State of Ohio NG911 Project

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Initial Findings

- Kimball will develop RFP for statewide NG 9-1-1 network
- Include a core services component
  - Based on cost/needs of PSAPs
- Core services important to PSAPs
  - Border Control Functions (BCF)
  - Emergency Services Routing Proxy (ESRP)
  - Policy Routing Function/Policy Store
- Geographic Information Systems (GIS) Data
  - More critical role within the NG 9-1-1 environment
  - GIS-enabled call routing requires accurate data
  - Synchronizing GIS data with MSAG
  - Proper data standards and data maintenance needs to be implemented
Initial Findings

Network

- All 88 counties must have access to the state ESI net
- OARnet as the backbone
- PSAPs connect to different service levels
  - State core services and hosted CPE from State
  - State core services with PSAP owned CPE
  - Interoperable State core service to regionally owned core services
  - i3 capable core services and i3 capable CPE
Economic Impact and Funding Analysis

- Current Statute/Regulations Wireless surcharge distribution
  - 97% 9-1-1 Government Assistance Fund for disbursement to counties
  - 1% Wireless 9-1-1 Administrative Fund for tax commissioner for carrying out ORC 128
  - 2% 9-1-1 Program Fund defray costs of steering committee to carry out duties under statute
  - Wireless carriers retain 2% as a billing/collection fee

DRAFT
Economic Impact and Funding Analysis

- Current surcharge collected from 5 top ILECs in Ohio
  - Frontier $0.24
  - AT&T $0.12
  - Windstream $0.20
  - CenturyLink $0.18
  - Cincinnati Bell $0.12

- Revenue generated from wireline is estimated at $5,322,240
  - Aggregate wireline subscriber count latest FCC report-2,464,000
  - Rate mean average of $0.18 across these five carriers
- Revenue generated from wireless is $25 million
- Cost approximately $30 million for the current 911 system
Economic Impact and Funding Analysis

- State 9-1-1 program costs for NG 9-1-1 System
  - Network and Core Services (state will own equipment in data centers)
  - Hosted Remote CPE
  - Maintenance and equipment for network and core services

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Economic Impact and Funding Analysis

- Costs to PSAP
  - Last mile and circuits to NG 9-1-1 network and core services
- Depends on level of service PSAP chooses:
  - State core services and hosted CPE from State
  - State core services with PSAP owned CPE
  - Interoperable State core service to established regionally owned core services
- State will develop the guidelines on what state will cover vs PSAP responsibility
DRAFT Preliminary Design and Operational Requirements
State provides Core Services for Independent PSAPs & Regional ESInets.

- **Ingress** – originating to ESInet
  - Wireline, Wireless, VoIP, Telematics, Text
  - Legacy Network Gateway (LNG)
  - ALI Database

- **Core Services** – Call Processing Domain
  - Emergency Call Routing Function (ECRF)
  - Policy Routing Function (PRF), Policy Store
  - Emergency Services Routing Proxy (ESRP)
  - Border Control Function (BCF)

- **Egress** – terminating to Regional ESInets & i3 capable PSAPs
DRAFT Preliminary Design and Operational Requirements
State provides CPE, Core Services, for Independent PSAPs & Regional ESInets.

- **Ingress** – originating to ESInet
  - Wireline, Wireless, VoIP, Telematics, Text
  - Legacy Network Gateway (LNG)
  - ALI Database

- **Core Services** – Call Processing Domain
  - Emergency Call Routing Function (ECRF)
  - Policy Routing Function (PRF), Policy Store
  - Emergency Services Routing Proxy (ESRP)
  - Border Control Function (BCF)
  - State provided Hosted CPE

- **Egress** – terminating to remote PSAPs from hosted controllers
Proposed OARnet Backbone Availability.

- 10 designated ESInet points of presence (POPs)
- Negotiated agreements with network providers for PSAPs not serviced by designated POPs. Last mile connectivity.
- SLAs for Jitter, Reliability, Delay, and Reliability.
- Monitoring for designated POPs
DRAFT Preliminary Design and Operational Requirements

Proposed OARnet PoPs for NG911

08/18/2016

Proposed 2017 deployment

- aknf: Akron First Communications
  1 Cascade Plaza Akron OH 44308 (Suite #900)
- athna: Athens Zayo
  160 W Union St Athens OH 45701 (Ste 175A)
- cnnc: Cincinnati Windstream
  635 W Mohning Way Cincinnati OH 45202
- clev: Cleveland BlueBridge
  1255 Euclid Ave Cleveland OH 44114 (Fl 5)
- sghd: Columbus Cologix Data Center
  535 S zubers Ct Columbus OH 43085
- clns: Columbus Neublton
  251 Neublton St Columbus OH 43215 (E)
- clsm: Columbus SOCC
  1220 Arbor Dr Columbus OH 43221
- limaa: Lima AEP
  1688 N Sugar St Lima OH 45801 (Rm 305A)
- psmkh: Portsmouth AEP
  800 Gallia St Portsmouth OH 45662 (Fl 5)
- tldsb: Toledo Buckeye
  4818 Angola Road Toledo OH 43615

PoP OARnet PoP

100g
Proposed OARnet Backbone Availability with Gateways & Monitoring from 3rd party.

- 10 designated ESInet points of presence (POPs) connected to redundant gateways throughout the state.

- A statewide network provider using local providers provisions, configures, and provides end to end monitoring for Last mile connectivity.

- SLAs for Jitter, Reliability, Delay, and Reliability. Core-Core, NAP – Remote, Host – Host, etc……

- Provides one point of contact for Last Mile issues.
Economic Impact and Funding Analysis

- Economic history of funding methodologies
  - Ohio predominately collects by telephone numbers
  - Property taxes
  - Sales tax
  - Special Assessments
  - User Fees
  - Next Generation IP networks is changing environment to any device with an IP address
Economic Impact and Funding Analysis

- Two alternative funding models
  - Both models include migrating to a single statewide all device fee
  - No changes to bill and keep
- Twenty-five cent single statewide all device fee
  - Estimated 19,808,868 devices capable of connecting to 911 in Ohio
  - Generates $59,426,604 annually
  - Uses current collection and distribution in ORC 128
- Twenty cent single statewide all device fee
  - Estimated 19,808,868 devices capable of connecting to 911 in Ohio
  - Generates $47,541,283 annually
  - Reduces current wireless surcharge by $0.05
  - Uses current collection and distribution in ORC 128

Draft
Economic Impact and Funding Analysis

Economic Impact of each model:

- $0.25 single device fee
  - Generates an additional $34 million in revenue annually
  - Based on estimated 19,808,868 devices

- $0.20 single device fee
  - Reduces surcharge by $0.05 per subscriber each month
  - Generates $47.5 million in revenue annually
  - Based on estimated 19,808,868 devices
Next Steps

- Finalize implementation design and operation requirements
- Develop draft RFP specifications
- Review and revise RFP specifications
- Prepare final RFP for release
QUESTIONS
AND
ANSWERS