

***MWCOG Regional  
Text-to-9-1-1 Project Efforts  
Update to  
Virginia E-911 Services Board  
August 26, 2014***



***Metropolitan Washington Council Of Governments (MWCOG)  
Twelve 9-1-1 centers serving 23 communities comprised of 5.5  
million residents in the National Capital Region***

# Agenda

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- » Introduction
- » Project Overview
- » Key User Requirements for Interim Solution
- » Key Architecture Requirements for a Solution
- » Current Status

# Project Overview of MWCOCG Interim Text-to-9-1-1 Study

## Tasks Performed For This Project Were:

1. Collected information on the currently deployed solutions
2. Compiled and tabulated data
3. Analyzed pros and cons of all solutions studied
4. Developed recommendations

## Participants

1. City of Alexandria, VA
2. Charles County, MD
3. Fairfax County, VA
4. Loudoun County, VA
5. Montgomery County, MD
6. Stafford County, VA
7. Arlington County, VA
8. District of Columbia
9. Frederick County, MD
10. Prince George County, MD
11. Prince William County, VA



Completed Report in Jan/Feb 2014

Funded via DHS grant with assistance  
provided by Winbourne Consulting



# Project Overview of MWCOCG Interim Text-to-9-1-1 Study

Gathered information on the currently deployed solutions from numerous sources

## FCC

- Public Safety and Homeland Security Bureau
- Text-to-9-1-1 Deployment records

## Wireless Carrier Reports

- FCC Reporting
- Press Releases
- Public Presentations
- Marketing Materials

## Third-Party Text-to-9-1-1 Providers

- Intrado
- TCS
- Agent511

## Interviews w/text-enabled PSAP Personnel

- State of Maine
- NCTOG
- State of Vermont
- Black Hawk County, Iowa

## Wireless Carrier Presentations

- Sprint
- Verizon
- AT&T
- T-Mobile

## Group Interviews with NG9-1-1 PSAP Program

- Christy Williams & LeAnna Russell, North Central Texas Council of Governments (NCTCOG)
- Maria Jacques, State of Maine

# Key User Requirements for Interim Solution

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## **Make it a Regional Implementation so the Public Is not Confused**

- Deploy a solution that supports all wireless carriers in the U.S. who have implemented text-to-9-1-1 in accordance with the FCC guidelines so that people in the MWCOCG region can easily understand where text-to-9-1-1 is available (i.e., don't say it's available in County A but not next door in County B).

## **Make public interaction similar to what they use & easy for PSAPs**

- Deploy an NG9-1-1 compliant text aggregating solution with capabilities to have efficient two-way texting conversations and not slower one-way conversations that rely on TTY-to-SMS message conversions. The solution should meet NENA i3 standards.

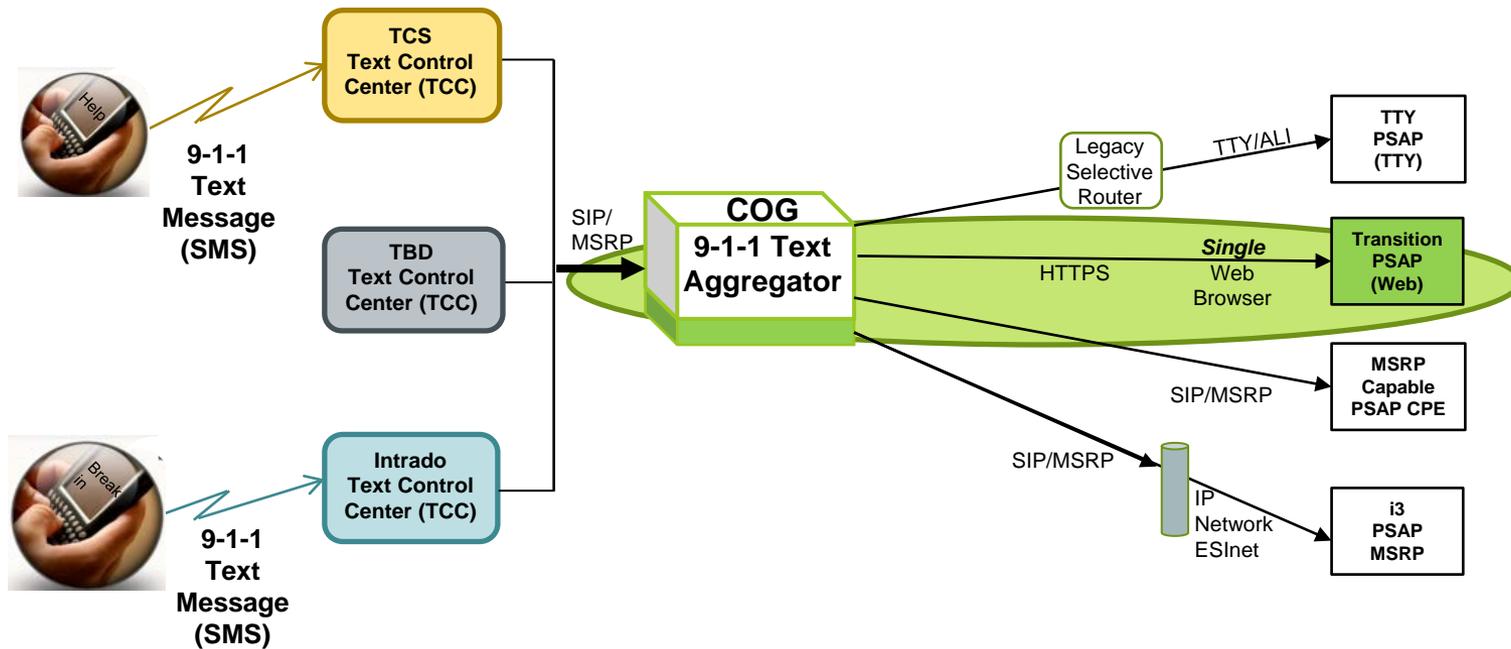
## **Make a Regional Choice with a shared Contract Vehicle**

- Acquire a text aggregating solution that easily supports transfers of text sessions among jurisdictions and make the solution available to each member of COG (or any jurisdiction in country) by entering into a competitive procurement with a COG purchase rider (Fairfax County RFP).

# User Requirement Example from RFP

- » Requirement 5.2.1
- » **Use Case #1 - Basic Text Message Call from An Interconnected Texting Application**
- » The offeror should **describe and be ready to demonstrate** how their proposed solution (aggregator and web browser) works when a texter in the following situation:
- » Person with wireless device using SMS or an Interconnected text application, without speaking to the PSAP, and located within the jurisdictional boundaries of Fairfax County, types in a request for help and **enters the digits '911'** as the sender phone number and requests emergency medical assistance, demonstrating:
  - **Call flow** from user to call taker
  - Determine the ability to find a verifiable responding address from the information entered into a wireless device by a texting user.
  - **At a minimum display information about the text caller** to include
    - Callback phone number
    - Coarse location (Phase 1 equivalent)
    - Carrier network delivering text message
    - Horizontal uncertainty information such as latitude, longitude, range in meters of where caller is located
    - Street map with location of caller indicated by a pinpoint marker of some type
  - **Describe any automated interface** available to allow the call taker to press a function key and have the texter's location (as identified in the web browser) passed in an automated fashion to a **Computer Aided Dispatch (CAD)** system for address verification (such as is done with ANI/ALI information in Fairfax County with the Intergraph CAD system)
- » **Illustrate the amount of accuracy** the coarse location of the provider's solution affords a PSAP. Demonstrate how the initial coarse location information (when the emergency text is first received prior to any rebidding or conversation between the call taker and the texter) compares to the CAD verified civic address provided by the texting user which is determined after the texter and call taker exchange address information. **Explain the levels of location accuracy** available in the proposed solution.

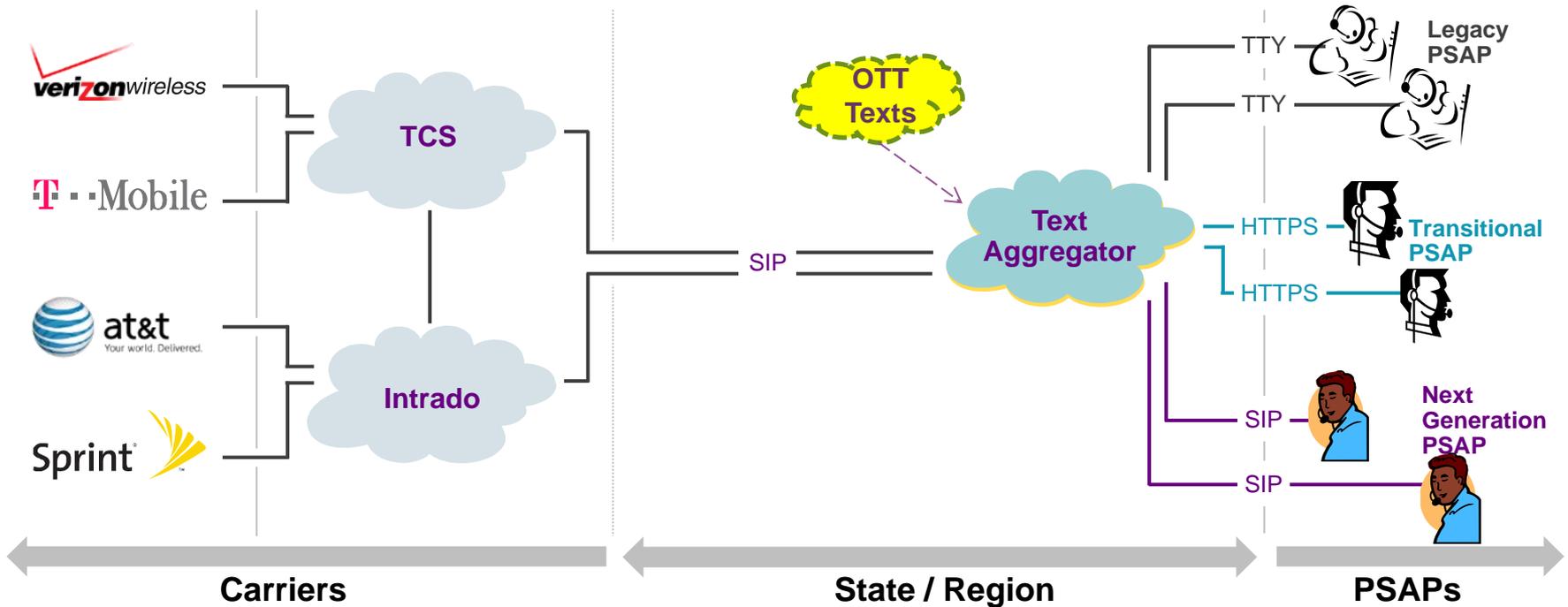
# Metropolitan Washington Council Of Governments 9-1-1 Director's Strategy for Implementing Text to 9-1-1



## Strategic Principles:

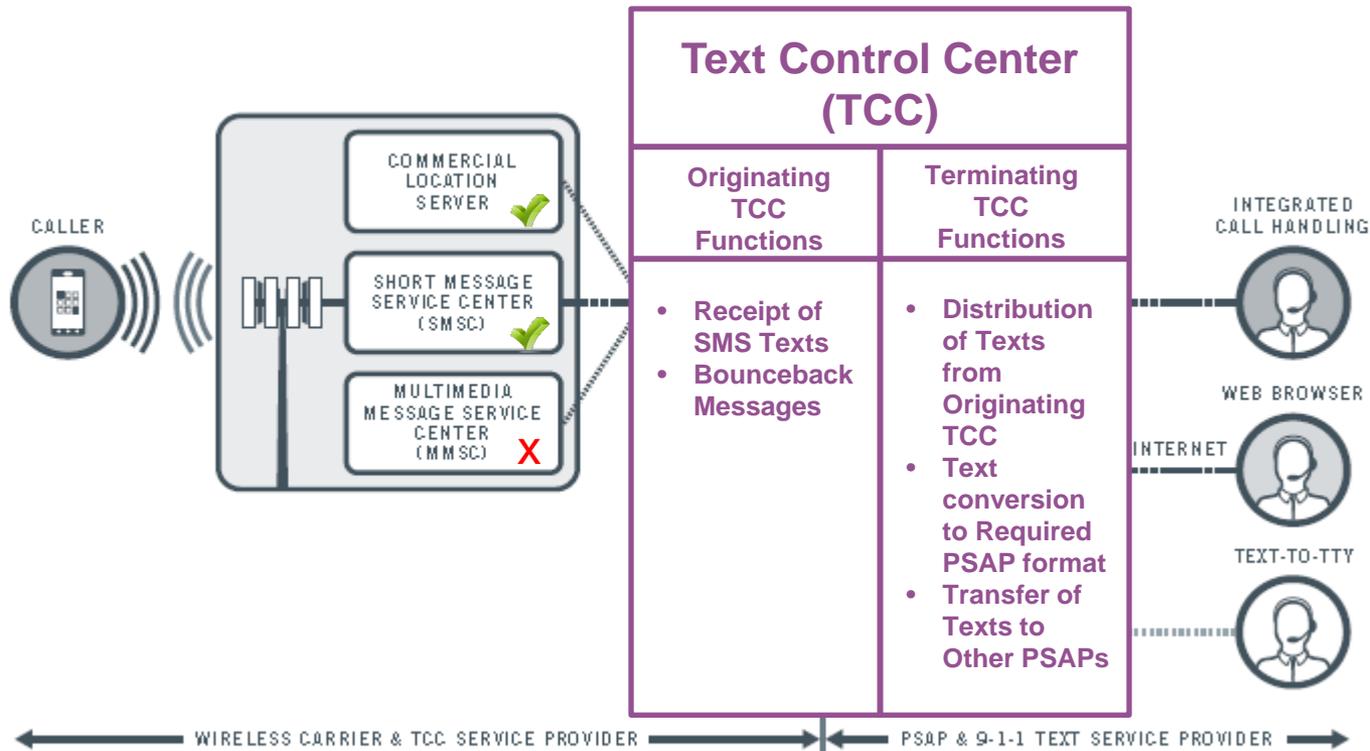
- **Efficient.** Aggregates all text-to-911 traffic from multiple wireless carriers and TCC vendors, allowing COG PSAPs to interact with a single servicing provider for text-to-911.
- **Flexible.** Supports transfer of text sessions between different text handling protocols and between PSAPs.
- **Trainable.** PSAPs can use a **single** user interface for text-to-911 (TTY, Web or text-enabled CPE) and transition to a new CPE interface without changing the aggregator.
- **Industry standard interface Alliance for Telecommunications Industry Solutions (ATIS) compliant - ATIS/JSTD-110 standard.**
- **NG9-1-1 compliant** (National Emergency Number Association (NENA) i3 standard).

# Key Aspects of Solution Architecture



- The Text Aggregator enables single web user interface at PSAP and enables transfers which is vital to regional/state solution provided the aggregator is flexible and works across a diverse (legacy, transition (web), or i3) PSAP CPE environment.
- The current J-STD-110.a Architecture does not address transfers and the solutions on the market vary in their approach and functionality with regard to transfers.
- Aggregator provides a clean interface point for incorporating “Over the Top” texts (currently out of scope of FCC order) from the internet when they come within scope.

# Key Aspects of Solution Architecture



- Once the caller sends the message, the emergency text is routed through a short message service center (SMSC) to the appropriate TCC. Only basic SMS texts are sent not multi-media texts (not texts with pictures nor multiple addressees).
- The TCC queries the wireless carrier commercial location server to obtain the X,Y coordinates of the originating cell tower and to determine if there is a text-enabled PSAP in the jurisdiction.
- Once the location information and PSAP identification are known the message is sent to the appropriate PSAP. The connection from the TCC to the PSAP could be through an ESInet or another IP network, such as the public Internet.
- The message is received at the PSAP on text-enabled call-handling equipment or on a separate monitor designated specifically for text-generated requests for assistance.
- Intrado and TCS operate as both an Originating TCC and a Terminating TCC. Some companies operate only as Terminating TCCs and contract with Intrado and TCS for Originating TCC services (e.g., InDigital and Agent 511).

# Current Status

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## **Detailed Evaluations of Proposed Solutions Complete**

- Scored Technical Proposals
  - Selection Advisory Committee (SAC) and Technical Advisory Committee (TAC) includes multiple jurisdictions not just Fairfax to get representative regional input
- Scored Cost Proposals
  - Same SAC/TAC blended representatives for input
- Conducted Vendor Demonstrations at Fairfax location (PSTOC).

## **Working with Fairfax Purchasing to enter Negotiations Phase**

- Expect contract award by end of September

## **Make plans for Regional Implementation**

- Dates TBD – perhaps by end of 2014 or early 2015