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December 5, 2025

VIA EXPERIMENTAL LICENSING SYSTEM

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
45 L Street, NE
Washington, DC 20554

ATTN: Office of Engineering and Technology

Re: Informal Objection; ELS File No. 0856-EX-CR-2025

Dear Ms. Dortch:

Pursuant to Section 5.95 of the Federal Communications Commission's ("FCC's" or "Commission's") rules,¹ Comcast Corporation ("Comcast"), by its undersigned counsel, submits this Informal Objection to oppose the Application for Renewal of Experimental License WM2XHW ("Experimental"),² submitted by FalconION, Inc. ("Falcon") on December 4, 2025 (ELS File No. 0856-EX-CR-2025) (the "Renewal Application").³ As explained herein, the Experimental has been the source of harmful interference to Comcast's network in certain areas of the United States for over a year, which has disrupted, degraded, and impaired the speed and quality of broadband and other services, and impeded the ability of customers to use certain devices. Accordingly, Comcast respectfully requests that the Office of Engineering and Technology ("OET") deny the Renewal Application or, at minimum, condition any grant on Falcon eliminating the Experimental's interference with and disruption of Comcast's operations and services.⁴

¹ 47 C.F.R. §5.95.

² See FalconION, Inc., *Experimental Radio Station Construction Permit and License*, ELS File No. 0140-EX-CM-2025, Call Sign WM2XHW (granted Aug. 6, 2025).

³ FalconION, Inc., *Application for Renewal of Radio Station License in Specified Services*, ELS File No. 0856-EX-CR-2025, Call Sign WM2XHW (filed Dec. 4, 2025).

⁴ In addition, pursuant to Section 5.59 of the FCC's rules, an application for renewal of an experimental license "shall be filed at least 60 days prior to the expiration date of the license to be renewed." 47 C.F.R. § 5.59(a)(2). The Experimental is effective until January 1, 2026, which means that Falcon was required to

I. The Experimental Has Caused Harmful Interference to Comcast's Network and Customers for Over a Year

Comcast, operating as “Xfinity,” provides broadband internet, cable television, and voice over Internet protocol (“VoIP”) services across 45 states. To provide these services, Comcast, along with nearly every cable broadband provider across the United States, utilizes the 5-42 MHz band in accordance with the American National Standard, ANSI/SCTE 40 2016 (R2021), “Digital Cable Network Interface Standard,” which has been incorporated into the FCC’s rules by reference.⁵ In order to successfully deliver services, including 911 calling and reliable internet access, to households across the country, Comcast needs the ability to utilize these frequencies without harmful interference.

Falcon’s use of the Experimental across the 2-25 MHz band has been interfering with and severely disrupting Comcast’s services in certain markets for over a year, potentially affecting tens of thousands of Comcast customers.⁶ Falcon uses the Experimental to transmit signals that have the capacity to travel long distances, including across oceans, by bouncing back and forth between Earth and the ionosphere.⁷ While Comcast’s plant and equipment are adequately shielded to protect against outside interference consistent with Commission rules, Falcon’s high-powered, frequency-hopping transmissions ingress into the cable network through customer-purchased equipment, which is more susceptible to ingress and beyond Comcast’s direct control.⁸ These transmissions then travel from the customer’s home to the network node, disrupting service to customers on that node. The Experimental has had a severe negative impact on Comcast’s 10.4 and 16.4 MHz signals (covering 8.8 to 19.6 MHz), with the upstream signal-to-noise ratio dropping by up to 30 dB, from 40 to 10 dB.⁹ Falcon’s Experimental operations have caused Comcast customers to experience slower and intermittent broadband internet service, increased latency,

file its license renewal by November 2, 2025. While the FCC did extend the due date until November 18, 2025 because of the government shutdown, the FCC did not provide for any further extensions for filings due in the experimental licensing database. For that reason alone, the FCC should dismiss the Renewal Application as untimely. *See Revisions to Deadlines Following Resumption of Normal Operations*, Public Notice, DA 25-943 (rel. Nov. 17, 2025).

⁵ See 47 C.F.R. §§ 76.602(a), (d)(3) (“Certain material is incorporated by reference into this part,” including “ANSI/SCTE 40 2016, ‘Digital Cable Network Interface Standard,’ copyright 2016, IBR approved for §§ 76.605, 76.640.”); *see also* 47 C.F.R. § 76.605(a) (“Each cable system that uses QAM modulation to transport video programming shall adhere to ANSI/SCTE 40 2016 (incorporated by reference, *see* § 76.602).”).

⁶ See Affidavit of Matthew Wichman at para. 2 (“Wichman Affidavit”).

⁷ A number of experimental licensees in this band are purportedly using their authorizations for high-frequency trading purposes. *Skywave Networks, LLC v. DiSomma et al.*, No. 1:24-cv-09650, Amended Complaint, para. 25 (N.D. Ill. Feb. 13, 2025).

⁸ See Wichman Affidavit at para. 3.

⁹ See *id.* at para. 4.

and the inability to utilize certain Comcast devices with their services.¹⁰ In turn, Comcast has experienced a significant increase in complaints from customers who are experiencing a range of persistent and frustrating interference that is significantly impairing their broadband and other services. These complaints have resulted in a doubling of network task work, including technician truck rolls, on days when Falcon transmissions are active.¹¹

Comcast and Falcon have engaged in numerous discussions to try and mitigate the harmful interference stemming from Falcon's sites in East Graham, Washington and Orland Park, Illinois. Comcast also undertook its own efforts, including its own testing exercises, which confirmed that Falcon is the source of the interference in Comcast's network. While Falcon has shut down its interfering location in Orland Park, Illinois (which eliminated the interference problem in that area), it has refused to shut down its interfering location in East Graham, Washington.¹² Given the critical impact of this harmful interference, Comcast filed an Informal Enterprise Complaint ("Complaint") with the Enforcement Bureau on August 20, 2025, which details Falcon's consistent and rampant interference with Comcast's operations.¹³

At this juncture, there is little more Comcast can do to resolve Falcon's harmful interference absent FCC intervention. Because of the constantly changing nature of the frequencies being used by Falcon's transmitters, it is extremely difficult for Comcast to implement any type of practical mitigation, as it cannot predict how and when customers will experience the interference. These difficulties are exacerbated by the fact that Falcon's ingress is occurring inside customer homes, where customers may have purchased their own endpoint hardware, and are responsible for their own inside wiring, including connectors and splitters. Such items are wholly outside of Comcast's immediate control. Even if Comcast is able to access a particular home, the issue will continue to arise in other homes – ultimately forcing Comcast into a "whack-a-mole" maintenance approach that is not customer friendly and is neither scalable nor sustainable. Nevertheless, where possible, Comcast has installed filters outside impacted customer homes as part of its mitigation approach. Unsurprisingly, these efforts did not and cannot wholly remediate the issue and are meant only as a temporary solution to protect other customers on the same node from experiencing service degradation.

¹⁰ See *id.* at para. 6.

¹¹ See *id.* at paras. 6-7

¹² Comcast, via its counsel, also separately reached out to the "stop buzzer" contact listed on the Experimental to no avail. See Affidavit of Michael Lazarus at para. 3 ("Lazarus Affidavit").

¹³ Comcast filed its Complaint via the FCC's Radio Frequency Service Interference Complaint Portal.

II. OET Should Deny Falcon’s Renewal Application, or At the Very Least Condition Any Grant of the Application on Falcon’s Elimination of the Ongoing Harmful Interference to Comcast’s Cable Systems and Customers Caused by the Experimental

The FCC, at its discretion, issues experimental licenses to allow for limited experimentation under real-world conditions for narrow, specific purposes, including product development, market trials, testing of equipment, and other experiments in scientific or technical radio research.¹⁴ The authority to use an experimental license is generally limited to a two-year term, “does not confer any right to conduct an activity of a continuing nature,” and “is subject to change or cancellation by the Commission at any time without notice or hearing if in its discretion the need for such action arises.”¹⁵ In addition, the FCC has clearly established that experimental operations must be designed to protect against harmful interference to existing authorized services.¹⁶ The FCC further has emphasized the importance of taking incumbent operations – including unlicensed operations and devices – into account when parties attempt to introduce new services into a band.¹⁷

¹⁴ 47 C.F.R. Pt. 5.

¹⁵ 47 C.F.R. § 5.83.

¹⁶ See generally *Promoting Expanded Opportunities for Radio Experimentation and Market Trials Under Part 5 of the Commission’s Rules and Streamlining Other Related Rules*, et al., Report and Order, 28 FCC Rcd. 758, para. 47 (2013) (experimental licensees “must take all necessary technical and operational steps to avoid harmful interference to authorized services”). See also 47 C.F.R. § 5.111(a) (“When transmitting, the licensee must use every precaution to ensure that it will not cause harmful interference to the services carried on by stations operating in accordance with the Table of Frequency Allocations.”); *Allocation of Spectrum for Non-Federal Space Launch Operations*, et al., Second Report and Order and Second Further Notice of Proposed Rulemaking, 38 FCC Rcd. 9029, 9091, para. 170 (2023) (“[O]perators who obtain experimental licensing approvals . . . are communicating on a non-protected, non-interference basis and must cease operations in the event interference with a primary or secondary allocated operator occurs.”).

¹⁷ See, e.g., *Starkey Laboratories, Inc. Petition for Rulemaking and Request for Waiver of Section 15.247(A)(2) of the Commission’s Rules*, 27 FCC Rcd. 5805, 5808, para. 7 (2012) (dismissing a petition for rulemaking as not warranting consideration because of inadequate analysis regarding the potential for interference to “unlicensed devices used ubiquitously in homes and businesses across the country that co-exist with licensed operations”); *Amendment of the Commission’s Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands*, 21 FCC Rcd. 2809, 2818-19, para. 26 (2006) (in evaluating whether the Commission could afford greater flexibility to multilateration Location and Monitoring Service (“M-LMS”) Band licensees, the FCC examined “ways to minimize the potential for interference to unlicensed devices that possibly may arise from licensed operations under potentially more flexible M-LMS rules,” despite also recognizing that unlicensed devices do not have interference protection under Part 15 of the Commission’s rules); *Amendment of Parts 2 and 97 of the Commission’s Rules to Create a Low Frequency Allocation for the Amateur Radio Service*, et al., Report and Order, 18 FCC Rcd. 10258, para. 17 (2003) (“Our decision must be based upon the facts at hand and our evaluation of any potential changes to the spectral environment due to our decision. In evaluating whether new operations should be added to a band, licensed or not, we must

Comcast has operated cable systems for decades and has been authorized by the Commission to operate at various frequencies between 2 and 25 MHz. The use of these frequencies, which are essential to the delivery of broadband, VoIP telephone (including 911 calls), video distribution, and interactive services (such as video-on-demand and pay-per-view services) to millions of households across the country, are detailed in ANSI/SCTE Standards that are specifically incorporated into the Commission's rules.¹⁸

Falcon is causing harmful interference to Comcast's authorized operations in East Graham, Washington via its Experimental, and has not ceased such operations following receipt of multiple cease-and-desist letters,¹⁹ "stop buzzer" outreach,²⁰ the extensive testing described above, or even submission of the Complaint. Pursuant to the Communications Act of 1934, as amended, the FCC may only grant Falcon's Renewal Application under the proposed parameters if doing so would serve the public interest.²¹ Based on the above, the public interest standard should compel OET to deny the Renewal Application or, at minimum, condition a grant on Falcon eliminating the Experimental's interference with and disruption of Comcast's operations and services in East Graham and anywhere else.²²

consider the potential for interference conflicts between the operations. . . . [W]e disagree . . . that we should not consider the impact on unlicensed operations when making spectrum decisions.").

¹⁸ The ANSI/SCTE Standards were incorporated into the Commission's rules in 2003 with the recognition that "[a] number of large cable systems comply with these standards already; other operators have begun implementation at their headends and through their networks." *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, Second Report and Order and Second Further Notice of Proposed Rulemaking, 18 FCC Rcd. 20885, 20894, para. 17 (2003); *see also Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992 Compatibility Between Cable Systems and Consumer Electronics Equipment*, First Report and Order, 9 FCC Rcd. 1981, 2000, para. 110 (1994) (recognizing assertions that "cable systems are beginning to operate two-way transmission technologies that use frequencies between 5 MHz and 30 MHz for subscriber return signals which need protection from conducted emissions produced by subscriber equipment"); 47 C.F.R. §§ 76.602(a), (d)(3); 47 C.F.R. § 76.605(a).

¹⁹ *See* Lazarus Affidavit at paras. 1-2.

²⁰ *See id.* at para. 3.

²¹ 47 U.S.C. § 309.

²² *See Spectrum Horizons; James Edwin Whedbee Petition for Rulemaking to Allow Unlicensed Operation in the 95-1,000 GHz Band*, First Report and Order, 34 FCC Rcd. 1605, 1616, para. 26 (2019) ("[A]s with all experimental licenses, . . . the Commission has broad authority to place specific conditions on experimental licenses to minimize the risk of causing interference to incumbent spectrum users.").

The FCC should not allow experimental licensees such as Falcon to continue to harm and impair the communications services on which many Americans rely for so many aspects of their daily lives.²³ The fact that tens of thousands of Comcast customers, many in rural markets, may experience degraded broadband and other important services due to harmful interference from an experimental licensee compels a shutdown of the interfering operations.²⁴ Not only does Falcon's interference harm Comcast customers on a daily basis,²⁵ but it also directly impedes Chairman Carr's key goal of ensuring that all Americans have access to high-quality broadband service.²⁶ Cable operators like Comcast undertake significant efforts to deploy services and ensure plant integrity. Ignoring this history of service and investment in favor of an experimental licensee would be at odds with the purpose and intent of the experimental licensing regime, Commission precedent, and the public interest, and would disincentivize operators from continued investment going forward.

Lastly, pursuant to the Commission's experimental license rules, "a license may be renewed for an additional term not exceeding 5 years, upon an adequate showing of need to complete the experiment."²⁷ Falcon has not provided any information illustrating why it needs additional time to operate under the Experimental, much less an adequate showing of need.

III. Conclusion

For the reasons described above, grant of the Renewal Application would not serve the public interest, as Falcon's ongoing operations are having a material adverse effect on important broadband, video, and other services that Comcast delivers to many paying customers using the 2-25 MHz band. As an experimental licensee, Falcon bears responsibility for avoiding harmful interference to Comcast's existing authorized operations. Despite extensive efforts, Comcast cannot unilaterally prevent or mitigate the interference caused by the Experimental, so the FCC must step in to protect Comcast's customers from the harmful effects of this persistent interference.

²³ Moreover, other critical services are being provided over this band by federal and state agencies, which have the potential to experience harmful interference as well if Falcon is allowed to continue to operate under its Experimental. *See Opposition of NCTA – The Internet & Television Association*, RM-11953, 7-9 (filed July 31, 2023).

²⁴ To the extent experimental licensees across the country are allowed to interfere with broadband and cable operations pursuant to the requests in the Shortwave Modernization Coalition's Petition for Rulemaking, such harmful interference could potentially disrupt the services of an exponentially higher number of customers. *Id.* at 12-19.

²⁵ "Cable broadband companies depend on their authorized use of the 2-25 MHz band for [the signals they transmit within cables], and the band represents almost half of the frequencies used for upstream internet access delivered by cable providers over wired systems." *Id.* at 4-5.

²⁶ *See, e.g.*, FCC Chairman Brendan Carr, A Build Agenda for America (July 2, 2025), <https://docs.fcc.gov/public/attachments/DOC-412663A1.pdf>.

²⁷ *See* 47 C.F.R. § 5.71(a)(2).



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Comcast therefore respectfully urges OET to deny the instant Renewal Application or, at minimum, condition any grant on Falcon eliminating the Experimental's disruption to Comcast's operations and services in East Graham and anywhere else.

Please direct any questions to the undersigned.

Respectfully submitted,

Michael Lazarus
of TELECOMMUNICATIONS LAW PROFESSIONALS PLLC

Enclosures

AFFIDAVIT OF MICHAEL LAZARUS

I, Michael Lazarus, am the Managing Member of Telecommunications Law Professionals PLLC (“TLP”). TLP represents Comcast with respect to the harmful interference being caused by Falcon to Comcast’s operations. I hereby certify to the following:

1. On December 20, 2024, I sent a cease-and-desist letter to Aissam Ouriche, the contact for Falcon listed on the Experimental, which requested that Falcon refrain from operating on the Experimental in a manner that causes harmful interference to Comcast’s services, specifically in Orland Park, Illinois and East Graham, Washington.
2. On August 12, 2025, I sent an additional cease-and-desist letter to Falcon’s Legal Counsel, David O’Neil, which requested that Falcon refrain from operating on the Experimental in a manner that causes harmful interference to Comcast’s services, specifically in East Graham, Washington.
3. On September 8, 2025, I called the “stop buzzer” contact, Aissam Ouriche, at the phone number listed in Special Condition (4) of the Experimental. My call was sent directly to voicemail, where I left a message indicating that Comcast’s operations were experiencing harmful interference pursuant to the Experimental, and that Falcon needed to cease operations on the Experimental. On September 9, 2025, counsel for Falcon, David O’Neil, returned my call and informed me that Falcon would not be ceasing operations.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on November 14, 2025



Michael Lazarus
Managing Member
Telecommunications Law Professionals PLLC

AFFIDAVIT OF MATTHEW WICHMAN

I, Matthew Wichman, am the Director of Network Operations, Technology and Product, of Comcast Cable Communications, LLC, a subsidiary of Comcast Corporation. I hereby certify:

1. I hold a network engineering certification from the University of Washington and have worked as a network engineer with Comcast for more than 26 years.
2. Falcon's use of the Experimental across the 2-25 MHz band has been interfering with and severely disrupting Comcast's services in certain markets for over a year, potentially affecting tens of thousands of Comcast customers.
3. While Comcast's plant and equipment are adequately shielded to protect against outside interference, Falcon's high-powered, frequency-hopping transmissions ingress into the cable network through customer-purchased equipment, which is more susceptible to ingress and beyond Comcast's direct control. These transmissions then travel from the customer's home to the network node, disrupting service to customers on that node.
4. The Experimental has had a severe negative impact on Comcast's 10.4 and 16.4 MHz signals (covering 8.8 to 19.6 MHz), with the upstream signal-to-noise ratio dropping by up to 30 dB, from 40 to 10 dB.
5. The attached slides further demonstrate the impact of Falcon's interference in East Graham as of August 2025.
6. Falcon's Experimental operations have caused Comcast customers to experience slower and intermittent broadband internet service, increased latency, and the inability to utilize certain Comcast devices with their services.
7. Comcast has experienced a significant increase in complaints from customers who are experiencing a range of persistent and frustrating interference that is significantly impairing their broadband and other services. For example, in the last thirty days, calls to Xfinity agents from the impacted area increased by more than twenty-eight percent. These complaints have resulted in a doubling of network task work, including technician truck rolls, on days where Falcon transmissions are active.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on November 13, 2025

Signed by:

Matthew Wichman

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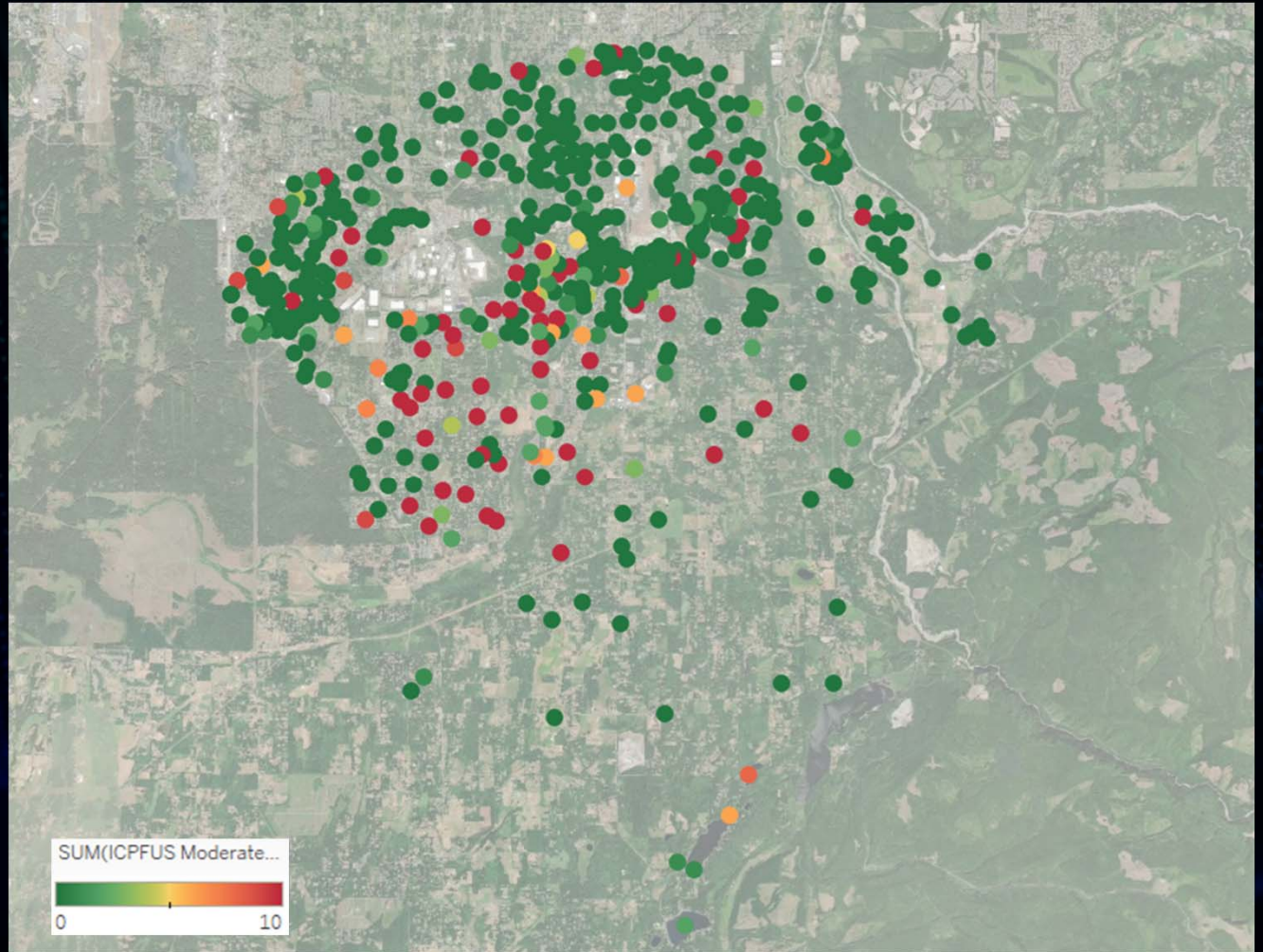
Matthew Wichman
Director of Network Operations, Technology and Product
Comcast Cable Communications, LLC

East Graham, WA

- 9905 251st St E, Graham, WA 98338
- 47.02893272495811, -122.29952075516123
- 551 node segments in 12 km radius
- 46,762 active customers within 12 km

30 Day Upstream Network Stats

Pmausprofilealarm	23
Trouble Calls	378
Us Performance	501
ICPFUS Severe Plant Faults	1,818
ICPFUS Moderate Plant Faults	2,171



East Graham, WA

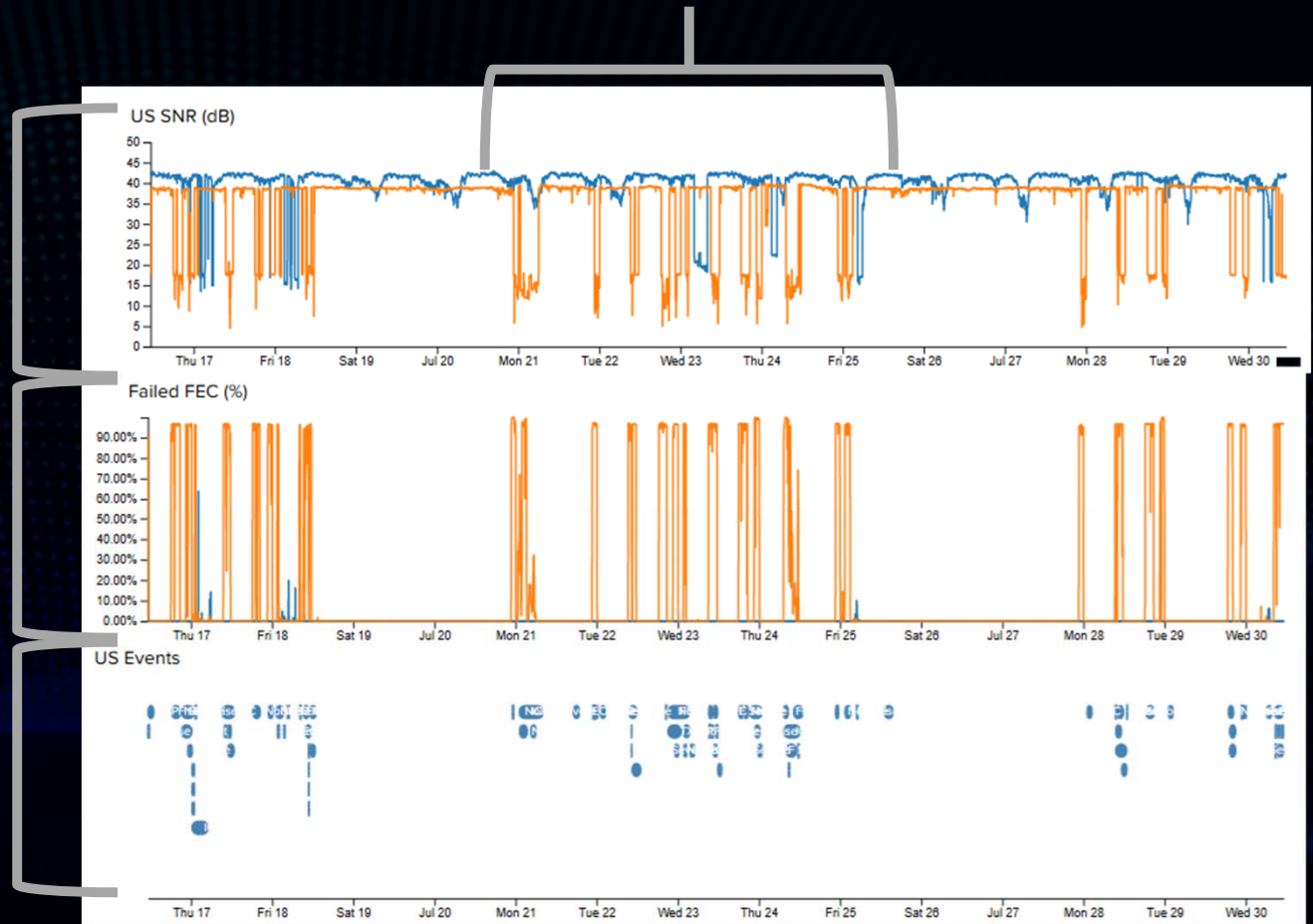
Tower Ingress Impact

Upstream Signal to Noise drops by up to 30 dB, from 40 to 10 dB

Failed FEC (Packets/codewords) increase from 0% to 95%

Upstream Network events are numerous throughout the day

Tower Transmitter Radiating Monday-Friday

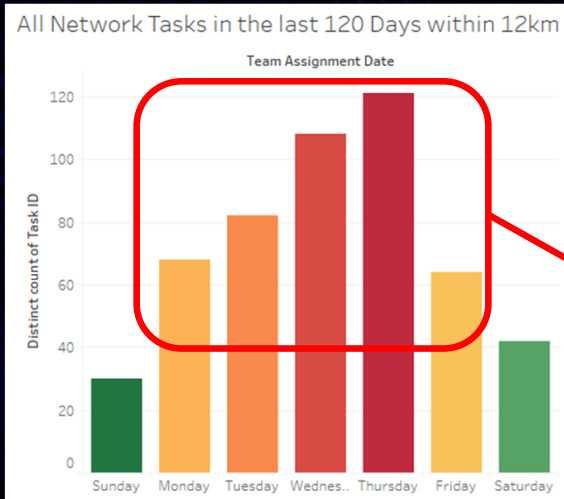


East Graham, WA

Tower Ingress Impact

RF signal detected across the network impacting 10.4 and 16.2 MHz signals

Network Outages over the last 120 days in the 12 km Radius.



More than double all work on non-Tower transmit days

