



Highlights of [GAO-10-158](#), a report to congressional requesters

## Why GAO Did This Study

The Department of Homeland Security's (DHS) Secure Border Initiative Network (SBI*net*) is a multiyear, multibillion dollar program to deliver surveillance and decision-support technologies that create a virtual fence and situational awareness along the nation's borders with Mexico and Canada. Managed by DHS's Customs and Border Protection (CBP), SBI*net* is to strengthen CBP's ability to identify, deter, and respond to illegal breaches at and between border points of entry. Because of the program's importance, cost, and risks, GAO was asked to, among other things, determine (1) whether SBI*net* testing has been effectively managed, including the types of tests performed and whether they were well planned and executed, and (2) what the results of testing show. To do this, GAO reviewed test management documentation, including test plans, test cases, test procedures, and results relative to federal and related guidance, and interviewed program and contractor officials.

## What GAO Recommends

GAO is making four recommendations to DHS related to the content, review, and approval of test planning documentation and the analysis, disclosure, and resolution of system problems. DHS agreed with three and partially agreed with one of the recommendations, and it described actions under way and planned to address them.

View [GAO-10-158](#) or [key components](#). For more information, contact Randolph C. Hite, (202) 512-3439 or [hiter@gao.gov](mailto:hiter@gao.gov).

## SECURE BORDER INITIATIVE

### DHS Needs to Address Testing and Performance Limitations That Place Key Technology Program at Risk

#### What GAO Found

DHS has not effectively managed key aspects of SBI*net* testing. While DHS's approach appropriately consists of a series of progressively expansive developmental and operational events, the test plans, cases, and procedures for the most recent test events were not defined in accordance with important elements of relevant guidance. For example, while plans for component and system testing included roles and responsibilities for personnel involved in each of ten test events that GAO reviewed, none of the plans adequately described risks and only two of the plans included quality assurance procedures for making changes to the plans during their execution. Similarly, while GAO's analysis of a random probability sample of test cases showed that a large percentage of the cases included procedures and expected outputs and behaviors, a relatively small percentage described the inputs and the test environment (e.g., facilities and personnel to be used). Moreover, even though the test cases largely included procedures, a large percentage were changed extemporaneously during execution in order to fulfill the purpose of the test. While some of the changes were minor, others were more significant, such as rewriting entire procedures and changing the mapping of requirements to cases. Further, these changes to procedures were not made in accordance with documented quality assurance processes, but rather were based on an undocumented understanding that program officials said they established with the contractor. Compounding the number and significance of changes are questions raised by the SBI*net* program office and a support contractor about the appropriateness of some changes. For example, a program office letter to the prime contractor stated that changes made to system qualification test cases and procedures appeared to be designed to pass the test instead of being designed to qualify the system. Program officials attributed these weaknesses to time constraints and guidance limitations. Because of these issues, the risk that testing has not sufficiently supported objectives, exercised program requirements, and reflected the system's ability to perform as intended is increased.

From March 2008 through July 2009, about 1,300 SBI*net* defects have been found, with the number of new defects identified generally increasing faster than the number being fixed—a trend that is not indicative of a system that is maturing. Further, while the full magnitude of these unresolved defects is unclear because the majority were not assigned a priority for resolution, several of the defects that have been found have been significant. Although DHS reports that these defects have been resolved, they have caused delays, and related problems have surfaced that continue to impact the program's schedule. Further, an early user assessment raised concerns about the performance of key system components and the system's operational suitability. Program officials attributed limited prioritization of defects to a lack of defect management guidance. Given that key test events have yet to occur and will likely surface other defects, it is important for defect management to improve. If not, the likelihood of SBI*net* meeting user expectations and mission needs will be reduced.