COAT – A CBP Zero-Tolerance Solution

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TABLE OF CONTENTS

THE GEORGIA PORTS AUTHORITY ......................................................... 3
INTRODUCTION .................................................................................. 4
BACKGROUND .................................................................................... 5
OBJECTIVES AND METHODOLOGY ..................................................... 6
SOFTWARE SOLUTION ......................................................................... 6
PROJECT COST ................................................................................... 8
HOW COAT FULFILLS THE AWARD CRITERIA ...................................... 10
CONCLUSION ..................................................................................... 11
The Georgia Ports Authority

The Georgia Ports Authority (GPA) is a public corporation that acts as an agency of the State of Georgia. GPA owns and operates the Port of Savannah, the Port of Brunswick, the Bainbridge Inland Barge Terminal and the Columbus Inland Barge Terminal. Exports of raw materials, grains, forest products, automobiles and heavy machinery move smoothly through GPA. Major retailers such as Wal-Mart, Home Depot, Target and IKEA depend on GPA to move their imports quickly. All of the world’s largest ocean carriers call the Port of Savannah.

The Port of Savannah is the largest single-terminal container facility on the U.S. East and Gulf coasts and ranks fourth among U.S. container ports. It is the fastest growing container port in the U.S., averaging between 6,500 and 6,700 gate transactions daily. In the last decade alone, TEUs have tripled, increasing from 606,176 to 2.04 million.
Introduction

U.S. Customs and Border Protection (CBP) officers routinely inspect cargo entering through the Port of Savannah at the Garden City Terminal. Since 9/11, heightened port security and more stringent government regulations have generated a significant increase in the number of containers inspected. With TEUs tripling in the last decade at GPA and no sign of a slowdown, it has become even more crucial to maintain fluid communications between the CBP and GPA. Nowhere is this more evident than in the container inspection process.

Business Problem

The dramatic increase in cargo inspections, coupled with the increasing complexity of CBP’s requirements, began to present a number of challenges for both GPA and its customers. These challenges ranged from increased container dwell time and demurrage for the customer to increased administrative overhead and unbilled services for GPA.

GPA’s Client Relations Center (CRC) began to receive an increasing number of inquiries regarding cargo that had been placed on government hold. All too often, GPA did not have current information from the CBP regarding the status of the cargo. These types of inquiries frequently necessitated a call to the CBP to determine the container’s status. This
situation undermined GPA’s “one-call resolution” approach to customer service.

As container inspections increased, so did the administrative task of keeping track of the containers and billing for services rendered in the inspection process. Although the CBP maintained container inspection data in a standalone system that was transferred via ftp to GPA, there was no real-time integration with GPA’s container operations system. As CBP inspection volume and task complexity increased, both CBP and GPA processes required more frequent maintenance, and suffered from reduced reliability.

GPA recognized that in order to address these problems, it had to devise a system whereby the CBP could directly update container inspection data in GPA’s container operations system.

**Background**

The local CBP previously utilized a Microsoft Access database for tracking customs inspections at GPA. Records from this database were transferred periodically via ftp processes to GPA where they were uploaded into Navis Express, GPA’s terminal operations system (TOS). The upload process placed government holds and releases on containers as specified in the flat file from CBP. Billing data for services rendered in the inspection process was also generated as part of the upload, as were work orders to relocate the required containers.
The volume of data in CBP’s database had grown too large for Access to reliably handle, often resulting in missing data. Additionally, the flat file was not always transferred to GPA in a timely manner; in fact, sometimes the file was not transferred at all. This not only resulted in government holds not being removed from a container, it also resulted in holds not being placed on a container – a far worse scenario that could result in hefty fines for both GPA and the customer. To compensate for this missing data, under advisement from the CBP, GPA had to manually place government holds and releases based on faxed records from CBP. GPA also had to manually create orders to bill for services rendered in the inspection process.

**Objectives and Methodology**

GPA determined that the best approach for improving information and data flow between CBP and GPA was to provide CBP a mechanism for issuing real-time government holds and releases directly in GPA’s terminal operations system. At the same time, the CBP needed a secured system accessible only by the CBP. Working closely with GPA’s Client Relations Center (CRC) and CBP, GPA software engineers began defining a Web-based solution that would directly interface with GPA’s terminal operations system.

**Software Solution**

Using Oracle Forms, GPA software engineers designed and developed an integrated Web-based application exclusively for the use of the CBP. The
system is named COAT to represent the CBP’s four processes: CET (Contraband Enforcement Team), Outbound, Agriculture, and Trade. The COAT system provides real-time container inspection tracking integrated wholly with GPA’s container operations system, Navis Express.

COAT allows local CBP officers to notify GPA when a container is designated for inspection, creates work orders to move containers through the inspection process, updates seal changes and tracks the release of individual containers – all in real time. Using a portable computer, CBP officers can even inspect containers shipside and immediately update and release the container. A container can be targeted for multiple types of inspection. Each of the inspections is logged and the container status and its location are updated as it moves through the inspection process. The container information in the TOS immediately reflects the updated status of the container.

At times, CBP needs to place a hold on a container that is not yet known to GPA’s Express system. In this scenario, COAT will create a “hold” record for the container and as soon as the container arrives, the hold is automatically set. With CBP’s old system, this would not have been possible. Instead, the hold record would have been rejected and the hold information would have been lost, introducing the possibility that the container could exit the gate without inspection. With hefty government regulation fines, this type of infraction could be quite costly to both GPA and the customer.
COAT provides a number of queries and reports that allow CBP to quickly identify containers by “hold type.” For example, CBP can easily identify all containers that have been on hold in excess of a specified time parameter. This prevents containers from getting “lost” in the inspection process, thereby reducing container dwell time.

**Project Cost**

Development costs for COAT were kept low by utilizing in-house developers and currently licensed development tools. GPA software engineers chose Oracle Forms as the development platform for COAT. Using rapid development techniques, the system was completed in just three months utilizing only 320 man-hours for analysis, design, development, testing, and implementation.

Since the COAT system runs on the same database server as GPA’s terminal operations system, no additional software or hardware purchases were required. As a Web-based application, deployment costs are minimal since COAT can be quickly and easily deployed via the Internet.

Personnel in GPA’s Client Relations Center provide COAT end-user training and application support as needed. The COAT system has quickly proven to be a robust application that requires little intervention from GPA’s IT staff, further minimizing overall project cost.
**Performance Measures**

Since implementing COAT in January 2007, GPA has realized numerous benefits. Prior to implementation, GPA was devoting significant time to handle container hold inquiries, update container statuses, and manually enter work orders and billing data. With activity at GPA steadily increasing, this effort can now be directed toward improving customer service through the CRC.

In addition to more proactive use of manpower, COAT has significantly improved communication between CBP and GPA and strengthened port security. With CBP exclusively responsible for updating container holds, GPA has drastically improved data integrity and greatly reduced the likelihood that a container would leave the terminal without appropriate CBP authorization. This is particularly critical given the zero-tolerance policy of CBP, where an unauthorized “gate-out” can carry a penalty equal to the value of the cargo. GPA recently handled one container with contents valued at $5 million. Had this container resulted in an unauthorized gate-out, GPA could have faced a $5 million fine.

COAT has also reduced the chance of lost revenue due to services that go unbilled. From December 2006 to January 2007, 16% of orders had to be billed manually. Since implementation of COAT on January 22, 2007, no manual orders have been required for services related to customs inspections.
Container dwell time has also been reduced, resulting in demurrage savings for the customer and more timely delivery of cargo, both of which go a long way toward improving customer satisfaction. At a time when GPA is continually searching for more yard space, reducing container dwell time yields great dividends for the port as well.

**How COAT Fulfills The Award Criteria**

The benefits of COAT have been realized throughout GPA, from the CRC, to the container field, to gate operations, to the billing and administrative departments. Gains have been made through better customer service, smoother operations, reclaimed revenue, and improved port security.

The benefits of COAT extend even beyond GPA, providing CBP with a cost-effective, reliable, and easy-to-use system for managing and tracking inspections. Further benefits are realized by GPA customers in reduced demurrage, more timely deliveries, and less likelihood of governmental fines.

Implementation costs for COAT were kept astoundingly low by developing the system in-house using already-licensed development tools. Rapid development of the system in a three-month time period further reduced costs. All costs incurred in the development of COAT have been overwhelmingly diminished by the benefits realized by CBP, GPA, and GPA customers.
With CBP regulations extending to every U.S. port, the functionality provided by COAT is readily transferable to other ports. Further, by designing and building COAT on widely available and affordable technology, this solution could be easily implemented at any other terminal.

**Conclusion**

In a never-ending effort to improve operations, security and customer service, GPA realized that it had to improve communication between CBP and GPA. With heightened awareness of port security and the dramatic increase in cargo inspections, GPA could no longer rely on outmoded technology for this critical information flow. Neither could CBP continue to depend on a Microsoft Access database to handle their increasing volume of data. Designing COAT to fully integrate CBP’s processes with GPA’s TOS proved to be the most desirable solution for both partners. While CBP gained a secured, robust system for better tracking inspections, GPA gained more accurate, updated container information, which in turn benefits GPA’s customers. These improvements yield a smoother and more cost-effective operation and, most importantly, a more secure port. Providing better port security for GPA’s workers, customers and community is something no one can measure.