



GOING GLOBAL: A MULTI-ORG SOLUTION FOR FIXED ASSETS

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Introduction

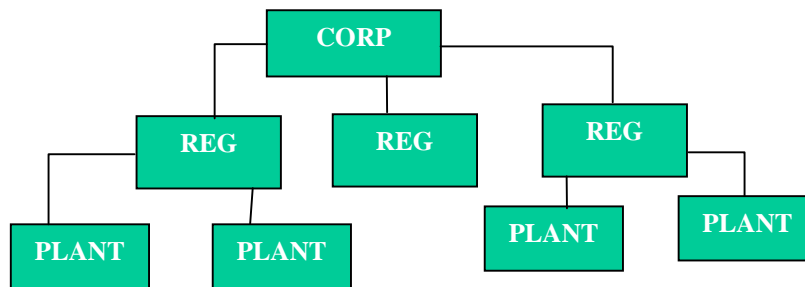
Oracle Fixed Assets has supported multiple Sets of Books and multiple Asset Books long before true multi-org functionality existed in any of the other sub-ledgers. Now that AP and AR allow for decentralization of responsibilities, many organizations are looking for similar functionality within the Assets Application. While the assets application is designed to support multiple Corporate and Tax Books, the access to asset control data is often greater than many customers would prefer.

A geographically decentralized organization often has multiple departments responsible for different groups of assets. Sometimes the areas of responsibility are split at more than one level of segregation. Often while the Finance department is responsible for Corporate Book assets, the Tax department maintains full control of the Tax Books. Further with responsibility divided among corporate and regional locations, the need for enhanced security increases. The capability and requirements necessary to build additional flexibility and security enabling decentralized organizations more freedom within their business structure is explained.

Security Review

The following is a sample scenario for a Global Corporation requiring complex segregation

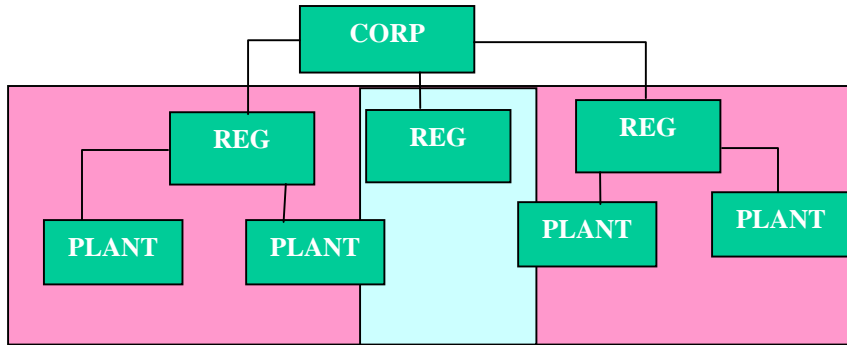
1. A Corporate Headquarters with Regional and Legal entity Assets
2. Corporate Assets are owned and maintained by the Corporate Finance Department
3. Corporate Tax Books are maintained by the Corporate Tax Department
4. Legal Entities throughout the world maintain assets at a plant level with Regional Oversight





Requirements defined include the following Security/Segregation needs

1. Global Access to Asset Information at the Corporate level
2. Security Access to asset data by Geographic Region
3. Security Access to asset data by 'Asset Grouping' for tax books
4. Security Access to asset data by individual book for Tax and Plant needs



Result

Because the security sought is not supported, atypical enhancements will be necessary. A goal of minimal customization is a high priority; however, with an extremely decentralized environment, some modifications are realized as being acceptable. All but one piece of the solution presented is supported through standard supported application functionality. Semi-modular sql*plus programming code is written to incorporate security into shared user forms which allow data updates. The program code is flexible enough to allow for growth and also designed to be minor and straight forward enough to be repeated during an upgrade or patch application.

In the end, the solution satisfies the needs of the global environment. The modifications are reasonable. Decentralization is feasible, without significant concern about data security.

Standard FA and Multi-Org Review

FA Standard Functionality

Oracle Fixed Assets allows for multiple Corporate, Tax and Reporting Books to be defined. Some of these Asset Books will post to a General Ledger Set of Books while others may be strictly for reporting and tax purposes. Access to the data within the different books is not restricted through standard Oracle functionality.

Fixed Asset Data is separated by Asset Book but is not secure by Asset Book. All users with access to a given form can access any of the books and therefore all the data within the book. Security can be achieved through the use of Menus and Responsibilities that restrict access to certain Forms and Functions. However, if a user has access to a Form or Function, any Asset Book and therefore the Asset Data can be modified. The lack of restricted access to the various Asset Books makes it difficult to decentralize the Fixed Asset Function.

Standard Multi-Org Functionality

Org Setup - In Release 10.6 and 10.7 the architecture of the financial subledger application was modified to support multiple Operating entities within a single database instance. Because there are differences in this architecture, we will focus on the more recent 10.7 and beyond design. In essence, tables have been segregated between transactional and non-transactional definitions. Those tables that may be directly tied to a transaction have been modified to include an Organization ID. Invoice, Payment, Site level information tables all have this additional attribute. Views have been created which display data to different responsibilities based on the 'Operating Unit' definition.



Segregation of Data – In subledgers like AR and AP the Transactional data and some of the setup is segregated by Operating unit. The MO:Operating Unit Profile Option must be assigned to a Responsibility by the System Administrator. The Responsibility will give the user access to only one Operating unit regardless of how many Operating units are defined. If a user needs access to more than one Operating Unit multiple Responsibilities must be assigned to the user. All transactional data and some setup within the Operating Unit is secure by Responsibility. Fixed Asset data and much of the setup is segregated by Asset Book. However, all the Asset Books and its corresponding data are accessible by the users if the user has access to the form.

Postings – Subledgers like AR and AP require each Operating Unit to post transactions to its associated General Ledger Set of Books independently of the other Operating Units. Similarly, Fixed Assets must run the Journal Entries Program for each Asset Book that requires transactions to be transferred to the General Ledger.

Shared Data - The subledgers like AR and AP have very limited shared data between Operating Units. Header level Vendor and Customer information is shared and several pieces of the set up information is also shared. Fixed Assets also shares some setup information between the books. The Assets Application also shares data between a Corporate Book and its related tax and reporting books. Assets and related asset information from the Corporate Book can be copied each period to related Tax and Reporting books. However, data cannot be shared between non-related books.

Bringing the Requirements Together

The security definitions listed above do not currently exist through Release 11 of Oracle Fixed Assets. A consolidated solution has been defined utilizing supported Descriptive Flexfields, Site Specific Profiles, Value Sets, Menus, Responsibilities and some minor form modifications. Because these customizations are still more than what a standard implementation, a custom application is also recommended.

Now that the functionality differences are clear between the Multi-Org Apps and the Standard Assets environment, the knowledge exists to merge the requirements into a technical design. Our goal is to create an environment functionally similar enough to Multi-Org to allow for the Assets departments to make use of similar organizational and business structures. Complex customizations could be made to include identical Multi-Org profile options and fields to the system; however, that could be unnecessary effort that might not create the ideal result either.

The analysis first focuses on the desire for segregation. Reviewing the question of where security is needed and how to break it down best is straightforward. The core focal point for Asset information is the Corporate Book. Legal entity reporting is often done at this level. Maintenance is usually done at this level. Depreciation runs (Posting) is also done at this level. Additionally, like ORG_ID in the Multi-Org applications, BOOK_TYPE_CODE is part of the primary key in many of the FA tables. This similarity should make the goal reasonable to achieve.

FA Customized Functionality

The customization requires several functional setup steps and some programming to modify the asset forms. Access to the System Administrator and Application Developer Responsibilities will be required. A forms programmer will also be required to make the necessary modifications to the Asset forms.

The Book Controls Descriptive Flexfield must be defined to reflect the desired security controls. This descriptive flexfield will be populated on every book that is defined in the asset system. Multiple segments can be used to achieve different levels of security. Some planning should take place to decide on the proper number of segments for the flexfield and the valid values that will be used for each segment.

A custom Profile Option will need to be defined using the Application Developer Responsibility. This Profile should be defined on the custom Fixed Asset Application. The Profile will be the link that ties the custom forms to the Flexfields added to the book definition.



Each of the custom forms must be registered using the Application Developer Responsibility. The forms must be registered on the custom Fixed Asset Application.

Separate Responsibilities will need to be defined and attached to the users that will need access to the Fixed Asset Subledger.

The custom Profile Option must be populated by the System Administrator on each of the Fixed Asset Responsibilities that are requiring security. The value for the Profile corresponds to the values that are defined for the value set used in the Book Controls Descriptive Flexfield. The value that is populated on the Profile will determine the access that the user will have in the Fixed Asset Subledger.

Define a Custom Application

Whenever a company decides that it will need more than a slight 'tweak' or two to the applications, it is always recommended that they build a custom application. A custom application is a way of holding, maintaining and identifying 'home grown' solutions to site-specific needs. These custom applications complement the standard applications (GL, OE, AR, FA, etc.). Depending on the depth and breadth of planned customizations, a site might choose one custom application or many. ACME Corp might create a single custom application (perhaps 'CUS') or multiple custom applications (ACGL [acme custom GL], ACOE [acme custom OE], etc.).

These applications are created to reduce the chance that custom programs, forms, reports, etc. will be over written through an upgrade or patch application. Additionally it allows an additional opportunity for security to prevent technical team members from accidentally modifying or deleting the source code from Oracle.

The applications are not very difficult to create but are best left to the Database Administrator and the Oracle Applications System Administrator.

Descriptive Flexfields

Descriptive Flexfields allow us to make supported, site specific modifications to the applications easily. They allow us to add data to tables which would otherwise require database level customizations.

Since most of the application forms break data based on the BOOK_TYPE_CODE already, defining descriptive flexfields at this level is the most logical. In this example, because of differences in the amount of responsibility at the legal entity and regional levels, two layers of security have been designed, one for the physical book and another for the region, both utilizing Descriptive Flexfields on the Book Controls form.

Elements of the Flexfield include

1. Value Sets – One at each level for Group and Region
2. Value Set Values – Define Valid Values for each Value Set
3. Activate the Descriptive Flexfield by adding the Segments to the Descriptive Flexfield Definition.



1. Create the Value Set

The 'Value Sets' window displays the following configuration:

- Value Set Name:** XX_FA_REGION
- Description:** XX_FA_REGION
- Security Available
- Enable Longlist
- Format Validation:**
 - Format Type: Char
 - Maximum Size: 15
 - Precision: []
 - Numbers Only (0-9)
 - Uppercase Only (A-Z)
 - Right-justify and Zero-fill Numbers (0001)
 - Min Value: []
 - Max Value: []
- Value Validation:**
 - Validation Type: Independent
 - [Edit Information]

2. Create Value Set Values

The 'Segment Values' window displays the following configuration:

- Value Set
- Key Flexfield
- Descriptive Flexfield
- Concurrent Program
- Title: Book Controls
- Context: XX ASSETS
- Independent Segment: REGION
- Dependent Segment: []
- Independent Value: []
- Value Description: []
- Values (REGION):**
 - Effective: [Effective]
 - Table with columns: Value, Description, Enabled, From, To, []

Value	Description	Enabled	From	To	[]
CANADA	CANADA	<input checked="" type="checkbox"/>			
EUROPE	EUROPE	<input checked="" type="checkbox"/>			
MEXICO	MEXICO	<input checked="" type="checkbox"/>			
UNITED STATES	UNITED STATES	<input checked="" type="checkbox"/>			
		<input type="checkbox"/>			
		<input type="checkbox"/>			
		<input type="checkbox"/>			

Buttons: [Define Child Ranges], [Move Child Ranges], [View Hierarchies]



3. Activate the Descriptive FlexField

Descriptive Flexfield Segments

Action Edit Query Go Folder Special Help

Application Title

Freeze Flexfield Definition Segment Separator

Context Field

Prompt

Default Value

Reference Field

Value Required

Override Allowed (Display Context)

Context Field Values

Code	Name	Description	Enabled
Global Data Elements	Global Data Elements	Global Data Element Context	<input checked="" type="checkbox"/>
XX ASSETS	XX ASSETS	XX ASSETS	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>



Once the Flexfield has been built and activated, Users (Super Users/System Administrators) can assign the security levels to the books.

Book Controls

Action Edit Query Go Folder Special Help

Book Class

Description Associated Corporate Book [.U]

Calendar

Inactive On Allow Purge Purged Through

Book Controls

Set Book Security:

REGION

GROUP

Depreciate If Retired in First Year

Last Depreciation Run

Last Run Date Request Status

Status Request Phase



Define the Custom Profile

A single custom profile is necessary to associate either the Region or Group to the Asset Responsibility. This profile is set like typical responsibilities by the system administrator. While there are two levels of security associated with a Book, only one level of access is available to a given responsibility; therefore only one profile will be created.

This example is very simple, but with a little effort, can be validated against a Value Set similar to the Descriptive Flexfield.

The screenshot shows a software window titled "Profiles" with a menu bar (Action, Edit, Query, Go, Folder, Special, Help). The main area contains several input fields and sections:

- Name:** xy_FA_BOOK_ACCESS_CODE
- Application:** xy Assets
- User Profile Name:** xy_FA_BOOK_ACCESS_CODE
- Description:** xy_FA_BOOK_ACCESS_CODE
- Active Dates:** Start: 01-JAN-1999, End: (empty)
- SQL Validation:** (empty text area)
- User Access:** Visible, Updatable
- Program Access:** Visible, Updatable
- System Administrator Access:** A table with columns for Site, Application, Responsibility, User, Visible, and Updatable.

	Visible	Updatable
Site	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Application	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Responsibility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
User	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



FA Forms

The security defined above, in combination with the form modifications limits the user access to those of the Responsibility's profile options.

Forms customization is the area which should be approached with conservatism, due to their impact on maintenance. Whenever patches or upgrades are received, typically new forms are received. Any standard form that is customized will usually need to be re-customized after a patch application. Therefore good documentation and simple customizations are advised. Careful review to minimize the number of forms customized will also help in the long run.

Most of the transaction forms are mandated for security. Forms that can maintain the location, cost, account and other asset information are core to the modifications. Additionally modifying the depreciation form allows individual sites access to maintain their own depreciation schedules. Inquiry forms need only be modified if there are issues associated with inter-organizational review.

Be sure to rename the forms that need to be customized and store them in a custom directory.

Below is a listing of some of the primary Asset forms that should be considered:

<u>Original Form</u>	<u>Original Form Description</u>	<u>Custom Form</u>	<u>Custom Form Description</u>
FAXASSET	Assets (Maintenance)	XXFAXASSET	XX Assets (Maintenance)
FAXDPRUN	Run Depreciation	XXFAXDPRUN	XX Run Depreciation
FAXMAABI	Assign Investment Tax Credit	XXFAXMAABI	XX Assign Investment Tax Cr
FAXMACWA	Capitalize CIP Assets	XXFAXMACWA	XX Capitalize CIP Assets
FAXMADPA	Mass Depreciation Adjustment	XXFAXMADPA	XX Mass Depreciation Adj
FAXMAMCH	Mass Change	XXFAXMAMCH	XX Mass Change
FAXMAREV	Mass Revaluation	XXFAXMAREV	XX Mass Revaluation
FAXOLFIN	Financial Inquiry	XXFAXOLFIN	XX Financial Inquiry
FAXOLTRX	Transaction History	XXFAXOLTRX	XX Transaction History

Form	Application	User Form Name	Description
XXFAXASSET	XX ASSETS	XX Assets	
XXFAXDPRUN	XX ASSETS	XX Run Depreciation	
XXFAXMAABI	XX ASSETS	XX Assign Investment tax Credit	
XXFAXMACWA	XX ASSETS	XX Capitalize CIP Assets	
XXFAXMADPA	XX ASSETS	XX Mass Depreciation Adjustment	
XXFAXMAMCH	XX ASSETS	XX Mass Change	
XXFAXMAREV	XX ASSETS	XX Mass Revaluation	
XXFAXOLFIN	XX ASSETS	XX Financial Inquiry	
XXFAXOLTRX	XX ASSETS	XX Transaction History	



With the above items in place, all of the pieces are available to create the responsibilities. The only remaining tasks are to create menus and responsibilities making use of all of the above. Once complete assigning the custom profile value to each responsibility completes the security requirements sought.

Special Note

There should always be at least one Global user defined for the application super user. This responsibility should continue to use the Standard Oracle provided Application Forms. The Global user should maintain the Fixed Asset Setup, coordinate Depreciation Runs and Journal Entry transfers, and resolve any Fixed Asset issues. Beyond other functions, this responsibility will provide an outlet to determine if any errors being experienced are the result of customization or an Oracle supplied bug.

Patches and Upgrades need to be reviewed carefully. The original customizations will not be wiped out by a patch or upgrade because the custom forms were renamed and a custom application was used. However, if the form versions or functionality changes during a patch or upgrade, the customization will need to be reviewed and reproduced in the new version of the forms.

Conclusions

More and more Corporations are attempting to support multiple entities and multiple tiers of their organizational structure through an enterprise suite. The flexibility of the Oracle Applications design allows for enhancing the security to support these needs with minor custom development. The design presented here allows for Plants and Tax Departments to have tight restrictions to specific book elements; regional leads access to plant data under their authority; and global super users the flexibility to manage, review

About the Author

Peter Merrifield is a Practice Manager with Applications Consulting Specialists, in St. Petersburg Florida. He has been working with the Oracle Applications for over seven years as a consultant, developer, and project manager and has participated in over a dozen applications implementations. He can be contacted via email at pmerrifield@acsi-usa.com or phone 727-822-3000.