NEC India Response to TRAI Consultation Paper
on
Allocation and Pricing of Microwave Access (MWA) and
Microwave Backbone (MWB) RF carriers

1. How many total Microwave Access and Backbone (MWA/MWB)carriers should be assigned to a TSP deploying:
   a. 2G technology only.
   b. 3G technology only.
   c. BWA technology only.
   d. Both 2G and 3G technologies.
   e. 2G and BWA technologies.
   f. 2G, 3G and BWA technologies.
   Please give rationale & justification for your answer.

   Ans: The number of MWA and MWB carriers to be assigned to a TSP does not depend upon the type of Service provided by the TSP. The total number of carriers to be assigned to a TSP mainly depends upon following factors:

   1) Number of Network Nodes to be connected
   2) Traffic capacity to be supported by the Network
   3) Network topology
   4) Terrain
   5) Spread of network (Coverage Area)

2. How many MWA/MWB carriers need to be assigned to TSPs in case of 2G, 3G and BWA at the start of their services[i.e. at beginning of rolling of services] Please justify your answer.

   Ans: Minimum one pair of Carrier for MWA and MWB need to be assigned (provided the TSP Network consists of both Access and Backbone Networks), additional carriers can be considered depending upon above mentioned factors.

3 to 13: These questions pertain to pricing policy which a TSP only can reply

14. Should the option of assignment of MWA carriers in all the spectrum bands in 6-42 GHz range be explored in line with other countries? What are the likely issues in its assignment MWA carriers in these additional spectrum bands?

    Ans: Yes. Since some of the available bands have already been exhausted and very less channels are available in remaining bands, there is definite need of opening up carriers in all the spectrum bands in 6-42GHz range. Allocation of Carriers with higher Channel spacing of 40MHz or 56MHz should also be considered in the new Bands.

Some of the Bands could be in use for Satellite Communication which should be carefully considered before opening up of the Band.

15. In your opinion, what is the appropriate time for considering assignment of MWA carriers in higher frequency bands viz. E-band and V-band?

Ans: As mentioned about the existing available bands are already reaching close to being exhausted. In addition, the maximum available channel Bandwidth in the existing bands is only 28MHz per Carrier. Considering that all major TSPs are experiencing explosive growth in traffic mainly due to increase in data traffic, available carriers are not sufficient to support this traffic explosion. Therefore it is recommended to open up the higher Bands like E-Band and V-Band at the earliest possible.

16. Should E-band be fully regulated or there should be light touch regulations?

Ans: Light touch regulation is suggested. The current pricing model cannot be applied to E-band and V-band considering the quantum of spectrum that is applicable. The current pricing model will make these bands highly expensive.

17. Not relevant. TSP need to respond.

18. Apart from Q1-Q17, stakeholders are requested to bring out any other issue, which needs to be examined, with justification

Ans: Following couple issues can be considered:

(i) Incentive mechanism can be created for TSPs deploying spectrum efficient technology like XPIC in the Network which reduce need for additional carriers and benefit for same can be provided in the pricing model.
(ii) Use of un-authorised carries should be strictly controlled by aggressive monitoring and implementing severe penalties. As this is not only illegal, but also results in serious interference in other Networks leading to disruptions in operations.