Automated Message Handling System Streamlines Official Communications Across the DoD

A Telos AMHS Case Study
BACKGROUND
The Department of Defense fielded the Defense Message System (DMS) to replace the aging AUTODIN system beginning in 1998. DMS was intended to provide secure record communications from writer-to-reader and meet stringent requirements for assured delivery, including priority, precedence, non-repudiation and proper security labeling. The system also had to be interoperable with numerous legacy messaging systems, including those systems required to communicate with our coalition partners. The DMS was deployed to locations all over the world.

Concurrent with the fielding of DMS, the Global Command and Control System (GCCS) fielded an Automated Message Handling System (AMHS) to all the Combatant Commands (COCOMS). This system was designed to distribute official message traffic leveraging Internet Protocol capabilities being fielded throughout the government. The system also provided message profiling and retrospective search capabilities.

In 2002 the AMHS program became part of the DMS program and moved to a web-based user interface. This leveraged the most modern technology of the day, dramatically improving the user interface. In 2004 all of the Services adopted AMHS to support their official messaging requirements. From 2005 to 2008 they deployed AMHS to replace the old DMS client-server architecture, providing enhanced web-centric capabilities while dramatically reducing operation and maintenance costs.

OBJECTIVES
The Services had several major objectives when they decided to field AMHS to replace their DMS client-server infrastructure:

• Improving the user experience with an easier user interface
• Making DMS more efficient by reducing infrastructure including servers and personnel
• Supporting seamless transition for future site consolidations and further efficiencies
• Providing organizational messaging services unavailable with existing DMS architecture

APPROACH
Telos AMHS was developed as a web-based user interface to provide official traffic to the desk-top. After a highly successful deployment in support of CENTCOM’s theater of operation, including Iraq and Afghanistan, the Army, Navy, Air Force and US Marine Corps decided to deploy AMHS to replace their DMS client-server infrastructures. This fielding strategy was identified as the DMS Extended Boundary Solution (DEBS).

VARIOUS DEPLOYMENT OPTIONS
Each of the services opted to follow a different deployment option:

• The Air Force deployed an AMHS regional node at each Major Command, a total of eleven systems
• The Army already had systems deployed in support of Europe and planned to deploy two regional nodes in support of CONUS operations
• The Navy decided to deploy two regional nodes in support of the entire Navy, a Pacific and Atlantic node.
• The US Marine Corps deployed six regional nodes in support of their major combatant commands.
A SMOOTH TRANSITION

The Air Force deployment of AMHS was the first and the largest, fielding sixteen mid-range systems, supporting 5000 users, in twelve months. The Air Force DMS PM teamed with Telos to support proper site preparation and follow-on support, and a comprehensive computer-based training (CBT) course facilitated rapid user transition.

The Army ultimately decided to deploy a single regional node in the Pentagon to support messaging operation in CONUS. The resulting system represented the first enterprise configuration to be deployed, supporting 30,000 users.

The Navy and US Marine Corps deployed their systems later and were completed within sixteen months. The US Marine Corps deployment included fielding deployable tactical messaging systems that can be run on a laptop.

FURTHER CONSOLIDATION

The DEBS initiative proposed that the services would transition their messaging infrastructures to AMHS and then consolidate their enterprise nodes into seven Joint Area Control Centers supporting geographical regions. To date three Joint Centers have been established at the Pentagon Telecommunications Center (PTC), CENTCOM and EUCOM. In addition the Air Force is consolidating fourteen of their remaining sites into two enterprise messaging nodes to support their requirements.

RESULTS:

>>> IMPROVED COMMUNICATIONS AND SUBSTANIAL COST SAVINGS

All of the services have transitioned to AMHS and are now working on further consolidation. The initial AMHS fielding resulted in the following:

- The Air Force documented a reduction of over 3200 servers in support of their messaging system. This provided an $11 million annual savings in hardware and software costs. The other services also dramatically reduced hardware and software requirements resulting in an additional $15-20 million in annual savings.

- The Air Force also documented a reduction of 1100 manpower spaces to support their messaging infrastructure. This provides an estimated $88 million in annual savings. The other services also significantly reduced manpower requirements resulting in saving an additional 1200-1500 manpower spaces, providing another $96-120 million in annual savings.

- The deployment also dramatically reduced the number of Fortezza cards required, producing an additional $1.6 million in annual savings. The Air Force alone reduced their requirement by 15,000 cards.

- In addition to significant savings, AMHS significantly improved messaging service to users including:
  - Profiling to key personnel based on key words
  - Very rapid retrospective search
  - A single official copy of the traffic rather than multiple individual deliveries
  - All actions fully audited
  - Easy integration of additional system interfaces
  - Intuitive user interface easily trained using CBT
FUTURE:

>>> FURTHER CONSOLIDATION AND GREATER EFFICIENCIES

Further consolidation is forecasted over the next two years. This will generate additional savings for all the services and DISA. The Air Force alone should realize an additional $1.5million in annual hardware and software costs along with 300 manpower spaces.

In addition to the significant savings, AMHS will add additional functionality. The following capabilities can be easily integrated into the existing web-based framework:

- Instant Messaging as the initial Unified Communications Capability (UCC). This is available in the September software release.
- Message syndication using RSS is already implemented in the current version of the product.
- Official Information Exchange XML data exchange
- Strong Public Key Infrastructure (PKI) authentication and secure data exchange
- Official active directory integration

Future capabilities being considered include Voice-over-IP (VOIP), collaboration tools such as shared white boarding, integration with SharePoint, and other social networking capabilities.