



Mr. Lav Gupta
Principal Advisor
TRAI.

Comments on consultation paper: Issues related to Telecom Infrastructure

Sir,

Coral Telecom has comments & observations on some of the issues mentioned in the paper regarding Telecom Infrastructure. You may note our comments & accord the merit they deserve

One of the biggest challenges we face in this country is the great divide that exists between “the haves & the have nots”. Ever expanding gap & paucity of opportunities to involve rural masses in the “money making business” is the cause of most social unrests including terrorism.

Approach papers at TRAI should consider softer aspects of “inclusive Growth”, by creating entrepreneurial models where our youth could own and feel involved in the wealth creation business of ICT. Any tangible solution, at the macro level must be an “inclusive solution” that addresses concerns of employment, Opportunities to own Telecom networks & Opportunities to own and manage telecom technologies.

Telecom in India is fast becoming a business for the elitist of elite. Smaller Telecom players like PCO operators, Internet Café owners & DID franchisees, who once contributed to ICT penetration are fast getting marginalized. Present paper should be modeled to create entrepreneurial opportunities for erstwhile telecom players and for our Rural youth.

6.1 Do you agree with the classification of infrastructure elements described in this chapter? Please indicate additions/modifications, if any, particularly where you feel that policy interventions are required.

PCO operators, Internet Café owners & DID franchisees, who once contributed to ICT penetration are fast getting marginalized. They should be encouraged to take IP1 license and allowed to install & operate active telecom & IT equipment within the buildings / private campuses.

They should be allowed to own these stand alone mobile networks that are access agnostic and provide private fixed / mobile services in the private network just like a PBX.



As regards the radio frequency for transmission, a small spectrum band (spot frequencies) could be earmarked for running such private services. This spectrum could be released on Non exclusive, Non-interfering & Non protective basis for use in low power devices within the private campus at the discretion of the premises owner. Same spectrum band will be used by the adjacent building / campus.

These network operators like (DID operators) will provision wired & wireless services within the building, Mall or campus. These private networks should be access agnostic capable of interconnecting with PSTN / IP or GSM networks based on the commercial decision of the private operator.

If such networks are backhauled to a TSP then seamless services can be provided. MSN code and the numbering plan of the TSP could be used.

These networks are complimentary to the TSP networks as all the traffic outside the private network would be carried by the TSP. These private networks would act as concentrators of ICT traffic.

TRAI should create an ecosystem to enable these entrepreneurial models that are governed by a set of rules similar to the ones of DID operators.

This model can be replicated for provisioning services in Villages / Rural areas, Islands, Mines, Underground dams etc thereby creating lacs of jobs & business opportunities for our Youth.

Mobile Virtual Network Operator

6.6 Please give your comments on the changes proposed

Operators as mentioned above are miniature version of an MVNO. They may offer “Fixed mobile Converged” services. They may share the TSP’s spectrum or a small spectrum band may be de licensed for such low power applications. These micro MVNOs may share active network elements like MSC & billing services or may have independent control, depending on the business case.

Legal interception requirements may be like a PBX if the unit is within a small campus but may be stringent if deployed in rural areas. Roaming services and seamlessness can be provisioned depending on the business case.

TRAI may need to create a very simple & easy licensing mechanism to enable such entrepreneurial ventures.





In- Building Solutions

6.7 What methods would you propose for reduction of the number of towers?

It is a fact that 70% of the mobile phone calls are made when the caller is sitting within his office / building. These calls (voice & data) can be routed through private GSM networks set up within the buildings and can flow out over the terrestrial connectivity thus decongesting the scarce and expensive spectrum. Backhaul from these networks could be access agnostic i.e IP, PSTN, A-bus or STM1.

In the topology mentioned above Voice & data traffic will be backhauled out of the private campus / building over terrestrial mode which will not only optimize the usage of already laid out copper plant at present but will become a necessity as data usage increases.

TRAI may recommend reservation of 3MHz spectrum in 900 /1800 / CDMA bands for In-building applications to take away the load from the macro network. These networks could be “fixed mobile converged” networks so that wired PBX extensions & GSM extensions work seamlessly.

This will reduce the requirement of outdoor BTSs and make the city wide spectrum usage more efficient.

6.8 In what ways do you think that IBS can be encouraged for better in building coverage, better QoS and reduction in level of radiated power from Macro cell sites?

It is a well-known fact that over 70 to 80% of the calls are made when a person is inside the building.

With over 20 million subscribers getting added every month, mainly from urban areas, the quality of service is going to get deteriorated and need for spectrum will increase.

Subscribers have great expectations regarding third-generation services. With the introduction of 3G services in the country, it needs to be ensured that the new services are made available everywhere, where 2G services are already covered.

Notwithstanding, many 3G networks deployed to date have been designed primarily to provide good coverage in outdoor environments—not inside buildings





To encourage IBS for better in-building coverage, better QoS and reduction in level of radiated power from Macro cell sites, we propose that a 3 MHz

spectrum in GSM/CDMA bands may be reserved for IBS / Private GSM network applications.

6.9 How can sharing of IBS among service providers be encouraged? Does TRAI need to issue any guidelines in this regard?

This business opportunity for setting up Private GSM networks should be reserved for small and mid size entrepreneurs to involve them in the ICT business. This will a step towards “Inclusive Growth”.

Distributed Antennae Systems

6.10 Do you agree that innovative technologies such as ‘Distributed Antenna System’ (DAS) can be effectively utilised to reduce number of towers and migrate towards tower-less cities?

Yes, DAS deployment should be encouraged & th business opportunity be reserved for small entrepreneurs who would set it up and charge TSPs for providing these services.

Warm regards

Rajesh Tuli

