

3G to No G: Sunil Mittal ko gussa kyon aata hai

Apr 2, 2012

By Aditi Roy Ghatak and Paranjoy Guha Thakurta

The sultan of mobile telecommunications in India, Sunil Bharti Mittal, is upset. He is wondering how he should rework his strategies. The Department of Telecommunications (DoT), usually rather receptive to his business aspirations, has gone ahead and signed an agreement with the ministry of defence (MoD) under which DoT will part with a chunk of the 3G (third generation) spectrum frequency band, which many of the telecom bigwigs (including Bharti) had been lasciviously coveting.

That is not all. Mittal finds that the pact he thought he had worked out with two of his industry "rivals", Idea and Vodafone, for intra-circle roaming, has run afoul of the Telecom Regulatory Authority of India (Trai). The sultan is sulking. Watching from the sidelines are the Ambani brothers who believe that it is high time the entire process of spectrum allocation be looked at afresh and that the finite (hence, scarce) national, natural resource be refarmed or reallocated.

Indeed, the telecom trio has been worried since late-2011 when it heard that Trai and DoT, not to mention the public sector Bharat Sanchar Nigam Ltd (BSNL, which has been systematically marginalised over the years by government policy), would be staunchly opposing the threesome arrangement to share spectrum and sell 3G telecom services in each others' space, courtesy intra-circle roaming that would allow the companies to offer their services even in areas (or telecom circles) in which particular companies had no spectrum.



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The triad – Bharti, Idea and Vodafone – has since been negotiating with the regulator to withdraw its objections to intra-circle roaming. The three have also threatened that they would withdraw from the 3G space if Trai failed to change its stance. A 5 March presentation on spectrum allocation by the Wireless Planning and Co-ordination wing of the DoT has brought matters to a head by virtually sealing the availability of spectrum for future assignment to the big three.

If Trai and DoT have their way, they will disallow the big three winners of the 3G spectrum auction from going pan-national through an intra-circle roaming arrangement, on the one hand, and, on the other, will also not provide the players more spectrum in the 2.1 Ghz (gigahertz) band because it would have given all the additional spectrum to the defence services because of a commitment made by DoT to MoD.

A bit of background on how the MoD comes into the picture is provided. When no one in India knew a thing about spectrum in the pre-1990s era of government control over telecom services, it was only the Indian Army, Navy and Air Force that was using electro-magnetic spectrum for wireless communications. Thanks to outdated technology, the country’s defence services hogged up a great deal of spectrum, some of which got freed once technology improved. The time was considered opportune by the government to offer spectrum to private players to shore up India’s rickety telecom services in the early and mid-1990s.

The advent of private sector companies using GSM (Global System of Mobile Communications) technology led to the offering of the prized 900 Mhz band for the first, second and third cellular licences for the four metros and the state telecom circles. Between them, they completely exhausted the 900 Mhz band. The fourth cellular licence was offered in the 1,800 Mhz band, earlier the exclusive domain of the defence services. The unused spectrum in the 1,800 Mhz band was carved out for private players.

A twist in the story comes here because a portion of the 3G spectrum – 1,920Mhz to 1,980 Mhz – that falls within this band also falls within the block of 1,700Mhz to 2,000 Mhz, used by the defence services ([see chart](#)).

The DoT wanted the extra spectrum released by the MoD for both 2G and 3G services and, accordingly, signed a memorandum of understanding (MoU) with the MoD in May 2009 for release of 2G and 3G spectrum linked to the laying of an OFC (optic fibre cable) network, which the DoT had promised to deliver to the defence services for its internal communications requirements in return for vacated spectrum. As per the MoU signed between the two ministries, the defence ministry had agreed to vacate 25 Mhz of 3G spectrum and 20 Mhz of 2G spectrum, in phases.

The MoU could not be executed because BSNL, which was supposed to build and implement the OFC project for the MoD, did not get the requisite funds – estimated in October to be Rs 14,000 crore.

Meanwhile, the 3G auction process was completed by the middle of 2010. The winners were supposed to get spectrum by September 2010 which was not a problem because the MoD had, in good faith, released all the 3G spectrum (two multiplied by 25 Mhz) without waiting for the execution of its MoU with DoT. The MoD did not wish to hold up the rolling out of 3G services, ostensibly in the “national interest”. At the same time, the armed forces needed their share of spectrum or a dedicated OFC network, none of which the DoT had been able to provide for at that juncture.

One proposal that was mooted was to give the armed forces a “defence band” which was not part of the DoT-MoD MoU but featured in an earlier list of long-standing demands raised by the defence ministry. On 20 August 2010, a high-level monitoring committee under the chairmanship of the Cabinet Secretary had decided to split the 1,700-2,000 Mhz band in blocks of 150 Mhz each for the defence services and DoT’s commercial use.

It was then that DoT asked for more spectrum (of 230 Mhz) but its demand was turned down because that would have affected the requirements of the armed forces. If this quantum of spectrum was given to DoT, little or nothing would have been left for the MoD in the 1,700-2,000 Mhz band.

On 5 July 2011, at a meeting of the defence and telecom ministers in the Union government (that is, AK Antony and Kapil Sibal), it was decided that the 1,700-2,000 Mhz band would be equally divided between the armed forces and DoT in chunks of 150 Mhz each as an interim measure, with a possibility of a review once the implementation of the OFC network project was completed.

Fast-forward to March 2012. At a presentation to the Empowered Group of Ministers, the Wireless Planning and Co-ordination wing (in DoT) on 5 March 2012 wanted to regularise the release of 150 Mhz spectrum by the MoD for the existing 2G assignment in the 1,800 Mhz band and also to regularise the 25 Mhz assignment in 3G band given by the defence ministry on September 2010. Besides, it sought additional spectrum for the CDMA (Code Division Multiple Access technology) extension band of 1,900 Mhz.

If all this is sounding like technical gobbledegook, the big question that one returns to is simple: how, why and where did Mittal and his friends get flummoxed? The total allocable spectrum with the DoT is only 150 Mhz and divided in the following manner:

1. Two multiplied by 55 Mhz for 2G in the 1,800 Mhz band from which all past and future assignments would have to come from; this means that 10 Mhz additional spectrum will probably be available after regularising the existing assignment (other than those available due to the cancellation of licences) in the 1,800 Mhz band.
2. Two multiplied by 7.5 Mhz for CDMA in the 1,900 Mhz band, which is the additional new assignment; this band did not exist earlier and was, indeed, vehemently opposed by the GSM lobby, which believed that the opening of the band would cause severe interference in its existing 3G assignment as the downlink of the 1,900 Mhz band (1,980-1,990 Mhz) is adjacent to the uplink of the 3G (2.1 Ghz) band between 1,920 Mhz and 1,980 MHz. Barring BSNL in a few telecom circles, almost the entire 3G current assignment is in the upper half of this spectrum (1,954-1,979 Mhz) and a spillover from the 1,900 Mhz spectrum into the 3G band will probably not be avoidable.
3. Twenty five Mhz for the 3G band, which has already been assigned in 17 telecom circles with only one slot of 5 Mhz available for assignment — the 3G auction had three slots of 5 Mhz in 17 Circles and four slots of 5 Mhz in five circles while BSNL and/or MTNL (Mahanagar Telephone Nigam Limited) have one 5 Mhz pan-India slot.

The DoT has already assigned 20 Mhz for 3G services in the 2010 auction, which means that there is only 5 Mhz available in 17 circles for assignment. As explained, the DoT has been making abortive bids to get the defence ministry to give it 230 Mhz and retain 70 Mhz in the civilian areas to operate sophisticated equipment. So much for the availability of additional spectrum for the big three – which is bad news for Bharti, Idea and Vodafone.

BOX

Why the DoT-MoD MoU could not be executed

In November 2005, a project definition team proposed a defence wireline network to replace its outdated wireless network at a cost of Rs 980 crore. This network was to be mainly used by the Indian Air Force, which was the main user of spectrum those days.

In January 2007, the Army and Navy's requirements were also added to this project and the project cost went up to Rs 3,000 crore.

In September 2008, the increased requirement was budgeted for and the cost further escalated to Rs 10,000 crore.

In May 2009, an MoU was signed between DoT and defence ministry for releasing portions of the 1,700-2,000 Mhz band for commercial usage linked to certain milestones (spread over 36 months) for the execution of the optic fibre cable (OFC)

network for 25 Mhz of 3G spectrum (in 2.1 Ghz) and additional 20 Mhz of 2G spectrum in the 1,800 Mhz band. The released 3G spectrum was to be auctioned and 2G spectrum was to be distributed to operators based on a first-come-first-served policy.

The public sector BSNL was to execute this project on behalf of the DoT. However, the tenders floated by it were cancelled in December 2010 following objections from a section of vendors over the specifications that were considered too stringent. Indeed, most of the aspiring parties got excluded.

In October 2011, the project was re-evaluated and the cost further escalated to Rs 14,000 crore.

When the DoT approached the finance ministry for approval of funds for this project, it found the cash-strapped government unable to make the additional funds available to it.