Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Wireless E911 Location Accuracy Requirements	)	PS Docket No. 07-114
	)	
T-Mobile USA, Inc. Request for Authorization	)	
	)	

ORDER

Adopted: May 27, 2026 **Released: May 27, 2026**

By the Chief, Public Safety and Homeland Security Bureau:

I. INTRODUCTION

1. This Order grants the Request for Authorization (Request) of T-Mobile USA, Inc. (T-Mobile) to use the European Union's Global Navigation Satellite System (GNSS), known as Galileo, in conjunction with the U.S. Global Positioning System (GPS), to provide Enhanced 911 (E911) location information.[1] T-Mobile requests authority to use information derived from Galileo signals to increase the availability, accuracy, and reliability of T-Mobile's 911 location services, which will better help emergency responders quickly find and assist 911 callers, potentially saving callers' lives.[2] We find that T-Mobile meets the requirements for Commercial Mobile Radio Service (CMRS) providers to integrate foreign satellite signals into E911 services that the Commission established in the *Fourth Report and Order* in this proceeding.[3] In addition, the Request satisfies the requirements that the Public Safety and Homeland Security Bureau (Bureau or PSHSB) applied in granting a prior similar request by AT&T to use Galileo for wireless E911 location.[4] We conclude that granting T-Mobile's Request will assist with improving emergency response and saving lives, without increasing the exposure of T-Mobile devices to harmful interference, and, therefore, serves the public interest.

[1] On September 11, 2024, T-Mobile USA, Inc. (T-Mobile) submitted a request for authorization to use Galileo to provide 911 location information. *See* T-Mobile Request for Authorization (filed Sept. 11, 2024) (Request). The Request was filed publicly via the FCC's Electronic Comment Filing System (ECFS) in PS Docket No. 07-114.

[2] Request at 1.

[3] *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, Fourth Report and Order, 30 FCC Rcd 1259 (2015) (*Fourth Report and Order*).

[4] *Wireless E911 Location Accuracy Requirements*; *AT&T Services, Inc. Request for Authorization and Waiver*, PS Docket No. 07-114, Order, 35 FCC Rcd 8805 (PSHSB 2020) (*AT&T Order*); *see also Location-Based Routing for Wireless 911 Calls*, PS Docket No. 18-64, Report and Order, 39 FCC Rcd 527, 540, para. 21 & n.91 (2024) (noting that CMRS providers seeking to employ foreign satellite navigation systems for 911 should follow the existing approval process discussed in the *Fourth Report and Order* and the *AT&T Order*); *Single Network Future: Supplemental Coverage from Space; Space Innovation*, GN Docket No. 23-65, IB Docket No. 22-271, Report and Order and Further Notice of Proposed Rulemaking, 39 FCC Rcd 2622, 2698, para. 178 & n.542 (2024) (reiterating that CMRS providers should follow the existing approval process when seeking to employ foreign satellite navigation systems for 911 location purposes).

II. BACKGROUND

2. *2015 Wireless Location Accuracy Fourth Report and Order*. In 2015, the Commission adopted the *Fourth Report and Order* in this proceeding, which strengthened the E911 location accuracy rules to improve location determination for outdoor and indoor calls.[5] As part of the *Fourth Report and Order*, the Commission addressed the use of foreign GNSS signals to augment GPS for E911 location purposes, and specified what CMRS providers must do to receive authorization to incorporate foreign GNSS signals into their E911 service:

> We believe that CMRS providers seeking to use non-U.S. satellites should also [1] conduct testing to ensure that operation with these signals does not inadvertently introduce vulnerabilities to the devices that could impair E911 performance or compromise data integrity. For example, devices that are augmented to receive signals from multiple satellite constellations may be more susceptible to radio frequency interference than devices that receive signals from GPS alone. Devices should also be [2] evaluated to determine their capabilities to detect and mitigate the effects of inaccurate or corrupted data from any RNSS [Radionavigation Satellite Service] system that could result in incorrect location information, or no information at all, being relayed to a PSAP [Public Safety Answering Point]. We expect CMRS providers, at the time they [3] certify their compliance with the Commission's location accuracy requirements, to also [4] certify that any devices on their network operating with foreign A-GNSS [Assisted-GNSS] signals for 911 location accuracy have proper authorizations in place to permit such use. Before incorporating foreign A-GNSS into E911, CMRS providers must [5] coordinate plans for foreign A-GNSS signal integration with the Public Safety and Homeland Security Bureau to confirm that signals are interoperable with GPS and that measures to prevent interference are appropriate. Furthermore, CMRS providers are expected to [6] certify that the devices have been tested to determine their ability to detect and mitigate the effects of harmful interference.[6]

3. *2018 Galileo Order*. In November 2018, the Commission authorized non-Federal, receive-only devices in the U.S. to receive signals from the Galileo system (E1 and E5, but not E6).[7] However, at that time, the Commission did not authorize receivers to use the Galileo E1 and E5 signals in support of E911 location.[8] The Commission observed that the *Fourth Report and Order* "identified procedures for Commercial Mobile Radio Service (CMRS) providers to follow before non-U.S. GNSS signals could be integrated into E911."[9] The Commission confirmed that it did "not address these additional procedures that CMRS providers must follow before integrating the Galileo E1 and E5 signals for E911 location services."[10]

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[5] *Fourth Report and Order*, 30 FCC Rcd at 1260, para. 1.

[6] *Fourth Report and Order*, 30 FCC Rcd at 1273, para. 40 (footnotes omitted).

[7] *Waiver of Part 25 Licensing Requirements for Receive-Only Earth Stations Operating with the Galileo Radionavigation-Satellite Service*, Order, IB Docket No. 17-16, 33 FCC Rcd 11322, 11322-33, 11346-47, paras. 1-2, 53, 56 (2018) (*Galileo Order*) (granting the requested waiver for non-Federal receiver operations with two of the Galileo signals, E1 and E5, which are transmitted in the same Radionavigation-Satellite Service (RNSS) bands where GPS transmits its L1, L5, and L2 signals, and denying the requested waiver for the Galileo E6 signal).

[8] *Galileo Order*, 33 FCC Rcd at 11345, para. 50.

[9] *Galileo Order*, 33 FCC Rcd at 11345, para. 50, citing *Fourth Report and Order*, 30 FCC Rcd at 1272-1273, paras. 39-40; *see also* 47 CFR §§ 25.115(b)(9), 25.137.

[10] *Galileo Order*, 33 FCC Rcd at 11345, para. 50.

4. *2020 AT&T Order*. In the *AT&T Order*, the Bureau approved a request by AT&T to use Galileo for E911 location of wireless calls on its network.[11] In the *AT&T Order*, the Bureau set forth procedures that were developed to evaluate whether nationwide CMRS providers complied with the conditions of the *Fourth Report and Order* in order to be authorized to use Galileo in connection with E911 geolocation in the U.S.[12] These procedures called for any nationwide CMRS provider seeking to use Galileo in connection with E911 geolocation in the U.S. to implement the following three requirements: (1) conduct testing; (2) develop a signal integration plan; and (3) provide certification.[13] While these requirements are discussed in detail in the *AT&T Order*, we include a condensed overview of them below as they apply to T-Mobile's Request. In addition, we intend to apply these same requirements to any future similar requests from nationwide CMRS providers.[14]

5. *Testing*. Testing is required to ensure that integrating non-U.S. signals and GPS signals into the same device will not introduce radiofrequency interference that could impair E911 performance. The *Galileo Order's* findings on channel compatibility addressed many of these concerns as they relate to Galileo.[15] The need for additional test data is, therefore, limited. Test data is only required to the extent necessary to verify that mobile devices can mitigate the potential effects of harmful interference that could impair E911 performance. For satisfying this requirement, CMRS providers may rely on either: (1) their own testing of CMRS devices (e.g., in the industry test bed); or (2) test data from other sources (e.g., testing conducted by other carriers or third parties). It is still the case that CMRS providers that do their own testing do not need an experimental license if they are only using receive equipment in their testing. However, if CMRS providers are using a transmitter that simulates satellite transmissions, they may need to first obtain an experimental license and should, therefore, coordinate with the Commission's Office of Engineering and Technology. Providers are required to maintain the test data and make the data available if requested by PSHSB, but are not required to submit test data to the Commission as part of a request.[16]

6. *Signal Integration Plan*. A signal integration plan is required to be developed and maintained by each CMRS provider seeking authorization to use Galileo for E911 purposes. CMRS providers must also submit their signal integration plans to PSHSB.[17] As part of the signal integration plan, there should be a description of the mechanisms the provider will use to detect, mitigate, and, if necessary, disable Galileo signals if they cause harmful interference that impairs E911 performance. The signal integration plan should also include a commitment to abide by best practices relevant to the use of GNSS signals, certifying that they have met the requirements in the latest GPS Interface Control

[11] *AT&T Order*, 35 FCC Rcd at 8805, 8810, paras. 1, 15.

[12] The Public Safety and Homeland Security Bureau, in coordination with the Office of Engineering and Technology, and the Wireless Telecommunications Bureau developed these procedures pursuant to authority delegated by the Commission.

[13] *AT&T Order*, 35 FCC Rcd at 8807, para. 5.

[14] Should a non-nationwide CMRS provider be interested in submitting a similar request, we recommend that it reach out to, and coordinate with, PSHSB before submitting its request.

[15] *Galileo Order*, 33 FCC Rcd at 11335, 11339, paras. 27, 36.

[16] This requirement follows the 911 indoor location rules, which similarly rely on carrier compliance certifications without requiring submission of testing data. *See, e.g.*, 47 CFR § 9.10(i)(2)(iii)(A) ("All CMRS providers must certify that the indoor location technology (or technologies) used in their networks are deployed consistently with the manner in which they have been tested in the test bed.").

[17] The *AT&T Order* states that "[e]ach CMRS provider seeking authorization to use Galileo for E911 purposes must submit a signal integration plan to the Bureau." *AT&T Order*, 35 FCC Rcd at 8807, para. 7.

Documents (ICDs)[18] and those set forth in the U.S. Department of Homeland Security (DHS) best practice documents.[19]

7. *Certification*. CMRS providers are required to certify in writing that they have authorizations in place to permit the use of non-U.S. GNSS signals, and that they have complied with the specified testing conditions. These certifications must accompany the submitted signal integration plan.

8. *T-Mobile's Request for Authorization*. T-Mobile explains in its Request why it believes that the six conditions outlined in the *Fourth Report and Order* have been satisfied, with one of the conditions being satisfied by the *Galileo Order*'s waiver allowing devices to receive the approved foreign satellite signals (Galileo E1 and E5).[20] T-Mobile explains that it conducted lab tests that "demonstrated that T-Mobile-certified devices are able to detect and mitigate any interference that might result from incorporating location information derived from Galileo signals into T-Mobile's 911 location information services."[21] It certifies that the tests successfully demonstrated that T-Mobile-certified devices will be able to detect and mitigate any interference resulting from incorporating location information from the Galileo satellite navigation system.[22]

9. In its Request, T-Mobile submits an overview and description of its signal integration plan and affirms that testing was completed and that it has effective mitigation options if unforeseen interference arises with the use of Galileo signals that would impair the ability to transmit accurate 911 location information.[23]

10. In an attachment to the Request, T-Mobile includes attestations certifying that T-Mobile completed the tests for integrating location information derived from signals from the Galileo GNSS constellation.[24] T-Mobile attests that, if signals from the Galileo constellation cause interference that impairs its provision of 911 location information, it has plans to detect, mitigate, and disable these signals.[25] T-Mobile also attests that it "will abide by applicable best practices relevant to the use of information from Galileo GNSS signals specified at GPS.gov."[26] These best practices call for meeting the requirements in the latest GPS ICDs and those set forth in the above mentioned DHS best practice documents.

III. DISCUSSION

11. We grant T-Mobile's Request and find that T-Mobile has met the Commission's conditions for authorizing CMRS providers to use Galileo, in conjunction with GPS, for E911 purposes. As discussed above, the Commission requires CMRS providers to satisfy six conditions before integrating non-U.S. GNSS signals (i.e., Galileo E1 and E5) into their E911 service.[27] In the *Galileo Order*, the

[18] The GPS ICDs are available at https://www.gps.gov/interface-control-documents-icds-interface-specifications-iss (last visited May 27, 2026).

[19] The DHS best practice documents are available at https://www.dhs.gov/science-and-technology/pnt-program and at https://www.gps.gov/resilience-through-responsible-use-pnt (both last visited May 27, 2026).

[20] Request at 4-7.

[21] Request at 5.

[22] Request at 6.

[23] Request at 6.

[24] Request at Attach.

[25] Request at Attach.

[26] Request at Attach.

[27] *Fourth Report and Order*, 30 FCC Rcd at 1272-1273, para. 40.

Commission emphasized that CMRS providers must have the authorizations contemplated by the procedures established in the *Fourth Report and Order* for E911, but did find that there was a significant benefit to waiving the rules to permit the use of the Galileo E1 and E5 signals.[28] Therefore, CMRS providers must satisfy the following five remaining conditions in order to integrate Galileo signals into their E911 service: (A) coordinate with PSHSB to ensure the signals are interoperable and no interference will result; (B) certify location accuracy compliance; (C) test devices to ensure there are no device signal interference problems from using the non-U.S. GNSS satellite feed; (D) test devices to ensure no inaccurate location data is sent to PSAPs due to satellite signal noise; and (E) certify that these device tests show the CMRS provider's devices can detect and mitigate any interference that might result from incorporating non-U.S. GNSS satellite signals into their E911 service.[29]

12. *Satisfaction of Coordination and Testing Requirements*. During the summer of 2024, T-Mobile had discussions with PSHSB staff regarding T-Mobile's intention to request authorization to use Galileo. At that time, PSHSB staff outlined certain expectations for wireless carriers to follow in order to receive authorization to use Galileo signals for E911 purposes. PSHSB staff stated that it would expect a CMRS provider to perform testing showing that wireless devices could detect and mitigate interference caused by Galileo signals. T-Mobile's discussions with PSHSB staff about meeting the conditions for the use of foreign GNSS signals, in conjunction with GPS, with E911, satisfy condition A in the *Fourth Report and Order*, i.e., coordination with PSHSB to ensure Galileo signals are interoperable with GPS and no interference will result.[30]

13. As part of its Request, T-Mobile certifies that "the addition of Galileo signals would not adversely impact location accuracy compliance."[31] This certification is supported by T-Mobile's description of its testing and signal integration plan. T-Mobile explains that the results of its lab tests show that "measured location accuracy, yield, and latency statistics when both GPS and Galileo signals were included were essentially equal to or improved relative to GPS-only location performance."[32] This certification establishes T-Mobile's compliance with condition B of the *Fourth Report and Order*, i.e., certification of location accuracy.

14. With regard to testing for interference, T-Mobile states in its Request that it "has conducted lab testing of its mobile devices in which both GPS and Galileo signals were used without interference or degradation of location information."[33] As to satellite signal noise, in its Request, T-Mobile explains that its testing confirmed that satellite signal noise would not result in inaccurate location

[28] Although receive authority was granted by the *Galileo Order*, that order did not grant market access to the Galileo satellite navigation system under Rule 25.137, which would have automatically granted device/earth station receive authority by satisfying Rule 25.115(b)(9)(ii) instead of waiving Rule 25.115(b)(9). Rule 25.115(b)(9) (formerly Rule 25.131(j)(1)) specifies receive-only earth station operators must request a Commission license, or modification, to receive signals from foreign satellites unless the Commission has granted market access to the GNSS satellite signals. The *Galileo Or*der waived the receive-only earth station licensing requirement of 25.115(b)(9) without granting the Galileo system market access. *Galileo Order*, 33 FCC Rcd at 11346, para. 53; 47 CFR §§ 25.115(b)(9), 25.137.

[29] The five conditions were set forth in this manner in the *AT&T Order*. *AT&T Order*, 35 FCC Rcd at 8809, para. 11.

[30] Request at 5. Regarding interoperability with GPS, the Commission concluded that "The Galileo GNSS is uniquely situated as a foreign GNSS system with respect to the U.S. GPS, since the two systems are interoperable and RF compatible under the 2004 EU/US Galileo-GPS Agreement and subsequent EC/U.S. actions to implement that agreement." *Galileo Order*, 33 FCC Rcd at 11327, para. 12.

[31] Request at 5.

[32] Request at 5.

[33] Request at 5 (footnote omitted).

data to be sent to a PSAP.[34] We conclude that T-Mobile's testing and statement of results satisfies conditions C and D of the *Fourth Report and Order*, i.e., that devices have been tested to ensure there are no device signal interference problems from using the non-U.S. GNSS satellite feed, and ensuring that no inaccurate location data is sent to a PSAP due to satellite signal noise, respectively.

15. *Satisfaction of Signal Integration Plan and Certification Requirements.* T-Mobile's Request includes an overview and description of its signal integration plan, including a description of the testing that was conducted, and an attestation that it complied with the required testing conditions and completed the testing. T-Mobile's description of its signal integration plan explains its "plans to detect, mitigate, and disable the receipt of signals from the Galileo constellation if they cause interference that impairs T-Mobile's ability to transmit accurate 911 location information" and "plans to mitigate interference by requiring that manufacturers whose devices receive information from Galileo satellites configure those devices so that they are capable of disabling Galileo usage on chipsets and modifying or replacing software or changing device settings to revert to a GPS-only operational mode, if and when needed."[35] T-Mobile's description of its signal integration plan states that it will generally abide by the best practices that are available at www.gps.gov that are applicable and relevant to the use of GNSS signals.[36] T-Mobile has made attestations confirming this in an attachment to its Request and has described its plan to abide by the GPS best practices.[37] T-Mobile has also submitted attestations of testing completion.[38] T-Mobile's signal integration plan and attestations to the Commission satisfy the *Fourth Report and Order*'s conditions A, B, and E.

IV. ORDERING CLAUSES

16. Accordingly, IT IS ORDERED that, pursuant to sections 301 and 303(b) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 301, 303(b), T-Mobile USA, Inc.'s Request for Authorization IS GRANTED.

17. IT IS FURTHER ORDERED that the effective date of this Order is the date upon which this Order is adopted.

18. This action is taken under delegated authority pursuant to sections 0.191 and 0.392 of the Commission's rules, 47 CFR §§ 0.191, 0.392.

FEDERAL COMMUNICATIONS COMMISSION

Zenji Nakazawa
Chief
Public Safety and Homeland Security Bureau

[34] Request at 5.

[35] Request at 6.

[36] Request at 6.

[37] Request at 6 and Attach.

[38] Request at Attach.