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**INVESTIGATING THE DEPARTMENT OF DEFENSE'S
IMPLEMENTATION OF PASSIVE RADIO FREQUENCY
IDENTIFICAION (RFID)**

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by

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Investigating the Department of Defense's Implementation of Passive Radio Frequency Identification (RFID)

Presenter: Christopher A. Thomas, Lieutenant, United States Navy, received his Master of Business Administration with a concentration in Acquisition and Contract Management from the Naval Postgraduate School in December 2005. Prior to this assignment, Lieutenant Thomas served as the Supply Officer onboard the USS Henry M Jackson (SSBN 730). He also served as the Supply Officer onboard the USS Florida (SSBN 728), the USS Champion (MCM 4), and the USNS Kanawha (TAO 196). Lieutenant Thomas is a 1990 Graduate of Iowa State University where he received a Bachelor of Science in Community and Regional Planning and Urban Design. Lieutenant Thomas' next assignment is as a Fleet Financial Accounting Resource Analyst with Commander, Naval Surface Force, US Pacific Fleet, Naval Base Coronado, California.

Presenter: Emeterio V. Hernandez, Captain, United States Air Force, received his Master of Business Administration with a concentration in Acquisition and Contract Management from the Naval Postgraduate School in December 2005. Prior to this assignment, Captain Hernandez, a Logistics Readiness Officer, served as a Fuels Staff Officer for the Air Force Petroleum Office, Detachment 3, Warner-Robins Air Logistics Center, Fort Belvoir, Virginia. He also served as the Flight Commander, Combat Operations, with the 49th Supply Squadron, 49th Fighter Wing, Holloman Air Force Base, New Mexico and had an outstanding enlisted career of 13 years as a Fuels Specialist. Captain Hernandez is a 1998 graduate of Eastern Washington University, where he received a Bachelor of Science in Biology. Captain Hernandez' next assignment is as a Research Analyst with the Air Force Logistics Management Agency, Maxwell Air Force Base-Gunter Annex, Alabama.

Executive Summary

PURPOSE

The purpose of this report is to study the implementation process of passive RFID throughout the Department of Defense and determine whether or not the process explicitly or implicitly followed typical executive modeling formulas. It will also determine the problematic areas in the implementation of such an emerging technology and the best way to overcome those problems throughout an organization of the magnitude and complexity of the Department of Defense.

INTRODUCTION

1.   Background

During Operation Desert Storm, there were 42,000 containers that went to AOR. The Army had to open 28,000 to find out what was inside. The Army found a solution to this problem in Active RFID. US European Command and US Central Command went to the Joint Staff who went to the OSD with this solution. The OSD directed the DoD AIT to write the policy for active RFID and included passive RFID within the mandate. The OSD required external suppliers to use passive RFID tags and also required the Services to pursue passive RFID with Integrated Product Teams. The final policy stated that passive RFID would be implemented in a phased implementation to be completed in 2005, 2006, and 2007. Additionally, the OSD AT&L required

all services and agencies to upgrade their logistics systems from the military logistics systems (MILS) to the defense logistics management system (DLMS) within the year. It is apparent that the initial COCOM requirement was altered to include the implementation of an item that the OSD felt was an important part of the transformation of the Department of Defense.

2. Project Objectives

This research project specifically focuses on the discovery of the methods used and the models followed to implement an emerging technology within the Department of Defense. It also concentrates on the discovery of barriers to the implementation of an emergent technology and possible solutions to those barriers.

METHODOLOGY

- Conduct interviews with key Department of Defense personnel involved in the planning and implementation of passive RFID technology.

- Ask unbiased key questions in an uninhibited environment to allow interviewees the ability to answer questions in a non-bureaucratic manner, thereby collecting data that can be analyzed for dissemination and discovery.

- Analyze the responses to each question by each interviewee to discover common themes to be used in the categorization of responses and utilize those themes to discover common barriers to the implementation of passive RFID throughout an organization like the DoD.

FINDINGS AND ANALYSIS

There is a lack of synchronization of three key elements that has created a barrier to the implementation of passive RFID at the pace prescribed by the OSD. Those three key elements are automated information and communication systems integration, passive RFID technology maturity, and DoD/Service business processes. This study disagrees with the GAO report which states that passive RFID needs better management to work. This study concludes that passive RFID is following the prescribed course of implementation of an emerging technology by following the processes of:

- Forward-looking policy creation by the OSD.

- A lack of synchronicity between automated information and communication systems integration/passive RFID technological maturity.

- Resistance and concern by the Services as to the necessity and cost of implementing an immature and emerging technology into obsolete legacy systems.

- Our analysis reveals that:

- Passive RFID implementation is progressing in a manner conducive to the implementation of an emerging technology combated by so many factors.

- The GAO's recommendation that "passive RFID needs better management to work" offers little assistance to the implementation of passive RFID.

- The DoD should slow the implementation process to allow for the synchronization of the three elements that would result in the immediate exploitation of the technology. Those elements are:

- Automated information and communications systems integration

- Passive RFID technological maturity

- DoD/Service business processes

RECOMMENDATIONS

- Key stakeholders must reevaluate passive RFID policy and implementation in order to coordinate the three key elements in a 2010 timeframe. Until that point, BCAs will be redundant with insignificant results; implementations will be costly and risky, and post-implementation analysis will show poor returns resulting from costly legacy-system integration and premature business process reengineering.

- Key stakeholders must continue pursuing the exploitation of active RFID to fulfill COCOM requirements through the ingenuity of the warfighters who have championed the implementation process.

- Key stakeholders must maintain the passive RFID implementations at Susquehanna and San Joaquin as anchors for the maturity of the technology within the DoD. They must also utilize these sites for piloting activity and metric collection as well as starting points from which the Services should begin implementation.

BOTTOM LINE

It does not make good business sense for the DoD to continue with its current approach of implementing passive RFID. The DoD will continue to have significant difficulties and will never successfully overcome the barriers observed in this analysis until the coordination criteria is met. However, if the DoD gives proper attention to our recommendation and delays implementation until the three key elements appropriately synchronize, the DoD will have found the coordination match needed to successfully implement an emerging technology and to provide a model for future implementations.

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