
5G spectrum - Technical issues- Strategic implications

1 message

EAS Sarma <eassarma@gmail.com>

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To: defsecy@nic.in

Cc: secy-dot@nic.in, secretary@traai.gov.in, CAG <cag@cag.gov.in>, cagoffice@cag.gov.in, cds.sectt@gov.in

Bcc: Kattalai Ramachandran Sriram <sriramKR@cag.gov.in>, "Mehta Parveen (Ms)" <mehtaP@cag.gov.in>, choudhuryar@cag.gov.in

E A S Sarma

Former Secretary to Government of India

Visakhapatnam

To

Shri Ajay Kumar

Defence Secretary

Govt of India

Dear Shri Ajay Kumar,

The Department of Telecommunications (DOT) has put a range of 5G spectrum bands on sale and a few private companies with little or no competition whatsoever have already cornered some franges of the bands. In this connection, I have addressed the C&AG requesting the latter to undertake a comprehensive audit of the auctions. You may access my letters at the following weblinks.

<https://countercurrents.org/2022/08/5g-spectrum-is-it-a-distress-sale-cag-may-look-at-it-carefully/>

<https://countercurrents.org/2022/08/5g-spectrum-is-it-a-distress-sale-cag-may-look-at-it-carefully-2/>

<https://countercurrents.org/2022/08/5g-spectrum-why-the-relaxation-of-security-conditions-in-border-areas/>

<https://countercurrents.org/2022/09/recent-5g-spectrum-auctions-post-tender-developments-erode-the-credibility-of-the-auctions/>

You will observe from these letters that the issues that I have raised also relate to the defence services.

For example, the spectrum bands in question have multiple applications including specialised defence applications. The technologies associated with the use of spectrum are constantly evolving with many potential new applications in sight. In my view, it is therefore imprudent for the government to rush into alienating the spectrum bands to private companies for a single application to the exclusion of the others, that too, on a long-term basis. Moreover, it is also a matter of concern that the government should place strategic spectrum bands in the hands of private companies for their exclusive use.

In one of my letters cited, I had also pointed out that the DOT has granted a post-tender relaxation allowing private licensees to set up facilities close to the international borders. This can have security implications.

I feel that these spectrum bands will have several potential uses for the defence services in the coming decades, as the conflicts with our neighbours are going more and more into cyberspace.

Recently, the US Federal Communications Commission (FCC) has faced a controversy arising from its order authorizing Ligado Networks, LLC, to move forward with the deployment and operation of a low-power terrestrial nationwide radio network. The order authorizes Ligado to provide terrestrial base station to mobile earth station downlink transmissions in the 1526–1536 MHz band within the mobile satellite services (MSS)-allocated 1525–1559 MHz band and mobile

earth station to terrestrial base station uplink transmissions in the 1627.5–1637.5 and 1646.5–1656.5 MHz bands of the 1626.5–1660.5 MHz band.

The US Senate, taking note of the concerns expressed by the Department of Defence had commissioned the National Academies of Sciences, Engineering, and Medicine to investigate the possible interference from 5G use of the L Band of the spectrum with the GPS facility used extensively by the US Defence Forces. The latter, on the basis of an extensive investigation, has since come to the conclusion that *"the terrestrial network authorized by FCC Order will create unacceptable harmful interference for DoD (Dept of Defence) missions. The mitigation techniques and other regulatory provisions in FCC Orders 20-48 are insufficient to protect national security missions."*

I have enclosed here a copy of the summary of the report for your reference. I would suggest that your Ministry downloads the full report for use by the experts in the field.

Your Ministry should examine the implications of the recent 5G spectrum auctions from this point of view, also keeping in view the implications pointed out by me in my earlier correspondence with the C&AG.

Regards,

Yours sincerely,

E A S Sarma

Visakhapatnam

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E.A.S.Sarma
14-40-4/1 Gokhale Road
Maharanipeta
Visakhapatnam 530002
Mobile: 91-9866021646
Email: eassarma@gmail.com

Website: <http://eassarma.in>

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