



**Response of
Tata Communications Internet Services Limited (TCISL)
and Tata Communications Limited (TCL) to the
Consultation Paper No.6/2009 dated 16th October, 2009
by TRAI on
Overall Spectrum Management and
review of license terms and conditions**



Chapter: 1

Spectrum requirement and availability

Question: 1

Do you agree with the subscriber base projections? If not, please provide the reasons for disagreement and your projection estimates alongwith their basis?

Response:

The mobile subscriber number projections seem to be consistent with various other projections. However, there are no projections made for Broadband subscriber base. Because of the low fixed line penetration in this country, wireless technologies are expected to drive Broadband penetration. In the light of this, it would be necessary to project Broadband (and in particular, Wireless Broadband) subscribers also, so that appropriate spectrum related decisions are taken to enable growth.

Question: 2

Do you agree with the spectrum requirement projected in #1.7 to #1.12? Please give your assessment (service-area wise).

Response:

In respect of BWA Spectrum, an assumption has been made that 20 MHz spectrum is required per operator. This is not substantiated based on subscriber projections or any international benchmarks. Based on our analysis of the Indian market as well as a study of various other countries that are issuing BWA spectrum, we believe that minimum spectrum required is 30 MHz per operator. Therefore, for five operators, the minimum spectrum required would be 150 MHz.

In response to Para 1.11 of the Consultation Paper, we would also like to submit that LTE is only one of various technologies likely to become commercially available whereas Wi-Max technology also has number of networks across globe. The 700 MHz band could potentially be used by other technologies also, including WiMax, and therefore, in the spirit of technology neutrality, it is important that the 700 MHz band be not "preferred" for LTE or any specific technology.

Question: 3

How can the spectrum required for Telecommunication purposes and currently available with the Government agencies be re-farmed?

Response:

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NTP 99 has specified the Policy pertaining to relocation of existing spectrum; however there is no significant progress made so far in this regard. It is suggested that the Government create a dedicated fund or earmark budgetary support for relocation of Spectrum that can be used for commercial purposes.

As regards BWA spectrum, there has not been any allocation of spectrum to date. The upcoming BWA auction is expected to make available spectrum for deployment of BWA services. Lack of sufficient spectrum has limited and will continue to limit growth of Broadband in the country.

In view of the above, it is suggested that Spectrum held by Government Agencies should be re-farmed in a time bound manner and if required dedicated relocation fund be created for making available spectrum in a time bound manner.

Question: 4

In view of policy of technology and service neutrality licenses, should any restriction be placed on these bands(800, 900 and 1800 MHz) for providing a specific service and secondly, after the expiry of present licenses, how will the spectrum in the 800/900 MHz band be assigned to the Operators ?

Response:

The Government should adopt a consistent policy of auctioning any additional (or existing) spectrum that becomes available for assignment. The spectrum should not in any way be restricted for a service or a technology. As long as Licensed operators bid for and win the spectrum, they can use the spectrum for any service that they are Licensed to operate.

In order to ensure transparency as well as to enable long term planning, there needs to be full disclosure of all spectrum that is to be auctioned on a rolling cycle of at least 2 years ahead. Operators will then know what spectrum is likely to be available in future and can plan their competitive strategies and network roll-out accordingly.

Question: 5

How and when should spectrum in 700 MHz band be allocated between competitive services?

Response:



The frequency band between 470 MHz and 862 MHz has traditionally been allocated worldwide for radio and TV broadcasting and encompasses the UHF TV channels. However, in India it is largely unused. Therefore, spectrum in this band must be auctioned at the earliest, since it can be used for a variety of data or broadcasting applications. In addition, this band is well suited for providing broadband services in low population density regions such as rural India.

TRAI has recognized this in the past, over three years ago, in its recommendations on Allocation and Pricing of Spectrum for 3G and BWA Services (Sep 2006):

“5.19 The 700 MHz band is ideal for providing wireless service in low population density regions, such as rural India, due to its better coverage characteristics. This band is gradually becoming a target resource for rural broadband wireless access worldwide. Network deployments in the 700 MHz band will have larger areas of coverage with fewer base stations. This will reduce capital expenditure, which makes deployment in rural or high-cost regions economically viable. In its recommendations on ‘Growth of Telecom Services in Rural India,’ the Authority has recommended that the DoT should allocate this band for use by advanced wireless technologies for rural connectivity.

... the Authority recommends that the DoT should coordinate some part of this spectrum for making it available for rural wireless networks in the near future.”

Therefore, the 700 MHz spectrum should be allocated immediately, using an auction mechanism.

Question: 6

What is the impact of digital dividend on 3G and BWA?

Response:

As such, there is no “Digital Dividend” in India because the 700 MHz band is not currently being used by analogue services. However, this creates a great opportunity for us to use the 700 MHz band immediately for a variety of services, particularly Broadband services, without having to wait for others to vacate the spectrum band. An immediate decision in this regard will also help 3G and BWA operators plan their competitive and network roll-out strategies in advance.



Chapter 2

Licensing Questions

Question: 7

Should the spectrum be delinked from the UAS License? Please provide the reasons for your response.

Response:

Yes. The UAS License must be delinked from any automatic or minimum spectrum allocation. Therefore, the UAS License Fee must also be delinked from the value of the spectrum that comes associated with the License. As recommended by the TRAI as part of its roadmap towards Unified Licensing Regime and reinforced in the 12th May 2008 recommendations on Internet Telephony, the Unified License should have a nominal entry fee and minimal or no obligations. There would be no necessity to cap the number of such licensees or impose any ownership restrictions on them, subject to FDI guidelines. All Unified Licensees should be eligible to bid for any new spectrum that is being auctioned and use it for any service using any technology. This approach would make spectrum allocation highly transparent and move our licensing regime to a simple and progressive era.

Question: 8

In case it is decided not to delink spectrum from UAS license, then should there be a limit on minimum and maximum number of access service providers in a service area? If yes, what should be the number of operators?

Response:

It is suggested by us that spectrum should be delinked from the UAS License; however, if that were not to be the case, then the maximum number of operators would be automatically determined by the availability of spectrum in any service area. There are already several operators in the market; at least 4 operators (including BSNL/MTNL) would be sufficient to ensure a competitive choice to customers. Even so, such a situation would give rise to opacity and confusion on the road-map of spectrum availability and number of players, thus the scenario where spectrum is delinked from the License is in the best interests of the industry and the customer.

Question: 9



What should be the considerations to determine maximum spectrum per entity?

Response:

The TRAI need not determine maximum spectrum per entity if a minimum number of operators is set in place. The spectrum that any of these four or more operators can hold would be determined by their participation and success in any auction, and overall capped by the total spectrum available for all the players. In order to ensure sufficient competition, there could be a limit of, say 30% of the total available spectrum in that band, owned by any one operator (assuming minimum 4 operators). In case of BWA, where only three spectrum slots are being auctioned, the minimum might be kept at 3 operators, till such time more slots are made available.

Question: 10

Is there a need to put a limit on the maximum spectrum one licensee can hold? If yes, then what should be the limit? Should operators having more than the maximum limit, if determined, be assigned any more spectrum?

Question: 11

If an existing licensee has more spectrum than the specified limit, then how this spectrum should be treated? Should such spectrum be taken back or should it be subjected to higher charging regime?

Response to Q10 & Q11:

Given the current fragmentation of the market, it may not be necessary to put limits on maximum spectrum. However, in anticipation of future consolidation, it might be necessary to limit any one operator to say, 30% of the total available spectrum in a band. If one or more operators have more than the maximum limit, the TRAI must set in place a roadmap to bring them to the maximum level – this could be done by barring them from participating in a future auction thus bringing their share down or, if there is no auction planned in the foreseeable future, through a forced divestment. Having a roadmap of spectrum available for the operators over the next 24-36 month period would be critical to enforce such a policy.

Question: 12

In the event fresh licenses are to be granted, what should be the Entry Fee for the license?

Question: 13



In case it is decided that the spectrum is to be delinked from the license then what should be the entry fee for such a License and should there be any roll out condition?

Response to Q12 & Q13:

The entry fee for the revised UASL License or new category of license viz. UASL without spectrum, should be nominal. For reference, the entry fees for NLD and ILD Licenses are set at a nominal Rs 2.5 crore each. There should not be any roll-out obligations for such a License or can be set at part with those applicable for the ISP License. Roll-out obligations should be imposed only when a scarce resource or unique right (such as Spectrum) is being made given to an operator.

Question: 14

Is there a need to do spectrum audit? If it is found in the audit that an operator is not using the spectrum efficiently what is the suggested course of action? Can penalties be imposed?

Response:

Basic philosophy of auctioning ensures efficient utilization of spectrum as it is allocated to a bidder which values it most. Therefore, there is no need for any Spectrum Audits.

Question: 15

Can spectrum be assigned based on metro, urban and rural areas separately? If yes, what Questions do you foresee in this method?

Response:

The categorization of metro, urban and rural areas would be difficult to manage since these keep evolving as development takes place. Further, since any reasonable landmass would have a mix of at least two, if not all three, categories of areas, it would not be possible to practically roll-out distinct networks for each. This would also hurt the ability to achieve scale and efficiency of network roll-out as well as operations. The current circle-wise licencing and spectrum allocation is working reasonably well and should be continued.

Question: 16

Since the amount of spectrum and the investment required for its utilization in metro and large cities is higher than in rural areas, can asymmetric pricing of telecom services be a feasible proposition?



Response:

Today, prices of most services are under forbearance and are determined by market forces. This should continue; market forces do ensure prices that are linked to affordability. Any additional asymmetric pricing (or subsidies for rural areas) can be achieved through the USO Fund and not through price regulation.

M & A Questions

Question: 17

Whether the existing license conditions and guidelines related to M & A restrict consolidation in the telecom sector? If yes, what should be the alternative framework for M & A in the telecom sector?

Question: 18

Whether lock-in clause in UASL agreement is a barrier to consolidation in telecom sector? If yes, what modifications may be considered in the clause to facilitate consolidation?

Response to Q17 & Q18:

The lock-in clause is an outcome of issues relating to spectrum pricing and valuation, In an environment where spectrum is allocated through an auction mechanism, it has to be believed that it is priced as per market benchmarks. Restrictions such as lock-in clause would reduce the perceived “value” of the spectrum and thus adversely impact auction pricing. As long as spectrum is auctioned and there are limits on number of operators (minimum) and spectrum share per operator (maximum), no other restrictions on consolidation would be needed.

Question: 19

Whether market share in terms of subscriber base/ AGR should continue to regulate M & A activity in addition to the restriction on spectrum holding?

Response:

Minimum number of operators in a circle should be sufficient to ensure competitive levels in a market. Market share (volume or revenue) can be used as additional criteria when the minimum level is being reached.

Question: 20



Whether there should be a transfer charge on spectrum upon merger and acquisition? If yes, whether such charges should be same in case of M & A/transfer/sharing of spectrum?

Question: 21

Whether the transfer charges should be one-time only for first such M & A or should they be levied each time an M & A takes place?

Question: 22

Whether transfer charges should be levied on the lesser or higher of the 2G spectrum holdings of the merging entities?

Response to Q20, Q21 & Q22:

There should not be any charges for transfer or M & A of spectrum, particularly when it has been acquired through an auction.

Question: 23

Whether the spectrum held consequent upon M & A be subjected to a maximum limit?

Response:

The limits on minimum number of operators and maximum share of spectrum per operator should be applied in the context of an M&A also.

Spectrum Trading

Question: 24

Is spectrum trading required to encourage spectrum consolidation and improve spectrum utilization efficiency?

Response:

Yes, Spectrum trading is required as it provides the licensees the option to align the spectrum held with its requirements for efficient utilization of this limited national resource. Globally, the trading is allowed so that the usage of spectrum generates latest value for the operators and provides affordable services to the end consumers

Question: 25



Who all should be permitted to trade the spectrum?

Response:

All the licensed operators having been allotted the spectrum through auction or by other means can be allowed to trade the spectrum.

Question: 26

Should the original allottee who has failed to fulfill “Rollout obligations” be allowed to do spectrum trading?

Response:

The objective of spectrum trading is to encourage efficient utilization of spectrum. Any operator who fails to fulfill rollout obligations is not efficiently utilizing spectrum and therefore should not be allowed to exploit the trading of spectrum.

Question: 27

Should transfer charges be levied in case of spectrum trading?

Since BWA Spectrum is to be obtained through the auction route i.e. at market value, there should not be any transfer charges.

Question: 28

What should be the parameters and methodology to determine first time spectrum transfer charges payable to Government for trading of the spectrum? How should these charges be determined year after year?

Response:

Please refer response to Question: 27

Question: 29

Should such capping be limited to 2G spectrum only or consider other bands of spectrum also? Give your suggestions with justification.



Response:

Normally there should not be any capping of spectrum. However, only two blocks of BWA are being auctioned and therefore, no operator should be allowed to hoard spectrum and therefore, spectrum cap for one BWA block should be specified for at least three years.

Question: 30

Should size of minimum tradable block of spectrum be defined or left to the market forces?

Response:

Tradable block of Spectrum should be left for the market forces to decide.

Question: 31

Should the cost of spectrum trading be more than the spectrum assignment cost?

Response:

Cost of spectrum trading should be left to market forces to determine.

Spectrum Sharing

Question: 32

Should Spectrum sharing be allowed? If yes, what should be the regulatory framework for allowing spectrum sharing among the service providers?

Question: 33

What should be criteria to permit spectrum sharing?

Response to Q32 & Q33:

Spectrum sharing should not be allowed at this stage as it will result in aggregation of spectrum and monopolization. Particularly in case of BWA, only two blocks are available and it should not be allowed to be shared. In the interest of consumer and for healthy competition spectrum sharing should not be allowed till there are sufficient number of players.



Question: 34

Should spectrum sharing charges be regulated? If yes then what parameters should be considered to derive spectrum sharing charges? Should such charges be prescribed per MHz or for total allocated spectrum to the entity in LSA?

Response:

If spectrum sharing were to be permitted, then such charges should be left to the operators to determine.

Question: 35

Should there be any preconditions that rollout obligation be fulfilled by one or both service provider before allowing the sharing of spectrum?

Response:

Question: 36

In case of spectrum sharing, who will have the rollout obligations? Giver or Receiver?

Response:

Perpetuity of licenses

Question: 37

Should there be a time limit on license or should it be perpetual?

Response:

Service providers have made huge investment for rolling out their networks. In order to protect the Investors in the licensee companies even after the validity of license, the operators should have first right to refusal for renewal of license.

Question: 38

What should be the validity period of assigned spectrum in case it is delinked from the license? 20 years, as it exists, or any other period

Response:



Spectrum should have a validity period of 20 years from the date of assignment. In case of a mismatch with the License period of the operator, the License should be automatically extended till the spectrum validity period.

Question: 39

What should be the validity period of spectrum if spectrum is allocated for a different technology under the same license midway during the life of the license?

Response:

License should have the perpetual validity. Only spectrum should have validity of 20 years. The spectrum should be renewed if licensee meets the licensing conditions. Licensee should have first right of refusal for the allocated spectrum.

Question: 40

If the spectrum assignment is for a defined period, then for what period and at what price should the extension of assigned spectrum be done?

Response:

Please refer the response to the Question as per 39

Question: 41

If the spectrum assignment is for a defined period, then after the expiry of the period should the same holder/licensee be given the first priority?

Response:

The licensee/same holder has to be given priority

Uniform License Fee

Question: 42

What are the advantages and disadvantages of a uniform license fee?

Question: 43



Whether there should be a uniform License Fee across all telecom licenses and service areas including services covered under registrations?

Question: 44

If introduced, what should be the rate of uniform License Fee?

Response to Q42-44:

Advantage of uniform license fee would be that it would eliminate the scope for arbitrage in reporting requirement for some of the vertically integrated operators providing Access Services on Pan-India basis along with other telecom services like NLD, ILD & ISP services. This should be applied to all categories of services under the UASL, NLD and ILD Licenses. A uniform rate of 6%, including 5% towards USO contribution, would be a reasonable License fee. The Government has taken a policy initiative to promote the proliferation of broadband density, therefore, Internet Services should be exempt from the License fees, except in case of Internet Telephony revenues (as applicable currently).

Chapter 3

Spectrum Assignment

Question: 45

If the initial spectrum is de-linked from the license, then what should be the method for subsequent assignment?

Response:

Any assignment of spectrum henceforth across spectrum bands should be only on the basis of auctions. There could exist cases/situations whereby the additional spectrum is not enough to cater to new operators as well as the growth needs of the existing operators. In that situation the additional spectrum may be auctioned in two different slots: 1) for existing operators and 2) for new operators. While deciding on allotment of the additional spectrum between the two categories given above, it should be ensured that there is enough competition in category 1, so as to avoid cartelization of spectrum pricing amongst existing operators. Existing operators could also participate in the open market auction, which is category 2. This shall ensure that all spectrum allocation is on market pricing model and also provides roadmap for growth for incumbent operators.

Question: 46



If the initial spectrum continues to be linked with license then is there any need to change from SLC based assignment?

Response:

Notwithstanding whether the initial spectrum comes linked with the license or is delinked future allocation should be as per the method suggested in the response to question 45.

Question: 47

In case a two-tier mechanism is adopted, then what should be the alternate method and the threshold beyond which it will be implemented?

Response:

Not applicable

Question: 48

Should the spectrum be assigned in tranches of 1 MHz for GSM technology? What is the optimum tranche for assignment?

Response:

Question: 49

In case a market based mechanism (i.e auction) is decided to be adopted, would there be an Question of level playing field amongst licensees who have different amount of spectrum holding? How should this be addressed?

Response:

A cut off date/cut off quantum of spectrum should be determined and post that all spectrum allocation should be on market determined basis. In case an Operator has additional spectrum over the cutoff, the additional spectrum should be as per the market determined rate. Any difference between entry/license fee paid by the operator since the cut off date and the migration to the recommended new regime should be subtracted from the market determined price for the spectrum. This shall ensure uniform principle of charging for all operators for initial spectrum as well as additional allocations done so far on SLC basis or that will be done in future.



Question: 50

In case continuation of SLC criteria is considered appropriate then, what should be the subscriber numbers for assignment of additional spectrum?

Response:

Please refer to response to Question: 49

Question: 51

In your opinion, what should be the method of assigning spectrum in bands other than 800, 900 and 1800 MHz for use other than commercial?

Response:

Spectrum Pricing

Question: 52

Should the service providers having spectrum above the committed threshold be charged a one time charge for the additional spectrum?

Response:

Please refer to response to Question: 49

Question: 53

In case it is decided to levy one time charge beyond a certain amount then what in your opinion should be the date from which the charge should be calculated and why?

Response:



Question: 54

On what basis, this upfront charge be decided? Should it be benchmarked to the auction price of 3G Spectrum or some other benchmark?

Response:

It should be benchmarked to the auction price for 3G.

Question: 55

Should the annual spectrum charges be uniform irrespective of quantum of spectrum and technology?

Response:

Post the implementation of market determined pricing for all Spectrum, there should be no annual spectrum charges irrespective of the quantum of spectrum.

Question: 56

Should there be regular review of spectrum charges? If so, at what interval and what should be the methodology?

Response:

Structure for Spectrum Management

Question: 57

What in your opinion is the desired structure for efficient management of spectrum?

Response:

Spectrum is a scarce resource that has applications and usage ranging from commercial communication to education to security/defense to space research to broadcasting and entertainment etc. As such multiple government departments' private organizations, research institutes have interest in this area. In order to ensure that spectrum is utilized and managed in the most optimized manner, spectrum management should be removed from the purview of any one department and housed under an independent &



empowered spectrum management body. This body should have representations from various government departments, private users and academic / scientific institutions.

In addition and meanwhile, there is need to bring more transparency and therefore it is suggested that following information be provided on WPC website:

- (i) Spectrums bands for commercial deployment;
- (ii) Spectrum available for auction;
- (iii) Spectrum likely to be available for auction;
- (iv) Likely dates for auction of spectrum;
- (v) Spectrum holders;
- (vi) Winning Auction bids
- (vii) Band plans
- (viii) Details of Spectrum trade etc.
