



February 27, 2024
ITU-APT/2023-24/L-814

To,
Shri Ashwani Vaishnav
Hon'ble Minister for Communications, IT and Railways
Sanchar Bhawan
New Delhi-110001

Sub: Urgent need for WRC-23 follow up actions on 6 GHz Band - Delicensing of 5925-6425 MHz is key to support innovation and make in India

Dear Sir,

Following on from the recent ITU World Radio Conference in Dubai, where the issue of 6GHz was discussed in details by all the spectrum, industry and telecom experts in the world and the following conclusions have been welcomed by all:

- The band 6425-7025 MHz identified for 5G in Europe Middle East and Africa (ITU Region 1) with strict conditions to protect satellites
- The band 6425-7025 MHz is available for WiFi for administrations wanting to delicense the same.
- The band 5925-6425 continues to be open for Wi-Fi and other non-IMT radio services on shared basis.

Ever since Covid-19 and increased work from home, there is an unprecedented increase in use of Wi-Fi. With Launch of 5G services, the demand for high speed Wi-Fi has further increased substantially. Presently India permits Wi-Fi only in 2.4 and 5 GHz frequency bands. These two bands have only about 600 MHz spectrum for all users as compared to over 2 GHz that is needed. Even then, it is estimated that present use of Wi-Fi in India creates an economic value of about Rs. 1.6 Lakh crores every year. A global study commissioned by the Wi-Fi Alliance predicts that the global economic value of Wi-Fi will rise to a staggering Rs. 300 Lakh Crores (\$4.9 Trillion) by 2025. This economic value includes contributions from the use of Wi-Fi by consumers, businesses, service providers, and more.

55 countries around the world have already delicensed Wi-Fi 6e in 6 GHz band (5925-6425 MHz) as shown in the attachment. IAFI therefore calls for urgent delicensing of the lower 6 GHz band (5925-6425 MHz) for Wi-Fi 6e. This delicensing of lower 6 GHz band is key to India's local manufacturing, innovation and exports, not just for telecom but the Industrial sector as a whole as most products in future will have inbuilt Wi-Fi modules and India's export of industrial products may be compromised without access to the necessary Wi-Fi modules. It may be noted that WRC-15 studied this band (5925-6425 MHz) for IMT and found that it is not feasible. Based on these findings of ITU-R, no country has used this band for deployment of IMT and hence there is no ecosystem for this band for IMT.

With global delicensing of 6 GHz (5925-6425 MHz) for Wi-Fi, the technology and product development is going on in full swing. This will represent a huge new global market for Wi-Fi technology, software and equipment. As Wi-Fi-6e is still a niche technology, it is easier for the Indian telecom hardware and software companies to corner a large part of this futuristic global



market, which we could not do in case of 5 GHz Wi-Fi as it was delicensed in India after more than 20 years from rest of the world. Since the developed world has already decided to use this band for Wi-Fi, eventually India will have to do the same but by delicensing after 10 years, our young engineers and scientists will lose the edge in capturing a part of the global multibillion \$ market opportunity.

The Government of India has recently launched the PM Public Wi-Fi Program (PM-WANI) to accelerate the reach of broadband to the masses through the proliferation of Public Wi-Fi. Due to the pandemic, dependence on Wi-Fi increased manifold for a number of applications including, Working from Home (WFH), health care, and education. Various studies have indicated that at least 2GHz Wi-Fi spectrum is needed to meet the need for increased home working. The recent push of the government through BharatNet Project has seen installation of 104,675 Wi-Fi hotspots to ensure last-mile connectivity in rural areas.

Frequency band 5925-6425 MHz is allocated to Fixed, Mobile and Satellite Service in India's National Frequency Allocation Plan 2018. Wi-Fi using the lower 6 GHz radio band opens up 500 MHz of extra bandwidth, a boon for high congestion. This bandwidth can provide upto 6 channels of 80 MHz each or 3 channels of 160 MHz each. Unlike existing Wi-Fi channels that are currently crammed into around just 600 MHz of spectrum, Wi-Fi- 6e channels exist without overlap or interference.

Currently this band is used for Satellite uplink and Point to Point microwave and it has been proven that there is full sharing possibilities with the existing services without any loss of revenue from the current services. Use of this band for Wi-Fi will increase the efficiency of WLAN networks 4 times the throughput of 802.11ac. FSS studies indicate that allowing for up to 2% outdoor usage with max EIRPs up to 1W with satellites was feasible. We have had discussions with Department of Space as well as Private/Global satellite operators and they are comfortable with shared use of this band with low power Wi-Fi

We strongly recommend that DOT to urgently delicense the frequency band of 5925-6425 MHz as a first step, as proposed above, in line with what has been done by other developing and developed countries in order to support innovation by our own engineers and promote Atamirbhar Bharat. We are also happy to make a detailed presentation on this proposal at your earliest convenience.

Warm Regards

A handwritten signature in blue ink, appearing to read 'Bhatia', with a horizontal line underneath.

Bharat B Bhatia,

President, ITU-APT Foundation of India

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Copy to:

1. Dr. Neeraj Mittal, Chairman DCC and Secretary DOT
2. Shri Manish Sinha, Member Finance, DOT
3. Smt. Gunjan Dave, Member Technology, DOT
4. Shri VJ Christopher, Wireless Advisor, DOT

Countries that have already delicensed Wi-Fi in Lower 6 GHz band for Wi-Fi 6E and Wi-Fi 7

S. No.	Country	Status	Spectrum
1	Andorra	Adopted	5945-6425 MHz
2	Argentina	Adopted	5925-7125 MHz
3	Australia	Adopted	5925-6425 MHz
4	Austria	Adopted	5945-6425 MHz
5	Bahrain	Adopted	5925-6425 MHz
6	Belgium	Adopted	5945-6425 MHz
7	Brazil	Adopted	5925-7125 MHz
8	CEPT (48 European countries)	Adopted	5945-6425 MHz
9	Canada	Adopted	5925-7125 MHz
10	Chile	Adopted	5925-6425 MHz
11	Colombia	Adopted	5925-7125 MHz
12	Costa Rica	Adopted	5925-7125 MHz
13	Dominican Republic	Adopted	5925-7125 MHz
14	El Salvador	Adopted	5925-7125 MHz
15	United States	Adopted	5925-7125 MHz
16	Faroe Islands	Adopted	5945-6425 MHz
17	France	Adopted	5945-6425 MHz
18	Germany	Adopted	5945-6425 MHz
19	Gibraltar	Adopted	5945-6425 MHz
20	Guatemala	Adopted	5925-7125 MHz
21	Honduras	Adopted	5925-7125 MHz
22	Hong Kong	Adopted	5925-6425 MHz
23	Iceland	Adopted	5945-6425 MHz
24	Ireland	Adopted	5945-6425 MHz
25	Isle of Man	Adopted	5945-6425 MHz
26	Japan	Adopted	5925-6425 MHz
27	Jordan	Adopted	5925-6425 MHz
28	Kenya	Adopted	5925-6425 MHz
29	Liechtenstein	Adopted	5945-6425 MHz
30	Luxembourg	Adopted	5945-6425 MHz



31	Malaysia	Adopted	5925-6425 MHz
32	Mauritius	Adopted	5925-6425 MHz
33	Mexico	Adopted	5925-6425 MHz
34	Monaco	Adopted	5945-6425 MHz
35	Morocco	Adopted	5925-6425 MHz
36	Namibia	Adopted	5925-6425 MHz
37	Netherlands	Adopted	5945-6425 MHz
38	New Zealand	Adopted	5925-6425 MHz
39	Norway	Adopted	5945-6425 MHz
40	Peru	Adopted	5925-7125 MHz
41	Portugal	Adopted	5945-6425 MHz
42	Qatar	Adopted	5925-6425 MHz
43	Russian Federation	Adopted	5925-6425 MHz
44	Saudi Arabia	Adopted	5925-7125 MHz
45	Singapore	Adopted	5925-6425 MHz
46	South Africa	Adopted	5925-6425 MHz
47	South Korea	Adopted	5925-7125 MHz
48	Spain	Adopted	5945-6425 MHz
49	Switzerland	Adopted	5945-6425 MHz
50	Thailand	Adopted	5925-6425 MHz
51	Togo	Adopted	5925-6425 MHz
52	Turkey	Adopted	5925-6425 MHz
53	United Arab Emirates	Adopted	5925-6425 MHz
54	United Kingdom	Adopted	5945-6425 MHz