

DEPARTMENT OF EDUCATION-FSA
FMS INTEGRATION PARTNER
FORM FUNCTIONAL DESIGN



FMS SPLITTER ALLOCATION TABLE AND FORM
TO 128 – FMS TO FMSS DATA TRANSFORMATION AND
TRANSFER

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		Subject: Splitter Form Functional Design
		TO 128 – FMS to FMSS Data Transformation and Transfer
Prepared by: Srikant Akula	Date: March 20, 2003	Version: 7.0

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Document Change Control

Date	Author	Version	Change Reference
02/11/2003	Srikant Akula	1.0	Initial Creation
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Approval

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Specification

Form Name:	Account Allocation Form
Functional Design Document ID & Title:	FMS_SPLITTER_FORM_FD
Application:	N/A
Priority:	High
Estimated Production Date:	June 2003
Other Affected Applications:	N/A
Comments:	The custom form is used to query splitter allocation percentages online. The File Load process is used to insert data into the custom table.

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General Requirements

Business Objective:

As part of TO 128, FMS has been tasked to create a new allocation form for the splitter process. The form will be created as a read only form to query splitter allocation percentages. The form will not allow users to update, delete, and insert data. The purpose of the form is to allow users to view splitter allocation information online. The form provides a single area for FSA user to view splitter allocation percentages for the fund allocation. The users will be able to query unique combinations of 4251XNY Financing Fund, LIM, Object Class, and Budget Fiscal Year using this form.

Currently, financial data from LaRS, Forms 2000, and Mellon Bank have transactions that are applied to fund 4251XNY. Per new requirements, funds need to be allocated to two separate funds (4251XNY Financing Fund and 0230XNY Liquidating Fund). The data for the allocation will be stored in the new allocation table. The data from the allocation table will be used to split financial transactions prior to insertion into the Oracle AP, AR, and GL modules.

In addition, the file load process that uploads data to the custom splitter allocation table will perform limited error handling to make sure that the data is valid. There will be three validations:

1. Ensure that percentage splits between the two funds add up to 1.0 (100%) for each unique code combination of Fund, LIM, Object Class, and Budget Fiscal Year.
2. Ensure that there are no duplicate records for each unique code combination of Fund, LIM, Object Class, and Budget Fiscal Year.
3. Ensure that the Fund, LIM, Object Class, and Budget Fiscal Year values already exist in the segment value fields of the FMS tables.

Component Description:

Custom Form and Table:

The custom form will allow the user to query this information and the custom table will store split percentage information.

- 1) The user will be able to query each Unique Code Combination of 4251XNY Financing Fund, LIM, Object Class, and Budget Fiscal Year in the form. When querying data, the user will be able to search by LIM, Object Class, and Budget Fiscal Year. For example, if the user enters 00A in the LIM column, the Form will pull all the records in the custom table with a LIM of 00A. The user will be able to search by any combination of the three values.
- 2) The user will be unable to update, delete, or insert any data through the form.

File Load Process:

- 1) The designated FMS users with access to the Oracle Applications where the procedure can be executed will have the ability to upload the data from the in the custom table via a custom File Load Process. The File Load Process will involve maintaining a file that loads data into the custom table and validating this data before inserting into the table. The File Load Process will be the only means to upload the data in the custom table.
- 2) A PL/SQL based procedure will be created to validate data before being loaded into the custom table.

Component Risks:

- 1) The data file used to load the custom table with the unique combinations must contain data summarized by Fund, LIM, Object Class, and Budget Fiscal Year. Data must be given for each unique combination of Fund, Limitation, Object Class, and Budget Fiscal Year.

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Authorization:

Users with the ‘SFA FP Accounting Super User’ responsibility will have access to the form and the procedure that executes the File Load Process.

Development Complexity:

Medium – The Form will allow the user to query data only. The File load Process will ensure data is valid before being inserted into the custom table.

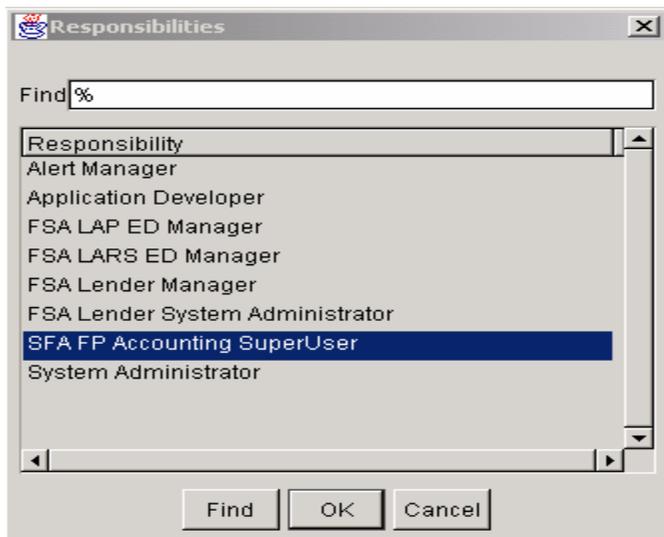
Assumptions:

- 1) Form is Read Only – Users cannot update, delete, or insert data through the custom form.
- 2) The File Load Process can be executed at any time.
- 3) Data will be provided in a flat file (Reference File Format: in Appendix).
- 4) The data on the input file will be summarized by Fund, Limitation, Object Class, and Budget Fiscal Year. File Load Data is accurate and is provided to FMS in the predetermined format (Reference File Format: in Appendix).
- 5) File Load Process will validate whether Allocation percentages for each unique combination will add up to 1.0 (100%).
- 6) All valid Fund, Limitation, Object Class, and Budget Fiscal Year values exist in the FMS tables.
- 7) File Load process will overwrite all existing data in the custom allocation table.
- 8) Users initiating the load process will have the appropriate access to the Oracle Apps to confirm that the File Load Process has completed normally.
- 9) A history of the flat files will be maintained in a pre-determined UNIX directory.

Design

Navigation/Logic Flow:

1. Log into Oracle Apps
2. From the Navigator screen, select ‘SFA FP Accounting Super User’



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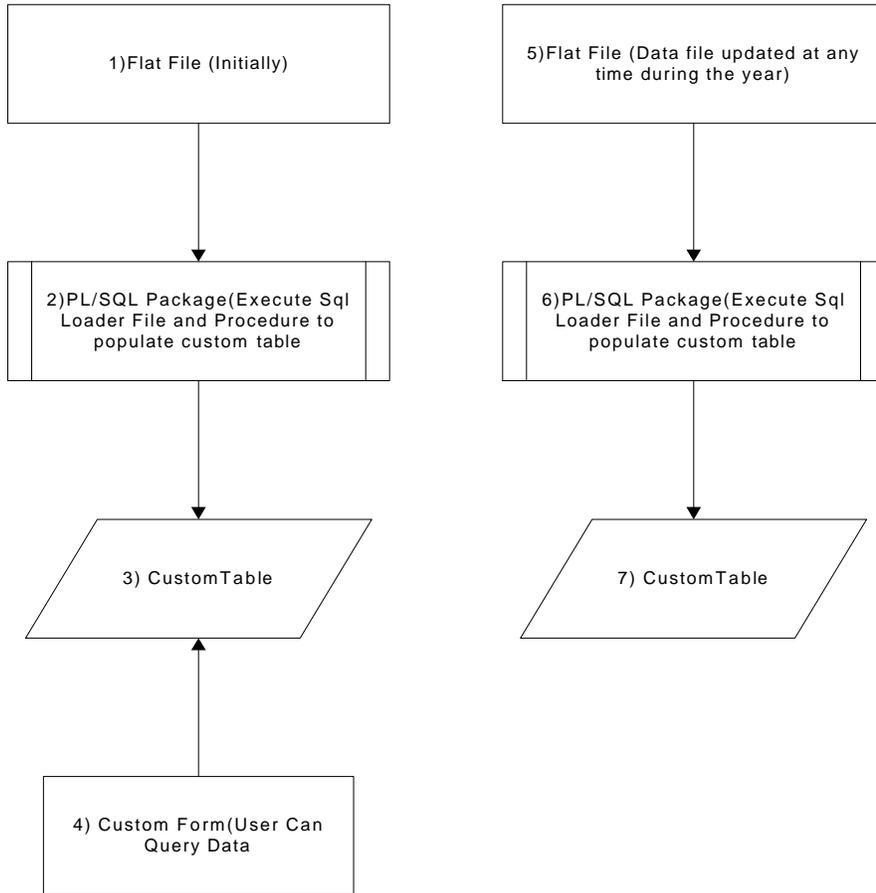
Date:
March 20, 2003

Form Layout:

	Financing Fund	Limitation	Object Class	Budget Fiscal Year	Liquidating Fund	Limitation	Object Class	Budget Fiscal Year	Financing Fund 4251XNY %	Liquidating Fund 0230XNY %

Detailed Description of New Form:

Detailed Description:



- Initially, a file with the splitter allocations will be loaded into the custom table. The file will be provided in a pipe delimited flat file format (See Appendix). The file will contain eight columns:
 - Financing Fund (4251XNY), Financing LIM (user determined value), Financing Object Class (user determined value), Financing **Budget Fiscal Year** (user determined value)
 - Liquidating Fund (0230XNY), Liquidating LIM (user determined value), Liquidating Object Class (user determined value – Same as Financing Object Class), and Liquidating Budget Fiscal Year (user determined value – Same as Financing **Budget Fiscal Year**)

The naming convention for the file will be <FMSALLOCATION><Date *mmddyyyy*><Time *hh24miss*><.dat>:

- e.g. FMSALLOCATION07012003150000.dat (file sent on July 1, 2003 at 3:00 pm)

- A PL/SQL package will have to be executed in the Oracle Applications to successfully load data into the custom table. The flat file will load a temp table using SQL Loader. A custom procedure will check whether or not data is valid in the temp table. If valid, the procedure will load the custom table with the predetermined data.
 - A designated user will maintain the data in the flat file. Subsequently, the user will ftp the file to a pre-determined directory on the FMS server.
 - The user will execute the custom PL/SQL package to initiate the File Load Process in FMS.
 - A procedure will make sure the data is valid.

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- If valid, the procedure will purge the existing records in the custom table and insert the new data from the file into the custom table.
 - If invalid, the program will error out and an error message will be written to the request log.
- 3) The File will Load the custom table with the Fund Type (4251XNY) and the associated percentage split between (4251XNY and 0230XNY). The table will contain the following columns Financing LIM, Financing Object Class, Financing Budget Fiscal Year, Liquidating LIM, Liquidating Object Class, and Liquidating Budget Fiscal Year, and Percentage of split between the two funds. For example, Fund Type (4251XNY) will have two columns, one for 4251XNY percentage and the other for 0230XNY percentage. These two columns will have a percentage split equaling 1.0 (100%).

The custom table will contain the following columns:

- Fin_Fund, Fin_LIM, Fin_Object Class, Fin_Budget Fiscal Year
 - Liq_Fund, Liq_LIM, Liq_Object Class, Liq_Budget Fiscal Year
 - 4251XNY Percentage, 0230XNY Percentage
 - Creation_Date, Created_By
- 4) The Allocation Form will allow the designated user to query data online.
- 5) At any time during the fiscal year, the PL/SQL package can be executed in the Oracle Applications to successfully load new data into the custom table.
- 6) The new flat file will be ftp to a pre-determined directory. A custom PL/SQL package will be executed to start the File Load Process.
- 7) The old data will be purged from the custom table and the new splitter allocations will be loaded in the custom table.

Container Objects:

Container Name	Container Type	Description	Dependencies (Data & Control)	Comments
N/A				

Data/Control Objects:

Block Name	Field Name	Object Type	Table Name / Column Name	Comments (Functional Notes/Calculations/Translations/Data Dependencies)
SFALIB_AC COUNT_AL LOCATIONS	FIN_FUND	Field	sfalib_account_all ocations (Custom Table)	Default Value: 4251XNY Data Type: VARCHAR2 This Field is display only
SFALIB_AC COUNT_AL LOCATIONS	FIN_LIM	Field	sfalib_account_all ocations (Custom Table)	Data Type: VARCHAR2 This Field is display only
SFALIB_AC COUNT_AL LOCATIONS	FIN_OBJECT_CLA SS	Field	sfalib_account_all ocations (Custom Table)	Data Type: VARCHAR2 This Field is display only
SFALIB_AC	FIN_YEAR	Field	sfalib_account_all	Data Type: VARCHAR2(2)

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COUNT_AL LOCATIONS			ocations (Custom Table)	This Field is display only
SFALIB_AC COUNT_AL LOCATIONS	LIQ_FUND	Field	sfalib_account_all oocations (Custom Table)	Default Value: 0230XNY Data Type: VARCHAR2 This Field is display only
SFALIB_AC COUNT_AL LOCATIONS	LIQ_LIM	Field	sfalib_account_all oocations (Custom Table)	Data Type: VARCHAR2 This Field is updateable and will have a List Of Values attached that pulls all the valid Limitations
SFALIB_AC COUNT_AL LOCATIONS	LIQ_OBJECT_CLASSES	Field	sfalib_account_all oocations (Custom Table)	Data Type: VARCHAR2 This Field is display only
SFALIB_AC COUNT_AL LOCATIONS	LIQ_YEAR	Field	sfalib_account_all oocations (Custom Table)	Data Type: VARCHAR2(2) This Field is display only
SFALIB_AC COUNT_AL LOCATIONS	4251XNY%,	Field	sfalib_account_all oocations (Custom Table)	Data Type: NUMBER (6) This Field is Updateable
SFALIB_AC COUNT_AL LOCATIONS	0230XNY%	Field	sfalib_account_all oocations (Custom Table)	Data Type: NUMBER (6) This Field is Updateable
SFALIB_AC COUNT_AL LOCATIONS	CREATION_DATE	Field	sfalib_account_all oocations (Custom Table)	Data Type: DATE This Field is not Displayed in the Form
SFALIB_AC COUNT_AL LOCATIONS	CREATED_BY	Field	sfalib_account_all oocations (Custom Table)	Data Type: NUMBER This Field is not Displayed in the Form
SFALIB_AC COUNT_AL LOCATIONR	LAST_UPDATED_DATE	Field	sfalib_account_all oocations (Custom Table)	Data Type: DATE This Field is not Displayed in the Form
SFALIB_AC COUNT_AL LOCATIONS	LAST_UPDATED_BY	Field	sfalib_account_all oocations (Custom Table)	Data Type: NUMBER This Field is not Displayed in the Form

Database Objects:

Database Object Name	Object Type	Oracle Application	Comments
sfalib_account_allocations (Custom Table)	Table	SFALIB	This is a custom table that needs to be created with the specific fund type combinations and the appropriate % splits

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Dependencies

Dependencies on Other RICE Components:

The GL_ITEM_SPLITTER uses data from the custom table (ffelga_account_allocation). This PL/SQL Program will split financial transactions for fund 4251XNY into 4251XNY and 0230XNY automatically, prior to insertion to the Oracle AP, AR, and GL modules. The allocation of funds for these splits will be taken from a custom Allocation Table (ffelga_account_allocation).

Dependencies on Other Business Components:

N/A

Design Constraints:

N/A

Performance Considerations:

N/A

Implementation Considerations:

The custom table (ffelga_account_allocation) will be purged and a SQL Loader file will load new data.

Other Dependencies/Special Concerns:

N/A

Error Handling

Potential Errors	Possible Reasons	Solution Strategy
Error inserting data into table using SQL Loader.	Duplicate value (Fund, LIM, Object Class, Budget Fiscal Year)	Unique table index on Fund, LIM, Object Class, Budget Fiscal Year. SQL Loader will not be able to insert record, failure would be reported in SQL Loader log file.
Percentage Split must add up to 1.0 (100%)	Wrong percentage amounts in the data file	PL/SQL level Validation in procedure. Error message is written to Oracle Applications Log stating which unique combination has a percentage split not equaling 1.0(100%).
Invalid Fund	There is an invalid Fund in the data file	PL/SQL level Validation in procedure. Error message is written to Oracle Applications Log stating which unique combination has a Fund that is not enabled and does not exist in the FND_FLEX_VALUES table.
Invalid Lim	There is an invalid Limitaion in the data file	PL/SQL level Validation in procedure. Error message is written to Oracle Applications Log stating which unique combination has a Limitation that is not

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		enabled and does not exist in the FND_FLEX_VALUES table.
Invalid Object Class	There is an invalid Object Class in the data file	PL/SQL level Validation in procedure. Error message is written to Oracle Applications Log stating which unique combination has a Object Class that is not enabled and does not exist in the FND_FLEX_VALUES table.
Invalid Budget Fiscal Year	There is an invalid Budget Fiscal Year in the data file	PL/SQL level Validation in procedure. Error message is written to Oracle Applications Log stating which unique combination has a Budget Fiscal Year that is not enabled and does not exist in the FND_FLEX_VALUES table.

Testing Requirements

Test Condition	Expected Results
User views data in the form	Query returns records for criteria entered
User updates data in the form	User cannot update data

Issues and Additional Considerations

The following Issues were defined during Functional Design:

Issue	Raised By / Date Needed	Resolution/Answer	Resolved By / Date Completed
Which columns will be included in the form?	Srikant Akula	Currently we have Fund Type, LIM, Object Class and Percentage of split as being viewable information in the form. The only updateable field is the percentage split between the two funds.	Resolved as per requirements matrix
If a change is made to the percentage split should a new line (two new lines) be added to the table and the old ones end dated, or should they just be updated?	Srikant Akula	There is no historical data in the table, only a column stating who and when the record was updated by.	Resolved as per requirements matrix

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Issue	Raised By / Date Needed	Resolution/Answer	Resolved By / Date Completed
File Load Process - Is the custom table going to be loaded annually? Is the data going to be purged from the table annually when the data is loaded?	Srikant Akula	The custom table will be loaded annually and the data will be purged from the table. The person in charge of the file that will load the table is responsible for providing accurate data with the appropriate percentage splits	Resolved as per requirements matrix
Are all the possible Fund Type unique combinations going to be loaded into the table by the File Load? This means the user will not have the ability to insert a record in the custom table through the form, but simply update the appropriate percentage split for the unique combination. So in this case they would choose the unique combination from the LOV and update the percentage split.	Srikant Akula	Form will allow the user to insert data based on combinations contained in the LOV. The user will not be allowed to insert a record that already exists in the table. However, they will be allowed to update an existing record.	Resolved as per requirements matrix
Should the form allow the user to delete out of the table or should an end date column be added to retain historical data.	Srikant Akula	The user will be allowed to delete records through the form. When they delete a record two lines will be deleted from the table. However, the user will be allowed to insert this same record by choosing it from the List Of Values (LOV) and entering the appropriate allocation percentage splits,	Resolved as per requirements matrix
Should the form only display one line rather than two?	Srikant Akula	The form will display one line with the percentage split on the same line	Resolved
Should the Form have only one block where the user can perform all functions	Srikant Akula	The Form will have one block rather than two so the user can perform all functions (Query, Insert, Update, Delete) in one place. This makes the form much more simpler and provides same the same type of functionality as in the Splitter Mapping Form	Resolved
Should Budget Fiscal Year be added to the table and Form?	Srikant Akula	Budget fiscal year will be added to the custom table and form. Budget Fiscal Year will be treated the same way as LIM, and Object Class. (i.e. the user can query by this field, but not update it)	Resolved
Should a Limitation field be added to the table and form?	Srikant Akula	The table and form will include new columns: Financing LIM, Financing Object Class, Financing Budget Fiscal Year, Liquidating LIM, Liquidating Object Class, and Liquidating Budget Fiscal Year. The Liquidating LIM column will be updateable and pull valid values from the gl_code_combination table.	Resolved

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Issue	Raised By / Date Needed	Resolution/Answer	Resolved By / Date Completed
Should the Form be Query Only?	Srikant Akula	The form is query only and the user cannot update, insert, or delete data through the form	Resolved
Is the File Load Process an automated process that will be kicked off through a PL/SQL package?	Srikant Akula	The File Load Process is an automated process, but will require a budget service user to provide a file with accurate data in a pre-determined format.	Resolved

Appendix

File Format:

4251XNY | BSA | 4101G | 2002 | 0230XNY | BSA | 4101G | 2002 | 0.1 | 0.9
4251XNY | BB7 | 63011 | 2002 | 0230XNY | BB7 | 63011 | 2002 | 0.25 | 0.75
4251XNY | BDC | 3302C | 2003 | 0230XNY | BDC | 3302C | 2003 | 0.3333 | 0.6667