

ADITYA BIRLA



IDEA Cellular

14<sup>th</sup> Aug, 2013

The Secretary,  
Telecom Regulatory Authority of India,  
Mahanagar Doorsanchar Bhawan,  
Jawahar Lal Nehru Marg (Old Minto Road),  
New Delhi-110002

**Kind Attention: Advisor (NSL)**

**Sub: TRAI's Consultation on 'Valuation and Reserve Price of Spectrum' dated the 23<sup>rd</sup> July, 2013**

Dear Sir,

At the outset, we welcome the Authority's initiative to release this detailed Consultation Paper.

Spectrum is a critical resource for mobile networks and the issue of "sufficient spectrum availability" for mobile services at the "right price" is central to the growth of these services in the country.

Please find enclosed herewith our submission as Annexure A in response to the Authority's Consultation Paper.

We are confident that the suggestions and comments given by us as part of our submission will merit in-depth consideration from TRAI.

Should you require any clarifications or further information on the positions set out in this response, please do not hesitate to contact us.

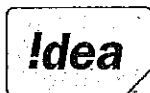
Thanking You.

Yours faithfully,

For IDEA Cellular Ltd.

Rajat Mukarji  
Chief Corporate Affairs Officer

Enclosed: As above



## Annexure A

### Idea Cellular's Response to

#### TRAI's Consultation on 'Valuation and Reserve Price of Spectrum' dated 23<sup>rd</sup> July, 2013

1. At the outset, Idea Cellular compliments the Authority for bringing out a detailed consultation paper on the issue of spectrum valuation and also highlighting issues related to the subject.
2. It is now well known that the fast pace of change and innovation taking place in the mobile communications sector are placing increased demands on spectrum. Hence there is an urgent need for modernization of spectrum management in India.
3. The Authority in its consultation has given a clear perspective on issues which have hitherto not been fully debated & considered by various stakeholders. Issues like adequate spectrum for operators, dismal financial condition of telcos, need for E-GSM & linkage of auction price to 2001 1800 MHz auctions are some of the realities which the Regulator has finally taken on board.
4. The Authority would appreciate that the present Consultation is a result of :
  - a. The Supreme Court order directing auction of entire spectrum quashed in February 2012.
  - b. The failure of the November 2012 & March 2013 spectrum auctions.
5. For Idea Cellular, the spectrum sold in November 2012 auction was a "no choice" auction, since we had more than 7.7 million customers and crores of investment at stake across 7 quashed service areas. To not take back the quashed spectrum was not an option. Hence, we participated and won back spectrum in seven service areas. Total quantities available in these seven service areas were not fully exhausted during the auction and even subsequently there have been no takers of spectrum in March 2013 auction, thus clearly establishing that November 2012 auction prices were not a true reflection of the market price for spectrum. Idea reserves its right to seek any remedies to the extent we are adversely impacted by any future change in spectrum price.

6. Even otherwise, except Bihar, the reserve price of spectrum put up for auction in November 2012 auction was not breached & total quantities of spectrum were never taken up by other stakeholders. The March 2013 auction 1800/ 900 MHz did not see any participation. There were various contributing factors for auction failure :

- a. The reserve price was completely unrealistic and out of sync with market realities.
- b. There was no clear visibility on availability of spectrum over next few years. An operator does not know the spectrum roadmap of the Government and is apprehensive of making financial commitments due to lack of clarity.
- c. The Government needs to clarify its intent – does it seek higher economic value from spectrum (in which case why not instantly proceed with E-GSM rather than disrupting the majority of subscriber base & investments in rural areas) or does it seek more equitable distribution of spectrum (in which case, why are specific spectrum caps not being implemented). Structural policy shifts have to pre-empt auctions such that Regulatory clarity encourages investments.

7. In view of the above, we recommend that Government first prioritize the deliverables as follows :

- a. Define spectrum road map for all bands of spectrum including 700/800/900/1800/2100/2300. The TRAI recommendations of April 2012, clearly highlighted the likely spectrum availability and auction time frames. It is not clear whether DoT accepted this roadmap or wants to update it. As stakeholders, it is necessary to have a clear roadmap on availability of spectrum and also likely horizon for auction of available spectrum. This is a pre-requisite for commencement of any auction process.
- b. Create opportunities for greater availability of spectrum . This can be achieved by various policy interventions :
  - i) Provide "exit" opportunities for operators who wish to exit particular spectrum band/ entire spectrum allocation.
  - ii) Specify that for healthy competition a minimum number of 4 players in Sub 1GHz band and a minimum number of 5 players in above 1GHz band are required. The Authority may wish to refer to our tabular depiction of the same on page 3 of this submission.

- iii) Encourage spectrum availability by allowing E-GSM, reconfiguration of 1900 MHz band to allow for more availability of 2100 MHz spectrum & free up spectrum from Government users wherever possible.

TRAI should recommend reconfiguration of the available 800 MHz and offering the same as the EGSM Band (i.e. 880-890 MHz paired with 925-935 MHz), which is globally considered to be a part of the 900 MHz band. This addition to the existing 900 MHz will enhance the total availability band from the present 25 MHz to 35 MHz while also allowing for conformance to the "international harmonization".

Similar opportunities exist for re-configuration of 1900 MHz band, such that additional 2100 MHz spectrum is made available for 3G services.

Band	Maximum Permissible Spectrum Limit Per band / Per operator	Minimum no. of operators in each band
700 MHz	5 + 5 MHz	For sub 1GHz band – Minimum 4 operators.
800 MHz ( <i>Modified 10 MHz total band, post E-GSM</i> )	2.5 + 2.5 MHz	For sub 1GHz band – Minimum 3 to 4 operators.
900 MHz	5 + 5 MHz	For sub 1GHz band – Minimum 4 operators.
900 MHz with E-GSM	8 + 8 MHz	For sub 1GHz band – Minimum 4 operators.
1800 MHz	10 + 10 MHz	For above 1GHz band – Minimum 5 operators.
2100 MHz	5 + 5 MHz	For above 1 GHz band – Minimum 5 operators.
2300 MHz	20 MHz	For above 1GHz band – Minimum 5 operators.

- c. To ensure fair distribution and enhanced availability of spectrum, introduce spectrum caps in sub 1 GHz and above 1 GHz band. The basic principle for cap being to ensure adequate competition in market.
- d. Permit M&A, spectrum sharing & spectrum trading while defining the spectrum caps as highlighted above. It is critical that a conducive environment be created for consolidation to take place in the Indian Telecom sector through an enabling policy on mergers and acquisitions. This will help put an end to fragmented spectrum holdings that have been carved out of hyper-competition in the market as well as allow unutilized spectrum to be put to use.

#### 8. Valuation of spectrum.

- a. The Authority is aware that the DoT's attempt to auction spectrum in November 2012 / March 2013 was not successful.
- b. The primary reason behind such a situation was the completely unrealistic pricing & its linkage to final 3G spectrum auction prices.
- c. We had submitted to TRAI in February 2012 itself that the only available benchmark for 1800 MHz spectrum were the 1800 MHz auctions of year 2001. Linking pricing of 1800 MHz to the 3G spectrum pricing of 2010 auctions was incorrect since these auctions were held in an environment of scarcity of spectrum and in any case the use of spectrum was for entirely different purpose.
- d. The Department of Telecom has allocated spectrum to existing GSM /CDMA operators as late as 2007/08 at the same 2001 Market discovered Auction price for GSM @ Rs. 1658 cr for the Pan India Licenses. It might be pertinent to note that some of the operators who were recipients of spectrum in 2007/08 are struggling to make a viable business case out of the allocations even at 2001 auction price, thus indicating that 2001 pricing remains a challenge for some operators.
- e. In this regard, while the Authority has highlighted various methodologies for valuation of spectrum. We however find most of them unsuitable for deriving the correct valuation. The Authority should note that the recommended methodology for valuing spectrum would have implications for all future auctions.
- f. For example, the Discounted cash flow methodology for a 20 year period is fraught with risks based on assumptions one takes. Deriving a point estimate using a set of variables/assumptions is surely

inappropriate for a businesses that have unpredictable technology cycles and evolving consumer behaviour. Also, the starting point of each telecom operator is different in each service area and therefore, the method would yield different results for different operators.

- g. We also appreciate the Government need for auctioning the natural resources at best possible value. In absence of any other suitable method, we thus recommend the concept of indexation over 2001 prices for determining the current reserve price.
- h. Since the final market price for spectrum would eventually be discovered by market auction process, it would be reasonable to take the benchmark of 2001 prices with CPI indexation as provided in the Income Tax Act, 1961, as this is a fair reflection of the inflation in the country. We would not recommend SBI PLR or weighted Average Cost of Capital for indexation since these parameters are the result of monetary policy of RBI & hence may not be reflective of the real inflation in the country

### **Idea Cellular's response to TRAI consultation on specific queries**

**Q.1. What method should be adopted for refarming of the 900 MHz band so that the TSPs whose licences are expiring in 2014 onwards get adequate spectrum in 900/1800 MHz band for continuity of services provided by them?**

#### **Idea Cellular Submission:**

- A) Idea Cellular would like to reiterate its earlier stand that re farming should not be proceeded with because of its alarming implications on all stakeholders, namely the customers, operators, investors, competition and the society at large.

The Authority is already aware that out of the existing nearly 900 million mobile customers in India, 900 MHz band today serves over 500 million customers (as reported by 800/900 MHz Telecom Operators for their specific Service Area). The Voice Telephony business continues to grow in India with rural penetration still at an abysmal level of under 40%. The Regulator needs to ensure that any Regulatory intervention does not lead to mass disruption of services, customers and investments. We submit as under :

- a. It is pertinent to mention here that the re-farming, as envisaged, would be most detrimental to the interests of rural consumers who are being serviced predominantly by operators that have

allocations in the 900MHz band. These aspects have been very well explained by the Analysys Mason Report titled "TRAI's recommendations on spectrum re-farming: Critique of key assumptions and procedural considerations" of 2012, which states:

"...We have not come across any re-farming situation globally where a specific band of spectrum (especially 900MHz) has been fully withdrawn for re-farming..." Partial withdrawal, primarily used to allow entry of a new operator, generally involves retrieval of a tiny fraction of overall spectrum holding without disrupting existing operations.

- b. In this regard, Idea Cellular would like to submit an illustrative figure below re-farming done in some markets. Evidently, incumbent operators had a lot of spectrum in multiple bands (such as 900MHz, 1800MHz, 1900MHz, 2100MHz and 2600MHz) and withdrawal of a small part of the spectrum did not impact their on-going operations substantially. Even in these markets, the regulator carried out the withdrawal activity through collaborative discussions with service providers.

900 MHz Spectrum Redistribution across Select Markets							
Market	Operator	900MHz refarming (MHz)		Spectrum holdings in other key bands (MHz)			Remarks
		Before	After	1800	2100 (Paired)	450/800/1900	
(1) Sweden	Tele2	2x10.0	2x7.5	2x3.0	2x19.8	5	
	Telia Sonera	2x10.0	2x10.0	2x3.0			
	Telenor	2x10.0	2x7.5	2x3.0	2x19.8	5	
	Swefour	2x5.0	2x5.0	-	-	-	
	Hi3G	-	2x5.0	-	2x19.8	5	
(2) France	Bouygues			2x26.6			
	Telecom	2x9.8	2x9.8	(21.6)	2x14.6	5	
	Orange France	2x12.4	2x10.0	2x23.8	2x19.6	5	
	SFR	2x12.4	2x10.0	2x23.8	2x9.8	5	
	Free Mobile	-	2x5.0	-	2x5.0	-	
(3)	Telia	2x14.8	2x11.8	2x23.6	2x15.0	5	

Denmark	TDC Mobil	2x9.0	2x9.0	2x17.2	2x15.0	5	
	Telenor	2x9.0	2x9.0	2x20.2	2x15.0	5	
	Hi3G	-	2x5.0	2x10.0	2x15.0	5	
(4) Romania	Cosmote	2x10.0	2x10.0	2x25.0	2x14.8		
	Orange	2x12.4	2x10.0	2x20.0	2x14.8		
	Vodafone	2x12.4	2x10.0	2x30.0	2x14.8		
	RCS&RDS	-	2x5.0		2x20.0		
	Telemobil				2x15.0	2x4.5	
(5) Switzerland	Orange	2x6.6	2x5.0	2x25.0	2x20.0		
	Swisscom	2x12.2	2x15.0	2x30.0	2x20.0		
	Sunrise	2x15.2	2x15.0	2x20.0	2x20.0		
(6) Germany	E-Plus		2x5.0*	2x27.4	2x29.8		<i>*Given frequency in 900MHz band in 2006 when eGSM band became free</i>
	O2 (Telefonica)		2x5.0*	2x17.4	2x34.0	2x10.0	
	T-Mobile		2x12.4	2x20.0	2x 14.9	2x10.0	
	Vodafone D2		2x12.4	2x5.4	2x19.9	2x10.0	
(7) Australia	Telstra Corp Ltd.		2x8.4		2x15.0		<i>Only p-GSM as 850 MHz used for CDMA</i>
	Singtel Optus		2x8.4		2x5.0		
	Vodafone Hutchison		2x8.2		2x15.0		
(8) Italy	Hutchison 3G			2x15.0	2x20.0		
	Telecom Italia		2x12.4	2x15.0	2x15.0		
	Vodafone		2x11.8	2x15.0	2x15.0		
	Wind		2x8.2*	2x20.0	2x15.0		<i>*Non contiguous</i>
(9) Finland	DNA		2x11.6	2x44.6	2x24.6		



	Elisa		2x11.4	2x24.8	2x39.4		
	Telia Sonera		2x11.4	2x24.8	2x24.6		
(10) UAE	EITC		2x5.0	2x10.0	2x5.0		
	Etisalat		2x30.0	2x20.0	2x15.0		
(11) Malaysia	Celcom		2x17.0	2x25.0	2x15.0		
	Maxis		2x16.0	2x25.0	2x15.0	2x4.3	
	DiGi		2x2.0	2x25.0	2x15.0		
	U Mobile				2x15.0		
<b>References</b>							
(1)	<i>Analysys Mason Report - TRAI recommendations on re-farming, 2012</i>						
(2)							
(3)							
(4)	<i>Results of Spectrum Auction, Sept 2012 - ANCOM</i>						
(5)	<i>OFCOM, Switzerland</i>						
(6)	<i>European Communications Office (ECO) Report - October 2012</i>						
(7)	<i>Initial consultation by Australian Communications &amp; Media Authority (ACMA) - May, 2011</i>						
(8)	<i>AGCOM, Tolaga Research, 2010</i>						
(9)	<i>European Communications Office (ECO) Report - October 2012</i>						
(10)	<i>World Cellular Information Service - November 2012</i>						
(11)	<i>Malaysian Communication &amp; Multimedia Commission</i>						

- c. Globally, partial withdrawal of spectrum for competitive entry has been the primary approach to re-farming, with adequate mechanisms in place to ensure that operators have sufficient spectrum across bands to provide services across technologies.
- d. It is pertinent to highlight that in 2010, TRAI had noted that spectrum re-farming 900MHz poses significant challenges and that there was a need to carefully assess the impact thereof. TRAI had also stated that it would carry out a separate consultation on the issues involved such as (i) traffic management, the frequency coordination & reconsideration of the spectrum, (ii) need for guard band & transitional zones, management of voice & data traffic loads, (iii) issues of site optimization and that DoT should wait its recommendations before taking a decision in the

matter. However, till date no separate consultation has been carried out by TRAI and no deliberation has taken place on the issues and challenges as outlined by TRAI in May 2010 till date.

- e. This approach is radically different from the general practice of other NRAs who have ensured that stakeholder concerns are addressed in a fair, objective and collaborative manner, even if it requires a multi-year consultation process to do so..
- f. The Analysys Mason report observes that *International regulators follow a much more rigorous consultation process for re-farming, accounting for key near-term and long-term issues for consumers and industry. The TRAI consultation and recommendations lack the rigor, and comprehensive review of potential impact on consumers and industry considered by regulators in global markets while considering critical issues such as re-farming of spectrum..*
- g. The Report published by Analysys Mason concludes that re-farming as proposed by TRAI will have a substantial cost to industry, lead to an increase in retail tariffs and cause significant inconvenience to consumers, with no benefit to any involved stakeholders. In particular, it would:
  - i. Require replacement of 286,590 base stations currently using 900MHz and installation of additional 171,954 base stations to provide equivalent coverage using 1800MHz spectrum
  - ii. Require incremental CAPEX of INR 54,739 crores (USD 9 billion), and incremental annual OPEX of INR 11,762 crores (USD 2 billion);
  - iii. Require additional CAPEX of about INR 26,653 (USD 4.5 billion) crores to deploy new towers to support the incremental base stations;
  - iv. Require write-offs of existing 900MHz assets at an estimated cost of INR 22,310 (USD 3.7 billion) crores;

Thus, it would cost the GSM operators approximately Rs 1.25 lakh crores (USD 21 billion) in incremental CAPEX and Rs 25,000 crores (USD 4.1 billion) in equipment write-off. This is just the cost of network migration from 900MHz to 1800MHz and the cost of buying spectrum at auction, would be over and above this cost. The Analysys Mason report was done nearly 2 years

ago and considering expansion of networks, the figures on no. of BTSs & capex would have also accordingly increased.

h. Analysys Mason Report also estimates that:

- i. In urban areas, active equipment will have to be replaced on the existing 94,670 sites and an additional 56,802 base stations on 1800MHz will be needed to provide equivalent coverage.
- ii. In rural areas, active equipment will have to be replaced at about 191,920 site locations, and an additional 115,152 base stations will be needed.

i. Our detailed submission to the TRAI as a part of the 1,800 MHz Auction Consultation on 21<sup>st</sup> March, 2012 is reiterated as under :

**A. Spectrum refarming as proposed is illegal :**

- i) From the inception of mobile telephony, every license carries a pre-defined frequency band. Illustratively, the 1995 CMSP licenses assigned the 890-902.5 & 935-947.5 MHz band. An individual license and its assigned frequency band are joined at the hip. If the link between the license and its assigned frequency is severed, the license stands effectively destroyed.
- ii) There is no provision in the license or in policy for the DoT to sever a license from its designated frequency. Importantly, the DoT has itself invariably defined the frequency band within which the licensee has to operate.
- iii) Crucially, the DoT has also itself invariably defined the limits of its discretion, every license carrying a clause clarifying that within the defined frequency band, the frequencies assigned by the licensor to the licensee may not be contiguous, though every effort will be made as such. So, the license explicitly provides the DoT very limited discretion, that too within the defined frequency band, and only *before* allocation of frequencies.
- iv) By direct inference, it provides the DoT nil discretion *after* the license is in operation, even within the same frequency band. Evidently, the discretion to replace frequency bands as proposed in the name of re-farming does not even arise. It is patently illegal.

- v) We further clarify, and only because of the obfuscation surrounding the issue, that severing the license from its assigned frequency is illegal, not just within the license period, but also into any extended license periods. If ever that is done, the license stands effectively destroyed. Only the same license can be extended. If the license is destroyed, it becomes incapable of extension.

**B. Refarming is recipe for Economic havoc :**

- i. Networks are designed around frequency bands, not the other way round! There is no precedent in the world, where any telecom network, let alone some of the world's biggest telecom networks, has its frequency band uprooted.
- ii. Stripped of technical jargon, the meaning of spectrum re-farming is simple. Take a parallel with a country selecting businesses to set up teak plantations, which have notoriously long gestations, but much longer business lives. The country does not allow the businesses to buy farmlands, instead it leases farms for twenty years, extendable on mutually agreed terms. Imagine that 15 years on, once the heavy investment and gestation period is behind, the country forces the businesses to vacate that farm, and take some other barren farm at a heavy price. The authorities may call it re-farming, but the world would call it eviction !

**C. Customers - Refarming is Anti-Consumer:**

- i. If 900 MHz band is re-farmed out of GSM services, there would be large geographical pockets in India with a blackout of GSM mobile services. If these sites are replaced with 1800 MHz band providing GSM services, the coverage will shrink and large portion of existing customers will go out of service or quality of service will suffer.
- ii. As rural penetration is still low (below 40% as per TRAI release) and mostly existing 900 MHz GSM operators are expanding into these rural areas, re-farming of this band will stop the journey of rural mobile telephony coverage expansion. This will be contrary to the stated objective of the Government.
- iii. In this regard, some relevant observations highlighted in the Analysis & Mason Report on Re-farming is as below :

*In the scenario that operators with 900MHz spectrum are not able to provide equivalent coverage due to business case and operational feasibility, then there is a risk of reduction in geographic coverage by as much as 40%. Such a reduction of coverage is estimated to directly impact the connectivity to about 70 million subscribers, and other consumers trying to reach them. Also, the business case for a new operator acquiring 900MHz spectrum at the proposed prices will not allow for expansion to rural markets to address these coverage gaps.*

- iv. In fact the Analysis & Mason Report on Re-farming also notes that “ If the incremental investment in re-farming and the costs of spectrum are passed on to consumers in the form of enhanced retail voice tariffs, the overall tariffs will go up by as much as 64 paise per minute (30 paise due to re-farming and 34 paise from spectrum investments), with a much higher impact on tariffs in non-Metro circles “. Thus any unilateral Government decision on re-farming would necessarily impact ordinary customers whose cause the Government claims to espouse from time to time.

**D. Re-farming is Anti Investment - Is Write off of 900 MHz GSM Assets in the National Interest :**

- i. It's a myth that 900 MHz operator assets have been depreciated. As the country's mobile business reached its inflection point as late as 2008, a significant portion of 900 MHz GSM operators' investments are current. If re-farming is ordered by the Government, a large portion of un-depreciated assets will have to be written off.
- ii. Most of the RF GSM equipments are tuned for a specific spectrum band and cannot be reused for example if 900 MHz re-farming is ordered by the Government today.
- iii. In this regard, some critical & key observations highlighted in the Analysis & Mason Report on Re-farming is as below :
  - *We estimate that operators with 900MHz band will need to replace 286,590 base stations and install an additional 171,954 base stations to provide equivalent coverage on 1800MHz*

- *Such a replacement of base stations and deployment of additional sites will result in an incremental capex of INR 54,739 crores, and incremental annual opex of INR 11,762 crores*
  - *Interestingly, the major capex impact is on account of the fact that existing operating networks will have to be replaced and will account for 58% of the total capex. The better propagation characteristics of 900MHz band as compared to 1800MHz band will have a smaller contribution to this overall impact.*
  - *In addition, operators will also have to write-off their existing 900MHz assets at an estimated cost of INR 22,310 crores. At an industry level, an additional capex of about INR 26,653 crores will be required to deploy new towers to support the incremental base stations.*
- iv. While most of the investments in 900 MHz spectrum is by listed public limited companies given the fact that the telecom investment has a direct correlation to the GDP growth of the country, any early write off of these large investments will be a colossal national waste, and will shake investor confidence, making it difficult to attract investments for future country needs. While at one hand the Government is initiating a slew of economic reforms to boost the current economic situation and invite fresh investments, the existing investments in national infrastructure projects like telecom are being put to grave risk.

E. Re-farming is Anti Competition – How does Nation Benefit ? :

- i. In case, the Regulator, Government and the winner of 900 MHz auction, decides to make fresh investment in GSM service for the next 20 years, it is not understood how the society and country would benefit ? The existing investment will have been written off, consumers and society would have suffered in quality during the phase of transition and long geographical stretch of no coverage for a period of time. The new operator practically will need 3 – 5 years to build GSM equivalent coverage to serve the same customers and this too is with the assumption that the investors of these companies also take a similar view as of the present incumbent to invest aggressively in the deep interior rural areas and serve the lowest income strata of the country.

- ii. In case, the winner of 900 MHz Auction were to abandon GSM for high end Data Services like UMTS/ LTE, the effective competition for GSM Services would be reduced with a consequent impact on market structure and tariffs. This cannot be the intended objective of the Government to reduce option to the customers for GSM services. The mass Indian consumers specially lower socio economic classes in urban and rural need low cost GSM Services for meeting their voice telephony needs.

**F. Government need to Auction 900 MHz to increase Competition - Can still be achieved :**

- i. 900 MHz band has a bandwidth of 35+ 35 MHz, and most countries in Europe have full spectrum of 900 MHz allocated for Mobile Telecom Use. Instead, in India allocation in the 900 MHz band is presently at 18.6 + 18.6 MHz existing telecom operators. India is the 2<sup>nd</sup> largest market for GSM Voice in the world and that too with the lowest tariff, the volume of traffic carried by 900 MHz GSM operators in India is far in excess of their counterparts in Europe.
- ii. Hence, if Government directs Refarming it is not possible to offer a choice of both GSM services and future services from UMTS/LTE unless the Regulator refarms the remaining 16.4 +16.4 MHz spectrum in the extended GSM band and auctions the same exclusively for UMTS /LTE.
- iii. **The Government should focus on refarming the remaining 16.4 +16.4 MHz (including extended GSM band and 900 MHz band with Railways) and auction the same for mobile broadband using UMTS/LTE technology standards and for the existing 18.6 + 18.6 MHz, let existing operators offering GSM services continue on existing technology until the overall eco system is ready and consumer /society demands their existing services are upgraded to future mobile broadband services.**

In view of the above we hope that the Regulator will see merit in our submission that re-farming the existing 900 MHz band from GSM Services is not an option available for a developing economy like India, more specifically in the current economic situation prevailing domestically and globally. The DoT is requested that the proposal of re-farming 900/800 MHz is a disruptive exercise and should immediately be abandoned.

- B) Further, we would like to suggest that the TRAI should consider reconfiguration of the available 800 MHz and offering the same as the E-GSM Band (i.e. 880-890 MHz paired with 925-935 MHz), which is globally considered to be a part of the 900 MHz band. This addition to the existing 900 MHz will enhance the total availability band from the present 25 MHz to 35 MHz while also allowing for conformance to the “international harmonization” standards as acknowledged by TRAI in its “Recommendations on Spectrum related issues” dated May 3, 2005.

As mentioned in the Consultation Paper, the usage of CDMA Technology has witnessed a decline the World over and its ecosystem has not developed as much as GSM Technology. The situation in the Indian market has also been grim with a continuously declining CDMA subscriber base that has witnessed shrinkage from its earlier figure of 105.11 million as on Mar, 2012 to 73.78 million as on March,2013, a decline of nearly 30%.

Given the higher appetite / demand for 900 MHz, the reconfiguration of the available 800 MHz spectrum is not only going to increase the availability of spectrum in the 900 MHz band but also lead to efficient use of spectrum that is a perishable commodity.

- C) Idea Cellular believes that excessive fragmentation of the 900 MHz spectrum will serve no useful purpose for any of the stakeholders, and will indeed lead to poor quality of services for all the user networks. It is therefore recommended that E-GSM spectrum may be utilized at the earliest where after the number of user networks in the 900 MHz spectrum category can be a minimum of 4. The inclusion of E-GSM will also create enough availability of spectrum for a new operator who wishes to have the 900 MHz spectrum..

The spectrum caps would ensure service continuity in case of existing operators while also ensuring that that there is enough availability of spectrum for a new operator who wishes to have the 900 MHz spectrum.

- D) Rationalize the actionable block size to 1 MHz.

- a) November 2012 auctions saw the spectrum being dispensed in blocks of 1.25 MHz each. However, since the technology uses 200 KHz based steps, procuring a block of 1.25 MHz meant wastage of



0.05 MHz on a single block. The wastage of spectrum is naturally higher if an operator wins two blocks of 1.25 MHz, as the unusable quantity will go up to 100 KHz. However, given the high cost of spectrum and the deteriorating financial metrics of operators, there is already no scope for redundancy in terms of the quantum of spectrum. It is therefore recommended that for the upcoming auctions, blocks of 1 MHz be introduced as they would adequately meet the needs of any given situation, while enabling the bidder to choose the number of blocks that fit his specs.

- b) With 1 Mhz block size, the granularity also improves and therefore a 2G GSM operator may opt for up to 4 Mhz for its greenfield operation where he can easily operate in 2/2/3 configuration till capacity demands comes. In case of 1.25 Mhz block the operator has to either settle at 3.75 Mhz (that can be too tight ) or has to force move to 5 Mhz block , which may not be his requirement.

Thus, persisting with a block size of 1.25MHz will result in a significant wastage of valuable spectrum in various scenarios, as enumerated in the table below:

Carrier Block size	Wastage for GSM	UMTS	Wastage for LTE
1.25/ 6.25 MHz	0.05	N/A	N/A
2.5 /7.5 MHz	0.10	N/A	1.10
3.75/ 8.75 MHz	0.15	N/A	0.75

The maximum wastage of 0.15 Mhz is seen at 3.75 Mhz block , that can be avoided if we move to 1 Mhz block step size. The next highest wastage comes in at 2.5 Mhz for 0.10 Mhz @ 4 %, which is very high considering a small block of 2.5 Mhz only.

- c) Instead of multiples of 4 x 1.25 Mhz blocks for a 5 MHz spectrum, we can have 5 x 1 Mhz blocks to make 5 Mhz of spectrum. In this way, the blocks size is also not very small and in addition, it will allow for efficient use of spectrum leaving no scope for wastage. The entire 1 Mhz can be used by the GSM operator without any wastage and five such contiguous blocks can be used to go for a new technology when required.

**Q.2. In case spectrum is to be "reserved" for such TSPs, should it be restricted to licences expiring in 2014 (metros) or include licences expiring afterwards (LSAs other than metros)?**

**Idea Cellular Submission:**

Idea Cellular has already highlighted the need for continuity of spectrum already allocated, subject to spectrum caps. Thus the TRAI may reserve the spectrum upto maximum caps, subject to such operators paying market price for such spectrum. The treatment of license expiring in 2014 or later cannot be different.

**Q.3. Is any restriction required to be imposed on the eligibility for participation in the proposed auction?**

**Idea Cellular Submission:**

Idea Cellular supports open, market-driven and transparent global auctions without any "restrictions". We therefore recommend that 1800/800 MHz Auction be opened to :

- All licensees due for extension.
- All New applicants who become eligible for new UASL licenses on currently specified terms and conditions.
- Existing Telecom Service Providers in respective service Areas.

We reiterate that the spectrum availability for existing 900 MHz licensees needs to be maintained in order to ensure continuity of services and non disruption to millions of rural consumers. This would imply that a minimum of 5+5 MHz spectrum in 900 MHz is kept separate and not put up for auction. Naturally the existing operators, though eligible to get back 5 MHz for extension of their licenses , would be required to pay market price for such 900 MHz spectrum.

**Q.4. Should India adopt E-GSM band, in view of the diminishing interest in the CDMA services? If yes,**

**a) How much spectrum in the 800 MHz band should be retained for CDMA technology?**

**b) What are the issues that need to be addressed in the process?**

**c) What process should be adopted for migration considering the various issues involved?**

**Idea Cellular Submission:**

Idea Cellular fully supports the harmonization of global E-GSM band in India. Besides various reasons enumerated by us in Para 7.b.iii) at Page 2 and Para B) at page 14, we submit that adopting E-GSM is

essential for the Government to generate economic value of the spectrum as well ensure adequate GSM spectrum availability for competition. In this context, we would like to suggest that the TRAI should consider reconfiguration of the available 800 MHz and offering the same as the EGSM Band (i.e. 880-890 MHz paired with 925-935 MHz), which is globally considered as a part of the 900 MHz band and will enhance the 900 MHz band from the present 25 MHz to 35 MHz. This also conforms to "international harmonization" standards as acknowledged even by TRAI in its "Recommendations on Spectrum related issues" dated May 3, 2005.

Give the higher appetite / demand for 900 MHz, the reconfiguration of the available 800 MHz spectrum will not only increase the availability of spectrum in the 900 MHz band but will also lead to more efficient use of spectrum.

**1) How much spectrum in the 800 MHz band should be retained for CDMA technology?**

In its Consultation Paper, TRAI has observed that CDMA subscriber base reduced by 30 % in 2013 and going forward we feel this trend may further accelerate as current CDMA operators have almost ceased their network expansion in rural areas, where the maximum growth is currently happening. In view of the declining CDMA base we may comfortably suggest that 2x10 Mhz (824-834/869-879 Mhz) is sufficient enough to meet the CDMA requirement. In 2x 10 MHz, two TSP with 3.75 Mhz each and one TSP with 2.5 MHz can be easily managed in step of 1.25 Mhz blocks of auction. If two PSU TSP surrender their CDMA spectrum only two TSPs will remain in all LSAs ( exception being 8 LSAs where an additional TSP would be present post March 2013 auction. )

We feel that 2.5 MHz in 800 MHz may be sufficient to meet the voice and data requirement for the present subscriber base and keeping in mind the current trends of declining CDMA customer base. We are also firmly of the view that in most cases CDMA operators are likely to want to continue the use of 800Mhz spectrum for the purpose of EVDO (which is 3G equivalent), and consequently the same should be separately auctioned.

**2) What are the issues that need to be addressed in the process?**

- a) Moving to EGSM will require realignment/lateral shift of CDMA frequency allocations to operators from 880 to 890 MHz on to the 870 to 880 Mhz to carve out the EGSM spectrum of 880-890 MHz paired with 925-935 MHz.

- b) The Authority has highlighted that WPC seems have indicated that about 7 MHz in the E-GSM downlink of 925-935 MHz is being used by Defence. It is submitted that the National Frequency Allocation Plan shows no such usage by Defence. Naturally, if there is any usage otherwise, the same need immediately clarified by WPC so that scarce natural resource is put for maximum productive usage.
- c) As per NFAP, 0.6 MHz spectrum in the down link is earmarked for some other users, as brought out in the Consultation paper also and would need to be vacated. This band is not very popular in India and we feel there would be very few devices in this band and so we could allocate other bands for low power cordless telephones. However, even if this band cannot be vacated immediately, we could take this 0.6 Mhz spectrum out of the band and allocate the rest. Details of the users as per NFAP is as under:
- i) 926-926.5 MHz (0.5 MHz) is earmarked for low power cordless telephone systems
  - ii) \*\* Some spots in 933.0125- 933.1250 MHz (0.1 MHz) are earmarked for Supervisory Control and data acquisition system (SCADA)

The continuous bandwidth of 5 Mhz are to be planned in EGSM band to bring India to conform to the international harmonization standard as specified by ITU in case of region 1.

- iii) As on date EGSM frequency is not allocated in India, as such most equipment procured by the operators as on date covers only the PGSM band. Existing operators should be allowed to continue to use their current allocations in PGSM band so that their investment in the equipment is protected. Additional spectrum to be allocated the existing operators beyond the amount held by them or to the new operators entering the GSM technology could be allocated spectrum in the EGSM band.

### **3) *What process should be adopted for migration considering the various issues involved?***

1. The existing CDMA TSPs would need to be allocated spots within the revised CDMA band of 870 to 880 MHz.
2. The equipment used by CDMA operators covers the entire 20 Mhz band of 870 to 890 Mhz, hence there should be no problem for CDMA band operators to move to this band. This can be easily implemented through a software command from the network operation control centre without any hardware change involved.

3. Since in case of CDMA, the frequency reuse is possible, there would be no problem in changing the network to the new frequency spots allocated and the same can be done by simple command from the OSS without any impact on the NW quality or customer impact.
4. Once the CDMA operators have moved into the 870 – 880 Mhz band, and the corresponding downlink are free to use , the same can be allocated to the operators successful in the auction to roll out their networks on this band.
5. GSM operator has to adopt the EGSM band by fine tuning their BTS filter with adequate guard band to control interference with CDMA band.
6. In any case all devices being sold in India cover EGSM band, hence from device aspect there would be no issue.

**Q.5. Should roll out obligations for new/existing/renewal/quashed licenses be different? Please give justification in support of your answer.**

**Q.6. Is there a need to prescribe additional roll-out obligations for a TSP who acquires spectrum in the auction even if it has already fulfilled the prescribed roll-out obligations earlier?**

**Idea Cellular Submission:**

- a. We would like to submit that for any market driven auctions, where a rigorous process has already been followed, there exists no rationale for insisting on any roll-out obligation. We thus recommend that no roll out obligations should be specified and the dissemination of services should be via the medium of market forces.
- b. However, in the event, the Government does decides to prescribe roll-out obligations for TSPs, then the same obligations that were defined in the recent auctions of November 2012 and March 2013 should be made applicable.
- c. Further, some of the holders of quashed licenses like ourselves, who are serious operators, have already invested in extensive roll-out of networks and are currently offering services to millions of customers. Additionally we have also obtained TERM cell certifications for completion of roll-out obligations, in most cases even for 50% DHQ completion. For operators like us, who have already gone through the lengthy and time-consuming process of fulfilling roll-out obligations and getting the TERM Cell certifications, any

further prescription for re-testing and re-acquiring various TERM cell certifications and approvals will only result in bureaucratic delay and additional costs for the TSP, as also acknowledged by the Authority in its Consultation Paper. This would also negatively impact the fresh deployments that are contingent on securing approvals for the existing.

It is therefore recommended that for quashed licenses where the roll-out obligations have already been fulfilled, no new prescriptions be made. However, for operators who have taken extra spectrum for purposes of building capacity, roll-out obligations for that extra spectrum can be stipulated.

Finally, it is also suggested that operators who roll-out their networks in rural stretches and offer extensive coverage should be rewarded with incentives. Towards that end, the earlier DoT Order dated 1<sup>st</sup> Oct, 2008 allowed for 2% reduction license fee reduction in contribution towards USO levy as a percentage of the AGR in the event the operator achieved a higher than 95% coverage of the total number of development blocks in the service area covered by the licensee. This rationale of ensuring license fee reduction would incentivize the operators to roll out fast in all rural areas, hitherto uncovered. We thus recommend the license fee contribution (currently 5%) to USO be reduced by 2% in case of coverage in more than 95 % of development blocks.

**Q.7. What should be the framework for conversion of existing spectrum holdings into liberalised spectrum?**

**Idea Cellular Submission:**

- a. It is submitted that at present the GSM/ CDMA spectrum allocated to all licenses came bundled with the license.
- b. The license is technology neutral & thus all operators are free to use the allocated spectrum with whatever technology they wish to.
- c. Further the scope of UAS/ CMTS license permits the operators to provide all type of services. While, the license has been technology neutral, the Regulator, the Government and /or WPC has historically specified the initial use of the spectrum allocated. In case of 900 MHz, based on original allocation, in 1994/1996, the use specified was 'GSM Services'. Similarly, in 2001 allocation of 1800 MHz, the expectation of use was again for 'GSM services'.

- d. Liberalization, as is being postulated by TRAI and its linkage with re-farming would mean a change of use of existing GSM technology to futuristic UMTS /LTE technology primarily for Wireless Broadband. Until now, operators have ensured while licenses are technology neutral, there is no disruption of services to the customer or society at large. Any attempt now to link the so called liberation of band with re-farming of spectrum band is likely to have a damaging impact on customers, operators, investors and overall growth of mobile sector in the country.
- e. Does this country need liberalization (as is being postulated by TRAI) of spectrum by linking to re-farming ?
- i. The GSM services in India are likely to get phased out only until after all high income and mid income countries have migrated out of GSM 2G technology. Based on current trends, this is not expected before 2030- 2040 when the eco system of equipment, devices and applications would have fully matured for UMTS/LTE, and reached the scale of affordability for an average mass market Indian. (Please refer to our overarching submissions in this regard)
- ii. Informal discussions with equipment suppliers suggest that GSM services continue to grow across the globe especially in heavily populated developing countries like India, Pakistan, Indonesia, China, African and Latin American continents where a large mass of 1.5 - 2 billion people is still without availability of basic voice services.
- f. However, the liberation of 900 MHz spectrum Band can actually be achieved by Regulator /WPC auctioning the remaining 13.2 + 13.2 MHz spectrum band including the extended GSM band and ensure auction defines use exclusively for Mobile broadband with UMTS/LTE technology standards.
- g. As regards, existing 21.8 + 21.8 MHz spectrum, currently in use of GSM services, let existing operators continue offering GSM services on existing technology until the overall eco system for future technology is ready and consumer /society demands their existing services be upgraded to future Mobile broadband services with 'Voice on IP'.

In essence, Liberalization has to given its real meaning and should not be constraining and damaging to the entire telecom ecosystem of the country, rather it should benefit the country, its customers and society at large.

**Q.8. Is it right time to permit spectrum trading in India? If yes, what should be the legal, regulatory and technical framework required for trading?**

**Idea Cellular Submission:**

We have already highlighted the need for spectrum consolidation to ensure spectrum availability \* efficient use of spectrum. However to ensure equal access of resources & promote competition, the Government should first consider capping the total spectrum requirements in each band. Our recommendation in this regard is as follows:

Band	Maximum Permissible Spectrum Limit Per band / Per operator	Minimum no. of operators in each band
700 MHz	5 + 5 MHz	For sub 1GHz band – Minimum 4 operators.
800 MHz ( <i>Modified 10 MHz total band , post E-GSM</i> )	2.5 + 2.5 MHz	For sub 1GHz band – Minimum 3 to 4 operators.
900 MHz	5 + 5 MHz	For sub 1GHz band – Minimum 4 operators.
900 MHz with E-GSM	8 + 8 MHz	For sub 1GHz band – Minimum 4 operators.
1800 MHz	10 + 10 MHz	For above 1GHz band – Minimum 5 operators.
2100 MHz	5 + 5 MHz	For above 1 GHz band – Minimum 5 operators.
2300 MHz	20 MHz	For above 1GHz band – Minimum 5 operators.



- a. In case such spectrum caps are imposed, the Government can consider spectrum trading. The spectrum and license already stand delinked. In view of the same, we believe that spectrum trading and leasing should be permitted in the country. We also believe that implementing this shall ensure optimal allocative efficiency of this limited natural resource, making the sector as a whole better off in the bargain, as mentioned in the Consultation Document.

**Q.9** Would it be appropriate to use prices obtained in the auction of 3G spectrum as the basis for the valuation in 2013? In case the prices obtained in the auction of 3G spectrum are to be used as the basis, what qualifications would be necessary?

**Idea Cellular Submission:**

**A:** It will be completely inappropriate to use prices obtained in the auction of 2100 Mhz spectrum in 2010 as the basis for the valuation of spectrum in 2013 in view of the following:

- i. The prices obtained in the auction of 2100Mhz spectrum in 2010 were high due to too many operators chasing limited quantity of spectrum. Due to demand-supply imbalance, artificial scarcity of spectrum was created , and thus the price discovered through such auction cannot be reflective of the intrinsic value of any and all kinds of spectrum (e.g., for continuation of voice services, for higher speed broadband business, etc.)
- ii. Final price of 2300 Mhz spectrum, for which auction happened quite near to the time of 2100Mhz auction, turned out to be quite different from 2100Mhz price. That is ample proof that each spectrum band has its own intrinsic value, and that too varies sharply based on the profile and starting position of the operator
- iii. High investment made in the 3G spectrum has not only impaired the ability of the operators to have pan India presence in the 3G data market, but also has severely constrained their ability to invest sufficiently in the areas where they obtained 3G spectrum
- iv. When 3G spectrum was auctioned, the operators had little experience of 3G as a technology & its viability in the context of Indian environment. As a result, for most operators, the actual P&L for 3G has turned out to be much worse than what they had assumed during their bidding.

- v. As is rightly pointed out by TRAI in the consultation paper itself, using prices of spectrum in 2100 MHz band for auction of spectrum in 1800 MHz band is like comparing apples with oranges. From the operators perspective, spectrum band in 900 MHz or 1800 MHz is already liberalized but still the same is primarily used for voice while the spectrum in 2100 MHz band is used for high speed data services. The business value of the spectrum depending upon the purpose for which it is used is going to be significantly different & therefore it would not be appropriate to use value of spectrum in 2100 MHz band for valuation of spectrum in any other band
- vi. Since 2010 the macro economic scenario & the business environment has significantly worsened with GDP growth rate declining from 8.5% in 2010-11 to 4.8% in 2012-13. Further the Rupee has depreciated significantly, increasing the outflow of the operators for equipments. The uptake of data traffic is far lower than what operators had believed at the time of 3G auction
- vii. Recent two auctions wherein the reserve price was derived from the 3G auction prices have completely failed to cheer the prospective bidders & the only operators who probably participated had compulsions arising out of the quashing of their licenses by the Hon'ble Supreme Court

**Q.10. Should the value of spectrum for individual LSA be derived in a top-down manner starting with pan-India valuation or should valuation of spectrum for each LSA be done individually?**

**Idea Cellular Submission:**

A: This question can be better answered only upon getting the clarity on what method finally is going to be adopted for valuation of spectrum. However, if one has to respond to this question from the business perspective it would be appropriate to follow a top down approach for valuation/reserve price of the spectrum in view of the following:

- i. Almost every prospective bidder is likely to be a pan India operator (today or in future). The amount of money that can be spent on acquisition of pan India spectrum is not unlimited & is largely decided by the business model of the company for all service areas together. At times companies may take strategic calls to invest in few service areas just to

- have pan India presence, but business model can be sustainable in the long run only if the other service areas can support such loss making service areas
- ii. In the bottom up approach there is always a danger of arriving at the value of spectrum of individual service areas, the total of which at the pan India level becomes completely unviable for the company as a whole
  - iii. The objective of the auction should be such that operators are able to derive synergy with existing operations as also trigger economies of scale and hence it is absolutely necessary that the valuation of spectrum at the pan India level is reasonable, affordable & can result in a sustainable & viable business model for the company as a whole

**Q.11. Is indexation of 2001 prices of 1800 MHz spectrum an appropriate method for valuing spectrum in 2013? If yes, what is the indexation factor that should be used?**

**Idea Cellular Submission:**

A: Value of the spectrum is different for each operator depending on its profile, starting position, risk appetite, capacity to invest and execute, and other spectrum holdings. Therefore, trying to arrive at one single number as the intrinsic value of any spectrum band is quite inappropriate to say the least. Having said that, amongst various choices laid out in the consultation paper, we believe that the indexation of 2001 prices of 1800 MHz spectrum for valuing spectrum in 2013 is the most preferred option amongst those available. It may not be a perfect approach due to changes in macro economic factors as well as the business environment, however, considering that all the recent auctions including 3G auction have failed to meet the objective of creating a long term & sustainable business model for telecom, we would recommend indexation of 2001 prices of 1800 MHz spectrum for valuing spectrum in 2013. More detailed rationale for our view is as follows:

- i. All other methods or alternative approaches for valuation of spectrum given in the consultation paper are practically infeasible or inappropriate for many reasons which are given in the specific responses relating to those approaches
- ii. The spectrum band for auction in 2001 & proposed auction in 2013 is the same & the comparison of the price will be more like an apple to apple comparison

- iii. The new entrants in 2008 who got GSM spectrum in 1800 MHZ band based on 2001 prices have still not been able to develop a long term sustainable business model, though they entered this business as late as 2008. This clearly shows that the spectrum prices discovered in 2001 auction are not low by any standard. On top of it if CPI index is applied on 2001 prices, the value of the spectrum becomes almost double
- iv. Considering the fact that the final price of the spectrum is in any case going to be decided based on the auction process, it would be reasonable to take the benchmark of 2001 prices with CPI indexation as provided in the Income Tax Act, 1961, since this is a fair reflection of the inflation in the country. We would not recommend SBI PLR or weighted Average Cost of Capital for indexation since these parameters are the result of monetary policy of RBI & hence may not be reflective of the real inflation in the country

**Q.12. Should the value of spectrum in the areas where spectrum was not sold in the latest auctions of November 2012 and March 2013 be estimated by correlating the sale prices achieved in similar LSAs with known relevant variables? Can multiple regression analysis be used for this purpose?**

**Idea Cellular Submission:**

A: We strongly recommend not to use this method because Nov 2012 & Mar 2013 auctions do not reflect the true intrinsic value of the spectrum since bidders' licenses were cancelled & they had no option but to pay these prices for business continuity. The fact that no competitive bidding took place & the auctions miserably failed, it would be completely inappropriate to use any reference from these auctions

**Q.13. Should the value of spectrum be assessed on the basis of producer surplus on account of additional spectrum? Please support your response with justification. If you are in favour of this method, please furnish the calculation and relevant data along with results.**

**Idea Cellular Submission:**

A: We strongly recommend not to use this method for following reasons:

- i. This method can be used at best for calculating the financial savings on getting additional spectrum as compared to investing in the network. However, the method will fail to compute the value of the startup spectrum which is required for renewal of the licenses
- ii. This method will throw only a financial savings in network cost due to additional spectrum. However, such saving will be uniform across all geographies assuming the network architecture is more or less uniform & thus will wrongly throw uniform spectrum value across all LSAs. The value that the prospective bidder is going to perceive is largely based on the future business potential of a particular LSA & not really the financial savings in the network costs due to additional spectrum
- iii. Spectral efficiency of different equipments/technologies is going to be different across various vendors & network architecture & given technological advancements, this efficiency is going to significantly vary over a period of time & hence it will be practically impossible to even develop perfect financial model for such method

**Q.14. Should the value of spectrum in the 1800 MHz band be derived by estimating a production function on the assumption that spectrum and BTS are substitutable resources? Please support your response with justification. If you are in favour of this method, please furnish the calculation and relevant data along with results.**

**Idea Cellular Submission:**

A: We do not recommend this method in view of following:

- i. This method assumes that a TSP will be able to find the optimum mix of two critical inputs for production of minutes in such a way that it yields the same marginal productivity per rupee spent. We do not think that developing a model for working out such optimum mix is practically feasible given the fact that the network architecture, equipment vendors, technology, etc. are different for different TSPs. So there cannot be a standard optimum mix for all operators
- ii. If at all this type of model is developed with some accuracy, at best it can throw a techno-commercial value of a spectrum arising out of various combinations of spectrum & BTSs. However, this will not be a true reflection of the business value of the spectrum based on the business potential of a particular LSA

Q.15. Apart from the approaches discussed in the foregoing section, is there any alternate approach for valuation of spectrum that you would suggest? Please support your answer with detailed data and methodology.

**Idea Cellular Submission:**

A: Theoretically the value of any business can be computed by calculating the DCF value of the business in a particular LSA without taking upfront spectrum cost. However, this is merely the NPV of the likely future cashflows for the entire business, which in most instances would be built on a basket of spectrum holdings for operators, and not attributable to any one spectrum band. We would strongly recommend not to use any such methods for calculation of the reserve price because the business value for each operator in a particular LSA will be different depending upon its market share, entry point, quality of subscribers, network architecture, spectrum holdings, technology, etc. Developing a standard DCF model which can apply uniformly to all the prospective bidders is impossible. At the end of the day, DCF value is based on future projections of the business for fairly long term and in a very dynamic and fast changing technology driven industry like telecom, developing DCF model based on few assumptions of future becomes a very subjective exercise. The fact that an auction outcome is highly varied is evidence that every operator assigns a different value to the same spectrum band. Therefore, this exercise of DCF based valuation should be left to the individual bidders who may choose to use it in their preparations for the auction (but would most definitely arrive at very different numbers)

We would like to suggest that in the event no method for valuation of spectrum is found feasible, TRAI may consider auction without prescribing any reserve price with a condition in the auction document that would enable DOT to withdraw from the auction in the event final outcome of the auction is not satisfactory from DOT's perspective & subsequently the auction can be re-convened based on the reserve price to be recommended by TRAI taking inputs from the bidding pattern observed in such withdrawn auction

Q.16. Should the premium to be paid for the 900 MHz and liberalised 800 MHz spectrum be based on the additional CAPEX and OPEX that would be incurred on a shift from these bands to the 1800 MHz band?

**Idea Cellular Submission:**

- A: We recommend that no premium should be paid for 900 MHz spectrum as compared to 1800 MHz spectrum in view of the following:
- i. When incumbent first & second operators started their business, GSM was prescribed as a mandatory technology & operators were required to bid for the license & the GSM 900 spectrum was bundled along with the license. Till the migration package was offered by the DOT pursuant to the NTP-99, operators were paying the fixed license fee which was treated as an entry fee for the license including spectrum & operators migrated to a revenue sharing regime as well as the spectrum usage charge as a % of AGR. As a part of this migration package, incumbent operators were required to forgo their rights for duopoly & agreed to operate in a multipoly licensing regime. To now penalize the incumbent operators for having faithfully rolled out services as per mandated technology is unfair and also against the basic policy of providing level playing field.
  - ii. From the network architecture point of view 900 MHz Vs 1800 MHz doesn't make much difference in terms of number of sites in the densely urban cities/towns due to the requirement of fill-in/capacity sites. The only advantage will be found in the rural/remote areas where operators any way find it very difficult to break-even in 900 MHz band due to very low ARPU & ARPM. If any premium is to be charged on 900 MHz spectrum, it will force the operators to stop rolling out in the rural/remote areas which is against the prime objective of the Telecom Policy
  - iii. Out of the total industry revenue, approx. 65% of the revenue is contributed by 900 MHz spectrum band operators. If these operators are burdened with extra outflow on account of premium over 1800 MHz band, it will severely affect the overall prospect of the industry revenue with consequent impact on revenue sharing license fee & spectrum usage charge as a % of AGR if operators are forced to make their service unaffordable to recover their cost
  - iv. If the long term road map of the operator is to move towards 3G or 4G data using higher frequency bands, then the so called advantage of lesser number of sites for 900 MHz will also be neutralized over a period of time as the 3G coverage in 2100 MHz or 1800 MHz band increases. Operators will not be able to derive any savings in the cost of passive

infrastructure, while there will be insignificant saving in the cost of GSM equipment due to 900 MHz band

- v. Given the fact that country's 65% of the revenue (primarily voice) is generated on 900 MHz spectrum, it is practically impossible to use this spectrum for any purpose other than voice. Given technical challenges in migration of networks, the advantage of using the spectrum band for high speed data as is available for 1800 MHz band is not available for 900 MHz band. In an eventuality of the voice rates going down significantly due to data revolution in the country, the business case for 900 MHz operators will be significantly affected & on top of it if they are forced to shell out extra premium over 1800 MHz band, it will make the overall telecom industry unviable

**Q.17. Should the valuation of spectrum and fixing of reserve price in the current exercise be restricted to the unsold LSAs in the 1800 MHz band, or should it apply to all LSAs?**

**Idea Cellular Submission:**

Market determined price is established when the market gets cleared, and all the quantity that was put up for sale has actually been sold. During the auction held in Nov 2012, the "market clearing price" was not established for any of the LSAs except Bihar because there were many units of unsold spectrum in all LSAs. Those who bought spectrum in some of the LSAs (like TNC, Kolkata, WB) actually paid the Reserve Price primarily to ensure continuity of operations. In fact, some of the operators chose to shut down their existing operations in those circles because the Reserve Price was seen as unviable. Now, even more quantum of spectrum is being made available in the auction. Therefore, we recommend that the current exercise of valuation of spectrum & fixing of reserve price with a view to truly get "market determined/ clearing price" should apply to all LSAs

**Q.18.**

**a) Should annual spectrum usage charges be a percentage of AGR or is there a need to adopt some other method for levying spectrum usage charges? If another method is suggested, all details may be furnished.**



b) In case annual spectrum usage charges are levied as a percentage of AGR, should annual spectrum charges escalate with the amount of spectrum holding, as at present, or should a fixed percentage of AGR be applicable?

c) If your response favours a flat percentage of AGR, what should that percentage be?

**Idea Cellular Submission:**

Currently the Spectrum usage charge are not only dependent on the quantum of spectrum but also on the technology used and are payable as per the following notified rates of the DoT:

Charges for GSM operators	
Spectrum Slab	%AGR
Up to 4.4 MHz	3%
Up to 6.2 MHz	4%
Up to 8.2 MHz	5%
Up to 10.2 MHz	6%
Up to 12.2 MHz	7%
Up to 15.2 MHz	8%

Charges for CDMA operators	
Spectrum Slab	%AGR
Up to 5 MHz	3%
Up to 6.25 MHz	4%
Up to 7.5 MHz	5%
Up to 10 MHz	6%
Up to 12.5 MHz	7%
Up to 15 MHz	8%

For BWA services, the operators are required to pay an annual spectrum charge of 1% of AGR after a period of one year.

This escalating rate approach is appropriate to discourage substitution of physical infrastructure by spectrum when spectrum is assigned based on administratively determined subscriber thresholds. However, once the value is determined through an auction mechanism, there is no rationale for continuing with an escalating charge approach and a uniform spectrum charge should suffice.

Thus, Idea Cellular recommends that a notional annual SUC on a per MHz basis be charged. This will also result in a simple, fair and transparent spectrum usage charges regime that is easy to administer and enforce and will help avoid arbitrage opportunities. Further, it will also translate itself into an Auction price that is not artificially weighed down by considerations of substantial recurring payments.

Q.19. What should be the ratio adopted between the reserve price for the auction and the valuation of the spectrum?

**Idea Cellular Submission:**

We are in agreement with TRAI study on international estimates of ratio of reserve price to final price of different auctions being the reasonable estimates for adoption in India. This would align the methodology followed to international best practices.

**Other Critical Issues for consideration of the Authority**

1. **MERGERS & ACQUISITIONS**

- a. In this regard we submit that vide its Press Release dated 15<sup>th</sup> February 2012, DoT announced that:

“14. ii. Merger up to 35% market share of the resultant entity will be allowed through a simple, quick procedure. However, there may be a need to consider cases of merger beyond 35% market share in certain circumstances without breaching the 25% cap on GSM spectrum/ 10 MHz for CDMA spectrum holding in any service area.

Recommendation of TRAI that such cases will be considered up to a market share of 60% has been taken note of. In order to ensure clarity on the circumstances and extent to which merger above 35% limit would be permissible, detailed transparent criteria will be prescribed/ adopted after receipt of TRAI's recommendations and after due consultation with the appropriate authorities."

However, it appears that DoT has not sought any recommendations from TRAI so far on this issue. We request the Authority to provide recommendations to DoT on this related issue also so that while finalizing the M&A guidelines, DoT can also come out with detailed guidelines on approving M&A beyond 35% market share.

- b. We would like to state that there is a need for a liberalized M&A framework that can facilitate market based consolidation. In this regard, the proposal to have different spectrum caps (25% of 900 & 1800MHz spectrum and 10MHz for CDMA) is retrograde and against the principle of technology neutrality enshrined in our policy.

We also state that there is no legal or logical basis to distinguish between technologies and provide different caps based on technologies or bands or different caps for M&A versus organic growth. Since, less than 20 MHz of spectrum is available for CDMA operators, allowing a cap of 10 MHz would tantamount to an operator holding more than 50% of the total spectrum in the relevant market. Hence, the spectrum cap should be agnostic of the technologies or bands used by the service providers and should be fixed at 25% of the total assigned spectrum in a service area irrespective of band and technology mix deployed. It is pertinent to point out here that the Authority in its recent recommendations of April 23, 2012 reviewed its earlier recommendation and stated as under:

*"The limit for acquisition of spectrum shall be 50% of the spectrum assigned in each band in the respective service area and 25% of the total spectrum assigned in all bands put together in each service area."*

The same has been stated by the Government in the NIA documents for the recent auctions held in November 2012 and March 2013. The same also needs to become part of the M&A guidelines.

- c. We would also like to state that since, under M&A guidelines, spectrum will be acquired on a market based price, imposition of any further or additional price for spectrum is not warranted and any contemplation of the same, will discourage M&A and deter market based consolidation.
- d. Any M&A activity would necessarily involve a transient equity holding in two entities within same service area, before the actual merger. We also submit that to ensure that substantial equity clause does not hinder the process of M&A, this transient period needs to be acknowledged as part of M&A process.
- e. The present M&A guidelines are limited to CMTS/UASL operators. As the ISPs are also holding the BWA spectrum now, clarity needs to be given on applicable terms & conditions if:
  - i. One ISP acquires another ISP with BWA spectrum
  - ii. One UASL operator acquires an ISP with BWA spectrum
  - iii. One ISP with BWA spectrum acquires a UASL operator
- f. We reiterate that it is incumbent upon the Authority to ensure adequate competition intensity such that minimum 4 operators in sub 1 GHz band and minimum 5 operators in above 1 GHz band are operational at all times.

We submit that this aspect also needs to be covered while finalizing the new M&A guidelines.

## 2. CHANGE IN OWNERSHIP OF SPECTRUM

- a. The present policy of the government aims at providing M&A guidelines for merger of two entities along with the spectrum they have been allocated. However, presently there is no exit route available to an operator that holds spectrum in multiple bands, to exit from business for the services which can be provided through a specific spectrum due to techno-commercial reasons. For instance, at present if an entity having both 3G and BWA spectrum, allocated via auction, intends to exit from either BWA or 3G business, the only option available to it is to get

merged/ acquired with its entire 3G and BWA spectrum or surrender the specified spectrum and forgo all investments made thereof.

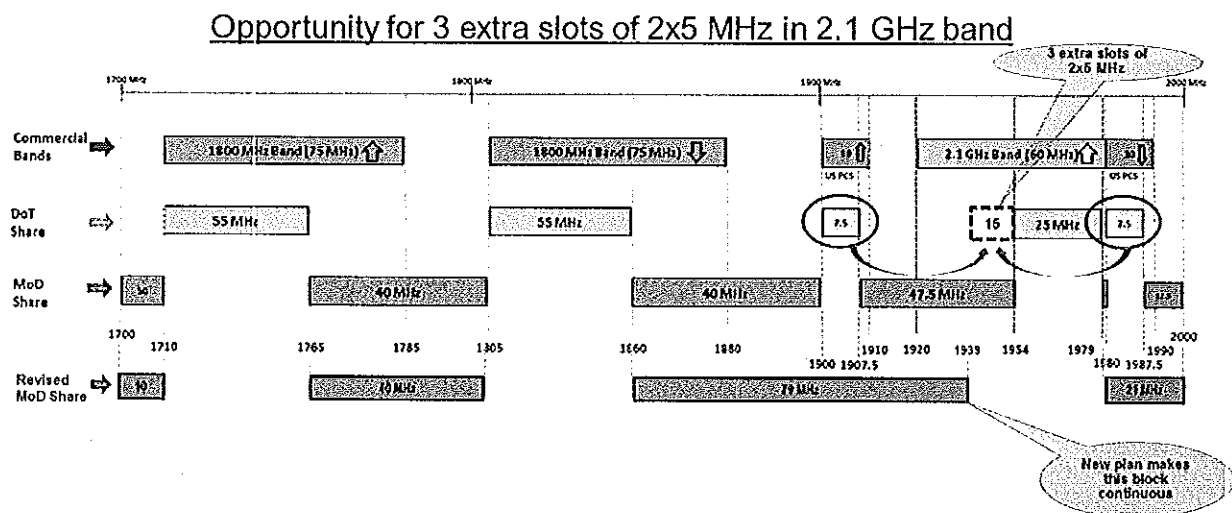
- b. In the changed telecom scenario where operators are allocated spectrum in multiple bands, there might be a situation where the entity may not find it viable to continue with any spectrum band, say 3G or BWA, due to techno-commercial reasons; however it may want to continue with its other networks, then the policy should facilitate the entity to sell off its 3G or BWA spectrum separately along with the relevant assets to another entity. Thus change in ownership of such spectrum should be permissible.
- c. We would therefore submit that a change in ownership of spectrum be allowed, thus permitting the transfer of spectrum (allocated via auction) along with assets either directly or through the process of demerger/ merger under the M&A policy so that M&A can take place for different spectrum bands separately between two licensed operators without any of the entities losing their license and spectrum in other bands.

### 3. MAKE 2100 MHZ AVAILABLE FOR AUCTIONS

- a. As per our understanding, 1800 MHz band is being shared by DoT (2x55 MHz) and Defence (2x20 MHz). TRAI, in their March 2012 recommendations on auction of spectrum recommended that spectrum in 1800 MHz and 1900 MHz band be reserved and to be used at the time of renewal of licenses. Now with the Supreme Court order of auctioning all spectrum in 1800 MHz band, TRAI to modify its earlier recommendation for 1800 MHz band, and to maintain consistency the Authority also needs to modify its recommendation on reserving 1900 MHz band.

As mentioned in the TRAI consultation paper, the number of CDMA subscribers have declined. CDMA subscriber base has fallen by 30% over last one year. This has impacted the revenue, minutes of usage and the subscriber count of each CDMA operator. Now as there is an overall reduction in the subscriber base of CDMA, there is naturally no need to reserve any additional spectrum in 1900 MHz band for CDMA. This will help in immediate release of 2x7.5 MHz in 1900 MHz band. This 1900 MHz spectrum can be used to swap with 15 MHz of spectrum in 2100 MHz band held by Defence, thus

enabling four additional slots of 2x5 MHz band of 2100 MHz spectrum band which can be auctioned immediately. The swapping proposal was submitted to the Authority vide COAI letter No. RSM/COAI/2013/033 dated February 15, 2013. As a ready reference, the 2.1 GHz spectrum swapping proposal is shown below-



What should the DoT do to create 3 extra slots of 2x5 MHz in 2.1 GHz band?

- Exchange blocks 1900-1907.5 & 1980-1987.5 (7.5+7.5 MHz) with 1939-1954 (15 MHz) in 2.1 GHz band.
- Corresponding 2129- 2144 (15 MHz) of 2.1 GHz is outside the ambit of the MoD agreement.