



## Spectrum of hope

[Mahesh Uppal](#) | Updated: Feb 19 2014, 02:44 IST

### Summary

A spectrum roadmap would ensure companies take bidding decisions based on hard information, not desperation

The auction of 2G spectrum ending February 13 will have enriched the exchequer by roughly R61,000 crore or over \$9.7 billion. This is good news for a deficit-strapped government but also a reward for poor handling of spectrum and questionable auction design. The auction succeeded because it forced a “now or never” option on bidders with little information about future spectrum availability or when the next auctions will be held. Operators who bid in similarly “successful” auctions in 2010 for 3G and BWA spectrum still offer limited services with that spectrum, demonstrating that while the high demand for spectrum makes auctions necessary, merely holding them is not sufficient. Therefore, it is critical to promote efficient use of available spectrum to reconcile the competing agenda of the exchequer, industry and users. This article highlights how this can happen.

Take spectrum in 800 and 1800 MHz bands. The existing demand is manifest proof of their commercial value and that much of valuable spectrum is unusable today because of haphazard deployment. Fragmentation locks up precious spectrum much like poorly used parking lots which could otherwise accommodate more cars—particularly bigger vehicles. This hurts deployment of broadband technologies, like 3G, LTE, which need more contiguous or “unbroken” spectrum but can deliver greater bandwidths and flexibility than 2G technologies.

Harmonisation of spectrum could free up considerable value of spectrum. For example, companies have different spectrum frequencies for cities within a circle for which they have a licence. This raises costs and hurts efficient use of spectrum. Similarly, while several bands can be used for existing technologies, some like 1800 MHz and 2100 MHz are used more widely across the world for 4G and 3G deployments, respectively. The resulting global economies of scale mean considerably cheaper equipment as well as devices. India ignores this at its peril.

Spectrum can be freed up by defence forces without compromising their work. Historically, they were allocated most spectrum because of the terrains and circumstances in which they operate; wireless networks are cheaper and take less time to deploy than fixed lines of copper or optical fibre. With the introduction of mobile phones, defence forces have released spectrum for civilian use. A sensitive audit of spectrum use by defence could identify idle spectrum that companies would be willing to pay for. There have been reports that at least 15 MHz of 2100 MHz spectrum currently lying unused with defence can be easily put to commercial use by swapping it with telecom spectrum in the 1900 MHz which, as per current arrangements, will remain idle till 2017.

Allowing telecom companies to share or resell spectrum could unlock considerable value. The Telecom Regulatory Authority of India (Trai) has recommended this. There is little additional risk in allowing licensed—therefore, security cleared—operators to share spectrum. The government

seems agreeable but has yet to finalise the terms especially in case companies buy or sell their licences. Given the use and commercial value lost by keeping spectrum idle, the delay is inexcusable.

We cannot afford distortions in spectrum rules. The controversy over spectrum usage charges (SUC) reflects the same patchy approach to the use of different types of spectrum that led to much of the current mess. A move to uniform spectrum usage charges is critical, even if it requires a one-time settlement between players (much like what happened in 1999 and 2003). Disparate rules for GSM and CDMA players caused intense litigation in 2001-02. The timing of the decision to allow companies to deploy dual technologies, create a separate queue for spectrum, and subsequently different treatment of GSM and CDMA revenues led to another round of damaging litigation. The decision of the Supreme Court to cancel 122 licences in 2012 has at its heart mischief related to rules that distorted competitive markets.

There is need to explicitly reduce the cost of expanding networks or their capacity. High bids do the opposite. Data markets are the obvious casualty since they are weak and require large investments to develop them. In the past, this was caused by distortions in spectrum allocation and pricing which allowed companies to claim more spectrum based on the number of subscribers (measured by the number of SIM cards sold). This took all focus away from developing data markets to selling more SIMs, by offering voice calls at cut-throat prices. This has come back to haunt operators struggling to sell 3G services. It should worry the government as failure to build the ecosystem or data services might hurt the larger efforts to grow broadband.

High bids may not result in dramatically high prices right away. However, if high spectrum prices drive away competition from smaller players, then the incumbents will have greater flexibility to increase tariffs.

Spectrum reform requires a serious overhaul of the design of future spectrum auctions. The ongoing auction is yet another nail in the coffin of the argument favouring high reserve prices. There is an inability to learn that auction can “fail” (2012 and 2013) when reserve prices are high and “succeed” spectacularly (2001, 2010 and 2014) when they are low. Politicians and bureaucrats must recognise and accept this.

“Blackmailing” companies into bidding high is backfiring on users. The overwhelming focus on generating government revenues is the biggest stumbling block to spectrum reform and growth of services, especially broadband. Frequent auctions, without a clear game plan, will bleed the sector and deprive users of access to new technologies. The government can and should come up with an approach to protecting its revenues without distorting a key regulatory goal, viz the efficient use of spectrum in a predominantly wireless market.

A clear roadmap is needed for the telecom sector and spectrum. It would lay out the government’s plans about what spectrum will be available, when and for what tenure. There needs to be a timetable for future auctions. Future auctions require an environment where companies take bidding decisions based on hard information and not desperation.

The author is a telecom consultant.