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Mr. Sanjeev Banzal,
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Valuation and Reserve Price of Spectrum in
700, 800, 900, 1800, 2100, 2300 and 2500 MHz bands

Dear Sir,

The GSMA welcomes the opportunity to submit its views on the consultation paper which discusses the issues for the next round of spectrum auctions in India.

Mobile already makes a significant contribution to economic growth and job creation in India. In 2014¹, the mobile industry was responsible for 6.1% of India's GDP, a contribution that amounts to nearly INR 8 lakh crore (\$120 billion) of economic value added. This is forecast to increase to INR 14 lakh crore, contributing 8.2% of India's GDP by 2020. In order to sustain this growth, the mobile industry requires access to sufficient spectrum at fair prices.

The migration to higher speed 3G services has also continued apace since the auction in 2010. 3G accounts for 12% of total connections and will rise to almost 40% by the end of this decade. The continued migration to mobile broadband services, more affordable tariffs and devices, and growing uptake of new apps and services are all driving strong data traffic growth in India- expected to grow 13-fold between 2014 and 2019, a CAGR of 66%². Aside from data tariffs, the declining cost of smartphones bodes well for smartphone adoption in India. Around 20% of mobile connections in the country are now smartphone-based, and this is expected to rise to more than 50% by 2020.

By 2020 more than half a billion mobile connections in India will be running on mobile broadband networks. Achieving this figure, and ensuring further growth in future, will depend on mobile operators gaining access to additional spectrum, especially 2100 MHz since India's mobile operators still have access to only a fraction of the spectrum that has been identified globally for mobile services.

¹ GSMA report: The Mobile Economy India 2015

² Cisco Visual Networking Index (VNI) forecast



It is very important to highlight that apart from auctioning all the remaining spectrum in 2100 MHz band, the Government should resolve the issue of interference of the frequency spots awarded in 2010 in few select service areas as it is impacting the quality of service and take up of 3G services. India also needs to harmonise the 1800 MHz band, which is highly fragmented.

Below are GSMA comments to some key issues raised in the public consultation:

700 MHz Spectrum Band

India has set out its vision to transform into a digitally empowered society and knowledge economy by launching 'Digital India' initiative. However, India faces unique challenges in providing connectivity to all of its citizens due to its geography and vast rural areas. Mobile technology is increasingly becoming the preferred means of delivering a variety of services that empower citizens living in hard-to-reach communities across India and it is widely recognised that high-speed mobile broadband offers a unique opportunity to accelerate social and economic growth and bridge the digital divide.

If the harmonised APT700 band plan is adopted there would be a total of 2x45MHz of spectrum for mobile broadband. A full allocation of this band to mobile makes it possible to assign the spectrum in large enough blocks (of size of 5 MHz) to enable the industry to deliver widespread high-speed mobile broadband services.

However, TRAI need to however assess the specific market circumstances and consider the objectives they wish to achieve. Highlighted below are certain factors that need to be incorporated:

Investment pressure

- Although the uptake of smartphones provides an opportunity for data revenue growth, mobile operators in India have so far reported limited revenue contribution from data services. As a proportion of recurring revenues, average data service revenues are slightly below 15%, compared to more than 30% in advanced countries in the region. One challenge for operators is the need to recover the high costs of access to spectrum.³
- Recurring revenue growth has seen the biggest decline in recent years, driven by a combination of intense price competition and the increasing cannibalisation of operators' traditional services by online communications services. Moreover, EBITDA margins have also come under pressure from the cost requirements of coverage expansion to underserved areas. Although there has been some recovery in margins over recent years, they remain below the developing market average.

Reserve Prices

- Spectrum's greatest value comes from its usage rather than from the short-term revenues generated by its sale. Short-term revenue generation must be balanced with the subsequent infrastructure investments to be made by operators to bring the many benefits of mobile broadband to the Indian people, especially in rural areas.

³ Operators paid around \$18 billion in the latest round of spectrum auctions in March 2015



- A key constraint for operators is that reserve prices in India have historically been set on the high side. As a general rule, reserve price for new spectrum should be set at a reasonable value and allow the market to determine price. It is particularly important to make available sufficient spectrum so that the auction realises a true market price, rather than an excessive price driven by artificial scarcity. The more mobile operators must pay to license spectrum, the less money they have available to build out networks. As the digital economy becomes increasingly important to India's future prosperity, the government needs to prioritise the rollout of broadband over plugging short-term gaps in the fiscal deficit. For example, Germany and New Zealand proposed a relatively low reserve price to incentivise investment. The roll out of mobile broadband in rural areas should therefore need to be factored in the prices.
- High reserve prices and/or an unrealistic predetermination of spectrum value would likely result in poor appetite from potential bidders and could lead to valuable spectrum left unsold and unused. This was the case in Australia where an unrealistically high reserve price resulted in a valuable portion of the 700MHz spectrum being left unsold and unused. Unused or under-utilised spectrum does not benefit society or consumers.

Licensing

- Spectrum utility is highly dependent on the maturity of the technology within relevant bands. Awards such as those for 700MHz in Tonga, Papua New Guinea, Australia, New Zealand and Chile may seem premature, given the fact that these markets might arguably lack the scale to drive its development. However, early awards do not pose a problem if the cost of securing these resources in advance is moderate, as was the case in most of these markets. Elsewhere, having to advance large sums for spectrum long before it can be exploited will undoubtedly be an issue which will influence participation in a spectrum auction. While timing is an aspect that can be factored into bid values, if capital is constrained, a potentially efficient user may effectively be excluded.
- Simultaneous awards across multiple bands offer operators the opportunity to take long-term views on technology deployment across different bands. This promotes allocation efficiency and fosters healthy competition. In contrast, sequential processes may hamper the aggregation of optimal spectrum portfolios by operators.

In view of the above, it is critical that the Government and the Regulator think carefully about the objectives of releasing spectrum in a band like 700 MHz, which would be one of the cost efficient bands for deploying mobile broadband services and expanding coverage in rural areas.

Setting reserve prices at reasonable levels and a reduction in SUC charges will be the key to achieve the Digital India objectives by making this band affordable and allowing operators to focus their resources on building the infrastructure necessary to delivery high quality services for consumers.

To increase digital inclusion, India's policy-makers should also consider offering subsidies, such as a reduction in licensee fees (USO fee), to operators that achieve a specific coverage threshold.



Spectrum Cap

Holistic Spectrum Caps

- In allocating spectrum, designing auctions and packaging lots, regulators often take a view on the competitive structure of the downstream market. Spectrum caps are a mechanism employed to prevent spectrum concentration that adversely affects the downstream market. Caps can be helpful, but need to be deployed cautiously to avoid unintended consequences and, ultimately, poor outcomes for consumers.
- Caps if defined too tightly can harm the ability of operators to effectively and efficiently deploy next-generation networks.
- Spectrum caps, when applied holistically, can be an effective way of enabling a redistribution of spectrum amongst market players. The caps should allow for all market players to be able to deploy networks in a technically and economically efficient manner.

Flexibility to operators

- To maximise the economic and social benefits for India's citizens, spectrum needs to be in the hands of those who are able to use it most productively.
- In India, fast increasing use of mobile broadband, applications, content and services means mobile operators are going to need to be able to employ significantly more spectrum than they do today.
- Auction and licensing rules must give operators the opportunity to secure a portfolio of spectrum to deliver economically viable broadband services. For example, the band-wise spectrum cap of 50 % in each service area can be retained which has effectively served the interest of the consumers, competition and industry and can easily be extended to new bands. TRAI proposal of separate 'sub GHz' cap or considering 2300 MHz and 2500 MHz as 'same band' is therefore unwarranted.

Changing Landscape

- Over time spectrum caps have been substantially modified and even removed in some countries in light of progress in wireless technology, growing demands for mobile services, and the attribution of new spectrum bands for commercial mobile communications. Today the need for, and value and ways of defining and enforcing spectrum caps, if any, are being reconsidered taking account of:
 - Emerging demands for mobile broadband services which are most efficiently provided by new broadband wireless technologies using wider channel bandwidths than systems deployed earlier to handle voice-dominated traffic streams
 - Anticipated spectrum requirements that are several times larger than the total amount of spectrum currently allocated to commercial mobile communications in some countries, and
 - The opening of new frequency bands.

In view of the above, the TRAI should look at reviewing the overall spectrum cap.



GSMA remains at your disposal to answer any questions you may have on the above and we hope this submission will be valuable to the TRAI before it finalises its recommendations to the Government of India.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sandeep Karanwal", is positioned below the word "Sincerely,".

Sandeep Karanwal
Director, GSMA India