

**OMB CONTROL NUMBER 0693-0043**  
**NIST GENERIC CLEARANCE FOR USABILITY DATA COLLECTIONS**

**NIST, Information Technology Laboratory (ITL)**  
**Public Safety Communications First Responder Interview**

***Survey Questionnaires for: Questions for developers about testing of cryptography in their software***

**1. Explain who will be surveyed and why the group is appropriate to survey.**

As part of an in-depth interview study of First Responder user groups, the Visualization and Usability Group (VUG), of the Information Technology Laboratory (ITL), of the National Institute of Standards and Technology (NIST) intends to recruit 250 participants. Participants will be individuals who have first-hand on the ground work experience as first responders (fire fighters, emergency services, or law enforcement). Participants will be recruited from several different sources: first responder organizations such as the Public Safety Advisory Committee (PSAC) the International Association of Fire Fighters, the National Association of State EMS Officials, the National Organization of Police, NIST partner mailing lists, and recommendations from NIST personnel.

The purpose of this project is to understand users and user needs, as well as how the system can function to help them achieve their goals in order to inform new technology development and standardization. The project will investigate users, user experience, and user needs by understanding:

- The public safety incident response process from first responders' perspective
- Public safety information and communication content and medium/form/modality, including context & sequencing
- Public safety technology usage and user interaction with technology, including medium/form/modality
- First responders' views on public safety technology & communications (current and future looking)
- Human capacity and limitations during incident response

**2. Explain how the survey was developed including consultation with interested parties, pretesting, and responses to suggestions for improvement.**

The interview questions were developed and refined based on discussions with First Responders at NIST and the PSAC.

**3. Explain how the survey will be conducted, how customers will be sampled if fewer than all customers will be surveyed, expected response rate, and actions your agency plans to take to improve the response rate.**

There are approximately five million workers in the public safety community in the United States, comprised of fire fighters, law enforcement, emergency medical services (EMS) and 911 call center workers. They differ organizationally, jurisdictionally, and geographically (Visiting Committee on Advanced Technology [VCAT], 2012), and have a variety of needs related to communication.

Since cultural and geographic regions influence first responder roles and communication needs, the sampling strategy focused on regions of the country. The 8 geographic areas are for this phase include:

1. Northeast Coast
2. Southeast Coast
3. Midwest/Northeast
4. Midwest/Southeast
5. Midwest/Northwest
6. Midwest/Southwest
7. Northwest Coast
8. Southwest Coast

Within each region sites were identified based on convenience, public safety data on existing public safety infrastructures and adoption of technology. Each site will be further divided into urban, suburban and rural areas. Data collection in this phase we will focus on additional geographic areas of the country, with more of an emphasis on rural and tribal areas. Given this focus, we also will work to insure representation from volunteer versus career first responders (specifically Fire), and from Wildland-Urban-Interface (WUI) participants. This phase will also include more of a focus on state and federal representation, as well as on Communications personnel (911 Call Centers, Dispatch, etc.). As in the first phase our goal is to collect data with a continued focus on representation from all four disciplines and various jurisdictional levels.

- Southeast Coast
  - o Atlanta, which will include urban, suburban, and rural areas
  - o Miami, which will include urban, suburban, and rural areas
- Midwest/Southeast
  - o New Orleans, which will include urban and suburban
  - o Kentucky and Tennessee, which will include rural areas
- Midwest/Southwest
  - o Phoenix, which will include urban, suburban, and rural and tribal
- Midwest/Northwest
  - o Montana/Dakotas/Wyoming and/or Nebraska, which will include rural and tribal areas (and possibly some urban areas)
  - o Portland, which will include urban, suburban, and rural areas
- Southwest Coast
  - San Diego, which will include urban, suburban, and rural areas
  - Nevada, which will include urban, suburban, rural and tribal

For each site/area we anticipate at least 5 interviews per discipline (EMS, Fire, LEO, and Communications such as 911 and Dispatch). Additionally, NIST will go to five (5) more

cities which will be coordinated with other events (conferences) to include the federal and state perspectives.

Participants will be identified by local PSAC members. Once an individual agrees to participate, an interview appointment will be scheduled at a particular location agreed upon by both the participant and researchers. The data will be collected through semi-structured interviews. The interview includes 10 questions and 8 demographic questions and will be at most 45 minutes in length. The audio of the interview will be recorded and transcribed.

**4. Describe how the results of the survey will be analyzed and used to generalize the results to the entire customer population.**

We intend to use the qualitative data analysis technique of grounded theory to create a list of developer testing practices, concerns, and techniques. We will compare the qualitative responses across different types of first responders and different geographical regions of the country. From these results, we plan to develop an online quantitative survey to reach a much broader cross section of the first responder population.

There will be no collection, storage, access, use, or dissemination of personally identifiable information from the interviews. As stated in the provided Information Sheet, participants will be assigned a participant reference code that will be associated with their responses. Data will not be linked back to a respondent. NIST will not create or keep a list that links the participant reference code to a participant.