Update on the National Emergency Address Database (NEAD)

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The NEAD Plan

NEAD, LLC was established by 'CTIA-The Wireless Association' (representing NENA, APCO, and 4x Tier 1 Carriers) design / implement the NEAD. Smaller carriers (Tier 2&3) represented by CCA.

Bluetooth LE UUID

WiFi MAC Address

- The NEAD stores the physical addresses of WiFi and Bluetooth beacons to determine the 'dispatchable' location of the beacon itself.
- A dispatchable location is a street address with a floor, room number, or other subaddress information.
- Alliance for Telecommunications Industry Solutions (ATIS): NEAD Project Manager.
- West Safety Services: NEAD implementation vendor.
- Two parts: **NEAD** (database) and **NEAM** (administration, data provisioning management, validation).

NENA JCM NEAD Definitions

- **Reference Point**

  Generic term used to reference either an Access Point or Bluetooth® beacon.

- **Owner**

  The entity that is ultimately responsible for the Reference Point.

- **Authorized User**

  Entity that acts on authority of the Owner. May be the Owner or a 3rd party on behalf of the Owner. Only an Authorized User can query for or manage a specific Reference Points.

- **External Data Sources**

  An operator, user or organization that owns or operates one or more Reference Points (same as Owner).

Working Groups in Support of NEAD

- Oversight/Advisory Working Group
- Test Bed Working Group
- NEAD Development Working Group
- PSAP Implementation Working Group
- Dispatchable Location Outreach Working Group
- Z-Axis Working Group
- Standards Working Group
- Demonstration Working Group

How the NEAD Works

- MAC/UUID addresses entered by:
  - Service-orders from wireline/cable/fiber carriers.
  - Customers provisioning when supplying their own devices.
  - Building owner provisioning for integrated devices (ex. Smoke detectors, exit signs etc.).
- Address validated against an MSAG or GIS-based LVF to subaddress level, but only to street address if the data did not include subaddresses.
- If an address does not validate to the subaddress level, existing procedures can be used to report missing subaddress data (user overrides).
- All data to be assigned ‘Privacy and Security values‘ by West according tothe privacy and security requirements plan.
- Display of complete address location, including subaddressing of the device, under development now (X/Y/Z option).
- There is still a year to go before the NEAD goes live, so some details are not worked out yet. An overall project plan to do so is now being developed

NEAD Platform Logic Flow

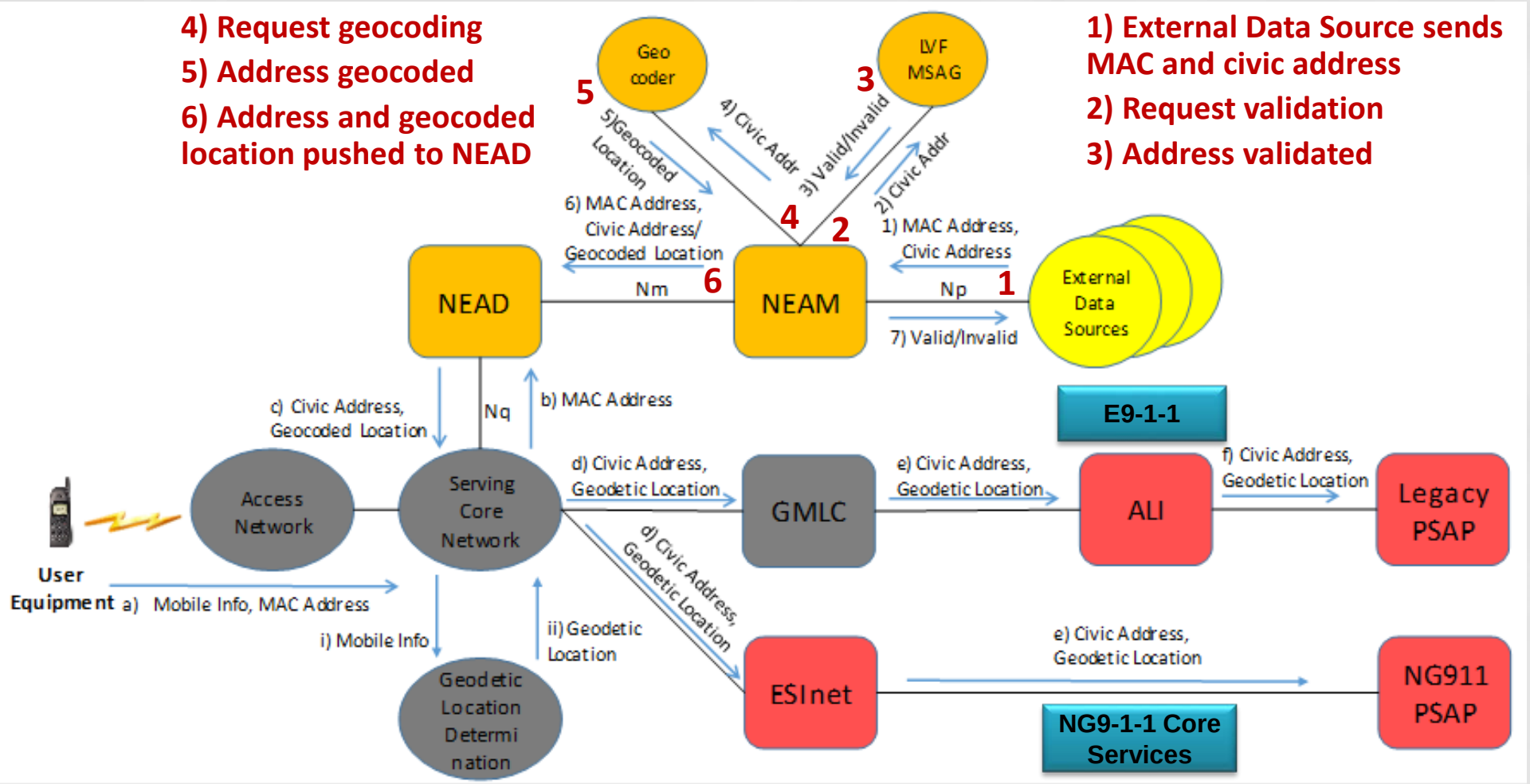
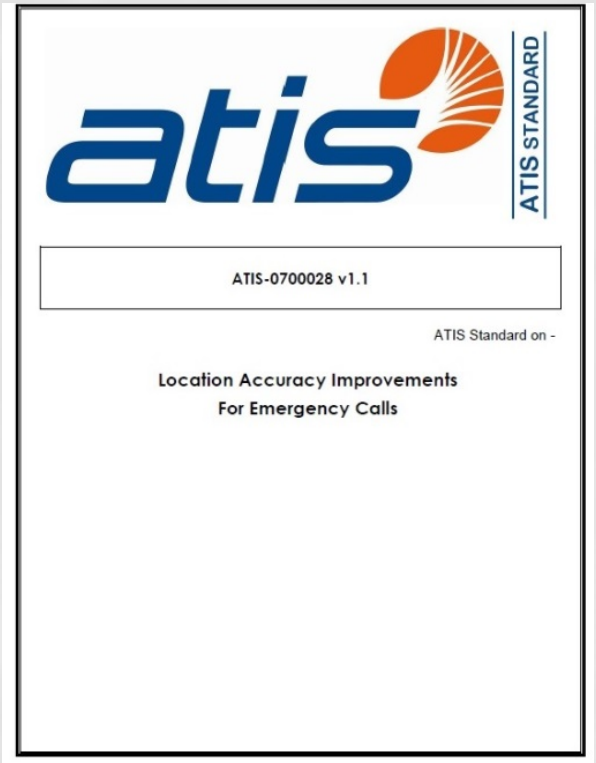


Diagram courtesy West Corp.

ATIS Standard

- NEAM Assumptions & Requirements
- NEAD Assumptions & Requirements
- User equipment (UE) Requirements
- Architecture
  - UE
  - NEAD
  - NEAM
  - Access Network
  - Serving Core Network
  - External Data Sources
  - Legacy Emergency Services Network
  - NENA i3 ESInet



- Stage 3 - Support for acquisition and conveyance of high accuracy location information (HALI) for an emergency call. (procedures & protocols)

Questions Recently Asked…

- How will data provisioned to the NEAD be validated? Will current MSAG or ALI data be used? Will West engage with local and/or state agency staff to identify and obtain authoritative data for jurisdictions within each state and to establish a data maintenance regime?

  MSAG and LVF data. For those areas that WEST doesn't currently have these for, it is assumed they will obtain it.

- Does the partnership include ALL landline and VOIP providers such as cable operators providing "bundled" services?

  Only certain wireless carriers are involved.

- If a NextGen project is in place, with authoritative address data and locations aggregated from local government entities, will the data in an LDB and/or LVF based on that data be used?

  LVF necessarily.

Questions Recently Asked…

- Will the validation occur as data is entered, or is it a function of the NEAM module to process and standardize data sometime later? Will pick lists and similar mechanisms be used to synchronize data entry to the maximum extent possible with existing authoritative data?

  Validation happens as data is entered.

- If there are discrepancies, will the original provisioning entity be notified? Will the provider of the authoritative data used in validation be notified? In general, what is the discrepancy reporting process?

  I don't think that process is completely defined yet.

- If there are discrepancies who gets notified and what is the process (ex. original provisioning entity, provider of the authoritative data, etc.)?

  This process is not completely defined yet.

Questions Recently Asked…

- Will the address data be validated at the level of building, floor and unit? If the data in the NEAD record are more complete but otherwise consistent with the authoritative data, will this constitute a discrepancy?

  Address data validation is at building address level. Not location level, as in floor or room.

- Will the data collected be shared with local, regional and state responding agencies?

  NEAD data is not shared with non-carrier entities, as arranged currently.

- Will content standards be implemented for building, floor and unit data – not just consistent with CLDXF schema but relating to the actual content of these fields?

  Some content standards for location (sub-address) will evolve, but are not clearly defined at present.

Going Forward

From effective date (2015) of FCC order by:

2017 - 40% of wireless 9-1-1 calls must be accurate to within 50 meters for both outdoor and indoor wireless call locations.

2018 - Requirement goes to 50% and adds deliver uncompensated barometric pressure to PSAPs from any capable device.

2020 - Requirement goes to 70% of wireless calls.

2021 - Requirement goes to 80% of wireless calls, with movement to 25% of calls having 'Dispatchable Locations' and/or 'Z' value. (NEAD 'reference points' to help facilitate this)

2023 - 80% of wireless calls must have an associated 'dispatchable location' (top 50 areas) and/or 'Z' value.

Open Discussion