Houston IT Services (HITS)

Public Safety Radio Replacement Project Update

Public Safety Committee
February 26, 2013
Presentation Topics

» Scope and History
» Funding
» Progress to Date
  > Construction
  > High Noise Testing
  > Coverage Acceptance Testing
» Project Delay
» Next Steps
» Risks
» Upcoming Requests for Council Action
Existing Systems

- Antiquated
- Low Capacity
- Low Reliability
- Poor Coverage
- Poorly Maintained
Consolidated System

» Modern
» Ultra High Capacity
  > Room to Share
» Incredibly Reliable
» Dramatically Improved Coverage
» Enhanced Security with Voice Encryption
» Well Maintained
Consolidated System

- RCA Approved – October 2008
  - $132.3 million contract value
- Increased Coverage (16 to 48 sites)
- Increased Capacity (5X)
- Increased Reliability through redundancy
- Increased Interoperability

Safety of First Responders and the Public They Serve
Funding Sources

» Police CIP  » $34.0 Million
» PWE CUS  » $10.3 Million
» HAS  » $2.02 Million
» Grants  » $91.7 Million
» Total Funding  » $138.02 Million

MWBE Goal = 11%
Current Performance = 10.51%
Completed Project Milestones 1-6

Completed:

- All Site Construction
- High Noise Audio Testing
- Microwave Backhaul System Completed & Operational
- Installation and Optimization of both General Government and Public Safety Layers of the system

Completed & Passed Functional and Coverage Acceptance Testing for Public Safety Layer

- City divided into half-mile grids (≈8,200)
- Goal was <5% failure of tested grids
- Result was <1% failed grids
Construction
Construction
High Noise Testing
Coverage Testing
Coverage Testing

Public Safety
M3 Coverage Test
Random Buildings

Passed
Failed
Inaccessible
No Building

Grids Tested: 4,003
Grids Failed: 41
Tested & Passed: 99.0%
Coverage Testing

Public Safety
M3 Coverage Test

Portable On-Street

- Passed
- Failed
- Inaccessible

Grids Tested: 8,623
Grids Failed: 2
Tested & Passed: 99.98%
Coverage Testing

Public Safety
M3 Coverage Test

Random Buildings Downtown

- Passed (132)
- Failed (0)
- Inaccessible (2)
- No Building (84)

Grids Tested : 132
Grids Failed : 0
Tested & Passed : 100%
Coverage Testing

Public Safety
M3 Coverage Test
Portable On-Street Downtown

Passed
Failed
Inaccessible

Grids Tested: 217
Grids Failed: 0
Tested & Passed: 100%
Related Progress

» Completed Downtown Tunnel Coverage Agreement
   (Approved by Council – 8/8/12)
   > Provides system for Cellular and Radio Coverage
   > 4 Major Carriers
   > Zero dollars to the City

» Completed Agreement for Joint Radio Facility with Harris County
   (Approved by Council - 10/10/12)
   > Approximately 50,000 Sq. Ft. Facility
   > Joint Network Operations
   > To be Built on Land acquired from HAS at 2318 Greens Road
Motorola Firmware Bug impacting radio subscriber performance
  > Retouch, Retune, Reprogram more than 13,000 radios
  > Estimated 90 day impact to schedule

Required waiver from FCC for Narrowbanding of existing UHF channels *(Received Approval January 2\textsuperscript{nd})*

End of this process now matches to a planned infrastructure upgrade further delaying cutover

New estimated cutover – April 2013
Next Steps

» Complete Migration to Public Safety Layer by May 2013

» Begin remediation of critical buildings
  > Target completion – December 2013

» Provide Radio & Cell Phone Coverage in Downtown Tunnels
  > Complete Building Owner Agreements (17 out of 44 as of 2/1/13)
  > Complete Contractor Site Walks & Receive Detailed Design Documents
    + Target completion – March 31, 2013
  > Approve Design and Installation Plan
  > System Activation Target – December 31, 2013
Risks

» Post Project Operating Costs Impact to General Fund
  > Staffing from 20 to 37
  > Maintenance Costs for Software and Hardware
  > Equipment Refresh not covered by grants
  > General Fund FY2013 ≈ $2.6m versus FY2014 ≈ $6.2m

» New Construction Impacting Coverage
  > Microwave Paths
  > In-building Coverage
Old Systems
- System Ops ≈ $1.55m
- Software Maint = $0
- Subscriber Svcs ≈ $1.1m
- Total Budget ≈ $2.6m
- Personnel ≈ 20

New System
- System Ops ≈ $3.37m
- Software Maint ≈ $1.1m
- Subscriber Svcs ≈ $1.8m
- Total Budget ≈ $6.2
- Personnel ≈ 37 (FY2014)
Support Level Reductions

Consolidation of Radio Services into IT Occurred January 2010

<table>
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<td>City-wide Total</td>
<td>82</td>
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*HPD staff handle more than just radios

The 40 total represents current Police and IT radio FTEs. When IT adds the 17 additional needed employees it will bring the total to 57.
Upcoming RCA

» Final Project Funding Appropriation (3/20/2013)
  > Final $9m of the planned $24m in CIP for FY 2013
  > Implementation Expenses (City Project Staff, Leases, Grant Matching, etc.)

» In-building Amplification Ordinance (April/May 2013)
  > Impacts 50,000 Square Feet or 4 Stories (50 feet in height)
  > Major Remodels and New Construction
  > Draft created vetting with Industry and Houston Fire