

ABOUT THE MARYLAND TEST FACILITY

The Department of Homeland Security (DHS) Science and Technology Directorate's (S&T) Maryland Test Facility (MdTF), located in Upper Marlboro, Maryland, provides a controlled, reconfigurable environment suitable for comparing and contrasting technologies; measuring the impact of process changes on system and/or human performance; and observing and documenting human-device interactions.

Variables in human and environmental conditions can be incorporated so researchers can evaluate different technologies, capabilities, and operational processes under simulated, real-world conditions. This allows researchers to estimate solution performance prior to incurring costs of development or deployment in an operational setting.

The fully re-configurable test area is capable of housing several different simulated operational concepts of operation in three customizable bays – totaling approximately 10,000 square feet.

have helped DHS S&T to evaluate technical performance and solutions for key metrics.



Additional testing area set up at the MdTF



Re-configurable testing area at the MdTF

OBSERVATION AND INSTRUMENTATION

In addition to the testing space, the facility contains extensive instrumentation and observation capabilities, such as the Command and Control Room, which allows for observation of test activities without distracting test volunteers. The facility also houses a reconfigurable array of 16 High Definition cameras, 18 microphones and environmental sensors (e.g., light, humidity, sound, and temperature) to record test activities for real-time and post-test analysis. This provides the detailed data collection required for analysis of throughput, accuracy, and usability. For more information on the MdTF, visit <https://www.dhs.gov/science-and-technology/maryland-test-facility> or <https://mdtf.org>.

TESTING WITH INFORMED CONSENT

Utilizing volunteers that have provided informed consent, the test space facilitates measured performance and interaction between individuals and technologies as well as capturing feedback on each individual's experience. All human subject testing is conducted in accordance with protocols approved by an independent Institutional Review Board. The demographics of the volunteer test subject pool is designed to represent that of the relevant operational environment. To date, more than 2,130 unique individuals, representing 86 countries of origin,

