Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
World Radiocommunication Conference	)	OIA Docket No. 24-30
Advisory Committee for WRC-27	)	

COMMENTS OF CTIA

Umair Javed
Senior Vice President, General Counsel

Scott K. Bergmann
Senior Vice President, Regulatory Affairs

Michael Mullinix
Vice President, Regulatory Affairs

Courtney Tolerico
Director, Regulatory Affairs

CTIA
1400 16th Street, N.W.
Suite 600
Washington, D.C. 20036
(202) 736-3200

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COMMENTS OF CTIA

CTIA[1] respectfully submits these comments in response to the Federal Communications Commission ("Commission" or "FCC") Public Notice seeking comment on draft recommendations provided by the World Radiocommunication Conference Advisory Committee ("WAC") for U.S. proposals on items of the agenda to the 2027 World Radiocommunication Conference ("WRC-27" or "Conference").[2] CTIA's recommendations are designed to preserve and expand the spectrum resources that will support U.S. economic growth, national security, and U.S. leadership in wireless and AI-enabled networks.

I. INTRODUCTION AND SUMMARY.

CTIA applauds the Commission and the Administration for the sustained interagency work that has put the United States in a strong position as preparations continue toward the next Inter-American Telecommunication Committee ("CITEL") PCC.II meeting. The Commission's work

[1] CTIA – The Wireless Association® ("CTIA") (www.ctia.org) represents the U.S. wireless communications industry and the companies throughout the mobile ecosystem that enable Americans to lead a 21st century connected life. The association's members include wireless providers, device manufacturers, and suppliers, as well as apps and content companies. CTIA vigorously advocates at all levels of government for policies that foster continued wireless innovation and investment. CTIA represents a broad diversity of stakeholders, and the specific positions outlined in these comments may not reflect the views of all individual members. The association also coordinates the industry's voluntary best practices and hosts educational events that promote the wireless industry. CTIA was founded in 1984 and is based in Washington, D.C.

[2] *Office of International Affairs Seeks Comment on Recommendations Approved by the World Radiocommunication Conference Advisory Committee*, Public Notice, OIA Docket No. 24-30, DA 26-1052 (OIA Sept. 29, 2026) ("Public Notice").

to frame U.S. positions now, well before WRC-27, is essential to securing support from allies and partners before regional and global views begin to harden. This work also demonstrates that the United States can again lead across the range of technical and regulatory issues at CITEL and at WRC-27.

Such leadership is critical given the significant impact wireless networks have on U.S. economic strength and national security, the global scale of the wireless ecosystem, and the benefits of global harmonization and U.S. leadership. The U.S. wireless industry, relying on full-power, licensed spectrum, is the second-largest domestic source of direct investment into the United States economy.[3] Last year, the wireless industry invested $29.7 billion in network infrastructure, bringing cumulative investment to approximately $764 billion over the lifetime of the industry, including more than $250 billion since 2018. U.S. wireless providers have paid more than $233 billion to the U.S. Treasury for spectrum licenses, and the Commission estimates that upcoming spectrum auctions could generate more than $100 billion in additional revenue. The industry now supports 441,606 cell sites, nearly 603 million connections, and more than 303 million active 5G devices.[4] Americans used a record 159.3 trillion megabytes of wireless data in 2025, up 20 percent from the prior year and reflecting approximately 32 percent average annual growth over the last four years.[5] Wireless data use now doubles every two to three years and stands at 411 times the 2010 level.[6]

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[3] *See* Timothy J. Tardiff, *Wireless Investment and Economic Benefits*, ADVANCED ANALYTICAL CONSULTING GROUP, at 1 (Apr. 2024), https://api.ctia.org/wp-content/uploads/2024/04/Wireless-Investment-and-Economic-Benefits.pdf.

[4] *See* CTIA, 2026 Annual Survey Highlights at 1-2 (Sept. 2026), https://api.ctia.org/wp-content/uploads/2026/09/2026-Annual-Survey-Highlights.pdf.

[5] *Id.* at 3.

[6] *Id.*

It is the policy of this Administration to lead the world in 6G development and deployment. To that end, the Administration issued a Presidential Memorandum last year that prioritized Agenda Item 1.7 and directed federal agencies to build a coalition of industry and foreign partners that supports the United States IMT positions at WRC-27. In fact, it is the only WRC Agenda Item subject to a Presidential directive.

Against this backdrop, the United States should use WRC-27 to implement the Presidential Memorandum, preserve the conditions for continued wireless investment, and secure a robust spectrum pipeline. As detailed below, CTIA urges the Commission to advance the following positions to CITEL and to the Conference:

- *Agenda Item 1.7 (4 GHz and 7/8 GHz):* The Commission should support the proposal to identify IMT in 4.5-4.8 GHz and should continue to support IMT identification in the 7/8 GHz tuning range. Advancing both bands together would give the United States a comprehensive mid-band position, build a robust spectrum pipeline, and create the foundation for leadership in AI-native 6G. CTIA urges the Commission to advance both bands to this upcoming CITEL meeting as U.S. proposals.
- *Agenda Item 1.13 (DC-MSS-IMT):* The Commission should support View A of WAC-27/079r1, which limits new mobile-satellite service ("MSS") allocations to a secondary basis exclusively within existing terrestrial mobile allocations, requires prior mobile network operator ("MNO") agreement, and applies practical cross-border protection limits to ensure the protection of America's wireless networks. This approach is consistent with the Commission's domestic framework because it supplements terrestrial allocations with satellite coverage without displacing or constraining terrestrial licensees. This proposal is well aligned with the federal proposal, recognizing the needed limitation to secondary allocations, as well as enforceable technical limits to prevent harmful interference.
- *Agenda Item 1.10 (70/80 GHz):* CTIA urges the Commission to advance this proposal, which provides protection of terrestrial services from GSO and NGSO satellite systems in the 70/80 GHz bands. The Commission should retain the proposed footnote **ADD 21.16.X**, which confirms that the NGSO protection mask is tied to the studied cases and triggers review if the underlying assumptions are exceeded. That safeguard is necessary to protect existing terrestrial operations as NGSO deployments increase and operating conditions evolve.
- *Agenda Item 1.12 (Low-Data-Rate NGSO MSS):* The Commission should support View B (no change) of WAC-27/078 and oppose primary MSS allocations in bands used by ubiquitous IMT networks. Primary allocations would create new constraints on existing terrestrial networks without a demonstrated operational need for such status. CTIA urges

the Commission to preserve the status quo, consistent with the Commission's domestic framework, recent FCC Space Bureau precedent, and the no change proposal provided by NTIA's Radio Conference Subcommittee.

- *Agenda Item 1.1 (47 GHz A-/M-ESIMs):* The Commission should protect terrestrial operations in the 47 GHz band by supporting the PFD mask scaled from existing regulatory provisions in View A of WAC-27/072. The Commission should disregard and oppose View B's less protective mask, which was developed without any technical foundation or study and subjects terrestrial operations to unacceptable levels of interference.
- *Agenda Item 10 (C-Band Inter-Satellite Service Links):* The Commission should only support study of inter-satellite links on a secondary basis and only in "portions" of the 3.7-4.2 GHz band where the fixed-satellite service ("FSS") allocation remains in the United States. The proposal should expressly provide that ISS operations may not claim protection from terrestrial services. CTIA urges the Commission to advance that language to CITEL as the U.S. proposal.
- *Preliminary WRC-31 Agenda Item 2.9 (5 GHz):* The Commission should support suppression of preliminary Agenda Item 2.9. A new international item could create uncertainty for the Commission's ongoing work on UAS operations in the 5.03-5.091 GHz band and for 5G networks that may support UAS command, control, payload, and detect-and-avoid functions. CTIA urges the Commission to preserve regulatory stability for these developing U.S. use cases by supporting suppression.

II. TO MEET THE URGENCY AND OPPORTUNITY OF AGENDA ITEM 1.7, THE UNITED STATES SHOULD ADVANCE BOTH THE 4 GHZ AND 7/8 GHZ BANDS TO CITEL.

The 4 GHz and 7/8 GHz bands that are the focus of Agenda Item 1.7—along with the 1675 MHz, Upper C, and 2.7 GHz bands—are key to fulfilling the promise of the Working Families Tax Cut Act and the Presidential Memorandum. With the potential for large blocks of spectrum, these bands are capable of supporting future technology and network needs. This concerted national effort to make more of America's airwaves available to licensed mobile broadband services remains critical. Every additional 100 megahertz of licensed mid-band spectrum made available brings roughly $260 billion in GDP and creates 1.5 million new jobs.[7]

[7] *See* Comments of CTIA, OIA Docket No. 24-30, at 3-4 (filed Mar. 6, 2026) ("CTIA March 2026 Comments"); Comments of CTIA, OIA Docket No. 24-30, at 5 (filed Apr. 30, 2025) ("CTIA 2025 Comments").

Without additional mid-band capacity, one-third of AI traffic could go unmet by the end of the decade, at a cumulative cost of $1.4 trillion. These figures show why near-term decisions under Agenda Item 1.7 are central to U.S. economic competitiveness and national security and meeting the 800 megahertz pipeline mandated in the Working Families Tax Cut Act.

At WRC-23, the United States lacked a compelling response to the growing global demand for additional mid-band spectrum, leaving an opening for China to advance its own spectrum priorities and shape the international agenda. WRC-27 presents a critical opportunity to reverse that dynamic. Securing international identification of the 4 GHz band, alongside the 7/8 GHz band, for IMT would not only advance U.S. domestic spectrum objectives and strengthen American leadership in next-generation wireless technologies, but also directly counter China's strategic ambitions for the Conference in Shanghai. Recognizing the importance of these bands to U.S. wireless leadership and future 6G deployment, China has actively sought to build international opposition to their identification at WRC-27, while promoting alternative spectrum priorities that better align with its own industrial and geopolitical interests. A successful U.S. effort to secure these identifications would therefore represent more than a spectrum policy achievement—it would demonstrate American leadership in shaping the global wireless ecosystem and challenge China's efforts to dictate the future direction of international spectrum policy.

CTIA reaffirms its strong support for identifying the frequency band 4.5-4.8 GHz for IMT. The 4.4-4.94 GHz range offers more than 500 megahertz of contiguous spectrum that is well suited for the wide channels future AI-native 6G deployments will require. Aligning the international position with the Administration's domestic study and repurposing efforts would

give the United States a timely opportunity to strengthen its spectrum pipeline and lead the development of trusted wireless technologies.[8]

Global momentum strongly supports identification of the 4 GHz band for IMT, underscoring the growing risk that the United States will fall further behind other countries in access to critical mid-band spectrum. Approximately 40 countries identified the upper portion of the 4 GHz band (4.8-4.99 GHz) at WRC-19, and 14 more did so at WRC-23, bringing the total to more than 50 countries. Eleven operators have deployed commercially in the 4 GHz band, and approximately 1,500 device models are in the ecosystem. While other countries continue to identify, allocate, and deploy additional mid-band spectrum, the United States risks falling further behind in making comparable spectrum resources available for next-generation wireless networks. This growing disparity threatens U.S. competitiveness, limits opportunities to leverage global economies of scale, and risks ceding technological leadership to countries moving more aggressively to secure spectrum for 6G. With 3GPP Release 21 decisions that will shape 6G standards being made now, identification of the 4 GHz band at WRC-27 is therefore critical to reversing this trend, reinforcing U.S. leadership, attracting international support, and ensuring American wireless providers can benefit from an established and rapidly expanding global ecosystem.[9]

Repurposing the 4 GHz band promises significant economic benefit. Repurposing 400 megahertz of the 4 GHz band could yield more than $1 trillion in GDP, create more than 6 million jobs, and extend broadband to approximately 1.1 million households. These benefits

[8] *See* Document WAC-27/053 (View B); Comments of CTIA, OIA Docket No. 24-30, at 6 (filed Aug. 24, 2026) ("CTIA August 2026 Comments"); CTIA, *Optimizing the 4 GHz Band for America's Economic and National Security: A Roadmap for American Leadership in AI, Wireless Innovation, and Spectrum Modernization*, at 5-7 (Sept. 2026) ("4 GHz Report").

[9] *See* 4 GHz Report at 19.

would reach consumers and businesses while strengthening the commercial foundation for AI, advanced manufacturing, logistics, and other data-intensive applications, making the 4 GHz band a central component of the U.S. spectrum pipeline.[10]

Timing matters because 3GPP Release 21 is moving quickly from study into specification work. Delay in spectrum identifications could prevent the United States from influencing radio requirements, device filters, and deployment models for the global 6G ecosystem.[11] The Commission should therefore work alongside U.S. leadership now to secure a CITEL Inter-American Proposal, giving federal users, allies, and equipment makers the certainty needed to plan for the band.

CTIA also reaffirms its strong support for advancing IMT identification in the 7/8 GHz tuning range, as detailed in its March and August 2026 Comments. The rationale for this position, including the looming spectrum deficit, the generational opportunity for U.S. leadership, and the economic and national security benefits, remains as compelling as ever. The 7/8 GHz range represents one of the most significant remaining opportunities to identify large, contiguous blocks of mid-band spectrum capable of supporting wide channels, network capacity, and advanced capabilities envisioned for 6G. As demand for wireless connectivity, AI-enabled applications, and increasingly data-intensive services accelerates, access to additional mid-band spectrum will be essential to maintaining U.S. wireless leadership and ensuring that American networks can meet future consumer, enterprise, and national security requirements.

The international dimension is equally consequential. In the CITEL, initial proposals and negotiations are already focused on the 7/8 GHz range, illustrating the urgency in aligning

[10] *Id.* at 20.

[11] *Id.* at 19.

regional consensus with American priorities in the march up to WRC-27. Extensive technical work has already been undertaken through the ITU-R, including more than 50 international sharing and compatibility studies examining the potential for IMT operations alongside incumbent services. These studies provide a substantial technical foundation for evaluating coexistence, identifying appropriate regulatory measures, and advancing internationally harmonized IMT identification while recognizing the need to protect existing operations. Moreover, early international identification would provide the regulatory certainty needed to encourage equipment development, support economies of scale, and help position the United States to influence future 6G technologies and standards. Advancing proposals for the 7/8 GHz band, alongside the 4 GHz band, ensures that the United States will define the next generation of wireless connectivity rather than responding to decisions made elsewhere.[12]

For these reasons, CTIA urges the Commission to advance both the 4 GHz and 7/8 GHz bands to CITEL as a comprehensive mid-band IMT position. A coordinated proposal will counter opposition from global competitors, reinforce U.S. leadership in wireless and AI-enabled networks, and deliver on the Administration's directive to build a coalition of industry and foreign partners supporting U.S. positions on Agenda Item 1.7. It will also give the United States a stronger opportunity to influence international standards and secure a robust pipeline of much-needed mid-band spectrum, all while protecting existing services through appropriate technical and coordination measures.

III. THE COMMISSION SHOULD SUPPORT VIEW A TO ENSURE THAT ANY NEW MSS ALLOCATIONS FOR DIRECT-CONNECTIVITY SATELLITE-TO-DEVICE SERVICE ARE SECONDARY AND SUBJECT TO STRINGENT

[12] *See* CTIA March 2026 Comments at 4-8; CTIA August 2026 Comments at 8-10.

PROTECTIONS OF AMERICA'S WIRELESS NETWORKS (AGENDA ITEM 1.13).

CTIA supports secondary MSS allocations for direct-to-device services under Agenda Item 1.13, consistent with the Commission's landmark domestic framework. The United States was the first administration to adopt a Supplemental Coverage from Space ("SCS") framework, which enables terrestrial providers to partner with satellite operators to expand coverage by offering connectivity from satellites directly to consumer handsets.[13] In its SCS Order, the Commission appropriately limited satellite operations to a secondary, non-interference basis and required the consent of terrestrial licensees. Because these space stations provide a service complementary to existing terrestrial operations, any international framework established under Agenda Item 1.13 should likewise reflect that approach.

Leveraging the FCC's domestic decisions, CTIA supports View A of WAC-27/079r1, which is also supported by AT&T, GSMA, T-Mobile, and Verizon.[14] View A provides an international framework for direct-connectivity mobile-satellite service ("DC-MSS-IMT") based on a secondary allocation for any new MSS allocation, and conditioned on the prior agreement of the terrestrial MNO. Satellite-to-mobile services should not undermine the reliability and performance of the terrestrial networks on which Americans depend every day. The international framework therefore needs robust, technically justified protections for existing IMT networks.

DC-MSS-IMT is premised on the collaborative use of terrestrial spectrum that wireless providers won at auction and invested billions of dollars to deploy. Any international

[13] *Single Network Future: Supplemental Coverage from Space et al.*, Report and Order and Further Notice of Proposed Rulemaking, 39 FCC Rcd 2622 (2024) ("SCS Order").

[14] *See* Document WAC-27/079r1 (View A).

arrangement should be consistent with the Commission's domestic framework so that a supplemental service does not undermine existing terrestrial operations.[15]

CTIA supports View A because it appropriately limits DC-MSS-IMT exclusively to existing terrestrial mobile allocations in the 694/698 MHz-2.69 GHz range, consistent with Resolution 253 (WRC-23). It requires MSS space stations to communicate only with IMT user equipment and to use the same IMT frequency arrangements and directions of transmission. These limits reflect the complementary nature of this new service to terrestrial IMT networks and avoid creating a broader international allocation that could harm future terrestrial use.[16]

CTIA also supports the draft Resolution in View A because it mandates necessary technical cross-border protections for both IMT user equipment and base stations. View A is the only view containing these fundamental technical elements. This should not be viewed as simply a cross-border coordination issue. With the introduction of new secondary mobile satellite services into these terrestrial bands, a satellite system operating in a neighboring country—or potentially serving another country in the region—could generate interference that extends hundreds of kilometers into the United States, depending on satellite beam geometry and operating parameters. That means a foreign satellite system, including one partnering with a terrestrial provider in the Caribbean or Mexico, would operate under an international framework that permits significant interference to U.S. terrestrial networks well inside U.S. territory. This creates an important national-interest and sovereignty issue: the United States should not establish international rules that could constrain its ability to protect the wireless infrastructure on which the U.S. economy depends.

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[15] *See* CTIA March 2026 Comments at 10-11; Comments of CTIA, OIA Docket no. 24-30, at 13-14 (filed Aug. 20, 2024) ("CTIA 2024 Comments").

[16] *See* Document WAC-27/079r1 at 1.

The draft Resolution specifically requires MSS space stations to promptly cease interfering transmissions and establishes cross-border aggregate PFD limits per system. The limits are designed to protect terrestrial IMT networks while allowing administrations to reach different limits through bilateral or multilateral coordination. CTIA supports carrying these protections into the U.S. proposal and the CITEL process.[17]

In particular, CTIA supports applying the following Frequency Division Duplex ("FDD")-compatible PFD limits for the protection of IMT user equipment in neighboring countries:

Band (MHz)	**Limit (dBW/m²/MHz)**
738	-122.019
880	-120.49
1400	-116.458
1900	-113.805
2300	-112.146
2500	-111.422

CTIA likewise supports applying the following Time Division Duplex ("TDD") and non-compatible FDD PFD limits for the protection of IMT base stations in neighboring countries (as a function of angle of arrival, θ):

Band (GHz)	**Limit (dBW/m²/MHz)**		
	θ = 0-5°	**θ = 5-25°**	**θ = 25-90°**
Below 1.4 GHz	-142	-142 + 0.95(θ - 5)	-123

[17] *Id.* at 18-20.

Between 1.4 and 2.4 GHz	-132	-132 + 0.85(θ - 5)[18]	-115
Above 2.4 GHz	-126	-126 + 0.65(θ - 5)	-113

These limits would apply unless a different limit or alternative is agreed through bilateral or multilateral coordination between the affected administrations. That flexibility preserves the protective baseline while allowing neighboring administrations to account for specific operating conditions.

The proposals in View A's framework protect not only mobile handsets but also base station receivers, which represent billions of dollars of infrastructure investment that terrestrial MNOs have deployed and Americans rely upon. The secondary, non-interference, no-protection status of the MSS allocation means that satellite operators must bear the full burden of avoiding harmful interference to terrestrial networks. Only with the explicit consent of the MNO should a satellite operator be permitted to transmit in the MNO's licensed spectrum.

View A is also closely aligned with the NTIA RCS proposal.[19] As the federal agencies explain, the proposed new MSS stations would be effectively secondary to stations operating in the mobile service, and therefore, incumbent systems should be protected. In particular, the addition of secondary MSS allocations for DC-MSS-IMT would not have priority over either primary or secondary incumbent service allocations. The proposed conditions for WRC-27 are equivalent to those granted in SpaceX's authorization for SCS service, mandating that those satellite operations not cause harmful interference to Federal systems operating in primary allocations, and that internationally, SpaceX must not cause harmful interference to, and must

[18] CTIA identified a discontinuity in the PFD formula contained in the Public Notice and takes the opportunity to fix it here. The multiplier in the second term of the 1.4 GHz to 2.4 GHz PFD mask should be 0.85 instead of 0.95 to correctly intersect the -115 level starting at the angle of arrival of 25 degrees.

[19] Public Notice, Attachment B.

not claim protection from, stations operating in accordance with the Radio Regulations.[20] And while federal agencies recognize "the value of expanding mobile-satellite connectivity," they equally caution that "such connectivity should not cause harmful interference to incumbent services."

In alignment with View A, the federal agencies describe four guidelines, namely (1) **Aggregate Interference:** Incumbent services protection is based on aggregate interference from all DC-MSS-IMT space stations and associated emissions; (2) **Enforceable Technical Limits:** Explicit PFD and OOBE limits sufficient to protect operational communications, navigation, and command and control systems; (3) **Band-Specific Restrictions:** As necessary, to protect a given co-frequency or adjacent band allocation; and (4) **MSS Allocations:** Any allocation made to the mobile-satellite service for DC-MSS-IMT should be secondary and include its directionality, such as space-to-Earth or Earth-to-space, and should be clearly indicated in the Article 5 allocation table.[21] The federal agencies also propose mandating agreements between satellite network operators and terrestrial MNOs before using these bands for operations.

By contrast, CTIA urges the Commission to reject View B because it does not sufficiently protect terrestrial wireless networks, despite the agreement that these new mobile satellite services be limited to a secondary basis. View B proposes materially less protective PFD levels. For example, it would allow -108.21 dBW/m²/5 MHz in the 700 MHz band and -97.16 dBW/m²/5 MHz at 2.5/2.6 GHz.[22] Those levels would permit significantly greater interference to IMT user equipment receivers and are inconsistent with the secondary, non-

[20] *See, e.g., SpaceX Application for Authority for Modification of the SpaceX NGSO Satellite System to Add Direct to Cellular System*, Order and Authorization, DA 24-1193, at paras. 89 xx, yy (rel. Nov. 26, 2024).

[21] Public Notice, Attachement B.

[22] *See* Document WAC-27/079r1 (View B).

interference premise foundational to DC-MSS-IMT. Further, View B designates limits based on a 5 MHz bandwidth, as opposed to the traditional 1 MHz bandwidth. When the DC-MSS-IMT transmission bandwidth is narrower than the reference bandwidth used by the PFD limit, the actual power spectral density ("PSD") of the interfering signal can increase because the same total power is concentrated over a smaller bandwidth. For example, if the PFD limit is specified in a 5 MHz measurement bandwidth, but the DC-MSS-IMT transmission occupies only 1 MHz, the signal PSD can be 7 dB higher than that of a 5 MHz transmission with the same measured PFD. Consequently, using a 5 MHz reference bandwidth could introduce a corresponding 7 dB increase in interference into terrestrial mobile networks.

Moreover, View B's proposal lacks any consideration for the protection of IMT base stations, or other incumbent services, leaving it incomplete. Resolution 253 requires studies to protect incumbent services, and the U.S. has emphasized that existing terrestrial IMT users must be protected from harmful interference.[23] If WRC-27 ultimately permits satellite operations without the necessary regulatory provisions, or based on less protective assumptions—such as accepting interference for a material percentage of time rather than maintaining established terrestrial interference criteria—the result would effectively require terrestrial networks to tolerate a degraded interference environment. For U.S. operators that have invested heavily in these bands, this is the most consequential technical issue under this agenda item. Poorly calibrated rules would constrain network densification, future 5G/6G deployments, and existing cross-border spectrum arrangements. CTIA supports the opportunity in extending terrestrial coverage for rural and remote areas from space, but not at the risk of rewriting the interference rules for the terrestrial networks that already provide nationwide connectivity, are directly tied to

[23] Public Notice, Attachment B.

economic and national security, and serve as the foundation for next-generation AI-native wireless services. CTIA urges the Commission to reject View B and advance View A.

CTIA also urges the Commission to reject View C because it would expand the scope of the allocation beyond what is warranted, does not provide any technical limits for protecting IMT networks in neighboring countries, and introduces regulatory provisions for only one of the candidate bands.[24]

The United States should lead in satellite-to-mobile connectivity—but it should do so by advancing an international framework that enables innovation without sacrificing terrestrial wireless leadership, including by preserving the reliability, performance, and investment of those networks.

IV. THE COMMISSION SHOULD SUPPORT THE COMPROMISE PROPOSAL FOR TERRESTRIAL PROTECTIONS IN THE 70/80 GHZ BANDS FROM NGSO/GSO OPERATIONS, WHILE RETAINING FLEXIBILITY TO ASSESS THESE LIMITS AS SATELLITE SYSTEMS MATURE (AGENDA ITEM 1.10).

CTIA has long advocated for robust protection of fixed service operations in the 70/80 GHz bands from NGSO FSS interference. In the Commission's proceeding addressing the 70/80 GHz bands (WT Docket No. 20-133), CTIA urged the Commission to adopt sharing conditions to protect incumbent terrestrial links and preserve the efficient, intensive use of these bands.[25]

In its domestic proposal, CTIA developed regulatory limits on FSS operations built from engineering analysis designed to protect terrestrial operations in these bands. Terrestrial incumbents use these frequencies as part of the national backhaul network, critical to America's

[24] *See* Document WAC-27/079r1 (View C).

[25] *See* Comments of CTIA, WT Docket No. 20-133 (filed Nov. 8, 2023); Reply Comments of CTIA, WT Docket No. 20-133, at 4, 10-16 (filed June 28, 2024) ("CTIA June 2024 Reply Comments").

growing data transport needs. Specifically, CTIA's domestic proposal includes a -9 dBW/MHz horizon EIRP density limit, a 25-degree minimum elevation angle for NGSO earth stations, and urban exclusion zones or shielding requirements to protect dense FS deployments.[26] CTIA also proposed a space-to-Earth PFD mask of -133.3 dBW/m²/MHz from 0-5°, -120 + 0.75(θ - 5) from 5-25°, and -105 from 25-90°.[27] These measures would protect existing terrestrial operations while allowing responsible satellite deployment in the same band.

For WRC-27, CTIA urges the adoption of NGSO/GSO limits contained in Article 21 modifications in the 71-76 GHz bands. This mask, developed as a compromise between satellite and terrestrial proponents, also includes regulatory provisions that enable future studies should the baseline assumptions for planned satellite operations change in the future. CTIA urges the Commission to retain proposed footnote **ADD 21.16.X** because it identifies the relevant assumptions. It states: "The values given in this table are derived based on the assumptions (e.g. N_{co}, total satellites deployed) in ITU-R Report F. [WRC-27 agenda item 1.10]. Further studies concerning the applicability of these values may be necessary if those assumptions are exceeded in the future."

The footnote is essential because it prevents a studied-case mask from being treated as a permanent safe harbor under materially different deployment conditions.[28] The footnote correctly acknowledges that the mask protects only the studied scenarios. It will not necessarily protect FS links operating below 10 degrees elevation, dense urban deployments, links to aircraft

[26] *See* CTIA June 2024 Reply Comments at 4, 8-9.

[27] *Id.* at Technical Appendix.

[28] *See* Document WAC-27/070 at 4.

and ships, or future growth in the number of co-frequency NGSO systems (Nco) and total satellites deployed.

CTIA therefore urges the Commission to retain the footnote and strengthen it into an affirmative trigger for mandatory review if the underlying study assumptions are exceeded. This approach is consistent with CTIA's domestic proposal and would ensure that FS operations remain protected as satellite systems scale.

V. THE COMMISSION SHOULD SUPPORT VIEW B (NO CHANGE) AND OPPOSE PRIMARY MSS ALLOCATIONS IN IMT BANDS FOR LOW-DATA-RATE NGSO SERVICE (AGENDA ITEM 1.12).

CTIA supports View B's no change proposal to Agenda Item 1.12, which aligns with the no change proposal submitted by NTIA's RCS under this agenda item.[29] View A would grant primary MSS allocations in portions of the 1.427-1.432, 1.6455-1.6465, 1.88-1.92, and 2.01-2.025 GHz bands for low-data-rate ("LDR") NGSO MSS. Three of these four ranges fall within spectrum identified for IMT[30] and support ubiquitous terrestrial deployments, so a primary MSS allocation in them could harm existing and planned operations.[31]

To the extent any satellite operator seeks to provide direct-to-device service in these bands, the appropriate vehicle is the DC-MSS-IMT framework under Agenda Item 1.13. That framework requires secondary, non-interference operation within existing terrestrial mobile allocations and the consent of the terrestrial MNO. Agenda Item 1.12 should not be used as a back door to circumvent those protections. CTIA urges the Commission to preserve that distinction in the U.S. proposals and in CITEL discussions.

[29] *See* Public Notice, Attachment B.

[30] *See* ITU, Radio Regulations, Nos. 5.341A, 5.384A, and 5.388.

[31] *See* Document WAC-27/078 at 1.

The international record reflects significant difficulty in sharing LDR MSS with ubiquitous IMT networks, and no study in the record demonstrates that a primary MSS allocation can coexist with IMT in the IMT-identified bands under consideration. Because primary status would entitle LDR MSS systems to protection from, and coordination with, terrestrial IMT stations, it would impose new constraints on dense, ubiquitous deployments that were built in reliance on the current allocations, and would undermine the Commission's policy of protecting existing terrestrial operations.[32]

Furthermore, View A does not provide international regulatory conditions that could be implemented without imposing an unacceptable coordination burden on terrestrial operators. As highlighted during the WAC discussions, View A's proposal is also incomplete and inaccurately modifies the Table of Allocations for bands not under consideration in Agenda Item 1.12. CTIA urges the Commission to reject View A and support View B's no change position.[33]

Recent FCC precedent and the federal agency proposal point in the same direction and counsel against new primary MSS allocations in these frequency bands. In the Omnibus MSS Order, the Space Bureau reaffirmed "a licensee's exclusive right to use certain MSS frequency bands for which it is authorized—both inside of and outside of the United States."[34] The Order dismissed with prejudice the requests of SpaceX, Kepler, Sateliot, and AST to access specific MSS bands. Kepler sought IoT device data transfers in the 1.6/2.4 GHz bands, and Sateliot sought narrowband satellite IoT in the 2-2.01 and 2.19-2.2 GHz bands—the same type of LDR IoT services that View A would accommodate. The Order also dismissed the SpaceX and

[32] *Id.*

[33] *Id.*

[34] *The Space Bureau Reaffirms Existing Licensees' Exclusive Rights to Use Certain D2D Spectrum Bands by Dismissing the Requests of Several Operators to Enter Those Same Bands and Dismissing Two Petitions for Rulemaking*, Order, DA 26-398, para. 2 (SB, Apr. 23, 2026) ("Omnibus MSS Order").

Iridium Big LEO rulemaking petitions and found that the existing MSS licensing plan does not allow for additional MSS systems.[35] Although the Order addressed MSS bands rather than the IMT bands at issue here, its reasoning applies with greater force to bands used by ubiquitous terrestrial networks: new entrants should not use new primary allocations to bypass established exclusivity, licensing, and interference protections.

Identifying spectrum specifically for narrowband IoT satellite service at WRC-27 would be in tension with this domestic precedent. The Commission should support View B and preserve the regulatory status quo rather than create a new primary allocation that could harm ubiquitous IMT operations and undercut the approach the Space Bureau took in the Omnibus MSS Order. CTIA urges the Commission to advance the no-change position to CITEL and the Conference.

VI. THE COMMISSION SHOULD PROTECT TERRESTRIAL OPERATIONS FROM INADEQUATELY STUDIED ESIM INTERFERENCE IN THE 47 GHZ BAND (AGENDA ITEM 1.1).

WRC-27 Agenda Item 1.1 considers regulatory provisions for Aeronautical and Maritime Earth Stations in Motion ("A-ESIMs" and "M-ESIMs") in the 47.2-50.2 and 50.4-51.4 GHz bands. Notably, 47.2-48.2 GHz is identified for IMT under No. 5.553B, and U.S. licensees have invested more than $10 billion at auction in UMFUS spectrum in these and adjacent bands. Protecting these terrestrial operations is paramount because the bands support high-capacity networks and future wireless services. CTIA urges the Commission to advance a protection framework that is consistent with the Commission's domestic framework and protects incumbent terrestrial operations.[36]

[35] *Id.* at paras. 3, 14-15, 22-23.

[36] *See* Document WAC-27/072 at 1-4.

CTIA urges the Commission to advance View A's PFD mask because it constructively builds upon existing regulatory provisions already adopted by WRC-23 to protect UMFUS operations in the 27.5-29.5 GHz band.[37] The terrestrial base station equipment operating in the 47.2-48.2 GHz band has the same operating behavior and sensitivity which drove the engineering analysis behind the adoption of these PFD limits. Leveraging that reasoning here is sound engineering and good policy.

On the other hand, the PFD mask in View B is unsupported by ITU-R studies and is less protective at all elevation angles, including and especially at low elevation angles where terrestrial systems are most vulnerable. To be clear, no study has been performed under this agenda item to demonstrate that the PFD mask in View B protects terrestrial licensees. View B proposes a flat -107.6 dBW/m²/MHz at low elevation angles, which is 20 dB—100 times—less protective than the PFD mask which engineering studies showed is necessary to protect terrestrial services.

This PFD mask disparity is one of many gaps identified. WAC-27/072 notes a "wide variance of studies,"[38] differing assumptions about the interferer population, maritime impacts that have not yet been analyzed, and inconsistent application of the 3 dB apportionment methodology. The proposal would also require prior agreement for A-ESIMs where fixed service or mobile service is authorized.[39] These gaps underscore the need for the more protective View A mask, which is grounded in existing regulatory provisions scaled to the 47 GHz environment. Adopting View B's mask where the study record is inconsistent and incomplete

[37] *See* ITU, Radio Regulations, Resolutions 123 and 169.

[38] Document WAC-27/072 at 6.

[39] *Id.* at 8, 18-19.

would jeopardize more than $10 billion invested by terrestrial operators at auction. CTIA therefore urges the Commission to advance View A and protect existing terrestrial operations and their investments.

VII. THE COMMISSION SHOULD ENSURE THAT C-BAND INTER-SATELLITE LINK STUDIES ARE LIMITED TO PORTIONS OF 3.7-4.2 GHZ AND ON A SECONDARY BASIS TO TERRESTRIAL OPERATIONS (AGENDA ITEM 10).

The future agenda item considering the inclusion of inter-satellite service ("ISS") links in the C-band should be conditioned on studying only the "portions" of the C-band where FSS remains. For example, this could include the remaining FSS portion of C-band not repurposed for terrestrial use, consistent with the Upper C-band Order and the planned 2027 auction.[40] The proposal should preserve the flexibility needed for future terrestrial use while enabling study of ISS in the FSS.

ISS operations must be secondary both in allocation status and in relation to terrestrial services. ISS use must not claim protection from, and must not cause interference to, terrestrial services operating in conformity with the Radio Regulations. Consistent with recent Space Bureau grants for inter-satellite links in portions of these bands,[41] the draft proposal already recognizes this principle, stating that ISS operations in the C-band would not claim protection from terrestrial services or other FSS applications operating in conformity with the Radio Regulations. The draft Resolution also recognizes the substantial investment that administrations have made in IMT auctions in the C-band.[42] CTIA urges the Commission to retain these protections in the U.S. proposal.

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[40] *See Upper C-band (3.98-4.2 GHz), Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, Report and Order, Order of Proposed Modification, and Order on Reconsideration, FCC 26-46 (rel. July 24, 2026).

[41] *See, e.g., Planet Labs PBC*, ICFS File No. SAT-MOD-20220421-00042, at condition 5 (Space Bureau, Satellite Programs & Policy Division, Jan. 30, 2026) (stamp grant) (granted in part, deferred in part).

[42] *See* Document WAC-27/075 at 1, 5.

VIII. THE COMMISSION SHOULD SUPPORT SUPPRESSION OF PRELIMINARY WRC-31 AGENDA ITEM 2.9 (5 GHZ).

CTIA supports suppression of preliminary WRC-31 Agenda Item 2.9, which would consider changes to spectrum allocations or regulatory provisions in the 5 GHz range to accommodate radionavigation-satellite service operations supporting positioning, navigation and timing applications. Suppression would preserve the regulatory stability needed for domestic UAS and 5G development while avoiding an international proceeding that could create uncertainty before the relevant use cases mature. CTIA urges the Commission to advance suppression as the U.S. position.

The Commission has described UAS as "an increasingly prevalent and important technology" with diverse public and private benefits.[43] Realizing that potential will require "highly reliable wireless two-way communications" for flight control and telemetry.[44] The Commission is advancing its domestic UAS work in phases, beginning with Non-Networked Access ("NNA") operations and new Part 88 rules for the 5.03-5.091 GHz band. An international framework is already in place: WRC-12 allocated the 5.03-5.091 GHz band to AM(R)S on a primary basis in all Regions, and the Commission mirrored that allocation in its rules.[45]

The Commission has recognized "the use of flexible-use spectrum and existing networks as platforms for UAS operations" and that other licensed bands are being explored as platforms for UAS operations, including for CNPC. 5G networks are therefore poised to serve as critical

[43] *See Spectrum Rules and Policies for the Operation of Unmanned Aircraft Systems*, Report and Order, 39 FCC Rcd 10005, para. 1 (2024) ("UAS Order").

[44] *Id.* para. 2.

[45] *See id.* paras. 5-6.

platforms for UAS command and control, payload, and detect-and-avoid functions.[46] The UAS Order does not foreclose 3GPP standards for future UAS operations.[47]

Pursuing a new WRC-31 agenda item that could alter the regulatory framework for the 5 GHz bands would create unnecessary uncertainty for these advancing use cases and could undermine the Commission's ongoing domestic proceedings. As is evident in the conditions surrounding the current 5.01-5.03 GHz allocation to RNSS, a new RNSS allocation in neighboring bands would necessitate operational constraints on the incumbent services due to the sensitivity of these operations. The Commission should therefore protect existing terrestrial operations and preserve the flexibility needed for UAS deployment.

The suppression of this preliminary agenda item will preserve the regulatory stability needed for UAS and 5G investment and avoid imposing new international constraints while the Commission continues its phased domestic work. CTIA urges the Commission to support suppression and advance that position through the U.S. proposals.

IX. CONCLUSION.

The Commission should develop and advance U.S. proposals for WRC-27 that preserve and expand the spectrum resources supporting U.S. economic growth, national security, and leadership in wireless and AI-enabled networks. By supporting IMT identification in both the 4 GHz and 7/8 GHz bands under Agenda Item 1.7, supporting View A of WAC-27/079r1 under Agenda Item 1.13, advancing the 70/80 GHz compromise proposal including requisite GSO and Non-GSO limits with footnote **ADD 21.16.X** under Agenda Item 1.10, supporting View B (no change) under Agenda Item 1.12, supporting View A's PFD mask under Agenda Item 1.1,

[46] *See id.* para. 4 n.6, para. 35.

[47] *See id.* para. 58.

limiting C-band inter-satellite link studies to secondary use in portions of 3.7-4.2 GHz under Agenda Item 10, and suppressing preliminary WRC-31 Agenda Item 2.9, the Commission can advance U.S. leadership while safeguarding America's terrestrial wireless operations.

CTIA urges the Commission to finalize and advance these positions to the upcoming CITEL PCC.II meeting so that the United States arrives at WRC-27 with a unified, comprehensive position that builds coalitions with allies and partners, secures a robust spectrum pipeline, and reinforces America's leadership in wireless and AI-enabled networks.

Respectfully submitted,

/s/ Michael Mullinix

Michael Mullinix
Vice President, Regulatory Affairs

Umair Javed
Senior Vice President, General Counsel

Scott K. Bergmann
Senior Vice President, Regulatory Affairs

Courtney Tolerico
Director, Regulatory Affairs

CTIA
1400 16th Street, N.W.
Suite 600
Washington, D.C. 20036
(202) 736-3200

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