

Spectrum requirement and availability

- 1. Do you agree with the subscriber base projections? If not, please provide the reasons for disagreement and your projection estimates along with their basis?**

We have observed that the subscriber base projections made by COAI, DoT internal committee and TRAI are more or less the same and accordingly, the same seems to be fine. Nevertheless, the projections are only indicative keeping in view the changing market conditions.

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

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

- a. India need to have a short & long term plan for meeting the spectrum requirements of the telecom operators. Spectrum is a scarce resource and has enormous economic value, if the same is exploited commercially. Thus, serious efforts should be made to use the spectrum commercially, if the same is either lying idle or not being used commercially. The existing non-commercial users of such spectrum should be encouraged to migrate to alternate technologies / bands or alternate network like fibre network should be created through appropriate means.

Thus, the Government should clearly provide the path for providing the spectrum for commercial use in different technologies / bands with the defined timeframe.

- b. In the consultation paper, the Hon'ble Authority has indicated that as per one expert report, 2x8 MHz is sufficient for an operator (i) to deploy a 2G network with reasonable levels of spectrum efficiency, and (ii) to satisfy the subscriber needs in the densest areas.

It is a fact admitted by the Licensor as well as the Regulator that the Indian telecom operators have least spectrum as compared to their international counterparts. While, internationally, the average spectrum per operator is in the range of 20MHz – 25MHz; in India, it is very low. The current spectrum policy gives a clear-cut path to allocate the GSM spectrum upto 15MHz and CDMA spectrum upto 7.5MHz, as recent as in January 2008.

Nevertheless, we request the Hon'ble Authority to share the copy of the complete report, along with basis and justification to enable us to go through the same and comment thereof.

4. In view of the policy of technology and service neutrality licences, 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 licences, how will the spectrum in the 800/900 MHz band be assigned to the operators?

Technology & Service Neutrality

In the licensing regime of technology & service neutrality, no restriction should be placed on any telecom operator to provide any specific service in 800, 900 and 1800MHz bands so long as it does not interfere with any service / technology / band / operator.

Renewal of the spectrum for existing operators

- a. As far as the renewal of the existing licence agreement is concerned, the existing licence condition allows the existing telecom operator to renew its licence agreement on mutual terms & conditions. Subsequently, in the information memorandum of 3G, the Government has stated that *"If the period of an existing UAS/ CMTS licence of a Successful Bidder is expiring before the period of expiry of the right to use the 3G Spectrum or the 800MHz Spectrum, then the UAS/ CMTS licence with respect to the 3G spectrum or the 800MHz Spectrum, as applicable, will get extended to 20 years from the time of award of the 3G or 800MHz spectrum.*
- b. As far as the treatment of the existing spectrum being used by the existing operators are concerned, we agree with the DoT's committee report (May 2009), which has stated as under:-

*..... At the end of the license period when the assigned spectrum reverts back to the licensor, the licensee holding the spectrum till date should be given the first right of refusal for the same spectrum for the next twenty years. The licensee must exercise the choice not later than 6 months prior to expiry and pay a fee. This fee is to be administratively determined and publicised by the licensor annually (say, on April 1), based either on (a) a recent auction of spectrum in the circle , or a comparable one at that time, or (b) extrapolation from past auctions , or (c) escalation based on some formula.
....."*

- c. We fully agree with the above recommendations of DoT committee (May 2009) and request the Hon'ble Authority that the renewal of the existing spectrum allocations made in 800, 900 and 1800MHz should be done in the similar manner.

In summary, we request the Hon'ble Authority that

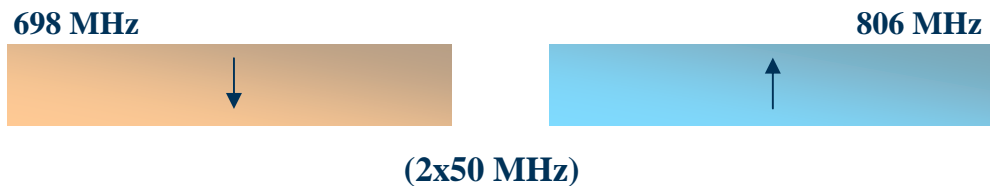
- **the operators should be allowed to provide any type of service in 800, 900 and 1800MHz band so long as it does not interfere with any service / technology / band / operator.**
- **The existing operators should be given first right of refusal for the existing spectrum being used by them.**

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

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

- a) Today, most countries around the world are moving towards closure of analog television signals and plans have been made to take advantage of the move to digital television to free up precious radio spectrum for other uses.
- b) The Hon'ble Authority has however, rightly pointed out that in India, the digital dividend band is largely unused.
- c) We are of the view that the band 698-806 MHz is ideally placed for Mobile Broadband services because of its excellent propagation characteristics. This band will allow mobile operators to provide cost-effective and seamless broadband experience, allowing for improved rural coverage and better quality coverage in urban areas.
- d) Allocating some of the digital dividend spectrum to mobile operators would also have a significant positive global economic impact, driving innovation, job creation, productivity and competitiveness.
- e) It is submitted that for many emerging markets, the digital dividend represents a unique opportunity to leapfrog into the broadband world. Studies have shown that a 10% increase in mobile penetration leads to a GDP increase of upto 1.4%. It is believed that mobile broadband is likely to have an even greater economic impact on GDP growth.
- f) We are of the view that particularly in developing countries, mobile broadband technologies such as HSPA and LTE can do for broadband availability what GSM did for voice.

- g) We are thus of the view that allocation of the full 698-806 MHz band for mobile broadband is essential if the industry is to continue to deliver the social and economic benefits that are being enjoyed by both developed and developing nations.
- h) From an industry point of view, we believe that the most efficient solution in the 698-806 MHz band is a 2 X 50 MHz arrangement (with 8 MHz center gap), as it will:
- Deliver large contiguous blocks of spectrum for mobile broadband.
 - Maximize the use of limited spectrum available in India and is hence the most spectrally efficient arrangement.
 - Avoid the potential fragmentation of the band thereby reducing the complexity of the terminals.
 - Ensure better co-existence with adjacent radio communication (broadcast) services with reverse duplex arrangement.



- i) We believe that the early vacation and allocation of this spectrum to mobile services would accelerate the shift to wireless broadband.
- j) The Hon'ble Authority may be aware that while Regions 1 and 2 have already adopted their respective band plan arrangements, Region 3 (including India) is yet to finalize its band plan arrangements for 700MHz. We believe that in Region 3, India will be one of the key markets to drive economies of scale by leading the initiative to develop a band plan for Region 3 and can thus advocate/push for adoption of the above-mentioned band plan in order to provide affordable mobile broadband services and to help develop a knowledge-based economy.
- k) The industry needs a clear and timely decision on allocation of digital dividend spectrum. This will enable the industry to invest early and with confidence in the future of mobile broadband and the services that it will deliver. This will also provide alternative evolution opportunity for operators who have not succeeded in the 3G/ BWA auction, to provide wireless/mobile broadband services.

Chapter 2

Licensing issues

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

All future licenses should be de-linked with the spectrum due to the following reasons:-

- a. It has been the consistent stand of the Hon'ble Authority that the spectrum should be de-linked with the licence. In the recommendations on Unified Licensing of 2005, the Hon'ble Authority recommended spectrum and licensing are to be de-linked. The one-time entry fee / registration charges recommended in Unified Licensing did not include spectrum charges.

Subsequently, in the recommendations on "Review of license terms and conditions and capping of number of access providers" dated August 28, 2007, it was stated that *"the Authority again reiterates that spectrum should be de-linked from the licensing regime. There is also a need to clearly specify the licence fee charges without spectrum."*

- b. The report of DoT Committee (May 2009), which comprised the senior Government officials & eminent economists / professors, has complements the Hon'ble Authority consistent approach, the relevant extracts of which are as under:-

In case any new UAS licenses are issued in future, they should not carry with them any eligibility for start-up spectrum. The licensee will have to go to the market even for start-up spectrum. The cost of licensing spectrum for a wireless network should be considered on par with other capital expenditure for rolling out networks, as for example, laying of cables for a wireline network. The license fee itself should be taken to reflect the cost of obtaining the privilege to offer services as specified in the license.

- c. The Government has already started the process of de-linking the spectrum with license. In forthcoming 3G & BWA auction, the non-telecom license holder can obtain the telecom licence after becoming successful in 3G or BWA spectrum.

In future, other bands of the spectrum will also be auctioned. If the license is de-linked with all types of spectrum, it will simplify the entire licensing process where all types of spectrum shall be granted through auction and the licence against a fixed regulatory price.

- d. The Economic Survey of 2008-09 has also advocated for de-linking the spectrum with licence. It states that “.....Disaggregate telecom licences from spectrum allocation. Telecom licence should have a nominal regulatory charge and be based on capability to provide sustained service.....

Thus, in order to realize the economic value of a scarce resource, all future licenses should be de-linked with the spectrum.

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?

- a. We do not support the continuation of the existing licensing regime wherein the licence is co-terminus with the initial spectrum. Based on the justifications / submissions given in our response to question no. 7, we reiterate that all future licences should now be de-linked with the spectrum.
- b. Once the spectrum is delinked with the licence agreement, any party can come and obtain the license agreement. If that party is keen to provide the wireless services, he can always get the spectrum through auction process.
- c. As per our view, the minimum numbers of access service providers are relevant from the merger & acquisition (M&A) point of view, the response of which we are submitting in later questions.

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

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?

- a. The DoT committee report of May 2009 states:

“Licensees should be permitted to consolidate spectrum holding up to the maximum amount that can be held by an operator without restricting competition. It is noted in the existing merger guidelines of intra-service area UAS and CMTS licenses (DoT, 2008) that the mark share of a merged entity shall not be greater than 40% either in terms of subscriber base Adjusted Gross Revenue. If this rule is applied, this would automatically mean that there must be at least three operators in each circle. Since competing operators may not all have similar market share, it is more reasonable to assume that there must be at least four operators to ensure that this limit is satisfied. This means that no operator should hold more than 25% of the total spectrum assigned in a service area in the bands listed in Paragraph I1-2(b) for the UASL/ CMTS services, irrespective of technology mix, deployed by the operator. Since

the average amount of spectrum assigned per service area is 2 X 75 MHz, the cap allows operators to hold up to 2 X 18.75 MHz on average per service area. This is roughly similar to the international average holding per operator."

- b. We fully support the above and urge the Hon'ble Authority that a cap of 25% of the total spectrum assigned in a service area may be applied on total spectrum held by a licensee, irrespective of technology mix deployed. In fact, we would like to go a step further and submit that this limit may be based on the total quantum of spectrum assigned in the market, irrespective of technology mix and/or spectrum band deployed.

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

In Indian telecom sector, no instance of having the spectrum beyond the specified limit exists as:

- a. Firstly, as per the existing spectrum allocations guidelines, 15MHz spectrum in GSM band & 7.5MHz spectrum in CDMA band in a given service area is the specified limit for a single operator. As per the available data, no operator has been allocated the spectrum beyond this specified limit.
- b. Secondly, the existing operators have been allocated the spectrum after meeting the eligibility criterion strictly as per the guidelines / orders issued by the Government from time to time. This true fact has been duly acknowledged by the DoT in its various affidavits filed before the Hon'ble TDSAT & High Court.

Thus, no question arises for any spectrum to be taken back or be subjected to any higher charging regime.

12. In the event fresh licences are to be granted, what should be the Entry fee for the license?

- a. We fully support the DoT committee report, which recommends all future licences to be de-linked with the spectrum
- b. The Hon'ble Authority has itself advocated to ascertain a market driven price in its recommendations on "Review of license terms and conditions and capping of number of access providers" dated August 28, 2007,

“ The entry fee as it exists today is, in fact, a result of the price discovered through a markets based mechanism applicable for the grant of license to the 4th cellular operator. In today’s dynamism and unprecedented growth of telecom sector, the entry fee determined then is also not the realistic price for obtaining a license. Perhaps, it needs to be reassessed through a market mechanism

- c. Thus, let the market discover the price of a scarce resource through the auction process and the plain licence is granted through a fixed regulatory charge.

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 Licence and should there be any roll out condition?

If the licence is de-linked with the spectrum, then the licensee will be allowed to provide wireline, IPTV, restricted internet telephony & other VAS services. Thus, the entry fee for licence (without spectrum) can be prescribed in the following manners:-

Entry Fee for UASL (without spectrum)

1. Before the UASL regime, the fixed line licences were being awarded under OPEN LICENSE REGIME. The entry fee prescribed for fixed line licences may be kept for UASL (without spectrum).
2. Alternatively, in its recommendations on Spectrum Related Issues dated May 13, 2005, wherein the Hon’ble Authority on the issue of One Time Spectrum Charges for New Entrants has stated the following:-

After implementation of Unified License regime as recommended by TRAI and subject to approval by Government of India, Authority recommends that the one time spectrum charges would be equal to UASL entry fee in that service area minus the component of registration charges based on the entry fee paid by new BSO (entered in / after 2001), specific by TRAI in its recommendations on Unified Licensing regime dated 13th January.

The Hon’ble Authority may consider any of the above following options and recommend the entry fee for UASL (without spectrum)

Roll out obligations

3. No roll out obligations should be prescribed for those services, which does not require spectrum. Once any new operator acquires the spectrum through auction, the roll out obligations for wireless should commence.

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?

We fully support the DoT's committee reports, which support all future 2G spectrum to be allocated through auction. Once an operator pays the market driven price, the market will determine the rewards and the punishments in case; the operator does or does not use the spectrum efficiently & efficiently.

Moreover, any such attempt will result in more complexities in operations and lead into micro management. There will be numbers of subjectivities involved in the deployment of techniques. It is a fact that Indian operators have shown the largest spectrum efficiency among most of the operators in the world and this has been due to the spectrum scarcity in India and the spectrum efficiency techniques being used by the operators. Thus, the Indian operators should be appreciated for their efforts to use the spectrum efficiently rather than being subjected to any audit.

In this regard, the DoT Committee report (May 2009) has rightly noted that

"A market-determined mechanism for spectrum allocation will ensure that spectrum goes to the entity that puts the highest value on spectrum, and is best placed to ensure its optimal use."

and that

"Any inefficiency in the use of spectrum' is sure to be penalized by market forces and does not need to be administratively monitored."

Thus, there is no need to have any concept of spectrum audit.

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

- a. In order to realize the true economic value of 2G spectrum, we fully support the DoT committee report that the 2G spectrum should now be allocated through auction. In the auction process, it is operationally impossible to have separate auctions for different cities / towns in a given service area. Any such arrangement will only create administrative complexities and will be extremely micro-management task.
- b. Furthermore, as a progressive regulatory policy, we favour spectrum trading & sharing. Once these policies are in place, alternative options will always be available to the operators to meet the spectrum requirements for a specific location, if any.

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?

Indian tariffs are one of the lowest in the world and it is still consistently coming down due to intense competition. Today, more than 55% net additions are coming from the rural areas as all the existing telecom operators are focusing in rural areas.

The principle of forbearance has worked well in India and today, different tariffs exist for different segments. Thus, any attempt to tinker with this would only lead into micro management. Nevertheless the cost of creating & maintaining the telecom infrastructure in rural areas is always higher than the urban areas and thus, let the operators decide about the price based on their overall business plan.

Similarly, the spectrum charges are levied on a service area basis. In case, the Government / Regulator wishes to bring more affordability of telecom services in the rural areas, the efforts should be made to incentivize the telecom operators to cover the rural areas. In the past, the Hon'ble Authority has recommended such incentive such as:

- a. In its recommendations on “**Growth of Telecom services in rural India**” dated October 3, 2005, the Hon'ble Authority recommended the discount in annual licence fee and spectrum charges to be linked with the rolling out of the infrastructure in rural/remote areas, e.g., if 5,000 BTSs are installed in rural/remote areas then say 10% discount may be given in the License Fee and Spectrum Charges which are payable by the operator and like this percentage of discount may increase further if the number of BTSs installed are more.
- b. In another recommendation on “Review of license terms and conditions and capping of number of access providers” dated August 28, 2007, the Hon'ble Authority recommended 2% reduction in USO levy after covering more than 75% of the development blocks.

Thus, we request that the existing tariff regime should continue to be prevailed. As far as the spectrum charges are concerned, we support the DoT's committee report, which recommends a uniform spectrum charges.

M&A issues

17. Whether the existing licence 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?

Looking at the prevailing market conditions, the consolidation in the telecom sector should be encouraged through relaxed and incentivize regulatory policies. Thus, we recommend that in the case of M&A, the following criterion should only exist:-

- a. That the merged entity should not have spectrum holding of more than 25% of the total assigned spectrum, irrespective of technology mix and / or spectrum band deployed.

However, if the merged entity has the overall spectrum beyond 25%, they may be allowed to trade & share with other operators especially when they have either would have paid the market driven charges or would be paying.

- b. The minimum number of telecom operators in a given service area should not be less than 4 including BSNL/MTNL.

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?

The existing guidelines stipulate that no merger between two companies can be effected until three years from the effective date of the licence expire. This restriction should be removed as it acts as a barrier to the consolidation within the telecom sector. The DoT committee report has recommended the transfer charges in the case of M&A. Once the merged entity is paying the transfer charges, the existing lock-in clause restrictions may be removed.

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?

The existing guidelines stipulate that the combined market share of the merged entities should not exceed 40 percent in any circle, either in terms of subscriber base or in terms of adjusted gross revenue.

As per our view, this restriction should be removed as it should be the prerogative of the Competition Commission of India to see that where any merger would be anti-competitive or not. As per our view, this cap is an artificial barrier and the removal of this will help the Industry to go for consolidation.

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?

We are in agreement with the DoT Committee report, which states that *'The same fee should apply irrespective of whether the spectrum is being transferred, or acquired through a merger, or shared.'*

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?

- a. As per the DoT's committee report, the transfer charges in the case of M&A, spectrum trading and sharing will be levied for the following types of spectrum:

Spectrum assigned through auction or by payment of a one-time upfront charge will not attract a charge when transferred. In other words, the spectrum transfer/ merger charge should be levied only on the spectrum assigned as follows:

A. All spectrum assigned to a licensee as start-up spectrum, where license (including start-up spectrum) was granted without an auction.

B. All additional spectrum assigned beyond start-up spectrum without an upfront fee This excludes spectrum beyond 2 x 6.2 MHz assigned for GSM on or after 17.1.2008, for which Government is to collect market price now, as per condition of assignment, as well as spectrum assigned prior to 17.1.2008 for which licensee opts to pay a price as determined by Government.

The transfer charge should be payable only for the first such transfer/ merger, and only when spectrum has been assigned without an upfront charge. Spectrum assigned through auction, or start-up spectrum received through auction of UAS/CMTS license, or spectrum for which market price is paid or agreed to be paid, will not attract any charge when transferred.

We are agreement with the above recommendations.

- b. Subsequently, we have observed that the DoT Committee in its report has also stated:

.....Subsequent trading of spectrum should not attract a further transfer charge since the holder would have already paid a market-determined price.....

Spectrum transfer charges are to be collected by Government only on the first transfer of the spectrum. Since each spectrum assignment is in a separate distinguishable frequency, it would be easy to determine if a sale is a first sale, or, if it is subsequent to an earlier sale or auction for a given frequency.

In order to activate the market at the earliest, the transfer / merger charge discounted by 20 % for one year from the date of announcement of policy.

We agree with the above recommendations of the Committee and urge the Hon'ble Authority to kindly consider the same.

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

a) It is first re-iterated that transfer charges are payable only the first time that the spectrum is traded through the market mechanism.

b) In this regard we note that the DoT Committee has recommended that

“The application for transfer/merger of spectrum must be made by the licensee to whom the spectrum has been assigned, and upon grant of permission, the requisite transfer/merger charge must be paid before effecting transfer. The same fee should apply irrespective of whether the spectrum is being transferred, or acquired through a merger, or shared. In the case of merger, transfer charge will be payable on the lesser of the 2G spectrum holdings of the merging entities.”

c) We agree with the above views and recommendations of the Committee and urge the Hon'ble Authority to kindly consider the same.

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

As submitted above, the maximum limit on spectrum, for an M&A transaction or otherwise, may be prescribed at 25% of the total spectrum assigned in a service area irrespective of technology mix and / or spectrum band deployed.

However, if the merged entity has the overall spectrum beyond 25%, they may be allowed to trade & share with other operators especially when they have either would have paid the market driven charges or would be paying.

Spectrum Trading

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

Yes. Spectrum trading should be encouraged.

25. Who all should be permitted to trade the spectrum?

Any licensee/entity holding spectrum in any band should be permitted to trade the same.

26. Should the original allottee who has failed to fulfill "Roll out obligations" be allowed to do spectrum trading?

We fully support with DoT's committee report (May 2009), which states that"

Unless a UAS/CMTS licensee transfers/merges the entire 2G spectrum assigned, the unmet roll-out obligations of the seller should continue to hold penalties, if any, liable to be paid by the seller prior to the date of the sale will remain payable by the seller. In case of sale of full spectrum holding no further penalties should be imposed on the seller after the date of the sale for unmet roll-out obligation.

27. Should transfer charges be levied in case of spectrum trading?

- a) There should be no distinction between spectrum transferred through an M&A transaction or traded directly in the market.
- b) It is however reiterated that the transfer charges should apply only in the case of the first transfer/ merger/ trade and only when the spectrum so transacted has been assigned other than through a market mechanism.

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?

- a) The DoT Spectrum Committee has already recommended transfer charges that may be payable on a service area wise basis for M&A, trading or sharing of spectrum. The methodology, assumptions and parameters taken into account by the Committee to arrive at its recommendations are detailed in Annexure A5 of the Report.
- b) The Committee has further recommended that :

- Transfer charges applied for sale/merger/sharing of spectrum should be set at a level that does not discourage consolidation.
- In order to activate the market at the earliest, the transfer / merger charge should be discounted by 20 % for one year from the date of announcement of policy.
- The transfer / merger charge may be revised by the licensor annually based on price discovery from auctions and other similar inputs.

The Authority may kindly consider the above recommendation of the DoT Committee.

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

- a) It is reiterated that the maximum cap on spectrum may be prescribed at 25% of the total spectrum assigned in a service area, irrespective of technology mix and/or spectrum band deployed.
- b) This is because the spectrum bands already allocated or are in the process of being allocated through the imminent 3G, EVDO and BWA auctions are all IMT identified bands capable of offering similar /equivalent functionality of services. It would thus be both incorrect as well as undesirable to prescribe different caps for different bands / technologies. This will only lead administrative complexity and enforcement issues.

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

It should be left to the market forces. The DoT committee has recommended the transfer charges per 1MHz for 20 years. In future, there could be scenarios where the spectrum blocks to be traded or shared is less than 1MHz. Thus, it would be appropriate if suitable clarifications are also provided that the transfer charges prescribed for 1MHz would be proportionally reduced accordingly.

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

We believe that the value of spectrum will ultimately be determined by the market. However, we request the Hon'ble Authority to provide more clarity on this question to enable us to respond in details.

Spectrum sharing

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

33. What should be criteria to permit spectrum sharing?

- a) At the outset, we request the Hon'ble Authority that full clarity should be provided to the Industry that what constitutes the spectrum sharing or what does not, to avoid any confusion at later stage.
- b) On Spectrum Sharing, the DoT Committee has already laid down the broad principles and framework for spectrum sharing. Relevant extracts from the Committee Report are reproduced below:

“Sharing of 2G spectrum amongst UAS/CMTS licensees will become feasible if the annual spectrum usage charges are made uniform for all bands irrespective of amount of spectrum held. The Committee is of the view that if annual spectrum charges are made uniform as recommended in Chapter V, Government may permit sharing of spectrum also, along with transfer of spectrum through sale or merger. Sharing of spectrum is not permitted amongst UAS/CMTS licensees who opt not to pay an up-front charge for additional spectrum assigned to them prior to 17. 1.2008 beyond 6.2 + 6.2 MHz. Sharing should be permitted on payment of sharing charges’ to the Government for the quantity of spectrum shared, in the same manner and of like amount as applicable in case of transfer or merger of the spectrum.

Sharing makes economic sense only when the full spectrum is shared between the operators in a service area. It should, therefore, be permitted only when two or three GSM or CDMA operators share their entire spectrum holding in a license area. When two operators share spectrum, sharing charges shall be levied on the smaller of the two spectrum blocks being shared. In case three operators share spectrum, sharing charges shall be levied on the smaller two spectrum blocks being shared.

Since spectrum sharing arrangements may sometimes unravel, the policy may also provide for retention of sharing charges only to the extent leviable for the actual period (part of the year will be taken as full year) of the sharing on a prorata basis, and refund of the difference. In case of subsequent sale or merger of the spectrum, transfer charges or merger charges as the case may be will be payable, prorata on the balance period of the spectrum assignment.

In case of sharing of spectrum, each licensee will have the benefit of the aggregate shared spectrum. For the purpose of assessing the total 2G spectrum holding of a UAS/CMTS

licensee, the total shared spectrum will be counted in the hands of each licensee. In case one of the licensees sharing spectrum has already fulfilled the roll-out obligations, there will be no further penalties on any of the licensees sharing spectrum. In the case where none of the licensees has fulfilled the rollout obligations, penalties for unfulfilled rollout obligations will be applicable on each licensee separately.

The Wireless Advisor is required to monitor compliance with the various technical conditions of the spectrum license such as interference, power limits and transmission within assigned frequencies. In case of sharing it will be necessary to prescribe responsibility jointly and severally for compliance of license conditions of the entire shared spectrum.”

- c) We are in agreement with the above views of the Committee and urge the Hon'ble Authority to kindly consider the same.

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?

- a) As submitted above, the sharing charges may be prescribed at the same level as transfer charges for M&A or spectrum trading.
- b) As recommended by the DoT Committee, we believe that while sharing charges may be prescribed on a per MHz basis, they should be levied/applied on the smaller of the two spectrum blocks being shared when two operators share spectrum and in case three operators share spectrum, sharing charges should be levied on the smaller two spectrum blocks being shared.
- c) The DoT committee has recommended the transfer charges per 1MHz for 20 years. In future, there could be scenarios where the spectrum blocks to be traded or shared is less than 1MHz. Thus, it would be appropriate if suitable clarifications are also provided that the transfer charges prescribed for 1MHz would be proportionally reduced accordingly.

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

36. In case of spectrum sharing, who will have the rollout obligations? Giver or receiver?

We believe that fulfillment of rollout obligations should not be made a condition precedent for sharing of spectrum.

Perpetuity of licences

37. Should there be a time limit on licence or should it be perpetual?

We fully support the DoT's internal committee report that "the UAS / CMTS licence should be perpetual as long as the licensee pays the annual license fee and meets the license conditions" for the purpose of the renewal of the licence agreement at every 20 years.

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

We fully support the DoT's committee report that the validity period of the spectrum should be 20 years.

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?

- a. At the time of allocation of spectrum in another technology, the in-principle approval issued to the concerned operators stated:

It may be noted that the payment of fee, as stipulated above, is solely for the purpose of grant of permission to use GSM technology also in addition to the CDMA technology being used under the existing UAS licence(s) issued to the company under section 4(2) of the Indian Telegraph. Act, 1835 Spectrum shall be allocated as per existing policy l guidelines, as amended from time o time, subject to its availability.

The effective date of existing UAS licence(s) and other terns & conditions shall remain unchanged.

- b. Thus, all the spectrum allocations made under one licence irrespective of date/month/year of the allocation or in either of the technology, shall remain valid till the expiry date of the licence agreement.

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?

- a) We support the DoT committee report for the period of the spectrum renewal that "At the end of the license period when the assigned spectrum reverts back to the licensor, the licensee holding the spectrum till date should be given the first right of refusal for the same spectrum for the next twenty years.

- b) We also support the DoT Spectrum Committee on pricing of the renewal of the spectrum, which states that:

....This fee is to be administratively determined and publicised by the licensor annually (say, on April 1), based either on (a) a recent auction of spectrum in the circle, or a comparable one at that time, or (b) extrapolation from past auctions , or (c) escalation based on some formula. In case the licensee refuses the offer, the spectrum should be auctioned for a period of twenty years."

- c) We believe that the above is a fair and correct approach and that the same may be recommended by the Authority as well.

While, the methodologies suggested for arriving at the renewal fee is absolutely fine, however, there could be a situation where in any particular auction, the auction price of the spectrum went abnormal due to interest of many operators or availability of less spectrum or due to any reasons. If the renewal fee is linked with the recent auction price, there could be a situation where one operator increases the price of the spectrum substantially with an understanding that the same price will have to pay by his competitors at the time of renewal. In order to avoid such instances, it would be appropriate if

- the average auction price of last 2-3 auctions may be considered instead of taking the price of a recent auction.
- the benchmark price can be taken from the similar type of the service area where the auction price was not inflated / abnormal.

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?

Yes. We fully support the DoT's committee report that the existing operator should be given the first priority for the existing spectrum being used by him.

Uniform License Fee

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

Uniform Licence fee across all telecom licences would be a right policy as the same would be easy to implement and monitor. Moreover, it will address any concern of arbitrage opportunities.

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

The uniform licence fee should be prescribed for the telecom licences, which have been granted under section 4 of the Indian Telegraph Act 1886.

As registration certifications say Infrastructure Provider, Telemarketer etc., which are not issued under section 4 of the Indian Telegraph Act 1884 and thus, the same should not be subject to any licence fee regime.

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

From time to time, the Hon'ble Authority has made various recommendations on adoption of a uniform licence fee @ 6% in (i) Unified Licensing dated January 13, 2005 (ii) On components of Adjusted Gross Revenue (AGR) dated September 13, 2006 and (iii) Issues related to Internet Telephony dated August 18, 2008 and March 17, 2009

We have always supported these recommendations and once again request the Hon'ble Authority to reiterate the uniform licence fee @6%.

Chapter 3

Spectrum assignment

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

Spectrum is a public resource and the Government is bound to ensure its most beneficial, efficient, effective and non-wasteful use. Pricing of such a valuable resource has to be at a level that is close to its real value so that the public exchequer is not denied what is legitimately due to it. Internationally, the Government has earned huge revenue from the auction, which has been used in meeting the social objectives.

Keeping the economic value of such a scarce resource, the Hon'ble Prime Minister of India, on the occasions of "India Telecom – 2007 stated" "The policy regime for making spectrum available should be fair, transparent, equitable and forward looking. At the same time, the revenue potential to the government must not be lost sight of. After all, governments across the globe have harnessed substantial revenues while allocating spectrum. In the final analysis, the key issues are correct pricing, fair allocation rules, and a pro-competitive stance....."

Similarly, the Economic Survey of 2008-09 has also acknowledged the economic value of 2G spectrum by stating that "Spectrum should be auctioned and be freely tradable among companies having a telecom licence. The auction price can be in the form of a fixed price or charge per unit of bandwidth per annum or a combination of the two"

After going through the best international practices as well as various methods of allocation of spectrum, the Government had adopted the auction approach for 3G spectrum. Similar auction process should be adopted for 2G as well, as rightly recommended in DoT committee report.

In this regard, we fully support the DoT committee report, which states that:

Start-up spectrum of 4.4+4.4 MHz for GSM and 2.5+2.5 MHz for CDMA is to be assigned to an existing UAS licensee as per current policy as and when spectrum becomes available.

In case any new UAS licenses are issued in future, they should not carry with them any eligibility for start-up spectrum. Since there is no start-up spectrum, the licensees will not have any roll-out obligations for wireless access networks.

No additional spectrum should be assigned to any licensee in future based on the Subscriber Linked Criterion. This includes licensees who may have already become eligible for additional spectrum. The

interim SLC notified in the order dated 17.1.2008 need not be revised further, and assignments already made since 17.1.2008 based on it can be taken to be final. All assignments of 2G spectrum in future should be through auction. The auction should be limited to UAS/CMTS licensees.

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

In its report, the DoT internal committee has given few justifications as to why the SLC approach should not be continued (from s. no. 2(f) to (h)). We fully agree with these observations.

As rightly suggested in DoT committee report, all future spectrums should be allocated through auction only.

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?

If 2 tier spectrum allocation approaches is adopted say Subscriber Linked Criterion (SLC) and Auction, beyond a threshold limit say 6.2MHz; it would be inconsistent approach wherein spectrum will be allocated to 2 sets of telecom operators differently. Such approach will only create huge controversies within the Industry like:

1. How the priority of the spectrum will be treated between 2 set of operators i.e. who have filed its application for additional spectrum upto 6.2MHz and second, who is waiting for auction and is ready to pay the market driven auction price.
2. Spectrum is scarce and in India context, it is always available in small quantity. If Government decides to clear the pending applications for additional spectrum of new operator before making it available for auction at any point of time, then it will be highly unfair to those operators, who would be starved with spectrum especially when they are ready to pay the market driven price.
3. An uneconomic model where one set of operators would be getting the additional spectrum free whereas other operator would be paying based on market driven price. This is despite the fact that under the licence agreement, both operators are entitled for additional spectrum (beyond the initial spectrum)
4. Very subjective policy wherein the date / month of the auction can be delayed to meet the spectrum requirements of some operators

5. If SLC approach is adopted; different operators will be able to fulfill the criterion at different point of time after achieving a prescribed subscriber base. As different operators would be achieving the prescribed subscriber base at different point of times, the SLC approach will continue for a long time. Till such period, the spectrum policy will continue to be flawed.

Thus, as rightly recommended by the DoT internal committee, the auction approach for spectrum 4.4MHz should be implemented.

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

We believe that in the case of 2G, GSM spectrum can be assigned in tranches of 1MHz, maximum 2 tranches per operator per auction.

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

While recommending the auction approach beyond 4.4MHz, the DoT committee has looked the issues related to level playing field extensively and thereafter, observed the following:-

the government need not exercise itself unduly about ensuring an absolute level playing field between licensees who entered the market at different points in time. Variable pricing of resources for entrants at different times happens with other natural resources (e.g., land for industrial development) as well. Early or late entry, each comes with a set of advantages and disadvantages, and is part of the business proposition. The government needs to consider only whether the objectives of fair competition, right economic value of the spectrum and efficient spectrum use are being met.

The DoT committee report has also stated that:

Some representations have been received stating that UAS licensees who have so far received only 4.4 MHz + 4.4 MHz ((or less) GSM spectrum , have a right to receive spectrum upto 6.2 MHz free of cost and without auction as per conditions 43.5(i) and 43.5(ii) of the UAS License agreement. The Committee examined the license conditions and is unable to agree with this contention.....

Condition 43.5(i) clearly states that initially a cumulative maximum spectrum of 4.4 MHz + 4.4 MHz in case of GSM or 2.5 MHz + 2.5 MHz in case of CDMA will be allocated. Condition 43.5(ii) clarifies that additional spectrum beyond 4.4 MHz and upto 6.2 MHz may be considered for allocation after ensuring optimal and efficient utilization of the already allocated spectrum taking into account all types of traffic and guidelines/ criteria prescribed from time to time. Currently the criteria for additional allocation is rolling out the network and achieving specified subscriber numbers as stipulated in subscriber linked criteria dated

17.1.2008. This makes it clearly beyond doubt that initial start up spectrum which is received with license free of cost is only 4.4 MHz + 4.4 MHz for GSM and 2.5 MHz + 2.5MHz for CDMA. The additional 1.8 MHz + 1.8 MHz for GSM and 2.5 MHz + 2.5 MHz for CDMA may be considered for allocation after efficient utilization of initial spectrum and after fulfilling the guidelines /criteria prescribed from time to time. Condition 43.5(iv) further stipulates that Government has a right to modify and/or amend the procedure for allocation of spectrum including quantum of spectrum at any point of time without assigning any reason. From reading of all three conditions together it is clear beyond doubt that Licensee has a right to receive initial spectrum (4.4 MHz + 4.4 MHz or 2.5 MHz + 2.5 MHz, as the case may be) and Government is within its right to change the procedure for further spectrum assignment. Government is under no obligation to assign spectrum beyond this free of cost, or, without auction.

Moreover, the Government has taken various policy shifts in the past as well in the public interest despite the fact that it affected certain number of telecom operators. For instance:-

1. Bharti as an operator signed basic licence in 4 service areas in October 2001, after payment of Rs.145 crores as combined entry fee. In October 2003, only after 2 years, after the introduction of UASL regime, these licences became redundant as they were holding the CMTS licence in those service areas. No refund of the entry fee for the unused period of the basic licence agreement was made.
2. In 2001, the private telecom operators were granted the long distance licences after paying the entry fee of Rs.100 crores & Rs.25 crores for NLD & ILD respectively with a recurring licence fee of 15%. Only after 4 years, the entry fee for new operators was reduced at the level of Rs.2.5 crores with a licence fee of 6%.

In summarize:

- a. **After going through the level playing field issues extensively, the DoT committee has suggested the auction approach for 2G spectrum beyond 4.4MHz. We request the Hon'ble Authority to consider the same favourably.**
- b. **The Government has the right to modify the policy in the public interest.**

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

As stated above, we strongly support the DoT Committee report that the spectrum auction should now been conducted for allocation of 2G spectrum beyond 4.4MHz and thus, we do not support the continuation of the SLC criterion.

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?

Spectrum is a scarce natural resource and thus, it is imperative that usage should serve overall public interest and it is optimally utilized. Appropriate spectrum pricing is one of the best tools to enforce optimal usage especially when the spectrum is being used for commercial purpose. Thus, all types of spectrum should be auctioned. If some non-commercial usages are inevitable in frequency band required for commercial public services, the charges for such non-commercial operations should also be more or less similar/ commensurate.

Moreover, currently, some of the bands are delicensed as the same is used by the public, without causing any interference to each other. The main purpose and objective of delicensing is to encourage the usage of such common gadgets for common/ wide benefit & convenience of the citizens and to free them from getting the wireless licence and its periodic renewals. The 'Public good' is the main objective as well as criteria for deciding such delicensing and the loss in revenue is compensated by public interest served by such delicensing.

However, many commercial operations are using maximum permissible or even higher than RF power, interfering low power public use, depriving them of use. Extensive commercial deployment of such de-licensed bands by the concerned operators may deprive public usage and benefits, defeating basic purpose of de-licensing;

As other service providers pay large amounts for spectrum, initially and recurring usage charges and thus, it creates non-level playing field. Thus, if delicensed bands are being used for the commercial purpose, the same should be charged appropriately. It will not only bring huge revenue to the Government but also bring discipline in the usage of such free / de-licensed bands.

Spectrum pricing

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

As per the guidelines issued from time to time and the position taken by the Government before the Court in various matters, the committed threshold for telecom operators in GSM is 15MHz and 7.5MHz in CDMA. To the best of our understanding no licensee has yet been given spectrum beyond the above committed threshold limits.

It is an admitted position of the Government that the existing spectrum allocations have been made strictly as per the guidelines / orders, issued from time to time. It is the stated position of the Government in its various affidavits before the Hon'ble TDSAT and High Court, the relevant extract of one of the Government affidavit is as under:-

"It is submitted that allotments of spectrum were made in accordance with the norms prevailing at the stage of allotment. ...

...to achieve the objectives of continued growth of telecom services, further spectrum beyond 2 x 6.2 MHz has also been allotted to various operators, as per guidelines/ orders/ criteria in force at the time of such allotment. These criteria have been formulated and appropriately reviewed periodically, taking into account TRAI recommendations and development of technological features, etc.

It is thus the case of these respondents that no spectrum in excess of what was permissible has been granted to any mobile operator.

The issue of criteria, allotment of additional spectrum and pricing are the part of normal spectrum management functions and accordingly orders in this regard were issued as, a part of normal procedure.

The additional spectrum to GSM operators were allotted as per guidelines, orders and eligibility criteria prevalent on the respective dates of allotment. The Service Licence agreement provides the licensor the right to modify and/ or amend the procedure of allocation of spectrum including quantum of spectrum at any point of time without assigning any reason.

The additional spectrum to GSM operators, beyond the initial spectrum had been allotted, as per the guidelines, orders and subscriber based edibility criteria prevalent on the respective dates of allotment. The allotments were made subject to availability of spectrum as well as enabling provision enshrined in the service License Agreement.

It is submitted that there can be no difference in allocation norms for existing players vis-a-vis, new entrants."

The DoT committee has now recommended the upfront charges to be paid by the existing telecom operators for the spectrum allocations made prior to 17.1.2008 if they wish to migrate themselves to a uniform spectrum charges. Since, the above proposal is optional, we have in principle no issue with the same.

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?

We fully support the recommendations of the DoT's committee report, which states that:-

UAS/CMTS licensees who have obtained additional 2G spectrum beyond 6.2+6.2 MHz in an LSA prior to 17.1.2008 should be given the option of paying an upfront charge for the spectrum beyond 6.2+6.2 MHz, computed as above for the remaining period of spectrum assignment from the date when annual spectrum usage rates become uniform, or a subsequent date from which they exercise the option. If they exercise this option, the annual spectrum usage charges for the spectrum held should become 3% of AGR, instead of the higher rate being levied at present.

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

The DoT committee has recommended the upfront charge of 2G spectrum to be benchmarked with 3G spectrum.

As a principle, it will be fair if the benchmark price is prescribed in the following manner:-

- | | | | |
|----|----------------------------------|---|--------------------------------------|
| 1. | Benchmark price for 2G spectrum | - | Price discovered through 2G auction |
| 2. | Benchmark price for 3G spectrum | - | Price discovered through 3G auction |
| 3. | Benchmark price for BWA spectrum | - | Price discovered through BWA auction |

We also understand that the auction process of 2G spectrum may take some time. Accordingly, the Government may advise the existing operators to pay the upfront charges based on the transfer charges proposed in DoT committee report and once the 2G auction takes place, the differential charges (upfront charges paid based on transfer charge for 2G – applicable upfront charges to be payable based on 2G auction price), the same may be adjusted. Once the existing operators pay the transfer charges, they shall be migrated to uniform spectrum charges.

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

Yes! In this context, the DoT Spectrum Committee has stated in its Report that:

- *Currently the annual spectrum charge depends not only on the quantum of spectrum but also on technology. These charges are currently based on an escalating percentage of AGR depending on spectrum held. The escalating rate approach is appropriate to discourage substitution of physical infrastructure by spectrum when spectrum is assigned based on administratively determined subscriber thresholds. Once the value is being determined through an auction mechanism, there is no rationale for continuing with an escalating charge approach.*
- *There is a second reason why an escalating charge approach is unsuitable when there is an auction. In an auction, the bidder would factor in both the upfront fee payable through the auction as well as the recurring usage charges. If usage charges were to be different at different levels of spectrum holding the entire auction process would be compromised. A person paying a higher usage charge on account of holding a larger block of spectrum prior to the auction would be compelled to place a lower upfront value for the bid and will not have a level playing field in bidding. Under these circumstances, it would be incorrect to determine the winning bidder only on the basis of the auction price. Therefore, once an auction approach is introduced for spectrum allocation, in order to ensure that all bidders compete and bid on equal terms, spectrum usage charges must be prescribed at a flat / uniform level so as to ensure level playing field in the bidding and allocation of spectrum.*

Thus, we fully support the DoT's internal committee recommendations on adoption of uniform spectrum charges regime.

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

No. Once the spectrum is being auctioned, there is no need to review the annual spectrum charges, which are only to recover the administrative expenses.

Structure for spectrum management

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

The trend of modern telecom services is towards greater mobility with ever increasing data rates. This would necessitate larger amount of spectrum. With the growth of existing operators and other large users, as well as new technologies/ services, the responsible agency needs to be equipped to handle the increasing complexity and volume of work most efficiently.

Based on the best international practices, the desired structure for efficient management of spectrum can be adopted by India.

