

The Secretary,  
Telecom Regulatory Authority of India,  
New Delhi.

TEMA/TRAI/149/04  
July 15, 2004

**Sub : Comments on Consultation Paper No. 11/2004 on Spectrum related issues**

Dear Sir,

As you are kindly aware, TEMA is an apex body of Telecom Equipment Manufacturers of India.

We have perused and discussed with our Members the Consultation Paper on Spectrum related issues : Efficient Utilisation, Spectrum Allocation, and Spectrum Pricing – Consultation Paper No. 11/2004. We wish to submit the following observations for your kind consideration in relation to the Band 1880 to 1900 MHz.

The moot question is;

- I. **“Whether the band 1880 – 1900 MHz be made technology neutral for all BSOs / CMSPs / UASLs and be made available paired with 1970 – 1990 MHz or should it be kept technology neutral but reserved for TDD operations only” ?**

**Our submission is as follows :**

a) Existing provisions:

Given the existing allotment of the 1880-1900MHz band for **"microcellular WLL systems based on TDD access techniques, especially indigenously developed technologies, capable of co-existence with multiple operators in the frequency band 1880-1900 MHz on a case-by-case basis"** as per IND 49 of NFAP – 2002 and the fact that multiple service providers are using this band to provide fixed wireless services of voice and data connectivity, this allotment be left un-touched.

b) Issues associated with Technology Neutrality:

This allocation is already technology neutral, to the extent that it can be, except that it specifically encourages the use of indigenous technologies by way of giving an encouragement to technology development in India.

In any spectrum allocation, even while being technology 'neutral', it is imperative to specify

- ~~the~~ the duplex type (here, TDD),
- ~~the~~ method of sharing spectrum among operators (here, co-existence),
- ~~the~~ channelisation
- ~~the~~ emission characteristics (here, specified in qualitative terms as "micro-cellular").

Thus, the allocation is already as technology neutral as possible in terms of spectrum allocation. There is no need for any changes in the allocation of this band and should be reserved exclusively for TDD operations only.

c) Ground Realities:

Currently, the band is used for the corDECT based fixed wireless services by at least 7-8 users / service providers, creating over 700-800 Exchange / Access locations and serving more than 6-8 lakh subscribers. Further opening the band for technologies such as GSM / CDMA (which are high power mobile systems, as against the low power corDECT) would mean that all the existing operators' services will be disrupted. None of these air interface standards can co-exist in the same 'air-space' without affecting the normal functioning of each other. CorDECT with its Relay Base Stations has a range of up to 35 kms, and higher power systems such as CDMA / GSM based systems can serve subscribers up to 35-40 kms, that would mean that if these systems have to co-exist without causing interference to each other, they must be at least 40-50 kms away from each other.

d) This band is specifically allotted for micro-cellular WLL systems based on TDD access technique, especially indigenously developed technologies. corDECT is designed and developed in India and manufactured by over 8 entities in India and abroad, and also exported to over 15 countries. Opening the band to GSM / CDMA would amount to making spectrum availability for corDECT installations in its 'country of birth' more difficult, if not impossible and would be a blow to indigenous technology development and indeed to the growth of future application of corDECT Systems.

e) DECT air interface is internationally used in the band (1880-1935 Mhz, and no other band), on the other hand GSM and CDMA operation is supported in many possible bands. We quite appreciate the need for allocation of additional spectrum for the CDMA / GSM operations, but it should not be done at the expense of other

technologies, which serve small towns and rural areas very effectively and strengthen India's technology development prowess.

**II Our next observation is on “Chapter 5: Spectrum allocation “**

**“De-linking of Spectrum Allocation done for fixed wireless services and mobile services:”**

- i) The 1880-1900 Mhz band (and 1900-1910 Mhz for additional requirements) is being used for fixed wireless services for Voice and Data, and not for mobile services, hence the allocation of spectrum in this band should have no bearing on the allocation being done for CDMA / GSM services. This spectrum usage should be treated independent of the usage for mobile services. These two services are distinctly different and their allocation should be completely de-linked.
- ii) It should be noted that the spectrum allocation for an operator for their terrestrial or satellite trunk network has no bearing on their other spectrum usage, in a similar fashion, spectrum allotment for the fixed wireless usage should be completely de-linked from the other allocations of spectrum an operator has.
- iii) Currently, the spectrum allocation for TDD Access Equipments in 1880 -1900 MHz (and 1900-1910 Mhz for additional requirements) has an in-direct linkage with the allotment of spectrum done for the WLL systems. We strongly suggest that these being clearly identified as different services, the allotment of spectrum in these bands should be in addition to any other allotment done for mobile services.

We are therefore of the strong opinion that, De-linking of Spectrum Allocation be done for fixed wireless services and mobile services.

We now request you to kindly consider our above suggestions appropriately and help the indigenous technologies to prosper in our country.

Regards,

Yours sincerely,

N.K. GOYAL