2022 Biometric Technology Rally Application Instructions

Biometric technology providers may apply to participate in the 2022 Biometric Technology Rally (2022 Rally). Additional information about the 2022 Rally is available at https://www.mdtf.org, including but not limited to slides from informational webinars.

Technology providers:

- MAY submit applications for both acquisition systems and matching systems.
- MAY submit applications for multiple acquisition systems or matching systems.
- SHALL complete different applications for each biometric acquisition system, and for each biometric matching system.
- SHOULD clearly mark any proprietary information.

All application materials are due by July 1, 2022 at 11:59PM Eastern Standard Time.

All materials should be sent to peoplescreening@hq.dhs.gov and rally@mdtf.org. Failure to send application materials to both email addresses may result in your application not being considered for participation.

Acquisition System Application instructions are on Page 2 of this file.

Matching System Application instructions are on Page 3 of this file.

Acquisition System Application Instructions

An acquisition system application should include a video demonstrating system functionality and reflect information included in the white paper no longer than two (2) minutes in length and less than 10MB. If the video file is too large to be included in an email, provide a URL and instructions to reviewers for access. An acquisition system application MUST contain a white paper in pdf format, up to five (5) pages in length, that includes the following information:

- Brief overview of provider
    - A brief history of the provider's experience in the biometric community
    - Location, including country of provider's headquarters
    - Contact information (name, email, telephone number, citizenship) of a business representative
    - Contact information (name, email, telephone number, citizenship) of a technical representative
- Overview of the acquisition system
    - Description of cameras and/or sensors utilized, and other equipment necessary
    - Expected layout of all equipment within the specified footprint (6' W x 8' L)
    - Network and power requirements
- A description of the complexity and maturity of the acquisition system
    - When was the system first conceived and developed? Is it still under development?
    - Known acquisition issues (group size limits, disability restrictions, etc.)
    - Has a third party integrated your system into a larger system? If so, how much effort was needed?
- Descriptions of the imagery acquired by the system
    - Image size, resolution, compression, and supported file formats (png, jpg, etc.)
    - Does your system select a single best quality image for each person in a group?
- Description of user interaction with the system
    - How does you system obtain a single quality image of each person in a small group?
    - How does your system preserve the privacy of non-users?
- Estimates of performance
    - Estimated failure to acquire rate
    - Estimated true positive identification rate using a top 3 recognition algorithm at a threshold consistent with a false match rate of 1:100,000
    - Estimated transaction time
    - Estimates of performance stability relative to race, gender, and skin tone
- System safety information, including eye safety
    - Demonstrate that system is safe for human users
    - Does your system use specific wavelengths for illumination?
    - Are there any sources of exposed current?
    - Are there any exposed sharp edges or moving parts that could cause physical harm?
- If multiple acquisition system applications are submitted
    - Is this the biometric technology provider's preferred system to participate?

Matching System Application Instructions

A matching system application MUST include a white paper in pdf format, up to five (5) pages in length, that includes the following information:

- Brief overview of provider
    - A brief history of the provider's experience in the biometric community
    - Location, including country of provider's headquarters
    - Contact information (name, email, telephone number, citizenship) of a business representative
    - Contact information (name, email, telephone number, citizenship) of a technology representative
- Overview of the matching system
    - Modalities and acceptable biometric sample types
    - High level overview of the underlying technology (CNN, Gabor wavelets, Haar cascades, etc.)
    - Recommended CPU, RAM, disk, operating system, and runtime dependencies
    - What programming languages does the matching system SDK support?
- Descriptions of the complexity and maturity of the matching algorithm
    - When was the algorithm first conceived and developed? Is it still under development?
    - Known processing issues (image size, pixels between the eyes, occlusion, pose, or gaze angle restrictions, etc.)
- Estimates of performance
    - Failure to process rate (unable to create a template)
    - Expected true match rates and matching thresholds for the following false match rates:
        - @ 1:10,000 FMR.
        - @ 1:100,000 FMR.
        - @ 1:1,000,000 FMR.
    - Estimates of algorithm stability to pose, motion blur, low contrast and images from a diverse range of acquisition systems
    - Estimates of algorithm stability to race, and gender
- Algorithm Training
    - Describe methods used to develop algorithm or measure algorithm's performance over time
    - Describe data used to train it – open sourced, private data set, etc.