CACHE IMS PROJECT REPORT

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Project Title: **Market Search—Inventory Management System for Local/Initial Attack Caches**

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This project proposal was submitted to the Chief Information Office (CIO) Technology & Development (T&D) Steering Committee in June 2009. The project was assigned to the San Dimas Technology & Development Center (SDTDC) in January 2010 and co-funded between the CIO–T&D and F&AM programs.

Purpose and Need

Local Area Support Caches (LASC) are in need of an inventory management system (IMS) to track inventory, manage shipping and receiving, and provide reports for incidents and accounting. Many LASCs need a reliable inventory management system. Some LASCs are using an inventory management application that no longer meets their business requirements; this system is no longer being supported by the developer and has become unreliable for everyday use. Other LASCs have no automated inventory management system.

The project proposal identified numerous requirements, both essential and value-added, that would be required to meet the needs of these caches. SDTDC worked with the McCall cache manager to determine requirements and current practices. Several other cache managers, some who were using commercial off the shelf (COTS) and customized IMS applications were also interviewed to ensure that the requirements list was complete. Although the Interagency Cache Business System–Reengineering (ICBS-R) system for the national caches would seem to be a suitable replacement for use at the local caches, ICBS-R will not be available for these caches in the immediate future.

After identifying the cache requirements and business needs, SDTDC conducted an online market search and contacted several vendors. Webinars were conducted and trial versions were

evaluated on some products. Several different IMS products were reviewed and the capability of each product was evaluated to determine its ability to meet the needs identified by the LASCs. SDTDC selected the products with the highest ranking and the cache employees identified the one that appeared to meet a majority of their needs and could also be customized and scaled up if necessary.

The CoreIMS Inventory and Warehouse Management Systems Software (http://www.coreims.com/) was selected as the application that would meet the majority of the LASCs business needs. The CoreIMS application is capable of handling large quantities and types of inventory and can be customized to meet a wide range of business needs.

Project Objectives
The initial objectives for this project were:

❑ Identify a COTS application that can replace the existing application being used by some caches (Orchid Software-Cache Tracker). This system is no longer being supported and does not meet the needs of local/initial attack caches.

❑ Improve efficiency and accountability by providing an automated system to track inventory and manage shipping and receiving.

LASC IMS Evaluation Criteria
The basic requirements as identified in the project proposal were:

1. Low cost.

2. Can be installed on a personal computer (PC) or laptop.

3. Easy for users to learn and use.

4. Application supports data input by scanning the National Fire Equipment System (NFES) product barcode labels, with an inexpensive plug-in "wedge scanner."

5. Microsoft (MS) Access-based, or at least compatible with Microsoft applications.

The CoreIMS application satisfies the five basic requirements listed above.

The project proposal also identified several "value added" capabilities that should be considered for an accurate inventory system for an LASC:

1. Can enter the NFES catalog into the system for getting proper stock numbers.

2. Can set a base line inventory and not allow inventory to drop below this level without a warning.

3. Can issue inventory and have it decrement itself from inventory; and receive back inventory that will increment itself back into inventory.

4. Can track who inventory was issued out to and who returned the items.

5. Can create and edit project lists (fires, districts).

6. Can run inventory reports for each project listed.

7. Can develop and run other reports (e.g., fire loss reports).

8. Can export data in HTML or other standard for running analytics and reports in other applications, such as MS Access or MS Excel.

9. Can find items by using NFES stock numbers or property numbers.

10. Can track items by expiration/reinspection dates.

11. Can backup and restore inventory.

12. Can have administrative overrides.

13. Can add new items into inventory.

14. Can track up to 2,500 items.

15. Have three separate directories/tabs to track:

    a. Fire equipment/supplies.

    b. Office and training supplies.

    c. Food.

16. Can track the monetary value of all inventory leaving and returning to the warehouse.

17. Able to print (e.g., HazMat shipping papers, barcoded NFES labels, various forms and reports, and so forth).

As configured for the McCall Cache evaluation, the CoreIMS application satisfies these value added capabilities.

In addition to these capabilities, CoreIMS also includes these features:

1. Allows the user to build kits with or without trackable items.

2. Processes inbound orders and create Purchase Orders in the system prior to arrival of the order and receive these items into inventory.

3. Does returns on issued items and put a hold on items that need to be refurbished.

4. Runs a loss use report, incident summary report, and other reports.

5. Adds inventory items by NFES number, a local identifier, or by description.

6. Supports a wireless barcode system.

7. Allows users to complete multiple cache processes simultaneously when networked to multiple computers.

8. Can be setup as a location based inventory system.

9. Records which employee processed each transaction.

10. Does not show items on hold as available for release.

11. Supports the transfer of items from one incident to another.

12. Creates and prints barcode labels.

13. Generates user-defined codes for unserviceable items and items on hold.

Evaluation

CoreIMS personnel installed the application on three PCs at the McCall warehouse on the Payette National Forest on July 7, 2010. The program uses one PC as a server (MS SQL); this PC is being used by the cache employee with primary responsibility for maintaining inventory and creating reports. Because the application runs on MS SQL, any computers accessing the application must be configured to allow access to the server PC. The application was installed on a laptop at the shipping/receiving dock and has the barcode scanner tethered to it. The application was also installed on the cache manager's PC.

A CoreIMS employee provided 2 days of onsite training at the McCall warehouse on July 8 and 9, 2010. CoreIMS technicians imported the entire ICBS catalog (NFES) for I Suite into the application. McCall warehouse employees manually added their specialized items and kits into the application. The McCall cache manager requested one software modification and one custom-designed report. This was done at an additional cost and has been added to the application.

Although the system includes a bar code scanner (tethered) and barcode label printer, the McCall warehouse staff did not use these features extensively during the evaluation period for actual receiving and distribution processing. The McCall cache did not have scanning experience prior to this installation and this was not a priority for them. A meeting was held at the McCall warehouse on November 16, 2010. Cache managers from other LASCs, representatives from ICBS-R, and the National Incident Support Caches were present. The meeting provided an opportunity for these individuals see how the CoreIMS application is working in McCall and discuss the evaluation with the McCall cache staff.

Cost

CoreIMS cost: $10,269.21 with 2 user software licenses; 1 year maintenance and support; onsite software installation, 2 days onsite training; barcode scanner, software, label printer, and miscellaneous items.
Software customization: $2,465.00

Final cost: $12,734.21

Recommendations

Based on the experience and feedback from the evaluation at the McCall cache and the responses from those present at the meeting held on November 16, 2010, the CoreIMS Inventory and Warehouse Management Systems Software is a viable option for any LASC that needs a reliable IMS application. This product will allow LASCs to effectively and efficiently manage inventory and develop necessary reports and documentation.

Based on the lessons learned from this evaluation, successful implementation at LASCs will require close attention to several factors.

- ❑ Forest Service caches will be required to receive Technical Approval (TA) from the Chief Information Office prior to purchasing this application. The Customer Relations Specialist for Fire and LEI (NIFC) can assist with this. Either a single Technical Approval for all caches will be submitted or a template TA for each cache to use will be prepared depending on the level of interest.

- ❑ Other agency caches may need to obtain approval prior to purchase and installation.

- ❑ Identify an agency employee as a project/program manager to assist each cache in the initial setup and training and be available for initial onsite support when the application is installed at each cache.

- ❑ Vendor supplied training is essential for each employee that will be using this program. This training should be customized for LASC current practices. The McCall cache manager has indicated he will be willing to attend this training to provide firsthand knowledge and practical advice he gained from this evaluation. He should be included in any training plan.

- ❑ Provide training at a single location for cache employees who will be using this program. This will reduce training costs and help develop consistency among LASCs.

- ❑ Caches that do not need or want bar code scanners do not need to purchase this option. This will reduce the initial purchase price and simplify training and implementation. This option can be added at a future time if a cache decides to implement this function.

- ❑ Prospective users should download the free demo version and request a webinar session to gain experience with the application prior to attending training.

- ❑ LASCs and ICBS-R representatives should agree on item descriptions and which attributes will be imported into CoreIMS from the NFES catalog. An agreement with the vendor should be put in place to assure that the NFES catalog can be updated and installed at every cache at a minimum of once a year.

- ❑ Standard Operating Procedures will be established between LASCs and NISCs (NFES) to assure that when items are sent to a national cache the NFES numbers match.

- ❑ LASCs will use the national configuration and established NFES numbers for all kits that are national kits. Local kits can be inventoried to best meet the LASC business requirements.

- ❑ Purchase of the CoreIMS should be done at the national level to reduce cost.

- ❑ Purchase of the CoreIMS application should include maintenance and support.

- ❑ The software customizations that were developed for the McCall cache will be included in the application for each cache that purchases the CoreIMS application.

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The National Technology and Development Center's national publications are available on the Internet at: http://www.fs.fed.us/eng/pubs/.

Forest Service and U.S. Department of the Interior, Bureau of Land Management employees also can view videos, CDs, and National Technology and Development Center's individual project pages on their internal computer network at: http://fsweb. sdtdc.wo.fs.fed.us/.

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