

Getting the Most from Your Flexfields

Introduction

This presentation and paper provide an overview of flexfields, both from a psychological and physiological standpoint. It includes hints and tips on flexfield design and makes recommendations based on the experience of FMT's consultants.

What's the big deal about flexfields?

Company X had a 17 segment accounting flexfield. This meant that for every transaction, the user keyed in values for all of the 17 segments! Just entering a new asset into the fixed asset system took over ten minutes. A routine, manual journal entry was a nightmare.

We suggested that the client could enter some default values into a few of the fields along with creating some account aliases (shortcuts) for frequently used account code combinations. This helped a little, but the accounting flexfield was still unwieldy with all of that information contained in it.

This was 1994, when the approach to flexfield design seemed to be "everything but the kitchen sink." Today, the typical accounting flexfield at most companies is more commonly in the 5-7 segment range, allowing for much easier data entry and analysis.

What's a flexfield, anyway?

Flexfields are an important feature of Oracle Applications. They allow you to configure and customize the fields in the applications for the way you do business, as opposed to attempting to make each customer conform to a "one-size-fits all" philosophy.

Key versus descriptive flexfields

Key flexfields

Key flexfields store specific business information that is often represented as a combination of codes or multi-part values. Examples of business data typically represented by such codes are General Ledger Account Numbers and Inventory Part Numbers. Each segment (or piece) of a key flexfield contains a portion of the information represented by the whole flexfield (in combination).

Some examples of Key flexfields (by application) are:

- Oracle Assets:** Asset Key, Category and Location
- Oracle General Ledger:** Accounting
- Oracle Receivables:** Sales Tax Location and Territory
- Oracle Inventory:** Account Aliases, Item Catalogs, Item Categories, Sales Orders, Stock Locators and System Items

This document primarily covers the accounting flexfield in the Oracle General Ledger application. The concepts discussed for planning and designing this flexfield, however, can be easily applied to other flexfields in other Oracle applications.

Descriptive flexfields

Descriptive flexfields provide customizable space on some forms. You can customize the field to collect information not generally tracked by Oracle Applications.

Descriptive flexfields can be global or context specific. Global descriptive flexfields appear the same every time you use them. Context sensitive descriptive flexfields may change, depending upon the information that you entered prior to accessing the descriptive flexfield.

For example, in Oracle General Ledger, you may want a global descriptive flexfield that gathers additional data at the end of each journal entry line. In Oracle Assets, you may want to gather information that depends on the asset category. The descriptive flexfield can be setup to be context sensitive to the category information that precedes it. If a user enters a "Computer" asset, the system may prompt for additional data such as memory, hard drive size, etc. If a user enters a "Vehicle" asset, the system may prompt for completely different information such as insurance policy and license plate number.

The focus of this document is key flexfields.

Flexfield design (psychology)

What to put in?

Deciding what to put in an Oracle flexfield can be a challenge. One way is to examine the data that you have in your existing system. What data do you need that you currently do not have? For example, your current system may have been implemented before you wanted to track budget centers. Therefore, you may want to add budget centers to your flexfield.

What to leave out?

In continuing to analyze the data from your existing system ask "What data do I have that I really do not need." For example, your current system may have been designed to track data at the sub department level, but sub department use was recently discontinued by your company. Therefore, you may elect to leave sub department out of your new flexfield.

What is typical?

It is common for flexfields to vary in length from as little as 3 to as many as 17 segments. Particularly, back in the earlier days of flexfield design when the "everything but the kitchen sink" mindset existed, which resulted in several companies implementing very large accounting flexfields.

Today, it is more common to see accounting flexfields in the 5-7 segment range.

What else should I consider?

Consider all application modules that you plan to implement (not just General Ledger). For example, a nine-segment flexfield may be fine with your corporate accountants, but those same nine segments may cause problems with data entry in a high-volume Payables or Receivables environment.

Flexfield design (physiology)

Now that we have discussed the psychology of flexfield design, we will cover the physiology (or steps) to creating a flexfield.

Define Accounting Flexfield Value Sets

Value Sets must be defined for each segment of the Accounting Flexfield. Value sets are used to set up the characteristics of the segments such as: How many characters long it will be, whether or not alpha characters are allowed, what kind of security can be enabled, and whether or not a value is required. The value set also specifies the positioning of the values within the segment. You may create individual value sets for each segment of the Flexfield. Value sets may also be shared between segments if the segments are the same length and have the same characteristics.

Use the following menu path to create value sets in Oracle General Ledger:

Setup, Financials, Flexfields, Validation, Sets

or

Click the Value Set button from the Define Accounting Flexfield window.

Value Set Fields

Value Set Name: Enter a name for the value set. Since value sets can be shared, you may want to describe how the value set will perform its validation, rather than naming it for a specific flexfield segment.

Description: Type in a description for the value set.

List Type: Select either List of Values, Long List of Values, or Poplist.
Select **List of Values** to access a regular list of valid segment values.
Select **Long List of Values** to launch the LongList feature in Oracle Forms Applications. When you encounter a longlist-enabled field, a pop-up window asks for a partial segment value to shorten the list of values that you must view. Typically, the longlist feature is used with the Accounting Flexfield segment that contains the greatest number of values. You may not enable LongList for a value set that has a validation type of None.

Select **Poplist** if you want to provide a pop up list of values in Oracle Self-Service applications.

Here are Oracle's guidelines for the List Type field:

- Poplist - fewer than 10 values expected
- List of Values - between 10 and 200 values expected
- Long List of Values - more than 200 values expected

Security Type: Allows for the definition of flexfield security rules for the segments that use this value set. Flexfield Security rules will not be required for value sets where this value is set to either Hierarchical Security or Non-Hierarchical Security, but rather the functionality will be available if you choose to use it. If you choose No Security, security will NOT be available for segments that use this value set.

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Format Type:	<p>Enter the type of format you want to use for your segment values. Valid format types are Char, Date, Datetime, Number and Time. The default value for this field is Char.</p> <p>Char allows you to enter letters, numbers and special characters as valid values.</p> <p>Number requires that users enter a numeric value.</p> <p>Date specifies a date format such as DD-MMM-YYYY, depending on the maximum size you have determined for the value set.</p> <p>Datetime requires a date/time format such as DD-MMM-YYYY HH:MM, depending on the maximum size for the value set.</p> <p>Time enforces a time-only format such as HH:MM:SS, depending on the maximum size for the value set.</p>
Maximum Size:	<p>Enter the maximum size for the value set. This is the longest value that can be entered into a segment that uses this value set and it is also the longest Display Size you can select in defining your flexfield segment structure or for reports.</p>
Precision:	<p>Used to specify the number of places that appear AFTER the decimal point. This field is only used if you have previously specified a Format Type of Number. For example, to display a number as a single integer, you use a precision of 0. To display a two numbers to the right of the decimal point, use a precision of 2.</p>
Numbers Only (0-9):	<p>Use this box if you ONLY want to allow numbers.</p>
Uppercase Only (A-Z):	<p>Use this box to automatically change alpha characters to uppercase, even if they were actually entered in lowercase.</p>
Right-Justify and Zero-fill Numbers (0001):	<p>Use this box to force the flexfield segment to right justify and enter leading zeros when you enter values for segments that use this value set. For example, this allows the data-entry user to enter the value of "1" and the system will automatically right justify it in the field and convert it to a value of "0001."</p>
Min Value:	<p>Enter the minimum value a user can enter in a segment that utilizes this value set. The minimum value must fall within the size parameter you have previously defined for the value set.</p>
Max Value:	<p>Enter the maximum value a user can enter in a segment that utilizes this value set. The maximum value must fall within the size parameter you have previously defined for the value set.</p>
Validation type:	<p>Specify how you want Oracle to validate your segment values. Value sets allows the following validation types:</p> <p>Independent: The valid values in this segment stand alone and do not depend on the valid values of any other flexfield segment.</p> <p>Dependent: The valid value in this segment depends upon the value in a previous segment. For example, you may choose to set up a Flexfield segment structure with two segments,</p>

	State and City, where the value of the City segment is dependent upon the value of the State segment.
Table:	The values of the segment using this value set are validated against another table in the application. Note: The accounting flexfield only supports independent, dependent, and table validation types.
None:	The values of the segments using this value set are NOT validated. They will not have descriptions and the data-entry user may type free-form into this segment. Data keyed free-form into this segment must fall within the size parameter previously defined for the value set.
Pair:	This value set uses special routines you define for pairs of segments.
Special:	This value set uses special routines that you define. For example, you may want to provide another flexfield's values as a value set for a single segment of this flexfield.
Translatable Independent:	Similar to the Independent value in that it provides a predefined list of values for a segment. However, a translated value can be used.
Translatable Dependent:	Similar to the Dependent value in that it provides a predefined list of values for a segment. However, a translated value can be used.

Value Set Name

Description

List Type **List of Values** Security Type **No Security**

Format Validation

Format Type **Char** Maximum Size 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**

Value Set Definition example

The screenshot shows the Oracle Value Sets configuration window. The 'Value Set Name' is 'F&DCOVALSET' and the 'Description' is 'Company Value Set for F & D Company'. The 'List Type' is 'List of Values' and the 'Security Type' is 'Non-Hierarchical Security'. Under 'Format Validation', the 'Format Type' is 'Char', 'Maximum Size' is '2', and 'Precision' is empty. There are three checked options: 'Numbers Only (0-9)', 'Uppercase Only (A-Z)', and 'Right-justify and Zero-fill Numbers (0001)'. 'Min Value' and 'Max Value' are empty. Under 'Value Validation', the 'Validation Type' is 'Independent'. An 'Edit Information' button is visible.

In the sample above, we have defined a value set for the Company segment of the Accounting Flexfield. The List Type will be List of Values. We have allowed for Non-hierarchical security. The format type of Char and the Uppercase Only check-box will allow for entry of alpha characters as well as numbers. Alpha characters will be converted to upper case even if they are entered in lower case letters. The maximum number of characters allowed in the valid values of this segment will be 2 and they will be right justified and zero filled. The Independent validation indicates that these values will stand alone and will not be dependent on any other flexfield segment values.

This process will be repeated for both the Cost Center segment and the Account segment of the Accounting Flexfield.

Value sets are the first step in flexfield design. Next you will define the segment structure.

Define Accounting Flexfield Segment Structure

This form is used to define the structure, or order, and the performance of the segments in your Accounting Flexfield. This is where you will establish the relationship between flexfield segments and the value sets that you have previously created. Consider how you want the segments be stacked when they pop up on the screen. Do you want the company (or balancing) segment to be at the top of the flexfield structure or at the bottom? If you are going to default the value in this segment a high percentage of the time, you may want to put it at the bottom of the structure, so that you only need to access it to change the default value.

When you have finished defining the segments, you will freeze and compile your flexfield definition. The flexfield is recompiled whenever you make changes to the structure.

Use the following menu path to define your segment structure in Oracle General Ledger:

Setup, Financials, Flexfields, Key, Segments

Key Flexfield Segments

Application and Flexfield Title: At the top of the Key Flexfield Segments window, execute a query to locate the Application: Oracle General Ledger and the Flexfield Title: Accounting Flexfield.

Key Flexfield Segments: Structures Section

Code:	The code for a structure is a developer key and is used by loader programs. The value you specify for the code will default into the title field. If you upgraded from Release 10.7 or 11.0, the codes for your structures were created from your structure titles during the upgrade.
Title:	In the Structures section of the window, you enter a title for your Accounting Flexfield structure. Oracle displays the titles of all other Accounting Flexfields that have been already created.
Description:	Enter a description for your Accounting Flexfield.
View Name:	If you would like to generate a database view for your flexfield structure, enter its name here. The view name cannot contain spaces. It must begin with a letter and can contain only letters, numbers, or underscores.
Freeze Flexfield Definition:	Check this box to freeze the flexfield definition after you are finished with it. You cannot make changes to your flexfield structure while it is frozen. The flexfield structure must be frozen and compiled before you can use it. To make changes to flexfield that has been frozen, remove the check from this box to un-freeze it, make your modifications, and then re-check the box to re-freeze the flexfield. You will need to re-compile the flexfield, also. If you have multiple flexfield structures, you must freeze and compile each one separately.
Enabled:	Check this box to specify whether this structure may be used in your Accounting Flexfield.
Segment Separator:	Type in the character that you want to use to separate your flexfield segment values. The allowed characters are: (-) dash, (.) period, () pipe, and custom characters. The default value here is a (.) period. You may want to take into consideration your data-entry operators preference when you determine this separator. The dash and the period are located on upper and lower portions of the 10-key pad, respectively. The pipe and other special characters may need to be accessed via the main keyboard.
Cross-Validate Segments:	Check this box if you desire to cross-validate multiple segments using cross-validation rules. Cross-validation rules are used to determine valid combinations of segment data. They are created in the Define Cross-Validation Rules form. For example, if you have a flexfield structure of Company-Cost Center-Account, you may want to write cross-validation rules disallowing some Company-Cost Center combinations. Enabling this box does not require that cross-validation rules be used, rather it allows you to use them if you so desire. If you leave this box blank, you will not be able to use cross-validation rules.
Freeze Rollup Groups:	Check this box if you want to freeze rollup groups. If rollup groups are frozen, users will not be able to make changes to rollup groups using the Define Segment Values form. This box may be un-checked if you do elect to modify your rollup groups. The default value for this box is blank or no value.
Allow Dynamic Inserts:	If this box is checked, new combinations of valid segment value data will be written into the GL_Code_Combinations table. Code combinations

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that get created using dynamic insertion must pass cross-validation rules and must be combinations of valid segment values.

If you do not check this box, you must enter valid code combinations into the GL_Code_Combinations table. This is a modifiable parameter. You may elect to turn it on for the initial load of data into the system and then disable it to keep new code combinations from being created at the time of data entry.

Application: Oracle General Ledger Flexfield Title: Accounting Flexfield

Structures

Code	Title	Description	View Name
ADB_ACCOUNTING_FLEX	ADB Accounting Flex	Vision ADB Accounting Flexfield	
F & D ACCOUNTING_FLEX	F & D Accounting Flexfield	F & D Company AFF Structure	
ADB_HOLDINGS_ACCOUNTING_FLEX	ADB Holdings Accounting Flex	Vision ADB Consolidated Accounting Flexfield	
BELGIUM_ACCOUNTING_FLEX	Belgium Accounting Flex	Vision Belgium Accounting Flexfield	
BRAZIL_ACCOUNTING_FLEX	Brazil Accounting Flex	Vision Brazil Accounting Flexfield	
COMMS_ACCOUNTING_FLEX	Communications Accounting	Vision Communications Accounting Flexfield	
CORPORATE_ACCOUNTING_FLEX	Corporate Accounting Flex	Vision Corporate(Consolidated) Accounting Flexfield	
DISTRIBUTION_ACCOUNTING_FLEX	Distribution Accounting Flex	Vision Distribution Accounting Flexfield	

Freeze Flexfield Definition Enabled Segment Separator: Period (.)
 Cross-Validate Segments Freeze Rollup Groups Allow Dynamic Inserts

Buttons: Compile, Segments

Click the Segments button on the Key Flexfield Segments window to display the segment summary for the selected (highlighted) structure.

Segments Summary (Accounting Flexfield) - F & D Accounting Flexfield

Number	Name	Window Prompt	Column	Value Set	Enabled	Displayed
1	Company	CO	SEGMENT1	F&DCOVALSET	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Cost Center	CC	SEGMENT2	F&DCCVALSET	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Account	ACCT	SEGMENT3	F&DACCTVALSET	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>

Buttons: Value Set, Flexfield Qualifiers, New, Open

Key Flexfield Segments: Segments Window

This window is used to define your accounting flexfield segments.

Name:	Enter a name for the Accounting Flexfield segment that you want to define. Your segment name can contain only letters, numbers, spaces or underscores (_). Your segment name should start with an alpha character.
Description:	Enter a description for your segment.
Column:	Enter the name of the column of the database table that you want to use for your segment. For the Accounting Flexfield, you may only use SEGMENT1 through SEGMENT30 and each column can only be used one time.
Number:	Enter the number of the segment here. The number of the segment relates to where it pops-up in the flexfield window. Lower number segments appear in the display above higher number segments. If the segment uses a value set of dependent, it should appear numerically after the independent segment it references. The Accounting Flexfield REQUIRES consecutive segment numbers beginning with the number 1.
Enabled:	Checking this box allows you to use this segment.
Displayed:	Checking this box allows this segment to actually appear in the flexfield pop-up window. If the segment is not displayed, you should provide a default value so that the user does not need to enter one for this segment. If you do not want to provide a default value, you may also elect to use a validation type of NONE for segments where the value will not be displayed.
Indexed:	Oracle General Ledger uses this field for the Optimization feature. Check this box if you want the database column in the combinations table to have a single-column index. Indices should be created on segments that will have a large number of values.
Value Set:	Use this field to associate the value set to the flexfield segment. Value sets for the Accounting Flexfield must use a validation type of either Independent, Dependent or Table. You may not use a validation set with a type of "None" for the Accounting Flexfield. Value sets may have a one to one relationship with segments of the flexfield, or they may be re-used if segments are the same size and have the same attributes.
Default Type:	If you elect to establish a default value for this particular segment, you must specify the "Type" of value here. Valid types are: Constant: The default value specified can be any constant value. Field: The default value will be the current value in the field you designate in the Default Value field. The field you specify must be in the same form as the flexfield whose value contains the default. Profile: The default value is the current value of the user profile option defined in the Default Value field. The field you specify must be in the same form as the flexfield whose value contains the default. Make sure to use the

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	application names of the profile options and not the user names with this Default Type.
SQL Statement:	The default value is returned from the SQL statement you define in the Default Value field. The SQL statement must return a single value.
Segment:	The default value is the value entered in a previous segment of the same flexfield window.
Default value:	You can enter a default value for the flexfield segment. The flexfield segment automatically displays this default value when a user enters the flexfield pop-up window. The default value may be either constant or context-sensitive, depending on what you select as the default type. (See Default Type, above).
Required:	Check this box to specify that a value is required for this segment. If this box is checked, users must enter a value in the segment before the flexfield window can be closed.
Security Enabled:	Check this box to allow the use of Flexfield Security rules for this segment. Checking this box does not require Flexfield Security rules to be used, it simply allows for this functionality should the user elect it. This checkbox displays only (no entry allowed) when the value set for this segment has not been enabled to allow either hierarchical or non-hierarchical security.
Range:	Use this field to validate the value of your segment against the value of another segment in this same structure. Valid values for this field are either Low or High . If your value set is of the type Pair , this field is display only and the value defaults to Pair .
Display Size:	Enter the segment's display size here. The flexfield pop-up window displays this many characters. The display size must be less than or equal to the maximum size that was selected in the Define Value Set form for the value set that is associated with this segment.
Description Size:	Enter the segment's description size here. The flexfield pop-up window displays this many characters. The default value for this field is 50 characters. You may want to set this value to 30 or less, to keep your flexfield pop-up window from scrolling horizontally.
Concatenated Description Size:	Specify the length of a segment description, number of characters long, when it is displayed concatenated. The default value here is 25 characters.
Window:	Enter the prompt that you want your data-entry user to see in the flexfield pop-up window. This prompt may be different than the actual flexfield segment value name.
List of Values:	This is an abbreviated value that displays above the flexfield segment and in reports. The default value for this field is the segment name; however, you may want to shorten the segment name in some abbreviated fashion for this above-prompt.

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Key Flexfield Segments: Flexfield Qualifiers Window

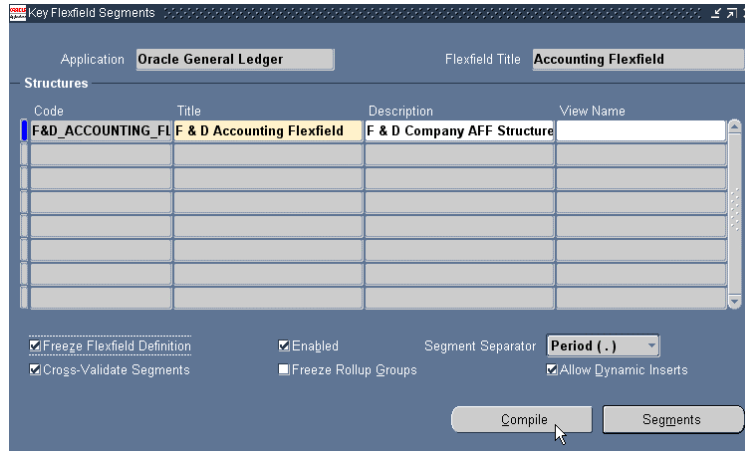
This window is used to specify flexfield qualifiers for your flexfield segments. This window is not enabled if the flexfield has no qualifiers.

- Enabled:** Checking this box indicates to the system that this qualifier is turned on for a particular segment.
- Natural Account Segment:** One and only segment of your accounting flexfield **MUST** be specified as the natural account segment. By defining a segment as the natural account segment, you will be required to enter additional information for each value you define for that segment. Some of the additional information required is: Account type (asset, liability, owner equity, revenue or expense) and whether or not budgeting and posting are allowed for the account value. This is the segment of the Accounting Flexfield that usually equates to your existing Chart of Accounts.
- Balancing Segment:** One and only one segment of your accounting flexfield **MUST** be specified as the balancing segment. The balancing segment of the accounting flexfield is the segment at which all debits and credits must balance.
- Cost Center Segment:** One and only one segment of the accounting flexfield may be specified as the Cost Center segment. Oracle Assets uses this segment to post monthly asset depreciation to the Cost Center level.
- Intercompany Segment:** Check this box to designate a particular segment of the accounting flexfield to be the intercompany segment.

Name	Description	Enabled
Cost Center Segment	This attribute is used to identify the cost center segment.	<input type="checkbox"/>
Natural Account Segn	This attribute is used to identify the natural account segment.	<input type="checkbox"/>
Balancing Segment	This attribute is used to identify the balancing segment. This i	<input checked="" type="checkbox"/>
Intercompany Segme	This attribute is used to identify the intercompany segment	<input checked="" type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

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After you define the structure, freeze the definition and compile it for use.



Define Accounting Flexfield Segment Values

For each segment that you have created for your Accounting Flexfield structure, it is necessary to enter valid segment values. For example, if you have a 3-segment Accounting Flexfield that consists of a Company-Cost Center-Account structure, you must enter the valid values that you will use for each of the segments. Utilizing our 3-segment flexfield example, before you actually enter the values, determine which Companies, Cost Centers and Accounts you need to run your business. These valid values appear in the List of Values pop-up window whenever a user enters data into a segment of the Accounting Flexfield.

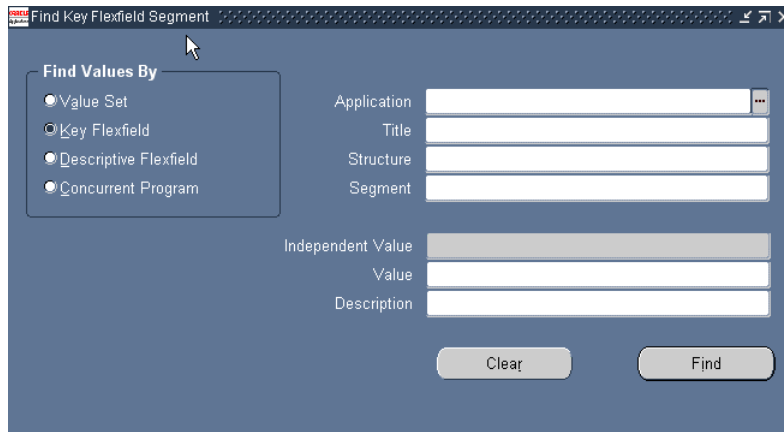
Use the following menu path in Oracle General Ledger to enter valid segment values:

Setup, Financials, Flexfields, Key, Values

Find Key Flexfield Segment Window

To define valid segment values for a particular Application, Flexfield, Structure and Segment, it is necessary to enter and execute a query. You should run your query using the following criteria:

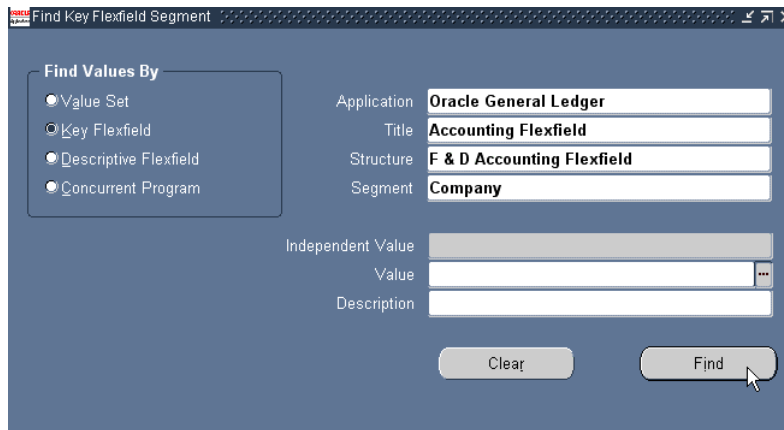
Application: Oracle General Ledger
Title: Accounting Flexfield
Structure: Your Accounting Flexfield structure name
Segment: Select a segment in your accounting flexfield or leave this field blank to view all of the segments in your structure.



The screenshot shows the 'Find Key Flexfield Segment' window. On the left, under 'Find Values By', there are four radio buttons: 'Value Set' (selected), 'Key Flexfield', 'Descriptive Flexfield', and 'Concurrent Program'. To the right, there are input fields for 'Application', 'Title', 'Structure', and 'Segment', all of which are empty. Below these are fields for 'Independent Value', 'Value', and 'Description', also empty. At the bottom right are 'Clear' and 'Find' buttons.

Find Key Flexfield Segment Example

In the Find Key Flexfield Segment sample screen (seen below) we have entered selection criteria to find the Application: Oracle General Ledger, Title: Accounting Flexfield, Structure: F & D Accounting Flexfield and Segment: Company. We will execute a query using these selection criteria.



The screenshot shows the 'Find Key Flexfield Segment' window with the same layout as the previous one, but with the following values entered in the input fields: 'Application' is 'Oracle General Ledger', 'Title' is 'Accounting Flexfield', 'Structure' is 'F & D Accounting Flexfield', and 'Segment' is 'Company'. The 'Independent Value', 'Value', and 'Description' fields remain empty. A mouse cursor is pointing at the 'Find' button.

Define Segment Values Form

Use this form to enter valid segment values into the segments of your Accounting Flexfield.

Value Set Section

The first section of this form displays the Application, Title, Structure and Segment name that you selected in the Find Key Flexfield Segment Form.

- Title: The system displays the flexfield title that you selected in the Find Key Flexfield Segment form.
- Structure: The system displays the flexfield structure that you selected in the Find Key Flexfield Segment form.
- Independent Segment: The system displays the independent (or standalone) flexfield segment that you selected in the Find Key Flexfield Segment form.
- Dependent Segment: This field is used only if you are defining values for a segment whose value is dependent up the value in a previous segment. Enter the Dependent Segment here.

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Independent Enter the Independent Value for the dependent segment here. A Value: dependent segment must be dependent upon the value in an independent segment.

Value Description: This field displays the text description of the Independent Value from the previous field.

Values Tab (1): Effective

Use this section to enter the valid values for a segment. Segment values are both enabled and disabled using this form. This section is also used to select values for rollup groups and segment qualifiers. Segment qualifiers used in the Accounting Flexfield specify whether or not budgeting, posting and reconciliation are allowed for a value and what particular account type (Asset, Liability, Owner Equity, Revenue or Expense) an account value will be. Segment qualifiers also indicate whether or not an account is a control account.

Value: Enter a segment value that will be used to store data for this segment. The segment value must meet the format criteria for the value set that is assigned to the segment.

Translated Value: If your value set has the type Translatable Independent or Translatable Dependent, the Translated Value field is enabled. The value from the previous step defaults in. You can update the Translated Value for all installed languages using the Translation icon in the Toolbar.

Description: Enter a description for your value. This description appears on the List of Values pop-up window at the time of data entry into the segment.

Enabled: Check this box to use this value for the segment. Removing the checkmark from this box disables the value.

Effective From: Enter the date upon which you will allow the value to be used.

Effective To: Enter the date upon which the value will no longer be used.

Define Segment Values Example (1)

In the Define Segment Values screen (seen below) we have entered valid segment values for the Company segment of the Accounting Flexfield, utilizing the F & D Accounting flexfield structure. Valid values for the Company segment of the flexfield will be 01 through 99 and all of the values are enabled for use.

Value	Translated Value	Description	Enabled	From	To
01	01	Company 01	<input checked="" type="checkbox"/>		
02	02	Company 02	<input checked="" type="checkbox"/>		
99	99	Consolidation Company	<input checked="" type="checkbox"/>		

Values Tab (2) Hierarchy, Qualifiers

Parent: Check this box if you want your value to be a parent value. If you do not check this box, the value will be a child value. If you specify that a value is a parent value, you will be allowed to define and move child ranges for this value. You will also be able to assign the parent value to a rollup group. The default value for this box does not contain a checkmark.

Group: Enter the name of a predefined rollup group, if you want to assign this value to one. The Freeze Rollup Groups check box in the Define Key Segments form must be blank in order to do this. Rollup groups are assigned here only. They are created in another Oracle General Ledger form called Define Rollup Groups.

Level: A text field that is typically used to describe a level in the parent-child hierarchy.

Qualifiers: Placing your cursor in the qualifier field will pop-up a window prompting you to enter additional information (known as flexfield qualifiers) for your segment value:

Allow Budgeting: Specify **YES** or **NO** to indicate whether you want to allow budgeting to be used with this segment value. The default value for this field is **YES**. If you do not allow budgeting for this value, you will not be able to use it within budget organizations or budget formulas.

Allow Posting: Specify **YES** or **NO** to indicate whether you want to allow posting for this segment value. The default value for this field is **YES**. If you do not allow posting for this value, you will not be able to use it to enter journals or define formula-based journal entries.

Control Account: Control accounts are General Ledger accounts accessed from Oracle Payables, Receivables, and Inventory, for which the Global Accounting Engine automatically creates detailed balances. The control account segment qualifier lets you indicate which account segment values represent control accounts. You must define the

control account segment qualifier before you can define accounting segments as control accounts.

Account Type: Used ONLY for the Accounting Flexfield segment that you specified as the Natural Account Segment. For these segment values only, you must specify what type of account your value is. Valid proprietary account types are: Assets, Liability, Owner Equity, Revenue or Expense. For budgetary accounts only, you will specify Budgetary Debit or Budgetary Credit.

WARNING: The system default value for account type is EXPENSE. If you do not select the qualifier for each account value you define, it is automatically assigned the account type of expense.

Reconciliation Indicates whether General Ledger should allow Flag: reconciliation for natural accounts that should balance to zero. You can enable or disable reconciliation for an account segment value or for specific accounting code combinations.

Buttons

Define Child Ranges: Click this button to define individual child values, or ranges of child values to a parent value.

Move Child Ranges: Click this button to move a range of child accounts from one parent value to another.

View Hierarchies: Click this button to view the hierarchical structure of your selected account value.

As an alternative to using these buttons to define, move, and view your parent-child hierarchies, you may also elect to use Oracle General Ledger's Account Hierarchy Editor. The Account Hierarchy Editor provides a more graphical user interface for this functionality.

Define Segment Values Example (2)

In the Define Segment Values example screen (seen below) we have specified the value of 99 (Consolidation Company) as a parent segment value.

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The screenshot shows the 'Segment Values' window with the following configuration:

- Radio buttons: Value Set (selected), Key Flexfield, Descriptive Flexfield, Concurrent Program
- Title: Accounting Flexfield
- Structure: F & D Accounting Flex
- Independent Segment: Company
- Independent Value: (empty)
- Dependent Segment: (empty)
- Value Description: (empty)

Below the configuration is a table for 'Values (Company)'. The table has columns: Value, Translated Value, Description, Parent Group, Level, and Qualifiers. The 'Consolidation Company' row is selected.

Value	Translated Value	Description	Parent Group	Level	Qualifiers
01	01	Company 01	<input type="checkbox"/>		Yes.Yes
02	02	Company 02	<input type="checkbox"/>		Yes.Yes
99	99	Consolidation Company	<input checked="" type="checkbox"/>	1	Yes.Yes
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		

Buttons at the bottom: Define Child Ranges, Move Child Ranges, View Hierarchies.

Define Child Ranges Example

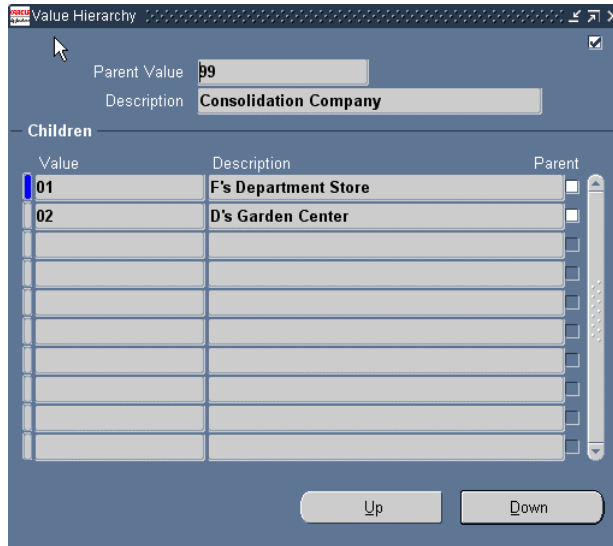
In the Define Child Ranges example screen (seen below), the valid child values that belong to the parent segment value are the range of child values from 01 through 98. Any valid child value that is added within the 01-98 range is automatically picked up by and included in the parent.

The screenshot shows the 'Child Ranges (F&DCOVALSET) - 99' window with a table for defining child ranges:

From	To	Include
01	98	Child Values Only

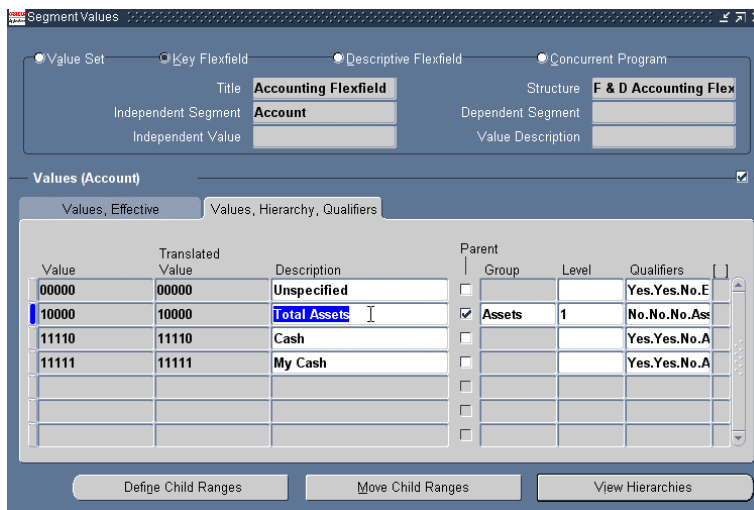
Value Hierarchy Example

In the Value Hierarchy sample screen (seen below), you can view the entire hierarchical structure of the parent value, 99, which is the Consolidation Company.



Define Segment Values Example (3)

In the Define Segment Values screen (seen below) we have entered valid segment values for the account segment of the Accounting Flexfield, utilizing the F & D Accounting flexfield structure. Valid values for the account segment of the flexfield are 00000 through 11111 and all of the values are enabled for use. One of the values, 10000, has been designated as a parent segment value and is included in a rollout group.



Click the Qualifiers column to enter or view segment qualifiers:

Value	Translated Value	Description	Parent Group	Level	Qualifiers
00000	00000	Unspecified			Yes.Yes.No.E
10000	10000	Total Assets	Assets	1	No.No.No.Ass
11110	11110	Cash			Yes.Yes.No.A
11111	11111	My Cash			Yes.Yes.No.A

Define Segment Qualifiers

In the Define Segment Qualifiers (seen below) we must tell the system if budgeting, posting, and reconciliation are allowed for the selected value, 11110 (Cash). We must also specify whether or not this account is a control account and select the account type for this value. Valid account types are Asset, Liability, Owner Equity, Revenue and Expense and the default for this field is Expense. The Account Type qualifier is required here because we specified this particular segment of the Accounting Flexfield to be the Natural Account Segment.

Allow Budgeting	Yes
Allow Posting	Yes
Control Account	No
Account Type	Asset
Reconciliation Flag	No

Define Cross Validation Rules

Through the List of Values feature, Oracle makes certain that the values entered in each segment of the Accounting Flexfield are valid segment values. However, Cross-Validation Rules are necessary to make sure that combinations of valid segment values are entered properly into the underlying GL_Code_Combinations table.

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The GL_Code_Combinations table can get populated in two ways. You can manually enter all of the valid Accounting Flexfield code combinations into the table using the menu path Setup Accounts Combinations in Oracle General Ledger. The other way in which the GL_Code_Combinations table can be populated is using an automatic feature called Dynamic Insertion. (You control whether or not to use Dynamic Insertion at the Key Flexfield Segments window).

If Dynamic Insertion is turned on, you **MUST** have a way of keeping bad combinations of segment data from being entered into the GL_Code_Combinations table and you are able to do that using Cross-Validation Rules.

Using the example of a holding company, F & D Holdings, that owns two different retail establishments, we will discuss cross-validation rules.

Company 01 is F's Discount Department Store and Company 02 represents D's Garden Center. F & D Holdings has a simple, 3-segment Accounting Flexfield where the segments consist of Company-Cost Center-Account. We need to restrict Cost Center 777 (Infant's Apparel) from EVER being used with Company 02, D's Garden Center. D's Garden Center does not currently, nor does it ever intend to sell Infant's Apparel, so this particular Cost Center-Company combination should not be allowed in the Accounting Flexfield. We can create a Cross-Validation rule to state that Cost Center 777 cannot be used with Company 02.

Use the following menu path to create cross validation rules in Oracle General Ledger:

Setup, Financials, Flexfields, Key, Rules

Cross-Validation Rules Window

Enter and execute a query to locate the following: Application: Oracle General Ledger, Flexfield Title: Accounting Flexfield and Structure: use the name of YOUR Accounting Flexfield Structure.

Cross-Validation Rule Section

- Name: Enter a name for your cross-validation rule.
- Description: Enter a description for your cross-validation rule.
- Enabled: Check this box to be able to use the cross-validation rule. Removing the checkmark from this box disables your cross-validation rule.
- Error Message: Enter the error message that you would like displayed to your data-entry user when the cross-validation rule is violated.
- Error Segment: The data-entry user's cursor is returned to the Accounting Flexfield segment specified here, so that the data entered in this segment can be corrected.
- From: Enter the date on which the cross-validation rule becomes valid.
- To: Enter the date on which the cross-validation rule becomes invalid.

Cross-Validation Rule Elements Section

This section of the window is used to define the elements of your cross-validation rule.

- Type: Enter the type of cross-validation rule element. Valid values here are **Include** or **Exclude**. Include includes all values in the specified flexfield range and Exclude excludes all values in the specified range. Your rule

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must have at least one Include element. A rule automatically excludes all values unless you specifically include them. For this reason, you may choose to use what is referred to as a "Global Include", which includes ALL values in all ranges, then create specific exclude elements for values that you don't want. Exclude elements are used here to override include elements.

From: Enter the low end of the range of values. The range of values here may be very narrow (specific to a single value) or they may be a broad range of values.

To: Enter the high end of the range of values. The range of values here may be very narrow (specific to a single value) or they may be a broad range of values.

The screenshot shows the 'Cross-Validation Rules' window. At the top, there are input fields for 'Application', 'Structure', 'Flexfield Title', and 'Description'. Below this is a table titled 'Cross-Validation Rules' with columns 'Name', 'Description', and 'Enabled'. The first row is checked. Below the table is an 'Error Message' field and 'Error Segment', 'From', and 'To' fields. At the bottom is a table titled 'Cross-Validation Rule Elements' with columns 'Type', 'From', and 'To'.

Example

In the Cross-Validation Rules sample window (seen below) we have written a rule that excludes cost center 777 from being used with Company 01. We have used a global include statement that includes the entire range of flexfield values for all segments. We have then written an exclude statement that excludes the cost center 777. The error message that is shown to the user is "You cannot use this cost center with this company". The user's cursor is returned to the cost center segment of the Accounting Flexfield to allow for correction of that value.

Name	Description	Enabled
CC Not Valid	Cost Center Not Valid with this Company	<input checked="" type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

Error Message: **You cannot use this cost center with this company**

Error Segment: **Cost Center** From: To:

Type	From	To
Include	00.000.00000	ZZ.ZZZ.ZZZZZ
Exclude	02.777.00000	02.777.ZZZZZ

Define Accounting Flexfield Security Rules

The purpose of defining Flexfield Security Rules is to restrict inquiry and data entry access at the flexfield segment value level. Security rules restrict query access in the Account Inquiry, Summary Account Inquiry, and Funds Available forms.

To setup and use flexfield security rules is actually a two-step process:

You must **DEFINE** the security rule and then you must **ASSIGN** the rule(s) to a responsibility.

Define Security Rules

Use the following menu path in Oracle General Ledger:

Setup, Financials, Flexfield, Key, Security, Define

Find Key Flexfield Segment Window

In order to define security rules for a particular Application, Flexfield, Structure and Segment, it will be necessary to enter and execute a query. You should run your query using the following criteria:

Application: Oracle General Ledger, Title: Accounting Flexfield, Structure: Your Accounting Flexfield structure name; and Segment: choose a segment in your accounting flexfield or leave this field blank to view all of the segments in your structure.

Define Security Rules Window

Value Set Zone

Title: The system displays Accounting Flexfield, based on the selection criteria you entered in the Find Key Flexfield Segment Form.

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Structure: The system displays your Accounting Flexfield structure name, based on the selection criteria you entered in the Find Key Flexfield Segment Form.

Independent Segment: The system displays the segment name, based on the selection criteria you entered in the Find Key Flexfield Segment Form.

Security Rule Section

Name: Type in a name for your security rule.

Description: Type in a description for your security rule.

Message: Enter the message that will be displayed to the end-user whenever the security rule is invoked. The message should be brief, but descriptive enough to let the user know what flexfield security rule has been violated.

Security Rule Elements Section

This section is used to define the elements of your flexfield security rule.

Type: Enter the type of security rule element. Valid values here are **Include** or **Exclude**. Include includes all values in the specified flexfield range and Exclude excludes all values in the specified range. Your rule must have at least one Include element. A rule automatically excludes all values unless you specifically include them. For this reason, you may choose to use what is referred to as a "Global Include", which includes ALL values in all ranges, then create specific exclude elements for values that you don't want. Exclude elements are used here to override include elements.

From: Enter the low end of the range of values. The range of values here may be very narrow (specific to a single value) or they may be a broad range of values.

To: Enter the high end of the range of values. The range of values here may be very narrow (specific to a single value) or they may be a broad range of values.

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The screenshot shows the 'Define Security Rules' window with the following configuration:

- Radio buttons: Value Set (selected), Key Flexfield, Descriptive Flexfield, Concurrent Program.
- Title: Accounting Flexfield
- Structure: F & D Accounting Flex
- Independent Segment: Company
- Independent Value: (empty)
- Dependent Segment: (empty)
- Value Description: (empty)

Name	Description	Message

Type	From	To

Assign

Example

In our sample flexfield security rule (seen below), we have chosen to do a “Global Include” to include all companies in the 2-digit range 00 through ZZ. The ZZ value is used, as opposed to 99, because we have allowed alpha characters in the value set for the company segment of this flexfield.

After entering the include statement, we begin the process of excluding the values that we do not want. We have chosen to exclude company 02. The responsibility to which this rule will be applied will be able to access other company values, just not company 02.

After the security rule is defined, it is assigned to a responsibility.

The screenshot shows the 'Define Security Rules' window with the following configuration:

- Radio buttons: Value Set (selected), Key Flexfield, Descriptive Flexfield, Concurrent Program.
- Title: Accounting Flexfield
- Structure: F & D Accounting Flex
- Independent Segment: Company
- Independent Value: (empty)
- Dependent Segment: (empty)
- Value Description: (empty)

Name	Description	Message
C01ONLY	Company 01 Only	You are only allowed to use Company 01

Type	From	To
Include	00	ZZ
Exclude	02	02

Assign

Assign Security Rules

Use the following menu path:

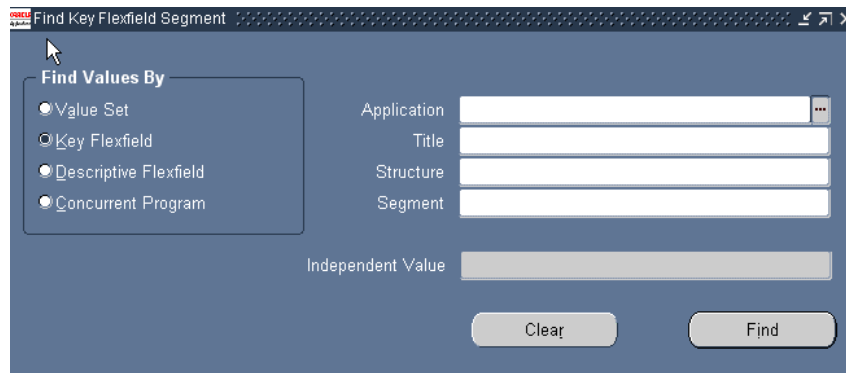
Setup, Financials, Flexfields, Key, Security, Assign

OR click the **ASSIGN** button on the Define Security Rules window.

Find Key Flexfield Segment Form

In order to assign security rules for a particular Application, Flexfield, Structure and Segment, it is necessary to enter and execute a query. You should run your query using the following criteria:

Application: Oracle General Ledger
Title: Accounting Flexfield
Structure: Your Accounting Flexfield structure name
Segment: Select a segment in your accounting flexfield or leave this field blank to view all of the segments in your structure.



Assign Security Rules Window

In this window, you assign the previously-defined flexfield security rule to a Responsibility. The flexfield security rule must be defined before it can be assigned. This form may be used to assign flexfield security rules at any time during the implementation. Flexfield security rules will restrict access to particular segment values or ranges of segment values based upon the responsibility chosen by the user at login.

Value Set Zone

Title: The system displays Accounting Flexfield, based on the selection criteria you entered in the Find Key Flexfield Segment Form.

Structure: The system displays your Accounting Flexfield structure name, based on the selection criteria you entered in the Find Key Flexfield Segment Form.

Independent Segment: The system displays the segment name, based on the selection criteria you entered in the Find Key Flexfield Segment Form.

Security Rules Section

Application: Enter the name of the Oracle application for which you want to assign security rules.

Responsibility: Enter the name of the responsibility for which you want to assign the security rules.

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Name: Select the name of the security rule you want to assign to this responsibility.

Application	Responsibility	Name
Oracle General Ledger	F's Dept. Store GL SU	CO1ONLY

Description: **Company 01 Only**
Message: **You are only allowed to use Company 01**

Summary

We, at FMT Systems, hope that this document has provided you with some insight into planning, defining, and implementing your flexfields. By applying a little psychology to the design process and by using the flexfield definition steps detailed above, you should be able to “Get the Most from Your Flexfields”!

The author, Dorothy Sheets, Director—Eastern Operations, FMT Systems Inc., has 9 years experience implementing, teaching, and selling Oracle Applications. Dorothy’s consulting expertise includes business process re-engineering and applications training for Oracle General Ledger, Accounts Receivable, Fixed Assets, and Cash Management.

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