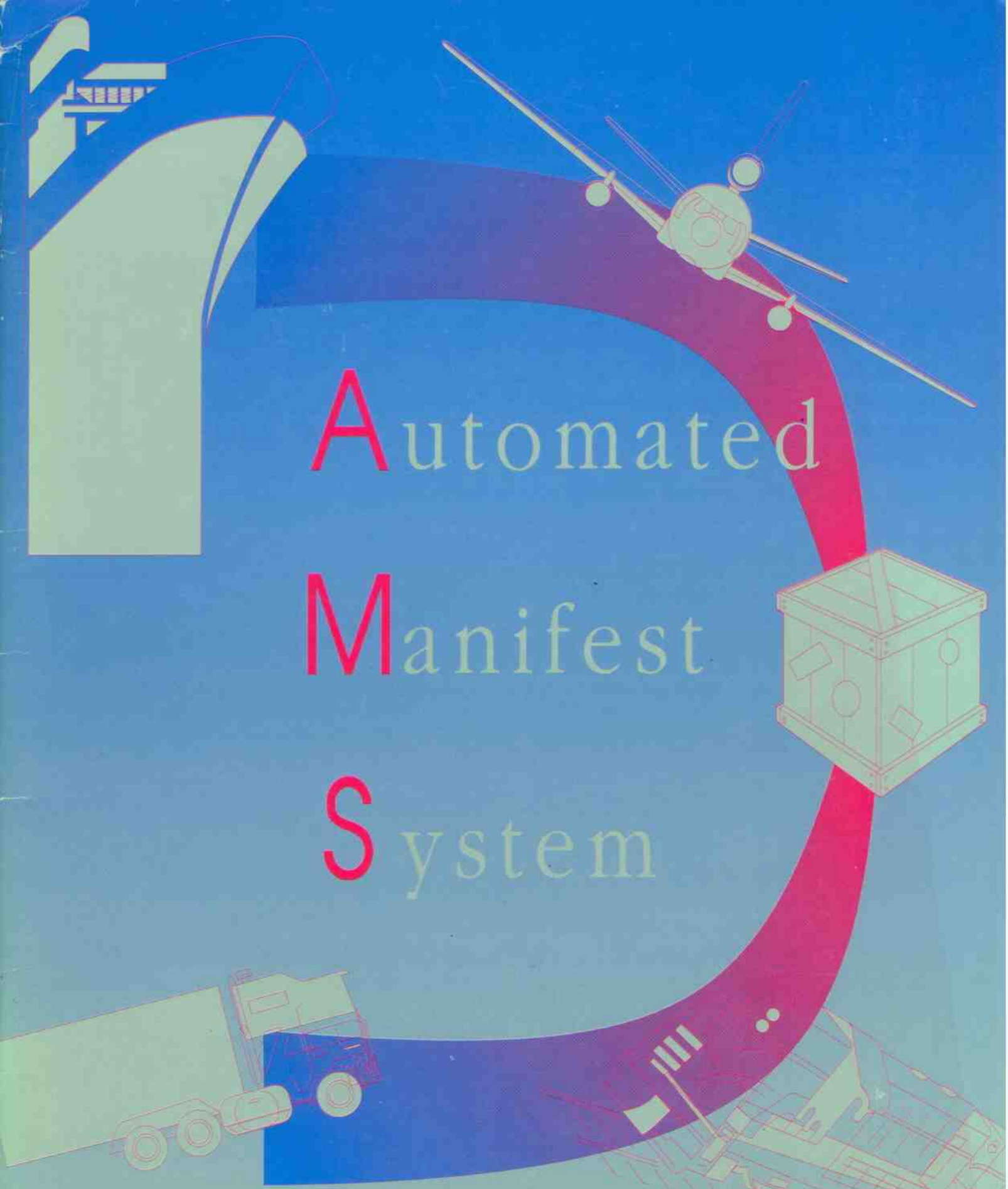


Automated Manifest System

Department of the Treasury
U.S.Customs Service
Office of Automated Commercial Systems
ACS Documentation Branch
Publication # 557
September 1992

AMS: Overview

At a Glance . . .

In the early to mid 1980s, the U.S. Customs Service participated in evaluating, testing and using prototype carrier, port authority and service bureau-based cargo delivery systems.

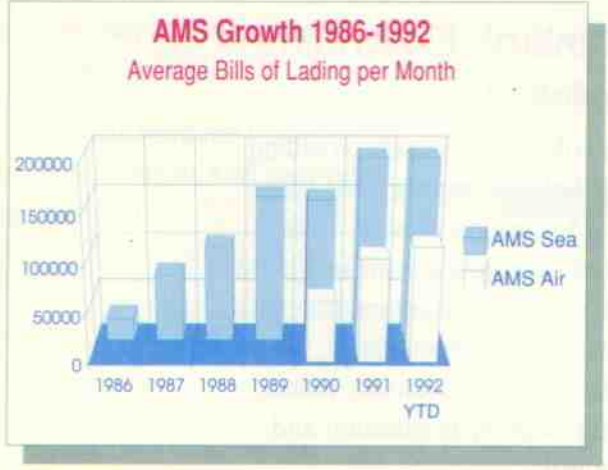
The objective was to find a way of easing the labor intensive function of reconciling imported cargo inventories.

In its search for a total solution — one that could fully satisfy Customs needs as well as the needs of the importing community — Customs also tested several stand-alone internal manifest systems.

The conclusion drawn from these experiences was clear: to operate most effectively and efficiently, Customs needed one nationwide automated manifest system that could interact with other Customs automated systems and interface with automated systems used by the trade community.

Based on this conclusion, Customs developed a multi-modular imported cargo inventory control and release notification system called the Automated Manifest System (AMS).

AMS is a key component of Customs Automated Commercial System (ACS). ACS is widely recognized as one of the most successful and sophisticated automated



Participation in Sea AMS and Air AMS systems shows a steady increase.

By working together, both AMS participants and Customs benefit from greater cargo control, better communication, and shorter holding time for imported cargo.

systems in the world. ACS is multi-faceted, highly integrated and modular to allow for expansion. Customs goal is to exchange data electronically with all elements of the trade involved in the handling of imported and exported cargo. The integration of ACS modules, including AMS, ABI, and Cargo Selectivity, is a positive step in that direction.

Working Together

The Customs Automated Manifest System does not preclude the need for other automated systems used by the trade community. It is designed to complement rather than replace or compete with other systems so both Customs and the trade can realize multiple benefits.

AMS Participants

- **Air Carriers**
- **Sea Carriers**
- **Port Authorities**
- **Service Centers**
- **Rail Carriers**
- **Truck Carriers as Secondary Notify Parties**
- **Deconsolidators**
- **Freight Forwarders**
- **Container Freight Stations**
- **Terminal Operators**
- **Software Vendors**

AMS participants use manifest data for accounting, billing, delivery notification, inventory and traffic control. Customs uses automated manifest data to carry out its mission of enforcing Customs and other importation laws.

A Voluntary, Expanding System

AMS is a voluntary program providing electronic linkages among trade users and the U.S. Customs Service. The advantages to trade users include multi-agency access to their information; faster and more accurate processing; standardization of accounting, billing, community delivery notification and traffic control.

Faster Release of Cargo

AMS standardizes data elements and formats for interface with other related Customs ACS modules, such as ABI and Cargo Selectivity. This linkage allows faster identification and release of low risk shipments.

AMS reduces reliance on paper documents to speed the processing of manifest and waybill data and eliminates the need for paper manifest discrepancy reports.

Electronic Interface with Other Agencies

The Department of Agriculture has access to AMS at all ports. This access permits Agriculture Inspectors to review manifest information electronically, place and remove holds, and perform related enforcement functions. Similar interfaces with other agencies may be added to AMS in the future.

The Federal Maritime Commission also has access to AMS to review manifest data.

Highlights

- **File or amend manifest or waybill data electronically**
- **Arrive shipments electronically**
- **Receive faster release of low-risk shipments**
- **Establish electronic linkage to common carriers and auxillary services**
- **Receive status notification when an entry has been canceled or deleted**
- **Request extension of the lay order period**
- **Receive cargo status and advance notice of General Order (GO) eligibility**
- **Receive notice of other government agency holds**
- **Standardize billing, accounting, delivery and traffic control information**
- **Receive exam notification**
- **Maintain confidentiality of data**
- **Reduce paper costs**

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AMS: Requirements

AMS is voluntary and designed to use standard technology available to both large and small businesses. To participate, your computer system must be capable of transmitting data to and receiving data from the U.S. Customs Service Data Center. Independent service centers provide the capability for non-automated users to realize the benefits of AMS participation.

Software/Hardware

Before becoming operational in AMS, a participant must determine in-house needs and requirements, review design considerations, select AMS-compatible software, obtain appropriate communications hardware, and test their system with Customs assistance.

AMS participants are responsible for developing or procuring computer software that is compatible with AMS. Commercial vendor software must have complete edit and validation/verification logic.

Independent data processing companies and port authorities have developed hardware, software, and teleprocessing capabilities that meet the requirements of the U.S. Customs Service. These companies are located throughout the United States and charges to participants vary. The Customs Office of ACS can furnish a list of AMS data processing providers. The decision to use a particular provider is strictly an individual AMS participant's decision. System demonstrations can be arranged by contacting the independent data processing companies.

U.S. Customs Data Center

The U.S. Customs Service Data Center serves as the communications link to AMS for qualified participants. Communications access is monitored by internal security programs within AMS. The Data Center is operational 24 hours a day, 7 days a week.

Costs

The U.S. Customs Service charges no fees for participation in AMS and assistance is provided during development by a Customs representative.

The costs incurred for developing or purchasing software and hardware are the AMS participant's responsibility. These costs can be lessened by purchasing existing approved software or by using a service center or port authority to provide the automated interface.

Testing

Each potential AMS participant is required to successfully complete a series of tests designed to evaluate their ability to receive and transmit manifest data. Testing for AMS is done in three stages: the systems interface test, the software test and the pilot test.

The systems interface test is used to verify the accuracy of the participant's communications software and hardware. All communications problems encountered during the test are resolved between the participant, the Customs Headquarters AMS Design and Development Branch, and the Communications Center at the U.S. Customs Service Data Center.

The test is considered successful when the potential AMS participant has retrieved and verified several special Customs-created client-specific files from the AMS database. These include user, data processing, site, security and carrier files.

Following a successful communications link, a predefined test scenario must be followed by each prospective AMS participant to evaluate their software's effectiveness in transmitting and receiving manifest data.

Software packages purchased from a vendor must be tested by the participant even if the vendor has previously tested the package.

The software test allows for final adjustments to the potential participant's system and provides an opportunity for error detection without risk to the AMS production system.

Each participant must demonstrate the ability to transmit sample manifests, various messages, amendments, and General Order (GO) status replies according to established test procedures. Customs will process the sample messages and generate error messages, reject messages and status notifications.

After software testing is successfully completed, live data is transmitted during a pilot test at a port designated by the participant. A dual system of paper and electronic processing is required during the pilot stage for both manifesting and releasing of cargo.

Upon successful completion of the pilot stage, the applicant is certified as "operational" in AMS. Paper processing is then reduced or eliminated at the discretion of the District Director in the port.

Operational Standards

To continue processing through AMS, participants must maintain a high level of quality as well as a low error ratio. Participants who do not maintain these standards may be placed in a probationary status or removed from AMS.

AMS: Sea

Trade participation in Sea AMS continues to grow steadily. Approximately 60-65% of in-bound ocean bills of lading are now transmitted electronically to Customs.

Sea AMS participation is available to carriers, secondary notify parties, and port authorities/service centers acting on behalf of their clients. Port authorities and service centers participating in AMS can file and receive both manifest and cargo data for multiple carriers calling at multiple ports.

Features

Using a unique bill of lading number, manifest data can be transmitted electronically for all cargo enroute to the United States *prior to vessel arrival.* This allows Customs an opportunity to review the submitted documentation and determine, in advance, whether the merchandise merits examination or whether to release it immediately upon arrival.

The carrier, upon receiving a release from Customs, is able to make decisions on staging cargo and the importer can arrange for examination, release and further distribution of the merchandise. All of this can be accomplished before the merchandise actually arrives.

The most recent enhancements to Sea AMS include Auto Arrival, Secondary Notify Party, Port Authority and Rail Interfaces with Sea AMS, Electronic Requests for Permits to Transfer, and Paperless Master In-Bond Reporting.

Auto Arrival

Since December 1990, approved carriers are permitted to arrive electronically their own vessels at discharge ports. Participating carriers can now do timely updates to manifest records with the actual arrival date.

Secondary Notify Party

Participation in the secondary notify party feature of AMS permits:

- designation, by SCAC or FIRMS code, of up to two additional parties per bill of lading to receive status notifications
- updating bills of lading with arrival and export data for cargo moving on a paperless master in-bond
- electronic request for Permits to Transfer for in-port cargo movements

Secondary notify parties include rail carriers, warehouse operators, truck carriers, and others involved with imported cargo.

The secondary notify party feature of AMS involves information sharing at the bill of lading level. Only the status notification of bills with the secondary SCAC or FIRMS identifier are transmitted, not the entire vessel.

Port Authority Interface with Sea AMS

Customs encourages port authorities who are capable of transmitting data for non-automated carriers using their ports to participate in AMS. Port authorities receive manifest information for their ports, as well as bill of lading status reports. These reports enable them to make information available to all concerned parties.

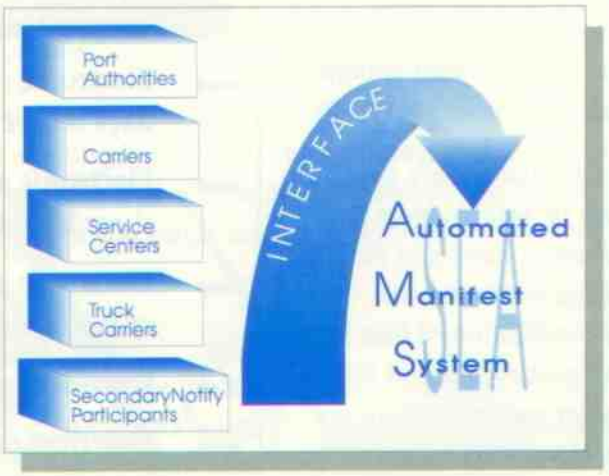
As an AMS participant, port authorities can play a major role within a community cargo release network.

Sea AMS...*Now*

- **Electronic release up to five days before vessel arrival**
- **Electronic arrival of a vessel at each port of call**
- **Electronic amendment of bill of lading data**
- **Electronic status notification**
- **Paperless master in-bond movements**
- **Electronic in-bond authorizations**
- **Electronic reporting of hazardous cargo and Harmonized System nomenclature**
- **Designation of secondary parties to receive release information**
- **Permits to Transfer (PTT)**
- **Electronic requests for lay order extensions**
- **Electronic requests of authorizations for local transfers**
- **Electronic message from Department of Agriculture**

Electronic Requests for Permits to Transfer

Paper documentation to request in-port movements of cargo is eliminated. Status notifications authorizing these movements are electronically sent to the party making the request.



Sea AMS benefits are now available to more trade users.

Paperless Master In-Bond Reporting

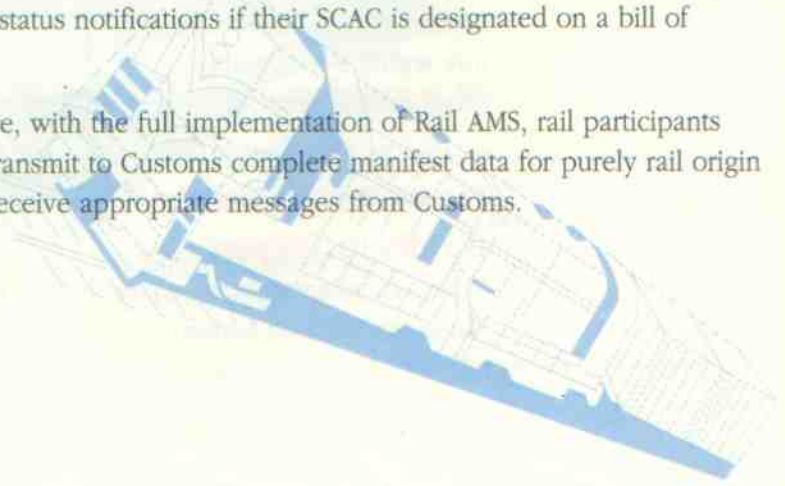
Carriers approved as paperless MIB participants in Sea AMS can transmit bill of lading and in-bond data and receive electronic authorization to move the shipment in-bond to a paperless destination port without preparation of a CF-7512 and CF-7512C.

Paperless reporting can be accomplished for Immediate Transportation (IT), Transportation and Exportation (T&E), and Immediate Export (IE) cargo movements. Additionally, participants can electronically update these movements with arrival and export data.

Rail Interface with Sea AMS

Utilizing RAILINC, rail carriers now have the capability as a secondary notify party to receive status notifications if their SCAC is designated on a bill of lading.

In the near future, with the full implementation of Rail AMS, rail participants will be able to transmit to Customs complete manifest data for purely rail origin shipments and receive appropriate messages from Customs.



Sea AMS Communications

The Customs Data Center provides free dial-up connections for authorized AMS participants with toll-free 800 numbers at 2400, 4800, and 9600 baud. Participants must procure the necessary modems and software and incur all costs for equipment and software.

Sea AMS...*Soon*

- **Electronic transmission of export manifest data**
- **Capture of house/sub-house bills of lading**
- **Revision of paperless in-bond tracking**

Dedicated service is also available through participant-provided leased lines. The option to use leased lines is at the discretion of the participant but communications protocol must be compatible with the Customs Data Center. Participants bear the cost of leased lines. A Customs Communications Specialist is available at the U.S. Customs Service Data Center to assist with selection and testing of communications links.

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Message Formats

Sea AMS supports batch transmissions in both AMS 80-position record format and Electronic Data Interchange (EDI) format. Requirements for AMS record formats can be found in the *Customs Automated Manifest Interface Requirements* document.

Special Sea AMS Requirements

Service centers and port authorities must submit letters of authorization on their client's letterhead for each client for whom they are authorized to transmit manifest data.

The first requirement for participation in Sea AMS is that the carrier or issuer of the bills of lading must possess a unique bill of lading number and a Standard Carrier Alpha Code (SCAC), and must inform U.S. Customs of the code in writing. The letter from the National Freight Traffic Association assigning the SCAC code must be included.

AMS: Air

Air AMS is a cargo inventory control system which standardizes the way the trade community and the U.S. Customs Service communicate.

The Air AMS module of ACS reached its second anniversary on October 16, 1991, expanding from a single daily flight at JFK to over 100 flights and 20,000 waybills per week at 10 ports of entry. Participants include carriers, port authorities, container freight stations, deconsolidators, and freight forwarders.

Features

Air AMS provides the authority to "arrive" an in-bond shipment and to file in-bond, permit to proceed, and local transfers electronically. In return, the carrier obtains notifications of releases, in-bond authorizations, general order, permit to proceed and local transfer authorization upon the flight departure or arrival from the last foreign port.

Air AMS increases data reliability and electronic enforcement capability, and decreases labor-intensive functions such as re-keying of information.

Electronic Air Waybill Transmission

Air waybill data can be transmitted in any sequence to an open inventory file in the Customs computer. This file is created by the participant. Carriers have the option to transmit bills at random or group them by flight.

Amendments to any air waybill information may be transmitted to AMS electronically. These amendments may be sent provided the cargo has not been sent to General Order (GO). The number of paper manifest discrepancy reports can be reduced and subsequently eliminated.

Air AMS include the ability to split shipments, to receive notification when an air entry has been filed that references an air waybill number not on file, and to use the air waybill number as the in-bond control number.

Cargo Status Notifications

Air AMS allows all participants in a shipment to receive electronic cargo status notification as soon as Customs is notified that the flight has departed from the last foreign port.

Cargo status notifications inform the Air AMS participant that the cargo is in-bond or permit to proceed authorized, or authorized for local transfer. Notification of examination status is also provided.

Lay Order Notifications

Air AMS permits participants to request extension of a lay order period and to receive notification at the expiration of the lay order period. Cargo can be designated for a General Order warehouse via AMS.

In-Bond

For cargo that is proceeding to destinations other than the initial port of entry, the in-bond procedure may be initiated by flagging the air waybill at the time of transmission. The air waybill number can be used as the in-bond control number.

Permit to Proceed

Air AMS participants receive electronic authorization to proceed from the initial arrival port to the final destination.

Air AMS...*Now*

- **Amend air waybills electronically**
- **Communicate flight departures electronically**
- **File permit to proceed, in-bond and local transfers electronically, often in the original bill**
- **Arrive an in-bond shipment at the port of destination**
- **Use the air waybill number as the in-bond control number**
- **Designate a freight forwarder or deconsolidator to act as an agent for the carrier**
- **Receive cargo status notifications as soon as Customs is notified that the flight has departed from the last foreign port**
- **Receive notification when an entry has been canceled or deleted**
- **Receive notification 48 hours prior to the expiration of the lay order period**
- **Request extension of lay order period**

Local Transfers

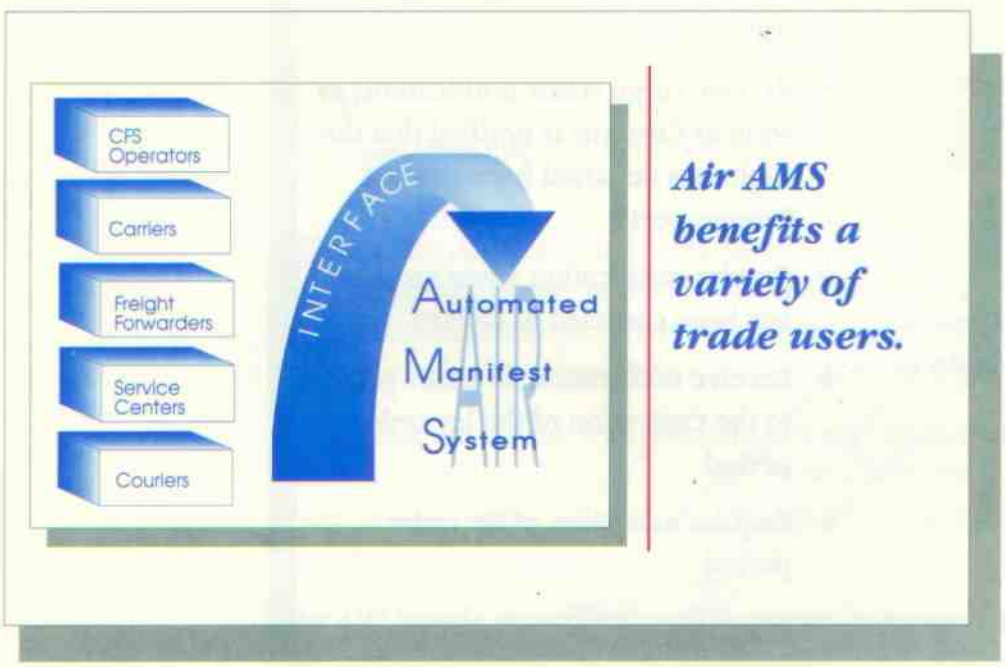
The local transfer feature of AMS provides electronic notification permitting movement of an air waybill from the carrier's premises to a deconsolidator.

AMS Open to Deconsolidators and Freight Forwarders

Air AMS capabilities include participation by deconsolidators and freight forwarders.

A deconsolidator provides full air waybill information on all non-AMS cargo moving through a facility and may be nominated by an AMS carrier to provide information on specific waybills. The deconsolidator receives Freight Status Notification (FSN) messages after a transfer by an AMS carrier and after transmitting air waybill data on non-AMS cargo going to their facility. Advance notice of a General Order is transmitted through AMS so the deconsolidator can respond by sending electronic requests for lay order extensions. Deconsolidators also receive electronic notice of Customs and USDA holds.

A freight forwarder may also be nominated by an AMS carrier to provide air waybill information.



Air AMS Communications

Three communications sources - ARINC, SITA or direct - are available using AX.25. Dial-up access (800 number), direct or network (GEIS) sources are also available using LU 6.2 communications protocol. Other protocols are being considered for future availability.

Message Format

Air AMS is designed to use IATA Cargo IMP message structuring techniques. Each transmission to or from Customs must contain the standard IATA communications address format encompassing each record transmitted.

Air AMS . . . *Soon*

- **Additional messages from AMS to ABI filers regarding the status of the bill and whether the carrier has received entry data against the bill**
- **ABI filers to update bill shipper/ consignee data to release suppressed entry notifications to the carrier**
- **AMS carriers to transmit and request subsequent in-bond moves against a bill**
- **Deconsolidators to transmit and request in-bond movements from their facility**
- **Status notifications for freight forwarders**

AMS uses airline industry standard communication protocols AX.25 or LU 6.2.

The address format is used to direct the transmission to the proper addressee, assign a priority, and delineate the detail records to follow. All applications require the use of the standard communications address. Users can send data at will over dedicated lines.

The Application Identifier is a three-character field in the data section which identifies the type of applications data being transmitted. The identifier consists of the airline standard message identifiers found in the IATA Cargo IMP Manual.

AMS: Getting Started

A phone call or letter is all it takes to get started in AMS.

Inquiries

U.S. Customs Service
Office of ACS, Room 2334
Manifest Trade Support Branch
1301 Constitution Ave. N.W.
Washington, D.C. 20229-0001
Phone: (202) 927-1280

Checklist Questions

Each potential user of AMS is sent a "Respondent's Checklist". This checklist includes information on:

- direct arrival U.S. ports for your AMS operations
- the onward destination points where aircraft and/or vessels move on permits to proceed
- number of arrivals per month
- the number of air waybills and/or master and house bills discharged per month for each port
- the percentage of monthly air waybills/master bills per port that will move in-bond
- the ports where you operate a bonded facility with facility names and FIRMS codes
- the status of your firm's automated manifest development (study, programming, planning)
- the communications protocols your system supports.

By completing and returning the respondent checklist sent by the U.S. Customs Service, a potential AMS participant signals interest in AMS. A Customs representative is assigned to work with your company and serve as technical advisor to help you through the five step process to become an active AMS participant. These steps are: development of software, communications link, testing both the software and communications link with the Customs computer, transmission of actual data for a designated port in a pilot test, and finally, elimination of the paper cargo declaration (production stage).

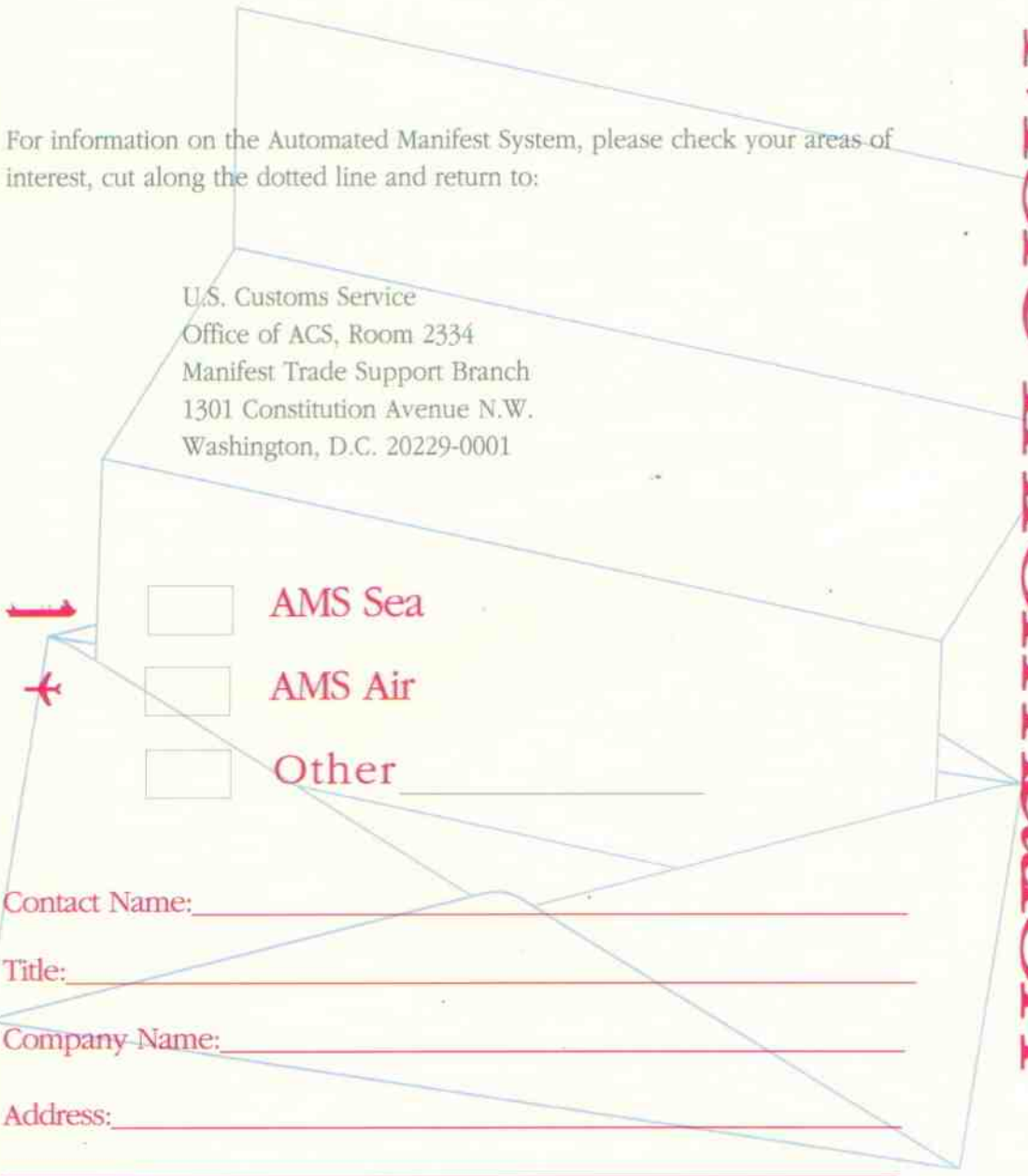
Assistance

Contact the U.S. Customs Service Manifest Trade Support Branch to get started in AMS or whenever AMS assistance is needed.

For More Information

For information on the Automated Manifest System, please check your areas of interest, cut along the dotted line and return to:

U.S. Customs Service
Office of ACS, Room 2334
Manifest Trade Support Branch
1301 Constitution Avenue N.W.
Washington, D.C. 20229-0001



☐ AMS Sea

☐ AMS Air

☐ Other _____

Contact Name: _____

Title: _____

Company Name: _____

Address: _____

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Phone: _____