



Telewings Communications Services Private Limited*
a teleinor company
The Masterplace, Sector - 54
Golf Course Road, DLF Phase - V,
Gurgaon - 122002, INDIA

T +911243329000
F +911243329996
www.uninor.in

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Shri Arvind Kumar,
Advisor (NSL)
Telecom Regulatory Authority of India
Mahanagar Doosanchar Bhawan
Jawahar Lal Nehru Marg
New Delhi 110002

Subject: Response to Consultation Paper on 'Reserve Price for Auction of Spectrum in the 800 MHz Band' (No 13/2013) dated 30.12.2013

Dear Sir,

Please find enclosed our response to the Consultation Paper subjected above. We hope that the Authority will find our response useful and consider our inputs while formulating the recommendation on the subject.

This is for your information and records please.

Thanking you

Yours sincerely,
For Telewings Communications Services Pvt. Ltd.

(Pankaj Sharma)

Sr. Vice President & Head Regulatory

Encl: a.

UNINOR response to TRAI consultation paper on 'Reserve Price for Auction of Spectrum in the 800 MHz Band' (No 13/2013) dated 30.12.2013

Preamble

This submission is made by M/s Telewings Communications Services Pvt. Ltd, a Telenor Group company in response to above referred consultation paper.

At the outset, we would like to thank Authority to bring a comprehensive paper highlighting all the relevant and critical issues which requires deliberation on determining the Reserve Price for Auction of Spectrum in the 800 MHz Band. We sincerely hope that basis the conclusion drawn from this consultation process, TRAI will recommend Reserve price keeping in mind the marginal value of the spectrum to have level playing field among all the telecom players as well as optimal use of available spectrum by making it technology neutral.

As can be seen from the consultation paper, there has been no response for 800 MHz spectrum in Nov'12 auction and limited response in Mar '13 auctions even though the prices were reduced by 50% on the pretext that 5MHz is readily not available in 800 band in all LSAs. Nevertheless the 800 band has its advantage in better propagation characteristics (superior than 900) and this precious natural resource if sold in smaller quantities which can not be used for either LTE or UMTS or EGSM spectrum, will a colossal loss of precious natural recourse.

As is mentioned in the present and last consultation papers, the CDMA subscriber base is dwindling in the country, hence the value of this 800 spectrum for a CDMA application will be much lower. However, the same band if efficiently utilised for UMTS / LTE applications will garner high value. So the effort of the regulator and Govt should be in the directions of spectrum consolidation in this band. This aggregate quantum of vacant / available spectrum should be sold in blocks of 5MHz and multiples thereof in those LSAs where it is available. In those LSAs where availability is <5MHz, efforts should be done to get some spectrum vacated from defence and withhold spectrum sale till such time. In summary:

1. Auction spectrum in blocks of 5MHz in LSAs where it is available.
2. If availability <5MHz then wait till some spectrum gets vacated.
3. Extract true value of liberalised 5MHz in 800 band by auctions in specific LSAs as per 1 above

Determination of Reserve Price by assessing marginal value of spectrum

We would like to place on record that the **reserve price recommended should encourage purchase of maximum spectrum as unsold/ idle spectrum is a valuable socio-economic opportunity loss to the exchequer**. In practice, this means that spectrum must be sold at a price lower than or equal to the marginal value of the spectrum in question to the operators demanding the spectrum. However, in general, Government and Operators will only have uncertain estimates of this marginal valuation hence Regulator should be cautious while determining the reserve price and decide the same considering the fact that if reserve price are set higher than the marginal level, spectrum will remain unsold and unused. Moreover, as highlighted by TRAI, larger carrier size is also an important factor for achieving better spectral efficiencies and can be used for deploying any technology with the allocated spectrum. This will also plays a vital role in estimation of marginal valuation of the spectrum.

As correctly highlighted by TRAI in para 3.52 of their recommendations dt 09.09.2013 given on **“Valuation and Reserve Price of Spectrum”**

“.....a high reserve price may result in spectrum remaining unsold. When spectrum is not sold, the revenue to Government is in any case zero. This is what happened in many LSAs in the Indian spectrum auctions of November 2012 and March 2013. It is important to keep this aspect in mind while arriving at an optimal reserve price.”

From the above para, it is clear that Authority is well aware of the fact that incorrect valuation of spectrum will lead to determination of incorrect/ higher reserve price which will ultimately result into unsuccessful auction. Therefore, to set appropriate reserve prices, **valuation of the spectrum must be estimated at some margin**. For Operators, the relevant margin is determined by their existing spectrum holdings and for Government, it is the marginal valuation of the strongest losing bidder measured at its existing portfolio, or the marginal valuations of the winning bidders, measured at the amounts they win, that matters.

Hence, **marginal valuations depend on spectrum availability**, including the amount of spectrum already assigned, and spectrum expected to be available to operators in the near future. Estimation of valuations and **determination of appropriate reserve prices can therefore only be done after the determination of the amount for sale**.

Further, it is also to mention that **all the methods discussed in the consultation paper to determine the valuation of the spectrum have their own merits, depending on the portfolio of the operator assessing the value as depicted in below scenarios:**

- The value of “business-enabling” spectrum, such as 3G spectrum in a 2G only market is influenced by the estimated value of future 3G business
- The value of incremental spectrum is affected by cost saving associated with increasing spectrum portfolio
- Benchmark numbers from foreign markets and historical data from recent auctions in India are relevant for all operators since they are used for “top-down” sanity checks of “bottom-up” value estimates.

In view of above, we do understand that it is very challenging to assess which method is most appropriate to determine the marginal valuation in a given situation, since the choice of method depends on the situation of each operator. Further, it is also possible that the marginal valuation can be increased by allowing operators to aggregate larger amounts of spectrum, suitable for use e.g. to LTE whereas on the other hand, **increasing supply of spectrum (700 MHz, 1800 MHz etc.) will decrease scarcity and hence valuation on the margin**.

To cater for the large uncertainty in value estimates, **we suggest that reserve prices are set below 50 % of estimated marginal valuations**; at this level most of the incentives for collusion between operators should disappear, and prices should normally rise to the “market clearing” market-determined price.

In summary, we recommend a 50 % reduction of reserve prices, that all available spectrum is offered for sale in this auction, and that operators are allowed to aggregate up to at least 5 MHz of spectrum.

Adoption of 800 MHz Band to E-GSM

The adoption of the 10MHz block as E-GSM should be put forward with a roadmap. Since, there is no definite timeline from the Defence on vacation as per the DOT correspondence. However, TRAI and DOT should arrive at a methodology wherein a part of the auction proceeds from 800 band will be funnelled towards cost of equipment purchase and spectrum vacation.

In view of above submissions, please find below our point wise response to various issues raised in the Consultation paper –

Q.1. What should be the quantum of spectrum in the 800 MHz band that should be put up for auction?

The quantum of spectrum should be seen from the perspective of adoption of technology. Neither the existing licensees nor the new entrants have evinced any interest in acquiring 800 band for CDMA. Now this frequency should be used only for higher technologies like LTE and UMTS as eco-system is available for the same. However to use this frequency for higher technologies, it is imperative that adequate amount of spectrum is made available. Hence all efforts should now be made to make available spectrum in blocks of 5MHz. Those LSAs which have 1 or more such blocks of contiguous and truly liberalised 5MHz should be put to auction, so that the maximum value can be extracted by the Govt through bidding.

The next priority of the Govt should be to make efforts to vacate more spectrum in remaining LSAs and once 5MHz block is available, put up for auction.

A part of the auction proceeds may be ploughed back towards spectrum vacation.

Q.2. What should be the block size in the 800 MHz band?

TRAI has concluded and recommended a minimum block of 5MHz is required to truly use the auction acquired spectrum as liberalised.

Licensor has also used the same benchmark (non availability of 5MHz) to reduce the price by 50% in the March'13 auctions.

No demand for 800 band for CDMA applications in 2 consecutive auctions even after price reduction.

Hence, Govt should extract maximum value by putting blocks of only 5MHz in auction, so that operators use it for its maximum potential and maximum value is extracted through bidding.

Q.3. Should the value of 800 MHz spectrum be derived on the basis of the value of 1800 MHz spectrum using technical efficiency factors?

Sub-GHz bands (800 MHz and 900 MHz) have greater propagation characteristics in terms of coverage in comparison to 1800 MHz band and require lower amount of CAPEX and OPEX for managing network operations. Amongst them 800 is further efficient compared to 900 band. However, TRAI may adopt the valuation approach of 900 for 800 for the sake of simplicity. This approach is already approved and used in the present Jan'14 auction. The 10

to 20% greater efficiency factor to the advantage of 800 will be factored by the market while bidding.

Q4. Is there any case for application of a lower efficiency factor (1.3) over the valuation of 1800 MHz spectrum, for determining the valuation of 800 MHz, as was done in the previous auction? If yes, give detailed reasons for the same.

There is no case for a lower efficiency factor and thus auction valuable natural resource at a lower value. In the previous auction there were quashed license (which bid in 10 out of 21 quashed circles) and presently there is no such pressing urgency. Auction should be conducted only in those LSAs where spectrum is available in multiples of 5MHz only.

The efficiency of sub-GHz band is on the principles of physics and this should not be diluted.

Q5. Should the value to be paid for 800 MHz spectrum be based upon the potential growth in data services? If yes, please state whether you agree with the assumptions made.
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Q6. Should the value of spectrum in the 800 MHz band be assessed on the basis of producer surplus on account of additional spectrum? If you are in the favour of this method, please furnish the detailed calculations and relevant data along with results.

As mentioned by TRAI vide its recommendations dated 09.09.2013,

“valuing spectrum and setting reserve prices is part science and part art. The Authority is clear that there is no single correct and precise valuation of spectrum or the reserve price. There are different ways of arriving at the value of the spectrum, all of which have their merits as well as their drawbacks. Rather than count on one method, prudence suggests it would be better to rely on a number of such models to arrive at a final reasonable valuation and then to base a reserve price on such valuation. The valuation has to be based on clear and cogent reasoning, transparency, logic, and scientific method.”

In view of above, it is suggested that TRAI should adopt the same approach “probabilistic average valuation” for determining the valuation of 800 MHz band as has been used in 900 MHz band auction.

The recommendation is adopted by Govt and Industry and put to use in the Jan '14 auctions, hence any new approach is not advisable. The potential of 800 for data is definitely 10 to 20 % higher than 900, however this should be left for the bidders to factor in and submit higher bids as per their individual business case.

Government should use its resources in making available adequate spectrum, free of incumbencies and forward looking policies.

Q7. Should the value of spectrum in the LSAs in India for 800 MHz be determined by utilizing the data on international prices? What other variables do you suggest for arriving at robust value estimates using the multiple regression approach? Is there any alternate approach for valuation of spectrum in 800 MHz using the data on international auctions?

By doing valuation of 800 MHz band spectrum utilizing available data on international prices realized in auctions of similar frequency bands will not be realistic considering deployment of different technologies in India (CDMA) and other countries (LTE/ WCDMA) having different market and economic conditions. The international prices may be used for the purpose of “top-down” sanity checks of “bottom-up” value estimates.

Q8. Apart from the approaches discussed above, is there any alternate approach for valuation of spectrum in 800 MHz that you would suggest? Please support your answer with detailed data and methodology.

As suggested in response to question no 3, 5 & 6, TRAI should adopt the same approach “probabilistic average valuation” for determining the valuation of 800 MHz band as has been used in 900 MHz band auction.

The marginal valuations depend on:

- spectrum availability,
- including the amount of spectrum already assigned, and
- spectrum expected to be available to operators in the near future.

The value of spectrum for an existing licensee / new entrant also depends on:

- their existing spectrum holdings
- expansion plans through spectrum sharing
- consolidation plans through spectrum trading

Thus it should be left to the bidders to prepare their business plans and arrive at their individual valuation and Govt efforts should be focussed towards on:

- Vacation of spectrum
- Forward looking enabling policies

Q9. What should be the ratio adopted between the reserve price for the auction and the valuation of the spectrum? Would it be optimal to fix reserve price equal to valuation of spectrum?

To cater for the large uncertainty in value estimates, **we suggest that reserve prices** should be set conservatively e.g. at 50 % of **estimated marginal valuations**; at this level most of the incentives for collusion between operators should disappear, and prices should normally rise to the “market clearing” market-determined price. Hence, we recommend a reduction of at least 50 % compared to the excessive reserve prices used in 2012 and 2013.
