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GSMA Response to TRAI Consultation Paper "Auction of Spectrum"

Objectives for Auction

Q2. What are the key objectives to be kept in mind in the auction of the spectrum?

Spectrum has a substantial economic value. Telecommunications services derived from spectrum are purchased not just directly by customers, but also form a key input into nearly every sector of a modern economy. Therefore, it is essential that governments have appropriate objectives when allocating spectrum.

The GSMA believes that an 'efficient allocation' of spectrum would mean placing spectrum in the hands of those able to create greatest overall benefit from it. Provided that competition between spectrum licensees in providing telecoms services is effective, efficient allocation can usually be achieved by licensing spectrum to whoever values it most. Auctions provide a useful tool to achieve efficient allocation, which may also generate very significant sums for the public purse as a by-product.

Auctions provide a means of allocating scarce spectrum to those best able to extract value from it. A well-designed auction can provide spectrum regulators with a means of ensuring that spectrum is efficiently used, ending up in the hands of those best able to use it.

Lack of clarity around the spectrum award procedures can send mixed (and even negative) signals about the investment climate in a country. Therefore, a Government should design and implement spectrum award procedures in an efficient, timely, technology-neutral, fair and transparent manner to keep participant costs reasonable so as to ensure benefits to citizens as quickly as possible.

A. Quantum of Spectrum to be Auctioned

Q3. What should be the amount of spectrum which should be auctioned?

Spectrum management is among the most important issue for the telecommunications industry globally. Spectrum is a limited and valuable resource—effectively a scarce natural resource—that governments control, and must be utilised to maximise economic and social benefits for their citizens.

Mobile technologies are the primary sources of communication for much of the population in India, and mobile broadband is expected to be critical in bridging the digital divide and connecting the unconnected throughout India. However, for

ubiquitous and seamless mobile communication and broadband to exist, enabling governments to tap into the economic value benefit of mobile to the industry and the citizens of India, there must be sufficient spectrum allocated.

To ensure a range of mobile services are provided, at the lowest possible cost and to allow consumers to use the widest selection of devices, the mobile industry needs allocation of internationally harmonised frequency bands and implementation of internationally harmonised band plans.

The amount of spectrum issued to mobile operators determines their ability to deliver high quality services to consumers and manage the bandwidth required to handle increasing traffic volume from the uptake of mobile internet services.

Moreover, unused or under-utilised spectrum does not benefit society or consumers. In contrast, spectrum made available to the mobile industry will bring cheaper voice and data services to more people, increase productivity and support other industries.

Governments may be tempted to limit the supply of spectrum in order to drive spectrum prices up under the guise of maximising public good. However, short-term goals of maximising revenue by governments seeking to reduce budget deficits are actually harmful to the development of the mobile sector and the socio-economic benefits it brings.

Public discourse related to maximising public good from spectrum should therefore not be focused on how much money can be generated for public funds. Instead, it should be focused on how to maximise the overall economic and social returns from spectrum. There is a strong correlation between mobile penetration and both economic and social development. It follows that the value of spectrum to a country cannot simply be measured in terms of price per MHz, but rather needs to take into consideration the positive impact of readily available and affordable spectrum.

Unreasonably high and irrational spectrum prices will ultimately be passed on to consumers, which will inhibit penetration growth, reduce the ability of operators to invest in networks and, ultimately, limit the impact and value derived from the spectrum in the longer term.

In view of the above, all available spectrum in the band, both returned spectrum and currently unallocated spectrum, should be made available in the forthcoming auction.

C. Spectrum Refarming

Q6. What are the issues that may arise in the refarming process?

The GSMA supports a technology neutral approach to the use of all the existing mobile bands as this facilitates innovation and a smooth technology development curve. GSMA notes that the Indian licensing regime is already technology neutral and believes that

this liberal and progressive licensing framework will allow operators to follow a natural upgrade path, and ensure that they are using the most cost-effective, and spectrally-efficient solutions.

The GSMA believes that technological evolution benefits society. Technological development and service innovation significantly contribute to society both in terms of fuelling economic growth and in terms of improving social welfare of citizens through new services, such as mEducation, mHealth, mMoney and mAgriculture.

There should be a presumption in favour of continuity for mobile licences to encourage long-term investment and minimise the risk of service disruption to customers. A presumption of continuity of mobile communications service also makes sense as it clearly represents the best use of a particular spectrum band and its role as a part of the economy's key infrastructure. This also gives operators greater certainty and encourages them to invest in network development and the deployment of new services. This can be critical for investments that have long payback times such as mobile networks. A presumption of renewal can also improve operators' abilities to raise capital from financial markets and invest in networks. It is GSMA's view that an expectation of renewal is implicitly built into the Indian licensing regime as it provides for an extension of licences.

D. <u>700 MHz</u>

Q11. When should 700 MHz spectrum be auctioned?
Q13. How much spectrum in 700 MHz band should be put to auction initially and what should be the amount of spectrum which a licensee should be allowed to win in that auction?

The GSMA submits that the regulator should consider the wider regional and global implications when considering spectrum allocation. The 'type' of spectrum issued—or the frequency band where the spectrum is allocated—greatly affects mobile operators' ability to achieve ubiquitous population coverage in a cost effective manner, particularly in rural areas, and their ability to meet increasing demands for high speed mobile data.

Harmonization is a key factor in promoting adoption and can bring many benefits such as cost effective roll-out of networks and devices, a reduction in cross-border interference can also facilitate international roaming. Meanwhile, if harmonization is not achieved there will be an adverse effect on the technical and economic efficiency of any future rollout.

Allocation of 700 MHz spectrum to mobile should be the next step towards achieving mobile broadband for all. To enable take-up in rural areas and among citizens with lower income, the Government of India should provide mobile operators with the 700 MHz spectrum—as that spectrum is ideally suited to providing wide coverage, reducing rollout costs, and ultimately, reducing prices to consumers. In most countries in the Asia Pacific, the 700 MHz band (698-806 MHz) is most likely to be the harmonised solution

for mobile in the UHF band. Harmonisation of frequency bands is especially important for emerging economies like India where affordability is the greatest barrier for access as it can drive down rollout costs and consumer pricing.

The Asia-Pacific Telecommunity (APT) has recommended to the ITU an APT harmonised band plan for the 700 MHz Digital Dividend, which consists of 45 MHz paired, with a 10 MHz centre gap. This band plan offers the largest amount of useable spectrum and has great potential for large-scale regional and inter-regional adoption. There is also very strong technical support for it internationally. It is envisaged that this plan will help drive significant economic growth in the region if widely adopted, which would benefit from economies of scale in both radio equipment and handset production.

The GSMA would strongly recommend that the entire spectrum band (in line with APT band plan) is made available in the auction at the same time. There is a high probability that reducing the amount of spectrum made available would artificially inflate prices.

Further, the Government should provide the entire band whilst creating a supportive, predictable environment for operators, equipment vendors and their investors. Without this, investment, overall efficiency and speed of rollout will be hampered.

The GSMA suggests that since a block size of 5 MHz is the absolute minimum required for IMT Advanced, this band can be auctioned as 2x5MHz FDD spectrum blocks. Further, the operators should also be allowed to acquire multiple blocks in an auction to support 2x10MHz or 2x20MHz channels in order to maximise efficiency and offer the highest possible data rates to customers.

In conclusion, the GSMA believes that the entire 700 MHz spectrum (as per APT band plan) should be auctioned for mobile telecommunications, that such an auction should be conducted as soon as possible and, ideally, in conjunction with the 2G auction process. However, the GSMA would caution against any further delay in the assignment of the 1800 MHz spectrum.

CONCLUSION

Clearly, spectrum is fundamentally important for the success of the mobile industry. In economic terms it is an essential input; no spectrum means no networks, no services and no business. Spectrum is a vital factor for the mobile industry's ability to truly deliver affordable services to all. The objective of providing voice connections and internet access to all citizens cannot happen without ensuring the mobile industry receives sufficient amount of spectrum.

As such, regulators are strongly encouraged to adopt the recommendations made above to allocate sufficient spectrum in the right frequency bands, priced to achieve maximum benefits for the economy and society as a whole, in an open and fair award process.

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