



**Telecom Regulatory Authority of India**

**Recommendations**

**on**

**Permitting New Entity for  
Allocation of 3G Spectrum**

**April 25<sup>th</sup>, 2008**

*(In response to DoT's Letter No. P-11014/02/2008-PP(pt-1) dated April 10<sup>th</sup> 2008)*

The Telecom Regulatory Authority of India (TRAI) had submitted its recommendation to DOT on “Allocation and pricing of spectrum for 3G and BWA services” vide letter No. 101-36/2006 dated 27<sup>th</sup> September, 2006. In the said recommendation amongst others, the Authority had recommended that *“Spectrum allocations in the 2.1 GHz band thus should be done to all eligible UASL and CMSP licensees using fair and equitable norms as explained subsequently, and should bear no relationship to their current spectrum allocations or subscriber base”*. (para 4.32)

2. The DoT vide letter No.11014/02/2008-PP (Pt.I) dated 10<sup>th</sup> April 2008 (Annex-I) had conveyed the Ministry’s view on paras no. S.16 to S.25 (given in the executive summary of the recommendations). The Authority’s recommendation regarding allocation of spectrum for 3G to the existing operators only (para 4.32) was summarized in para S.18 and S.19 of the executive summary and the same was agreed by DoT as per the annexure to above referred letter. However, the DOT, vide above referred letter, has also conveyed in para 2.1 “The Ministry is considering to include other Indian / foreign prospective operators also who fulfill the criterion in Para 2.2 below and fulfill the conditions for getting UAS license. In case of a foreign operator, he would have to enter into joint venture with an Indian Company as per existing norms and policy of the Government for getting a UAS license.

Para 2.2. In this regard such new prospective service providers should have minimum one year experience in Telecom Sector in India or abroad, of providing at least 5 lakhs (500000) wireless access lines (2G, 3G services etc.)”

3. The DoT has requested TRAI for its considered views / comments on the participation of new prospective service providers within a

fortnight, as per the proviso under 9 (a) (1) of TRAI Act 2000.\* The Authority has deliberated on the DoT's reference with reference to eligibility of non-licensees for the 3G auction and its views are specific to the reference as summarized below:

4. The Authority while framing its earlier recommendation dated 27<sup>th</sup> September 2006 for restricting the allocation of spectrum for 3G to only existing UASL / CMTS licensee had also deliberated on the option that the existing UAS / CMTS licensee as well as non telecom companies whether Indian or foreign may be recognized as potential candidates for offering 3G services in India. The key arguments for such an option were that the wider participation of service operators might bring about convergence, technological innovation, in voice and data services and investment in the sector. However, it was not considered appropriate, feasible and viable option and the Authority preferred the eligibility for participation in the auction and consequent allocation to the existing licensees in view of the following reasons.

- a) Being a highly price sensitive country, affordability of new services to the subscribers is of prime importance while also contributing towards the growth of the service providers.
- b) As the existing licensees have already made huge investment in the infrastructure and their systems are in place, therefore, they will be in a better position to deliver 3G services efficiently at low incremental cost.
- c) The existing licensees will be able to roll out the services faster than the non-licensed bidders, not yet operating in the country.
- d) As per the data available for various countries, the number of telecom operators varies from 3 to six. However, in India, at the time of the framing of the recommendations, there were already

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\* Perhaps a typographical error. The Authority is forwarding its recommendations under the provisions contained in fifth proviso to sub section (1) of section 11 of the TRAI Act 1997

4-7 service providers in each service area. Now with the grant of new licenses, the number of service providers in each service area has increased to 13-14. Many telecom analysts already believe that it is not a sustainable model. Thus, the Authority believes there will be sufficient competition to ensure that the spectrum is priced competitively, discourage cartelization and offer services that are acceptable in terms of quality and price. Thus, the need for fair and healthy competition is fully met and it is not restrictive.

- e) The Authority in its earlier recommendations from 2002-03 onwards had always pleaded that the grant of license should be only after ascertaining the adequacy of spectrum. It has also advocated that the process of spectrum allocation should ensure level playing field and a growth path for the existing incumbents/licensees. This is particularly critical when the allocation of spectrum will be determined by the auction mode. **It is conceivable that the total quantum of spectrum required for the existing licensees may not be available in one lot. It was in this context that the Authority had recommended that those who do not get accommodated in the first phase will be placed in the queue and will be allotted spectrum as and when available on the same terms and condition as granted to the licensees in the first phase.** It is being reiterated. This is critical so that the existing licensees do not face any uncertainty and have a predictable path for investment. The requirement of level playing field and competition will also get satisfactorily addressed once the information regarding the availability of spectrum in the first phase and subsequent phases is available at the time of auction.

- f) Information available to the Authority regarding quantum of spectrum for 3G in 2.1 GHz bands is approximately 2X25 to 2X30 MHz. It was in this context that the Authority had recommended that the auction may be made in the lots of 2X5 MHz spectrum for the existing licensees only. It is not disputed that 2X5 MHz is a viable and technologically acceptable quantum for the licensees who are either offering or planning to offer 2G services. In such a scenario, the deployment of 3G can be expeditious through overlay network. This initial quantum of spectrum for the auction was recommended to accommodate maximum number of licensees and to avoid any possible legal challenge on grounds of equity. It was for this reason that para 4.6 reproduced below was made part of the earlier recommendation on Allocation and Pricing of Spectrum for 3G and Broadband Wireless Access Services dated 27<sup>th</sup> September 2006.

**“Para 4.6**

*The key issue is that only 2 x 25 MHz of spectrum availability is presently indicated in the 2.1 GHz band. This quantum of spectrum is significantly lower than allocations elsewhere around the world. In order to enable future growth of 3G services, **it is essential that DoT has time bound road map for making available additional and sufficient spectrum.** As the spectrum is limited, some operators may have to wait until additional spectrum is identified in these bands. The Authority therefore has to determine the allocation criterion and the order of allocation for 3G service providers based on spectrum availability and the quantum of spectrum allocation to such operators. The exercise is to identify the first lot of telecom service operators and then gradual entry of the remaining as and when additional spectrum is available.”*

**The Authority wishes to reiterate that there should be no compromise with this criteria.**

5. The Authority has recommended auction mechanism for the allotment of spectrum for 3G services at “Annex N of Allocation and Pricing of Spectrum for 3G and Broadband Wireless Access Services”. These rules should be followed for the auction. In regard, to identifying the first lot of telecom service providers and the gradual entry of the remaining as and when additional spectrum is available, the Authority wishes to reiterate that after the auction process is complete, the various bidders are placed in the waiting list as per the descending order of their bid amount. The allocation of spectrum is done on the basis of this waiting list. The price to be paid by each bidder will be the highest bid amount finalized during the auction process. The top five bidders (assuming 25 MHz spectrum is available at first instance) are called in decreasing order of their bids to choose which block of spectrum they wish. Whenever further spectrum will become available, the waitlisted bidders in decreasing order of their bids shall be allocated spectrum at the price already determined for the first five bidders.

6. There are few who may advocate and highlight the need of a minimum quantum of 2X10 MHz spectrum for 3G services. As explained earlier this idea suffers from many negatives. Firstly, it violates the principle of level playing field in the Indian context, as it will restrict the initial allocation to two or three operators including BSNL/MTNL. The situation will further worsen if non-licensees enter as a winner in this auction mode. It will lead to high tariff and may give way to monopoly practices. Such an entity will also suffer for want of viable network and interconnection arrangements with other incumbents. This will only delay the deployment of 3G services and thus deprive the subscribers to enjoy its legitimate right of triple play. Perhaps it has also to be kept in

mind that the introduction of 3G in the country has already been delayed.

7 The Authority had examined the growth of 3G services around the world and had concluded that still the growth is concentrated in 2G i.e. Voice Centric applications. It had noted in its recommendations that *“voice telephony is still the key application in mobile telecommunications today. While 3G usage is growing, perhaps it is more for enhanced voice capacity than data applications. Data applications as a significant driving force behind 3G will take some time. This observation is particularly relevant in the Indian marketplace. With a current monthly addition of around 5 million subscribers in India, it is evident that there is still unmet demand for voice service”*. (para 4.11). The Authority believes that though the Indian market place is growing at a very fast pace, but it is primarily voice centric and is likely to remain unchanged for some time. As the efficiency of 3G technologies is at least two to three times that of 2G, and in view of the Government’s target of 250 million telephone subscribers by 2007 and 500 million by 2010, the usage of 3 G technologies will allow the telecom operators to reduce the cost of infrastructure substantially. More importantly, by deploying the 3G technologies, the existing licensees can migrate their high-end subscribers to 3G technology and will be able to partially ease 2G spectrum availability. From the data, it is abundantly clear that networks will need minimum technologically feasible additional spectrum at present to support the demand for data applications. Hence, 2x5 MHz should be sufficient in the medium term.

8 In response to the Authority’s recommendation for specifying appropriate license fee for UAS licensees, who do not wish to utilize the spectrum, given in ‘Review of license terms and conditions and capping of number of access providers’, the DoT vide letter dated 8<sup>th</sup> November 2007 had conveyed that the recommendation is not accepted as

proposing a new category of license i.e. “UAS licensee who do not wish to utilize the spectrum” would be out of purview of NTP’99. Now in the instant case, if the new entity is allowed to bid for spectrum for 3G and incase it is successful, then it will have to apply for an UAS license. Presently the UAS license for a service area has a certain specified entry fee and the applicant is entitled to get certain amount of spectrum for starting its service subject to availability. If the new entity, after being successful in the bidding gets an automatic right to get UAS license then it will create legal complications and litigations as it will be construed as an indirect backdoor entry. In case the entity is given only license and not spectrum (2G) than it will tantamount to creation of new license category which will be against the NTP 99, as per the DoT decision quoted above. *More importantly, being a new category of license, DoT is required to refer it to the Authority for its recommendation under the clause 11 (a) (i) & (ii) of the TRAI Act 1997 as amended.*

9 It is a known fact that today the Indian telecom market is the most sought after market by all the international telecom companies. The large number of applicants for the UAS license is a testimony to this fact. Therefore, the Authority is also apprehensive that in case an outsider entity is allowed to bid for the 3G spectrum then in order to get into the Indian market, some of these companies waiting to get the UAS license may bid very high for the 3G spectrum. This will result in a) High tariffs for the 3G services and b) deprive the existing operators from providing the 3G services. **The Authority firmly believes that in the interest of the growth of the Indian telecom sector, entry of this kind must be strongly discouraged.**

10 The DoT in its letter dated April 10 has proposed the following criteria for a new entity for allocation of spectrum for 3G services.

“In this regard, such new prospective service providers should have minimum one year experience in Telecom Sector in India or abroad of

providing at least 5 lakhs (500000) wireless access lines (2G, 3G services)”

Presently, in UAS license, there is no eligibility condition concerning minimum experience. It is apprehended that in case this condition is applied only to the new entity then it will be against the principle of level playing field and if all the bidders for 3G spectrum are required to fulfill this condition then it may disqualify all those service providers who have been granted UAS license recently.

11 Presently, the UAS license permits a foreign company 74% Foreign Direct Investment. With 13-14 licensees in each service area, the Authority believes that any new aspirant can join hands with the existing licensees. The Authority is conscious that a number of rapid technological advancements are taking place in the telecom sector and these needs to be taken into consideration in the future. In view of this, the Authority recommends to review the scenario after three years.

12 In view of the above the Authority reiterates the following :-

- **The auction for 3G licensees should be restricted to existing UASL/CMTS licensees.**
- **The spectrum module for auction should be 2X5 MHz.**
- **The auction mode as recommended earlier may be accepted.**
- **The total availability of spectrum should be made public at the stage of the auction so that the bidders are fully aware regarding the first and subsequent phase of allocation on the price determined by the auction. It is conceivable that the total quantum of spectrum required for the existing licensees may not be available in one lot. It was in this context that the Authority had recommended that those who do not get accommodated in the first phase will be placed in the queue and will be**

**allotted spectrum as and when available on the same terms and condition as granted to the licensees in the first phase.**

- **In view of the future technological advancements, the Authority recommends a review after three years.**

**No. P-1104/02/2008-PP (pt-1)  
Government of India  
Ministry of Communications & I T  
Department of Telecommunications**

Sanchar Bhawan,  
Ashok Road, New Delhi-10001,  
Dated : April 10<sup>th</sup> 2008,

To

The Secretary,  
Telecom Regulatory Authority of India,  
MTNL Bhawan, Jawahar Lal Nehru Marg,  
New Delhi – 110002.

**Subject :- TRAI Recommendation on 3G Services.**

Sir,

This has reference to the TRAI Recommendation/Report of September, 2006 on “Allocation and Pricing of Spectrum for 3G and Broadband Wireless Access Services”. The relevant extracts from the Executive Summary of the TRAI Recommendations and Ministry’s views thereupon are annexed.

2. It was also recommended (Para 4.32 of Report) that Spectrum Allocation for 3G services shall be made to the “eligible UAS, Cellular Mobile and Basic Service Providers”.

2.1 The Ministry is considering to include other Indian foreign prospective operators also who fulfill the criterion in Para 2.2 below and fulfill the conditions for getting the UAS licenses. In cases of a foreign operator, he would have to enter into a joint venture with an Indian company as per existing norms and policy of the government for getting a UAS license.

2.2. In this regard, such new prospective service providers should have minimum one year experience in Telecom Sector in India or abroad, of providing at least 5 lakhs (5,00,000) wireless access lines. (2G, 3G services etc.)

3. Considering the above, TRAI is requested to kindly provide their considered views/comments on the participation of new prospective service providers within a fortnight, as per the provision under 9 (a) (1) of TRAI ACT 2000 (reproduced below).

“Provided also that if the Central Government having considered that recommendation of the Authority, comes to a prima facie conclusion that such recommendation cannot be accepted or needs modification, it shall, refer the recommendation back to the Authority for its reconsideration, and the Authority may, within 15 days from the date of receipt of such reference, forward to the Central Government its recommendation after considering the reference made by the Government. After receipt of further recommendation, if any, the Central Government shall take a final decision”

Yours faithfully,  
Sd-  
**(S. Chandrashekhar)**

**Deputy Secretary (TC)**  
**Annexure to No. P-11014/02/2008-PP (Part-I)**

TRAI Report Executive Summary Para No.	Executive Summary	Views of Ministry
<b>Allocation methodology and pricing of 3G spectrum</b>		
S.16.	In order to enable future growth of 3G services, it is essential that the DoT has a time bound road map for making available additional and sufficient spectrum.	Accepted.
S.17.	2 x 32.5 MHz of spectrum will be available in a time scenario of 6-9 months for 3G services.	Agreed. For 450 MHz band, please see S.20 below.
S.18.	With the current availability of 2 x 25 MHz of spectrum in the 2.1 GHz band, five operators should be accommodated in blocks of 2 x 5 MHz in this band in the first lot. Remaining operators should be allocated spectrum as and when it is available. Since the quantum of spectrum in the 800 MHz band is limited, the Authority recommended that this band be allocated among the UASL CDMA operators. DoT should also allocate 2 x 5 MHz in the 450 MHz band to one of the existing UASL CDMA operators based on the specified allocation process.	Agreed. For 450 MHz band, please see S.20 below.
S.19.	An UASL CDMA operator will have the option to seek 2 x 1.25 MHz in the 800 MHz band at a determined price. Additionally, it will have the option of taking spectrum in either the 2.1 GHz or 450 MHz bands. In case it opts for the 2.1 GHz band, the UASL CDMA operator will have to bid along with the other operators. In case it is among the successful bidder, he will have an option of either retaining 2 x 1.25 MHz in the 800 MHz and getting an additional 2 x 3.75 MHz in the 2.1 GHz band, or giving up the option on 2 x 1.25 MHz in the 800 MHz band and getting 2 x 5 MHz in the 2.1 GHz band.	Agreed. For 450 MHz band, please see S.20 below.

S.20.	In the 450 MHz band, if more than one operator opts for 2 x 5 MHz, the Authority recommended that a single stage bidding process be conducted. The reserve price for 2 x 5 MHz in the 450 MHz band will be half of the reserve price set for 2.1 GHz band for that service area.	Paired spectrum not available in 450 MHz band.
<b>Spectrum Pricing</b>		
S.21.	The Government should charge a spectrum acquisition fee from all operators wishing to provide services using the 800 MHz band and/or 450 MHz band. The allocation criteria followed for the identified carriers in 800 MHz should also be a spectrum acquisition fee.	Agreed. For 450 MHz band, please see S.20 above.
S.22.	The Government may allocate spectrum blocks in the 2.1 GHz band using a simultaneous ascending auction system. If there are more operators interested in the 450 MHz or 800 MHz bands than the amount of available spectrum, then a one-stage bidding process should be organized to decide the winners.	Agreed. For 450 MHz band, please see S.20 above.
S.23.	Ascending auctions have a reserve price, a minimum price above which bidders must place their bids. The Authority has recommended a specific reserve price for the 2.1 GHz and 450 MHz bands. For the 800 MHz band 3G carriers, the Authority recommended that the second-highest winning bid in the 2.1 GHz auction should be pro-rated to a per-2 x 1.25 MHz price.	Agreed. For 450 MHz band, please see S.20 above.
S.24.	DoT should have a one year moratorium on incremental annual spectrum fees for 3G spectrum from the time of spectrum assignment. After this one year, the DoT should charge operators an additional annual spectrum charge of 1 per cent of the operator's total adjusted gross revenue (AGR).	Agreed. However, only for second year, 0.5% of AGR is proposed as annual spectrum usage charge/fee.
S.25.	There are specific roll out obligations and conditions to be enforced for the 2.1 MHz and 450 MHz bands.	Agreed. For 450 MHz band, please see S.20 above. In case of Metro Areas, 40% coverage at the end of 3 years is proposed.