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**Prepared Statement**

**of**

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**Before the**

**House Committee on Armed Services  
Subcommittee on Oversight and Investigations**

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Good morning Mr. Chairman and members of this distinguished subcommittee. My name is Bill Moore and I am a Vice President at the Logistics Management Institute, known as LMI. Thank you for inviting me to testify before the subcommittee. Your letter of invitation asked for a discussion on the Defense Travel System (DTS) usability study that LMI completed in September of 2008 for the Defense Travel Management Office (DTMO) under LMI's contract with DoD/DTMO. You have asked that I focus on LMI's findings, recommendations and improvement strategy with regard to the DTS contained in our study.

As you may know, LMI is a 501(c)(3) not-for-profit corporation, founded in 1961 by Secretary of Defense Robert S. McNamara to provide unbiased strategic consulting services to government leaders and managers.

As a tax-exempt organization under I.R.C. section 501(c)(3), LMI does not engage in political activity or substantial lobbying. My intent today is neither to influence legislators nor to advocate adoption or rejection of a legislative position. The purpose of my testimony today is to inform you of LMI's findings, recommendations and improvement strategy with regard to the DTS. We remain neutral with regard to any effect our testimony may have on the Subcommittee's actions with regard to any agency functions, duties, or policies.

The views and opinions expressed in my testimony are solely those of LMI and do not reflect the views of the Defense Travel Management Office or the Department of Defense, or any other U.S. Government department or agency.

I will provide a brief overview of our approach to the review, discuss our findings, and end with our recommendations for improving the usability of DTS.

In the FY2007 National Defense Authorization, Section 943, Congress directed an independent study of DTS to determine the most cost-effective method of meeting DoD travel requirements. That study, by the Institute for Defense Analyses (IDA), showed that the most serious concern of DTS was its usability. DTMO has therefore intensified its focus on improving the system's ease of use for current users, as well as increasing utilization by commercial travelers. It asked LMI to assess the usability of the system for various types of users performing typical tasks.

We first identified the types of user groups and tasks they performed. Our team then conducted usability testing with approximately 280 participants having a mix of demographic characteristics and levels of experience with computers and the Internet. The participants included DoD military and civilian users from the four military services as well as other DoD components.

We grouped participants into four categories: travelers, lead or organizational Defense travel administrators (DTAs), financial DTAs, and routing officials. Participants in each group attempted to complete several role-specific scenarios representing common tasks, such as setting up a trip, canceling or modifying portions of a trip, or approving vouchers. We observed their performance of the tasks, captured usability metrics with automated software, and gathered participant comments and suggestions.

Our findings fall into three broad areas: performance-based issues that show statistical differences in success rates, based on user demographics; DTS-wide issues that affect the design of the overall system; and scenario-based issues stemming from the specific tasks given to users.

We found large differences in overall success rates for different types of users and the kinds of tasks they perform. The average success rate for travelers was only 42 percent; lead and organizational Defense travel administrators had a success rate of 61 percent; financial Defense travel administrators had a success rate of 73 percent; and for routing officials the success rate was 88 percent. In general, we found that many ordinary tasks are demonstrably difficult, inappropriately require users to understand complex underlying business processes, invite confusion and errors, lack sufficient online help, and are hampered by poor interface design.

On the basis of our findings, along with user comments and usability analysis, we developed recommendations for each scenario where users' success rate was less than 70 percent. We have enumerated these and other proposed changes in a series of 42 system change requests (CRs). Our recommendations fall into three broad areas:

- ◆ Performance-based—Our recommendations include making changes to the interface to better accommodate less experienced users, improving opportunities for training and system learnability, and ensuring that DTS provides enough feedback for users to know whether they have successfully completed a task.
- ◆ System-wide—Among our recommendations are to design DTS to be more like a traditional web application that functions within one browser window, complete with a “Back” button and a link to “Home”; make the system work more like commercial travel sites, with which many users are already familiar; ensure that the welcome screen has links that allow travelers to interact with trip documents; revise the format of the travel documents and organization of tasks; revise the

global navigation throughout the site; make link labels clear, unambiguous, and intuitive; and improve the help information for each screen.

- ◆ Scenario-based—We make specific recommendations for several task scenarios, including trip cancellations, authorizations, justifications, user profiles, vouchers, international travel, element updating, conditional routing, and creating user groups.

The metrics we gathered can play a central role in benchmarking the usability of selected major components of the system, so that DTMO can assess the results of future design changes. Future improvements should be user-centered, data-driven, and research-based.

The focus of initial redesign efforts should be on the scenarios that less than 70 percent of users successfully completed. These areas are where users have the most difficulty, are the most critical, and have the greatest impact on user performance, so they are the highest priority candidates for making serious improvements to DTS. In particular, DTMO should focus first on the travelers' portion of the system, because those users had the worst success performance of the four groups that we tested.

Once DTMO makes the first changes to the travelers portion, it can decide whether to create a new set of traveler scenarios and repeat the same test process for a different set of travel-related tasks; or to next focus on the lead and organizational DTA scenarios, which generated the second worst performance in the original baseline test; or, in the interest of making quick and significant improvements to DTS, doing both concurrently. We have provided a strategic implementation plan that outlines the systematic, iterative

steps for changing critical portions of DTS, assessing the results, and then using the results to guide further refinements.

By making changes to the system and continually measuring progress, DTMO has a much greater chance of ultimately improving the usability of the DTS on the dimensions of user effectiveness, user efficiency, and user satisfaction with the system.

Thank you once again for the opportunity to appear before you. I'll be happy to answer any questions you might have.