

1.0 Introduction

1.1 Overview:

The Public Safety Communications Research Division of the National Institute of Standards and Technology is conducting the Automated Streams Analysis for Public Safety (ASAPS) Prize Challenge, authorized under Section 105 of the America COMPETES Reauthorization Act of 2010 (Pub. L. No 111-358), as codified in 15 U.S.C. § 3719.

This challenge anticipates awarding prizes to challenge contestants who submit innovative approaches that address information extraction across ASAPS multimodal data streams and perform fusion in real time across extracted data to generate actionable data reports about simulated and staged emergency events. One of the most important objectives of this program is to demonstrate how data can be used to enable decision support tools and capabilities for public safety. This challenge is a nationwide innovation contest taking place throughout 2020, 2021, and 2022. The challenge is anticipated to be administered in four discrete contests. In the context of multiple contests, these are the official rules for Contest 1 only.

Contest 1 will focus on developing innovative “plans of attack” focused on data extraction and fusion, refining and focusing the details relevant to the ASAPS Challenge’s problem statement, partnering between contestants to form highly qualified teams, and encouraging collaborative and creative thought around potential approaches to developing solutions. NIST anticipates awarding up to \$150,000 in cash to winning contestants in Contest 1. In addition, contestants will be familiarized with the development data set and version 1.0 of the test harness and encouraged to provide feedback for potential updates in advance of the second contest.

1.2 Program Information:

Additional information on the Challenge can be found on www.herox.com/ASAPS1. Questions on the Challenge can be directed to the challenge forum: www.herox.com/ASAPS1/forum.

1.3 ASAPS Challenge Background:

The area of real-time automated analytics is understudied – especially with regards to the analytic fusion of multiple sources of unstructured information in real-time. The future of public safety demands automated solutions to analyze live data, provide improved situational awareness, and alert and inform decision making.

Extracting information from video, audio and textual communications, social media, and sensors presents a significant analytic challenge. It is virtually impossible for humans to co-analyze these data streams in real-time, and, currently, there are few automated tools to analyze these types of unstructured data in real-time and virtually no automated tools to create dynamic analytic models of public safety emergencies as emergency situations evolve.

With the maturation of artificial intelligence (AI) technologies, specialized architectures and processors for AI applications, cloud computing, high-speed communications networks and streaming data resources and protocols, it is now possible to create automated tools to assist public safety organizations in analyzing the increasingly large amounts of information at their fingertips to help them make the most informed decisions based on a comprehensive analysis of the data available. Such tools will help distill, structure, and present the quickly evolving information from a multitude of data streams to public safety organizations in a way that supports time-critical decision making and serves as an essential force multiplier.

Due to the multitude of sensors and devices being used in public safety along with communications data collected in operations and contributed by the public, and the multi-modal nature of all of these data streams, transforming data, especially unstructured data, into information in real-time is one of the key technology gaps that must be bridged to achieve advances in this area. The available technology is insufficient to bridge this technological gap because:

- Most automated data analysis tools have been developed for use with archival data and focus on post-event forensic analysis.
- Few analytic technologies focus on a moving representation of live streaming data that is updated over time, and that can be used to show temporal changes in the analysis.
- Tools that make data available to first responders in real-time are heavily weighted towards a visual representation of responder location and structured reporting of known emergency communications.
- Few public safety emergency analysis tools exist that provide an effective real-time automated analysis and fusion of information from unstructured public safety communications streams and sensor- and citizen-generated data streams.

Note that while public safety organizations must often grapple with answering the who, what, when, and where of emergencies, the research supported by this Challenge focuses only on the what, when, and where aspects of streaming data analysis and specifically excludes identity-related technologies such as facial and voice biometrics which are considered out of scope for this research program¹. This focus of the Challenge is because the area of identifying the situational and time-critical evolving characteristics of an emergency across information streams is under-researched. This Challenge seeks to focus research on analyzing a plethora of fast-moving data streams for life/infrastructure-critical situational information to support both effective and efficient response.

1.4 Technical Details for ASAPS Contest 1:

Public safety organizations are inundated with live streaming data from a variety of sources. This live streaming data generally falls into two categories - some of this data is structured, while much of it is unstructured. Structured data that resides in a fixed field within a record or file (the kind typically found in spreadsheets or relational databases) is formatted in a way so that it can be readily queried. By contrast, unstructured data (e.g., video and audio) generally does not have a *pre-defined data* model or is not organized in a *pre-defined* manner and, therefore, is not readily searchable. The lack of a defined data model prevents the data from being automatically interpreted and used by automated decision support applications without significant human intervention.

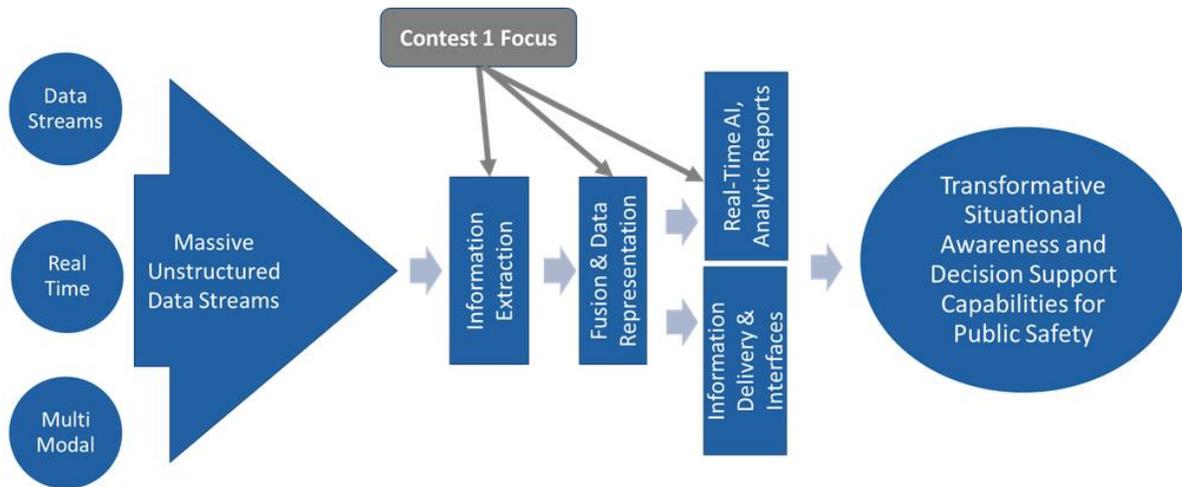
In this first contest, NIST PSCR is inviting a novel multidisciplinary community to share its vision for how to analyze numerous live data streams, understand the data, and transform it into information to support public safety decisions. We are looking for ideas that address the following analytic tasks as well as an overall extraction to analysis systems platform approach to the contest elements. The core analytic tasks for this contest can be broadly described as:

1. **Information extraction across data streams and data sources:** Structured information is continuously extracted from each of the data streams that are necessary to support downstream analysis and detection of emergency events.
2. **Information fusion across extracted data and generation of live/dynamic information representation:** Joint inferencing is performed across all of the information in the extracted streams to create an event-level analysis of an emergency and store that information in a dynamically evolving structured data representation that can be utilized at any time during the life of an emergency.
3. **Automated emergency event analysis:** Highly actionable analytic reports about emergency events are generated from the extracted/fused structured information (as described in the above topics) into a form that can be readily rendered into actionable user-readable reports in real-time and in both ongoing and summary forms.

Success in this ideation contest is dependent upon a clear vision of the components, platform, and novel approaches that fulfill the functions of real-time information extraction, live dynamic information fusion and representation, and evolving emergency event analysis.

Figure 1. A rendering of the flow of streaming data through a conceptual ASAPS system. **Contest 1 focuses ONLY on the extraction and core analysis components of the system.** Later contests will expand the focus to include the end user interfaces to the analytic information.

¹ With the exception of technology to maintain scene-relative identification of people/vehicle/object/place entities involved in emergencies in order to associate activities with the entities they are involved with.



This figure is a simplified depiction of the flow of information through an analytic process and not prescriptive of the approaches that might be developed to address the challenge.

To provide some additional clarity on the context and make-up of the data, Table 1 illustrates the categories and types of data generally available to public safety.

Table 1: Example Public Safety Data Types

Data Stream Category	Example Data Types
Video & Still Images	<ul style="list-style-type: none"> ● Fixed/Stationary or Pan Tilt Zoom mounted CCTV cameras (some potentially including infrared data) ● Vehicle Cameras ● Cell phone cameras ● Drones
Audio	<ul style="list-style-type: none"> ● 911 calls ● Communications between dispatch and first responders ● Peer-to-peer first responder communications
Text	<ul style="list-style-type: none"> ● 911 texts ● Communications between dispatch and first responders ● Peer-to-peer first responder communications
Social Media (multimedia)	<ul style="list-style-type: none"> ● Facebook ● Instagram ● Twitter ● Includes text, images, video, audio, graphics, and other non-textual information
Sensors	<ul style="list-style-type: none"> ● Gunshot detection systems ● Automated license plate readers ● First responder asset tracking systems (for example GPS location of first responders and their vehicles)

Public safety requires automated approaches to sift through this incoming data and enable decision support tools and capabilities of the future. Tools and capabilities are needed which can identify emergency events and emergency related information within live streaming data. Table 2 lists examples of emergency events.

Table 2: Example of Public Safety Emergency Events

Public Safety Domain	Example Emergency Event Types
Law Enforcement	<ul style="list-style-type: none"> ● Streetfight ● Theft - stealing purse ● Active breaking and entering ● Domestic disturbance ● Vehicle accident ● Brandishing a gun ● Disorderly conduct ● Drug overdose ● Homicide ● Active shooter
Fire	<ul style="list-style-type: none"> ● Vehicle accident - fire ● Residential fires ● Commercial building fire ● Dumpster fire
EMS	<ul style="list-style-type: none"> ● Choking ● Vehicle accident injury ● Drug overdose ● Residential fire injury

1.5 Important Dates:

Pre-registration begins	February 10, 2020
Open to submissions	April 13, 2020
Submission deadline	August 7, 2020 @ 5pm ET
Reviewing & Judging	August 10 to September 14, 2020
Winners Announced	September 17, 2020

2. How to Enter

Visit www.herox.com/ASAPSI:

- Register as a contestant on HeroX.com and complete your submission using the online portal by the Submission Deadline.
- Each individual, team, or organization is allowed only one entry.
- There are four topics addressed in this contest and you may respond to one or more of these topics within your submission form.

3. Prizes

A total prize purse of up to \$150,000 will be awarded to the winners, as follows:

Category	Award
Topic 1: Information extraction across ASAPS streams and data sources across 1 or more data categories	\$30,000
Topic 2: Information fusion across extracted data and generation of live/dynamic information representation, across 3 or more data categories	\$30,000

Topic 3: Automated emergency event analysis across 3 or more data stream categories, and preferably across all data categories	\$30,000
Topic 4: Extraction-to-analysis systems approach across all data categories	2 X \$30,000

4. Reviewing, Judging, and Winners Selection

Submissions will initially be screened for completeness and compliance with the objectives and Official Rules of this challenge. A submission that fails to meet the compliance requirements listed below will be disqualified and will be ineligible to compete in this challenge. Submissions that pass the initial compliance review will be evaluated by a panel of subject matter experts and scored by a panel of judges. An evaluation of a submission by the Judging panel does not constitute NIST's final determination of the contestant or submission eligibility.

4.1 Completeness and compliance requirements (Pass/Fail):

To pass initial screening, submissions must:

- Discuss the current technology landscape
- Identify the technology gaps
- Describe the proposed approach to bridging the identified gaps
- Present the expertise and experience represented by the team and discuss how it aligns with the proposed approach
- Be written in English

4.2 Judging Criteria:

Submissions will be evaluated based on the criteria below. Scores will not be provided to the contestants. In the case of a tie, the Judging panel will decide on the winners.

In addition to the criteria listed below, submissions will also be evaluated to ensure they meet the requirements for the number of data categories (see Table 1 for data stream categories) required for each topic area. The requirements are as follows:

- **Topic 1: Information Extraction across ASAPS streams and data sources** Submitted ideas must address information extraction across one or more data stream categories.
- **Topic 2: Information fusion across extracted data and generation of live/dynamic information representation** Submitted ideas must address information fusion and information representation from 3 or more data stream categories.
- **Topic 3: Automated emergency event analysis** Submitted ideas must address emergency event analysis across 3 or more data stream categories. Preference will be given to ideas that span all data stream categories.
- **Topic 4: Extraction-to-analysis systems approach** Submitted ideas must address an extraction-to-analysis systems approach that uses all data stream categories.

Criterion	Evaluation metrics	Weight
Understanding of current state of the art and emerging trends	Demonstrates a clear understanding of the current state of the art and emerging trends.	20
Identification of technology gaps	Identifies critical technology gaps that prevent the problem from being successfully addressed.	20
Approach to bridging technology gaps	Presents a clear and compelling idea, accompanied by a technical approach to bridge the technology gaps identified. Describes how the proposed approach fits into the technology landscape. Demonstrates an understanding of the impact addressing the technology gaps would have in advancing the current state-of-the-art.	40
Innovation	Demonstrates creativity and novelty in the approach. Submissions that propose significant improvements, as opposed to incremental improvements, will be more favorably scored.	10
Implementation Considerations	Describes how the proposed approach would be implemented. Discusses the potential risks and risk mitigation strategies, how the proposed solution would integrate into a broad extraction-to-analysis systems approach, and what expertise and resources are required. Addresses what open questions still need to be thought through to realize the proposed approach.	10

5. Submission Content Requirements

The submission must conform to the following content requirements and must be submitted through the online form on www.herox.com/ASAPS1.

NIST makes an independent assessment of each submission based on the evaluation criteria. NIST will not review or consider incomplete submissions. During the review, each subject matter expert and member of the Judging panel will review the entire submission to which they are assigned, with the exception of the Team Information which will not be used for evaluations. The review is not done in sections with different reviewers responsible for different assigned sections, therefore, it is not necessary to repeat information in every part of the submission. Contestants must use non-confidential terms in their submissions. Do not include information deemed to be proprietary, private, trade secret, or in any way confidential

Each individual/team/organization is only permitted to submit one submission. There are four topics addressed in this contest and you may respond to one or more of these topics. If you are responding to multiple topics, please address each topic separately within the submission form by adding a Header within each text box.

5.1 Submission Form:

Section Title	Field Prompts	Field form
<p>Team Information and Submission Compliance The following fields are hidden during evaluation.</p>		
Team Information	Please list the full name and email address of the Official Representative submitting this entry (Individual or Team Lead in the case of a team entry.)	Textbox
Team Information	If submitting as a business entity or other organization, please also list the legal name of the business entity and website of the business.	Textbox
Team Information	Please list the full name and email address of all team members	Textbox
As an individual, team or business entity/other organization, we confirm that our entry meets the Eligibility Requirements set forth in the Challenge Rules.	<p>Please review the Challenge Rules for complete eligibility requirements.</p> <p>Eligibility requirements include:</p> <ul style="list-style-type: none"> ● The Official Representative (individual or team lead, in the case of a group project) must be age 18 or older and a U.S. citizen or permanent resident of the United States or its territories. ● In the case of a business entity or other organization, the business or organization shall be incorporated in and maintain a place of business in the United States or its territories. 	Yes No

<p>As an individual, team or business entity/other organization, we confirm that our entry meets the Submission Requirements set forth in the Challenge Rules.</p>	<p>Please review the Challenge Rules for complete submission requirements.</p>	<p>Yes No</p>
<p>IT Disclaimer</p>	<p>I understand that the HeroX website is hosted by a private entity and is not a service of NIST. The solicitation and collection of personal or individually identifiable information is subject to the host's privacy and security policies. Personal or individually identifiable information collected on this website will be shared with NIST for prize payment purposes only, and only for winners of the Challenge.</p> <p>I acknowledge that I have read the HeroX data privacy, use, security, and retention policies and understand that all data, except that expressly marked for government use, is subject to these HeroX policies. I further agree not to hold NIST or the U.S. Government liable for the protection, use, or retention of any information submitted through this website.</p>	<p>Yes No</p>
<p>I/We confirm that I/we unequivocally accept the complete Challenge Rules.</p>		<p>Yes No</p>
<p>Submission Categories Each individual, team, or organization is allowed one entry, but you may choose to submit to more than one topic within the one entry. If you wish to submit ideas to more than one topic, please check the appropriate boxes.</p>		
<p>Please select to which analytic tasks you are submitting to:</p>	<ol style="list-style-type: none"> 1. Information Extraction across ASAPS streams and data sources across one or more data stream categories: 2. Information fusion across extracted data and generation of live/dynamic information representation across 3 or more data stream categories: 3. Automated emergency event analysis across 3 or more data stream categories (across all categories is preferred): 4. Extraction-to-analysis systems approach across all data stream categories 	<p>Checkboxes (select multiple)</p>

<p>If submitting to Topic 1, please select which data categories you have included in your approach (you must select one or more data categories for Topic 1).</p>	<ol style="list-style-type: none"> 1. Video and still images 2. Audio 3. Text 4. Social media (multimedia) 5. Sensors 	<p>Checkboxes (select at least one)</p>
<p>If submitting to Topic 2, please select which data categories you have included in your approach (you must select three or more data categories for Topic 2).</p>	<ol style="list-style-type: none"> 1. Video and still images 2. Audio 3. Text 4. Social media (multimedia) 5. Sensors 	<p>Checkboxes (select at least three)</p>
<p>If submitting to Topic 3, please select which data categories you have included in your approach (you must select three or more data categories for Topic 3). Approaches that address all data categories are preferred.</p>	<ol style="list-style-type: none"> 1. Video and still images 2. Audio 3. Text 4. Social media (multimedia) 5. Sensors 	<p>Checkboxes (select at least three)</p>
<p>Submission Content</p> <p>If you are responding to multiple topics, please address each topic separately within the submission form by adding a Header within each text box.</p> <p>Please remember that you must have the full rights to use any information that is contained within your submission and, when required, you should include a citation in the content of your response and add the citation added to the list of references at the bottom of this form.</p> <p>All character limits include spaces.</p>		
<p>Summary of proposed approach</p>	<p><i>Your first paragraph should be an executive summary that captures the scope and key aspects of the proposed concepts.</i></p> <p>Contestants should consider the following open questions in creating their response:</p> <p>What is your idea? How does your idea align with ASAPS goals and objectives? How is your idea novel and innovative? If your idea were to be successfully developed, how would the results meet the ASAPS goals and objectives? What data and metrics are needed to test and validate your idea?</p>	<p>3000 characters maximum.</p>
<p>Understanding of the current state-of-the-art and emerging trends</p>	<p>Participants should consider the following open questions in creating their response:</p> <p>Please describe your understanding of the current state-of-the-art for this field and the emerging trends.</p>	<p>6000 characters maximum.</p>

<p>Identification of technology gaps</p>	<p>Contestants should consider the following open questions in creating their response:</p> <p>Looking at your idea and the current technology landscape, what are the most important technology gaps? For each technology gap, please discuss what is missing, its importance to the overall idea execution, and your estimation of the degree of difficulty to successfully bridge the gap.</p>	<p>6000 characters maximum.</p>
<p>Approach to bridging technology gaps</p>	<p>Contestants should consider the following open questions in creating their response:</p> <p>For each technology gap that you have identified, what is your idea to bridge the gap? How does your proposed approach fit into the technology landscape? Does it require something completely new to be developed and/or does it require existing technology to be leveraged? Please discuss the potential for your solution to be applied at a city-wide scale. If the technology gap were to be addressed with your idea, how would it have an impact in advancing the current state-of-the-art?.</p>	<p>12000 characters maximum.</p>
<p>Implementation Considerations</p>	<p>Contestants should consider the following open questions in creating their response:</p> <p>Describe the next steps to implement your unique approach. Please discuss potential risks and risk mitigation strategies, how your solution integrates into a broad extraction-to-analysis systems approach, and what expertise and resources you have now and those you would need to acquire. In addition, discuss what open questions you still need to think through to realize your approach.</p>	<p>6000 characters maximum.</p>
<p>References</p>	<p>Please provide a list of references with links to the reference where possible.</p>	

6. Terms and Conditions

6.1 Submission Requirements:

In order for submissions to be eligible for review, recognition and award, contestants must meet the following requirements:

- Deadline - The submission must be available for evaluation by the end date noted in the "Important Dates" section of these rules.
- No NIST logo - submission(s) must not use NIST's logo or official seal and must not claim NIST endorsement.

- Each submission must be original, the work of the contestant, and must not infringe, misappropriate or otherwise violate any intellectual property rights, privacy rights, or any other rights of any person or entity.
- It is an express condition of submission and eligibility that each contestant warrants and represents that the contestant's submission is solely owned by the contestant, that the submission is wholly original with the contestant, and that no other party has any ownership rights or ownership interest in the submission. The Contestant must disclose if they are subject to any obligation to assign intellectual property rights to parties other than the Contestant, if the Contestant is licensing, or through any other legal instrument, utilizing intellectual property of another party.
- Each contestant further represents and warrants to NIST that the submission, and any use thereof by NIST shall not: (i) be defamatory or libelous in any manner toward any person, (ii) constitute or result in any misappropriation or other violation of any person's publicity rights or right of privacy, or (iii) infringe, misappropriate or otherwise violate any intellectual property rights, privacy rights or any other rights of any person or entity.
- Each submission must be in English.
- Submissions will not be accepted, evaluated, or considered for award if they contain any matter that, in the sole discretion of NIST, is indecent, obscene, defamatory, in bad taste, demonstrates a lack of respect for public morals or conduct, promotes discrimination in any form, shows unlawful acts being performed, is slanderous or libelous, or adversely affects the reputation of NIST. NIST shall have the right to remove any content from the Event Website in its sole discretion at any time and for any reason, including, but not limited to, any online comment or posting related to the Challenge.
- If NIST, in its sole discretion, finds any submission to be unacceptable, then such submission shall be deemed disqualified.

6.2 Judging Panel:

The submissions will be judged by a qualified panel of expert(s) selected by the Director of NIST. The panel consists of Department of Commerce, National Institute of Standards and Technology and non-Department of Commerce, National Institute of Standards and Technology experts who will judge the submissions using the judging criteria identified above and will select winners. Judges will not (A) have personal or financial interests in, or be an employee, officer, director, or agent of any entity that is a registered contestant in a challenge; or (B) have a familial or financial relationship with an individual who is a registered contestant. Members of the judging panel are required to complete an Agreement of Nondisclosure, conflicts of interest and rules of conduct. A sample is located at: <https://www.challenge.gov/assets/netlify-uploads/4.1-judges-nda-and-coi-certificate-final.docx>

The decisions of the Judging panel for the challenge will be announced in accordance with the dates noted in the "Important Dates" section of these rules. Contestants' evaluation results from the Judging panel will not be made available to Contestants or the public.

6.3 Verification of Potential Winners:

ALL POTENTIAL CHALLENGE WINNERS WILL BE SUBJECT TO VERIFICATION OF IDENTITY, QUALIFICATIONS AND ROLE IN THE CREATION OF THE SUBMISSION BY THE DEPARTMENT OF COMMERCE, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.

Contestants must comply with all terms and conditions of the Official Rules. Winning a prize is contingent upon fulfilling all requirements contained herein. The potential winners will be notified by email, telephone, or mail after the date of winning results. Each potential winner of monetary or non-monetary award, will be required to sign and return to the Department of Commerce, National Institute of Standards and Technology, within ten (10) calendar days of the date the notice is sent, an ACH Vendor/Miscellaneous Enrollment Form (OMB NO. 1510-0056) and a Contestant Eligibility Verification form in order to claim the prize.

In the sole discretion of the Department of Commerce, National Institute of Standards and Technology, a potential winner will be deemed ineligible to win if: (i) the person/entity cannot be contacted; (ii) the person/entity fails to sign and return an ACH Vendor/Miscellaneous Enrollment Form (OMB NO. 1510-0056) and a Contestant Eligibility Verification form within the required time period; (iii) the prize or prize notification is returned as undeliverable; or (iv) the submission or person/entity is disqualified for any other reason. In the event that a potential, or announced winner, is found to be ineligible or is disqualified for

any reason, the Department of Commerce, National Institute of Standards and Technology, in their sole discretion, may award the prize to another contestant.

6.4 Eligibility Requirements:

A contestant (whether an individual, team, or legal entity) must have registered to participate and complied with all of the requirements under section 3719 of title 15, United States Code as contained herein. At the time of entry, the Official Representative (individual or team lead, in the case of a group project) must be age 18 or older and a U.S. citizen or permanent resident of the United States or its territories. In the case of a private entity, the business shall be incorporated in and maintain a place of business in the United States or its territories.

Contestants may not be a Federal entity or Federal employee acting within the scope of their employment. NIST Associates are not eligible to enter. Individuals currently receiving PSCR funding through a grant or cooperative agreement are not eligible to apply. Previous and current PSCR prize challenge contestants are eligible to apply. Non-NIST Federal employees acting in their personal capacities should consult with their respective agency ethics officials to determine whether their participation in this Competition is permissible. A contestant shall not be deemed ineligible because the contestant consulted with Federal employees or used Federal facilities in preparing its submission to the Challenge if the Federal employees and facilities are made available to all contestants on an equitable basis. Employees of any official co-sponsoring entities are not eligible to enter.

Contestants, including individuals and private entities, must not have been convicted of a felony criminal violation under any Federal law within the preceding 24 months and must not have any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. Contestants must not be suspended, debarred, or otherwise excluded from doing business with the Federal Government.

Multiple individuals and/or legal entities may collaborate as a group to submit a single entry and a single individual from the group must be designated as an Official Representative for each entry. That designated individual will be responsible for meeting all entry and evaluation requirements.

6.5 Teams:

Challenge submissions can be from an individual, a team or a group of teams who submit a solution to the Challenge. If a team of individuals, a corporation, or an organization is selected as a prize winner, NIST will award a single dollar amount to the Official Representative. The Official Representative is solely responsible for allocating any prize amount among its member contestants as they deem appropriate. NIST will not arbitrate, intervene, advise on, or resolve any matters between entrant members. It will be up to the winning team(s) to reallocate the prize money among its member contestants, if they deem it appropriate.

6.6 Submission Rights:

Any applicable intellectual property rights to a submission will remain with the contestant. By participating in the competition, the contestant is not granting any rights in any patents, pending patent applications, or copyrights related to the technology described in the entry. However, by submitting a challenge submission, the contestant is granting the Department of Commerce, National Institute of Standards and Technology certain limited rights as set forth herein.

- The contestant grants to the Department of Commerce, National Institute of Standards and Technology the right to review the submission, to describe the submission in any materials created in connection with this competition, and to screen and evaluate the submission, and to have the Judges, Challenge administrators, and the designees of any of them, review the submission. The Department of Commerce, National Institute of Standards and Technology, and any Challenge Co-Sponsors, will also have the right to publicize contestant's name and, as applicable, the names of contestant's team members and/or organization which participated in the submission following the conclusion of the competition.
- As part of its submission, the contestant must provide written consent granting the Department of Commerce, National Institute of Standards and Technology, a royalty-free, non-exclusive, irrevocable, worldwide license to display publicly and

use for promotional purposes the contestant's entry ("demonstration license"). This demonstration license includes posting or linking to the contestant's executive summary only on the Department of Commerce, National Institute of Standards and Technology websites, including the competition website and inclusion of the contestant's submission in any other media, worldwide.

6.7 Warranties:

By submitting an entry, each contestant represents and warrants that the contestant is the sole author and copyright owner of the submission; that the submission is an original work of the contestant and that the contestant has acquired sufficient rights to use and to authorize others, including the Department of Commerce, National Institute of Standards and Technology, to use the submission, as specified throughout the Official Rules, that the submission does not infringe upon any copyright or upon any other third party rights of which the contestant is aware; and that the submission is free of malware.

By submitting an entry, the contestant represents and warrants that all information submitted is true and complete to the best of the contestant's knowledge, that the contestant has the right and authority to submit the entry on the contestant's own behalf or on behalf of the persons and entities that the contestant specifies within the entry, and that the entry (both the information and materials submitted in the entry and the underlying technology/method/idea/treatment protocol/solution described in the entry):

- is the contestant's own original work, or is submitted by permission with full and proper credit given within the entry;
- does not contain proprietary or confidential information or trade secrets (the contestant's or anyone else's);
- does not knowingly violate or infringe upon the patent rights, industrial design rights, copyrights, trademarks, rights in technical data, rights of privacy, publicity or other intellectual property or other rights of any person or entity;
- does not contain malicious code, such as viruses, malware, timebombs, cancelbots, worms, Trojan horses or other potentially harmful programs or other material or information;
- does not and will not violate any applicable law, statute, ordinance, rule or regulation, including, without limitation, United States export laws and regulations, including but not limited to, the International Traffic in Arms Regulations and the Department of Commerce Export Regulations; and
- does not trigger any reporting or royalty or other obligation to any third party.

By making a submission to this prize competition, each contestant agrees that no part of its submission includes any trade secret information, ideas or products, including but not limited to information, ideas or products within the scope of the Trade Secrets Act, 18 U.S.C. § 1905. All submissions to this prize competition are deemed non-proprietary. Since NIST does not wish to receive or hold any submitted materials "in confidence" it is agreed that, with respect to the contestant's entry, no confidential or fiduciary relationship or obligation of secrecy is established between NIST and the contestant, the contestant's team, or the company or institution the contestant represents when submitting an entry, or any other person or entity associated with any part of the contestant's entry.

7. Additional Terms and Conditions

This document outlines the Official Rules for the *AUTOMATED STREAMS ANALYSIS FOR PUBLIC SAFETY (ASAPS) CHALLENGE, CONTEST #1*. Nothing within this document or in any documents supporting the *AUTOMATED STREAMS ANALYSIS FOR PUBLIC SAFETY (ASAPS) CHALLENGE, CONTEST #1* shall be construed as obligating the Department of Commerce, NIST or any other Federal agency or instrumentality to any expenditure of appropriated funds, or any obligation or expenditure of funds in excess of or in advance of available appropriations.

7.1 Challenge Subject to Applicable Law:

All challenge phases are subject to all applicable federal laws and regulations. Participation constitutes each contestant's full and unconditional agreement to these Official Rules and administrative decisions, which are final and binding in all matters related to the challenge. Eligibility for a prize award is contingent upon fulfilling all requirements set forth herein. This notice is not an obligation of funds; the final award of prizes is contingent upon the availability of appropriations.

Participation is subject to all U.S. federal, state and local laws and regulations. Contestants are responsible for checking applicable laws and regulations in their jurisdiction(s) before participating in the prize competition to ensure that their participation is legal. The Department of Commerce, National Institute of Standards and Technology shall not, by virtue of conducting this prize competition, be responsible for compliance by Contestants in the prize competition with Federal Law including licensing, export control, and nonproliferation laws, and related regulations. Individuals entering on behalf of or representing a company, institution or other legal entity are responsible for confirming that their entry does not violate any policies of that company, institution or legal entity.

7.2 Resolution of Disputes:

The Department of Commerce, National Institute of Standards and Technology is solely responsible for administrative decisions, which are final and binding in all matters related to the challenge.

In the event of a dispute as to any registration, the authorized account holder of the email address used to register will be deemed to be the contestant. The "authorized account holder" is the natural person or legal entity assigned an email address by an Internet access provider, online service provider or other organization responsible for assigning email addresses for the domain associated with the submitted address. Contestants and potential winners may be required to show proof of being the authorized account holder.

7.3 Publicity:

The winners of these prizes (collectively, "Winners") will be featured on the Department of Commerce, National Institute of Standards and Technology website, newsletters, social media, and other outreach materials.

Except where prohibited, participation in the Challenge constitutes each winner's consent to the Department of Commerce, National Institute of Standards and Technology's, its agents', and any Challenge Co-Sponsors' use of each winner's name, likeness, photograph, voice, opinions, and/or hometown and state information for promotional purposes through any form of media, worldwide, without further permission, payment or consideration.

All cash prizes awarded to Contestants by the Department of Commerce, National Institute of Standards and Technology are subject to tax liabilities, and no withholding will be assessed by the Department of Commerce National Institute of Standards and Technology on behalf of the Contestant claiming a cash prize.

7.4 Payments:

The prize competition winners will be paid prizes directly from the Department of Commerce, National Institute of Standards and Technology. Prior to payment, winners will be required to verify eligibility. The verification process with the agency includes providing the full legal name, tax identification number or social security number, routing number and banking account to which the prize money can be deposited directly.

7.5 Liability and Insurance:

Any and all information provided by or obtained from the Federal Government is without any warranty or representation whatsoever, including but not limited to its suitability for any particular purpose. Upon registration, all contestants agree to assume and, thereby, have assumed any and all risks of injury or loss in connection with or in any way arising from participation in this challenge, development of any application or the use of any application by the contestants or any third-party. Upon registration, except in the case of willful misconduct, all contestants agree to and, thereby, do waive and release any and all claims or causes of action against the Federal Government and its officers, employees and agents for any and all injury and damage of any nature whatsoever (whether existing or thereafter arising, whether direct, indirect, or consequential and whether foreseeable or not), arising from their participation in the challenge, whether the claim or cause of action arises under contract or tort. Upon registration, all contestants agree to and, thereby, shall indemnify and hold harmless the Federal Government and its

officers, employees and agents for any and all injury and damage of any nature whatsoever (whether existing or thereafter arising, whether direct, indirect, or consequential and whether foreseeable or not), including but not limited to any damage that may result from a virus, malware, etc., to Government computer systems or data, or to the systems or data of end-users of the software and/or application(s) which results, in whole or in part, from the fault, negligence, or wrongful act or omission of the contestants or contestants' officers, employees or agents.

Contestants are not required to obtain liability insurance for this Competition.

7.6 Records Retention and FOIA:

All materials submitted to the Department of Commerce, National Institute of Standards and Technology as part of a submission become official records and cannot be returned. Any confidential commercial information contained in a submission should be designated at the time of submission. Submitters will be notified of any Freedom of Information Act requests for their submissions in accordance with 29 C.F.R. § 70.26.

7.7 508 Compliance:

Contestants should keep in mind that the Department of Commerce, National Institute of Standards and Technology considers universal accessibility to information a priority for all individuals, including individuals with disabilities. The Department is strongly committed to meeting its compliance obligations under Section 508 of the Rehabilitation Act of 1973, as amended, to ensure the accessibility of its programs and activities to individuals with disabilities. This obligation includes acquiring accessible electronic and information technology. When evaluating submissions for this challenge, the extent to which a submission complies with the requirements for accessible technology required by Section 508 will be considered.

8. General Conditions

All challenge and prize competitions shall be performed in accordance with the America COMPETES Reauthorization Act of 2010, Pub. Law 111-358, title I, § 105(a), Jan. 4, 2011, codified at 15 U.S.C. § 3719 and amended by the American Innovation and Competitiveness Act of 2016 (Pub. L. No. 114-329) (hereinafter “America COMPETES Act”).

The Lafayette Group, Inc. responsible for the implementation of the ASAPS Challenge in its capacity as a contractor to the U.S. Department of Commerce, National Institute of Standards and Technology (NIST). The Public Safety Communications Research Division of NIST is the Federal Agency sponsor of the prize, and as such will process the payment of cash prizes to winners.

The Department of Commerce, National Institute of Standards and Technology reserves the right to cancel, suspend, and/or modify the challenge, or any part of it, if any fraud, technical failures, or any other factor beyond the Department of Commerce, National Institute of Standards and Technology's reasonable control impairs the integrity or proper functioning of the challenge, as determined by the Department of Commerce, National Institute of Standards and Technology in its sole discretion. The Department of Commerce, National Institute of Standards and Technology is not responsible for, nor is it required to count, incomplete, late, misdirected, damaged, unlawful, or illicit votes, including those secured through payment or achieved through automated means.

NIST reserves the right in its sole discretion to extend or modify the dates of the Challenge, and to change the terms set forth herein governing any phases taking place after the effective date of any such change. By entering, you agree to the terms set forth herein and to all decisions of NIST and/or all of their respective agents, which are final and binding in all respects.

ALL DECISIONS BY the Department of Commerce, National Institute of Standards and Technology ARE FINAL AND BINDING IN ALL MATTERS RELATED TO THE CHALLENGE.