

DHS SCIENCE AND TECHNOLOGY

Briefing for NPSTC

NEXT GENERATION FIRST RESPONDER APEX PROGRAM

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**Homeland
Security**

Science and Technology

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Integration Demonstrations

NGFR integration demonstrations have evolved into exercises with partner public safety agencies to produce knowledge products to facilitate technology implementation.

<https://edit.dhs.gov/science-and-technology/ngfr>



- **Grant County TechEx NGFR Case Study Series**
 - Deployable Communications, Location Services, and Video Services released in 2017.
 - Physiological Monitoring, Situational Awareness and Raspberry Tech Bulletin will be released in March 2018.
- **NASA JPL PlugTest – February 2018**
 - Integrated technologies from performers with a variety of modules which will inform the 2018 NGFR/Harris County, TX Operational Experimentation (OpEx).
 - After Action Report will be released mid-to-late 2018.

NGFR Integration Handbook

Released in February 2018, the Next Generation First Responder Integration Handbook provides recommendations from NGFR which detail technical specifications that are needed to develop interoperable solutions to the first responder market. NGFR is requesting industry feedback.



Part One - Provides an introduction and overview of the NGFR on-body framework and the concepts behind its modular design.

Part Two - Targets engineers and details engineering design for module-to-module communications and data transfer from on-body systems to agency systems, including the interfaces, services and standards.

Part Three - Targets software developers and engineers to guide modular development; provides additional details of the data architecture for modules and their interfaces

AUDREY Pilot Programs

Assistant for Understanding Data through Reasoning, Extraction & sYnthesis

In 2017, NGFR partnered with U.S. and international public safety agencies to begin pilot programs for the AUDREY artificial intelligence solution.

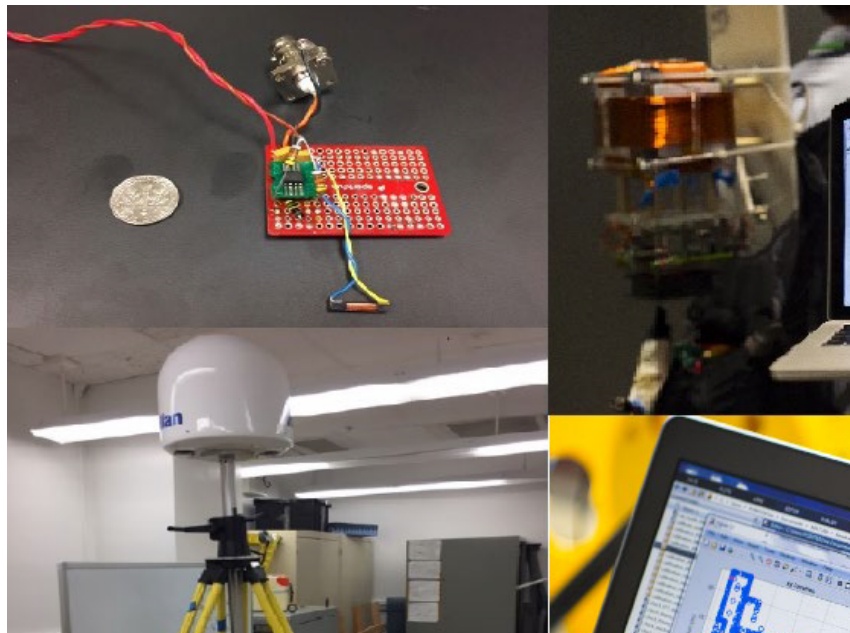


- Continued partnership with Grant County, Washington Multi-Agency Communications Center.
- New partnership with Defence Research and Development Canada and Hastings-Quinte Paramedic Services.
- Discussions with:
 - US Coast Guard
 - Office of Health Affairs
 - Sacramento PSAP

POINTER

Precision Outdoor and Indoor Navigation and Tracking for Emergency Responders

Precision positioning sensor system that locates first responders via low-frequency magnetic fields and can transmit signals through materials, including wood, concrete, brick and rebar.



- Testing of miniaturized receiver, transmitters and UHF wireless communications link will occur May – September 2018.
- Version One will be commercially available mid-to-late 2019.
- First release will target rural homes, warehouses and low-rise buildings.
- Next phase to focus on high-rise buildings, outdoor and underwater environments and tunnels.

Advanced Multi-Purpose Base Ensemble Uniform (AMBER)

Designed and developed as a multi-threat base protective ensemble, the AMBER project's anticipated completion date is mid-to-late 2018.



- Grant County, Washington fire departments to begin testing early 2018.
- International partners interested in testing:
 - Sweden
 - United Kingdom
 - Canada
- Collecting data for transitioning weather April-July, 2018.

Other Programs/Projects

- **Tracking of Emergency Patients (TEP)**
- **CAUSE – Next steps**
- **CA/US Collaboration**
- **LA County Sheriff**
- **UCF AR/VR HUD**
- **Harris County Spiral III**
- **Plug Fest**
- **JAM-X 2019**

Engage With Us!

DHS S&T Next Generation First Responder Apex Program



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