

The Regulatory Framework for Managing Address Data in 911 Systems

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Regulation of telcos & 911



Federal: Communications Act of 1934

- established FCC authority over phone companies
 - regulated as 'common carriers' in interstate commerce
- amended in response to economic conditions and technology developments
 - Cable Communications Policy Act of 1984 deregulated cable industry
 - Telecommunications Act of 1996 dealt with breakup of Bell system
 - Wireless Communications and Public Safety Act of 1999 dealt with wireless 911
 - Ruling by FCC in 2005 dealt with VOIP 911
 - New and Emerging Technologies 911 Improvement Act of 2008 filled in gaps

State: Public utility commissions, corporation commissions, etc

- telcos initially regulated like "utilities"
- during this phase traditional e911 was deployed
- 911 regulations similar state to state
- however, funding amounts and formulas differ

Address data in traditional 911 services



- **ANI and ALI databases of subscriber info**
 - E911 automatically routes the emergency call to PSAP (ANI)
 - PSAP gets customer name and address (ALI)
 - ANI/ALI maintained by the “incumbent” phone company (ILEC)
 - other phone companies are required to contribute data (CLECs)
- **discrepancy reporting**
 - if a call is mis-routed, the reason why can be investigated
- **subscriber address data and public safety**
 - 1999 legislation required all **local-exchange carriers** to share subscriber data (ALI) with emergency service providers on request
 - often used in ‘reverse-notification’ systems
 - hence, Verizon provides a regular export from the ALI database in MA to MassGIS



Local role in maintaining 911 address data

- **phone companies (or 911 service providers) required to validate ALI database against a Master Street Address Guide (MSAG)**
- **MSAG is a list of all valid street names and address ranges identifying the emergency service providers for each block of addresses (ESN)**
- **MSAG content is controlled by local authorities**
- **MSAG and ALI format and content standards not mandatory**



What about wireless and VOIP?

- **Wireless**

- Wireless Communications and Public Safety Act of 1999 required wireless service providers to support 911 calls

- **“Portable” VOIP**

- Initially, providers didn’t want to support E911
- Often, they didn’t tell the subscriber that 911 wouldn’t work properly
- FCC intervened in 2005 to make 911 service mandatory for VOIP
- **Service provider (and customer) responsible for tracking location**
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- **Cable companies offering “triple-play” bundled phone service**

- still VOIP, but customer location fixed, not typically portable
- classified as “information service providers” not phone companies by FCC
- **often participated in traditional ALI databases, BUT... some didn’t**



NextGen and the ALI goes away

- Routing calls in NextGen requires a map of addresses
- ESL is an important reference
- One day ... a million Comcast records drop out of ESL?

Since we will be responsible for mapping those addresses and any new Comcast subscriber addresses, this last development was alarming.



FCC to the rescue

- **Thanks to Tim May and Dana Zelman at the FCC – amazing grace, all my fears relieved**

Communications Act of 1934, *as amended by* the New and Emerging Technologies 911 Improvement Act of 2008 at 47 U.S. Code § 222

(g) Subscriber listed and unlisted information for emergency services

Notwithstanding subsections (b), (c), and (d) of this section, a telecommunications carrier that provides telephone exchange service or a provider of IP-enabled voice service (as such term is defined in section 615b of this title) shall provide information described in subsection (i)(3)(A) of this section (including information pertaining to subscribers whose information is unlisted or unpublished) that is in its possession or control (including information pertaining to subscribers of other carriers) on a timely and unbundled basis, under nondiscriminatory and reasonable rates, terms, and conditions to providers of emergency services, and providers of emergency support services, solely for purposes of delivering or assisting in the delivery of emergency services.

makes it very clear that ALL “interconnected” providers of dial-tone must provide subscriber address info to 911 projects

Comcast, after a protracted negotiation, provided its complete customer list in support of our mapping effort and allowed us to publish the address information in anonymized form