

# AmosConnect Service Description

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## 1. Introduction

The objective of this document is to provide a more detailed understanding of AmosConnect.

Here you will find more information about:

- The background and philosophy behind AmosConnect
- The problems that can be solved with AmosConnect, the possibilities and the limitations
- Short description of the Main Elements of the System

## 2. Background and Philosophy

### 2.1 Background

AmosConnect is a fully managed messaging (e-mail) service designed for use on board ship for use over satellite connections.

In order to use AmosConnect, it is necessary to install AMOS Mail software on board the vessel. AMOS Mail is then used for reading & writing messages and to dial in to the AmosConnect hub.

The AmosConnect hub is located within Xantic's Land Earth Station at Burum, the Netherlands.

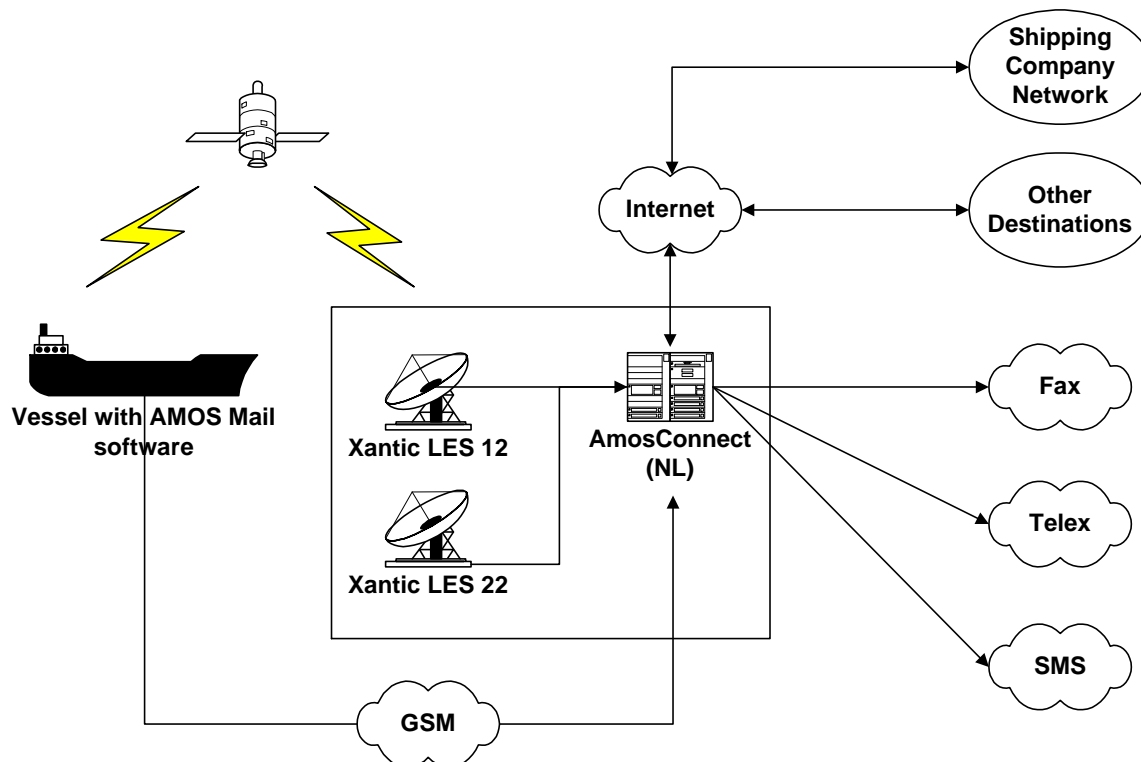


Figure 1 - AmosConnect Configuration

For more information about the AMOS Mail software, please refer to the AMOS Mail Product Description. This document focuses on the features and benefits of the AmosConnect managed service.

## **2.2 Philosophy**

Many shipping companies use a proprietary e-mail system like AMOS Mail for data communication over satellite. Furthermore there is an increasing trend for shipping companies to focus on their core business, using trusted partners to provide non-core activities. AmosConnect is intended to meet the requirement for a proven message and data communication system whilst enabling the shipping company to delegate the day-to-day responsibility for the messaging system to Xantic.

With AmosConnect, Xantic is the single provider of the end-to-end messaging system including the satellite connection and software. In case of any issue with the satellite connection or the software, Xantic assumes responsibility for fault resolution.

AmosConnect removes your concerns about satellite communications. Xantic are responsible for the operation and development of AmosConnect including system availability, support, capacity management and future development.

Advances in telecommunications happen fast and we believe that a communication system should be optimised for existing carriers (e.g. Inmarsat A, B, M, mini-M), but also be flexible enough to adapt to new alternatives as they become available (e.g. Inmarsat Fleet ISDN and MPDS). Xantic continually develops the AmosConnect service to keep abreast of changes in the Inmarsat arena, thus protecting your investment in hardware and software, staff training and business processes.

## **3. The problems we solve**

### **3.1 Responsibility**

Do you want a single supplier to be responsible for your voice and data communications via satellite?

#### Solution:

AmosConnect is available globally via Xantic's own Land Earth Stations at Burum, the Netherlands and Perth, Australia. Xantic is responsible for the entire AmosConnect service including the end-to-end communication channel, the satellite connection and the software. Xantic are able to provide this assurance because we provide the communication infrastructure **and** the software.

### **3.2 Cost Control**

Do you want to keep control of your communication costs with all charges on a single invoice?

#### Solution:

With AmosConnect, Xantic is your single supplier of the satellite connection and e-mail software. All communication-related charges are presented on a single Xantic invoice, enabling you to easily identify and keep full control of your communication costs.

### **3.3 System Administration and Maintenance**

Do you want to avoid the overhead of maintaining an additional communication system in-house?

Solution:

Xantic assumes complete responsibility for the AmosConnect service. This includes responsibility for maintaining the system capacity, ensuring system availability (uptime) and all routine maintenance necessary to keep the service running.

### **3.4 Support**

Do you want to avoid supporting a satellite communication system in-house?

Solution:

Xantic provides support for AmosConnect at no additional cost. Support is available by making a free Inmarsat call to Xantic's round-the-clock Customer Service Centre using Special Access Code 68.

Should it be necessary for a technician to attend the vessel, perhaps to install the software or provide training or assistance, onboard service is available from Xantic offices worldwide. Please contact your account manager for costs and availability.

### **3.5 Ongoing Development**

Are you concerned about the rapid pace of change in satellite communications?

Solution:

Xantic is committed to keep AmosConnect up-to-date with trends in satellite communications. For example, AmosConnect is fully compatible with Inmarsat Fleet (including ISDN and MPDS services). Routine upgrades to the AMOS Mail / Connect software are available to AmosConnect users at no additional cost.

AmosConnect is based on the AMOS Mail software, which is in daily use at around 3500 locations<sup>1</sup> and has continuously evolved since 1990. Xantic's software development team works continuously to improve AMOS Mail and the AmosConnect service in accordance with our customers' needs. Our product development program is directed by customer feedback.

### **3.6 Security**

Are you concerned about your onboard users receiving unwanted messages from the Internet?

Solution:

AmosConnect enables you to restrict incoming messages using the following security features: -

Blacklist / white list

You can configure a blacklist or a white list. A blacklist means that the AmosConnect hub will reject messages addressed to your vessels from any of your blacklisted addresses and

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<sup>1</sup> As at January 2003

domains (for example reject messages from [anyone@anyco.com](mailto:anyone@anyco.com) and [\\*@nuisance.com](mailto:*@nuisance.com)). If you decide to set-up a white list, this means that all messages to your ships will be rejected unless the sender's address or domain is specified on your white list.

#### Size limits

You can specify individual size limits for each AmosConnect user, both for ship-to-shore and shore-to-ship messages. For example you may decide that the Captain can send & receive messages up to 1 MB in size, but that all other users are restricted to sending and receiving 50 KB. The size limit for ship-to-shore messages is configured in the AMOS Mail software on board the vessel. The size limit for shore-to-ship messages is configured at the AmosConnect hub.

Rejected messages are never transmitted over the satellite connection.

### **3.7 Reliability, integrity and trace ability**

Do you sometimes experience problems due to non-delivery of messages via the Internet?

#### Solution:

The optional "AmosConnect Office" module provides the following main benefits: -

#### *More reliable communication*

AmosConnect Office provides superior reliability compared with regular Internet (SMTP) messaging. With AmosConnect Office, all e-mail traffic between your office and the AmosConnect hub takes place with a direct TCP/IP connection. AmosConnect Office eliminates "relay hosts" between your office and the AmosConnect hub. When "relay hosts" are involved, a problem anywhere between the sender and recipient can result in non-delivery.

#### *More secure communication*

With AmosConnect Office, all communication between your office and the AmosConnect hub is compressed and encoded using Xantic's proprietary format. This format is more secure than regular Internet (SMTP) e-mail, thereby providing added security for your ship/shore messages.

#### *Accurate delivery status notifications*

AmosConnect Office provides a single end-to-end messaging system between your ships and your office. AmosConnect treats every message as if it is "registered mail", whereby each recipient of each message returns a status indicating whether the recipient received the message successfully, whether the message is still pending or whether delivery failed. These high levels of assurance are not possible with regular Internet (SMTP) messaging.

### **3.8 To Stay Informed**

Do you and your users want to be kept informed about the status of the communication system?

#### Solution:

AmosConnect System Announcements are sent whenever there is a planned or unplanned event affecting the AmosConnect service. Examples of such events are downtime for AmosConnect system upgrades or expansion. System Announcements can be sent to your vessels or/and to your office.

*Via Inmarsat C to your vessels*

Xantic sends a simultaneous broadcast via Inmarsat-C (known as an EGC or Enhanced Group Call). Each vessel for which this option was specified on the original AmosConnect application form receives the announcement. This is intended to keep AmosConnect users informed about the service and to avoid any unnecessary frustration due to vessels trying to dial in during a service interruption.

### *Via fax to your office*

Xantic sends a fax notification to a fixed-line fax number. This is intended to keep your office-based staff including superintendents and ICT support informed about the AmosConnect service. To add your office to the distribution list, please contact your Xantic Account Manager.

## 3.9 Reporting

Do you want to keep track of the airtime usage and e-mail traffic across your entire fleet?

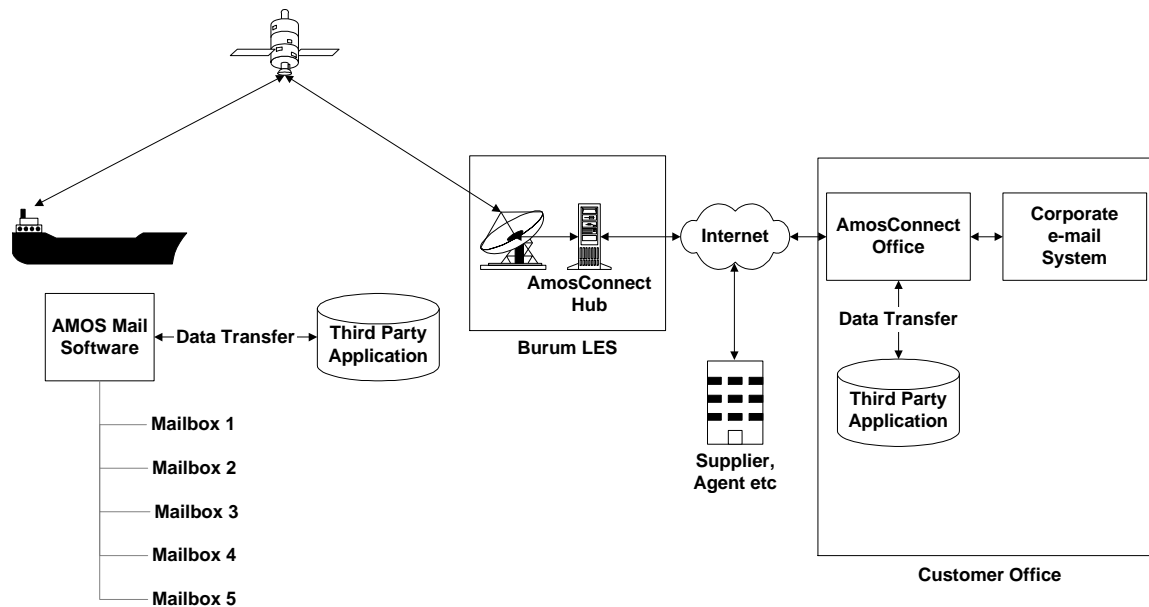
### Solution:

The Xantic TaB (Traffic and Billing Explorer) software provides you with an overview of Xantic airtime usage and AmosConnect e-mail traffic for your entire fleet. TaB is usually installed in the office, but can also be installed on board the ship if required. At your chosen frequency (daily, weekly, monthly), you will receive a new traffic file from Xantic via e-mail. Importing this file into TaB updates your overview of airtime usage and AmosConnect e-mail traffic.

Account	Subscriber	Sent (local time)	From	To	Channel	Account code	Size Compressed	Size Original
CE852	QW1PC	Ma-11-2002 20:38:28	god.fax@xantic.net	DWLBK@LIFE	Maltes	STURAM	44425	137479
CE852	QW1PC	Ma-11-2002 20:48:45	god.fax@xantic.net	DWLBK@LIFE	Maltes	STURAM	295	338
CE852	QW1PC	Ma-12-2002 12:38:54	QWLBK@LIFE	god.fax@xantic.net	Inmars	STURAM	262	402
CE852	QW1PC	Ma-12-2002 12:14:38	QWLBK@LIFE	god.fax@xantic.net	Inmars	DFW	250	418
CE852	QW1PC	Ma-26-2002 18:48:46	god.fax@xantic.net	DWLBK@LIFE	Maltes		182	252
CE852	QW1PC	Ma-27-2002 18:23:32	stojan.balk@xantic.net	DWLBK@LIFE	Maltes	CEMH	9527	2024
CE852	QW1PC	Ma-27-2002 18:23:32	stojan.balk@xantic.net	DWLBK@LIFE	Maltes	CEMH	3075	5032

Figure 2 - Overview of AmosConnect e-mail traffic in TaB

## 4. Main elements of the system



**Figure 3 - Typical AmosConnect Configuration**

### *AmosConnect hub*

The AmosConnect hub serves as a managed e-mail gateway for your fleet. Xantic is fully responsible for the availability and management of the hub, which is physically located within Xantic's Land Earth Station at Burum, The Netherlands. AmosConnect provides gateways to Internet, telex, fax and SMS (GSM text) so that messages can be addressed to any combination of these destinations. AmosConnect also enables anyone with an Internet e-mail facility to send a message to your ships (subject to your black / white list and size restrictions described in this document).

### *AMOS Mail client software*

AMOS Mail e-mail client software is installed on board each vessel. AMOS Mail is used to read and write messages and to dial in to the AmosConnect hub. Each copy of the software is licensed to the individual vessel and company.

### *Corporate e-mail System*

Most companies already use a proprietary e-mail system like Microsoft Exchange, Lotus Notes / Domino or Novell GroupWise in the office. AmosConnect can be used with such systems, in fact with any e-mail system supporting Internet (SMTP) e-mail. Alternatively, Xantic can provide the complete messaging system for your office with Internet, fax and telex gateways – please see the AMOS Mail Product Description for further details.

### *AmosConnect Office (Optional)*

AmosConnect Office provides a direct TCP/IP connection between your office and the AmosConnect Hub. This provides a more reliable connection than SMTP, which typically involves a number of "relay hosts" between the sender and the destination. With AmosConnect Office, your traffic passes directly and immediately between your office and the AmosConnect Hub with no intermediate stages.

AmosConnect Office also provides more security for your messages between your office and the AmosConnect hub. With AmosConnect Office, this traffic uses the proprietary AMOS protocol, which is compressed and encoded. Although AmosConnect Office is not intended to provide state-of-the-art

encryption, it does offer greater security than SMTP (if you are concerned about high-level encryption, please contact your Account Manager for further details).

AmosConnect Office also provides Directory Synchronisation, enabling you to maintain the address books on board your ships from the office. Furthermore, if you use Microsoft Exchange 5.5 in the office, the address books on board your ships can be automatically updated from your Microsoft Exchange address books.

*Third Party Software Application (optional)*

AmosConnect Office can act as middleware for many third-party software applications such as maintenance, purchasing, personnel and other software systems. AmosConnect can transport data in both directions (ship-to-shore and shore-to-ship). For example, AmosConnect can be used to automatically collect data from an onboard condition monitoring system and send it ashore for analysis.