

Wi-Fi 6E Insights



In this issue

2021 Round-Up • Reflections on 2021 • Countries enabling Wi-Fi 6E at a glance • Product news

Editorial

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Welcome to the latest edition of the Wi-Fi 6E Insights newsletter. Wi-Fi 6E refers to Wi-Fi 6 services in the 5925-7125 MHz (the 6 GHz) frequency band. Written for policymakers and regulators in the EMEA region, this newsletter covers regulatory developments relating to Wi-Fi 6E and the views of key stakeholders.

In 2021, governments in EMEA took major steps to ensure their citizens will benefit from the high-quality Wi-Fi 6E connectivity. But more needs to be done.

To fulfill their potential to deliver compelling new applications and services, Wi-Fi 6E and future Wi-Fi® generations including Wi-Fi 7 will need access to the full 1200 MHz of spectrum available in the 6 GHz band. Whereas some countries – such as Canada, Brazil, Saudi Arabia, South Korea, and the U.S. – have made the full 1200 MHz available, most of EMEA is not there yet.

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2021 Round-Up

A summary of major policy and regulatory developments in 2021.

Africa and the Arab States

The African Telecommunications Union (ATU) recommended that administrations make the lower 6 GHz band license-exempt with the same power limits as in Europe. The recommendation includes an annex containing the technical and regulatory conditions for operating unlicensed technologies in the lower 6 GHz band, similar to those included in the EC Decision. The ATU preparatory meeting for WRC-23 approved the adoption of the Africa Spectrum Allocation Plan (AfriSAP) which recommends license-exempt wireless access

services/radio local area access networks (WAS/RLANs) in the lower 6 GHz band, in line with the ATU Recommendation.

In **Saudi Arabia**, the regulator CITC announced it will release the entire 6 GHz band on a license-exempt basis. In a [new spectrum roadmap](#), the CITC said it is making the 5925-7125 MHz band license-exempt because of the “importance of WLAN use in the Kingdom and substantial amount of Wi-Fi traffic, which was exemplified during the COVID-19

lockdowns, and the emergence of a promising device ecosystem that can be taken advantage of starting from 2021 to enable a wide range of innovative digital services.” It added that a substantial amount of licensed TDD mid-band spectrum is already being made available for IMT and 5G.

In May, the **Moroccan** National Telecommunications Regulatory Agency (ANRT) published a decision amending and supplementing the technical conditions for the use of low power and short-range radios in the lower 6 GHz band. The ANRT said Wi-Fi 6E allows high speed browsing and reduced latency for telecommuting, video conferencing, e-learning, virtual reality, augmented reality, and other activities.

In November, the regulator in **Jordan** published proposals to make the lower 6 GHz band available on a license-exempt basis for very low power (up to 14 dBm) and low power indoor (up to 23 dBm) services. Outdoor hotspots would also be allowed in this band for operators to provide public telecoms services, as well as for the general public for their own use only.

The **Qatar** Communications Regulatory Authority consulted on plans to make the full 6 GHz band available for Wi-Fi 6E. The authority believes the spectrum could be used to complement the services provided by mobile operators during the 2022 FIFA World Cup.

Tunisia consulted on the use of Wi-Fi in the 6 GHz band. One of the questions in the consultation asked what technical and operational restrictions would be necessary to ensure that indoor wireless local area networks (WLANs), including devices with low power and Wi-Fi systems, in the 5925-7125 MHz band on a license-exempt basis do not cause harmful interference to other systems operating in the band.

In the **United Arab Emirates**, the Telecommunications and Digital Government Regulatory Authority (TDRA) released a public consultation on the future outlook for wireless services and spectrum utilization. The consultation asked a number of questions about the 6 GHz band. The topics included the technical coordination activities that need to be carried out with the existing services/assignments in the band and the timeline for IMT development and related standards in this band. In September 2020, TDRA designated the lower 500 MHz spectrum of the 6 GHz band (specifically 5925-6425 MHz) to Wi-Fi for indoor use at an Effective Isotropic Radiated Power (EIRP) of 250 mW under class authorization.

Europe

The European Commission published an implementing Decision on the harmonized use of the 5945-6425 MHz frequency band by WAS/RLANs. EU Member States are required to designate the 5945-6425 MHz frequency band available on a non-exclusive, non-interference and non-protected basis for the implementation of WAS/RLANs. The Decision said the additional spectrum should support the wide channels required for many applications (including videoconferencing, downloading media, telemedicine, online learning and gaming, augmented reality, and virtual reality) that need the bandwidth to achieve gigabit speeds. It also noted the EU internal market can now benefit from a spectrum resource potentially available worldwide, thus generating large economies of scale for equipment manufacturers.

The European Conference of Postal and Telecommunications Administrations (CEPT) has begun to explore the potential for Wi-Fi to use the upper 6 GHz band. CEPT’s Electronic Communications Committee (ECC) has adopted a work item to study possible technical conditions under which wireless access systems could operate and coexist with existing services in the 6425-7125 MHz band.

Global

Colombia and **Peru** joined other Latin American countries – Brazil, Chile, Costa Rica, Guatemala, and Honduras – to make the entire 6 GHz band (5925-7125 MHz) available on a license-exempt basis for wireless access systems, such as Wi-Fi. The Colombian regulator has imposed power limits (30 dBm for access devices and 24 dBm for client devices), so as to avoid interference with incumbent services. Peru's Transport and Communications Ministry (MTC) has allocated the entire 6 GHz band for use by license-exempt technologies, such as Wi-Fi. Wi-Fi will be allowed to operate in the entire 5925-7125 MHz range at low power, but operations will be restricted to indoor. The MTC is likely to consider very low power and standard power at a later stage.

The **Canadian** government announced it will open the 6 GHz band to Wi-Fi to “support greater choice and affordability of wireless broadband” for consumers. The decision opens up an additional 1200 MHz of spectrum, tripling the spectrum available for Wi-Fi, the government said. “More spectrum available for Wi-Fi means Canadians will benefit from increased speed and connectivity for working from home, participating in online education and accessing health care services remotely,” it added. “This decision also allows for more affordable deployment of broadband technology in rural areas and increased access to the spectrum for Canadian businesses and innovators looking to use it.”

In **Australia**, the Australian Communications and Media Authority consulted on the possibility of allowing RLAN equipment to operate in the 6 GHz band. In the consultation document, the authority said: “There is sufficient momentum internationally to propose that the lower 500 MHz (5925-6425 MHz) of the 6 GHz band be made available for RLAN use. ... It is not proposed that access be limited to RLANs – other devices that meet these technical conditions, such as ‘unlicensed’ variants of 4G and 5G technologies, would also be enabled.”

In **New Zealand**, the Radio Spectrum Management (RSM) agency is considering the use of the 6 GHz band to accommodate growing wireless broadband traffic. The RSM is proposing to make the lower 6 GHz band (5925-6425 MHz) available for use by Wi-Fi and other wireless local area networks (WLANs). To enable these services to coexist with the incumbent fixed, fixed satellite, and ultra-wide band systems, the RSM has proposed two power limits for WLAN devices operating indoors and outdoors respectively.

The **Malaysian** Communications and Multimedia Commission (MCMC) issued a consultation on allowing WLANs in the 6 GHz band and comments closed early October. “Given the global interest of WLAN devices operating in the 6 GHz frequency band, the MCMC is investigating the potential use of this frequency band for WLAN in Malaysia under the Class Assignment, taking into consideration the critical role of the wireless ecosystem and the level of interest in this frequency band.” One of the consultation questions asks: “Should MCMC consider allowing Wi-Fi to operate in the entire 1200 MHz (5925 MHz to 7125 MHz frequency band) or only in the 500 MHz (5925 MHz to 6425 MHz frequency band)?”.

In **Taiwan**, the Ministry of Transportation and Communications (MOTC) acknowledged the global trend of license-exempt use of the 6 GHz band, referencing the examples of the U.S. and South Korea. On April 8, 2021, the MOTC announced draft amendments to the Radio Frequency Allocation Table, which under certain conditions provide for indoor use of the lower 6 GHz (5925-6425 MHz) band by low power wireless information transmission equipment.

The results of a public consultation requesting views on the use of RLAN devices in the lower 6 GHz band in **Hong Kong** are still to be reported.

Reflections on 2021

We asked senior figures from the regulatory community and Wi-Fi ecosystem to flag the most significant regulatory developments of 2021 and what they hope will happen next. Here are their comments:

“The ATU-R Recommendation 005-0 is on the implementation of emerging radiocommunications technologies including WAS/RLANS in the lower 6 GHz band on a license-exempt basis in Africa. We see this recommendation as key in unlocking the full potential of Wi-Fi – Wi-Fi remains vital in our quest for enhanced digital connectivity in Africa.”

John Omo, Secretary General of the Africa Telecommunications Union

“The Czech Telecommunication Office believes that Wi-Fi 6E in the 6 GHz band can contribute to reaching the new EU gigabit society goals. Therefore, the adoption of the EC Decision is one of the most important harmonisation steps in Europe in the area of license-exempt usage of spectrum. The Czech Telecommunication Office supports studies on license-exempt usage of further frequencies in the upper 6 GHz band, which would introduce the full benefits of Wi-Fi 6E technology for end-users.”

Pavel Sístek, Head of Policy and Strategy unit, Czech Telecommunication Office, which adopted the implementation of the EC Decision in November 2021

“The publication of EC Decision 2021/1067 on opening the 5945-6425 MHz band for licence-exempt WAS/RLAN operation in June 2021 was an important milestone on the way towards a European gigabit society. While much remains to be done to put Europe on par with other regions and countries that already opened up the full 5925-7125 MHz band for Wi-Fi and other licence-exempt technologies, the recent decision of the European Electronic Communications Committee (ECC) to study coexistence between WAS/RLAN and incumbent services in the 6425-7125 MHz band sends an important signal to stakeholders in and outside Europe that Wi-Fi is and will be an essential element of the digital future society.”

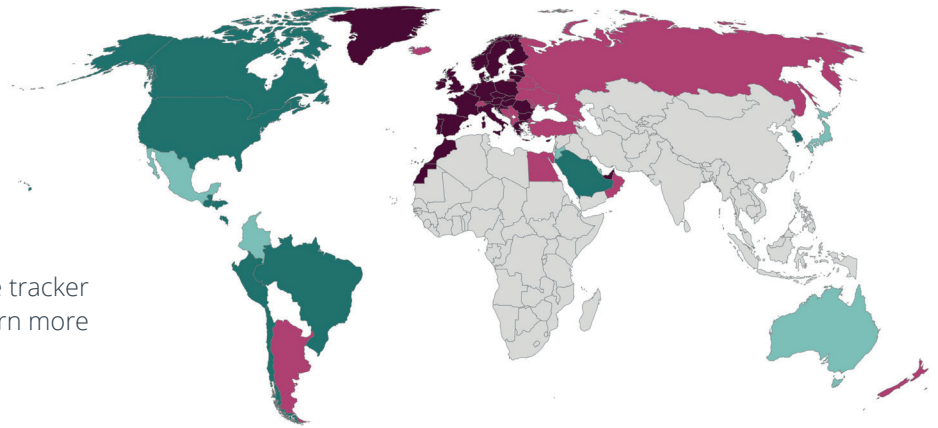
Detlef Fuehrer, Senior Manager, Spectrum Management and Regulatory Affairs, EMEA, HPE

“Without doubt the publication of the mandatory European Commission Implementation Decision enabling access to lower 6 GHz (5945-6425 MHz) is a significant milestone towards releasing additional license-exempt mid-band spectrum to help address the requirements for larger bandwidth applications and services building upon the Wi-Fi 6E global ecosystem of Wi-Fi Alliance certified products. Europe also showed leadership in recognising the need to better understand the coexistence opportunities for Wi-Fi in the upper 6 GHz band with approval of a new work item to undertake studies.”

Graham MacDonald, Chair, Wi-Fi Alliance Regulatory Group Europe, Middle East, and Africa

Countries Enabling Wi-Fi 6E

- Adopted 5925-6425 MHz
- Adopted 5925-7125 MHz
- Considering 5925-6425 MHz
- Considering 5925-7125 MHz



Wi-Fi Alliance maintains an up-to-date tracker on Wi-Fi 6E global developments. Learn more about [countries enabling Wi-Fi 6E](#)

Product news

Learn more about the latest Wi-Fi 6E devices unleashing the benefits of 6 GHz for consumers and businesses around the world in our [product finder](#) and [latest blog](#).



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