



Privacy Impact Assessment
for the

First Responder Technologies (R-Tech) Program

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Abstract

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) First Responder Technologies (R-Tech) program often requires the collection of personal information and video recordings of first responder research volunteers in support of operational testing, evaluation, demonstration, and outreach activities. This privacy impact assessment (PIA) discusses the risks associated with the use of volunteers to test first responder technologies that are otherwise not privacy sensitive.

Overview

The Homeland Security Act of 2002 [Public Law 1007-296, §302(4)] assigns S&T the responsibility for conducting research in support of the Department's mission. Specifically, Section 302(4) of Title 3 states, "the Secretary, acting through the Under Secretary for Science and Technology, shall have the responsibility for conducting basic and applied research, development, demonstration, testing, and evaluation activities that are relevant to any or all elements of the Department." This privacy impact assessment (PIA) discusses the risks associated with the use of volunteers to test first responder technologies that are otherwise not privacy sensitive.

The R-Tech program supports S&T's research mission by performing tests and evaluations in a simulated operational environment on first responder technologies that address the capability gap and needs of first responder communities (i.e., fire fighters, law enforcement, and emergency medical technicians). The purposes of these projects are to test the unique features, functions, and operational readiness of the first responder devices in a variety of settings. The tests focus on establishing the benefits of deploying the devices to first responder communities and determining the devices' capabilities in an operational environment. S&T is conducting this PIA to analyze the privacy impacts of these tests, which involve data collection from volunteers such as contact information, information about the volunteers that may be relevant to the evaluation of the technology, and video recording volunteers using the equipment to determine its utility and how to properly use it. These tests are conducted on technologies that are otherwise not privacy sensitive; any testing of privacy sensitive technologies will require a separate PIA. Examples of technologies R-Tech develops, tests, and evaluates include:

- navigational devices that could potentially enable first responders, their exterior sector officers, and the fire-ground commander to navigate a burning building or area as they battle interior structural fires,
- personal protective equipment (PPE), such as gloves, helmets, vests that first responders don for protection in emergency situations,
- real-time video, voice, and data transmission via personal digital assistant from the scene of an incident to the incident commander to provide situational awareness, and
- vehicle-mounted chemical detectors that would potentially be capable of providing the first responder with real-time evaluation of Toxic Industrial Chemical contamination.

This PIA covers the collection of demographic information related to the research volunteer including the volunteer's name, height, age, vision, state the volunteer is from, department name, discipline field (i.e., fire, emergency medical service (EMS), law enforcement), and years of related work experience; survey and interview information to obtain feedback on the performance of the devices in test



settings; contact information to coordinate and schedule tests with the volunteers; photographs and video recordings that capture audio and images of volunteers testing technologies. Photograph and video recordings are used by testing teams to demonstrate how to use the equipment in operational settings, further support determinations regarding the value of the equipment, and determine the readiness of the technology for deployment.

The R-Tech programs will include the following participants:

1. S&T R-Tech: S&T R-Tech will fund the contracted testing teams to perform the testing and evaluation activities on the first responder technologies. S&T R-Tech will only receive final reports from the contracted testing team at the outcome of the tests. The reports will contain neither PII nor images. S&T R-Tech may receive video and audio via DVD or printed photographs demonstrating the use and utility of the technology.
2. Contracted testing team: The contracted testing team will coordinate with first responders to recruit research volunteers and obtain facilities to conduct the tests. The contracted testing team will execute the tests and collect the information from volunteers on behalf of DHS S&T R-Tech. The contracted testing team will compile a final report at the conclusion of the tests which will explain testing results. The testing team will coordinate with the first responder community and other potential participants (e.g. universities) to obtain research volunteers, testing facilities, and other equipment necessary for the tests. R-Tech contractors have already established relationships with the first responder community, for all discipline areas (e.g., fire, law enforcement, EMS, etc.) which allows them to readily identify appropriate first responder test subjects throughout the country.
3. First responder community: The first responder community will provide volunteer test subjects that participate in the tests. All participants will sign informed consent forms indicating their understanding of their role in the research and how their information may be used. The first responder community may also provide equipment and facilities to conduct the tests, including burn buildings, smoke houses, and fire trucks necessary to complete the tests.

The testing facilities are simulated operational settings that may include empty houses or building complexes used or owned by the first responder community. Because they are located on private property, members of the public will not be impacted by the testing activities.

Upon completion of the tests, the contracted testing team will compile a final report on the technology for the S&T R-Tech program manager, who then promulgates findings from the report to educate potential customers or users in the first responder community. These reports do not contain PII or identifying information of the research volunteers. Once the final reports are completed, the contracted testing team will destroy all PII and other information, with the exception of photos and video recordings, collected during the course of the testing and evaluation activities. Photos and video recordings may be provided to S&T R-Tech to further support test results. No individual PII is collected for the purpose of distributing reports.

All test and evaluation activities funded by S&T R-Tech are conducted in a similar, if not identical manner; therefore, this PIA will broadly cover all test and evaluation activities conducted under the R-Tech program. A list of projects covered under this PIA will be included as an appendix to the document. S&T will update and append the PIA periodically, as appropriate.



Section 1.0 Characterization of the Information

The following questions are intended to define the scope of the information requested and/or collected as well as reasons for its collection as part of the program, system, rule, or technology being developed.

1.1 What information is collected, used, disseminated, or maintained in the system?

S&T R-Tech's contracted testing team may collect the following from first responder volunteers: demographic information related to the volunteers, including name, height, age, vision, department name, state the volunteer is from, discipline field (i.e., fire, law enforcement, EMS), and years of related work experience; contact information (e.g., work email and phone number); survey and interview information to obtain feedback on the performance of the devices in test settings; and photographs and video recordings that capture audio and images of the volunteers.

1.2 What are the sources of the information in the system?

S&T R-Tech's contracted testing team will collect the information directly from the volunteers through surveys and interviews. Depending on the technology being tested, the system may also contain photographs, video images, and audio recordings of the volunteers captured during the tests.

1.3 Why is the information being collected, used, disseminated, or maintained?

R-Tech tests and evaluates equipment prototypes/develops for first responders to use in their day-to-day operations. R-Tech will fund testing team through contracts to collect information from first responder and subject matter expert evaluators to adequately assess the equipment against pre-defined assessment criteria and compile a comprehensive final assessment report and other outreach material containing test results. Contracted testing team will collect contact information to coordinate with volunteers on testing schedules, dates, times, etc. Testing team will also collect feedback and observations from the evaluator participants (who are members of the first responder community) to determine the utility and functionality of the equipment. To ensure that the participants utilized in the evaluations do have their stated credentials, the testing team must validate their name, employment, tenure and any specialized training that is required of them for participation.

Demographic information further supports the assessment of the equipment, as it evaluates the equipment across a range of professional characteristics (i.e., years of experience, etc.). The contracted testing team may link the feedback and observations to the participants during their analysis to ensure accuracy and allow participants to correct their information and/or statements. The testing team will also capture photographs of participants during the testing activities to illustrate how to use the equipment in operational settings and further support determinations regarding the value of the equipment. The testing team may also record video and audio of the volunteers to demonstrate the proper use of the equipment by the first responder personnel in the simulated, operational setting and further support determinations



regarding the functionality and value of the equipment to first responders. The testing team will compile this information and create a final report and other outreach material which the national emergency responder community will use to better select, procure, use, and maintain emergency responder equipment. The final report will not contain any PII, including images.

1.4 How is the information collected?

When demographic information is collected, the research volunteers will transmit that information directly to the project test administrator (typically a member of the S&T contracted testing team) by hardcopy or email. The test administrators will retain the information until the test and final report are complete. Upon completing the test and final report, all emails and hard copy documents containing demographic information are shredded/deleted. The contracted testing team will also collect the volunteers' feedback and observations through surveys and interviews. The contracted testing team will photograph and videotape the volunteers during the tests and will capture images and audio recordings. Prior to data collection, volunteers will sign informed consent forms allowing the collection of information and video/audio recordings.

1.5 How will the information be checked for accuracy?

The testing team will collect the information directly from the participants, and volunteers will verify the accuracy of all the information collected at the time of collection.

1.6 What specific legal authorities, arrangements, and/or agreements defined the collection of information?

The Homeland Security Act of 2002 [Public Law 1007-296, §302(4)] authorizes the Science and Technology Directorate to conduct "basic and applied research, development, demonstration, testing, and evaluation activities that are relevant to any or all elements of the Department, through both intramural and extramural programs." In exercising its responsibility under the Homeland Security Act, S&T is authorized to collect information, as appropriate, to support R&D related to improving the security of the homeland.

1.7 Privacy Impact Analysis: Given the amount and type of data collected, discuss the privacy risks identified and how they were mitigated.

The risk associated with collecting this information is that unauthorized users may have access to the information or use the information for unauthorized purposes. The testing team will mitigate this risk by anonymizing all information in the final reports and publications. The contracted testing team will not include any PII or images of volunteers in the final reports and publications. All volunteers referenced in the final report will be given unique identifiers (i.e., volunteer A). Once the final report is completed or the contracted testing team determines that the information is no longer needed, they will destroy all information, both paper based and electronic. Additionally, during the testing activities, the contracted testing team will limit access to information to only authorized personnel with an appropriate need-to-know.



Another risk associated with the data collection is that the contracted testing team will collect more information than is necessary for the specific project. The contracted testing team will mitigate this risk by ensuring that only relevant and necessary information is collected for the specific project to assess and evaluate the utility and functionality of the emergency responder equipment in operational settings. The contracted testing team will only collect information that will support a thorough assessment and evaluation of the equipment to assist the emergency responder community in making selection and procurement decisions. The contracted testing team will collect feedback and observations from the participants on the utility and functionality of the equipment. Factors such as years of related work experience and jurisdiction are also used to evaluate the equipment across a broad range of professional characteristics.

Section 2.0 Uses of the Information

The following questions are intended to delineate clearly the use of information and the accuracy of the data being used.

2.1 Describe all the uses of information.

S&T R-Tech's contracted testing team will collect information to enable them to evaluate the performance of the device across a broad range of physical and professional characteristics and provide video and audio demos for the use of the technologies. S&T R-Tech will use the final reports and publications to educate the first responder community on the operational capabilities of the technologies being tested when exposed to real world conditions. S&T R-Tech may also use the video recordings and photos to further demonstrate the utility of the technology.

2.2 What types of tools are used to analyze data and what type of data may be produced?

S&T R-Tech's contracted testing team will manually analyze the information collected and compile a final report. During the tests, the testing team will store volunteer demographic information, survey, feedback, and photographs and video on a password protected computer, safe, or locked cabinet. The final report is used to verify the device function as reported under simulated operational conditions.

2.3 If the system uses commercial or publicly available data please explain why and how it is used.

S&T R-Tech's contracted testing team do not use commercial or publicly available data during the tests.

2.4 Privacy Impact Analysis: Describe any types of controls that may be in place to ensure that information is handled in accordance with the above described uses.

The privacy risk associated with the uses of the information is that unauthorized users may view stored information or use the information for unauthorized purposes. To mitigate this risk, only authorized personnel with a need-to-know will have access to the information. The contracted testing team will



employ adequate safeguards (physical and technical) to protect the information from unauthorized access. The contracted testing team, at minimum, will place all videos and hard copy documents in secured rooms and locked in a safe or file cabinet; S&T R-Tech will follow similar procedures. Electronic documents stored on network connected computers are encrypted and protected by user name and password privileges. Only test team individuals with a need-to-know will be granted access to the secure rooms, computer network, and files.

Section 3.0 Retention

The following questions are intended to outline how long information will be retained after the initial collection.

3.1 What information is retained?

S&T R-Tech's testing team will collect and retain demographic, contact, interview, and survey information from volunteers during testing activities for the purpose of demonstrating the proper use of the technology. The testing team will also capture and retain photographs, video images, and audio recordings during the testing activities. The testing team will destroy all personal, demographic, contact, interviews, and survey information collecting during the tests once they determine it is no longer needed. S&T R-Tech may receive a copy of the video recordings captured during the testing activities to analyze the utility of the device. At the conclusion of the project, S&T R-Tech will receive a final report on the technology containing anonymized information. The testing team will not include any PII, nor include images in the final reports.

3.2 How long is information retained?

S&T contracted testing team will retain information until a final report is compiled, which takes approximately one year. Once final analyses and evaluations are made and published, testing team will destroy all PII.

3.3 Has the retention schedule been approved by the component records officer and the National Archives and Records Administration (NARA)?

Yes. The S&T Records Retention Officer has approved the use of General Records Schedule (GRS) 20, Item 1 for the retention of the final report and 21, Item 19 for the retention of the video recordings.

3.4 Privacy Impact Analysis: Please discuss the risks associated with the length of time data is retained and how those risks are mitigated.

The testing team will collect and store information until a final report is produced. During that time, a risk associated with data retention is the unauthorized access of the information. To mitigate the risk, the testing team will employ all appropriate physical and technical safeguards to secure the information. This will include locking all information in a safe when not used and using firewalls and



encryption techniques to protect any information stored on electronic devices. S&T R-Tech will employ similar physical safeguards to protect the video recordings in their possession.

Section 4.0 Internal Sharing and Disclosure

The following questions are intended to define the scope of sharing within the Department of Homeland Security.

4.1 With which internal organization(s) is the information shared, what information is shared and for what purpose?

S&T R-Tech may receive a copy of the photographs and video captured during the tests; S&T R-Tech will not receive or have access to any other personal, demographic, interview, or survey information. Only the testing team working directly on the project will have access to the personal, demographic, interview, and survey information. The testing team will use this information to prepare the final report containing test results and analyses. Neither S&T R-Tech nor contracted testing team will share the video recordings or the volunteers' information with any other internal organizations. At the conclusion of the project, S&T R-Tech will receive the final report which will not contain any PII nor images.

4.2 How is the information transmitted or disclosed?

Neither S&T R-Tech nor the contracted testing team will share the information with any internal organizations.

4.3 Privacy Impact Analysis: Considering the extent of internal information sharing, discuss the privacy risks associated with the sharing and how they were mitigated.

S&T R-Tech will not share the information with any internal organizations.

Section 5.0 External Sharing and Disclosure

The following questions are intended to define the content, scope, and authority for information sharing external to DHS which includes Federal, state and local government, and the private sector.

5.1 With which external organization(s) is the information shared, what information is shared, and for what purpose?

S&T R-Tech will not share any PII with any organization external to DHS. The S&T R-Tech contracted testing team will collect the information to evaluate and make determinations on the utility and functionality of the devices or protocol. They will not share the information with any other organizations external to DHS. The final reports documenting test results will be shared with members in the first responder community via R-Tech's FirstResponder.gov website; these reports will not contain any PII.



5.2 Is the sharing of personally identifiable information outside the Department compatible with the original collection? If so, is it covered by an appropriate routine use in a SORN? If so, please describe. If not, please describe under what legal mechanism the program or system is allowed to share the personally identifiable information outside of DHS.

There is no sharing of PII outside of DHS.

5.3 How is the information shared outside the Department and what security measures safeguard its transmission?

S&T R-Tech will share the final reports, which will not contain any PII nor images, outside the Department with first responders via hardcopies and the FirstResponder.gov website. FirstResponder.gov is a DHS S&T system that has received certification and accreditation from the DHS S&T CIO.

5.4 Privacy Impact Analysis: Given the external sharing, explain the privacy risks identified and describe how they were mitigated.

The S&T R-Tech testing team will not share any personal, demographic, interview, and survey information with any external organizations. Instead, they will produce a final report, which S&T R-Tech will share externally with first responders via the FirstResponder.gov website. The privacy risk associated with this external sharing is that volunteers could be identified. To mitigate this risk, the testing team will ensure that none of the volunteers' PII or images will be included in the final reports.

Section 6.0 Notice

The following questions are directed at notice to the individual of the scope of information collected, the right to consent to uses of said information, and the right to decline to provide information.

6.1 Was notice provided to the individual prior to collection of information?

S&T R-Tech contracted testing team will provide detailed notice to volunteers. The notice will provide participants background information on the project, that participation in the project is voluntary, that photographs and videos may be captured during the tests, and that volunteers' feedback (in anonymized form) may be included in the final reports. The notice will provide volunteers with the contact information of testing team staff to follow up or obtain additional information on the tests. All volunteers will sign informed consent forms prior to the initiation of the project.

Participants will also receive a full briefing prior to the initiation of the tests. The briefing will include the purpose of the project, notify the participants of all data collection that will occur during the project, and inform the participants of all uses of their information, including with whom the information



will be shared. Once the final report is completed or the testing staff determines that the participants' PII, including demographic information and survey information is no longer needed, they will delete all of the information from their own records and files.

6.2 Do individuals have the opportunity and/or right to decline to provide information?

Volunteers participating in the testing activities are under no obligation to provide information. All volunteers will have the right to decline providing information if they so choose.

6.3 Do individuals have the right to consent to particular uses of the information? If so, how does the individual exercise the right?

Yes. Volunteers will sign informed consent forms, which will clearly state the uses of the information, prior to data collection.

6.4 Privacy Impact Analysis: Describe how notice is provided to individuals, and how the risks associated with individuals being unaware of the collection are mitigated.

The testing team will provide notice to the volunteers with informed consent forms, which volunteers will sign prior to data collection. The testing team will notify all volunteers of their participation in the testing activities both orally and in writing. Each participant will sign a consent form that will allow researchers to collect their video images, interview responses, and survey information. Additionally, volunteers will receive a full briefing prior to initiation of the testing activities.

Section 7.0 Access, Redress and Correction

The following questions are directed at an individual's ability to ensure the accuracy of the information collected about them.

7.1 What are the procedures that allow individuals to gain access to their information?

The contracted testing team will allow all test subjects to access information collected about them during the testing activities. Volunteers can gain access to information by contacting the test director and/or the test data recorders. The testing team will notify volunteers of such mechanisms during the initial briefing, prior to the start of the project.

7.2 What are the procedures for correcting inaccurate or erroneous information?

The testing team will collect information directly from the volunteer test subjects. The testing team will give volunteers the opportunity to correct any inaccurate or erroneous information at the time of data



collection. After the testing team compiles the test results and feedback, they will provide volunteers the opportunity to review their own information for accuracy.

7.3 How are individuals notified of the procedures for correcting their information?

The testing team will notify volunteers of procedures for correcting their information during the initial briefing, prior to starting the project. The contracted testing team will collect information directly from the volunteer research participants and provide the individuals the opportunity to correct inaccurate or erroneous information at the time of collection.

7.4 If no formal redress is provided, what alternatives are available to the individual?

The contracted testing team will provide appropriate redress procedures to volunteers, as described above.

7.5 Privacy Impact Analysis: Please discuss the privacy risks associated with the redress available to individuals and how those risks are mitigated.

The privacy risk associated with access and redress is that inaccurate data may be associated with individuals. This risk is mitigated by the fact that the individuals do not depend on their information being accurate. Inaccurate information would only be able to impact test results, not the individual.

Section 8.0 Technical Access and Security

The following questions are intended to describe technical safeguards and security measures.

8.1 What procedures are in place to determine which users may access the system and are they documented?

Only authorized members of the testing team working directly on a specific project will have access to the system. One or more layers of access control (badge, ID number/PIN number, file encryption and video surveillance system) will protect the workstation location. Username and password privileges will protect the computer and network. Access to documents requires file-level permission. The procedures have not been documented.

8.2 Will Department contractors have access to the system?

Yes, the R-Tech testing team will have access to the information collected.



8.3 Describe what privacy training is provided to users either generally or specifically relevant to the program or system?

All S&T R-Tech and contracted testing team personnel working on these projects will receive initial and annual privacy training. S&T provides web-based privacy awareness training to all members testing team involved in the project. The training will provide guidance to the testing teams on how to safeguard, store, and handle PII properly in their possession.

8.4 Has Certification & Accreditation been completed for the system or systems supporting the program?

The S&T CIO has determined that a C&A is not required for these projects because R-Tech will not create or set up any IT systems during any of the research projects. R-Tech will share final reports with the first responder community through the R-Tech FirstResponder.gov website, which has a valid authority to operate.

8.5 What auditing measures and technical safeguards are in place to prevent misuse of data?

The S&T R-Tech testing team will conduct regular audits and employ technical safeguards on computer systems where the volunteers' information is kept, which are intended to prevent the misuse of data. Depending on the testing team performing the test, some or all of the safeguards may be in place. S&T R-Tech will work with their test partners to ensure those responsible for securing the data have adequate controls in place. Any additional controls will be documented.

These measures may include, but are not limited to:

1. An internal firewall protecting the network to which the workstations are connected.
2. A secondary firewall protecting all servers, which include email servers and departmental servers.
3. Multi-tiered antivirus, antimalware, and anti-spam software and program packages protect the network, also.
4. The contracted testing team may audit the network, and provide alerts if it identifies questionable activity. They may also initiate a manual process to monitor and investigate any suspicious activity.
5. Network security procedures and practices may be audited each year by an external agency.

The auditing mechanisms that are used during the tests may depend on the testing team executing the tests, There may be variations of the identified safeguards and audit capabilities in place. S&T R-Tech will ensure that the safeguards listed above are recognized as a minimum requirement for all R-Tech projects.



8.6 Privacy Impact Analysis: Given the sensitivity and scope of the information collected, as well as any information sharing conducted on the system, what privacy risks were identified and how do the security controls mitigate them?

The privacy risks associated with technical access and security includes unauthorized access to information or inappropriate uses of the information. The contracted testing team will mitigate this risk by limiting access to authorized staff and ensuring that information is used in concurrence with the documented purposes. The contracted testing team will also mitigate the risk by ensuring that all staff employ appropriate safeguards as previously discussed in Section 8.5. Further, the testing team will employ encryption technology to secure all electronic transmissions.

Section 9.0 Technology

The following questions are directed at critically analyzing the selection process for any technologies utilized by the system, including system hardware, RFID, biometrics and other technology.

9.1 What type of project is the program or system?

The projects involve the development, prototyping, testing, demonstration and evaluation of first responder device or protocol that address capability gaps and needs of the first responder community. The objectives of the projects are to test the unique features, functions, and operational readiness of the device or protocol for first responder applications.

9.2 What stage of development is the system in and what project development lifecycle was used?

A selected manufacturer develops and manufactures the devices or develops new protocols. S&T R-Tech tests its utility and functionality for operational deployment for first responder applications.

9.3 Does the project employ technology which may raise privacy concerns? If so please discuss their implementation.

No. Most technologies tested by S&T R-Tech fill specific capability gaps from the first responder community, including developing and testing a device. For example, S&T R-Tech develops a new technology that allows firefighters to better navigate a burning building, or a device that will help locate a disoriented or lost first responder. These technologies generally do not raise privacy concerns.



Responsible Officials

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Approval Signature

Original signed copy on file with the DHS Privacy Office

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