

July 13, 2004

Mr. Pradeep Baijal
Chairperson, Telecom Regulatory Authority of India
A-2/14 Safdarjung Enclave, New Delhi 110 029

Dear Mr. Baijal,

I am enclosing with this letter our comments on TRAI's Consultation Paper No. 11/2004 on "*Spectrum related Issues: Efficient Utilisation, Spectrum Allocation and Spectrum Pricing*".

First of all let me commend you on your efforts to move towards a more rational approach to spectrum. We are in complete agreement that this is sorely needed at this stage of development of the wireless telecommunication industry.

Our response is from the perspective of fostering spectrum management to promote efficient utilisation in areas where it is scarce and leverage its availability in other areas to meet objectives such as the spread of rural telephony. It emphasises the following:

- (a) It would be best to develop a standard measure of spectrum in the form of a basic unit of measurement that delineates the unit's frequency boundaries of the right of use as well as geographical boundaries. In contrast to the current telecom circles, spectrum should be defined using much smaller blocks, which specifically segregate densely populated urban blocks from other areas. Defining spectrum using a finer geographic definition will enable attention to be focused on making spectrum available in those specific geographic locations where it is required. Following such a definition, one may find that spectrum is virtually costless in areas where its supply far exceeds demand, as for example, in rural India.
- (b) Whatever the pricing scheme chosen for the existing allocation of spectrum, whether it is the administered incentive price (AIP) proposed in the consultation paper or any other, spectrum should be charged on a Rs. per MHz basis and not on a revenue share basis as is the current practice. Furthermore, if the proposed AIP is selected, it should be used to price spectrum only in areas where spectrum is likely to be scarce in the foreseeable future. In other areas where scarcity of spectrum is not anticipated, there is no efficiency reason for incentivising service providers to build more base stations instead of acquiring more spectrum.
- (c) Spectrum should not be allocated and charged for. It should be bought and paid for. It should be made available in a non-discriminatory manner to all comers through a process where the amount to be purchased and the price to be paid are decided by service providers, depending on their business plan; while the government decides the total amount of available spectrum for which usage rights can be offered to commercial users. Auction appears to be the most suitable instrument to implement such a non-discriminatory approach to allocation and is, in particular, especially important for the allocation of IMT-2000 spectrum. Annexure F in the consultation paper also broadly supports this conclusion. Instead of auctioning ownership, long-term (e.g., 15 year leases as in Australia) usage rights to the spectrum could be auctioned. It is also important to avoid the illusion of false scarcity by announcing a schedule of release for spectrum to allow service providers to form a medium term view on the availability of spectrum.
- (d) Going forward, trading should be an integral part of any spectrum management approach. Moving to a regime where spectrum is priced in Rs. per MHz would facilitate trading since the original allottee

Cont'd...2

could continue to pay the agreed fee to the government even if spectrum use rights are transferred to a third party. Taken together, trading and redeployment (especially in the densely populated urban areas) may make enough spectrum available to ease any shortage. Trading will also improve our understanding of the scarcity of spectrum.

The rationale underpinning the aforementioned recommendations is detailed in our item-wise response to the consultation paper, which is attached for your consideration. We trust you will find our suggestions to be useful and acceptable, and look forward to further productive interactions with the Authority.

With best regards,

Sincerely,

Urjit R. Patel

Encl.

Comments on TRAI Consultation Paper No. 11/2004

Spectrum related Issues: Efficient Utilisation, Spectrum Allocation and Spectrum Pricing

This note is in response to the above consultation paper, and seeks to offer comments from the perspective of fostering spectrum management to promote efficient utilisation in areas where it is scarce and leverage its availability in other areas to meet objectives such as the spread of rural telephony.

Spectrum is defined both by bandwidth and by geography. In India, these geographic limits are co-terminus with those of the telecom circles (broadly state boundaries and the metros). It is noteworthy that the available spectrum is in excess supply in rural India, as is recognised in the Consultation paper in section 4.4.1.1.3 where it states that “*2 x 2.4 MHz ... is all that would be required in rural areas*”.

A finer geographic definition of spectrum would permit a more nuanced, targeted and disaggregated approach to the perceived problem of scarcity – following which attention can be focused on making spectrum available in those specific geographic locations where it is required.

Even in the areas of perceived scarcity, mostly densely populated urban agglomerations, there may be scope for redeployment to make more spectrum available in the bands that are currently being used. As the consultation paper notes: “*government users are presently occupying a large part of [the 1800 MHz / 1900 MHz] bands and re-farming of this spectrum is a continuous but long drawn process.*” Emphasising localised redeployment rather than nation-wide redeployment may make it possible for more existing “*government users*” to relocate.

There is also the possibility of spectrum trade between existing users, if it is allowed. While there may be reluctance to trade due to strategic reasons, operators may choose to swap spectrum in different locations, through mutually beneficial arrangements, based on differential growth in subscribers at these locations. In our opinion, going forward, trading should be an integral part of any spectrum management approach. Taken together, trading and redeployment may make enough spectrum available to ease the shortage. Also, trading can improve our understanding of the scarcity of spectrum and provide an alternative method for market-based valuation of spectrum.

A prime recommendation would thus be to define smaller spectrum blocks, which specifically segregate densely populated urban areas, in contrast to the current circles.

Looking to the future, the evolution to the IMT 2000 band is likely to affect the demand supply scenario in the existing bands. For example, the deployment of W-CDMA (wideband CDMA, one of the GSM migration paths to 3G) can be expected precisely in those geographic areas where there is considerable demand for spectrum in existing GSM bands, i.e., the urban hotspots. The migration of traffic (W-CDMA may attract a relatively small number of users but this may imply a high volume of traffic as these are likely to be high-intensity users) to W-CDMA, which has a high capacity for carrying voice as well as data as channels are not dedicated to one or the other, may free up capacity in the existing 2G GSM bands over and beyond the additional requirement for new 2G users. The UK experience mentioned in section 5.8.2.2.2 is indicative of the use of W-CDMA to aggressively price

voice calls, while maintaining a high quality data platform. This holds out the possibility that the spectrum situation may become considerably easier after the deployment of W-CDMA, which may happen sooner than expected. A critical determinant would be the cost of the handset, which may become affordable as China deploys W-CDMA and manufactures equipment and handsets. Recently, the Beijing Morning Post reported that China Telecom is planning to order 1 million W-CDMA 3G handsets for about 1 billion Yuan (about Rs. 6,000 per handset). Thus, the way in which the IMT 2000 band will be made available later is a critical component of the answer to today's problems. A more detailed discussion of this is given in response to issue (iv) below.

The issue at hand is therefore two-fold:

(a) How to price the existing spectrum allocation?¹

The existing pricing regime for spectrum is ad-hoc. An economic approach to spectrum is not encouraged if spectrum charges continue to be linked to the revenues of service providers, rather than being charged for itself on a per MHz basis. The consultation paper appears to encourage a move to such a regime. It is important that the change should be made applicable to spectrum that is already made available and additional allocations as per the entitlements embedded in the license agreements. To the extent that it is specified in the license conditions, there could be a certain imperative to continue with existing pricing arrangements. However, this can be revised with mutual agreement, if necessary. Service providers would not normally object to such changes in pricing methodology if the modification is broadly financially similar and comes along with a more rational spectrum policy. Moreover, it is possible to review pricing for spectrum allocated beyond what was assured in the license.

One approach suggested in the consultation paper is to use an administered incentive price (AIP). The manner of its calculation in the example indicates that the objective is to make it more economic to build more base stations rather than acquire more spectrum, i.e., to motivate the service provider to work with the amount of spectrum already allocated. A more detailed discussion of the issues involved with the proposed AIP method is given in the response to issue (xii) below. Here it is important to stress that the AIP should be used to price spectrum only in blocks that cover densely populated urban areas, as there is no efficiency reason for incentivising service providers to build more base stations instead of acquiring more spectrum in other areas where additional spectrum is available today and for the foreseeable future. It must be also recognised that there may be revenue loss to the government by moving to an AIP regime, which must be accepted as the cost of moving to a rational pricing scheme.

An added advantage of moving to AIP would be that spectrum would be priced in Rs. per MHz. This would facilitate trading in spectrum since the original allottee could continue to pay the agreed fee to the government even if spectrum use rights are transferred to a third party. This would have been more complicated under a revenue share based pricing regime.

(b) How to allocate the additional spectrum?

The consultation paper appears to retain an overly administrative approach to spectrum management. The underlying assumption appears to be that the government would continue to control both price and quantity, i.e., decide who would get how much spectrum, when they would get it and how much they would pay for it. This is a

¹ This refers to both the allocation being used currently and the allocation that the service provider is entitled to as part of his license agreement.

difficult role for the government especially in a situation of rapid technological development. It is imperative to move to a market-based system where service providers who are investing in these technological developments have a greater voice in determining the allocation and pricing of spectrum.

This approach of controlling both price and quantity is especially prominent in the issues raised in Chapter 5, especially for issues (xviii), (xxiv) and (xxv). Spectrum is not to be allocated and charged for. It is to be bought and paid for. Spectrum should be made available in a non-discriminatory manner to all comers and the amount of spectrum to be bought will depend on the business plan of the buyer. **Auctions appear to be the most suitable instrument to implement such a non-discriminatory approach to allocation.** Instead of auctioning the ownership, long-term (e.g., 15 year leases as in Australia) usage rights to the spectrum could be auctioned. Annexure F in the consultation paper also broadly supports this conclusion. Our response to issue (xiii) addresses some of the concerns regarding auctions.

In auctioning spectrum, it is important to avoid the temptation to create an illusion of false scarcity in order to increase revenues for the government coffers. One way of preventing this is to announce a schedule for release of spectrum over the next three years, which will allow service providers to form a medium term view on the availability of spectrum.

The Administered Incentive Price (AIP) is not appropriate to determine a price for a additional spectrum, because it predetermines the quantity to be allocated and then derives a price based on technically determined cost-savings. An auction will address both issues simultaneously. **The auction method will be especially important for the allocation of IMT-2000 spectrum because there are a number of available technologies that can use this band.**

Item-wise response to issues for consultation

Chapter 2: Current spectrum availability and requirement

- (i) **Should the 450 MHz or any other band be utilised particularly to meet the spectrum requirement of service providers using CDMA technology?**

Keeping in view the current technology-neutral approach to spectrum, it would not be appropriate to allocate any band to any particular technology. The appropriate option would to auction a suitable amount of spectrum in this band and make it open to all, not just restricted to service providers.

- (ii) **The consultation paper has discussed ITU method for assessment of spectrum requirement. Based upon the methodology submit your requirement of spectrum for next 5 years. While calculating the required spectrum, please give various assumptions and its basis.**

We have no specific comments on requirement of spectrum. However, as noted in our introductory comments, the introduction of W-CDMA may lead to a migration of high-intensity users out of existing GSM bands which may free up capacity in the existing GSM bands over and beyond the additional requirement for new 2G users traffic. This holds out the possibility that the spectrum situation may become considerably easier after the deployment of W-CDMA, which may happen sooner than expected. Similar developments can be expected for the CDMA migration path to 3G.

- (iii) **Whether IMT 2000 band should be expanded to cover whole or part of 1710 – 1785 MHz band paired with 1805 – 1880 MHz?**

No comment.

- (iv) **Should IMT 2000 spectrum be considered as extension of 2G mobile services and be treated in the same manner as 2G or should it be considered separately and provided to operators only for providing IMT 2000 services?**

It appears from the consultation paper that the implication of IMT 2000 spectrum being considered as extension of 2G mobile services is to continue with allocating IMT 2000 spectrum in the same manner as currently practiced for allocations of additional spectrum, e.g., as in the allocation of spectrum in the 1800 MHz band to GSM service providers. We do not agree with this practice. At the same time, we believe that buyers of IMT 2000 spectrum should not be forced to provide specific services. One can rely on market forces to ensure that the service providers will provide the necessary services that are capable of being provided using IMT 2000 spectrum if there is a commercially viable level of demand for them. Consequently, the IMT 2000 spectrum should be allocated through an auction process that is open to all.

- (v) **Reorganisation of spot frequencies allotted to various service providers so as to ensure the availability of contiguous frequency band is desirable feature for efficient utilisation of spectrum. Please suggest the ways and means to achieve it.**

No comment.

- (vi) **Whether the band 1880 – 1900 MHz be made technology neutral for all BSOs / CMSPs / UASLs and be made available with the pair 1970 – 1990 MHz or should it be kept technology neutral but reserved for TDD operations only.**

This question refers to the issue of reserving the mentioned band for corDECT operations. Since the use of corDECT is primarily in rural areas, where supply of spectrum is larger than demand, this conflict can be addressed by dividing the existing telecom circles into suitably smaller spectrum blocks that segregate dense urban areas from rural.

Chapter 3 Technical efficiency of spectrum utilisation

- (vii) Please offer your comments on the methodology outlined in this Chapter for determining the efficient utilisation of spectrum. Also provide your comments, if any, on the assumptions made.

No comment.

- (viii) Please provide your perception of the likely use of data services on cellular mobile systems and its likely impact on the required spectrum including the timeframe when such requirements would develop?

There is considerable use of data services (even excluding SMS) already on the existing GSM-GPRS and CDMA systems. Wi-Fi services are also expected to be launched shortly. As noted earlier in our introductory remarks, the deployment of W-CDMA is likely to be in current urban hotspots where there is demand for wireless data. A critical determinant would be the cost of the handset. This may become affordable as China deploys W-CDMA and manufactures equipment and handsets. Recent reports from China already indicate a cost of Rs. 6,000 per W-CDMA 3G handset. If this is accurate, one can expect intensive use of data services by a small group of high-intensity users as soon as W-CDMA services become available.

Chapter 4: Spectrum Pricing

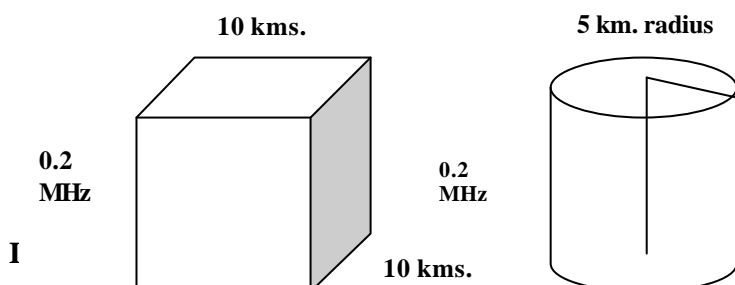
- (ix) Is there a necessity to change from the existing revenue share method for determining the annual spectrum charge?

Yes, it is necessary to change to a system whereby the spectrum is charged on a Rs. per MHz basis for reasons mentioned in our introductory remarks.

- (x) If yes, what methodology should be used to determine spectrum pricing for existing and new operators? (Please refer table in Section 4.8)

As noted earlier in our introductory remarks, it is fundamentally important to recognise that spectrum does not have any intrinsic value unless demand exceeds supply; a situation that pertains in India only in a few densely populated areas. A critical pre-requisite to bring out such a recognition would be to delimit spectrum blocks in a more disaggregated manner. Presently, and apparently in the approach followed by the consultation paper, the entire spectrum within a telecom circle (and the four metros) has/will have a uniform pricing measure, thus forestalling the option of differential pricing.

To rationalise the pricing regime for spectrum, it is useful to develop a standard measure of spectrum as a basic unit of measurement. These can be called standard spectrum units (SSUs), as shown in the figure alongside. The unit can be a cube or a cylinder (where the distance is measured radially from a



given geographical grid reference) or even have irregular geographical boundaries. Each telecom circle can then

be sub-divided into a number of SSUs². While SSUs in areas of high usage density can be charged based on AIP method for already allocated spectrum (including entitlements embedded in the licenses), SSUs with very low usage density may be charged no fee. This approach may not be revenue neutral from the point of view of the government but must be accepted as the cost of moving to a rational pricing scheme.

- (xi) **In the event AIP is adopted as a means to price spectrum, would it be fair to choose GSM as a reference for determining the spectrum price?**

Spectrum prices vary by location and bandwidth. Using GSM as a reference price for all bandwidths may not be desirable.

- (xii) **Please provide your comments on the assumptions used in A.I.P.**

In the example in the consultation paper, at the calculated price, the service provider is indifferent between increasing capital expenditure on the network and acquiring more spectrum, given that the operator already has some spectrum (10 MHz)³. The AIP approach adopted appears more suited to determining the price for additional (2.4 MHz) spectrum, while continuing to charge separately for the earlier allocation (10MHz), if the objective is to dissuade the service provider from asking for more spectrum and guiding it towards increasing capital expenditure.

However, the example appears to indicate that the calculated AIP will be charged not just for additional (2.4 MHz) spectrum but also for the entire (10 MHz) spectrum already allocated to the service provider. There is no compelling logic for pricing the entire (10MHz) using this particular approach, and in particular, there is no reason to believe that the unrestricted demand for spectrum at the calculated AIP (Rs. 2.1 crore per MHz) would be equal to the amount already allocated (10 MHz).

- (xiii) **In case Auction methodology is used for pricing the spectrum, please give suggestions to ensure that spectrum pricing does not become very high and spectrum is available to those who need it.**

There seems to be a misunderstanding.

'High' spectrum pricing depends on what the service provider thinks it will be able to recover from the consumer. A high spectrum price per se is of little concern to the regulator, unless it translates into a high consumer price. Given the previous experience with the Indian consumer market, where price sensitivity has been established, it would be unreasonable to base high payments for spectrum on the assumption that it can be recovered from high consumer tariffs. If a high spectrum price is bid, it is more likely to be the result of the service provider assuming a large subscriber base driven by low tariffs, a desirable outcome from the regulator's point of view. Indeed, the consultation paper mentions the experience of 3G auctions in the United Kingdom, where low tariffs prevail even though prices paid for spectrum were perceived to be 'high'.

The second statement is even more puzzling. Why would spectrum not be available to those who need it under an auction regime? Presumably, the service provider that has paid for the spectrum needs it,

² Administrative borders can also be used to geographically delimit SSUs, (as is the de facto case today) but these are less stable, as such boundaries can also be altered by administrative decisions.

³ To the extent that capital expenditure is a sunk cost, there is an option value to buying spectrum if it can be traded or returned and therefore there may be a tendency to ask for spectrum rather than undertake capital expenditure.

otherwise why would it pay for it? If a service provider has acquired spectrum to preempt its use by other service providers, then such eventualities can be dealt with under competition rules.

Thus, neither of these concerns about the auction methodology appears valid.

- (xiv) **Should the new pricing methodology, if adopted, be applicable for the entire spectrum or should we continue with revenue share mechanism till 10 + 10 MHz, and apply the new method only for spectrum beyond this?**

The new pricing methodology should be applicable for the entire spectrum made available for commercial use as per the entitlements embedded in licenses. A short phase in period (up to 3 years) can be allowed for an orderly transition. The only problem is that the financial implications of the new and the old methodologies are not comparable. This may lead to some complaints of favouritism, but as the amounts involved are relatively small compared to gross revenue, there may not be much protest.

- (xv) **What incentives be introduced through pricing to encourage rural coverage and / or using alternative frequency bands like 450 MHz?**

One must beware of using a single instrument (pricing) for multiple objectives. Rural spectrum should be free, not as a price incentive but because demand for rural spectrum is far lower than availability at this time and a zero price would be a market outcome. For this, it is necessary to segregate and define spectrum in geographically finer units than it is currently (where the minimum geographical unit is the circle, with the exception of the four metros).

- (xvi) **Does $M ? C ? W$ formulae for fixed wireless spectrum pricing need a revision? If so, suggest the values for M, C, W?**

A uniform pricing policy should be used for all spectrum including fixed wireless.

- (xvii) **Should there be different pricing levels for shared spectrum versus spectrum that is allocated with protection? How should this be determined?**

This question would be redundant if market based allocation mechanisms like auction were used. In that event, the price of shared spectrum would be determined in the same manner as the price of a timeshare is determined. However, it should also be possible to derive an AIP for shared spectrum using similar principles, in case this methodology is used for pricing.

Chapter 5 Spectrum allocation

- (xviii) **How much minimum spectrum (refer approach (I) and (II) in section 5.4) should each existing operator be provided? Give the basis for your comments.**

Approach II is on the face of it infeasible. This arises because the geographical distribution of spectrum demand is ignored. 10 MHz for each operator may not be necessary in most of India, except a few densely populated patches. In such areas, a concentrated effort at spectrum re-farming and trading is needed to increase availability. However, the quantity of further allocation of spectrum beyond

entitlements embedded in licenses should not be an administrative decision. Rather, it should be the outcome of an auction process.

- (xix) At what stage the amount of spectrum allocation to new entrants be considered in the 800 MHz / 900 MHz / 1800 MHz frequency bands?**

Whenever spectrum can be made available and service providers are ready to pay for it. Reservation for new entrants can only be justified on grounds of promoting competition.

- (xx) Should spectrum be allocated in a service and technology neutral manner?**

Yes, as a general principle. This question appears motivated by the reservation for micro-cellular use. However, as the use of corDECT is primarily in rural areas, where supply of spectrum is larger than demand, this conflict can be addressed by dividing the existing telecom circles into suitably smaller spectrum blocks that segregate dense urban areas from rural.

- (xxi) What should be the amount of cap on the spectrum assigned to each operator?**

This is a competition issue and should be decided in a contextual manner based on market conditions, instead of an ad-hoc cap.

- (xxii) What procedure for spectrum allocation be adopted for areas where there is no scarcity and in areas where there is scarcity?**

In no scarcity areas, spectrum charges should be free (management costs can be covered with fees from scarce areas), while auctions can be used in areas of scarcity.

- (xxiii) Which competitive spectrum allocation procedure (Auction / Beauty Contest) be adopted in cases where there are scarcity?**

Between the Auction and Beauty Contest, there is no contest. Auction is clearly preferable.

- (xxiv) Should we consider giving some spectrum in 900 MHz band to fourth CMSPs?**

Spectrum in 900 MHz band should be treated like any other spectrum, which can be used by all those who choose to pay for it in an open auction.

- (xxv) Comments of stakeholders are invited on the minimum blocks such as 2×2.5 MHz / 2×5 MHz of additional spectrum to be allocated to existing service providers in situations where IMT 2000 band is opened as well as in situation where it is not opened. Additionally, comments are also invited on the minimum allocation to new entrants.**

Spectrum is not to be allocated and charged for. It is to be bought and paid for. in a process where service providers decide the amount to be purchased and the price to be paid, while the government decides the total amount of available spectrum for which usage rights can be offered to commercial users. The amount of spectrum to be bought by the service provider will depend on its business plan. It is useful to offer the spectrum for auction in groups of standard spectrum units (SSUs), as defined in our response to (x) above. The frequency dimension of the SSU could be chosen based on technical considerations, based on the channel spacing used by the available technologies that are relevant to the band being offered on auction.

- (xxvi) **In the event that IMT 2000 spectrum is treated as continuum to 2G, should existing operators using spectrum below the specified benchmark be treated as those eligible for IMT 2000 spectrum?**

All operators willing to participate in the auction should be eligible. There should be no precondition for participation in the allocation process for IMT 2000 spectrum except financial capability. See response to (iv) above.

Chapter 6 Re-farming, Spectrum trading, M&A and Surrender Re-farming of spectrum

- (xxvii) **What approach should be adopted to expedite the re-farming of 1800 MHz and IMT-2000 spectrum from existing users?**

There should be compensation for re-farming in the case of non-telecom users. In such cases, especially for defence forces, redeployment offers an opportunity to upgrade to new equipment. This upgradation should be paid for, taking care to ensure that the new equipment is spectrally efficient. There may also be a case for consolidating spectrum requirements for defence equipment within the NATO band.

The adoption of spectrum trading should also help to address the issue, especially where the need to re-farm is localised.

- (xxviii) **What approach should be adopted for re-farming of spectrum after expiry of license?**

The issue presumably refers to the approach to be adopted for re-farming of spectrum before expiry of license (the issue is irrelevant after expiry). See response to (xxvii) above.

Surrender of spectrum

- (xxix) **Should there be any refund for spectrum surrender in principle?**

The question is redundant if trading is allowed. If there is demand for the spectrum under consideration, the service provider that currently has the rights to use the spectrum will trade it to those who demand it. If there is no demand, the traded price of the spectrum is zero and the service provider would not receive any recompense⁴.

- (xxx) **Should there be refund for spectrum surrender consequent to Unified Access license policy? If yes, what should be the basis?**

See response to (xxix) above.

- (xxxi) **How should the amount of refund be estimated?**

See response to (xxix) above.

Spectrum trading

⁴ This ignores any option values arising out of possible future use of the spectrum, for which too some service provider would be willing to pay a positive price.

(xxxii) Should we open up the spectrum market for spectrum trading? If yes, what should be the time frame for doing so?

Spectrum market should be opened up for spectrum trading as soon as a register can be collated and spectrum trading units (which can be identical to SSUs) defined.

(xxxiii) What are the pre-requisites to adopting spectrum trading?

One needs to develop a spectrum register with the name and address of the spectrum allottee and the following fields, similar to a title register for property, viz. (a) current use, (b) frequency boundaries of right, (c) geographical boundaries, (d) power specifications, (e) guard bands (f) authorised use of spectrum (g) the fee to be paid to the government for this right and (h) any other specific obligations.

Since the trades are more likely to resemble property transactions rather than stock sales, an organised exchange may not be needed. Instead, a facility to record change of users could suffice⁵. While there may be reluctance to trade spectrum between existing users due to strategic reasons, service providers may choose to enter into mutually beneficial arrangements to swap spectrum in different locations based on differential growth in their subscribers at these locations. Spectrum trading also may expedite the process of refarming.

Mergers & Acquisitions

(xxxiv) Whether we should specify a cap higher than 2 X 15 MHz for Metros and Category “A” service area and 2 X 12.4 MHz for Category “B” and “C” service area in case of M&As or should it be retained?

See response to (xxi) above.

(xxxv) In case, IMT 2000 is considered as a continuum of 2G Services, is there a need to have a cap higher than that without IMT 2000 services? Should there be individual caps on 2G and 3G spectrum or a combined cap?

See response to (xxi) above.

(xxxvi) In case of M&As where the merged entity gets spectrum exceeding the spectrum cap, what should be the time frame in which the service provider be required to surrender the additional spectrum?

See response to (xxi) above. If operators are required to surrender due to competition reasons, there will be demand for the spectrum and the service provider will want to dispose off the extra spectrum as soon as possible to capitalise on the asset.

If there is no demand for the spectrum, there seems no reason to impose a cap.

Surrender appears to imply that the service provider will not receive compensation for the spectrum given up. This is not desirable. When firms are forced to divest assets for competition reasons, they are allowed to retain the price received for those assets.

⁵ A more complicated system that allows change of use may require more institutional detail. See “Spectrum Trading Consultation” Ofcom, September 2003.