WIFIFORWARD

July 30, 2026

Sen. Deb Fischer
Chair, Telecommunications and Media Subcommittee
Senate Committee on Commerce, Science and Transportation
254 Russell Senate Office Buildings
Washington DC 20510

Senator Ben Luján
Ranking Member, Telecommunications and Media Subcommittee
Senate Committee on Commerce, Science and Transportation
254 Russell Senate Office Buildings
Washington DC 20510

Re: Hearing on "Intelligent Networks: Powering Artificial Intelligence and Transforming Communications"

Dear Chair Fischer and Ranking Member Luján,

As the Committee examines the communications infrastructure needed to support America's AI leadership, WifiForward urges you to recognize the foundational role Wi-Fi and unlicensed spectrum play in the deployment of AI. In particular, we urge the Committee to support the global adoption of the Wi-Fi in the 6 GHz band and to allow Wi-Fi services to operate in the lower 7 GHz band. For the United States to lead in AI, every American needs robust connectivity, so that they can build and use AI tools. Wi-Fi serves as the lynchpin of connectivity for Americans nationwide, carrying significantly more consumer and enterprise data traffic than any other wireless technology. For example, 80-90% of all mobile traffic travels over Wi-Fi – not over cellular networks.

Congress, the Federal Communications Commission (FCC), and the Executive Branch created the world's most AI-ready spectrum by opening the full 1200 megahertz in the 6 GHz band. That foresight launched a wave of innovation needed to support our nation's AI ambitions.[1] As AI begins to reshape network traffic, the 6 GHz decision has proven to be remarkably forward-looking. Moreover, the U.S. approach stands in stark contrast to China's emphasis on cellular infrastructure to support AI deployment while ignoring Wi-Fi, providing a strategic advantage for the U.S.

A recent report from Cisco Systems explains AI is not only changing both the volume and character of network traffic, but also the way network traffic growth behaves, creating new

[1] FCC, *Unlicensed Use of the 6 GHz Band*, FCC 20-51 (Apr. 23, 2020).

demands on infrastructure and in particular, Wi-Fi.[2] These changes should prompt policymakers to direct limited spectrum resources support the technologies that will enable America's AI leadership.

AI's center of gravity is both local and indoors. Data flows generated by AI software on a laptop, AI-connected cameras in a factory, an AI diagnostic system in a hospital, or an AI-powered robot moving through a warehouse all begin on local networks – and all rely heavily on Wi-Fi to move the AI traffic. Unlike wide-area mobile networks, which connect users across geographic areas, Wi-Fi is designed for the high-capacity, dense environments where many AI applications will operate. Wireline networks remain essential, but Wi-Fi provides the flexibility needed at the edge for scale and rapid deployment.

Cisco's analysis lays out several important distinctions:

1. Unlike humans, AI systems can operate continuously, naturally resulting in more network traffic, with agentic AI generating up to 450% more traffic than a person performing the task manually,[3] a trend that highlights how the traffic burdens on Wi-Fi networks are likely to grow significantly in the coming years.
2. AI data flows are twice as long as non-AI traffic, resulting in the consumption of more spectrum resources. For wireless networks, duration can be just as important as volume. Longer flows mean greater airtime occupancy, more contention among devices, and increased pressure on shared spectrum resources.
3. AI traffic is increasingly bidirectional, with a growing emphasis on traffic moving from the user to the cloud – a reversal from download-optimized data traffic flows typically seen to date. That shift matters because Wi-Fi is especially well suited to handle more symmetrical traffic: unlike cellular networks, which are typically engineered around download-heavy consumer use.
4. AI traffic is increasingly autonomous, not pausing for human interaction, enabling AI to work without breaks or sleep, and generating network activity around the clock.

This increased load falls predominantly on Wi-Fi because AI applications are being deployed where Wi-Fi networking dominates: inside homes, workplaces, factories, healthcare facilities, and other dense device environments. In addition, the vast majority of AI-connected devices operate on Wi-Fi and lack cellular connectivity. For those adopting the newer Wi-Fi 6 GHz-enabled technologies, there is good news. The Wi-Fi ecosystem is responding through technologies such as Wi-Fi 7 and the upcoming Wi-Fi 8, which use wider channels, lower latency, and more efficient coordination to accommodate AI workloads. Those technological advances, however, depend on sufficient spectrum. Even

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[2] Cisco Systems, Inc., "AI Impact on Wide Area Networks" (2026) at https://www.cisco.com/c/dam/en/us/solutions/collateral/artificial-intelligence/mass-scale-infrastructure/ai-network-traffic-report.pdf .

[3] Antich, Javier, and Gurudatt Shenoy. "The Impact of AI on Wide Area Network Traffic: We Need to Talk." *Cisco Blogs*, 21 May 2026, https://blogs.cisco.com/sp/the-impact-of-ai-on-wide-area-network-traffic-we-need-to-talk.

the most efficient protocol can become congested if traffic outpaces the available spectrum bandwidth available to Wi-Fi networks.

Technology alone cannot meet increasing AI demands if spectrum policy fails to keep pace. As AI traffic continues to grow, policymakers must revisit their assumptions about future spectrum requirements for different technologies. If future traffic is more persistent, more autonomous, more uplink-intensive, more device-dense, and increasingly driven by software agents rather than people, then traditional forecasting models may no longer provide a complete picture of future capacity requirements for technologies like Wi-Fi that are poised to carry the overwhelming share of this incremental wireless traffic.

At a minimum, policymakers need to preserve the full 6 GHz band for Wi-Fi. Beyond 6 GHz, spectrum planners should also be thinking about the next set of frequencies that would accommodate Wi-Fi's growing demand.[4] For example, as the Executive Branch studies the feasibility of allowing high power cellular systems into segments of the 7 GHz band pursuant to the Working Families Tax Cuts Act, Pub. L. No. 119-21 (2025), we urge policymakers to consider frameworks that also allow Wi-Fi co-existence in the band. A balanced approach will be critical to supporting the next generation of AI connectivity while enabling innovation across the broader wireless ecosystem and delivering true win-win outcomes.

Respectfully submitted,

WifiForward

By:

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Executive Director

[4] Bill Davenport, *Unlocking the Future: Why 6 GHz Wi-Fi Is the Foundation for the AI Era*, Cisco Blogs (Apr. 2, 2026).