December 23, 2014

Via Electronic Filing

Marlene H. Dortch, Secretary

Federal Communications Commission

445 Twelfth Street, S.W.

Washington, DC 20554

Re: Ex Parte Presentation, PS Docket Nos. 10-255 & 11-153

Dear Ms. Dortch:

On December 18, 2014, Zubin Wadia, Founder & CEO, Alma Safety ("Alma"), met in person with David Furth, Deputy Chief of the Public Safety & Homeland Security Bureau, Timothy May, Projects Manager for E911, Dana Zelman, Attorney Advisor, David Siehl, Attorney Advisor, Michael Connelly, Attorney Advisor, Eric Ehrenreich, Attorney Advisor, and Rasoul Safavian, Senior Engineer for ERIC to discuss the Federal Communications Commission's Second Report and Order and Further Notice of Proposed Rulemaking in the above-captioned proceeding.

During the 90-minute meeting, Alma introduced its unique dispatchable location solution and associated efforts around building highly efficient Bluetooth beacons that are easy to setup and designed to last 5+ years. Alma also demonstrated the platform's text-to-speech capabilities for delivering critical information such as Caller-ID, indoor location and type of emergency to the correct PSAP.

Alma noted that the current National Emergency Address Database (NEAD) plan was lacking in critical details as to how the 72-month dispatchable location roadmap would be realized. Alma noted that key stakeholders and responsibilities were already

assigned, before details were specified. There needs to be clarity on data ownership, access, and distribution.

As a solution, Alma urged the Commission to consider building an Application Programming Interface (API) for National Address data. A National Address API (NAAPI) would be a standards-based, secure and transparent way to involve various stakeholders – from vendors, to Government Agencies, to PSAPs and Researchers.

1. The NAAPI would be designed as a cloud-based distributed system, with multiple synchronized snapshots deployed for maximum durability under all operational conditions. A Domain Name System (DNS) system that routes requests to the closest available NAAPI server is a proven approach that scales to billions of requests per day.

2. The NAAPI would store the following data:

    - List of 9-1-1 Primary and Secondary PSAPs (inclusive of address and phone number)

    - GIS Polyline data identifying jurisdictions served by a given PSAP (this may take time to achieve)

    - List of Device Owners (an Owner can have one or more devices for their home/office/organization)

    - List of Device ID (actual MAC address or UDID or similar identifier)

    - List of Dispatchable Locations (Room/Apartment/Floor, Address1, Address2, City, State, Zip)

Alma also urged the Commission to consider more open approaches to innovation; approaches that focus on building platforms which other stakeholders can plug into and expand upon. Alma cautioned that thinking in decade-long horizons is

inherently risky when it comes to technology. Humans think linearly, technology advances exponentially.

Alma noted that if the Commission rolled back the clock to 2005, we would be in a world with no iPhones, no Android devices and no LTE/4G. We would be in a world where texting was the dominant form of communication. In 2015, texting via SMS is in its third year of decline and is slated to account for only 10% of all US communications by 2018. Today, Over-the-Top messaging applications on smartphones dominate. In another 5-10 years, the paradigm may shift again.

Alma also strongly espoused the role Bluetooth, Wi-Fi and future sensor protocols will play in delivering reliable indoor dispatchable location across all 120M+ structures in the USA. For the 120M+ 9-1-1 calls that originate from outdoors locations, the inherent value of A-GPS, GNSS and OTDOA technologies is clear. For the 120M+ 911 calls that originate from indoors and in dense urban environments, having a dispatchable location versus X-Y-Z coordinates may be the difference between life and death.

Alma urged the Commission that while it was useful to get a location lock within 50 meters (latitude-longitude) and 3 meters (elevation), the true value is in translating this location into a Room/Floor/Address that dispatchers can act upon. Knowing that someone is in distress 100 feet in elevation isn't as actionable as knowing that someone is in distress at "7th floor, Apartment 7B" of an apartment building.

The Commission raised concerns on two topics:

- That citizens and organizations may end up inadvertently associating incorrect addresses to beacons, resulting in confusion for dispatchers and first responders.

- That the beacons themselves could be moved to other locations and now have an out-of-date dispatchable location associated to it.

Alma acknowledged that these were plausible concerns, and noted the following solutions:

- That Alma beacons are configured to perform periodic (a) health-checks on its own sensors and sub-systems (b) check battery levels and announce if they are low and need replacement.

- That Smartphone 911 Apps such as Alma are configured to operate in the background, allowing them to detect beacons in their proximity. If a known beacon happens to now be in an invalid location – the owner of the beacon is simply alerted to this fact and the beacon is temporarily de-commissioned from broadcasting any further.

The Commission also made two prudent recommendations around beacon technologies that Alma will research further into:

- That beacons have additional radios (Wi-Fi/LTE) that allow them to "call home" without the need for a smartphone to be in range. Due to the additional power requirements, these beacons may require to be plugged in, but that's still a viable option for large organizations with mission critical needs.

- That beacons leverage accelerometer and barometer sensors to detect movement and changes to the last known location fingerprint, allowing for elegant detection that a beacon was moved without reconfiguration.

Further to National Address data and Dispatchable Location, Alma also urged the Commission to consider making smartphone 9-1-1 apps first class citizens of the public safety ecosystem. Alma's demo to the Commission demonstrated how such apps are complementary to voice-based 9-1-1 systems.

These apps make 9-1-1 more accessible, and allow 9-1-1 to be called within 3 seconds, silently and deliberately. Just as importantly, they require neither significant re-training nor purchase of new equipment on the PSAP side. They simply continue to receive emergency requests over the phone.

Alma concluded by reiterating its vision for the future of 9-1-1:

We at Alma look forward to responsibly innovating in the 9-1-1 Public Safety Space. We see a future where 9-1-1 is an evergreen, open and secure platform enabling authorized services to integrate with it efficiently. We aim to build a platform that evolves in lock step with the technologies and standards around it. We look forward to engagement with the Commission, NENA and the APCO on these matters.

Pursuant to Section 1.1206 of the Commission's rules, 47 C.F.R. § 1.1206, this letter is being electronically filed via ECFS. Please direct any questions to the undersigned.

Sincerely,

Alma Safety and Every Second Counts, Inc.

/s/ Zubin Wadia

Zubin Wadia
Founder & CEO
http://alma.io

cc: David Furth
Timothy May
Dana Zelman
David Siehl
Michael Connelly
Eric Ehrenreich
Rasoul Safavian