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January 23, 2018

**Via Email**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

Re: *Ex Parte* – Wireless Emergency Alerts – PS Docket No. 15-91

Dear Ms. Dortch:

The Alliance for Telecommunications Industry Solutions' (ATIS) Wireless Technologies and Systems Committee (WTSC) has reviewed the draft *Second Report and Order and Second Order on Reconsideration* ("draft order") that was released on January 9, 2018. ATIS WTSC provides additional input below regarding technical challenges associated with device-based Wireless Emergency Alerts (WEA). ATIS WTSC also provides further detail regarding industry standards that would be necessary to implement device-based geo-targeting, as well as the interdependencies among these standards.

ATIS notes that, among other things, the draft order would impose a new accuracy requirement for the delivery of WEA messages, requiring delivery of an alert message to 100 percent of the target area with no more than 0.1 mile overshoot.<sup>1</sup> ATIS believes that the geocode should not be subject to this accuracy requirement because the mobile device must determine its location in relation to the geocode. This implies that the device must know the geocode, which may only be obtained in one of two ways, both of which pose technical challenges. First, the corresponding polygon coordinates associated with a geocode (to cover all counties and states) could be broadcast to the mobile device; however, these coordinates would exceed the 100-coordinate limit for the polygon of the message as specified in ATIS-0700037.<sup>2</sup> Alternatively, the geocode could be broadcast to the mobile device, which in turn would have to translate the geocode into polygon coordinates; however, this would require mobile devices to store all geocode coordinates, requiring at least hundreds of megabytes of device storage, as well as periodic updates.

As ATIS has previously noted, the industry also remains concerned about extending WEA alerts beyond 360 characters (a message with the size equivalent of five or more pages of text) without further understanding the impact to communications systems and the introduction of transmission delay. Even with compression techniques, ATIS believes it is doubtful that 360 characters could be guaranteed for display when including the polygon in the transmission, as proposed in the draft

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<sup>1</sup> Draft order at ¶6.

<sup>2</sup> ATIS-0700037 (Dec. 2017), available at <https://www.atis.org/docstore/product.aspx?id=28367>.

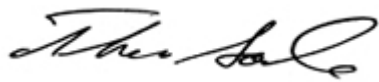
order.<sup>3</sup> ATIS notes that the standards community will work to identify solutions to compress content as much as possible.

Finally, ATIS is pleased to provide additional information about industry standards necessary for device-based geo-targeting, and the interdependencies thereof. The attached includes information about the 25 industry standards, including impacts to WEA standards efforts in progress from previous Commission rule changes (including the Commission's September 2016 *Report and Order* and November 2017 *Order on Reconsideration*) that must be developed or modified before device-based geo-targeting could be properly implemented by the industry.

A copy of this letter is being filed in the above-referenced docket.

If there are any questions, please feel free to contact the undersigned.

Sincerely,



Thomas Goode  
ATIS General Counsel

Attachment

cc: James Wiley, Attorney Advisor  
Megan Henry, Attorney Advisor  
Rasoul Safavian, Senior Technical Advisor

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<sup>3</sup> Draft order at ¶18.

# ATIS and Related WEA Deliverables and Dependencies

## Introduction

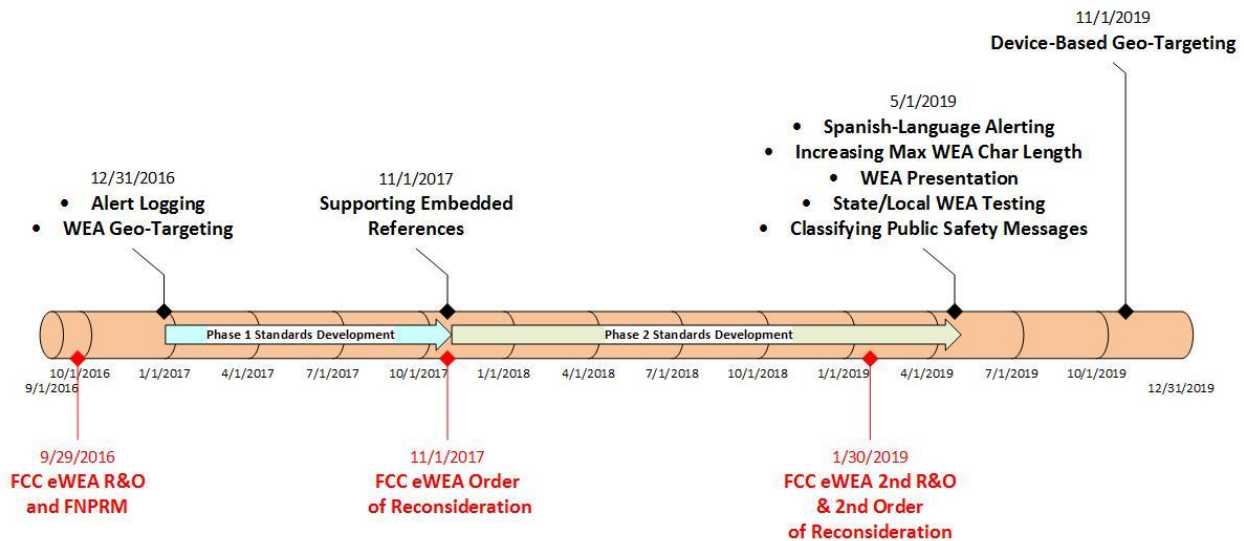
This paper provides the summary of the Enhanced Wireless Emergency Alert (eWEA) FCC Reports & Orders, FCC timeline, identification of deliverables of 3GPP, ATIS, and OASIS, and dependencies among the various deliverables of 3GPP, ATIS, and OASIS.

## eWEA FCC Reports & Orders and Timeline

In 2016, 2017, and 2018, the FCC has issued the following Reports & Orders pertaining to enhancements for Wireless Emergency Alerts (WEA):

- FCC 16-127, *Federal Communications Commission Report and Order and Further Notice of Proposed Rulemaking In the Matter of Wireless Emergency Alerts Amendments to Part 11 of the Commission’s Rules Regarding the Emergency Alert System*; September 29, 2016.
- FCC 17-143, *Federal Communication Commission Wireless Emergency Alerts Order on Reconsideration*; November 1, 2017.
- FCC 18-xxx, *Federal Communication Commission Wireless Emergency Alerts Second Report and Order and Second Order on Reconsideration*; anticipated to be approved January 30<sup>th</sup>, 2018.
- This 2<sup>nd</sup> eWEA Report & Order contains the new regulations for Device-Based Geo-Targeting of WEA Alerts.

The compliance timelines for these FCC Reports and Orders are shown in the following figure:



NOTE: ATIS is in the process of completing standards updates based upon the September 2016 FCC Report and Order and Further Notice of Proposed Rulemaking, as well as addressing requisite standards updates required from the 2017 FCC Order of Reconsideration. Additional concerted efforts will be required to update standards based upon the anticipated 2018 FCC Report and Order on device-based geo-targeting.

## Assumptions

1. Geocode is not subject to the accuracy requirements of device-based geo-targeting.

## eWEA Deliverables & Status

Listed below are the 3GPP, ATIS, and OASIS deliverables and associated status. These deliverables are needed to support the above FCC eWEA Reports & Orders.

1. ATIS-0700006.v002 Enhanced Wireless Emergency Alert (eWEA) via GSM/UMTS Cell Broadcast Service Specification
  - a. Default Ballot closes on January 22<sup>nd</sup>, 2018.
  - b. Publications should be suspended until clarification is received regarding the applicability of the 2018 FCC device-based geo-targeting regulations to GSM and UMTS networks.
2. ATIS-0700008.v002 Cell Broadcast Entity (CBE) to Cell Broadcast Center (CBC) Interface Specification, Revision 2
  - a. Default Ballot closed on January 4<sup>th</sup>, 2018.
  - b. Publications suspended until analysis can be performed by the working group to determine if additional modifications are required to support device-based geo-targeting.
3. ATIS-0700010.v002 Enhanced Wireless Emergency Alert (eWEA) via EPS Public Warning System Specification
  - a. Default Ballot closes on January 22<sup>nd</sup>, 2018.
  - b. Publications should be suspended.
  - c. Working group will need to evaluate if modifications will need to be developed to support the 2017 FCC Order on Reconsideration.
  - d. Modifications will need to be developed to support the 2018 Report & Order on device-based geo-targeting.
4. ATIS-0700025.v002 Enhanced Wireless Emergency Alert (eWEA) International Roaming Specification
  - a. Modifications will need to be developed to support the FCC Report & Order 16-127.
  - b. Modifications will need to be developed to support the 2017 FCC Order on Reconsideration.
  - c. Modifications will need to be developed to support the 2018 Report & Order on device-based geo-targeting.
  - d. Working baseline with Editor's Notes of potential topics for updates exists.
5. ATIS-0700032 Supplement B of J-STD-100
  - a. Published in August 2017 to support FCC R&O 16-127.
  - b. There are no known additional modifications required.
6. ATIS-0700033 Supplement C of J-STD-101
  - a. Published in August 2017 to support FCC R&O 16-127.
  - b. There are no known additional modifications required.

7. ATIS-0700034 Supplement B of J-STD-102
  - a. Published in August 2017 to support FCC R&O 16-127.
  - b. There are no known additional modifications required.
  
8. ATIS-0700035 Enhanced Wireless Emergency Alert (eWEA) Service Description
  - a. Modifications still being developed to support the FCC Report & Order 16-127.
  - b. Modifications will need to be developed to support the 2017 FCC Order on Reconsideration.
  - c. Modifications will need to be developed to support the 2018 Report & Order on device-based geo-targeting.
  - d. Bibliography will need to be updated for new FCC Reports and Orders, for new ATIS deliverables, and for any additional referenced standards.
  
9. ATIS-0700036 Enhanced Wireless Emergency Alert (eWEA) Mobile Device Behavior Specification (a revised version of J-STD-100)
  - a. Modifications still being developed to support the FCC Report & Order 16-127.
  - b. Modifications will need to be developed to support the 2017 FCC Order on Reconsideration.
  - c. Modifications will need to be developed to support the 2018 Report & Order on device-based geo-targeting.
  - d. Dependent on the new Device-Based Geo-Targeting WEA Message Content spec.
  
10. ATIS-0700037 Enhanced Wireless Emergency Alert (eWEA) Federal Alert Gateway to CMSP Gateway Interface Specification (a revised version of J-STD-101)
  - a. Published in December 2017.
  - b. Working group will need to evaluate if modifications will need to be developed to support the 2017 FCC Order on Reconsideration.
  - c. Modifications will need to be developed to support the 2018 Report & Order on device-based geo-targeting.
  
11. ATIS-0700038 Enhanced Wireless Emergency Alert (eWEA) WEA Federal Alert Gateway to CMSP Gateway Interface Test Specification (a revised version of J-STD-102)
  - a. Modifications still being developed to support the FCC Report & Order 16-127.
  - b. Working group will need to evaluate if modifications will need to be developed to support the 2017 FCC Order on Reconsideration.
  - c. Modifications will need to be developed to support the 2018 Report & Order on device-based geo-targeting.

12. ATIS-0x000xx Feasibility Study on Device-Assisted Geo-Targeting
  - a. Working group will need to determine if this feasibility study is still needed due to the 2018 FCC Report & Order of device-based geo-targeting.
  - b. Working baseline with Editor's Notes of potential topics for updates exists.
  
13. ATIS-0x000xx Feasibility Study for WEA via a Well-Managed Application
  - a. Working baseline with Editor's Notes of potential topics for updates exists.
  
14. ATIS-0x000xx Wireless Emergency Alert (WEA) End-to-End Security Best Practices
  - a. Still in development.
  
15. ATIS-0x000xx Geo-Targeting Best-Practices for Alert Originators
  - a. Working group will need to determine if this best-practices specification is still needed due to the 2018 FCC Report & Order of device-based geo-targeting.
  - b. Working baseline with Editor's Notes of potential topics for updates exists.
  
16. ATIS-0x000xx Device-Based Geo-Targeting WEA Message Content
  - a. New specification to define a WEA message containing both the alert message text and the associated polygon for device-based geo-targeting.
  - b. Target audience will be Alert Originators, IPAWS, CMSP Gateway vendors, CBC vendors, and mobile device vendors.
  - c. Working baseline will need to be created.
  
17. ATIS-0X000xx Device-Based Geo-Targeting APIs
  - a. New ATIS specification to define the APIs for an application on the mobile device to receive a WEA message containing both the alert message text and the associated polygon for device-based geo-targeting.
  - b. Working baseline will need to be created.
  
18. ATIS-0X000xx Device-Based Geo-Targeting End-to-End Test & Verification
  - a. New specification to define the test methodology and test cases for the end-to-end test and verification of device-based geo-targeting.
  - b. Working baseline will need to be created.
  
19. ATIS Report on Upgradable Mobile Devices
  - a. ATIS report to FCC on capabilities of the existing legacy mobile devices to support upgrades to implement device-based geo-targeting.
  - b. Working baseline will need to be created.

20. 3GPP TS 22.268 Public Warning System (PWS) Requirements

- a. 3GPP technical specification defining the global requirements for Public Warning Systems (PWS). WEA is a component of PWS.
- b. 3GPP Change Requests (CRs) will need to be developed to support the 2018 Report & Order on device-based geo-targeting.

21. 3GPP TS 23.041 Technical Realization of Cell Broadcast Service

- a. 3GPP technical specification defining the Cell Broadcast Service (CBS) which is the broadcast mechanism for WEA messages.
- b. 3GPP Change Requests (CRs) will need to be developed to support the 2018 Report & Order on device-based geo-targeting.

22. 3GPP Changes for WEA App

- a. 3GPP network enablers to support the ATIS WEA via a Well-Managed Application (WEA App).
- b. Will need to determine if these 3GPP network enablers require new 3GPP technical specifications and/or changes to existing 3GPP technical specifications.

23. 3GPP Device-Based Geo-Targeting APIs

- a. 3GPP underlying API enablers to support the ATIS APIs for an application on the mobile device to receive a WEA message containing both the alert message text and the associated polygon for device-based geo-targeting.
- b. Will need to determine if these 3GPP API enablers require new 3GPP technical specifications and/or changes to existing 3GPP technical specifications.

24. OASIS Common Alerting Protocol (CAP)

- a. OASIS specification that defines the protocol between the Alert Originators and the FEMA IPAWS system.
- b. Modifications will need to be developed to support the 2018 Report & Order on device-based geo-targeting.

25. OASIS IPAWS CAP Profile

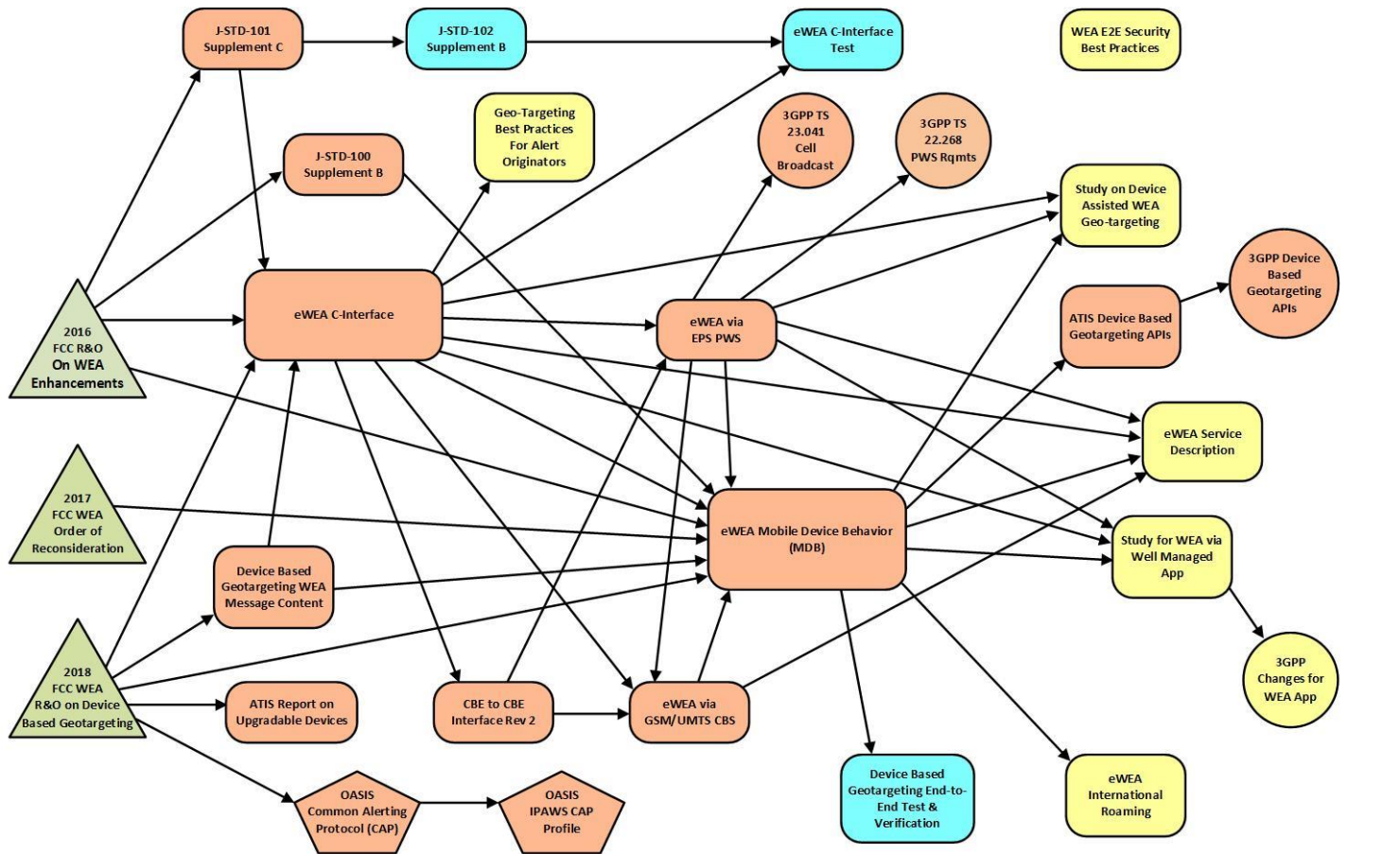
- a. OASIS specification that defines the profile (i.e., CAP configuration) for the CAP messages between the Alert Originators and the FEMA IPAWS system.
- b. Modifications will need to be developed to support the 2018 Report & Order on device-based geo-targeting.

## **eWEA Deliverables Dependencies Diagram**

The following diagram portrays the dependencies of the above eWEA deliverables associated with the FCC Reports & Orders for enhanced WEA.

NOTE: In the following diagram, Deliverable A pointing to Deliverable B means that the completion of Deliverable B is dependent upon the completion of Deliverable A.





**Legend**

