To.

Dear sir/madam,

At first, I indeed appreciate TRAI's efforts & dedication for nation building.

Now, on the topics.

I would re-arrange the sequence of questions for conveying my message.

Q. 15 - Any other issue related to the matter of Consultation.

Answer:

A. Long & cheap talks --- is not Everything:

"Mobile numbers" today, has been very important in the "Two step verification process" of the digital transaction. People believe mobile numbers are safer than email id.

Below average Indians don't remember user id & password, or they casually shares user id & password with others when some problem arises & long term security is compromised. But that is not case with OTP. OTP perfectly suits average or below average Indian.

PLMN / PSTN system has been proven extremely secure in delivering OTP whenever security / identity verification is required.

Whatsapp & many other banking applications also rely on - send & check message from the correct number for precise & perfect identity verification.

Thus, mobile number of current system has become "one very important step" in "Two step verification process" of digital transaction.

This security is because of extreme security against SIM cloning (using V2 & V3 versions, using **physical** k_i **key** & k_c key etc.) & other measures.

Open/Public Internet based VoIP is quite less secure.

If "Virtual Phone Numbers" (just like in USA, Google fi application user is given a separate telephone number) are allowed & allotted, many (really many) non-serious players will also jump in the business of "Virtual Mobiles" (because it only needs application development & nothing on infrastructure).

Now, as the fraction of mobile numbers (-- virtual phone numbers) will go & run on **public internet** (which is prone to attacks by notorious but best minds of the world), it will disturb the abovementioned developing sentiment of "Mobile Numbers" in digital payment.

Thus, today, a long & cheap talk is not only mobiling.

Mobiles have become identity of the person with quite high security.

Why to infringe the current good system of "SIM based mobile numbers" only for sack of LONG TALKS?

B. Competition between Virtual Phones Numbers & TSPs

Allowing the virtual phone numbers will be hazardous to telecom sector growth in India. It will move the premium users' traffic from TSPs to ISPs (like e.g. Hathway etc.).

Because of shift of premium users, TSPs may face extreme loss of revenue and therefore infrastructure cut.

ISPs are more or less the commodity of urban or premium segment of India. We should focus on "Connectivity to All & Everywhere" in India, which can only be done by TSPs.

Allowing application based phone numbers will create "<u>Growth-less growth</u>". That means 10s to 50s new virtual phone applications will mushroom out & earn profit, but they will not be interested in infrastructure growth. (Ultimately rural areas will suffer.)

C. VoLTE is the solution (and not the VoIP over public internet virtual phones):

The consultation paper on internet telephony RIGHTLY says that by using packet based system the bandwidth is utilized most efficiently rather than circuit based system.

TSPs are now shifting towards VoLTE - efficient "packet based system" (data only system)

Therefore, the regulator must encourage VoLTE – a data only technology in pan India, which will result in growth of infrastructure, technology & efficiency.

And must discourage Application based VoIP over public internet, which only eats the "cream" without any liability / interest in infrastructure growth.

In conclusion:

- 1. Virtual Phone numbers must not be allowed or allotted. It will confuse the system & It will vanish the rightly developed public perception of secure OTP for digital transaction. & will hurt use of mobiles in the revolution of digital retail payment.
- 2. The current policy of "Not allowing VoIP calls to terminate on PLMN/PSTN number" must be withheld.
 - If we allow the competition between physical & virtual players, we know the "Long free talks (i.e. virtual players)" will eat up the creamier part, but losers will be the tele-infrastructure & rural population of India.
- 3. Regulator must encourage VoLTE for imparting efficient use of limited natural resource bandwidths.
 - Necessary changes must be made in policy to allow VoLTE use & calls.

Answers: Q – 1 - 2 & 4 - 14:

"Internet Telephony" must not be allowed.

Average Indian, at present is not harassed by unaffordable call rates. Call rates are quite moderate at present. So, there is no call rate chaos in India. It is possible for person from village to recharge for 100 Rs and stay connected for 6 months.

India has seen tremendous mobile revolution where almost everyone now has mobiles. <u>The role of TSPs in the India mobile story is really appreciable.</u>

TSPs will invest & remain long if they earn. The high quality TSPs are here because India has predictable ARPU even though it is low. Allowing VoIP will make ARPU unpredictable and so the investment.

What India needs at present is - "Connectivity to All & Everywhere"

And that can't be done by VoIP. VoIP will rather hurt it. Regulator rather should encourage VoLTE so that high speed internet reaches to the farthest part of India.

Answer of Q-3:

In consultation paper, example of BSNL is given. BSNL has started application & internet based calling from their fixed line plan.

Someday XYZ company (with PLMN/PSTN license) will evolve with only 5 towers in whole India and will start selling lacs of SIM cards.

And will allow the customers to call from internet application with the SIM number. That means no infrastructure is required. This seems OK where internet is prevalent, but not OK where internet is not there, like in average village home.

Slowly 20s to 50s similar companies will evolve & without investment in towers, they will start competing with genuine players only targeting metro & semi metro customers & no care of rural customers & no rural infrastructure.

It should be considered a "Foul Play". It is same as "Virtual Phone Numbers"

A following rule must be made

"It is not allowed for the licensee to initiate or terminate "phone number traffic" over the public internet."

I would like to mention that I have no conflict of interest with any company in writing this suggestion. I am only the concerned citizen of India, taking part in my nation building. The names of companies I have mentioned are just for explanation & the details are as per my best knowledge. If my understanding is error-some, I apologize to the concerned one for it.

Sincerely,

T B Barot