Verizon's Technical Comments on the Internet Protocol (IP)-Based 9-1-1 Network Feasibility Study (Jan. 2015)

These comments are intended to be of a technical nature and are not policy comments on the study's recommendations.

Executive Summary, page 1, Operational Feasibility - Operational Feasibility highlights section highlights the need to act regionally for items such as CAD and CAP, but does not mention the importance of regional interoperable networking. The greatest benefits are likely derived from a collaborative and inclusive regional network plan.

Sec. 1.2 Feasibility Study Purpose

The listed "two widespread, significant limitations" of length of call set up time and ability to transfer calls statewide seem like relatively insignificant reasons upon which to base the significant changes recommended by the study.

Call set-up time is generally several seconds in an analog network. Is eliminating 2 seconds in response time the reason you want to use to justify a completely new network?

The other stated reason is a limited ability to transfer 911 calls statewide. The legacy network can be configured with intertandem trunking to enable transfers and VZ has done so where requested. It has received few requests.

If this were truly the purpose of this study, a tremendous effort has been spent to address some relatively minor issues. It might be more accurate to state that the purpose of this study is to describe the many advantages of a statewide ESInet / NG911 platform, the inevitable need to migrate the legacy platforms to the ESInet / NG911 platform, and the need to establish a migration plan.

4.8.1 CSP Call Delivery

While it is true that continuing to "Tandem" traffic at the legacy 911 Tandem / Selective Routers results in an additional network element / leg in the call flow, the efficiency gained by the tandem trunk aggregation / grooming and the redundancy provided by the Verizon mated tandem architecture actually provides for improved network resiliency that in most cases would provide greater network efficiency and resiliency than a direct trunk / unswitched call path.

4.8.2 ESInet Ingress

Verizon agrees that ESInet Ingress design and policies can be problematic in the transition to NG911 and that a collaborative approach with CSPs, most importantly legacy ILEC 911 Service Providers, is necessary. Special attention and care is required to ensure that universal 911 access is provided to all stakeholders and that costs are not unfairly shifted to stakeholders. For example, the pricing for legacy systems was developed on statewide average rates to ensure reasonably priced access / 911 call delivery was equally available to rural PSAPs where the higher network costs due to longer circuits or due to the requirement for special construction to provide certain facilities are spread over relatively fewer subscribers who contribute fewer surcharge fees

4.8.2.1 Concept of a Public Safety Gateway

This is an interesting concept and certainly a potential benefit to both the migration and ongoing administration of the ESInet. However, it is unclear how this would "eliminate the potential double billing for both legacy and NG911 services" unless the PSGW is actually selectively routing all the traffic. If the PSGW will not be performing the selective routing function, then the legacy 911 providers will have to continue to perform that function.

CSP end offices do not conform to political boundaries. Selective routing of 911 calls at some point in the process is required to deliver calls to the appropriate PSAP.

4.12 Findings and Recommendations

Finding #2 - SIP call delivery will reduce call setup times. The recommendation is that VITA should work with carriers to implement SIP call delivery to the ESInet.

This makes sense where calls originated as VoIP / SIP. However, where calls originate as TDM, carriers should be free to choose if they will keep the calls as TDM and leverage existing legacy 911 network infrastructure up to the POI where the PSGW / NG911 provider will pick up the traffic and convert to SIP, or the carrier will convert to SIP before the POI.

5.2.4 911 Funding and Tax Structure

A fuller understanding of the history of E-911 taxes prior to the implementation of the Communications Sales and Use Tax on January1, 2007 might be helpful. A significant amount of the taxes collected prior to tax reform in 2006 were landline E911 taxes levied by most localities. Prior to 2006, these taxes were collected by CSPs and remitted directly to the locality in which the taxes were collected. E911 tax rates were statutorily capped at $3.00 per line per month. In 2005, approximately 40 of the 151 localities levying this tax did so at the maximum $3.00 rate. Localities were required to spend this tax revenue on items related to the provision of E911 services. While some of the revenue collected under the former landline E911 tax was directly replaced by the new $.75 per line per month E911 tax, the remainder of that revenue continues to be collected through the Communications Sales and Use Tax.

In addition, the statement, "Each locality's share of the net revenue is distributed at the end of the month based on the locality's share of total local revenues received from the taxes and fees collected" is, at best, confusing. The distribution formula for the Communications Sales and Use tax is set forth in VA Code § 58.1-662 (C). That section originally set the distribution formula "according to the percentage of telecommunications and television cable funds (local consumer utility tax on landlines and wireless, E911, business license tax in excess of 0.5%, cable franchise fee, video programming excise tax, local consumer utility tax on cable television) they received respectively in Fiscal Year 2006 from local tax rates adopted on or before January 1, 2006." 2006 Acts of Assembly, ch. 780 (2006). This section was later amended to use 2010 distributions as the apportionment factor.