

Don't auction satellite spectrum

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Auctions will divide spectrum into portions, which will lead to a big reduction in efficiency of usage

[BY TV RAMACHANDRAN](#)



Exclusive access to spectrum is a fundamental basis of an auction | Photo Credit: bluebay2014

Policymakers in Indian telecom are caught in a major quandary as regards the allocation of satellite spectrum. Active and heated discussions are happening in many fora between the two warring

camps of stakeholders, one being some of the telcos and the other comprising all the satellite players. A quick conclusion does not seem to be in sight.

The case for auction of spectrum is quite apparent — on grounds of being open and transparent in the assignment of a resource which is somewhat limited but in very high demand that is exponentially increasing. Protagonists point to the serious disturbances in the sector, when some years ago there were some questionable administrative assignments of mobile access spectrum, and rightly cautioned against risking any repetition of the same through avoidance of auction.

However, it needs to be remembered that the mishaps referred to were related to terrestrial mobile access spectrum, and one needs to examine whether satellite spectrum is governed by similar circumstances.

It is well known that satellite spectrum has no national territorial limits and is coordinated by the International Telecommunications Union (ITU) — an UN agency — and is subject to their radio regulations to enable satellite networks to function without being impacted by harmful interference.

However, what is not probably well known is that multiple satellite operators, unlike terrestrial mobile network operators, use the same frequencies across multiple satellites without interfering with each other. They also coordinate with each other in sharing the same frequencies across their services. As a result, the satellite spectrum is never exclusively assigned as opposed to mobile access spectrum.

Exclusive access to spectrum is a fundamental basis of an auction. Bidders in an auction bid for spectrum to get exclusive access. Any auction mechanism will fail if the exclusive access is not granted. On the contrary, in the case of satellite spectrum, the sharing of frequencies between operators is what results in large capacities being available over a given geography. Any attempt to create

exclusivity by dividing the satellite spectrum will restrict the use of the spectrum only to a few operators and will significantly reduce its value.

To auction a satellite spectrum band therefore, we have to divide it into portions or chunks (like done for terrestrial) and then auction the various chunks. Necessarily therefore, auctioning of satellite spectrum would, as the industry spectrum expert, Parag Kar, points out, “result in the fragmentation of their spectrum which in turn will decrease throughput and data speeds in proportion to the fragmentation”. In effect, this means a great reduction in the efficiency of spectrum usage which goes against the most basic objective of any spectrum policy — enhanced efficiency of usage.

If one does succeed in auctioning chunks of spectrum for satellite services, how would the winners deploy to deliver service? A very complex and complicated set of rules would have to be put in place for coordinated operation of different satellites in the same spectrum.

This would be a veritable nightmare for spectrum administrators and as a result no administration has ever auctioned this spectrum. One or two countries in the Americas auctioned only orbital slots but found major problems and later discontinued, and the US enacted the Orbit Act prohibiting any auction of both orbital slots and spectrum for satellite services. Based on that experience, neither they nor any other country would want to go that way again.

CANNOT BE CHANGED

There is one more major problem with satellite spectrum auctions. Once auctioned, assigned and the complicated set of rules agreed upon, these cannot be changed during the tenure of the licences concerned. This means that new operators cannot be inducted because existing operators would be negatively impacted by any change in the coordination rules and this becomes an infringement on the legal rights after winning the spectrum in an auction.

Importantly, such high prices, as auctions invariably lead to, will stifle many budding start-ups in the space-tech segment. Breakthroughs, like just achieved with OneWeb, would become a distant dream.

There is another big downside to satellite spectrum auctions. Such a large and complicated framework of rules might lend itself to some honest lapses in compliance and the chances of 'mishaps' happening in the execution of the process are quite high, with the consequent intervention of the CAG.

Satellite spectrum auctions could create gatekeepers with chunks of spectrum. Such gatekeepers could block the entry, both of additional terrestrial or satellite operators, and create a serious anti-competitive environment. This goes against the spirit of enhanced competition and powerful industry houses with deep pockets could effectively use this to block new entrants and fair competition. The Competition Commission of India would have to keep a close eye on this aspect.

There is no need to get into Hamlet's quandary in the matter of satellite spectrum auction. International practice and our own policy for the last 20 years and more show the clear way forward. May administrative allocation prevail to ensure healthy competitive growth of the satellite sector in India.

The writer is President, Broadband India Forum. Views are personal