DHS Science and Technology Directorate
Apex Air Entry/Exit Re-Engineering
Maryland Test Facility

About the Maryland Test Facility

The Maryland Test Facility (MdTF), located in Upper Marlboro Maryland, provides a controlled, reconfigurable environment suitable for comparing and contrasting technologies, observing and documenting human-device interactions, and measuring the impact of process changes on system and/or human performance.

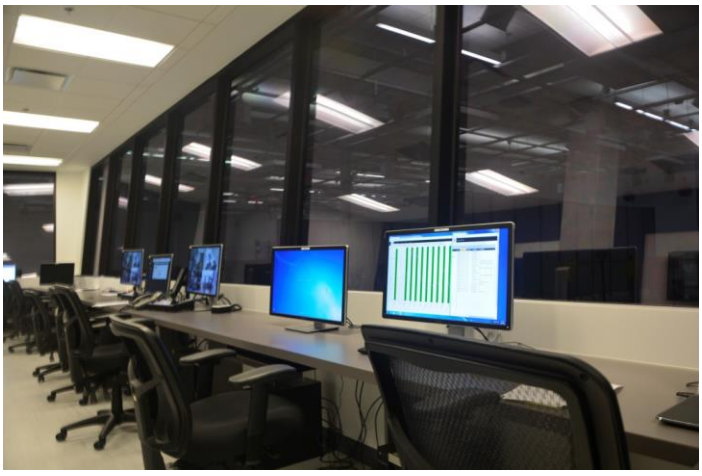
Variables in human and environmental conditions can be incorporated so researchers can evaluate different technologies, capabilities, and operational processes under simulated, real-world conditions. This allows researchers to predict solution performance prior to deployment in an operational setting with a high degree of confidence.

The fully re-configurable test area is capable of housing several different operational settings and contains three customizable bays of testing space – totaling approximately 10,000 square feet. Each bay is capable of housing various concepts of operation for evaluation, as well as accommodating up to 50 volunteer test subjects concurrently.

Human Subject Testing

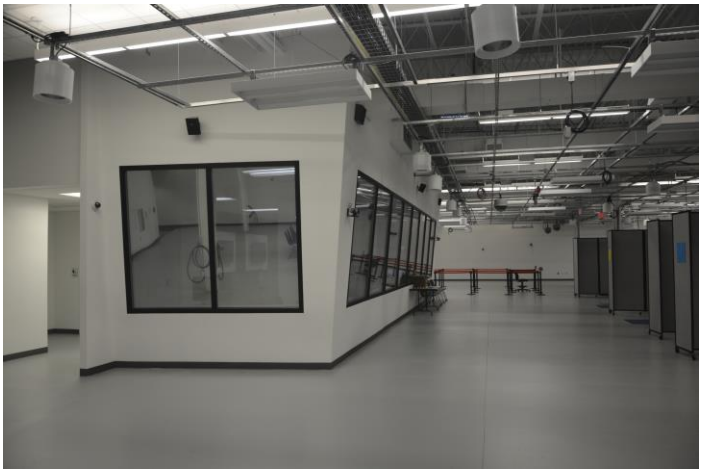
Within the facility, pre-screened volunteers from the general public interact with technologies and provide feedback on their experience in addition to evaluating the technology's technical performance. All human subject testing is conducted in accordance with protocols submitted and approved by an Institutional Review Board and appropriate privacy documentation, with the demographics of the volunteer test subject pool designed to be represent that found in an operational environment.

Observation and Instrumentation



View from inside the MdTF Command & Control Room

In addition to the testing space, the facility contains extensive instrumentation and observation capabilities. The Command and Control Room allows for observation of test activities without distracting test volunteers. It also houses a reconfigurable array of 16 HD 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.



View of the Control Room and Instrumented Test Floor