



# **System Development Life Cycle (SDLC) Process Guide**

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**Appendix C - SFA Internet Guidelines**



The following appendix provides SFA guidelines and references that are available to all future portal development efforts for standards for features, general web development, branding, URL standards, cookies, CIO/SDLC, CIO/QA, etc.

### Getting Started

In order for a portal development project to start, a business case must be complete and approved. All units of CIO should be involved in business case estimates (IT/Management, IT/Services, and eCAD). Once the project is ready to begin, notify CIO of the project and request a representative from each area. IT/Management is the lead for architecture and tool standards. *IT/Services is the lead for hosting at VDC. There is a lead-time for certain VDC support tasks, so start as soon as possible. For IT/ Services and VDC participation, you must complete a Request for Services that requires budget information from the approved business case.* It is recommended that this form be posted on SFANet. An IPT must also complete all of the documents required by the VDC during development and prior to production. Specific procedures for this still need to be developed and posted to SFANet. The SFA webmaster is also part of IT/Services. The webmaster should oversee operations for technical questions and the business unit should oversee content and programmatic issues. eCAD is the lead for development, SDLC, testing, and QA. eCAD will play an active role on the development IPT and assist in the coordination of all technical matters, especially within SFA's CIO and with the Modernization Partner.

### GUI Standards

The SFA/CIO has developed a White Paper that consists of Web Graphical User Interface (GUI) Guidelines. The current version (1.9) is in draft form and covers multiple areas including, but not limited to document specifications, site structure, navigation, links, web content, page structure, graphic design, multimedia usage, etc. These guidelines are to be used by all developers of SFA Web applications and Web pages.

These Web GUI guidelines are a working document that combines the best of many similar HTML guides. For the most current version or for any questions, please contact CIO's IT/Management group. This information can be found in Section 6 of the Tech Handbook on SFANet (under CIO).

### Section 508 Compliance

Assistive technology (Section 508) is also required when developing web pages. *Section 508 requires that Federal agencies' electronic and information technology is accessible to people with disabilities. Section 508 requirements and updates will involve:*

- *Identifying the pages that fail to meet the Web Accessibility Initiative (WAI) recommendations*
- *Prioritizing contents and structure of the pages*
- *Repairing pages (contents and structure) that are currently inaccessible*



- *Monitoring future submission to the web sites to ensure that they meet the accessibility requirements. New items submitted must comply with accessibility laws .*

The following web sites offer information related to assistive technology (section 508):

- [HTTP://www.w3.org/WAI/gettingstarted](http://www.w3.org/WAI/gettingstarted) (Getting Started in Making a web site accessible)
- <http://www.w3.org/TR/1999/WAI-WEBCONTENT-19990505/> (Web Content Accessibility Guidelines 1.0)
- <http://www.w3.org/TR/WCAG/full-checklist.html> (Web Accessibility Guideline checklist)
- <http://www.w3.org/TR/WAI-WEBCONTENT-TECHS/> (Techniques for fixing existing accessibility problems)
- <http://www.section508.gov>
- <http://www.connected/ref/pol/cio/508standards.html>
- <http://www.usdoj.gov/crt/508/508home.html>
- <http://www.cast.org/bobby>
- <http://www.ed.gov/internal/wwwstds.html> (ED's Internet Working Group standards)
- <http://www.access-board.gov/news/508-final.htm>

Another resource is the Electronic and Information Technology Accessibility Standards published in the Federal Register on December 21, 2000. Also, all IT contracts should include standard language requiring products to meet the ED requirements and pre-implementation testing to determine if the product meets ED accessibility requirements.

SFA needs a Section 508 officer to advise on web projects and to track all projects, their development and compliance with 508. It is recommended that someone be designated with this role.

*Testing of web projects should be coordinated with the Department of Education's CIO Section 508 Coordinator (currently Rob Selvage). Make a request for a formal evaluation of your application just before production. The Assistive Technology team will evaluate the site for compliance and produce a report. A product representative from the development team should plan to spend the first hour with the team reviewing the site.*

#### Quality Assurance

Quality Assurance activities should be a part of every new modernization development effort. The scope of the QA support will be determined by management assessment and funding available. For information on QA, please contact the QA Manager of CIO's eCAD team.

#### Usability



It is recommended that usability testing be done on all web projects. A usability expert should be involved in each web development task to help through the design and build phase, as well as testing repeatedly throughout SDLC. Another option is to add an usability expert to eCAD’s testing team. See [www.usability.gov](http://www.usability.gov) for more information.

#### Production Readiness Review (PRR)

Before systems can be opened to SFA customers, there must be a PRR with SFA management. For the most up to date PRR processes and procedures, please contact the QA Manager of CIO’s eCAD team. It is recommended that the PRR process document be posted on SFANet.

#### URL Naming and Registration

Standards for URL naming and the process for registration is owned by the SFA webmaster in CIO’s IT/Services. Naming efforts should also be coordinated with SFA Communications. It is recommended that specific standards and procedures be developed for SFA and posted on SFANet to ensure consistency. It is recommended that SFA register all versions of the URL name (.com, .org, etc.).

#### Virtual Data Center (VDC)

All SFA systems shall reside in the VDC. The VDC is managed by SFA CIO’s IT/Services group. It is recommended that all documents and procedures needed for development and production in the VDC be completed and posted to SFANet. The VDC routinely performs penetration testing of web sites.

#### Technical Architecture Standards

Moving forward in system development, SFA will use technical standards as set by the CIO’s IT/Management group. For more information, Task Order 16 documents are on SFANet. An IT/Management representative should be included in web development projects for the latest standards and advice.

#### *Security & Privacy*

*All systems must complete the following documents prior to production:*

- *Security Plan*
- *Risk Assessment*
- *Corrective Action Plan*
- *Continuity of Operations Plan*
- *Certification and Accreditation Plan*
- *Disaster Recovery Plan*



*The system manager is responsible to ensure that these documents are developed and the system security officer must ensure that the documents are reviewed and maintained. The functions related to security and privacy are described in OSFA's Guide to Information Security and Privacy. This document is available through the CIO's IT/Management's Security group and is also part of Technology Handbook/Software Engineering Handbook Section 6.3 on SFANet ([http://sfanet/cio/technology\\_handbook/handbook/index.html](http://sfanet/cio/technology_handbook/handbook/index.html)). Templates for the documents referenced above are also available through IT/Management's Security group. It is recommended that these documents be posted to SFANet as well.*

#### Privacy Act, System of Records & FOIA

Each functional area should have a Security and Privacy Advocate that serves as an advisor and works with system managers and system security officers on the development of security and privacy procedures. This person should stay current on items such as the Privacy Act, Freedom of Information Act, Systems of Record notices, and A-130. It is recommended that these advocates be designated for each systems IPT. For overall SFA guidance, IT/Management's Security group serves this function.

SFA has a standard privacy notice template. It is maintained and available through IT Management's Security group.

#### Cookies

The SFA privacy notice proclaims that we collect no information from a borrower unless it is voluntary. Cookies should not be used. For purposes of "pushing" information to users via the web portal, the user must specify what they would like "pushed" or give SFA permission to track their usage for automatic "pushing."

#### Links to sites external to ED

There are currently no standards/procedures or single source of contact for the approval of external links. It is recommended that SFA develop standards and procedures and provide a point of contact. Currently, these decisions are at the discretion of channel management and the SFA Chief Operating Officer (COO).

#### Browser Standards

The minimum standard is published in the Federal Register. If technology demands higher browser versions, you must get approval from IT/Management and start the process for a new Federal Register notice with the SFA Analysis/Policy group. Keep in mind that different user populations use different browsers (such as AOL, Lynx, etc.) and incorporate this into requirements, design, and testing, if necessary.

#### Online Help and Frequently Asked Questions (FAQ)



There are no documented standards or guidelines related to Online Help & Frequently Asked Questions (FAQ) associated with the architectural features of an SFA Web portal. All users should have Online Help and FAQ's available to ensure ease of use and maximize efficiency during customization. Online Help and FAQ's should be consistent across all Web Portal views to minimize the guesswork as to where to go for assistance. It is recommended that SFA set standards for Online Help and FAQ's.

### Branding

All SFA portal sites and Web sites should feature a common look and feel, using the SFA logo, colors, and mission statement in a similar fashion. Currently, the SFA brand includes the SFA star, blue and yellow colors, and the mission statement "We Help Put America Through School." In the future, the logo and color scheme may change.

Each portal or site should have similar layout, graphics, and navigation. These common elements will help identify the site as a product of SFA, as well as promote our mission.

Communications staff are available and should be included in discussions involving graphic design and layouts. The branding advice of Communications will ensure consistency across SFA Web sites. Branding is also addressed in SFA's Technology Handbook, section 6.2, on SFANet ([http://sfanet/cio/technology\\_handbook/handbook/index.html](http://sfanet/cio/technology_handbook/handbook/index.html)).