

Date : 28 January 2012

To :

Shri Sudhir Gupta, Pr. Advisor (MS), TRAI,

Telecom Regulatory Authority of India

Mahanagar Door Sanchar Bhawan

Jawahar Lal Nehru Marg (Old Minto Road), New Delhi-110002

Telephone No: +91-11-23220018,

Fax No: +91-11-23212014

Email: pradvmn@traigov.in

From : Khera TMT Consulting Private Limited (KTMT)

343 Sector 29 Noida 201303

Tele – 0120-4318375

Info@ktmt.in

Subject: Comments on TRAI Consultation Paper No. 9/2011

“Allocation of Spectrum Resources for Residential and Enterprise Intra-telecommunication Requirements/ Cordless Telecommunication Systems (CTS)”.

Company presentation

(Presentation on Company/Organization)

As per the web site at www.ktmt.in

Issues for Consultation

3.1 Whether the current allocation of spectrum for CTS is sufficient to meet the requirements? If not, then how to meet the demand of cordless telephony spectrum requirements?

The current allocation of spectrum in the band 1880-1900 MHz appears to be sufficient for voice services. For data and video services, the CTS spectrum is likely to fall short when NOFN in the back bone and in cities under the NBP comes up by 2014-2015. NBP has left the edge and access networks upon the private players to bring up. Private players have hardly invested in edge and access networks built around FTTB or FTTP since 1994. Even if they see good ROI in high speed high capacity FTTB/FTTP access networks, this is going to take a long time due to ROW/PROW issues. CTS with CAT iQ for data and video can be ideal for residential clusters, SOHO, SMEs, corporates, factories, plants etc. Thus, it is a good idea to keep another 10 MHz spectrum in 1900 MHz other than the current 20 MHz in 1880-1900 MHz band.

3.2 In view of the availability of cellular mobile services in the country and possibility of Fixed Mobile Convergence (FMC), is there any need to have DECT Phones?

Cellular phones are quite ubiquitous and some of them are also used in CUG in the enterprise segments. Femto cells are likely to be deployed as and when these become affordable. These would offer cellular phone service while being back hauled through a fixed broadband. However, the capacity of femto cells is really limited to not more than 3, 5, 7 lines and so on. High capacity femto cells are not viable as they become costly and have hand-off and interference issues. This deficiency of capacity of femto cells in the enterprise segment needs to be made up. Ubiquitous use of cell phones in enterprise segment, urban and dense urban areas would cause congestion. It is here that CTS spectrum employed as part of DECT for voice, video and data would come handy. There is a very good possibility of affordable multi mode cell phones having GSM, Wi-Fi and DECT coming up to serve the need for efficient voice, data and video services using one hand set.

3.3 Is there any requirement of allocating spectrum for digital CTS, in view of similar solutions being available in already de-licensed band 2.4 & 5.8 GHz?

The de-licensed bands really need to be coordinated for interference free service. Wi-Fi data service has shot up in popularity in a very big way. However, being uncontrolled, it suffers from interference and security where the deployment is huge and usage very high. We are not likely to see a big wired last mile in future. Thus, to cater for interference free and secure last 100 meter access for scaled up CTS voice and video service, the de-licensed bands of 2.4 and 5.8 GHz would not meet the requirement.

3.4 Whether de-licensing of the spectrum for digital CTS applications will be the right path?

We have had cases of licensed spectrum being used for WiMAX services for BWA. The spectrum fee even for the WiMAX CPE has become a barrier in the mass deployment of this BWA technology. The cable dry areas require BWA but spectrum charges make the service cost prohibitive and carriers do not even bother to offer this in those areas. Live example in Delhi itself is the area of Wazirabad. MTNL is

not present with its wire line. Carriers have not deployed many BTSs for EVDO or 3G due to capex constraint. GPRS/EDGE do not meet the requirements. BWA through WiMAX is a very good option but carriers find it cost prohibitive. Only low grade Internet service available is through LCOs LAN based infrastructure having no OSS/BSS/CRM. This is the case in Delhi. Rest of the peripheral areas in the country even around good cities would have similar situation. To make CTS viable as a scaled up technology for last 100 meters, the spectrum should not be charged.

3.5 Do you agree that the 1880-1900 or 1910-1920 MHz band (TDD Mode) be allocated for digital CTS applications? If yes, what should be the limits of emitted power (EIRP), power flux density (pfd), antenna gain etc?

We should follow the ETSI standards in this regard which the EU has adopted successfully.

3.6 Do you see any coexistence issues between existing cellular systems using adjacent band with low power CTS allocations in 1880-1900 or 1910-1920 MHz band?

The ETSI limits for CTS enable very smooth co-existence between GSM and CTS in EU. India can take a cue from there.

3.7 Whether the de-licensing of either 1880-1900 MHz or 1910-1920MHz band for low power CTS applications will result in loss of revenue to the government?

India has 1 million wired EPABXs. Assuming each EPABX has around 25 lines on an average, there are minimum 25 million EPABX lines in the country. We can assume another 25 million local lines coming up for high residential, SOHO, SMEs, enterprise, corporate, factories segments. Assume, another 25 million local lines for normal residential segment, thus, 50 million more lines can come up by 2016. If de-licensed CTS is available for deployment, the period may be shortened to 2015 even. The loss of revenue due to de-licensing, would be off set by quicker and scaled up proliferation of voice, data and video services which if left up to wired or BWA technologies alone would take much longer, less number of people would subscribe to the service and apart from delay, the revenue share for the government would also reduce. No loss of revenue is foreseen due to de-licensing of the band.

3.8 Will there be any potential security threat using CTS ? If yes, how to address the same.

CTS is digital and thus inherently secure. The control of power as per ETSI standards would ensure that to intercept the CTS transmission, the equipment must be very close to the terminal or base station. Such close placement of interception equipment can be easily detected through normal surveillance means. Sensitive government offices may not use the CTS.

3.9 Amongst the various options of digital technologies available to meet the cordless telephony requirements, either spectrum allocation can be considered according to technology or the etiquettes/specifications can be defined for the de-licensed spectrum band. What method of allocation of spectrum for digital CTS applications should be adopted?

In this case, we have clear deployment of CTS complying with ETSI standards in the EU. We should follow those proven methods as we are not doing any new R&D.

3.10 Any other issue?

India unfortunately has a huge slum area mushroomed in all the big cities. It is impossible to rehabilitate slums very quickly. Mumbai alone is 65 % slum. There is no wire line service in slums. Mostly people subscribe to mobile pre-paid service mainly for voice. Data and video services on 3G and above would be costly for these people. CTS with CAT iQ can give them Internet service very cheap. There is a very good possibility of mass usage of Internet through CTS with CAT iQ amongst the slums. India needs very quick penetration of Internet in masses to enhance its GDP. CTS in de-licensed band of 1880-1900 and 1910-1920 can help achieve the government objective of mass penetration of Internet.