

IV&V of PSAP Radio System

ECTP Project Context & NYPD Radio System

A Typical PSAP System Description

IV&V Effort

Summary

Questions

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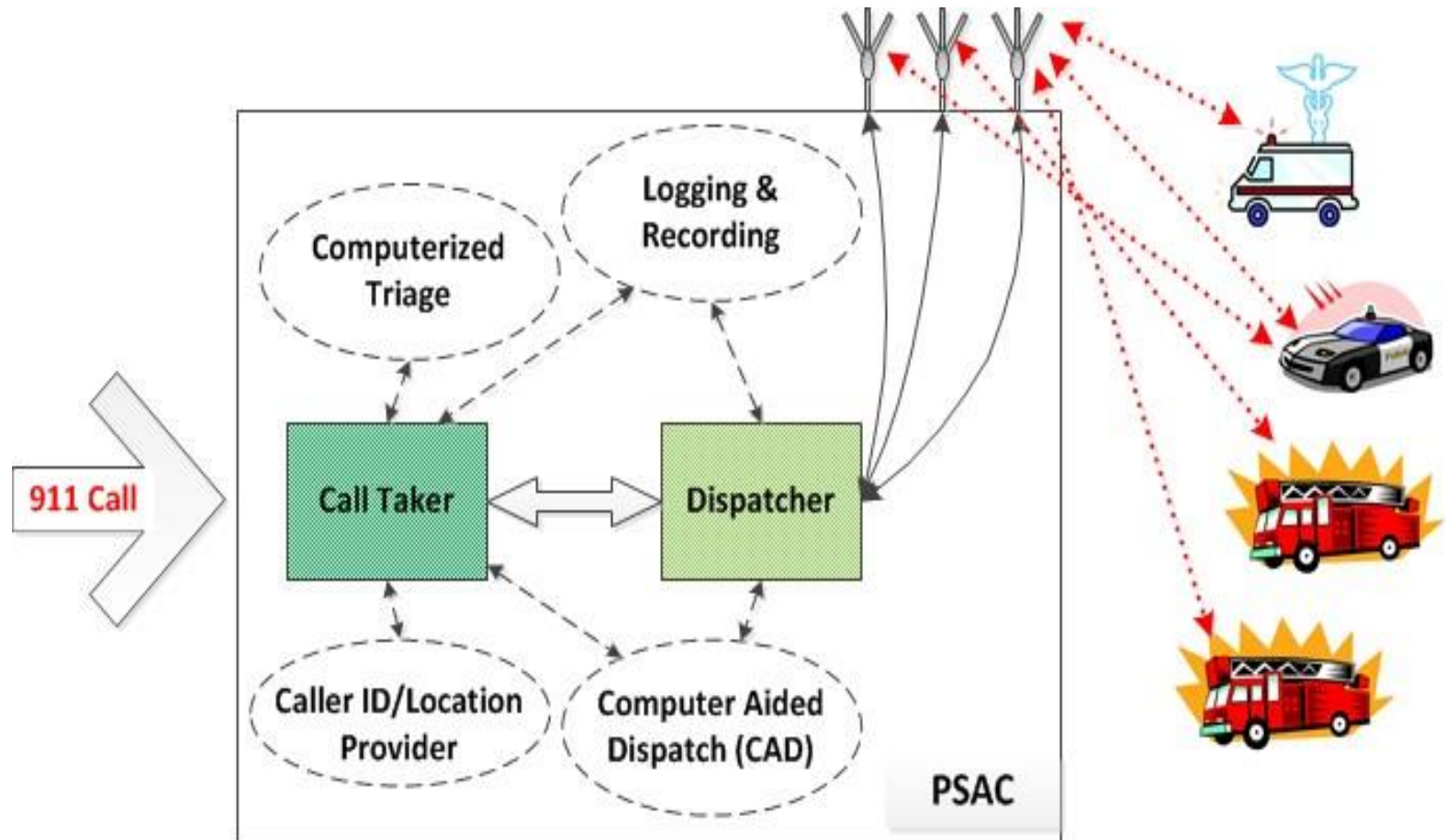
TASC

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ECTP Project & NYPD Radio System

- **ECTP: Emergency Communication Transformation Program.**
- Addition of new call center at Bronx called PSAC2 (**P**ublic **S**afety **A**nswering **C**enter #2).
- Upgrade existing PSAC1 at downtown Brooklyn.
- Push towards IP based system. (VoIP, Multimedia)
- Push towards APCO-25 standard compliance.
- Push towards greater availability.
- This presentation focuses on IV &V of NYPD Radio System.

How A Typical PSAP Works



Some Design Details on ECTP

- FDNY and NYPD share infrastructure like a physical building.
- Have similar but different equipment and data network.
- FDNY and NYPD use different carriers for UHF Radio.
- The system uses many forms of network connectivity.
- The system is not completely VoIP but getting towards it.
- The Zone Controller in a PSAC normally does call processing.
- A PSAC can operate even with the loss of Zone Controller.
- Audio Routing Network failure or Comparator Network Failure
=> PSAC reverts to ECS system to reach field units over UHF.

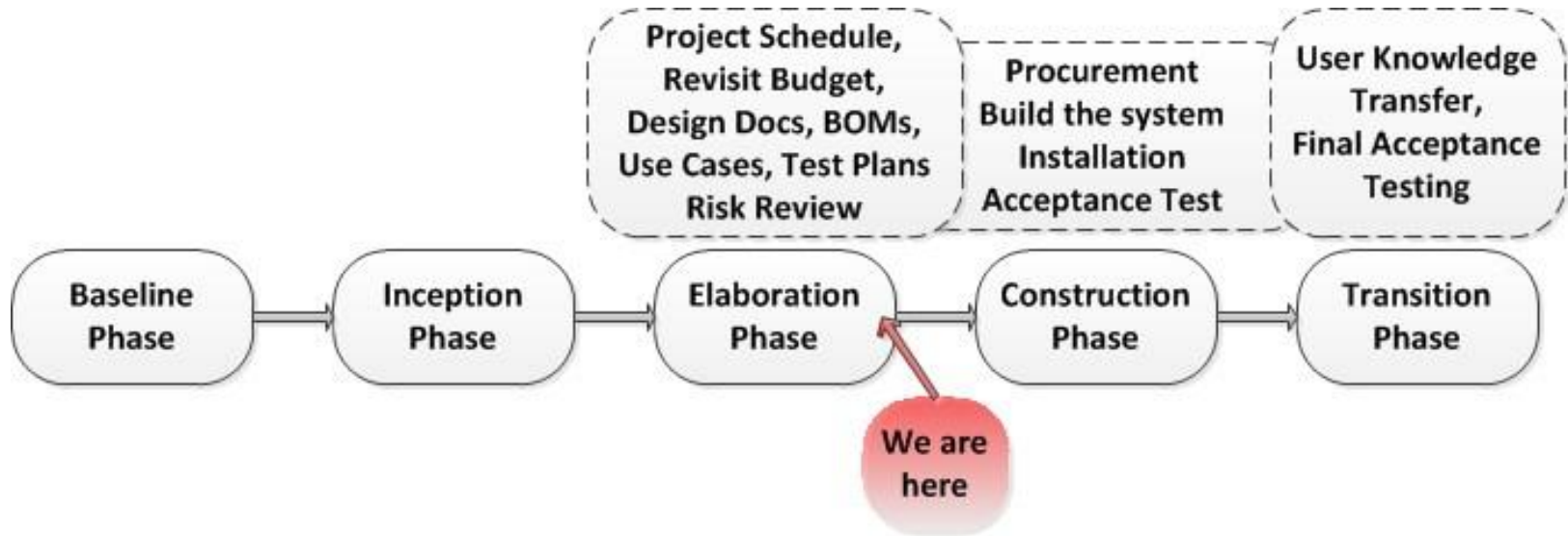
NASA IV&V's Role

- NYPD Radio is just one part of a very large system.
- 564 Radio Requirements + 62 ECS Requirements.
- Typical size of documentation for a given version is over 130 MB of human readable material.
- Most equipment is COTS from Motorola.
- Role of Northrop-Grumman (NGCS) is COTS integrator.
- NGCS is following a model based approach.
- NASA IV&V is verifying model and other artifacts.

IV&V Approach

- Evaluate SOW to Radio requirements to ensure needs are adequately captured.
- Evaluate that Radio Requirements were high quality.
- For functional requirements, ensured that the associated Use Case captures the appropriate behavior for test.
- Evaluate design documents, drawings and BOMs.
- Evaluate associated ICDs for quality.
- Perform a redundancy analysis to ensure that viable failures are guarded against and/or addressed.

Summary



As of now, the ECTP project is poised to move into the Construction Phase. This will involve installation and acceptance testing. And as always IV&V will support the ECTP project to make it a success story.

Questions?

