



U.S. GOVERNMENT PRINTING OFFICE
OFFICE OF INSPECTOR GENERAL

**ASSESSMENT REPORT
REPORT NUMBER 12-06**

**FEDERAL DIGITAL SYSTEM
RELEASE 2 TRAINING MATERIAL, USER
DOCUMENTATION, AND TRAINING
IMPLEMENTATION TASK REPORT**

February 24, 2012

**Date**

February 24, 2012

To

Chief Technology Officer

From

Inspector General

Subject

Federal Digital System (FDsys) Training Material and User Documentation Analysis, Independent Verification & Validation (IV&V) Report
Report Number 12-06

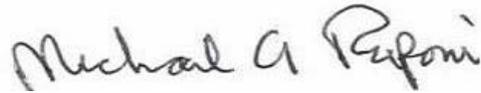
Attached is the Independent IV&V Report on the U.S. Government Printing Office's (GPO) development and implementation of FDsys. The Office of Inspector General (OIG) contracted with American Systems to conduct an IV&V in accordance with methodology established by the Institute of Electrical and Electronic Engineers (IEEE) Standard 1012-2004, the IEEE Standard for Software Verification and Validation.

American Systems provides quarterly observations and recommendations on technical, schedule, and cost risks. Additionally, American Systems has provided additional analyses on certain aspects of FDsys that have resulted in a report.

American Systems is responsible for the attached IV&V report and the conclusions expressed in the report. However, in connection with the contract, we reviewed American Systems' report and related documentation and inquired of its representatives. Our review disclosed no instances where American Systems did not comply, in all material respects, with contract requirements.

Chief Technology Officer
Report 12-06
February 24, 2012
Page 2 of 2

If you have any questions or comments about this report, please do not hesitate to contact me at (202) 512-0039.

A handwritten signature in black ink that reads "Michael A. Raponi". The signature is written in a cursive style with a large, prominent initial "M".

Michael A. Raponi
Inspector General

Attachment

cc:

Acting Public Printer
Assistant Public Printer, Superintendent of Documents
Assistant Public Printer, Operations
General Counsel
Chief Financial Officer
Chief Information Officer
Acquisitions Director

IV&V TASK REPORT	
TO:	Michael A. Raponi
FROM:	David Harold
IV&V OF:	Training Material and User Documentation (Doc Number 02-038)
SUBJECT:	Training Material and User Documentation Analysis Tasks 5.5.1.2 (Training) and 5.5.1.3 (User Documentation)
DATE:	January 24, 2012
CC:	Dan Rose, Margaret Brown

1. Description of Task

Independent Verification and Validation (IV&V) performed an assessment of the FDsys training material and user documentation for Release 2 that was available as of January 20, 2012. The findings in this report are based on review of the following:

- *Documentation and Training Plan for the US GPO FDsys Release 1, version 1.0, May 4, 2010;*
- *Training Presentations available on SharePoint;*
- *Training Manuals (per user) on the Shared Drive;*
- *IV&V participation in an Introduction to FDsys training session; and*
- *IV&V participation in an Advanced FDsys training session.*

The goal of this Task Report was to review and evaluate the following, and to provide recommendations for improvements:

- Quality of the *FDsys Documentation and Training Plan (D&TP)*;
- Implementation of the *D&TP*;
- Quality of the user manuals; and
- Quality of the training sessions and material.

2. Summary of Task Results

FDsys consists of a Documentum subsystem and a FAST subsystem. The Documentum subsystem is used for submission, processing, and archiving of documents, and the FAST subsystem for public search. In some instances, this report comments specifically on one or the other subsystem, but primarily the comments are directed at both subsystems.

IV&V assessment of the FDsys training material and user documentation produced the following summary observations (details for each topic area may be found in the Assessment of Quality section of this Task Report).

Summary: Quality of the D&TP

The *D&TP* has been updated since the original (release of the document) was reviewed and evaluated by IV&V in March 2009; however, the document has not been updated for Release 2 in accordance with the provisions stated therein. Section 1 of the *D&TP* states, “*This document is a ‘living’ document in that it will be updated throughout various releases to ensure that documentation and training is available and delivered to additional users as functionality is added in each release.*”

Summary: Implementation of the D&TP

Training is not being delivered in accordance with the schedules contained in the *D&TP*. This is likely due to the fact that system development is often delayed by the FDsys Program responding to requests from other government agencies for development of additional Collections or other applications; therefore, sufficient time has been unavailable to permit the review and update of the training material in a timely manner. The training schedule in the *D&TP* is out of date and should be updated. There are several areas of the *D&TP* which are not being implemented.

Summary: Quality of User Documentation

User documentation reviewed by IV&V consisted of FDsys user manuals that were developed for users based on specific user categories as delineated in the *D&TP*. Note that IV&V could not locate all FDsys user manuals referenced therein. They were not available either on the Shared Drive or in SharePoint, both maintained by the FDsys PMO. It is unclear whether all user manuals have been developed.

The user manuals reviewed by IV&V describe the activities and functions that can be implemented using FDsys for each specific user category. Screen shots are provided and the location of buttons and links on those user panes are described. Notes are provided containing useful tips and describing how to use the various Help methods that are currently available. The large numbers of annotated screen shots that are provided include step-by-step instructions describing to users how to interact with the system in the performance of their specific job-related activities and functions.

Summary: Quality of Training Material

IV&V reviewed FDsys training material as cited in the *DT&P*. This training material consisted of PowerPoint presentations for each of the identified User Categories and materials distributed for attendees of the FDsys Introduction and FDsys Advanced classes that are given to GPO internal employees. IV&V did not attend specific User Category training, e.g., Internal Service Provider, Congressional Publishing Specialist; rather, the training was geared toward using FDsys to find and retrieve materials from Collections within FDsys through the use of basic searching, advanced searching, browsing by citation, and performing advanced navigation to track legislation and regulations, e.g., congressional bills.

3. Summary of Anomalies and Resolutions

No anomaly reports were written as a result of this task.

4. Assessment of Quality

Specific findings and comments for each topic area evaluated by IV&V are detailed below.

Quality of the D&TP

The **D&TP** has been updated since the original was reviewed and evaluated by IV&V in March 2009. The current document date is May 4, 2010 (for Version 1.0). A number of previous IV&V recommendations have been incorporated in this version; however, the document has not been updated for Release 2. The document exhibits the following weaknesses:

- IV&V was unable to find any evidence that any of the User Manuals cited in the **D&TP** have been updated for Release 2. User Manuals have just recently become available on SharePoint;
- The training schedule provided in Paragraph 1.8.2 is outdated and should be updated for Release 2;
- IV&V found no evidence that Webinars were being either scheduled or offered;
- Only one (1) Training Video is to be provided, according to a GPO CIO response to an open OIG recommendation; however, Table 1.6.2 in the **DT&P** indicates that a number of these video tutorials would be produced; and
- Lab/classroom training per each specific User Category is not provided as described in the **DT&P**; rather, training is being provided as part and parcel of the User Acceptance Testing (UAT), which is *not* described in the document.

Implementation of the D&TP

It is part of IV&V tasking to review the adherence to the **D&TP**. Table 1.5 in the **D&TP** specifies and describes specific deliverables. The table below lists and describes those deliverables as they appear in the **D&TP**, and provides the status of each deliverable as IV&V was able to ascertain in December 2011.

Deliverable (as cited in the D&TP)	Deliverable Description (as cited in the D&TP)	Deliverable Status (as ascertained by IV&V as of 01/16/2011)
User Manuals	A User Manual will be developed for each User Category identified in Submission User Roles and Access Rights Technical Memo, Version 2. At the present time, we anticipate 8 user manuals.	While a number of User Manuals were verified as completed by IV&V in February 2009 there appears to be no evidence that many of these User Manuals were reviewed and compared to the current functionality that was in Release 1 to determine if updates would be required for Release 2. IV&V found no evidence that these User Manuals have been updated for Release 2. Only recently have specific user manuals been made available on SharePoint. Also, a new User Manual for Reporting has been developed and is available on

Deliverable (as cited in the D&TP)	Deliverable Description (as cited in the D&TP)	Deliverable Status (as ascertained by IV&V as of 01/16/2011)
		SharePoint; however, the <i>D&TP</i> does not reference this newer manual. <ul style="list-style-type: none"> • Internal Service Provider - Completed • Congressional Publishing Specialist - Completed • Web User Interface Specialist – Completed • Content Metadata Specialist – Completed • Featured Publication Specialist - Completed • Preservation Specialist - Completed • End User – IV&V could not locate this User Manual by name; however, an FDsys Search User Manual that provides information for performing public searches is available on the Shared Drive and from the Help provided in FDsys. • Workflow Administrator – Deleted
RoboHelp	Help Files will be developed to aid the user in the execution of tasks. Help files will be context-sensitive and displayed in separate windows overlaying the graphical user interface (GUI) screens.	Context-sensitive help is available at the screen level in the form of the mouse pointer changing shape into a question mark.
Field Help	For each field and link in each form, a description of that field will be provided both in the user manual as well as in a pop-up window in the software if evoked by the user.	There is some field-level pop-up help for the deployed search application.
Training Presentations	Training Presentations – as Power Point presentations – will be developed for each User Category, based on the User Manuals.	Only the Preservation Specialist Training Presentation is available on SharePoint. The other presentations are available on the Shared Drive which is maintained by the FDsys Program/Configuration Management. <ul style="list-style-type: none"> • Internal Service Provider - Completed • Congressional Publishing Specialist - Completed • Web User Interface Specialist – Completed • Content Metadata Specialist - Completed • Featured Publication Specialist - Completed • Preservation Specialist - Completed • End User - Completed • Workflow Administrator – Deleted
Online Training	Training Videos will be developed to help students learn how to use FDsys by watching the functions	Not found; however, a number of tutorials are available on the FDsys site. The FDsys Program will not be producing online training videos. Rather, the LSCM Group, during training sessions attended by IV&V,

Deliverable (as cited in the D&TP)	Deliverable Description (as cited in the D&TP)	Deliverable Status (as ascertained by IV&V as of 01/16/2011)
Videos	being performed in a simulation.	indicated they would be producing videos and posting them to FDsys.
FAQs	Frequently Asked Questions (FAQs) will be developed for end users to describe how to perform common and later uncommon tasks. Where possible, pointers to online training videos will be provided.	FAQs for the search application have been deployed via AskGPO. There are both Questions and Answers being provided. The FAQs appear to have been updated since the last IV&V evaluation. There is more detail available and currently there are two hundred thirty-three (233) answers.
Call Center Scripts	Call Center Scripts will be developed to answer the questions of end users. These scripts will also point to online training videos where available.	<p>Call Center Scripts were delivered to LSCM. There is a PowerPoint presentation for Call Center training dated 12/18/08. It provides very high-level information on FDsys. It contains no formal call center scripting, but does contain the same set of FAQs that are available on AskGPO. Call Center agents are instructed as follows on slide 12 of the PowerPoint presentation:</p> <p>“If you can’t answer the question, you can route it to Library Services and Content Management using RightNow CRM tool. If Library Services is unable to answer the question, they can route it to the Program Management Office.”</p> <p>No online training videos have been produced.</p>

Deliverable (as cited in the D&TP)	Deliverable Description (as cited in the D&TP)	Deliverable Status (as ascertained by IV&V as of 01/16/2011)
Training Classes	Training Classes will be developed for all classes of internal and external users.	<p>1. IV&V found no evidence that training classes were conducted for any user category in Release 2 except the following:</p> <ul style="list-style-type: none"> • End User (i.e., Public User) <p>2. Training classes were conducted in Release 1 for the following user categories:</p> <ul style="list-style-type: none"> • Internal Service Provider • Congressional Publishing Specialist • Preservation Specialist <p>3. IV&V found no evidence that training was provided for the following user categories:</p> <ul style="list-style-type: none"> • Web User Interface Specialist • Content Metadata Specialist • Featured Publication Specialist • End User <p>4. Training for the following user category was deleted from the D&TP:</p> <ul style="list-style-type: none"> • Workflow Administrator <p>Training classes have been developed by the GPO LSCM Group and are given in a computer lab as part of the GPO University. The training attended by IV&V was geared toward external (i.e., public) users.</p> <p>LSCM Group also indicated they would be using these videos for virtual training as well.</p> <p>The FDsys Program (i.e., IT&S) has been providing training in collaboration and coordination with their FDsys User Acceptance Testing. Comments received by the specific users (based on job function) are reviewed and investigated to determine if an actual failure occurred. If it has the failure/problem it is recorded using a Program Tracking Report (PTR). All comments are responded to by the FDsys Program and provided to the users.</p>

The lack of completion of some deliverables can be ascribed to the fact that the FDsys PMO has been working to a very aggressive schedule which, to date, has not permitted the update to the Training documentation as it is referred to in both Section 1 and Paragraph 1.2 of the FDsys **D&TP**: “*This document is a ‘living document’ in that it will be updated throughout various releases to ensure that documentation is available and delivered to additional users as functionality is added in each release.*” In addition, the FDsys PMO has responded to a number of outside agency requests, which has diverted resources away from this effort. The current

schedules that are available in SharePoint, i.e., R2 Master Schedule and the Master Schedule for Release 2 Group D, do not include any training activities. Lack of other deliverables may be due to the fact that the PMO has re-evaluated their usefulness and has not yet updated the **D&TP**.

Other Observations on D&TP Implementation:

- The **D&TP** calls for two individuals, a trainer and an SME, to be present for each training session, subject to the availability of the SME. Training provided by the LSCM Trainers did not include an FDsys SME.
- Webinars are mentioned in the **D&TP**. IV&V could not find any evidence of any webinars that have been created to date.
- Per the **D&TP** (Paragraph 1.2), there is no training or user manual being prepared for the System Administrator or Security Manager. Users in these roles, however, will certainly need training and manuals.
- The **FDsys Master Test Plan (MTP)** references the use of both User Acceptance Test and Beta Testing. This is significant because users have the opportunity to perform their specific functions, based on software updates that have been implemented in the FDsys Production Instance, and to provide feedback. The **FDsys MTP** does refer to this as actual training. The UAT Tester Feedback Form appears to be the mechanism used to gather feedback from UAT participants. Note that this type of training and the use of the feedback mechanism(s) are not documented in the actual **D&TP**.

Quality of User Documentation:

Per the **D&TP**, each user manual is supposed to contain the following features:

- Narrative of tasks to be performed
- Step-by-step instructions
- Screen shots
- Normal outcomes
- Errors and warnings
- Demonstrations of real world scenarios
- List of online video tutorials

Below are IV&V comments on the User Documentation.

- The User Manuals have not been updated for Release 2.
- In response to open OIG Recommendation 09-12-03 (from the **IV&V 7th Quarterly Risk Report**), it was indicated that no online video tutorials other than Public Users would be created. Table 1.5 in the **D&TP** needs to be updated (in the Notes column) to indicate this. Currently the entry in that table states “...*that these online training videos would be developed to help students learn how to use FDsys by watching the functions being performed in a simulation.*”

Quality of the training sessions and material (classes and PowerPoint presentations)

In a meeting with IV&V on Thursday, January 12, 2012, the FDsys Program Manager indicated that training is no longer being performed by FDsys personnel. This new information explains why the training schedules in the *D&TP* are significantly outdated and why the FDsys user manuals have not been reviewed and updated for Release 2. Training on how to use FDsys is being developed and provided by members of the Library Services and Content Management (LSCM) group at the GPO University. LSCM is developing a separate training plan and the training sessions include an FDsys Introduction class and FDsys Advanced class. During the introductory part of the training sessions, the LSCM group indicated that they would be producing five- to six- (5-6) minute training videos in the future and posting them to FDsys. Lastly, they also indicated that LSCM would use these to provide virtual training for users unable to attend training sessions at GPO headquarters.

It should be noted that other training is being performed by members of the FDsys Test Team, actually by members of the IT&S Group. User Acceptance Testing (UAT) is being used as both a testing and training vehicle. During these UAT sessions, specific users, e.g., Internal Service Provider and Congressional Publishing Specialist, are invited to perform tasks and actions specific to their user roles. Potential problems found during the UAT are documented and then investigated to determine if an actual problem exists, or whether or not the function could be executed due to machine or human (operator) error. All issues deemed as problems are then documented on a Program Tracking Report (PTR) and assigned to an engineer via email notifications from the ClearQuest tool. All issues and their resolutions, including PTR number, are documented in the User Acceptance Testing Report.

IV&V observed both the Introduction to FDsys and the Advanced FDsys classes that were conducted by the GPO University on January 11, 2012. The classes were well-prepared and presented, and the trainers were knowledgeable in the subject matter being taught. There were no representatives from FDsys present during the training sessions. The training was conducted in one of the computer labs in the GPO University. Each trainee had a machine with which to perform tasks. Training materials that were provided were more informational rather than containing step-by-step instructions on how to perform a particular search, browse, or navigation function. The information that was distributed was very helpful and described the various congressional artifacts, how they are prepared, and their purpose. No problems were encountered with the desktop machines during the training sessions. Known problems were announced by the trainers, and any issues that arose were recorded, so they could be provided to the FDsys team.

The LSCM trainers demonstrated flawlessly how to perform these functions, which again were directed more toward the public for performing search, browse, and navigational functions across the nearly fifty (50) collections contained within FDsys. The trainers also demonstrated an extensive help system within FDsys which was easy to use and very intuitive.

Each session was conducted in a similar manner, as described below:

- The training consisted of logging into a GPO computer and then accessing the FDsys website. Trainers from the GPO LSCM Group distributed handouts that contained descriptive information on the Collections and the high level need to access these Collections to obtain various congressional artifacts. The training material and presentations could be more specific – aimed at providing step-by-step instructions describing how to search, browse, or navigate FDsys. It is not that these tasks were difficult to perform; rather, inclusion of step-by-step processes would enable the handout to serve as a future reference guide for users attempting to perform these functions.
- The training encompassed the various mechanisms that can be used to locate and access congressional artifacts such as regulations, bills, and laws. This information was also displayed in the form of a PowerPoint slide presentation given by Ms. Seifert and Mr. Ames from LSCM. There were five to eight (5-8) trainees in each session and the sessions lasted approximately two to three (2-3) hours.
- The first fifteen (15) minutes of the training was spent in a high level explanation/discussion of FDsys, with few specifics related to training or to the trainees' use of the system to perform their jobs.
- There were no formal exercises for the users to work through using the system. The trainees followed along with the trainer on their PCs, but there were no independent exercises for the trainees to attempt. IV&V observed that most of the trainees were easily able to follow along with the trainer. Questions were asked and answered immediately with the trainers also pointing out known problems with FDsys.
- The trainees at the first two (2) sessions attended by IV&V were very positive and enthusiastic about both the training and learning how to use the system.
- All of the personal computers worked flawlessly for both classes.
- At no time during the session were trainees asked to complete exercises on their own. The trainees simply followed voice commands and compared their screen with that of the trainers.
- Only minor problems with FDsys were observed during the training and the trainers indicated that in two of the three instances these were known glitches. In the other instance, the trainers documented the issues and indicated they would forward the issue to the FDsys team.

3. Identification and Assessment of Technical and Management Risks

The effects of these conditions did not manifest themselves as potential risks.

4. Recommendations

There is no formal IV&V recommendation at this time. However, if the FDsys Training effort is or has been transitioned to the LSCM Group, then IV&V recommends that a pointer or link be provided to all LSCM Training materials to include the Training Plan, User Manuals, and User Presentations. If the training effort remains as tasking for the FDsys PMO, then IV&V recommends the following:

- Recommendations to improve the User Manuals:
 - User manuals should be revised to contain all of the features specified in Section 4 of the *D&TP*.
 - Update user manuals if necessary to reflect changes to the system resulting from correction of system problems and updates to system functionality in Release 2.

- Recommendations to improve training sessions and material:
 - Add user exercises specific to each user role to the training sessions.
 - Update training material if necessary to reflect changes to the system resulting from correction of system problems.
 - Have the trainer check with the trainees periodically to make sure none of them are stuck or lost. Some trainees are not willing to interrupt the class to be assisted in catching up.

- Recommendations to improve the D&TP
 - The PMO should update the D&TP for Release 2, capturing software and process changes related to each specific user category.

Management's Response. Concur. Management stated that the public search training materials developed by LSCM will be made available from the GPO Intranet, and also gpo.gov, so that all users of FDsys can have access to these materials. The expected completion date for this activity is April 2012.

Evaluation of Management's Response. Management's planned action is responsive to the recommendation. The recommendation is resolved but not yet implemented and will remain open for reporting purposes pending completion, implementation, and confirmation of the planned action.

Appendix A. Management's Response



U.S. GOVERNMENT
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MEMORANDUM

DATE: February 17, 2012

REPLY TO
ATTN OF: Chief Technology Officer

SUBJECT: Draft Federal Digital System (FDsys) Training Material and User Documentation Analysis.

TO: Inspector General

2012 FEB 23 PM 1:11
OFFICE OF THE INSPECTOR GENERAL
MCP/EBTC

Thank you for the opportunity to respond to the Draft Federal Digital System (FDsys) Training Material and User Documentation Analysis. As FDsys is now the operation system for GPO, training has been transitioned to LSCM and no longer resides within PST. This was practiced in the past with LSCM being responsible for training for FDsys' predecessor Web site, GPO Access. Continuing into the future, LSCM plans to continue its live, in-person training sessions and also add live, virtual training to its offerings. Additionally, LSCM is working to create the training video suite and will continue to maintain and update those videos as time progresses.

Below are the responses to the recommendations put forth in the report.

Recommendations

1. IV&V recommends that a pointer or link be provided to all LSCM Training materials to include the Training Plan, User Manuals, and User Presentations.
 - Response: GPO concurs with this recommendation. The training materials for internal user roles are available on Sharepoint at <http://teamwork.gpo.gov/projects/FDSYS/R2/Training/Forms/AllItems.aspx>. The public search training materials developed by LSCM will be made available from the GPO Intranet and also gpo.gov so that all users of FDsys can have access to these materials. The expected completion date for this activity is April 2012.

Please contact me if I can answer any questions or provide additional comments.

Richard G. Davis
Chief Technology Officer

Appendix B. Status of Recommendations

Recommendation No.	Resolved	Unresolved	Open/ECD*	Closed
1	X		04/2012	

*Estimated Completion Date

Appendix C. Report Distribution

Assistant Public Printer, Operations
Assistant Public Printer, Superintendent of Documents
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