May 7, 2002

Information Technology

Defense Hotline Allegations on the Procurement of a Facilities Maintenance Management System (D-2002-086)

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Acronyms

ATLASS	Asset Tracking Logistics and Supply System
CIO	Chief Information Officer
JLSC	Joint Logistics Service Center

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-4704

May 7, 2002

MEMORANDUM FOR COMMANDANT OF THE MARINE CORPS
COMMANDER IN CHIEF, U.S. ATLANTIC COMMAND

SUBJECT: Audit Report on the Defense Hotline Allegations on the Procurement of a Facilities Maintenance Management System (Report No. D-2002-086)

We are providing this report for your information and use. We conducted the audit in response to allegations to the Defense Hotline. No written response to this report was required, and none was received. Therefore, we are publishing this report in final form.

We appreciate the courtesies extended to the audit staff. For additional information on this report, please contact Ms. Kathryn M. Truex at (703) 604-9139 (DSN 664-9139) (kmtruex@dodig.osd.mil) or Mr. Dennis L. Conway at (703) 604-9158 (DSN 664-9158) (dconway@dodig.osd.mil). See Appendix C for the report distribution. The team members are listed inside the back cover.

David K. Steensma

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Office of the Inspector General of the Department of Defense

Report No. D-2002-086 **May 7, 2002**
(Project No. D2002FG-0031)

Defense Hotline Allegations on the Procurement of a Facilities Maintenance Management System

Executive Summary

Introduction. This audit was performed in response to allegations made to the Defense Hotline in May 2001 concerning Marine Corps acquisition of facilities maintenance software called MAXIMO® (a product of MRO Software, Incorporated). MRO Software, Incorporated, has provided MAXIMO to more than 8,000 organizations including Government agencies.

The allegations involved the procurement of MAXIMO at 16 Marine Corps installations. Specifically, the allegations addressed the Marine Corps failure to rely on a system approved for managing facilities maintenance within the Marine Corps, potential administrative violations within the procurement process for MAXIMO, and improper funding of MAXIMO with operation and maintenance funds.

Objective. Our objective was to determine whether the Marine Corps properly used funds to purchase MAXIMO.

Results. The complainant made eight allegations concerning the acquisition of MAXIMO. None of the eight allegations was substantiated.

One allegation was that the Marine Corps should have only one system for managing maintenance, to include facilities maintenance. The complainant stated that the Asset Tracking Logistics and Supply System (ATLASS) should be the maintenance management system for the Marine Corps, to include facilities maintenance. However, the Marine Corps ATLASS project officer stated that ATLASS was not intended for facilities maintenance. Further, the operational concept in the ATLASS Product Improvement Plan requires ATLASS to share data with facilities maintenance software because ATLASS was not planned for managing facilities maintenance. The Marine Corps uses two rather than one system to manage its maintenance programs–MAXIMO for managing facilities maintenance and ATLASS for managing all other maintenance.

Five allegations addressed the procurement process used by the Marine Corps to acquire MAXIMO. The complainant alleged that the Marine Corps should have followed DoD acquisition procedures, designated a program manager, and appointed a senior decision maker to oversee the program. DoD managers are required to follow DoD acquisition procedures, to include appointing a program manager and a senior decision maker, if the total program cost of an automated information system exceeds

$120 million. We determined that the Marine Corps had initially purchased MAXIMO software in 1997 costing only $1.27 million; therefore, the Marine Corps was not required to follow DoD acquisition procedures for major information technology programs.

Two allegations addressed the funding process used by the Marine Corps in purchasing MAXIMO. The complainant alleged that the Marine Corps wrongly used operation and maintenance funds to procure MAXIMO. The DoD Financial Management Regulation allows the use of operation and maintenance funds for buying software, such as the MAXIMO software, if the cost for each unit of software is less than $100,000. The Marine Corps initially purchased 510 licenses of MAXIMO costing $1.27 million or only $2,490 per unit; therefore, the use of operation and maintenance funds was appropriate.

Appendix B provides a detailed discussion of each allegation.

Management Comments. We provided a draft of this report on April 17, 2002. No written response to this report was required and none was received. Therefore, we are publishing this report in final form.

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Background

This audit was performed in response to allegations made to the Defense Hotline in May 2001 concerning the Marine Corps acquisition of maintenance software called MAXIMO.® MAXIMO is a product of MRO Software, Incorporated, and is deployed at more than 8,000 organizations including Government agencies.

Allegations. The complainant alleged the Marine Corps was procuring a system in addition to the Asset Tracking Logistics and Supply System (ATLASS) for managing facilities maintenance. Also, the complainant alleged a lack of adherence to the procurement process and failure to use appropriate funding sources for the procurement of MAXIMO.

Procurement of MAXIMO. The MAXIMO software is a commercial off-the-shelf software package originally procured by the Joint Logistics Service Center (JLSC) to manage maintenance of facilities. In April 1993, the JLSC chartered a customer advisory team to define the requirements for managing industrial plant facilities and capital equipment resources as part of the Depot Maintenance Standard System. This system was composed of eight modules, one of which was facilities and equipment maintenance. The MAXIMO software was chosen to provide DoD depots an automated tracking and control system for the management of facility and equipment maintenance.

Marine Corps Use of MAXIMO. In 1997, the Headquarters, Marine Corps, delivered MAXIMO to all installation facilities managers as the preferred system for managing facilities maintenance. In July 2000, a Marine Corps-wide MAXIMO Users Conference was held at the Marine Corps Logistics Base in Albany, Georgia. As a result of this conference and subsequent meetings, MAXIMO was selected as the standard software to be used by facilities maintenance organizations across the Marine Corps.

Objective

The primary objective for this audit was to determine whether the Marine Corps properly used funds to purchase MAXIMO. Appendix A discusses the scope, methodology, and prior audit coverage.

Procurement of MAXIMO

A complainant alleged that the procurement of MAXIMO was improper. Specifically, the complainant alleged that:

- the Marine Corps should have only one system for maintenance management;
- the Marine Corps might have violated administrative controls during the procurement of MAXIMO; and
- MAXIMO was improperly purchased using operation and maintenance funds.

These allegations were not substantiated. Appendix B provides a more detailed discussion of each allegation.

Maintenance Management Systems

The complainant alleged that the Marine Corps should have only one system for managing maintenance, to include facilities maintenance. The complainant stated that ATLASS should be the maintenance management system for the Marine Corps. However, the Marine Corps ATLASS project officer stated that ATLASS was not intended for facilities maintenance. In 1997 the Marine Corps ATLASS Program Management Office began work on a product improvement plan. That plan required ATLASS to interface with facilities maintenance software, such as MAXIMO. Therefore, MAXIMO, the software chosen to manage Marine Corps facilities maintenance, does not appear to duplicate the capabilities of ATLASS.

MAXIMO Procurement Process

Administrative Controls. The complainant alleged that the Marine Corps might have violated administrative controls during its procurement of MAXIMO. DoD Regulation 5000.2-R, "Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs," March 15, 1996 [now superseded], provided administrative controls for acquiring automated information systems.

DoD Regulation 5000.2-R required automated information systems to follow specific administrative controls if the cost of the program exceeded $120 million. Because the initial cost of MAXIMO, $1.27 million, was less than the $120 million limit and the purchase was only for software, the Marine Corps was not required to follow the administrative controls required by DoD Regulation 5000.2-R.

Modifications Made to MAXIMO. Although the Marine Corps was not required to follow the administrative controls required by DoD Regulation

5000.2-R, the Marine Corps had acted to control configuration modifications to MAXIMO. According to the Camp Lejeune Public Works Division, Camp Lejeune had used a locally developed system prior to 1998. In 1998, Camp Lejeune converted to MAXIMO, however, no overarching controls were in place and personnel modified the software as desired. As a result, MAXIMO began to mirror the locally developed system it was replacing. The Engineering Director for public works at Camp Lejeune cited concerns about the lack of overarching controls over the software modifications as the reason the Headquarters, Marine Corps, took over management of MAXIMO in 2000.

After taking this responsibility, Headquarters, Marine Corps, stopped the 16 Marine Corps installations using MAXIMO from making modifications. Next, a program management plan was developed with the goals of standardizing the configuration and functionality of the MAXIMO software and establishing MAXIMO as the standard software for managing facilities maintenance. Headquarters, Marine Corps, requested that the Marine Corps Systems Command manage the facilities maintenance information systems. A Facilities Management Information Policy Board was also created. This board was authorized to establish a MAXIMO Configuration Control Board that would assist the program management office in ensuring the uniform implementation of MAXIMO. Consequently, any future changes or modifications (such as had occurred after the initial purchase of MAXIMO) would now require approval from the Configuration Control Board.

Program Funding

The complainant alleged that MAXIMO was improperly purchased using operation and maintenance funds. The DoD Financial Management Regulation, DoD 7000.14-R, volume 2A, "Budget Presentation and Formulation," July 1996, [now superseded] stated that expenses are costs incurred to operate and maintain an organization. The DoD Financial Management Regulation allows the use of operation and maintenance funds to pay for expenses to include buying software, such as MAXIMO, if the cost for each unit of software is less than $100,000. The Marine Corps initially purchased 510 licenses for MAXIMO, costing $1.27 million or only $2,490 per unit; therefore, the use of operation and maintenance funds was appropriate.

Conclusion

The Marine Corps followed DoD policy for acquiring and funding MAXIMO. Consequently, there are no recommendations in this report.

Appendix A. Audit Process

Scope and Methodology

Work Performed. We performed audit work to examine allegations made by a complainant to the Defense Hotline in May 2001. We interviewed the complainant, the MAXIMO program manager, the MAXIMO project officer, and the ATLASS project officer. We also interviewed the Marine Corps Installation and Logistics Department personnel, Marine Corps chief information office personnel, Camp Lejeune Facilities Maintenance personnel, and personnel at the Marine Corps Logistics Base in Albany, Georgia.

We reviewed documents pertaining to the allegations on the Marine Corps development of a single system for managing facilities maintenance, potential administrative violations with the procurement process for MAXIMO, and improper use of operation and maintenance funds to procure MAXIMO.

During June 1997, the Marine Corps purchased 510 MAXIMO licenses costing a total of $1.27 million. In FY 2000, MAXIMO was used at 16 Marine Corps locations.

Limitations to Scope. We did not review the management control program. The audit scope was limited to the Hotline allegations.

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in the DoD. This report provides coverage of the Information Technology Management high-risk area.

Use of Computer-Processed Data. We did not use computer-processed data in the performance of this audit.

Audit Type, Dates, and Standards. We performed this program audit from October 2001 through April 2002 in accordance with generally accepted government auditing standards.

Contacts During the Audit. We visited or contacted individuals and organizations within DoD. Further details are available on request.

Prior Coverage

The Inspector General of the Department of Defense has issued numerous reports discussing the acquisition of software and information technology. These reports can be accessed on the Internet at http://www.dodig.osd.mil/audit/reports.

Appendix B. Allegations

The audit was conducted to investigate allegations made concerning the acquisition of maintenance software within the Marine Corps. Following is a synopsis of the eight allegations made by the complainant.

Allegation 1. The Marine Corps is using MAXIMO instead of ATLASS for facilities maintenance management. ATLASS was to bring all Marine Corps base functions, to include facilities maintenance, into a common environment.

Audit Results. The allegation was not substantiated. The ATLASS project officer stated that ATLASS is not a facilities maintenance system. We verified that the ATLASS product improvement plan states that ATLASS must interface with facilities maintenance systems. As evidenced by this plan, ATLASS does not provide the capability to manage maintenance of facilities. Therefore, the Marine Corps requires two systems—MAXIMO for managing facilities maintenance and ATLASS for managing all other maintenance.

Allegation 2. MAXIMO cost more than $100,000 and, therefore, the Marine Corps Chief Information Officer (CIO) should have developed a mission needs statement and compared functionality requirements against other current and planned programs, like ATLASS.

Audit Results. The allegation was not substantiated. The DoD Financial Management Regulation, DoD 7000.14-R, Volume 2A, "Budget Presentation and Formulation," July 1996, [now superseded] stated that expenses are costs incurred to operate and maintain an organization. The DoD Financial Management Regulation allows the use of operation and maintenance funds to pay for expenses to include buying software, such as MAXIMO, if the cost for each unit of software is less than $100,000. The Marine Corps initially purchased 510 licenses for MAXIMO costing $1.27 million or only $2,490 per unit, therefore, the use of operation and maintenance funds was appropriate in 1997.

Allegation 3. The Marine Corps CIO should have certified the MAXIMO program.

Audit Results. The allegation was not substantiated. According to Commandant of the Marine Corps messages, dated January 4, 2001, and January 23, 2001, the Marine Corps CIO must certify that the purchase of software within the Marine Corps does not impact or duplicate the Navy Marine Corps Intranet. The Marine Corps Logistics Base in Albany, Georgia, requested and received a waiver certifying that MAXIMO did not violate any Marine Corps order or policy and did not conflict with the Navy Marine Corps Intranet.

Allegation 4. The Marine Corps should have appointed a program manager to capture and manage life-cycle costs and requirements.

Audit Results. The allegation was not substantiated. DoD Regulation 5000.2-R, "Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs," March 15, 1996 [now superseded], provided guidance for acquiring software such as MAXIMO. DoD Regulation 5000.2-R required automated systems to follow specific administrative controls for programs costing more than $120 million, to include appointing a program manager. Because the initial cost of the MAXIMO program was only $1.27 million, the Marine Corps was not required to follow the administrative controls required by DoD Regulation 5000.2-R. As a result, the Marine Corps is in compliance with DoD policy and was not required to appoint a program manager.

Allegation 5. The Marine Corps should have requested funds from Congress.

Audit Results. The allegation was not substantiated. The DoD Financial Management Regulation, DoD 7000.14-R, Volume 2A, "Budget Presentation and Formulation," July 1996, stated that items with a unit cost less than $100,000 were classified as expenses and items with unit costs greater than $100,000 were classified as investments. Operation and maintenance funds should be budgeted to pay for expenses and investments.

The Marine Corps initially purchased 510 licenses of MAXIMO costing $1.27 million or only $2,490 per unit, which is less than the $100,000 limit. Therefore, the use of operation and maintenance funds was appropriate in 1997 and the Marine Corps was not required to request procurement funds from Congress.

Allegation 6. The Marine Corps CIO should have placed MAXIMO under the oversight of a Milestone Decision Authority (a senior decision maker) because program costs exceeded $250,000.

Audit Results. The allegation was not substantiated. DoD Regulation 5000.2-R, "Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs," March 15, 1996, provided guidelines for determining if a Milestone Decision Authority was required. A Milestone Decision Authority was required if a program cost more than $120 million or total life-cycle costs exceeded $360 million. Since the initial MAXIMO cost of $1.27 million was significantly less than these costs, the oversight of a Milestone Decision Authority was not required.

Allegation 7. The contractors developing MAXIMO seemed to be developing requirements without an established plan.

Audit Results. The allegation was not substantiated. When the Marine Corps purchased MAXIMO, it allowed each user to adapt MAXIMO to fit local needs and uses. Thus, the Marine Corps was allowing changes to MAXIMO without an established Marine Corps-wide plan prior to 2000. However, the Marine Corps took over management of MAXIMO in 2000 and stopped the 16 Marine Corps installations using MAXIMO from making modifications. Next, a

program management plan was developed with the goal of standardizing the configuration and functionality of the MAXIMO software and to establish MAXIMO as the standard software for managing facilities maintenance. In addition, the Marine Corps assigned a program manager and established a configuration control board.

Allegation 8. Camp Lejeune improperly used operation and maintenance funds to develop MAXIMO.

Audit Results. The allegation was not substantiated. The Marine Corps did not develop MAXIMO. MAXIMO is a product of MRO Software, Incorporated, and the Marine Corps initially purchased 510 licenses of MAXIMO software. As previously stated in allegations 2 and 5, the Marine Corps use of operation and maintenance funds for purchasing MAXIMO licenses was appropriate and in accordance with DoD guidance.

Appendix C. Report Distribution

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  Deputy Comptroller (Program/Budget)

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Commandant of the Marine Corps
Naval Inspector General
Naval Audit Service

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Commander in Chief, U.S. Atlantic Command

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Reform
House Subcommittee on National Security, Veterans Affairs, and International Relations, Committee on Government Reform
House Subcommittee on Government Efficiency, Financial Management, and Intergovernmental Relations, Committee on Government Reform
House Subcommittee on Technology and Procurement Policy

Audit Team Members

The Finance and Accounting Directorate, Office of the Assistant Inspector General for Auditing of the Department of Defense, prepared this report. Personnel of the Office of the Inspector General of the Department of Defense who contributed to the report are listed below.

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