Calling Name. A Calling Name transmitted in a supported character set(s) may be used by the alphanumeric display.

Applicability to Telecommunications Services :

CNAP should be applicable to voice and circuit switched data telecommunications services.

Authorization :

CNAP may be generally available or may be provided after prearrangement with the service provider.

The authorization may have the following subscription options:

CNAP Subscription Options

Subscription Options	Values
CNAP Activation	Permanent. CNAP is active while authorized.
	Demand. The subscriber is authorized to control the activation and deactivation of CNAP.
Redirecting Name Delivery (RND)	Not subscribed. In the case of forwarded calls, it shall be the CNA associated with the calling party which is presented to the mobile station (MS).
	Subscribed. In the case of forwarded calls, the CNA of the last redirecting party and the original calling party are presented to the MS.

Deauthorization

CNAP may be withdrawn at the subscriber's request or for administrative reasons.

Registration

CNAP should not have any registration.

Deregistration

CNAP should not have deregistration.

Activation

CNAP should be activated upon authorization for a Permanent NAP Activation subscriber.

CNAP may also be activated by a Demand Activation authorized subscriber specifying a feature code.

Successful demand activation should be indicated with feature confirmation treatment.

Deactivation

CNAP shall be deactivated upon deauthorization.

CNAP may also be deactivated by a Demand Activation authorized subscriber specifying a feature code.

Successful demand deactivation shall be indicated with feature confirmation treatment.

Invocation

CNAP should invoked when the CNI associated with an incoming call is available, the called subscriber has CNAP active and the call can be presented to

the called MS. CNAP should be subjected to the restrictions of the CNA and the serving service provider.

Normal Operation with Successful Outcome

When the CNAP service is invoked, the destination network shall send the CNA to the MS during alerting on incoming calls. It may be possible to present the CNA in the subscriber's preferred language.

In the event of call forwarding when CNAP and RND are active, the CNA of the last redirecting party and the original calling party are presented to the MS.

CNI may be used to derive the CNA. Only a network-provided or user-provided (passed screening) calling party number shall be used to derive the calling party name. Only a network-provided redirecting party number shall be used to derive the redirecting party name.

Call Detail Record

The system should record call detail information for the following:

a. CNAP activation activities and events.

b. CNAP deactivation activities and events.

c. CNAP invocation activities and events.

Exception Procedures or Unsuccessful Outcome

Registration

Deregistration

None identified .

Activation

If the subscriber is not authorized for a request, the system shall apply feature denial treatment.

Deactivation

If the subscriber is not authorized for a request, the system shall apply feature denial treatment.

Invocation

(i)   If the calling name is not available, an indication that the calling name is *not available* ca be presented to the MS.

(ii)   If the calling name is available and the presentation of calling name is restricted, an indication that the calling name is *restricted* shall be presented to the MS.

(iii) If the call has been forwarded and the redirecting name is not available, an indication that the redirecting name is *not available* shall be presented to the MS.

(iv)   If the redirecting name is available and the presentation of the redirecting name is restricted, an indication that the redirecting name is *restricted* shall be presented to the MS.

(v)   In all of these exception cases, the mobile station (MS) shall provide an appropriate indication to the subscriber. It should be possible to present these indications in the subscriber's preferred language.

(vi)   If the MS does not support the character set specified by the transmitting network, no information shall be presented.

Originating providers should be responsible for ensuring that accurate CLI data is provided with a call. Transit and terminating providers should be expected to check that the number and name provided with a call is from a valid number range.

For calls that originate on a network outside the scope of our requirements (e.g. calls to or from providers not in the India, or calls that may use the public network in transit), the provider at the first point of ingress should be responsible for ensuring that the call is populated with valid CLI data, replacing the information with a number and name that has been allocated to them for this purpose where the original number or name is not valid or is missing.

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.

Comments :   **Model No. 3.**   **Mentioned above.**

➢ In the USA, the caller's name, or CNAM information, is not sent during a call. Rather, the terminating carrier is responsible for providing the Caller ID information to its customer. The terminating carrier performs a database lookup using the caller's phone number to obtain the name information to display with Caller ID. If the data is with another carrier, then the terminating carrier must perform a lookup and pay a small "dip fee" to the carrier hosting the

information. Wholesale rates for the fee are on the order of $0.002 to $0.006 per database dip ($200 to $600 per 100,000 calls).

➢ Incorrect Caller ID information can be displayed under a variety of circumstances. The customer's carrier may not perform the database lookup and may supply old information. Or, the customer's carrier may perform the database lookup but get incorrect information from the database owner. In this case, the database owner has stale information (and not the terminating carrier). Or, the Caller ID information may be spoofed.

➢ Incumbent Local Exchange Carriers (ILEC) usually provide the most correct information. ILECs have a huge database of their own CNAM data, and ILECs are willing to pay the CNAM database dip fee to another ILEC or a Competitive Local Exchange Carrier (CLEC) to obtain the CNAM data.

Calls originating on networks outside the India :

❖ Indian service providers who receive these calls have an important role to ensure that only calls which meet the requirements in the general conditions should be connected to the recipient of the call.

❖ Only valid calling line identification data should be presented to the recipient of the call.

Definitions :

The CNAP supplementary service provides for the ability to indicate the name information of the calling party to the called party at call set-up time for all incoming calls. And the calling party should take no action to activate, initiate, or in any manner provide Calling Name Identification Presentation. The storage and

delivery of the calling party name are network functions. The called party should automatically receive the name information.

There should be centralized online portal, customer should get the correct calling number is displayed, verifies that the correct name is assigned to each telephone number for outbound calls, and measures the performance of caller names to adjust to improve answer rates.

Specific terminology

For this purposes, the following definitions can be apply :

1. **Calling name**: Information associated with a specific calling party number. The maximum length should at least 15 characters and may be up to 80 characters **associated with specific calling party.** The exact length, format and character set of the calling name to be delivered can be a service provider option.

    It may be possible to present the CAN in the customer's preferred language.

2. **Calling name identification user**: This is the party who is the called party.

3. **Name information**: In addition to the name, the character set used should be identified to enable the correct presentation of special characters, etc. to the user.

Definition of Presentation Indicator:

In addition to or instead of the name identity, the network may give a Presentation Indicator to the called mobile subscriber of the CNAP service. The following information may be given: - Presentation Indicator (PI) showing:

a) presentation restricted, or

b) name unavailable.

The calling name information of the calling party includes either the calling name identity or an indication of privacy or unavailability.

1.   Calling Name Presentation (CNAP) :

1.1   Handling of calling name presentation

1.1.1 Originating Mobile switching center (MSC) Activities :

The originating MSC may include calling name information in the Setup.

1.1.2   Terminating Visited Mobile Switching Center (VMSC) Activities :

The calling name identity shall be provided by the terminating VMSC to the Mobile Station (MS). The MSC shall determine the presentation indicator to be sent to the CNAP subscriber's MS by combining the presentation indicator in the calling line information (if available), the presentation indicator in the calling name information (if available) and the presentation indicator in the response from the name database (if applicable). The calling name shall be restricted if either the line or name indicator shows the information is to be restricted (and override category is not applicable). The precise handling depends on the structure of the name database. If a name database query is not possible, e.g. calling line identity is unavailable, name database is not responding, or the name database response timer expires, then the MSC shall send a presentation indicator of name unavailable to the CNAP subscriber's MS. A character translation may be required by the terminating MSC since the name characters stored in the name database are not using the GSM default alphabet (name characters passed to the CNAP subscriber's MS use the GSM default alphabet).

1.3 Information stored in the Central Database :

The Central Database shall store the logical state of CNAP (which shall be one of the valid state listed above) on a per customer basis.

1.4 Transfer of information from Central Database to Visitor Location Register (VLR) :

If the provisioning state for CNAP is "provisioned" then, when the subscriber registers on a VLR, the Central Database shall send the VLR subscriber information about the logical state of CNAP.

If the logical state of CNAP or the override category is changed while a subscriber is registered on a VLR, then the Central Database shall inform the VLR of the logical state of CNAP. If the override category is changed and the provisioning state of CNAP is "Provisioned", then the Central Database shall inform the VLR about the new override category when the VLR is in the Home Public Land Mobile Network (HPLMN) country. The Central Database may inform the VLR about the new override category when the VLR is outside the HPLMN country.

1.5   Information stored in the VLR For CNAP, the VLR shall store the service state information and override category received from the Central Database. If not received from the Central Database (in case of roaming outside the HPLMN country), the override category shall be set to the default value "no".

Diversion services

When the call has undergone call forwarding, a called party may receive the names of the calling party, original called party, and last diverting party, depending on the availability of each name. That is, names of the various parties in a call are presented to a called party according to the same rules as apply to the number of calling party, original calling party, and last diverting party.

There should no Impact on :

1. Call hold (HOLD)

2. Call transfer services

3. Call Waiting (CW)

4. Closed User Group (CUG)

5. Completion of calls services :

   (i)   Completion of Calls on No Reply (CCNR)

   (ii) Completion of Calls to Busy Subscriber (CCBS)

6. Conference services

7. Call Forwarding   etc..

When more than one supplementary service is active, new logical situations, decisions, priorities etc. may arise, this should be identify and define the resolution of such situations as they affect subscriber perception of the service. Social parameters may therefore be required, e.g. allow, where possible, the simultaneous use of different supplementary services by on mobile subscriber.

Incorrect Caller ID information can be displayed under a variety of circumstances :

- The customer's carrier may not perform the database lookup and may supply old information.

- Or, the customer's carrier may perform the database lookup but get incorrect information from the database owner. In this case, the database owner has stale information (and not the terminating carrier).

- Or, the Caller ID information may be spoofed.

Incumbent Local Exchange Carriers (ILEC) usually provide the most correct information. ILECs have a huge database of their own CNAM data, and ILECs are willing to pay the CNAM database dip fee to another ILEC or a Competitive Local Exchange Carrier (CLEC) to obtain the CNAM data.

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?

Comments :

The call setup success rate is one of the key performance indicators (KPIs) used by the network operators to assess the performance of their networks. It is assumed to have direct influence on the customer satisfaction with the service provided by the network and its operator. The call setup success rate is usually included, together with other technical parameters of the network, in a key performance indicator known as service accessibility.

In many practical cases, the definition needs to be further expanded with a number of detailed specifications describing which calls exactly are counted as successfully set up and which not. This is determined to a great degree by the stage of the call setup procedure at which a call is counted as connected. In modern communications systems, the call setup procedure maybe very complex and the point at which a call is considered successfully connected may be defined in a number of ways, thus influencing the way the call setup success rate is calculated. If a call is connected successfully but the dialed number is busy, the call is counted as successful. Another term, used to denote call attempts that fail during the call setup procedure, is blocked calls.

The main reasons for unsuccessful call setups in mobile networks are lack of radio coverage (either in the downlink or the uplink), radio interference between different subscribers, imperfections in the functioning of the network (such as failed call setup redirect procedures), overload of the different elements of the network (such as cells), etc.

In mobile networks call setup time is achieved by improving radio coverage, expanding the capacity of the network and optimizing the performance of its elements, all of which may require considerable effort and significant investments on the part of the network operator.

6.1 Handoff control is mainly based on :

(A)   Network   or

(B)   Terminal or Mobile triggering.

(A)   Network triggered can be controlled by :

(i)   Target selection in the network may be enhanced with additional parameters to finely tune the handoff criteria.

(ii)   Network can be tuned to trigger handoff based n highly granular information e.g. aggressive   handoff regiment depending on deployment circumstances.

(B)   Mobile Triggered :

The mobile makes the Handoff decision potentially with assistance from the network. It may be obtained by :

(i)   Network push

(ii)   Network receives measurement information

The degree of network assistance i.e. what information is provided will determine the performance of the handoff.

6.2   Circuit switched Fallback (CSFB) is the most commonly used method to support voice services over the Long Term Evolution (LTE) network today. The Key factors impacting CSFB call setup delay are :

6.3   The lack of suitable radio access planning, RF optimization and interference management or poor inter-working of both networks can lead to a verity of issues.

6.4   Network optimization related issues, Network configuration related issues and Network implementation related issues can leads to call setup delay.

6.5   The studies of well optimized deployments shows that on an average, Mobile Originated (MO)/Mobile Terminated (MT) call setup time for CSFB from the LTE to UMTS is around 1 second greater than legacy UMTS. However the results can vary depending on the network configuration and the conditions of the measurements.

We feel that in well optimized networks, the call setup time success rate can be very close to the required timings.

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.

Comments :   Yes.   Mentioned above.

The data that is attached to a call is called Calling Line Identification (CLI) data. It consists of a number that identifies the caller and a privacy marking,

which indicates whether the number can be shared with the person receiving the call. Ensuring that the CLI data includes a valid, dialable number, and that the caller has authority to use the number, is important so that people have accurate information about who is making a call when they receive it. This can help them decide whether or not to answer the call.

We request to modify the rules to require providers, where technically feasible, to identify and block calls with CLI data which is invalid, non-dialable, or which does not uniquely identify the caller.

This should help providers to identify and block calls that have inaccurate CLI data. Blocking calls that do not comply with the rules for CLI data will mean that calls with the most obviously spoofed CLI data will not reach the intended recipient. This should help reduce the number of scam calls reaching consumers and ultimately the number of people being scammed in this way.

If implemented, this will help to bring some immediate benefits to consumers by helping to block more scams calls. Over the longer term, having processes that detect and block spoofed numbers more comprehensively will be important to help tackle scam calls. TRAI should explore the introduction of technical standards that make it possible for the network originating the call to confirm the caller's authenticity before passing it to the network of the person receiving the call, referred to as 'CLI authentication.'

CLI data can also be used for other purposes, such as call tracing to identify the source of unwanted calls, or as a reference to help identify the location of a caller in emergency situations. To be effective, the CLI data must accurately identify the caller, meaning that the number is one which the caller has the

authority to use, either because it is a number which they have been allocated or they have been given permission by a third party who has been allocated that number.

The ability to make calls over the internet ('IP calling') has made it cheaper to generate calls and has resulted in an increase in the volume of unsolicited calls. Using IP calling, providers (and some callers) can more easily manage and manipulate the CLI data provided with a call. Consequently, the CLI data that is provided may not always be accurate and it can be intentionally misused for a variety of malicious reasons, most obviously by 'spoofing' the identity of a caller to mislead the recipient of the call.

Interworking considerations

In the case where the calling and called users' networks use different character sets there may be a possibility to perform translation.

Interworking with non-ISDNs

When the served user's network supports a smaller maximum calling name length than that of the calling user, and the length of the calling name supplied exceeds this maximum, then the name shall be truncated and characters in excess of this maximum shall not be presented.

Interworking with private ISDNs

Calls originating in private ISDNs may include the calling name identification. If this information is missing, then the private network calling line identification is used to determine the associated calling name.

Exceptions While Roaming

None identified.

Exceptions During Intersystem Handoff

None identified.

Interactions with Other Wireless Services :

Asynchronous Data Service (ADS)

None identified.

Call Delivery (CD)

None identified.

Call Forwarding—Busy (CFB)

None identified.

Call Forwarding—Default (CFD)

None identified.

Call Forwarding—No Answer (CFNA)

None identified.

Call Forwarding—Unconditional (CFU)

If the called subscriber has CNAP active, the CNA may be presented to the called subscriber during the abbreviated (or reminder) alert.

Call Transfer (CT)

None identified.

Call Waiting (CW)

If the called subscriber has CNAP and CW active, the CNA shall be presented with the CW notification.

Calling Name Presentation (CNAP)

Nome Identified.

Calling Name Restriction (CNAR)

None identified.

Calling Number Identification Presentation (CNIP)

None identified.

Calling Number Identification Restriction (CNIR)

None identified.

Conference Calling (CC)

None identified.

Data Privacy (DP)

None identified.

Do Not Disturb (DND)

None identified.

Emergency Services

None identified.

Message Waiting Notification (MWN)

None identified.

Network Directed System Selection (NDSS)

None identified.

Non-Public Service Mode (NP)

None identified.

Over-the-Air Service Provisioning (OTASP)

None identified.

Password Call Acceptance (PCA)

None identified.

Preferred Language (PL)

None identified.

Priority Access and Channel Assignment (PACA)

None identified.

Remote Feature Control (RFC)

None identified.

Selective Call Acceptance (SCA)

None identified.

Service Negotiation (SN)

> None identified.

Subscriber PIN Access (SPINA)

> None identified.

Subscriber PIN Intercept (SPINI)

> None identified.

Three-Way Calling (3WC)

> None identified.

User Group (UG)

> None identified.

Voice Message Retrieval (VMR)

> None identified.

Voice Privacy (VP)

> None identified.

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?**

Comments : **Yes.** **Mentioned above.**

Technical specification should be prepared and approved by TRAI, based on Telecommunication apparatus Type Approval Regime. The main scope of this

specification should be to enable Calling Name Presentation in all mobile devices operation in the Indian mobile networks.

Several technical specifications may apply to the equipment. If equipment within the scope of this technical specification should also incorporates functions that are covered by another technical specification, the relevant technical specification should applied to each function separately. The influence of one function on the other should be taken into account.

Phones already approved and operating in India needs to meet the new requirement. Registered dealers are required to update the software to ensure the devices are in compliance.

The Telecommunications Regulatory Authority (TRA) of United Arab Emirate has announced a new Calling Name Presentation (CNAP) feature that is now a requirement for all mobile phones sold in UAE, both new and existing products on the market.

Phones already approved and operating in UAE still need to meet the new requirement. Registered dealers are required to update the software to ensure the devices are in compliance.

The Technical Specifications published by 3rd Generation Partnership Project (3GPP) and **European Telecommunications Standards Institute** (ETSI):

- ETSI TS 122 081

- Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Line Identification supplementary services; Stage 1

- ETSI TS 122 096

- Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Name identification supplementary services; Stage 1

- ETSI TS 123 096

- Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Name identification supplementary services; Stage 2

- ETSI TS 124 096

- Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Name Identification supplementary services; Stage 3

- ETSI TS 124 080

- Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Mobile radio interface layer 3 supplementary services specification; Formats and coding

- ETSI TS 124 196

- Universal Mobile Telecommunications System (UMTS); LTE; 5G; Enhanced Calling Name (eCNAM)

- ETSI TS 122 173

- Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; IP Multimedia Core Network

Subsystem (IMS) Multimedia Telephony Service and supplementary services; Stage 1

Mobile devices Behavior

All mobile phones should implement and comply with the following behaviors:

1- Mobile handset should be configured to receive and display the calling name from the network.

2- Mobile handset should present the calling name and the calling number in the full screen mode.

3- Mobile handset should display the calling name with or without the calling number in the banner.

4- Handset should support the capability to reply and call back the received call with the name presented.

5- Mobile handset should display the calling name and the calling number in the history of the call log.

6- Calling name presentation feature should be enabled for GSM, UMTS, LTE, VoLTE and 5G and any new technology.

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

Comments : **Yes.**

The three most common types of call centers are :

(i) Inbound call center

(ii) Outbound call center

(iii) Blended call center

Importance of call centers

Customers have high expectations for customer service. They want their issues addressed and handled quickly and efficiently. Organizations must have representatives available when customers call for service or support, and those with call centers can more effectively assist customers in need. Call centers can make an organization available 24/7 or during a time window that matches customer expectations.

Customer phone calls have value beyond customer service. With some products or services, phone calls are the only interactions organizations have with customers -- therefore, the only opportunity to personally connect with customers.

Online merchants, telemarketing companies, helpdesks, mail-order organizations, polling services, charities and any large organization that uses the telephone to sell products or offer services and uses call center, should display their organization's or company name along with number.

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.

Comments :   Yes.   Mentioned above.

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

Comments :   Yes.   Mentioned above.

Along with company or organization's name – principal entity.

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.**

Comments : No comments.

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.**

Comments : Yes. Along with principal name.

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

Comments :

1. The name could be slightly different from the legal name or a name that they are most commonly referred.

2. Preferred name may be used as long as it is not in any form of misrepresentation or fraud.

3. TRAI should have right to remove the preferred name if it contains inappropriate or offensive language.

4. Preferred First Names should be limited to standard alphanumeric characters (e.g., A–Z, a–z, numbers), single spaces, apostrophes, and hyphens.

5. Commas, diacritical marks or more than one space in the preferred name should not be used.

6. TRAI should reserve the right to reject or remove a Preferred First Name if deemed inappropriate.

7. Procedure should be laid down to change the preferred name.

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.

Comments : **No.**

National Telecom Policy - 2012 recognizes that the evolution from analog to digital technology has facilitated the conversion of voice, data and video to the digital form. Increasingly, these are now being rendered through single networks bringing about a convergence in networks, services and also devices. Hence, it is now imperative to move towards convergence between various services, networks, platforms, technologies and overcome the existing segregation of licensing, registration and regulatory mechanisms in these areas to enhance affordability, increase access, delivery of multiple services and reduce cost.

Further, it envisages providing secure, reliable, affordable and high quality converged telecommunication services anytime, anywhere for an accelerated inclusive socio-economic development. One of the objectives of the National Telecom policy-2012 is "Strive to create *One Nation - One License*" across services and service areas.

After considering the recommendations of TRAI for Unified Licenses, the Government has decided to grant Unified License (UL). The basic features of UL for this consultation paper are as follows:-

Authorization under Unified License comprises and cover all services.

As per conditions of the License Agreement, cellular operators are free to provide, within their area of operation, all types of mobile services including voice and non-voice messages, data services and Public Call Offices (PCOs) utilizing any type of network equipment, including circuit and/or package switches that meet the relevant International Telecommunication Union (ITU) /Telecom Engineering Centre (TEC) standards.

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

Comments :

TRAI should carry out follow-up research into the incidence of call and text scams to help and monitor the impact of work that they and others are doing, including where to focus the efforts as scammers evolve their tactics. The research will also inform about the continued work to raise awareness of scams

and the steps people can take to protect themselves. TRAI should also continue to collaborate with other organizations working to reduce scams as part of a coordinated approach.

- Just by showing the identity would not mean much, once the system (to identify and mark spammers) gets built and hundreds of people are able to utilize the system, only then would the system have a meaningful impact.

- The interface should be user friendly with an effective mechanism. Active participation from the **subscribers would ensure that spammers are rightly identified** and are unable to make further calls.

- The government and TRAI must **also invest in creating digital literacy, skilling citizens to navigate and use the tech better,** ensuring they do not share their data indiscriminately and are informed about dangers such as financial frauds and spoofing.

Yours faithfully,

(Dr. Kashyapnath)
President