



LEAP/SLEAP
APPLICATION PROCESS
TEST PLAN

DEPARTMENT OF
EDUCATION - STUDENT
FINANCIAL ASSISTANCE -
FINANCIAL MANAGEMENT
SYSTEM

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1.0 LEAP/SLEAP APPLICATION PROCESS PRODUCT TESTING OVERVIEW

Product Testing is the final functional test of the system prior to production, and verifies that the system meets the documented user requirements. Business functions and system functions (i.e. batch processing, system security features, etc.) are executed in an isolated and controlled environment to validate that a quality system is ready for production. User procedures, workflow and other process definitions define the test conditions in Product testing. The systems business events are examined from the user or business perspective, rather than attempting to test every possible condition from the design perspective.

The main purposes of Product Testing are to:

- Test all processing cycles in the system to ensure the results meet users' requirements in as close to the business environment as possible.
- Obtain review that the system functionality is adequately exercised.

Entry Criteria for Product Test Execution:

- All applications and application components necessary for product testing have been inventoried and promoted.
- Product test plan has been completed.
- Resources to execute test are available.
- Results for prior testing phases are available.
- The product test environment is in place.

Exit Criteria for Product Test:

- All Product testing scripts and cycles have been executed successfully.
- Identified errors and defects have been corrected and re-tested.
- All issues and incidents have been properly documented and worked through the resolution process.
- All reviews were conducted and that the review yields satisfactory results.

1.1 LEAP/SLEAP APPLICATION PROCESS PRODUCT TEST SCOPE

The Leveraging Education Assistance Partnership Program (LEAP Program) and Special Leveraging Education Assistance Partnership Program (SLEAP Program) Product Test cycles will be based on the business requirements for the LEAP/SLEAP Application Process: They include the following:

- Budget Management
 1. Enter budget appropriation.
- Security
 1. Establish user id.
 2. Create supplier record for each State/Territory.
 3. Establish security such that each State/Territory only has access to its data.
- Awards Management
 1. Compute Anticipated Award amounts.
 2. Generate Anticipated Award Report.
- Application Management
 1. States/Territories maintain directory information.
 2. Directory information updates supplier information and pre-populates applicable Application fields.
 3. Generate Directory report.
 4. States/Territories complete new ED Form for LEAP/SLEAP.
 5. Generate report of LEAP/SLEAP Application form.
 6. Department of Education reviews LEAP Application. Initial checks are to be performed at the State/Territory level and corrected immediately. Internal checks for compliance will flag the LEAP/SLEAP Program Office of any potential application issues.
 7. LEAP/SLEAP application evaluation. Need different status of application (Pending, Rejected, Approved).
 8. Approve/Reject Application. States/Territories will only have edit rights for application forms which have a status of 'New', 'In Process', 'Rejected' or 'Re-Process'. Department of Education LEAP/SLEAP Program Office cannot modify application data.
 9. Generate Department of Education Application Log to facilitate monitoring of application process.
- Reports Management
 1. Directory Report
 2. Anticipated Award Report
 3. Application Report
 4. Drug-Free Certification Report
 5. Application Log Report

1.2 LEAP/SLEAP APPLICATION PROCESS PRODUCT TEST SCHEDULE

The Product Test execution phase involves executing each of the test cases and comparing the actual results with the expected results. Execution of the Product Test cases may sometimes occur more than once during the test execution phase, since discrepancies will be identified and fixed during this phase. Product Test cases will be executed until no discrepancies are found. Execution of Product Testing for the LEAP/SLEAP Application Process will occur from March 19, 2001 through March 29, 2001. Review and analysis of Product Test Results will be conducted from March 19, 2001, through March 29, 2001. The chart below provides details on the LEAP/SLEAP Application Process Product Test schedule.

Product Test Schedule				
Application Process				
ID	Task Name	Start Date	End Date	Responsible
	Product Test Schedule	02/01/01	03/29/01	
1	Test Region Available		03/19/01	FMS Technical Support Team
2	Establish User Ids/Security		03/19/01	FMS Technical Support Team
3	Build/Configure System		03/19/01	Business Requirements/ Software Architecture Teams
4	Define Test Conditions	02/01/01	03/16/01	Heath, Herron
5	Define Test Cases	02/26/01	03/16/01	Herron
5.1	Define LEAP/SLEAP Test Cases	02/26/01	03/05/01	Gerrans, Herron
5.2	Define Regression Test Cases	03/06/01	03/16/01	Herron, Malleck
6	Execute Tests & Resolve Problems	03/20/01	03/28/01	FMS Test Team
6.1	Execute LEAP/SLEAP Tests	03/20/01	03/25/01	Gerrans, Herron, Townsend
6.2	Resolve LEAP/SLEAP Problems	03/20/01	03/28/01	Gerrans, Herron, Townsend
6.3	Execute Regression Test	03/28/01	03/29/01	Hong, Malleck, Marks
6.4	Resolve Regression Test Problems	03/28/01	03/29/01	Hong, Malleck, Marks
7	Finalize Documented Test Results	03/28/01	03/29/01	Malleck, Townsend

1.3 LEAP/SLEAP APPLICATION PROCESS PRODUCT TESTING ROLES AND RESPONSIBILITIES

Staffing for Product testing involves both FMS Implementation Team and SFA personnel. The primary roles for the Product testing effort include Test Team Analyst and SFA-FMS Test Liaison. These roles are described below:

1.3.1 TEST TEAM ANALYSTS

- Assist in the development of the Product Test Plan.
- Execute the Product tests.
- Evaluate Product test results.
- Report all incidents and problems encountered during testing activities.
- Conduct regression testing to validate changes to the application software and/or configuration. Regression testing will consist of the testing of the suite of programs and affected sub-systems following program modification.

The FMS Phase III LEAP/SLEAP Release 3.1 Test Team is comprised of a cross section of SFA employees as well as FMS Implementation Team employees.

Mr. Greg Gerrans, SFA
Ms. Cynthia Heath, SFA/FMS Implementation Team
Ms. Constance Herron, FMS Implementation Team
Ms. Candice Hong, SFA
Mr. John Kim, FMS Implementation Team
Mr. Stephen Malleck, FMS Implementation Team
Mr. William Marks, SFA
Mr. Ryan Townsend, FMS Implementation Team

1.3.2 SFA-FMS TEST LIAISON

- Participate in the formal walkthrough of the Product Test Plans.
- Define Product test scripts and cycles.
- Record all incidents and problems encountered during testing activities.
- Monitor the testing process to identify problems, mitigate potential risks and schedule slippage.

- Review test results with the test team to clarify questions, concerning system functionality and discrepancies with expected results, and ensure that the product testing activity was a valid and complete exercise.
- Certify that the testing process is comprehensive in scope and is complete.

Ms. Cynthia Heath will be the SFA-FMS Test Liaison.

1.4 EXECUTING AND VALIDATING TEST CASES

A test case is a discrete, executable step that will return a predictable result. Test Cases are made up of a setup, input, and expected result sections. A test case is designed to verify the functionality of a business scenario. A test case describes step by step how the business scenario is being tested.

The Test Team Analyst will be responsible for Product Testing. The Test Team Analyst will update the appropriate Product Test Log (see Exhibit 1) when conducting product testing. Validation of a test script will occur when the specific test activity has a status of “Pass” and is reviewed by the SFA-FMS Test Liaison.

1.5 INCIDENT AND PROBLEM REPORTING/TRACKING

Any incidents or problems that are related to product testing will be recorded by the Test Team Analyst and will be reported to the SFA-FMS Test Liaison. An analysis of the incident will be performed to determine if the problem was caused by:

- Bad test data;
- A problem in the test environment;
- An incorrectly run test script;
- A misunderstanding of what the system really should do.

If necessary, the incident will be forwarded to the business requirements, software architecture or technical support team for solution.

Incidents or problems will be recorded using the “SFA Mod Partner – Issue Tracker” database (see Exhibit 2). The “SFA Mod Partner – Issue Tracker” is designed to capture as much information as possible to relay to the business requirements, software architecture or technical support team. This information will enable recreation of the situation. Test Team Analysts completing a “SFA Mod Partner – Issue Tracker” report should:

1. Write down a description of the symptoms that occurred and the test execution steps leading up to them. Note, the date and time of the discrepancy.
2. Print the screen(s) that illustrate the error that is occurring
3. If this is a “show stopper” that prevents you from continuing to test, escalate the problem to the SFA-FMS Test Liaison immediately.
4. If the problem isn’t severe, log the information and keep going.

1.6 PROBLEM DIAGNOSIS AND RESOLUTION

A “discrepancy” is a difference between what was *expected* to happen and what *actually* happened. Discrepancies are initially evaluated to ensure that they represent system defects. The initial evaluation of discrepancies includes:

- Review of the test data;
- Review of the test environment;
- Review of test scripts;
- Review of actual system functioning.

If it is determined that the “discrepancy” represents a system defect. The incident will be forwarded to the business requirements, software architecture or technical support team for assessment and proposed solution. After successfully testing the modification, the incident will be designated as “closed” by the SFA-FMS Test Liaison.

1.7 REVIEW AND VERIFICATION OF TEST RESULTS

The actual test results will be compared to the expected results to determine if the test ran correctly (or incorrectly). At the completion of each test activity the Test Team Analyst will evaluate the status of the activity as “pass” or “fail”. Product Testing is considered complete when each test activity has a status of “pass” and is reviewed by the SFA-FMS Test Liaison.

1.8 TEST DATA

Sample data will be gathered from the following programs:

- Leveraging Education Assistance Partnership Program (LEAP Program) / Special Leveraging Education Assistance Partnership Program (SLEAP Program), and
- SFA Operations (for Phase II Regression Testing).

1.9 TEST SCRIPTS

A test script is a collection of related test cases, put into a sequence. A test script describes how a group of test cases will be executed as a single entity.

1.10 TEST CYCLES

A test cycle is a collection of test scripts, put into a sequence. A test cycle describes how a group of test scripts will be executed.

1.11 LEAP/SLEAP APPLICATION PROCESS PRODUCT TEST RESULTS

The review of the Product Test Results will include, but not be limited to the following:

- description of cycles
- what constitutes test “pass”
- number of cases processed and passed
- review issues and incidents that required resolution or still require resolution
- review process
- stipulate process for module promotion to production environment

EXHIBITS

EXHIBIT 2 – LEAP/SLEAP APPLICATION PROCESS OPEN ISSUE REPORT

<i>Assigned Open Issues</i>						
<i>Issue Number</i>			<i>Issue Description</i>	<i>Impact</i>	<i>Also Assigned</i>	<i>Decision By</i>
Number	Priority:	High Medium Low				
	Created:	mm/dd/yy				
	Due Dt:	mm/dd/yy				