

Enhancing Public Safety with Next Generation E911 (NG911)

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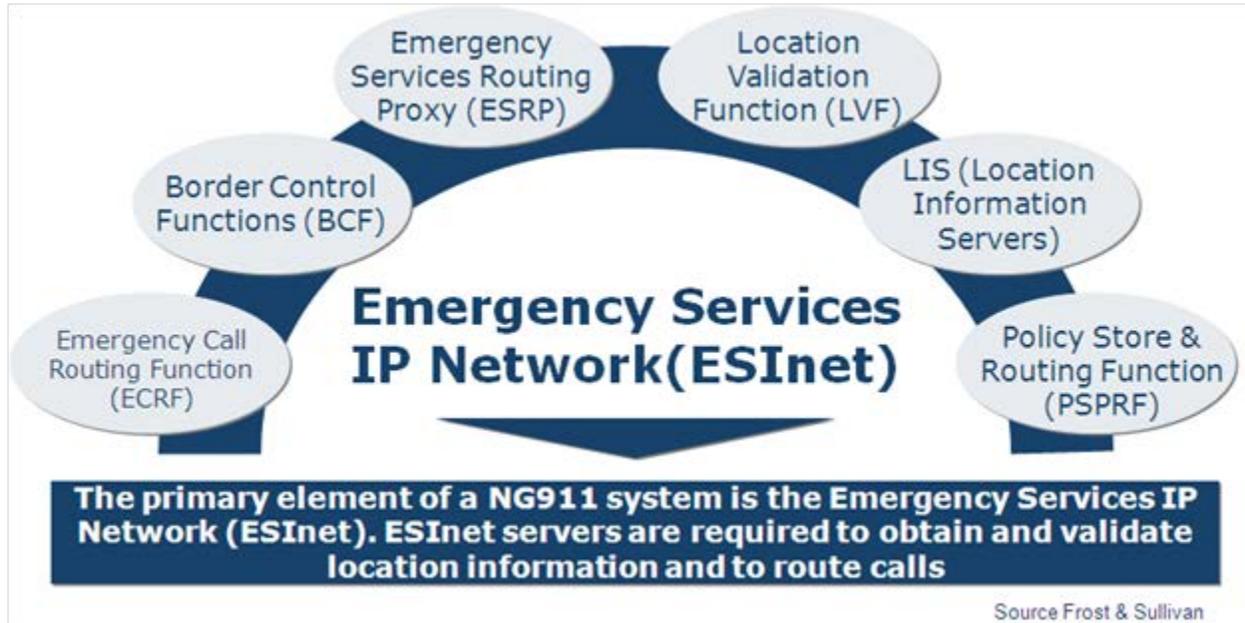
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In contrast to the legacy 'voice-centric' E911 network, Next Generation E911 (NG911) will support a more diverse set of IP-based communications including text, data, photos, and video exchanges that will enhance the speed, accuracy, and preparation of first responders. The Federal Communications Commission (FCC) is currently working closely with key stakeholders in the public safety sector in order to ensure a seamless and cost effective transition to NG911.

What are the core elements of NG911?

The primary element of a NG911 system is the Emergency Services IP Network (ESInet) which is designed as an IP-based inter-network shared by all agencies involved in an emergency. The ESInet obtains and validates an emergency caller's location and routes the voice, video, text and data



exchanges to the appropriate Public Safety Answering Point (PSAP).

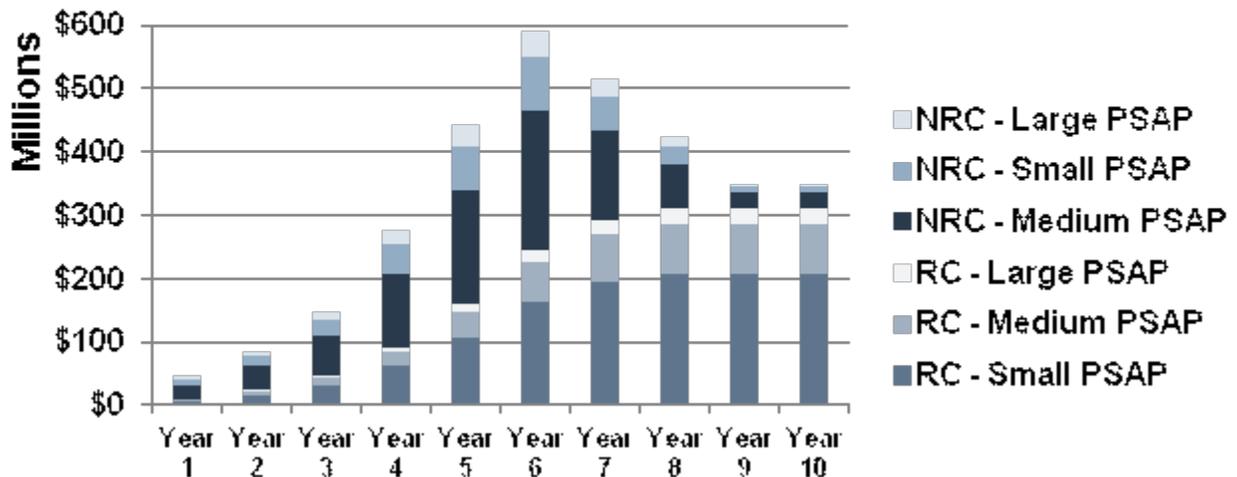
The Revenue Opportunity

The purchasers of NG911 systems are generally counties or states that control Public Safety Answering Points (PSAPs). Many states have centrally organized their PSAPs in order to conduct state-wide NG911 upgrades, while other states elect to purchase NG911 upgrades on a PSAP-by-PSAP basis or through regional coalitions.

The major costs for the PSAP are related to connectivity (i.e. costs to access the ESInet) and the chosen architecture (which can either be 'dedicated' or 'hosted') to provide the NG911 service. The dedicated model requires greater capital expenditures and on-going support as the PSAP owns and operates all network, call routing, and call processing equipment. With a hosted model, the PSAP can outsource these components to a third party service provider.

The FCC released a study in September 2011 which examined the cost of implementing NG911 in the US. Assuming that PSAPs do not consolidate operations as they transition to NG911, the FCC estimated that over 10 years, the costs for implementing NG911 could approach \$3B (with \$1.2B in non-recurring costs and \$1.8B in recurring costs). Clearly this represents an enormous revenue opportunity for a variety of solution providers in the NG911 space.

Non-Recurring Costs (NRC) and Recurring Cost (RC) - Ramp Up (Example)

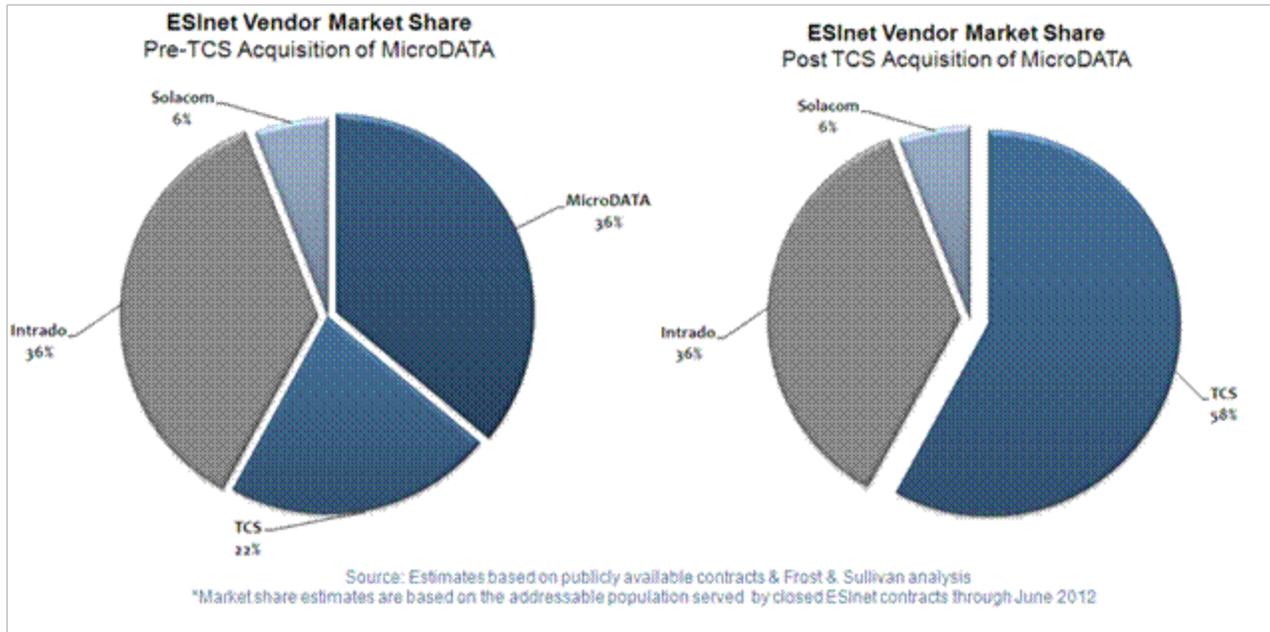


Source: Federal Communications Commission

(FCC): White Paper: A Next Generation 911 Cost Study

Players to Watch in the NG911/ESInet Market

To date, four vendors have received contracts for the ESInet portion of NG911 contracts: **microDATA**, **Intrado**, **Telecommunications Systems (TCS)** and **Solacom**. Contracts generally include non-recurring license and installation revenues, followed by a long-tail of required software maintenance and potential recurring managed services for network monitoring. With the acquisition of microDATA in July 2012, Frost & Sullivan research suggests TCS has recently emerged as the market share leader in ESInet contracts (see chart below). Market share estimates are based on the addressable population of closed ESInet contracts.



The Last Word

The Mobile Internet has ramped up faster than the desktop internet, leading to dramatic growth in smartphones, tablets and other emerging connected devices. In this environment, the benefits of introducing nationwide next generation E911 to the US communications market will be evolutionary, and perhaps even revolutionary, for key stakeholders in public safety. End users will experience improved functionality that will allow them to efficiently relay video, text, data and voice calls in emergency situations. Public safety organizations will benefit from cost savings and increased network performance from the replacement of circuit switched networks to IP networks. Finally, first responders will have enhanced access to real-time, mission-critical data to assess, prepare, and respond to emergencies quicker and more efficiently than ever before.