

DEPARTMENT OF HOMELAND SECURITY

Office of Inspector General

Audit of the
Automated Commercial Environment
Secure Data Web Portal:
Quality of Deliverables Can Be Improved



Office of Audits

OIG-04-01

November 2003

Preface

The Department of Homeland Security (DHS) Office of Inspector General (OIG) was established by the Homeland Security Act of 2002 (Public Law 107-296) by amendment to the Inspector General Act of 1978. This is one of a series of audit, inspection, investigative, and special reports prepared by the OIG periodically as part of its oversight responsibility with respect to DHS to identify and prevent fraud, waste, abuse, and mismanagement.

This report is the result of an assessment of the strengths and weaknesses of the program, operation, or function under review. It is based on interviews with employees and officials of relevant agencies and institutions, direct observations, and a review of applicable documents.

The recommendations herein, if any, have been developed on the basis of the best knowledge available to the OIG, and have been discussed in draft with those responsible for implementation. It is my hope that this report will result in more effective, efficient, and/or economical operations. I express my appreciation to all of those who contributed to the preparation of this report.

A handwritten signature in black ink, appearing to read "Clark Kent Ervin". The signature is stylized with a large, looping initial "C" and "E".

Clark Kent Ervin
Acting Inspector General

Department of Homeland Security
Office of Inspector General

INTERIM REPORT

AUDIT OF THE AUTOMATED COMMERCIAL ENVIRONMENT SECURE DATA WEB PORTAL

On April 4, 2003, the Office of Inspector General (OIG) began an audit of the Automated Commercial Environment (ACE) secure data web portal¹. During the ongoing audit, we identified matters that required immediate management attention. Therefore, we are issuing this interim report, number OIG-01-04, titled, *Audit of the Automated Commercial Environment Secure Data Web Portal: Quality of Deliverables Can Be Improved*. The objective of the audit is to determine whether the ACE web portal is being properly managed and developed to meet user expectations.

The purpose of this interim report is to recommend improvements to the Customs and Border Protection (CBP) management of the ACE program. During the first year and a half of the ACE contract, there were continued concerns about the quality of deliverables from the prime contractor. These concerns were highlighted in the Department of Treasury Office of Inspector General (OIG) reports² and in U.S. Customs Service's (Customs) correspondence with the contractor. Currently, the ACE contract is at a critical stage of development. ACE will be developed in a series of releases. Exhibit 1 illustrates the functionalities that will be delivered to users in each release. In Release 2 the contractor will deliver the portal through which the international trade community and the government will access ACE. Releases 1 and 2 are the foundational activities upon which all subsequent ACE development will occur. If the portal is not complete, or of sufficient quality, the overall cost and the time to complete ACE could increase.

In the current review, CBP, the successor to Customs, concurred with our two recommendations relating to acceptance of the Release 2 deliverable and improving technical reporting. Their response was dated September 11, 2003 and outlined planned corrective actions that, when fully implemented, will satisfy the intent of our recommendations. Target dates were not included in the response; however, products

¹ A web portal is software that provides a controlled gateway to an internet site.

² Treasury OIG issued three audit reports on ACE development to Customs. These reports highlighted the continued risk of emphasizing schedule over quality. These reports are:

- OIG-02-058, March 4, 2002, Titled: Customs Needs to Adequately Staff the Modernization Office
- OIG-02-102, July 9, 2002, Titled: ACE Development at Risk from Incomplete Management Systems
- OIG-03-058, February 13, 2003, Titled: Improved Management of Reengineering Needed

and decision points associated with the recommendations are specified in the ACE program schedules. The complete CBP response is provided as Exhibit 2.

By way of background, in August 2001 the ACE contract work was started by e-Customs Partnership (e-CP), a coalition of contractors headed by IBM Global Services. As of June 2003, Congress appropriated and released \$735 million for ACE. The CBP plans for ACE to be a customer-oriented, account-centric process that provides real-time access to internal and external information through a secure global channel for travel and trade. ACE is scheduled to be fully implemented by December 2007.

Quality of Deliverables Can Be Improved

In release 1, CBP accepted deliverables that did not meet expectations. CBP transferred these developmental issues to release 2. These issues contributed to a four-month delay in the ACE contract schedule for release 2. A 90-day pilot test for Release 2 was started in June 2003. At the end of the pilot, CBP will evaluate the acceptability of the deliverable. It is critical that the foundational activity in Release 2 is complete and satisfactorily meets quality, security, and user expectations prior to acceptance.

According to the Program Management Plan, contract tasks will include key milestones as “gates” into and out of each phase of the project’s life cycle. During each release there are specific deliverables that are key milestones. Examples of key milestones in Releases 1 and 2 include the Critical Design Review, Test Readiness Review, Production Readiness Review, and Operational Readiness Review. Each deliverable should be complete prior to continuing with system development. CBP’s Modernization Office reviews each deliverable to determine whether it is acceptable.

ACE Release 1 was to establish an integrated infrastructure and web portal framework upon which all subsequent ACE functionality will be built. In addition, the release was to lay the foundation for a user account structure for selected importers at selected locations. ACE Release 2 includes initial Account, Trade, and Portal functionality to internal CBP account managers and 41 companies. It will allow CBP account managers to establish trade accounts for a number of major importers and track major activities related to each account, such as enforcement and compliance activities. Members of the international trade community will also be able to access certain information pertaining to their accounts. The Secure Data Portal will provide access for both the trade and CBP users to interact with the ACE system.

During Release 1, CBP identified problems in the areas of system infrastructure, performance, and usability. However, the Modernization Office and the contractor proceeded to develop Release 2 with plans to fix the problems during development. For example,

- The Modernization Office accepted with conditions the Critical Design Review and Test Readiness Review, which allowed the contract to continue to the next key milestone.

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- The solutions to problems identified with infrastructure, stability, and performance were postponed to Release 2.
 - The User Acceptance Test users deemed the Release 1 Pilot “unacceptable.” A decision was made to make the corrections in Release 2.
 - During the Release 1 Project Readiness Review, a decision was made to move the correction of 15 product trouble reports to Release 2.
 - A decision was made prior to the pilot period that Release 1 would not move into an operational status, since the pilot would not be completely successful. Therefore, rather than making a decision to reject or accept Release 1 at the Operational Readiness Review, the Modernization Office simply accepted the Pilot Evaluation Report.

In addition to infrastructure stability and performance problems discovered during Release 1, unexpected infrastructure problems also occurred during Release 2 with the integration of commercial off the shelf software packages. However, in order to mitigate problems associated with schedule delays, staff was brought in from other project areas to help resolve the problems and some Release 2 requirements have already been moved to future releases.

Unlike prior deliverables, which were written products, Releases 1 and 2 are to provide a working system. This system must be functional for CBP and international trade companies. Some of the prior deliverables were accepted with conditions to allow the contract to continue as scheduled. Since Release 2 will be the infrastructure upon which subsequent ACE functionalities will be built, it must be complete and meet higher quality standards prior to acceptance.

Recommendation 1. We recommend that the contracting officer not accept the delivery of Release 2 until it is complete and meets the quality expected for all contract requirements.

Management Comments: CBP concurred and the contracting officer will only accept the delivery of ACE Release 2 when it meets the clearly defined acceptance criteria at the Operations Readiness Review.

OIG Comment: The actions taken and planned by CBP satisfy the intent of our recommendation. However, CBP expressed concerns that the draft report implies that CBP’s emphasis on schedule caused the resultant loss of quality. The OIG did not intend to imply this and the report has been revised accordingly. While CBP took several positive direct measures with the eCP to deal with problems encountered, our report makes recommendations to further improve government oversight of the contract. It is the responsibility of the contracting officer to ensure that the government gets what it has contracted for in a timely manner.

Technical Reporting Could Be Improved

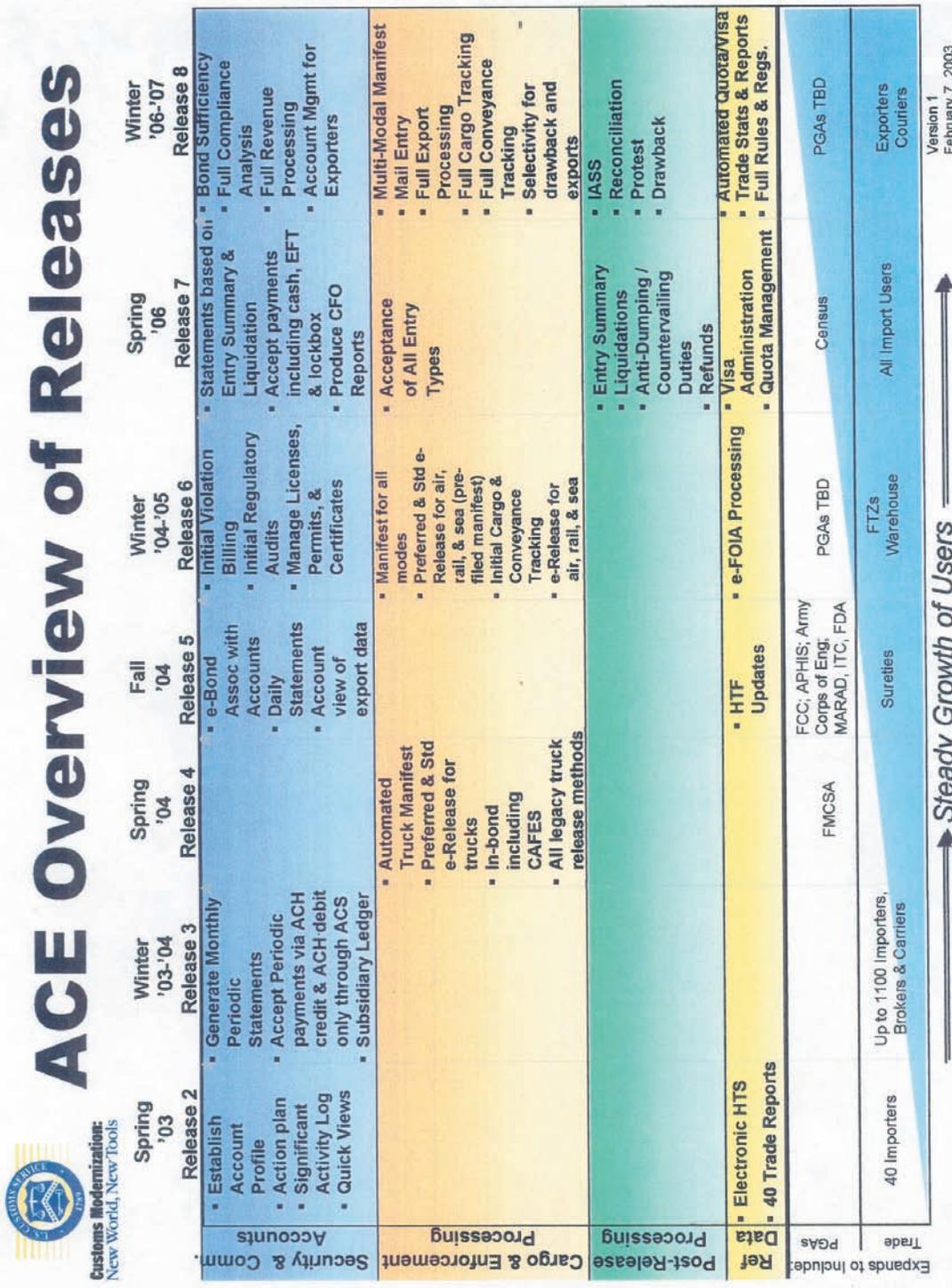
MITRE is an independent not-for-profit corporation chartered to work in the public interest. MITRE supports the CBP Modernization Office with strategic guidance and provides assessments of e-CP work products. It also provides technical expertise in acquisition, engineering, and architecture.

The current MITRE reports are not designed to provide Modernization Office management with the information they need to make the most informed decision. MITRE provides the Modernization Office with weekly activity reports and monthly progress reports. Weekly reports form part of the monthly progress report. The progress reports describe the work accomplished by MITRE during the reporting period and planned activities for the upcoming weeks. Progress reports address MITRE's activities in five areas - Project Management, Strategic Planning, Program Management, Enterprise Architecture and Engineering, and Projects. However, the reports provided by MITRE do not provide sufficient detail to identify and highlight important issues, nor do they provide alternative actions, risks, and recommendations needed by the Modernization Office to understand MITRE's position on issues clearly. For example, the reports are generally limited to a listing of meetings attended or documents reviewed, without further commentary. Consequently, the Modernization Office does not have a clear written record of MITRE's assessment results.

Recommendation 2. We recommend that the CBP chief information officer require MITRE to provide a report to the Modernization Office at the end of each of the key milestones of the project's life cycle, which, based on MITRE's technical evaluations, provide management with alternative actions, risks, and recommendations, as appropriate.

Management Comments: CBP concurred and has directed MITRE to provide a report as described in the recommendation.

OIG Comment: The actions taken and planned by CBP satisfy the intent of our recommendation.



U.S. CUSTOMS AND BORDER PROTECTION
Department of Homeland Security

Memorandum

September 11, 2003

MEMORANDUM FOR CLARK KENT ERVIN
ACTING INSPECTOR GENERAL

FROM: Acting Director
Office of Policy and Planning

SUBJECT: Office of Inspector General (OIG) Review of Automated
Commercial Environment (ACE) Web Portal

Thank you for providing us with a copy of your draft report entitled "Audit of the Automated Commercial Environment (ACE) Secure Data Web Portal" and the opportunity to discuss the issues in this report. We agree to take positive action on the recommendations, and our response to those recommendations is attached. We appreciate that many of the comments made at the exit brief on June 30, 2003 have been acknowledged and incorporated. However, we remain concerned that the report may leave an impression that the Customs and Border Protection Modernization Office (CBPMO) has not taken sufficient actions to ensure cost, schedule, and performance (quality) goals are met. Therefore, we are providing the following clarifying comments.

The report still appears to imply the CBPMO emphasis on schedule caused a resultant loss of quality.

- We believe it can be demonstrated that the CBPMO sought to balance cost, schedule, and performance (quality) in managing the products that were produced by the e-Customs Partnership (eCP).

Further, because of the concern for quality, the CBPMO took several direct measures with the eCP to ensure the quality of product expected. Notably, some deliverables went through multiple iterations prior to acceptance, and Customs and Border Protection issued several letters to different management levels of the eCP stressing quality as a key interest.

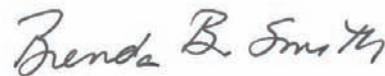
Vigilance ★ *Service* ★ *Integrity*

As discussed in the exit brief, we are concerned that the wording of the fourth paragraph (including the six bullets on page two of the report) could lead the uninformed reader to infer mismanagement on the part of the CBPMO.

- In fact, it our belief that the actions discussed are *positive* management actions based on sound management principles.
- The Release 1 test period scheduled to run for 30 days was reduced to 14 days because the objectives of the test were satisfactorily achieved. Extending the period for an additional 16 days would not have achieved any additional results except to extend the schedule and add unnecessary cost. The Pilot Evaluation period of 90 days was reduced to 45 days for similar reasons.
- The Problem Trouble Reports (PTRs) were individually assessed and a determination was made, case by case, on the most effective and efficient disposition – fix the pilot release or build the improvements into the future baseline release. Thus, the decision to defer PTRs from Release 1 to Release 2.
- The user acceptance test survey, which found Release 1 unacceptable, was anticipated. The users deemed the functionality test to be satisfactory, but the stability and response times were unacceptable. The Release 1 Pilot was running on a pilot platform, and was not expected to perform at a fully developed systems level. The knowledge and insight gained in the pilot is being used to build the mature system.

The CBPMO is following the Systems Development Life Cycle with specific milestones and criteria to ensure that the product that is eventually delivered meets the requirements and expectations of the end customer. We believe that consideration of our points outlined above provide examples which demonstrate the CBPMO made informed and prudent decisions.

Thank you for your assistance. If you have any questions, please have a member of your staff contact Ms. Michele Donahue at (202) 927-0957.



Brenda B. Smith

Attachment

-3-

cc: Assistant Commissioner, Office of Finance
Acting Assistant Commissioner, Office of Congressional Affairs
Acting Assistant Commissioner, Office of Public Affairs
Chief Counsel
Chief of Staff
Special Assistant to the Deputy Commissioner
Audit Program Coordinators (OIT, OF)

Attachment

Response to Audit Recommendations
OIG Draft Interim Report on the Automated Commercial Environment Web Portal

Recommendation 1: We recommend that the Contracting Officer not accept the delivery of ACE Release 2 until complete and meets the quality expected for all contract requirements.

Response: Concur. The contracting officer will only accept the delivery of ACE Release 2 when it meets the clearly defined acceptance criteria at the Operations Readiness Review.

Recommendation 2: We recommend that the CBP Chief Information Officer require MITRE to provide a report to the Modernization Office at the end of each key milestones of the project's life cycle, which, based on MITRE's technical evaluations, provide management with alternative actions, risks, and recommendations, as appropriate.

Response: Concur. MITRE will provide a report as described in the recommendation.

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