



E-911 Services Board

General Business Meeting

March 10, 2016



Agenda

1. Call to Order
2. Approval of Minutes
3. Progress Report on NG9-1-1
4. Regional Advisory Council Update
5. Next Steps for Data Analytics
6. Old Business
7. New Business
8. Public Comment
9. Adjourn



Progress Report on NG9-1-1





Drivers for NG9-1-1

- Retirement of the current analog network
- Carriers have begun a transition to IP-based telephony
- Traditional 9-1-1 service providers have announced their intention to exit the marketplace
- Shifts in consumers' expectations and behaviors
- Advances in technology



Completed Feasibility Study

- Board approved the document March 2015
- Provides multiple solutions for the design of a single, statewide IP-based 9-1-1 network
- Addresses system design, procurement, implementation, operation, and governance issues
- Develops a multi-phase effort to address generational technology issues
- Supports a long-term strategic approach to improve 9-1-1 service delivery



Feasibility Study Recommendations

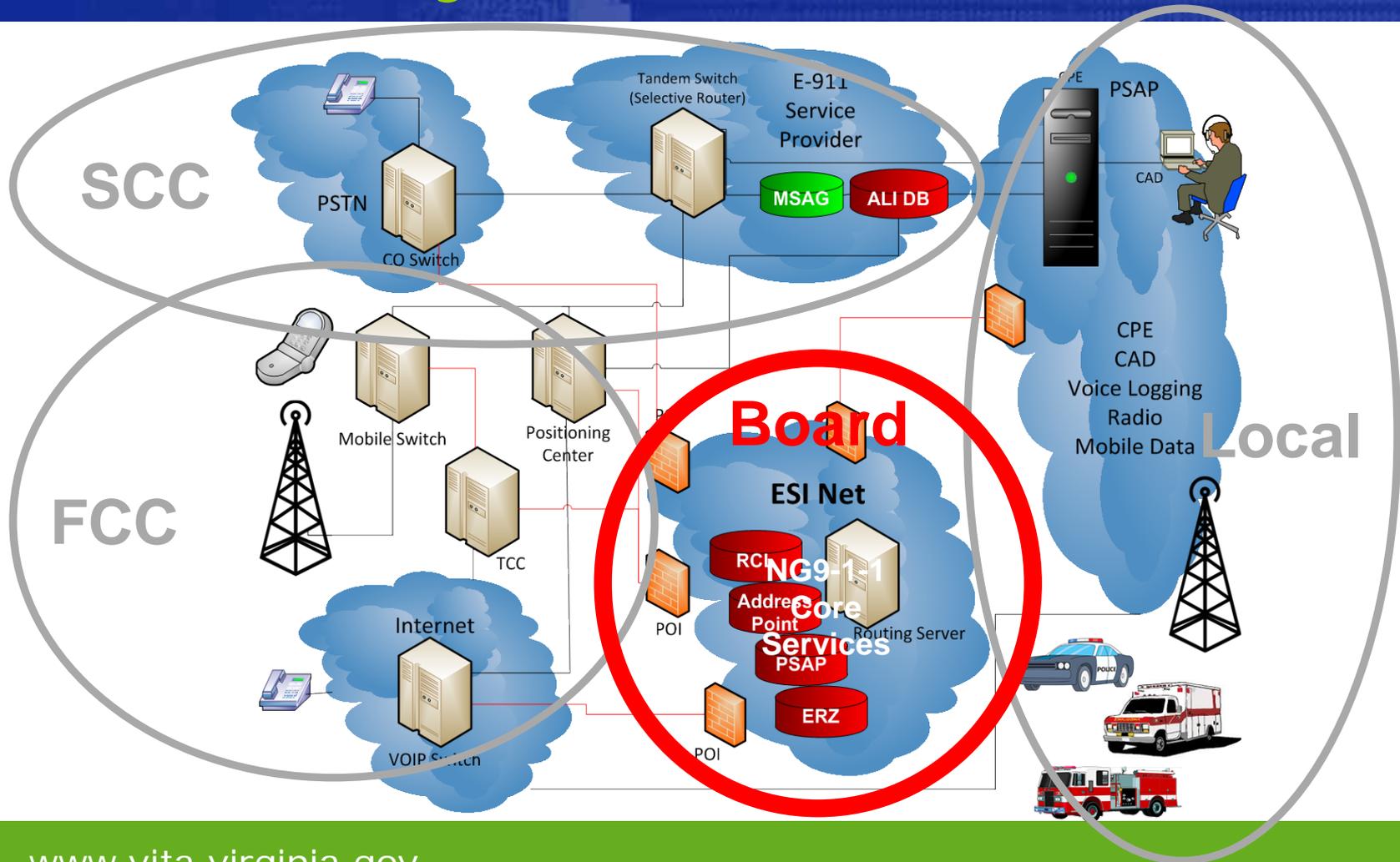
- Report contains 141 recommendations
- Determined priority
- Identified those chronologically first
- Grouped into “themes”
- Estimated resources required
- Identified 2016 tasks to support priorities



Guiding Principles

- 9-1-1 is an essential, local/regional service
- Need to address ALL of 9-1-1 not just NG
- Full stakeholder engagement is needed
- Services must be not be degraded
- Economies need to be leveraged
- Doing nothing is NOT an option

9-1-1 Ecosystem





Governance/Legislation

Proposed

- Decision maker education
- Explicit designation of 9-1-1 as essential and local govt service
- Role of the Board and Coordinator
- Board composition or Advisory Council
- Rulemaking authority

Status

- Outreach material for NG9-1-1 decision makers
- NG9-1-1 legislative agenda introduced in 2016 GA session
 - (HB 758 as amended)
- Focus on standards and best practices for localities
- Regional Advisory Council (RAC) established



ESInet Design/Pricing

Proposed

- Requirements definition through constituent outreach
- Options evaluation
- Request for Information (RFI)

Status

- Developed high level requirements
- NG9-1-1 NCR ESInet and NG9-1-1 Core Services Study
- NG911 NCR ESInet Technical Requirements
- Recommend an RFP approach to obtain a Trusted Partner



Best Practices/Standards

Proposed

- Identify and prioritize necessary best practices/standards for NG9-1-1
- Recommended work group of volunteer SMEs be formed to address

Status

- It may be more appropriate for Regional Advisory Council to complete
- ISP staff has developed two best practices draft documents:
 - Call Handling
 - Addressing



Geospatial Foundation

Proposed

- Conduct MSAG/ALI/GIS analyses to determine accuracy of local data
- NG9-1-1 data standards:
 - Road Centerline
 - PSAP Boundaries
 - Emergency Response Zones
 - Administrative Boundaries
 - Address Points

Status

- Completed 46 analyses
- NG9-1-1 data standards have been completed for Administrative Boundaries and Road Centerline



PSAP Grant Program

Proposed

- Require NG9-1-1 compatible equipment
- Statewide equipment contracts
- Encourage regional collaboration

Status

- FY 17 PSAG Grant Guidelines provide financial incentive to multijurisdictional projects, as well as funding for NG9-1-1 related projects
- CHE RFP finalized



Financing

Proposed

- Sustainability
- Collection Methodology
- Fund transfers
- Formulas

Status

- Need ESInet design and pricing first
- Address 9-1-1 funding holistically:
 - Includes NG9-1-1 transition costs
 - Plan B
- Work with RAC to determine approach for next year's legislative agenda



Remaining Recommendations

Trusted Partner

- ESI net design recommendations
- Financing (design dependencies)
- Governance (related to technical aspects of ESI net)
- GIS (spatial interface)

Regional Advisory Council

- Best practices
- Financing (input into sustainable model)
- Future technologies



Remaining Recommendations

ISP Staff

- Data Analytics
- Support and coordination of remaining recommendations

PSAP Grant Committee

- Further efforts to support NG9-1-1 through the PSAP Grant Guidelines



Remaining Recommendations

Finance Committee

- Finance (future 9-1-1 funding model)

Policy Committee

- Governance (Board representation, oversight of ESInet, and other items)
- Financing (legislative agenda for future 9-1-1 funding model)



Board Action

- Direct staff to move forward with ESI-net RFP with the strategy of obtaining a Trusted Partner
- Direct ISP to develop statewide Data Analytics program to support Guiding Principles
- Direct Finance and Policy Committees to focus on remaining governance and financial recommendations to determine focus of 2017 legislative agenda



Regional Advisory Council Update





March 8th Meeting

- Best Practices
 - RAC will act as a steering committee for the development of best practices and standards
 - RAC will bring in SMEs as needed and will coordinate smaller work groups to support the development of standards and best practices
- RapidSOS Haven App
 - Email blast to educate VA PSAPs
 - Webinars



March 8th Meeting

- Data Analytics
 - Discussed the presentation that ISP staff will provide later in this meeting
 - Webinars
- Update on the development of the task list to support the 9-1-1 Comprehensive Plan



9-1-1 Comprehensive Plan

- RAC met on February 10th to review the Goals and Initiatives contained in the 9-1-1 Comprehensive Plan;
 - Consensus on the interpretation of the Goals and Initiatives contained in the Plan
 - Brainstormed to produce tasks to support the Goals and Initiatives
 - Will prioritize the tasks and identify interdependencies at the next in-person meeting



Goal 1

- **FORMALIZE BASELINE LEVELS OF SERVICE AND CAPABILITIES THAT MEET PUBLIC EXPECTATIONS**
- **Interpretation:**
 - Establish the minimum 9-1-1 services/capabilities that should be available to meet the public expectation



Goal 1, Initiative A

- Identify, specify, and adopt a standard or set of standards for a baseline level of 9-1-1 service and capabilities
- **Interpretation:**
 - **Develop and adopt a master set a master set of Standards necessary to support an infrastructure for identified 9-1-1 services**



Recommended Tasks: 1A

1. Create baseline level of services and capabilities document
2. Develop PSAP baseline capabilities implementation plan



Goal 2

- **INCREASE SITUATIONAL AWARENESS THROUGH ENHANCED INCIDENT INFORMATION SHARING**
- **Interpretation:**
 - Facilitate and increase standardized data sharing among PSAPs and other public safety systems in which PSAPs are involved



Goal 2, Initiative A

- Implement statewide standards and best practices to enhance incident information sharing
- **Interpretation:**
 - **Set the standards to enable data sharing among PSAPs and other public safety systems that include PSAPs (Standards)**



Recommended Tasks: 2A

1. Create a 9-1-1 Clearinghouse
2. Create and adopt data sharing standards and best practices



Goal 2, Initiative B

- Identify and adopt a planning methodology that enhances technology implementation coordination throughout a project lifecycle and improves change management
- **Interpretation:**
 - **Promote and determine need for PSAP data sharing**



Recommended Tasks: 2B

1. Create an incident information sharing planning policy that provides a strategic framework for data sharing initiatives



Goal 2, Initiative C

- Employ technology that allows for seamless automatic bi-directional communication of incidents information between PSAPs
- **Interpretation:**
 - **Deployment PSAP data sharing projects (Implementation)**



Recommended Tasks: 2C

1. Monitor industry and assess emerging technologies that promote data sharing and interoperability
2. Champion emerging technology products



Goal 3

- **ALLOCATE FUNDING FOR FUTURE STATE AND REGIONAL PSAP INITIATIVES TO MAINTAIN AND IMPROVE SERVICE**
- **Interpretation:**
 - Determine how we will pay for 9-1-1 now and in the future



Goal 3, Initiative A

- Maintain stable and sustainable funding for the overall 9-1-1 system(s) in the Commonwealth
- **Interpretation:**
 - Define future funding requirements for 9-1-1 system(s) in the Commonwealth and implementing funding models



Recommended Tasks: 3A

1. Develop PSAP baseline level of service and capabilities budget
2. Create a holistic statewide 9-1-1 funding strategy



Goal 3, Initiative B

- Establish a strategy for funding the statewide deployment of NG9-1-1
- **Interpretation:**
 - **NG9-1-1 is interpreted here as NG9-1-1 transitional costs**



Recommended Tasks: 3B

1. Create NG9-1-1 deployment and sustainment funding strategy that aligns with the statewide 9-1-1 funding strategy, taking into consideration potential technology such as text-to-9-1-1, implementation of an i3-capable Emergency Services Internet Protocol (IP) network (ESInet), regional NG9-1-1 pilots, and GIS database development



Goal 3, Initiative C

- Adopt statewide procurement guidelines
- **Interpretation:**
 - Adopt a future procurement model for PSAP equipment and services



Recommended Tasks: 3C

1. Create and maintain statewide procurement and vendor qualification guidelines



Goal 4

- **POSITION PSAPS TO BETTER RESPOND TO EMERGENCIES THROUGH PROFESSIONAL DEVELOPMENT OF 9-1-1 AND TECHNICAL PERSONNEL**
- **Interpretation:**
 - Promote professional development of 9-1-1 and technical personnel to enhance the delivery of 9-1-1 services



Goal 4, Initiative A

- Identify PSAP and technical staffing needs
- **Interpretation:**
 - Identify critical Knowledge, Skills, and Abilities (KSAs) and Core Competencies related to 9-1-1 and technical staffing needs



Recommended Tasks: 4A

1. Conduct staffing analyses



Goal 4, Initiative B

- Identify and adopt minimum criteria for training, certification and retention programs to support 9-1-1 professional and technical support personnel
- **Interpretation:**
 - Identify and adopt recommend training levels to support 9-1-1 professional and technical support personnel



Recommended Tasks: 4B

1. Adopt and create baseline 9-1-1 professional and technical support staff development criteria



Goal 5

- **PROTECT THE LIABILITY AND SECURITY OF THE 9-1-1 SYSTEM**
- **Interpretation:**
 - Focus on the role of disaster recovery and cybersecurity in the 9-1-1 system



Goal 5, Initiative A

- Identify PSAP assets and communications infrastructure attributes
- **Interpretation:**
 - **Identify PSAP Critical infrastructure/Key Resources (CI/KR) before an incident occurs**



Recommended Tasks: 5A

1. Gather and assemble attributes for existing PSAP assets and infrastructure



Goal 5, Initiative B

- Support 9-1-1 center staff in formalizing Continuity of Operations (COOPs) for their respective PSAP
- **Interpretation:**
 - **Develop PSAP-level COOPs and Disaster Recovery (DR) plans**



Recommended Tasks: 5B

1. Develop COOP templates for Virginia PSAPs
2. Confirm that each PSAP has a formalized COOP that includes technology continuity management for disaster response, and recovery activities for PSAP assets and communications infrastructure



Goal 5, Initiative C

- Adopt a QA/QI and monitoring program to document and report the effectiveness of baseline level service and capabilities criteria
- **Interpretation:**
 - The QA/QC monitoring program would focus on the services identified in **Initiative 1A**



Recommended Tasks: 5C

1. Create QA/QI guidelines



Goal 6

- **IMPROVE 9-1-1 SERVICE DELIVERY THROUGH ENHANCED COMMUNICATIONS WITHIN STAKEHOLDER COMMUNITY**
- **Interpretation:**
 - Consistent outreach and communications



Goal 6, Initiative A

- Develop a communications plan for internal and external stakeholders
- **Interpretation:**
 - **Develop a policy and process on how communications will take place among stakeholders**



Recommended Tasks: 6A

1. Create a 9-1-1 stakeholder communications plan



Goal 6, Initiative B

- Develop guidelines for an effective stakeholder education and outreach program, to include legislators
- **Interpretation:**
 - **Develop guidelines on an as needed basis for specific audiences**



Recommended Tasks: 6B

1. Develop 9-1-1 public education guidelines



Goal 7

- **LEVERAGE GIS TECHNOLOGY AND DATA TO BETTER LOCATE CALLERS AND IMPROVE RESPONSE CAPABILITIES**
- **Interpretation:**
 - Leverage GIS to better support Virginia's 9-1-1 ecosystem



Goal 7, Initiative A

- Support coordination and collaboration of 9-1-1 between the PSC Coordinator and VGIN
- **Interpretation:**
 - Support GIS and 9-1-1 coordination and collaboration within and between all levels of government



Recommended Tasks: 7A

1. Identify ways to improve 9-1-1 and GIS coordination and collaboration within and between levels of government



Goal 7, Initiative B

- Validate and improve GIS data quality and integration for public safety purposes
- **Interpretation:**
 - Identify the types of things that can be done to validate and improve GIS data quality?



Recommended Tasks: 7B

1. Develop contractual language provisions (recommended language) for outsourcing
2. Conduct GIS database review
3. Develop user requirements for using GIS information in public safety software solutions



Next Steps for Data Analytics





Guiding Principles

- 9-1-1 is an essential, local/regional service
- Need to address ALL of 9-1-1 not just NG
- Full stakeholder engagement is needed
- Services must not be degraded
- Economies need to be leveraged
- Doing nothing is NOT an option



Data Analytics Problem Statement

- Minimal data collection currently
- Guiding principle to not degrade service
 - Need to be able to monitor system performance
 - Need a baseline of service before NG9-1-1
- No performance data on existing network
 - Routing of wireless calls
 - Location data provided (WPH1/WPH2)
 - Call set up/delivery times



Data Analytics Pilot

- Market research of potential solutions
- Approached two PSAP Grant recipients (Fluvanna & Waynesboro) and surrounding PSAPs
- Proposed three month pilot to test concept
- PSAPs can continue after pilot
- Determine if meets Commonwealth needs
- ECaTS selected for pilot



Commonwealth Reporting

- Critically important that we have a data supported understanding of:
 - Current functional levels of 9-1-1; operationally and systematically,
 - The impact of NG9-1-1 services on those functional levels.
- Standard reporting tool across PSAPs, that provides consistent, comparable data analytics.

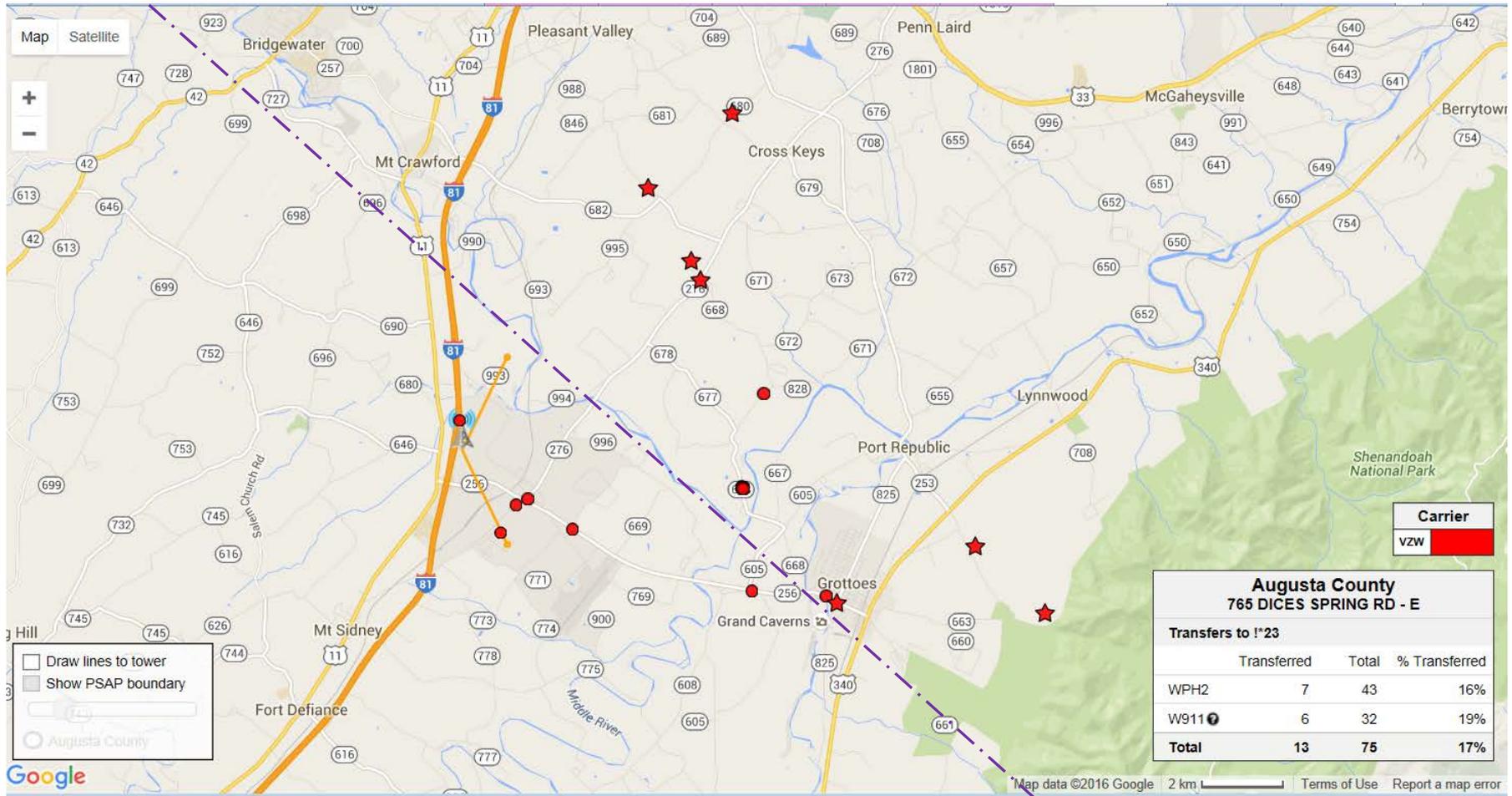


Critical Reporting

- Annual True-Up reporting (standardized)
- Circuit Utilization/Class of Service
- About 9% of all 9-1-1 calls get transferred, which consumes time and delays response
- ECaTS Transfer Reports:
 - Call Transfer Report
 - Wireless Call Sector Report
 - Wireless Transfer Summary Report



Visualization of Call Transfers





PSAP Reporting

- Operational and performance reporting
 - Telecommunicator level
 - Shift level
 - PSAP level
- Answer time
- Calls per hour and station
- Busy hour
- Outage/System monitoring
- Top ANI



Pilot Results

- Met PSAP needs for call accounting
- Meets Commonwealth need for baselining current 9-1-1 network
- Allows optimization of routing decision by the PSAP
- Greater accuracy, consistency and usability of the data
- All pilot participants expressed desire to continue with the ECaTS system



Conclusions

- Have a standard, comparable system among PSAPs to collect and analyze 9-1-1 system data
- Annual True-up data that is aggregated with common criteria
- Acquire a baseline of data to measure the performance of the 9-1-1 network
- Analyze future data to assure that the transition to NG9-1-1 does not adversely affect 9-1-1 call delivery or processing



Conclusions

(continued)

- Optimize wireless 9-1-1 call delivery, reduce the number of transferred 9-1-1 calls, and ultimately reduce response times
- Provide the PSAPs with a more “user-friendly” tool and service for evaluating operations within their centers
- Overall, to promote better, well informed, data driven decisions at both the state and local level



Proposal

- Final Pilot Report to the Board
- Request \$1M allocation of existing budgeted funds
- Start collection of data as soon as possible
- Deploy ECaTS system statewide
- Deployment methodology
 - Voluntary
 - Mandatory



Stakeholder Feedback

- Several stakeholder engagements
- Overall support for need and concept
- Positive feedback on the tool
- Concern expressed regarding
 - Freedom of Information Act
 - Records Retention
 - Ongoing financial support
 - “Big Brother”
 - Mandates based on data



FOIA and Records Retention

- Freedom of Information Act solutions
 - Board coordinates with locality
 - Board does not release local data
 - Board has access to limited, local data
 - Defined in Data Sharing Agreement
- Records Retention
 - Periodic download of data from ECaTS
 - Deleting records based on retention schedules
 - Three year minimum
 - Balance between reporting and FOIA



Commonwealth Report Access

- Unrestricted access to all reports; or
- Access to limited reports including:
 - **Call Summary Report**
 - **Calls per Hour**
 - **Top Busiest Hours**
 - **Average Call Duration**
 - **Calls by Circuit**
 - **Circuit Utilization**
 - **PSAP Answer Time**
 - **Class of Service**
 - **Call Transfer**
 - **Outage**
 - **Wireless Call Sector**
 - **Wireless Transfer Summary**
 - **Ad-Hoc Reporting Tool**

* Those in red are statewide only reports.



Recommendation to Board

- Approve \$1M of existing budgeted funds for statewide deployment of ECaTS system
- Start collection of data as soon as possible
- Voluntary deployment methodology
- Work with Counsel to resolve FOIA and record retention issue
- Continue outreach to all stakeholders on project benefits and policies



Old Business





Old Business Items

- None



New Business





New Business Items

- Recent 9-1-1 Outages
- FY 17 Brunswick County PSAP Grant
- FY 17 Grant Amendment Request:
 - Travel assistance
 - Adopt a 30-day follow-up period for grant payment requests
 - Business day deadline for WEP/PEP reimbursements
- CMRS Subcommittee Report



CMRS Subcommittee Report

- Review Subcommittee's recommendations



FY 17 Grant Guideline Amendment

- Establish immediately that per diem will be replaced with a flat rate reimbursement (travel assistance) for WEP/PEP attendees at the VA APCO, VA NENA, and VAMLIS conferences.
- Travel assistance will include an incidental calculation and parking
- Motion to approve above request



FY 17 Grant Guideline Amendment

- Establish immediately that PSAPs would have up to 30 days after the deadline/submission date to provide missing or clarifying documentation



FY 17 Grant Guideline Amendment

- WEPEs/PEPEs:
 - If missing or clarifying documentation is not provided during the follow-up period, the PSAP would only be reimbursed for those expenses for which proper documentation was provided
 - If the 30-day calendar deadline does not fall on a business day, then the deadline should be changed to the next business day



FY 17 Grant Guideline Amendment

- Other grants:
 - For non-WEP/PEP grants, if the missing or clarifying documentation is not provided within 30 days from the submission date, the PSAP would need to resubmit the entire grant payment request when missing or clarifying documentation is available
- Motion to approve the following:
 - Request for shorter follow-up period as described
 - Business day deadline for WEP/PEP reimbursements



Travel Assistance for 2016 VA NENA

- Request that the travel assistance for this conference be set at \$110 per attendee
 - Travel assistance requires an overnight stay
- Motion to approve travel assistance request



And In Conclusion

- Public Comment
- Adjourn
- Next meeting date is May 12, 2016