

Response to Consultation Paper on “Allocation and Pricing for 2.3-2.4 GHz, 2.5-2.69 GHz & 3.3-3.6 GHz bands.

We welcome and appreciate the effort of the authority for providing another opportunity to put across our comments on the aforesaid subject. At the outset, we wish to state that there should not be any auction for the Broadband Wireless Spectrum. Auction will only result in un-affordability to the end customer.

Significant growth of the nation, going forward, is going to be dependent upon effectively routing Broadband activity to every nook and corner of the country, delivering content and applications at very low cost. As matters stand today, there is a significant gap between desired Broadband activity at the actual roll out. To a very large extent, this is so on account of high cost of infrastructure roll out and levy of various kinds of charges related to Broadband activity. Consequently, numerous ISPs over the last decade have gone out of business.

BWA offers one route / solution to reduce capital expenditure on roll out of extensive physical / cable infrastructure. It is only now that BWA standards across the world are getting standardized and wireless equipment suited to these standards is also on its way. Hopefully, common standards and resulting benefits of scale and volume would result in quick expansion of BWA coverage. The importance of spectrum for sustainable growth of these services cannot be overemphasized.

The spectrum pricing should be aligned towards recovering appropriate costs of spectrum management and regulation rather than as a source of revenue to the Government.

Our further views/comments are mentioned below :

- 1. What should be the revised reserve price for the spectrum in 3.3.-3.6 GHz band? The various options available are as below:**
 - The reserve price of this spectrum remains as recommended earlier.
 - The reserve price for the spectrum is made equal to 50% of the reserve price recommended for the 3G spectrum.
 - The reserve price is made equal to the price recommended for the 3G spectrum
 - (i) The Authority must take a holistic view of spectrum management and appraise best international practices and their aptness in the Indian context.
 - (ii) Linking the spectrum fee for BWA and 3G is also not recommended as these are different business models and the business environments and conditions are totally different.

- (iii) It is unfair and unreasonable to impose upon any licensee to surrender/vacate spectrum in any particular band unless there is clarity on the predictable timely availability, assured assignment and pricing for the band where option to migrate is being proposed. Government vide its Circular dated 1st January 2008, had directed the spectrum holders of 2.5 GHz to shift operations from to 3.3 GHz.
 - (iv) Vacating spectrum and consequently migrating to a different band is a capital intensive activity as the existing equipment would have to be replaced by new ones.
 - (v) Internet Service Providers should be allowed to retain the spectrum in 2.5 GHz, and to ensure that sufficient spectrum is available for BWA systems, the authority should further recommend DoT to immediately coordinate 200 MHz spectrum from ISRO.
 - (vi) Further to the Guidelines for Broadband Wireless Access dated 12 November 2007, it is understood that any Auction of spectrum can potentially increase the prices for end users thereby a major hindrance for broadband penetration in India. **Hence, we strongly oppose any auction procedure for the spectrum allocation.** Any further allocation in any band may be done on '**first-come-first-serve**' basis as per technological developments as and when it happens. There should not be any Technology specific regulations on Spectrum pricing.
2. **What should be the eligibility conditions for bidding for spectrum in the bands of 2.3-2.4 GHz and 2.5-2.69 GHz?**
- As stated above, we are not in favour of auction procedure for spectrum allocation. Any further allocation, in any band, may be done on first-cum-first-serve basis as per technological requirements as and when it happens. The government should honour the spirit of wireless operating licenses granted.
- For 2.3-2.4 GHz band and fresh allocation in this band, UASL and ISPs should both be considered for eligibility.

3. In the 2.3-2.4 GHz band, the maximum amount of spectrum which a licensee can bid for?

Based on spectrum availability, ideally 30 MHz should be made available for tri-sector deployment but given spectrum shortage, minimum of 15 MHz should be made available. **We are opposing auction procedure.**

4. In the 2.3-2.4 GHz band, the size of the spectrum blocks for the bidding?

Contiguous block of minimum 15 MHz should be made available to all operators. **We are opposing auction procedure.**

5. In view of limited availability of spectrum in this band and possible conflict between the technologies using FDD and TDD modes, how the spectrum in 2.6 GHz band be allocated?

This band is well suited for mobile applications due to inherent propagation characteristics for Non Line of Sight Operations.

As per the prevailing NFAP (effective from 1st January 2002), this band can be used for FIXED as well as MOBILE access. The relevant footnote IND 54 reads as:

“INSAT system is presently using the frequency band 2535-2655 MHz for radio networking, Cyclone Warning dissemination system, meteorological data dissemination, satellite time and frequency dissemination application. Requirement of fixed and mobile services such as local multipoint distribution system (LMDS) and Microwave multipoint distribution system (MMDS) may be coordinated on a case to case basis.”

DoT should coordinate 100 MHz band from ISRO for the Broadband Wireless Access and assignments in this band must be done in a technology-neutral fashion, subject to sustained protection to the existing holders of this spectrum. The choice between TDD to FDD should be left to service providers. With Point to Point traffic on the rise, some service providers may prefer FDD. It would be best if two carriers are assigned with sufficient Rx-TX separation so that the users may deploy TDD/FDD as they so desire.

Perhaps the most crucial band for fixed Wimax (802.16d) is the 3.4 to 3.6 GHz band as most of the equipments that have already been certified are in this band. We understand that INSAT is using this band for various satellite applications albeit not the whole spectrum. Concerted efforts may

be made to make some spectrum available in this band for BWA applications.

DoT along with the Industry association should send a detailed representation to the Concerned Ministry. NFAP shall be amended for these bands and it shall be recommended only for the Broadband Wireless Applications.

- 6. In case the present available spectrum is allocated for BWA technologies using unpaired spectrum, then, will it be feasible in future, from technical and economic angle, to refarm the allocated spectrum in the 2.6 GHz band in line with the global practices?**

We do not see an issue here as ITU-R has recognized this band in TDD mode as Broadband spectrum.

- 7. Unlike a number of other countries, a major portion of spectrum in the 2.6 GHz band is yet to be got vacated by WPC. What measures can be taken to accelerate the process of vacation so that the Indian telecom sector is not at a disadvantage in relation to other countries?**

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8. What should be their reserve price for the purpose of auction for the spectrum in 2.3-2.4 GHz and 2.5-2.69 GHz?

As stated earlier, auction of the spectrum would defeat the objective of Broadband expansion. BWA offers the solution of effective connectivity services to millions of people overcoming physical / grounded infrastructure barriers and should not be compared to other value added services. BWA, subject to ensuring of affordability, has the potential to take the country into the next league of economic development. Pricing of any nature should reflect this over-riding social objective.

9. Is there a need for putting a maximum limit on the cumulative holding of spectrum acquired in these bands by a licensee and what should be that limit?

Since the spectrum is already limited in any of the proposed bands, the issue of maximum limit on cumulative holding may not arise.

However, we would like to reiterate the recommendation that each operator should be assigned a minimum of 30 MHz spectrum in lots of 5 or 10 MHz and to the extent possible, these lots should be contiguous. In any case, the minimum holding by an operator should not be less than 15 MHz or 3 blocks of 5MHz.

Other Comments:

While it is encouraging to note the due weightage given to a promising technology like Wimax, several other access technologies that are capable of delivering broadband (Ultra Wide Band, High Capacity Dense Networks among others) are at different stages of development. It would be more than appropriate if the authority takes cognizance of these technologies well in advance.

Creating Positive Incentives for More Efficient Technologies

Considering the potential demand of spectrum for broadband and other applications, the Authority to specifically consider providing incentives to users who deploy advanced technologies like the ones listed above for more efficient spectrum usage that are designed to promote sharing, dynamic tuning and aimed at reducing the effective signal-to-noise ration in the vicinity of usage while also allowing wider and more equitable penetration in terms of coverage.

We thank you for this opportunity to share our views and earnestly seek that our views, as expressed above, be considered in the best interest to ensure the spread of affordable BWA services in India.

Thanking you,

Yours faithfully,

For **Sify Technologies Limited**

Shyam Nair
Corporate Affairs