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Office of Student Financial Assistance

SFA Modernization Partner

FAFSA on the Web  
Semi-Monthly Status Report

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## 1.0 Executive Summary

The U.S. Department of Education's Office of Student Financial Assistance Programs (SFA) administers and operates the "Free Application for Federal Student Aid" (FAFSA). While available in paper form, SFA also provides this service through a web site. U.S. college students seeking student financial aid use the FAFSA program. During the academic year 2001-2002, over two million students used the web site to apply for federal financial aid. SFA anticipates that the number of users/applicants will double during the 2002-2003 academic year, and will continue to rise in future years as the number of paper submissions decreases. This anticipated growth makes it imperative that SFA maximize the capacity and availability of the FAFSA web infrastructure while at the same time minimizing the amount of support SFA's representatives will have to provide for questions by students or difficulties with completing the form. The web FAFSA product is commonly referred to as FAFSA on the Web and incorporates all requirements related to the paper FAFSA for each school year.

The FAFSA on the Web 6.0 project is on schedule with all planned activities completed. The detailed project work plan, CRAD, Functional Specification, High-Level Design, and Detailed Design Documents (DDD's) have been documented and delivered. Development, unit testing, functional testing, usability testing, and ED accessibility testing were completed on schedule. System and ED acceptance testing were also completed. Additional performance test cycles were planned, conducted, and completed. The Modernization Partner team worked with the VDC team to have the production environment configured and available for beta testing and production deployment on schedule.

All known issues and risks have been identified, and are being monitored closely. Specific action required for resolution is being taken. The Modernization Partner has successfully met the following guiding principles:

1. Production Delivery by 01/01/02 to support the 2002 – 2003 school year.
2. New look and feel for easier usability and enhanced accessibility of the application.
3. N-Tiered Integrated Technical Architecture (ITA) that conforms to SFA's infrastructure standard and forms the foundation for effective upgrades and enhancements. These SFA standards include WebSphere, IHS, and Oracle.
4. Improved performance and scalability to meet customer demands and technical capacity.
5. Maximum re-use from the Release 5.x design, code, and documentation to meet the goals of the FAFSA on the Web initiative.

## 2.0 Introduction

### **Overview**

The U.S. Department of Education's Office of Student Financial Assistance Programs (SFA) administers and operates the "Free Application for Federal Student Aid" (FAFSA). While available in paper form, SFA also provides this service through a web site. U.S. college students seeking student financial aid use the FAFSA program. During the academic year 2000-2001, over two million students used the web site to apply for federal financial aid. SFA anticipates that the number of users/applicants will double during the 2001-2002 academic year, and will continue to rise in future years as the number of paper submissions decreases. This anticipated growth makes it imperative that SFA maximize the capacity and availability of the FAFSA web infrastructure while at the same time minimizing the amount of support SFA's representatives will have to provide for questions by students or difficulties with completing the form. The web FAFSA product is commonly referred to as FAFSA on the Web and incorporates all requirements related to the paper FAFSA for each school year.

The primary objectives for redesigning FAFSA on the Web are to leverage industry best practices to improve usability and accessibility by customers, performance of the web application during peak periods of FAFSA submissions, and create the foundation for efficient enhancements, as necessary. The areas of focus will be:

- Usability & Accessibility
- Technical Capacity (technical infrastructure and application performance)
- Leveraging industry best practices around human interaction models for Web-based solutions

### **Background**

The FAFSA on the Web application is released on a school year basis. The current application available on the web is now FAFSA on the Web Release 6.0 for the 2002 – 2003 school year. This application is available on the web site with the following URL – <http://www.fafsa.ed.gov>.

As part of the FAFSA on the Web Release 5.x initiative, SFA examined various design, usability, technical, and performance factors in consideration of FAFSA on the Web Release 6.0, which became available to the public on January 1, 2002. This initiative leveraged the SFA experience with prior versions of the application and provided design, usability, technical, and performance input for the development and deployment of Release 6.0 of the application. Efforts associated with the release 5.x initiative were performed using SFA's standard Information Technology Architecture (ITA) based on the Sun platform for WebSphere and IHS. Efforts associated with the release 6.0 initiative will be performed in an HP environment at the VDC. Marketing and

communication alternatives were also included in the Release 5.x initiative to aid in the increased use of the web product.

A transition team established by SFA included team members from the release 5.0 and 5.x team to establish the approach, milestones, project plans, organization, roles, responsibilities, and the level of effort associated with the development of FAFSA on the Web Release 6.0. The approach for Release 6.0 leverages technology such as the n-tier SFA architecture at the VDC, new look and feel, performance and scalability from the release 5.x while incorporating the business logic, edits, and other key processes from the current release 5.0 production application. Performance and stress tests conducted on the release 5.X application developed in the VDC using the Sun architecture are also being leveraged to validate the scalability and performance of the application in its release 6.0. The guiding principles, key assessments, and validation as well as the project plan for release 6.0 have been developed as part of the FAFSA on the Web Release 6.0 Transition.

This semi-monthly report provides the following:

- Section 3. Accomplishments. Provides an overview of all completed activities including updated documentation, issues resolved, key decisions made, and application components developed.
- Section 4. Planned and In-Progress Activities. Provides an outline of all remaining planned activities including development, testing, documentation, and production deployment.
- Section 5. Open Issues, Risks, and Mitigation Strategies. Provides a listing of all open issues, risks, and status including solution alternatives and recommendations.
- Section 6. Summary. Provides an overall status summary of the project.
- Appendix A. Production Environment Schedule. Provides the updated listing of all production-related activities, schedule, and resource assignments.

## 3.0 Accomplishments

### **Completed Activities**

Based on the production environment schedule provided in Appendix A, the following major activities have been completed since the last semi-monthly status report:

- Performance Testing. The Modernization Partner conducted a total of sixteen performance test cycles. Enhancements were identified and implemented for the application, architecture, and infrastructure. Details were included in the final performance test report.
- Capacity Planning. The results of the performance testing validated the capacity planning analysis that has taken place since the beginning of the project. The capacity requirements for the peak volume have been determined.
- Web Demo Site. The Modernization Partner team deployed the web demo site into the VDC production and development environments.
- System Testing. The Modernization Partner team completed system testing with Macro International on 12/2/01. All planned regression testing has also been completed.
- ED Acceptance Testing. SFA completed acceptance testing with support from the Modernization Partner team on 12/3/01.
- Security. The Modernization Partner team completed a security risk assessment on 12/13/01. No major issues were identified. Details were included in the final security risk assessment report.
- Beta Testing. SFA and the Modernization Partner team conducted beta testing from 12/3/01 – 12/17/01. Extensive coordination took place between the Modernization Partner and VDC teams.
- Quality Assurance. The Modernization Partner team met with the CIO QA team to walk through their final deliverables. All category one issues have been addressed.
- Production Environment. The initial production environment configuration was completed and tested prior to production deployment of the application on 1/1/02.
- Production Readiness Review (PRR). The PRR was successfully completed on 12/21/01. All remaining VDC-required documentation will be finalized prior to 1/31/02.

### **Key Decisions Made, Issues Resolved, and Risks Mitigated**

The following are the major decisions that have been made or the key issues that have been resolved since the last semi-monthly status report:

- Performance Testing. Based on results from performance tests conducted in October and November, it was determined that additional test cycles were required to address all system components, such as upgrades being made to the infrastructure. A total of eleven tests were conducted in December, 2001.
- Beta Test/Production Environment. The Beta Test environment was configured as the initial production environment prior to 12/3/01 since it collected real FAFSA's from students. The performance test servers were added to this environment along with loaners received from HP to comprise the production environment. The DNS change was initiated at 1:00 am ET on 1/1/02 as scheduled. The following issues have been resolved since 1/1/02:
  - The Oracle temporary save database required additional storage space (previously requested).
  - The Oracle session database archive log was removed since it is not required. This was causing the table to become unnecessarily larger than needed.
  - The Oracle parameter setting "extents" needed to be changed to unlimited to allow more temporary saves to be made.
- Production/Operations Roles and Responsibilities. SFA, the Modernization Partner team, and the VDC team finalized the roles and responsibilities for the Production environment to include applications, architecture, and infrastructure operations.

## 4.0 Planned and In-Progress Activities

Based on the production environment schedules provided in Appendix A, the following major activities are planned:

- Production Performance Monitoring. The Modernization Partner team is planning to continue monitoring the production application/environment throughout the peak period. The next capacity planning meeting is scheduled for 1/25/02.
- VDC Documentation. All VDC-required documentation will be finalized by 1/31/02.

## 5.0 Open Issues, Risks, and Mitigation Strategies

There are currently no open issues at this time. Due to the importance of the application's performance, the production application/environment will continue to be closely monitored by all teams.

## 6.0 Summary

The FAFSA on the Web 6.0 project is on schedule with many planned activities completed. The detailed project work plan, CRAD, Functional Specification, High-Level Design, and Detailed Design Documents (DDD's) have been documented and delivered. Development, unit testing, functional testing, usability testing, and ED accessibility testing were completed on schedule. System and ED acceptance testing were also completed. Additional performance test cycles were planned, conducted, and completed. The Modernization Partner team worked with the VDC team to have the production environment configured and available for beta testing and production deployment on schedule.

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