

Automated Data Collection System

Process Overview

Background

The Seventy Sixth Session of the Maritime Safety Committee (MSC 76) and, concurrently, a Diplomatic Conference of the Contracting Governments to the International Convention for the Safety of Life at Sea (SOLAS), were held under the auspices of the International Maritime Organization, from December 9 to 13, 2002.

The objective of the Diplomatic Conference was to enhance maritime security through amendments to the SOLAS Convention (amendments to Chapter V and modifications of Chapter XI, with a subdivision into the new Chapters XI-1 and XI-2) and the adoption of the International Ship and Port Facility Security Code (ISPS).

The SOLAS amendments and the ISPS Code contain strong, comprehensive, worldwide measures aimed to enhance maritime security. Included in these measures is the option of requesting preliminary information regarding cargo, passengers, origin and destination, among other things. This information can be used by the Port Security Officer to perform risk assessments. The reception of this information prior to the vessel's arrival is essential in order to efficiently perform these assessments.

ACP Initiative

The Panama Canal Authority, (ACP) has the additional responsibility to ensure the most efficient use of its resources and to provide the best level of service and security to its customers. The ACP has initiated the implementation of the Automated Data Collection System (ADCS) with the system going live on April 1, 2004, and full implementation scheduled for July 1, 2004.

The ADCS adds to the other ongoing efforts to grant the best level of security possible to our customers by providing an adequate information system to improve the process of data submission needed for security verifications and transit operations. This system will make possible the electronic reception of all preliminary information and its proper analysis and risk level assessments.

The pre-ADCS process is time consuming and prone to human error, which can translate into costly delays due to incorrect or untimely data entry. With the upcoming implementation of the ADCS system, this process will no longer be a time and resource-consuming process of manually completing all the required forms with the information needed to ensure a secure, safe and efficient transit through the Panama Canal.

Benefits

The implementation of the ADCS is expected to generate the following benefits:

- Accurate and timely collection of maritime operations and security information that facilitates the optimization of vessel schedules, enhancing the security in the Canal.
- Improved accurate data validation.
- Efficient exchanges of electronic information between ACP and its customers and vice-versa.
- Improved user-friendliness. Convenient access via ACP's web-based interface.
- Overall reduction in operation costs and improvement in the competitiveness of the organization.
- Reduced forms processing time improving overall productivity.
- Enhanced information and system security ensuring ACP's operations' integrity are not interrupted by hackers or saboteurs.
- Enhanced Market Analysis that will translate into a more accurate pricing and customer service strategy.

What is the ADCS

The ADCS is an efficient electronic information exchange between the ACP information system and our customers systems, which enables the collection, administration, and validation of data.

The ADCS includes an application to be used by ACP boarding officers to access, update and add information with on-line access to the current operational application via wireless technology.

The ADCS is divided into two main components:

Electronic Data Collection System (EDCS):

The EDCS is designed to function as the ACP's Information System front-end. It provides for the electronic reception of all preliminary information required for security and operational purposes. After being verified by ACP personnel thru an interface, this information shall be input directly into the production database of the Enhanced Vessel Traffic Management System (EVTMS), which is the current operational application used by the ACP. The EDCS contains three main modules:

- Client's Web-Form Module (*To be used by clients and registered agents*)
- (EDI) Messaging Module
- Value Added Network (VAN) and EDI links

Mobile Data Collection System (MDCS):

The MDCS will allow wireless communication between the EVTMS database and the handheld devices carried by the ACP Admeasurers, Boarding Officers, and Canal Protection Officers (CPO). Wireless communication will provide these officials with the capacity to access, edit or input information, via an interface, from any location throughout the Canal, as well as onboard transiting vessels and ACP boarding launches.

How does the EDCS work

A. The EDCS will receive the required information from the vessel through three different routes or options, which are available to the customer to choose from:

1. EDCS Web Portal:

The customer and the registered agents will have access to this portal at any time. It will have the following functionality:

- a. User profile and password maintenance
- b. General Transaction Status
- c. Module for submission of required information
 - (1) ETA
 - (2) Ship Due
 - (3) Ship Due for Small Crafts
 - (4) Cargo Declaration
 - (5) Crew Information
 - (6) Passenger Information
 - (7) Preliminary Admeasurement Data Sheet (Only for first time transits)
 - (8) Booking Request and Cancellation (Only for Registered Agents)

General overview:

The ACP will provide each customer and registered agent with a user name and password to log onto the EDCS portal. The client would be able to change the password in the EDCS portal at any time.

In order to assure the proper level of security in the communications over the Internet, the registered agents will be required to use digital keys in order to electronically sign the documents generated by them. These digital keys (USB Tokens) will be provided and configured by the ACP.

However, in order for the customer to receive its user name and password, the customer needs to have a Customer Code (CC). This CC is critical for the submittal of any information to the ACP. Access to the information regarding each vessel will be restricted to the Users that are related to the corresponding CC provided.

After logging into the EDCS, the customer will be able to check the status of each transaction related to the data requested for security and operations purposes. It will also provide the links to the proper forms used in this regard. These forms will have intelligent

software that will validate the data as it is submitted to the ACP, with messages that will alert the customer if any required data is missing or invalid for ACP purposes, hence, minimizing delays or any other problems related to the required information.

The required information is basically the same type of information that has always been requested from our customers. Additional information required would be:

- Vessel Security Officer general data.
- Prior ports and corresponding MARSEC levels.

Additionally, detailed information regarding the cargo will be requested:

- Harmonized code for detailing of cargo (10 digit), including cargo inside containers.
- Location of cargo in the vessel, according to the Stowage Layout, to be provided electronically when a vessel arrives at Canal waters for its first transit.
- IMDG (UN) code for dangerous cargo.
- UN Port Codes for origin and destination ports.
- UN Country codes.

The ACP has designed this portal primarily for clients with bulk cargo on board and a reduced number of passengers. For the high volume of cargo and passenger data, the options of EDI Messaging Module (Secure ftp) or Value Added Network (VAN) are being implemented.

2. EDI Messaging Module:

The EDI messaging module will have the same functionality as the Web Portal but with access only to the following forms.

- a. ETA
- b. Ship Due
- c. Cargo Declaration
- d. Crew Information
- e. Passenger Information

This module will handle direct, server-to-server, communications using an ACP proprietary format called Panama Canal Automated Data Collection Requirements (PC-ADR). The PC-ADR is based on EDIFACT, which is a widely used international EDI protocol used among the major players in the maritime industry.

The Web Server module and the EDI Messaging Module are integrated in a way that if the customers send their ETA and Ship Due using the Web Portal and, uses the EDI messaging module to send their passenger and cargo declarations, the status of all the transactions will be reflected in the status screen at the Web Portal.

3. Value Added Network (VAN):

Additionally, customers will have the possibility of using their own VAN (if they so desire) or using the preferred ACP VAN provided by Crimson Logic. The VAN option is offered for those customers with high volume of data but with no current translation or mapping capabilities.

The use of this option only differs from the EDI messaging module in the way the connection is accomplished through a third party. The customer will be responsible for directly handling this connection..

The ACP has managed special rates for the services related to these transactions in order to minimize the economical impact on customers that wish to use this option.

- B.** The Boarding Officers (BO) and Canal Protection Officers (CPO) will be using wireless devices to access the information previously received, in order to review ready information and perform security checks.

Mobile Data Collection Application – Used by the boarding officers.

The boarding officers (BO) will board vessels carrying a tablet PC. When performing a normal boarding process, the first boarding officer will proceed to the designated reception room and review all the required information and documentation on board. This process will be nearly identical to the existing process, except that the vessel is no longer required to provide the following ACP forms:

- Ship Due
- Cargo Declaration
- Crew Manifest
- Passenger Manifest

This information is required to be sent to the ACP in advance, allowing the Boarding Officer to check the data already loaded in his tablet PC. Except for the Cargo Declaration, Crew Manifest and Passenger Manifest, any incongruity or error can be edited and uploaded to the system from the tablet PC, hence, making the process more efficient and less time consuming.

In cases where copies of the forms need to be provided to the Master of the vessel, the BO will print out all necessary documentation, using a portable printer.

Mobile Canal Protection Application – Used by Canal Protection Officers (CPO)

Canal Protection Officers (CPO) contribute to provide a secure environment along the transit route and in all anchorage areas - Pacific and Atlantic. They will be patrolling the anchorage areas using fast and maneuverable patrol boats. The CPO will only board in case of a definite security threat or if the vessel cannot be properly identified. Onboard, the CPOs will carry Portable Data Terminals (PDT), which will allow them to check the status and information of every vessel located at the anchorage area.

This will include the small crafts anchored on the Pacific Anchorage area. Small vessels should be properly registered before arrival and local crafts should be under the command of the properly registered personnel.

Changes in Procedure:

The main procedural changes needed for the implementation at the EDCS level are the following:

a. Submitting Information:

The information to be included in the following forms is required 96 hours prior to arrival of the vessel:

- (1) ETA
- (2) Ship Due
- (3) Ship Due for Small Crafts
- (4) Cargo Declaration
- (5) Crew Information
- (6) Passenger Information
- (7) Preliminary Admeasurement Data Sheet (Only for first time transits)
- (8) Booking Request and Cancellation (Only for Registered Agents)

Not providing the required information on time could translate into delays in transit times. There will be security holds imposed on every transit until the required information has been properly revised and a risk assessment has been performed.

b. The implementation schedule of the EDCS is:

- (1) April 1, 2004:
 - The EDCS goes live. All information, except ETAs and Booking request/Cancellations, will only be received through EDCS.
 - The alternate route for ETAs and Booking Request/Cancellation will be fax or e-mail.
 - At this time, for these specific forms, the fax or e-mail communications will hold preference over electronic.

- (2) May 1, 2004:
 - Last day of live testing of the EDCS. The alternate route for ETAs and Booking Request/Cancellations will remain fax or e-mail.
 - At this time, for these specific forms, EDCS communications will hold preference over fax or email.
- (3) July 1, 2004:
 - Last day to receive information regarding ETA and Booking Request/Cancellation by alternate means.
 - From this day forward the only option to submit information in order to transit the Panama Canal will be the EDCS.

c. Customer Code and User/Password:

The Customer Code (CC) is an imperative requirement for a transaction to be accepted or data to be received and processed.

The CC process will remain the same, with the addition of security related information such as general information of the Company Security Officer (CSO).

A general overview of the Customer Code and User/Password request process:

- (1) New customers send the required general and security information and documentation to the Customers Relations Office. This information can be sent by fax or email.
 - (a) General Information
 - Complete Company Address
 - Phone Number
 - Fax Number
 - Email Address
 - Web Site
 - Official Contact Person
 - (b) Security Information
 - Security Officer Name
 - Security Officer Email
 - Security Officer Phone Number
 - (c) Documentation
 - Article of Incorporation
- (2) The ACP Customer Relations Office will send the Customer Code and the User/Password assigned to the customer.
- (3) Customers shall be advised that their passwords should be modified on the first login to the EDCS. The ACP Help Desk will provide 24-hour service to attend all problems related to the access to the EDCS.

- (4) The process of generating a CC and User/Password will take a minimum of 2 working days. Please, remember that the Customer Relations Office is available Monday through Friday (7:15 am – 4:15 pm).