

S&T TECHNOLOGY CENTERS

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) Technology Centers conduct enduring, forward-looking basic and applied research in cross-cutting scientific, engineering, and technology areas to:

- Ensure advancements are harnessed for cutting-edge solutions to operational challenges.
- Ensure technical subject matter expertise is available to S&T and the Department for decision support.

S&T maintains the Technology Centers to identify and address current and future homeland security challenges.

BIOMETRIC AND IDENTITY TECHNOLOGY CENTER

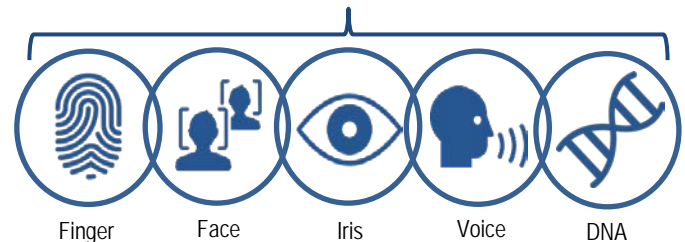
The Biometric and Identity Technology Center (BI-TC) focuses on the science, methods, tools, and technologies used to recognize individuals and protect sensitive personal information. It provides objective biometric capabilities to DHS, enables operational components to cost-effectively use and maintain new technologies, and informs strategic planning and acquisitions of new biometrics capabilities. The BI-TC accelerates effective integration of biometrics into operations. It also engages the private sector and academia to encourage innovation and collaboration.

CORE RESEARCH AND ACTIVITIES

- Improving the ability to effectively and efficiently collect information in high-throughput and challenging environments.
- Identifying robust matching capabilities that can accommodate variable presentation (cooperative vs. non-cooperative), population diversity, and signal quality. This research provides accurate, reliable, and verifiable outcomes to inform DHS vetting and decision making.

- Improving the detection of data alteration and manipulation. This research also focuses on applying novel methods to protect sensitive personally identifiable information.
- Developing methods with industry and international partners to secure transactions such as mobile driver's licenses, next generation passports, self-sovereign identity, and decentralized identity.
- Assessing and analyzing trends in emerging analytical capabilities to improve the accuracy of commercial identity capabilities.

Common Biometric Modalities



ACTIVITIES AND IMPACTS

The BI-TC provides a sustainable, common platform for driving biometrics standards, best practices, and innovations – driving down costs and increasing operational impact.

- Objective analysis of biometric and identity verification technologies (i.e. strengths and weaknesses).
- Robust experimentation, testing, and evaluation of biometric and identity verification technologies at the Maryland Test Facility to inform specific operational use cases and streamline DHS technology acquisitions.
- Identification of common biometric and identity verification capability gaps across DHS components and homeland security community stakeholders.
- Identification of innovative solutions that leverage public and private sector expertise to address diverse demographics and integrate biometric collection and matching processes.