

IARPA CASE Challenge Rules & Regulations

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Background

The IARPA Credibility Assessment Standardized Evaluation (CASE) Challenge is an open innovation ideation competition that seeks novel methods to measure the performance of current and future credibility assessment techniques and technologies. The CASE Challenge invites Solvers from around the world to develop innovative methods to *evaluate* credibility assessment techniques or technology. The challenge presents an opportunity for individuals and teams to earn prizes by creating methods that can further the research into the validity of credibility techniques.

Overview

Every day we make decisions about whether the people and information sources around us are reliable, consistent, honest, and trustworthy – the person, their actions, what they say, a particular

news source, or the actual information being conveyed. Often, the only tool to help us make those decisions are our own judgments based on current or past experiences.

For some in-person and virtual interactions there are tools to aid our judgments. These might include listening to the way someone tells a story, looking at a user badge, validating with other people - or in more formal settings, verifying biometrics or recording someone's physiological responses, i.e. the polygraph. Each of these examples uses a very different type of tool to augment our ability to evaluate credibility. Yet there are no standardized and rigorous tests to evaluate how comprehensive or accurate, such tools really are.

Countless studies have tested a variety of techniques and tried to improve credibility assessments to rigorously determine when a source and/or a message is credible and, more specifically, when a person is lying or telling the truth. Despite the large and lengthy investment in such research, a rigorous set of valid methods that are useful in determining the credibility of a source or their information across different applications remains difficult to achieve.

Challenge Timeline and Process

The following timeline outlines the major dates for the challenge. During the course of the challenge, there may be additional dates, events, and deadlines for materials that will be communicated via direct email, or through the challenge forums found on the HeroX site: www.herox.com/CASEchallenge.

- **12/3/2019:** Pre-Registration Begins
- **1/2/2019:** Challenge Launches, Full Registration Begins
- **3/31/2019:** End of Stage 1
- **May 2019:** Stage 1 Winners Announced, Begin Stage 2
- **July 2019:** Challenge Workshop & Pitch Event
- **July 2019:** Winners Announced

The CASE Challenge is an open ideation challenge that will take place in two stages, outlined below.

Pre-Registration & Registration

All Solvers will need to register for the HeroX platform, and then register for the CASE Challenge at the following link www.herox.com/CASEchallenge. During Pre-Registration, beginning on 12/3/2018, Solvers will be able to register for the HeroX site and begin following the challenge. Once the challenge has fully launched on 1/2/2019, Solvers will be able to fully register and accept the terms and conditions of the challenge.

Stage 1 – Method Creation & Evaluation

January 2, 2019 – March 31, 2019

Solvers will create their methods and prepare their Solution packages for review. Solvers will have until 3/31/2019 at 10pm EST to submit their Solution for review. During Stage 1, Solvers are welcome to participate in the challenge forums, attend the challenge webinars, and work on

their submission method. All Solutions should be submitted using the Solution Template provided through the CASE Challenge website and HeroX platform and address all areas in Solution Evaluation Criteria guidelines. Solutions that do not meet the full submission criteria, described in the Judging & Scoring: Stage 1 section, will be dismissed. Solvers who do not provide certification of intent to attend the Workshop Event will be automatically disqualified from moving to Stage 2. Winners of Stage 1 may continue to refine, but not significantly change, their methods prior to the Pitch & Workshop Event.

At the end of Stage 1, the CASE Challenge Judges will evaluate and score all eligible submissions. The submissions will be judged based on their content and not the quality of the writing. The Judging panel, comprised of multiple US Government officials, will select the Stage 1 winners based upon their assessment of the scientific support, realism, novelty, and participant considerations, as well as meeting the Stage 1 criteria outlined below.

See the Prizes section for a full list of Prizes associated with Stage 1.

Stage 2 – Pitch & Workshop

May 2019 – July 2019

Selected Solvers who make it past Stage 1 will be awarded a presentation spot in the Pitch Panel taking place during July 2019 in the Washington, D.C. area. These solvers will travel to the Washington, D.C. area to pitch their method, live on stage, to the Judge’s panel & audience as part of an overall CASE Challenge Workshop. Each presentation will be roughly 15 minutes in length with an additional 5 minutes for questions. Solvers will be provided with pitch presentation guidelines before Stage 2 begins.

During the Workshop, the final Overall Prizes for the challenge will be decided. The winners will be announced live at the conclusion of the Challenge Workshop.

General Rules

- Solvers may not perform research or experiments involving human participants during the creation of their methodology
- Only Solutions submitted through the CASE Challenge HeroX page will be evaluated. No submissions will be accepted via email or other means of distribution
- Solvers may submit more than one Solution in the challenge. Prize Restrictions in Stage 1 and Stage 2 are based at the Solution level and not the Solver level
- Solvers may form teams, and companies may enter the competition as a team, see Team / Companies section below
- All challenge submissions and communications must be in English; non-English language documents will not be evaluated
- Solvers will abide by the CASE Challenge Forum rules <https://www.herox.com/CASEchallenge/forum/thread/3638>, and may risk being disqualified based on their behavior in the Challenge Forums
- Solvers can continue to work on their Solution until the submission deadline.



- Solvers will not receive feedback on their Solution packages

Prizes

The following Prizes will be awarded for the challenge. Stage 1 Prizes, except for the Credibility Champions, will be paid within 60 days of Stage 1 winner announcements. Stage 2 Prizes, to include Credibility Champions, will be paid within 60 days of Stage 2 winner announcements.

Prize	Amount	Criteria	Constraint
Stage 2 / Overall Awards			
1st Place Overall	\$40k	Best Overall Methods in the Challenge, based on performance during the Stage 2 Workshop Pitch Presentation	<ul style="list-style-type: none"> • Must be invited to the Challenge Workshop based on Stage 1 performance • Must attend the Challenge Workshop • Must deliver a pitch at the Challenge Workshop
2nd Place Overall	\$25k		
3rd Place Overall	\$10k		
4th Place Overall	\$5k		
5th Place Overall	\$5k		
Stage 1 Awards			
Credibility Champions x 5	\$25K (\$5k each)	<p>Best Overall Performance in Stage 1.</p> <p>Candidates for this prize are selected in Stage 1 but must complete Stage 2 in order to receive the prize.</p>	<ul style="list-style-type: none"> • Must attend the Challenge Workshop & Pitch Solution • Must meet all Stage 1 Criteria • Must achieve Stage 1 Top 5 Score • Achieve a baseline score of 75% in each of the four Criteria • Must submit Travel Intention Document during Stage 1
Prospective Prize	\$10K	Best Overall Method geared towards Prospective Situations in Stage 1	<ul style="list-style-type: none"> • Must meet all Stage 1 Criteria • Achieve a baseline score of 60% in each of the four Criteria • Eligible for a Stage 2 Award
Innovative Methodology Award	\$1k	Award given for outstanding use of an innovative methodology	<ul style="list-style-type: none"> • Must meet all Stage 1 Criteria • Achieve a baseline score of 20 on the Novelty Criteria • Solution only eligible for one Stage 1 Award • Not eligible for a Stage 2 Award or the Prospective Prize
Outstanding Participant Motivation Award	\$1k	Award given for outstanding inspirational motivation to participant	
Realistic Reflection Award	\$1k	Award given for a method with outstanding performance reflecting the parameters of the real-world	
Creative Technology Award	\$1k	Award given for a method with outstanding and innovative use of technology	



Ground Truth Award	\$1k	Award given for a method that does an outstanding job of establishing ground truths
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Judging & Scoring

Stage 1

Stage 1 Submissions will be evaluated against the Judging Criteria Scorecard below. All Solutions received by the Stage 1 deadline (3/31/2019 at 10:00 PM EST) and are complete will be reviewed. Completeness is defined as:

- Complying with all the General Rules
- Responses are provided to all the prompts in the provided template
- The Solution is not harmful in any way to a person, organization, or other entity
- The Solution is independent of a particular credibility assessment technique or technology
- The Solution does not include any plagiarized material

Solutions will be judged by a multi-person scoring panel to consist of U.S. Government experts and practitioners in the field of Credibility Assessments. Judges will assign numerical scores to each section of the Solution as defined in the Judging Criteria.

Criteria	Description	Points
Scientific Support	Why will the solution work? How will it accurately measure performance?	30
	<p>This category provides support for the solution concept, design and procedures to be employed within. Points will be awarded for:</p> <ol style="list-style-type: none"> 1. Background - Sound theoretical and/or empirical (verifiable by observation and experience) support for the approach. 2. Validity - The degree to which the solution measures what it is designed to measure. For example, how is credibility defined and assessed? 3. Replicability - Whether the solution is written in such a way that it could be given to other researchers and implemented in the same way. 4. Generalization - The ability to generalize the solution's methods, and ideally the results, to new populations, settings, credibility assessment techniques or technologies, etc. 5. Ground Truth - The true state of credibility is objectively determined. Credibility is not determined by feelings, opinions or assumptions, but by objective ground truth. <p>A score of 0-6 would address 0-1 aspects, a score of 7-12 between 1-2, a score of 13-18 between 2-3, a score of 19-24 between 3-4 and a score of 25-30 between 4-5. As with all categories, if an individual evaluator chooses to give more weight to a particular component they are free to do so.</p>	
Realism	How does the solution reflect real world situations and circumstances?	30
	<p>The goal of credibility assessment research is often transitioning techniques or technologies to real-world applications. As such, this category seeks to address how well the solution reflects the real world conditions to which it will ultimately apply. Points will be awarded for:</p>	



	<ol style="list-style-type: none"> Psychological Realism - The motivators, consequences, and incentives implemented in the solution are reflective of the real world and personally meaningful to participants. Physical Realism - The physical conditions within which the solution takes place are consistent with how credibility would be assessed in the real world. This may include physical or virtual location, different mediums for communicating, as well as the makeup of the social or cultural environment. Practicality - How feasible the solution’s implementation is in a real-world scenario. This may include, but is not necessarily limited to: equipment and/or specialized facility costs, the time and labor required to execute the solution and access to additional resources necessary to implement solution procedures. <p>A score of 0-10 would address 0-1 aspects, a score of 11-20 between 1-2, and a score of 21-30 between 2-3. As with all categories, if an individual evaluator chooses to give more weight to a particular component they are free to do so.</p>	
Novelty	<p>Is the solution unique? Does it involve creative/clever ideas? How is it different from pre-existing solutions?</p>	30
	<p>The solutions put forth should be sufficiently different from the existing class of standard mock crime solutions. Points will be awarded for:</p> <ol style="list-style-type: none"> Procedure - Innovative methods to expose participants to event(s), experience(s), content/message(s) that will be at the core of why someone or something is or is not credible. Motivation - Enabling the choice of events, experiences, content/messages so that behaviors are chosen by an individual, rather than directed by a researcher. Enhanced Realism - Clever ways to enhance psychological realism, while maintaining physical realism. Technology - Creative uses of innovative technologies (e.g. social media, augmented reality, etc.). Objective Measurement - Methods to establish objective ground truth (e.g. unobtrusive recording, biological samples, etc.). <p>A score of 0-6 would address 0-1 aspects, a score of 7-12 between 1-2, a score of 13-18 between 2-3, a score of 19-24 between 3-4 and a score of 25-30 between 4-5. As with all categories, if an individual evaluator chooses to give more weight to a particular component they are free to do so.</p>	
Participant Considerations	<p>Is the solution safe for the human participants? Does it adhere to ethical principles and guidelines?</p>	10
	<p>All solutions must have the potential to comply with the relevant federal regulations providing protections for human subjects. Submitted solutions should take participant considerations into account and provide enough detail to illustrate that the experiment is safe and ethical for human subjects. Points will be awarded for:</p> <ol style="list-style-type: none"> Beneficence - A solution that maintains the safety of participants, as well as avoids causing immediate or long term harm (physical or psychological). It maximizes benefit to the participant, while minimizing harm. Respect for Persons - The autonomy (power to make one’s own choices) and rights of a participant are not compromised. Justice - The solution does not unfairly select or treat participants. Investment - How much personal impact would there be on participants? For example, how much of their time and resources would participation require? <p>A score of 0-2 would address 0-1 aspects, a score of 3-5 between 1-2, a score of 6-8 between 2-3 and a score of 9-10 between 3-4. As with all categories, if an individual evaluator chooses to give more weight to a particular component they are free to do so.</p>	
Overall Score	Sum of the constituent components	100

Solutions will be evaluated on the quality of the method and not on the quality of writing. Solvers should provide enough information to articulate their method, but longer Solution packages will not automatically score better than more succinctly written packages.

Solutions should contain a Solver’s **method to evaluate the validity** of current and future credibility assessment technologies and techniques. Solution submissions that describe credibility assessment techniques, rather than protocols for evaluating credibility assessment techniques, will not be scored. Solution submissions that seek to debunk a singular credibility assessment tool or technique will also not be scored.

After final review of Stage 1 submissions, the top five scoring solutions will be selected to move on to present at Stage 2 and the Credibility Champion prizes. Only Solutions that have signed the ‘Intent to Travel’ document will be considered for the Credibility Champion prizes. After the top 5 winners have been chosen, they will be contacted to confirm ability to travel to the Challenge workshop. Should they not be able to attend, the next score down will be contacted for this prize.

Solutions that have not signed the ‘Intent to Travel’ document will still be considered for other Stage 1 Prizes. These prizes will be selected by the judging panel once the Credibility Champion prizes have been confirmed.

In the event of ties, the IARPA Program Manager reserves the right to make final tie-breaking decisions, prioritizing solutions based on a diversity of thought to ensure a diverse solution set for final Stage 2 evaluation.

Stage 2

Solvers who have achieved the Credibility Champion prizes will be invited to present on their Solution at the CASE Challenge Workshop. Solvers will conduct a roughly 15 minute pitch-style presentation on their solution, followed by a 5 minute question and answer period, and will be evaluated on their pitch and responses during the workshop by the U.S. Government judging panel. Solvers will be judged based on the four Judging Criteria, as well as the quality of their presentation and feasibility of their Solution during Stage 2. Guidance on Stage 2 pitch content will be shared with the downselected Credibility Champions upon selection.

Criteria	Description	Points
Scientific Support	Same as 1 st Round	15
Realism	Same as 1 st Round	15
Novelty	Same as 1 st Round	15
Participant Considerations	Same as 1 st Round	5



Pitch Presentation	Was the presentation clear and compelling? Did the presentation reflect the original submission? Were any visual aids used appropriately to augment the message?	25
Method Feasibility	Could the solution become a new standard for evaluating current or future credibility assessment techniques or technologies?	25
Overall Score	Sum of the constituent components	100

Payment Terms

Solvers will need to submit a W-9 tax form, or a W8-BEN form in order to receive payment. Solvers are responsible for payment and declaration of all taxes incurred from the acceptance of Prize funds. Solvers are responsible for any fees incurred by the Solver for the financial transfer or currency exchange of Prize Funds. Prize funds will be paid in U.S. Dollars. Prize funds will be paid by Booz Allen Hamilton. Solvers will be given 30 days to submit their paperwork upon notification of award. IARPA and Booz Allen are not responsible for lost or stolen prize payments, or incorrect routing and payment information provided by the winning Solvers. All payments are subject to verification of recipient eligibility and compliance with U.S. legal requirements.

Intellectual Property

Solvers are required to agree to the HeroX Challenge-Specific Terms, including the Intellectual Property terms contained therein.

Eligibility

General Eligibility Requirements

Some individuals or organizations may not be eligible for prizes for reasons listed below. However, these Solvers may, upon IARPA approval, participate in the challenge and be eligible for ranking in the challenge. Approval will need to be obtained in advance of participation by emailing CASEchallenge@iarpa.gov.

To be eligible to win a prize under this competition, an individual or entity:

1. Must have completed and submitted a registration form on www.herox.com/CASEchallenge.
2. Must have complied with all the requirements under these rules and the Challenge-Specific Terms;
3. Must agree to abide by the decisions of IARPA and/or the individual judges, which shall be final and binding in all respects;
4. Must agree to follow all applicable local, state, federal and country of residence laws and regulations.
5. Must be (1) an individual or team of individuals each of whom are 18 years of age and over, or (2) a for-profit or non-profit entity organized or incorporated under law;

6. May not be a federal entity or federal employee acting within the scope of their employment;
7. Shall not be deemed ineligible because the individual or entity used federal facilities or consulted with federal employees during a competition if the facilities and employees are made available to all individuals and entities participating in the competition on an equitable basis;
8. In the case of federal grantees may not use federal funds to develop challenge applications unless consistent with the purpose of their grant award;

9. In the case of federal contractors, may not use federal funds from a contract to develop challenge applications or to fund efforts in support of a challenge submission;
10. May not be employees of IARPA, Booz Allen Hamilton, The Johns Hopkins University Applied Physics Laboratory, The Johns Hopkins University, and/or any other individual or entity associated with the development, evaluation, or administration of the competition (including CASE judges), as well as members of such persons' immediate families (spouses, children, siblings, parents), and persons living in the same household as such persons, whether or not related, are not eligible to participate in the competition;
11. May not be prime contractors or subcontractors and their employees of the MOSAIC Program, due to its similarity to the CASE prize challenge, are not eligible to compete for cash prizes (however, they may still register under the “forgoing prizes” option, in order to compete and have their solutions posted on the leaderboard); and
12. Must not be currently on the Excluded Parties List ([https:// www.epls.gov/](https://www.epls.gov/)).

Federally Funded Research & Development Centers (FFRDCs) and (DoD) University Affiliated Research Centers (UARCs) not mentioned above may be eligible to submit forecasts and receive leaderboard recognition, but are not eligible to win prize dollar awards. In order to compete, an email must be sent to CASEchallenge@iarpa.gov with the team name, organization represented, and team member information.

Companies/Teams

Companies, universities, individuals, and Teams of Solvers can participate in this challenge. Companies / Teams will need to elect a Team Captain, who will be the main point of contact (POC) for communications. Individuals who have registered on the HeroX CASE Challenge page as an individual competitor, will not be eligible to participate in a team. All Team Members must meet the General Eligibility Requirements, self-register, and acknowledge these rules through the HeroX CASE Challenge page www.herox.com/CASEchallenge.

- Upon registering for the challenge, the Team Captain will need to provide a breakdown of all Team Members along with the percentage allocation between all Team Members
- Each Team Member will need to sign an agreement that they agree to distribution of prize funds

- A Team Captain may provide information for a company or organization instead of their personal information for tax purposes.
- Only the Team Captain will submit Solutions for the challenge.
- Once a Team has submitted their first Solution, the team members cannot change. This means that adding or removing Solvers from the team will result in disqualification of the team.
- Individuals participating as a member of a team may participate on only one team and may not also participate as an individual solver.

Foreign Nationals and International Solvers

All submissions and any prizes are subject to verification of eligibility and compliance with U.S. legal requirements, such as sanctions prohibitions.

It is the responsibility of the Solver to ensure that they can participate in this challenge and allowed to export their technology solution to the United States.

Warranties

By submitting an Entry, you represent and warrant that all information you submit is true and complete to the best of your knowledge, that you have the right and authority to submit the Entry on your own behalf or on behalf of the persons and entities that you specify within the Entry, and that your Entry

(both the information and software submitted in the Entry and the underlying technologies or concepts described in the Entry):

- (a) Is your own original work, or is submitted by permission with full and proper credit given within your Entry;
- (b) does not contain confidential information or trade secrets (yours or anyone else's);
- (c) does not knowingly, after due inquiry (including, by way of example only and without limitation, reviewing the records of the United States Patent and Trademark Office and inquiring of any employees and other professionals retained with respect to such matters), 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;
- (d) does not contain malicious code, such as viruses, malware, timebombs, cancelbots, worms, Trojan horses or other potentially harmful programs or other material or information;
- (e) 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;

- (f) does not trigger any reporting or royalty or other obligation to any third party;
- (g) The submission or method and research to create the method does not interfere with any ongoing or past criminal or civil investigations, does not interfere with a person's employment validation and does not put at harm or distress any individual associated with the development of this method; and
- (h) The submission did not utilize or perform human subjects testing.

Limitation of Liability

By participating in the Competition, you agree to assume any and all risks and to release, indemnify and hold harmless IARPA, Booz Allen Hamilton, The Johns Hopkins University Applied Physics Laboratory, The Johns Hopkins University, HeroX, ODNI, each of the Judges, and Subject Matter Experts, from and against any injuries, losses, damages, claims, actions and any liability of any kind (including attorneys' fees) resulting from or arising out of your participation in, association with or submission to the Competition (including any claims alleging that your Entry infringes, misappropriates or violates any third party's intellectual property rights). In addition, you agree to waive claims against the Federal Government and its related entities, except in the case of willful misconduct, for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from your participation in this Competition, whether the injury, death, damage, or loss arises through negligence or otherwise. Entrants are not required to obtain liability insurance or demonstrate financial responsibility in order to participate in the competition.

IARPA is not responsible for any miscommunications such as technical failures related to computer, telephone, cable, and unavailable network or server connections, related technical failures, or other failures related to hardware, software or virus, or incomplete or late Entries. IARPA is not responsible for:

- (1) Any incorrect or inaccurate information, whether caused by a Participant, printing errors, or by any of the equipment or programming associated with or used in the Competition;
- (2) unauthorized human intervention in any part of the Entry process for the Competition;
- (3) technical or human error that may occur in the administration of the Competition or the processing of Entries; or
- (4) any injury or damage to persons or property that may be caused, directly or indirectly, in whole or in part, from a Participant's participation in the Competition or receipt or use or misuse of an Award.

If for any reason an Entry is confirmed to have been deleted erroneously, lost, or otherwise destroyed or corrupted, the Participant's sole remedy is to submit another Entry in the Competition.

Additional Information

These rules cannot be modified except by IARPA. All decisions by IARPA regarding adherence to these rules are final. The invalidity or unenforceability of any provision of these rules shall not affect the validity or enforceability of any other provision. In the event that any provision is

determined to be invalid or otherwise unenforceable or illegal, these rules shall otherwise remain in effect and shall be construed in accordance with their terms as if the invalid or illegal provision were not contained herein.

IARPA reserves the right in its sole discretion to amend these rules throughout the duration of the contest should extenuating circumstances arise, to extend or modify the dates of the Competition, and to change the terms set forth herein governing any phases taking place after the effective date of any such change.