

Hewlett Packard Enterprise

WCA Spectrum Overview: 2024

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6 GHz Unlicensed (License-Exempt) Decisions Russia This is unprecedented global momentum Jan 2023 **European Union** Jun 2021 Canada 🛳 May 2021 **S**UK 🏹 May 2021 Japan Türkey Mar 2022 Dec 2022 (I) USA Morocco Jordan Jun 2021 Apr 2020 A Israel Apr 2022 **South Korea** Dominican Republic Thailand Oct 2020 Mexico Apr 2023 **Sep 2022 Kuwait** Jul 2022 Feb 2023 Jan 2023 Trinidad & Tobago **Hong Kong Guatemala** Saudi Arab Apr 2023 Y? $\langle \rangle$ Apr 2022 想定机制 Jan 2021 Mar 2021 **Honduras** Malaysia Mar 2021 **El Salvador** Bahrain Jan 2022 Jul 2023 Togo Aug 2022 Jan 2023 **Mauritius Costa Rica** Singapore Aug 2022 May 2021 May 2023 Qatar Brazil 6 Apr 2022 Feb 2021 Colombia **New Zeala** UAE Oct 2022 Namibia Aug 2022 Peru 1H 2021 Apr 2023 **Australia** Apr 2021 **Argentina** Mar 2022 **GHz** Decision Kenya 6 **South Africa** May 2023 Jun 2022 Chile May 2023 **Consultation / Study** Oct 2020 Citizens 70%+ of global GDP Countries As of 31 December 2023

The ecosystem of devices supporting the 6 GHz band keeps growing



Currently more than 1200 types of devices in the market.

D D S A



WRC-23 Outcome: WRC-23 Agenda Item 10 (agenda for WRC-27 IMT id)

•WRC-27 agenda item 1.7 for IMT identification: "sharing and compatibility studies, with a view to ensuring the protection of services to which the frequency band is allocated on a primary basis, including protection of stations operating in international waters or airspace which cannot be registered in the MIFR, without imposing additional regulatory or technical constraints on those services, and also on services in adjacent bands, for the frequency bands":

- 4400-4800MHz,orpartsthereof,inRegion1andRegion3;
- 7125-8400MHz,orpartthereof,inRegion2andRegion3;
- 7125-7250MHzand7750-8400,orpartthereof,inRegion1; 14.8-15.35GHz

•U.S. National Spectrum Strategy (NSS) – five spectrum bands for in-depth study in the near term for potential expanded governmental and non-governmental use:

1.Lower 3 GHz (3.1-3.45 GHz): studied for dynamic spectrum sharing (e.g., CBRS)

2.5030-5091 MHz: studied for UAS

3.7125- : "studied for wireless broadband use (on a licensed and/or unlicensed basis)". There are, however, a variety of mission- (including Fixed, Fixed Satellite, Mobile, Mobile Satellite, Space Research, Earth Exploration Satellite,

and Meteorological Satellite services) that will make it challenging to repurpose portions of the band while protecting incumbent users from harmful interference.

4.18.1–18.6 GHz: studied for expanded Federal and non–Federal satellite operations

5.37.0–37.6 GHz: studied to implement a co-equal, shared-use framework allowing Federal and non-Federal users to deploy operations in the band

Standard Power and Automated Frequency Coordination (AFC)

- Will enable Outdoor, Higher Power, and Connectorized Antenna deployments. Requires coordination via an AFC database function (Federated Wireless is HPE's AFC Partner).
- US-conditionally approved AFC in 2H'23
- Canada-Approved in 4H'23
- Saudi Arabia—expected consultation and approval in 2024
- **Brazil**—recently postponed anticipated consultation until after WRC, approval uncertain at this time
- South Korea-likely not to see approvals before 2025
- Japan–Study ongoing, currently only focus on 5925–6425MHz due to the sharing difficulties with broadcasting incumbents
- Australia-expected consultation in 1H'2024
- European Electronic Communications Committee(ECC)
- Work Item—initial reports in summer 2024, possible national decisions in 2025

Hybrid sharing in the upper 6 GHz band (IMT and Wi-Fi shared use)

- EMEA administrations are unsure about future spectrum needs and want to keep their options for the 6 GHz band open.
- Germany and Ofcom UK floated the idea of IMT and Wi-Fi sharing the upper 6 GHz band.
- Ofcom UK launched a Public Consultation on that matter (ongoing).
- Seen by some administrations as a way to open the band for Wi-Fi in the short term and implement IMT later (if feasible and considered necessary).
- HPE's firm position is that 5G NR–Unlicensed (NR–U) is the appropriate way for administrations to accommodate both Wi–Fi and 5G in 6 GHz.

Is the 6GHz band the sole remaining mid-band spectrum available to respond to data traffic growth? Well, not really

- No Future Agenda Item related to the 6 GHz band. It was decided to move forward with new bands.
- New Agenda Item for WRC-27 (Resolution COM6/26): "1.7 to consider studies on sharing and compatibility and develop technical conditions for the use of International Mobile Telecommunications (IMT) in the frequency bands 4 400-4 800 MHz, 7 125-8 400 MHz (or parts thereof), and 14.8-15.35 GHz taking into account existing primary services operating in these, and adjacent, frequency bands, in accordance with Resolution COM6/26 (WRC-23);"

Region 1	Region 2	Region 3
 Bands under study for WRC-27 (IMT): 4 400-4 800 MHz (or parts thereof); 7 125-7 250 MHz 7 750-8 400 MHz (or part thereof); 14.8-15.35 GHz 	 Bands under study for WRC-27 (IMT): 7 125-8 400 MHz (or parts thereof); 14.8-15.35 GHz 	 Bands under study for WRC-27 (IMT): 4 400-4 800 MHz (or parts thereof); 7 125-8 400 MHz (or parts thereof); 14.8-15.35 GHz



Thank you

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