



SIEBEL ePHARMA HANDHELD GUIDE FOR WINDOWS-POWERED DEVICES

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Contents

Introduction

This guide describes Siebel ePharma Handheld, providing information on configuration, installation, application administration, and the user interface.

This book will be useful primarily to people whose titles or job descriptions match one of the following:

Database Administrators	Persons who administer the database system, including data loading, system monitoring, backup and recovery, space allocation and sizing, and user account management.
Siebel Application Administrators	Persons responsible for planning, setting up, and maintaining Siebel applications.
Siebel Application Developers	Persons who plan, implement, and configure Siebel applications, possibly adding new functionality.
Siebel System Administrators	Persons responsible for the whole system, including installing, maintaining, and upgrading Siebel applications.

This guide assumes that you already have an understanding of Siebel Tools.

Your project team members will benefit from attending Siebel University's configuration training before they begin working with and configuring Siebel Handheld applications.

Trained technical professionals should configure Siebel Handheld applications carefully. Keep in mind that improper application configuration can adversely affect the reliability and performance characteristics of your configured Siebel application. Thorough testing is strongly recommended before production rollout of your configured application.

How This Guide Is Organized

Product Modules and Options

This guide contains descriptions of modules that are optional and for which you may not have purchased a license. Siebel's Sample Database also includes data related to these optional modules. As a result, your software implementation may differ from descriptions in this Bookshelf. To find out more about the modules your organization has purchased, see your corporate purchasing agent or your Siebel sales representative.

How This Guide Is Organized

This guide provides instructions for configuring and using the Siebel Handheld application. The instructions assume a working knowledge of Siebel Tools; therefore, information that appears in *Siebel Tools Reference* is not repeated. This guide is designed to be read from start to finish, although it can also be used as a reference thereafter to look up specific topics.

The following chapters and appendixes are directed to database administrators, Siebel application administrators, Siebel application developers, and Siebel system administrators:

- Chapter 1, "Overview"
- Chapter 2, "Application Development"
- Chapter 3, "Application Administration"
- Chapter 4, "Data Filtering"
- Chapter 5, "Deployment"
- Chapter 6, "Synchronization Conflict Handling and Recovery"
- Appendix A, "Troubleshooting"
- Appendix B, "Screens and Views"
- Appendix C, "Business Components and Classes"
- Appendix D, "User Properties"
- Appendix E, "Print Tagging Language"

Appendix F, "Print Configuration Settings"

The following chapters are directed to end users of the application. These chapters will also be helpful, as a reference, to administrators and application developers who need to understand the handheld application in order to customize it.

- Chapter 7, "Installing the Handheld Application"
- Chapter 8, "Working with Siebel Handheld Applications"
- Chapter 9, "Using ePharma Handheld"

Additional Resources

The following Siebel application guides contain information that may be relevant to your use of the Siebel handheld application.

- For detailed coverage of the Siebel user interface and how to use it, working with data, locating information with the query and find features, sharing information with other users and other basic functionality topics, see *Fundamentals*.
- For development and configuration information, see *Siebel Tools Reference* and *Siebel Tools Online Help*.
- For information on installing the server components that are required for Siebel Handheld, see *Siebel Server Installation Guide for Microsoft Windows*.
- For more information on assigning user access to catalogs, see *Siebel eSales Administration Guide*.
- For information on creating user accounts, adding views and associating views with responsibilities, and assigning responsibilities and passwords for each handheld user, see *Applications Administration Guide*.
- For information on using Siebel Remote to complete the Companion Sync synchronization process to the Siebel server from the laptop, see *Siebel Remote and Replication Manager Administration Guide*.

Revision History

Revision History

Siebel ePharma Handheld Guide for Windows-Powered Devices

Version 7.5.3

Table 1. Changes Made in Version 7.5.3

Торіс	Revision
"Unsupported Features" on page 28	Revised for 7.5.3: Added more information to this topic.
"Synchronization Security" on page 105	New to 7.5.3: Added new topic.

Siebel Handheld provides Siebel functionality to Windows-powered mobile devices employed by mobile Siebel users working in the field. Siebel Handheld provides the subset of the Web Client functionality that is required by the handheld user. It differs from Siebel Web Client and Siebel Mobile Web Client in that it uses a selected subset of views, accommodates smaller screen sizes, and has a reduced memory capacity.

Siebel Handheld

The Siebel Handheld client is a streamlined version of the Siebel Mobile Web Client. It includes only the functionality required by end users. The Siebel Handheld client supports the same data relationships, the same configuration in Siebel Tools, and much of the same functionality as the Siebel Mobile Web Client.

Some features that are available on the Siebel Mobile Web Client are not available on the Siebel Handheld. Scripting and Siebel engines (for example, Pricing and Reporting) are not supported on the handheld.

Functional Differences

Siebel Handheld applications provide the functionality to support Siebel Handheld users working in the field. Not all functionality that is appropriate for the desktop or server environment is required by the handheld user. See Chapter 2, "Application Development," for details on functional differences.

Synchronization Overview

Using Siebel Tools

Siebel Handheld applications for Windows-powered devices can be configured in Siebel Tools using Web mode. You can take your existing Siebel application and use this as the basis for the handheld application, or you can create a new application by using the Siebel Tools application shipped on the Siebel Handheld application CD-ROM. See Chapter 2, "Application Development," for more information.

Filtering

Filtering allows you to specify a subset of data to be used on the handheld device. Filtering is an important feature of a Siebel Handheld deployment because of the relatively large size of the average enterprise database in comparison to the relatively limited memory capabilities of handheld devices. It is important that sufficient time is allocated in the project plan to create and test the handheld filters. See Chapter 4, "Data Filtering," for more information.

Deploying

The Siebel Handheld application can be installed on Windows-powered devices in one of two ways. The first is to create a partnership between a desktop or laptop PC and the handheld device using Microsoft ActiveSync. The second is to install the handheld application from external media, for example, a Cabinet (CAB) file.

Handheld patches can be remotely deployed using PatchAgent. For more information, see Chapter 5, "Deployment."

Backing Up and Restoring Data

The Siebel Handheld application provides database backup functionality. A database restore utility is also included with the application. See Chapter 3, "Application Administration," and Appendix A, "Troubleshooting," for details.

Synchronization Overview

The Siebel Handheld Synchronization (Sync) client synchronizes data between the Siebel Handheld database and a remote or server database. The synchronization process:

- Updates the Siebel server database with changes made to the Siebel Handheld database
- Updates the database on the handheld device with changes made to the Siebel server database
- Downloads metadata changes, such as object definitions for new or modified screens or views
- Allows users to select filters to limit the amount of data that is downloaded

Synchronization Methods and Architecture

The following methods can be used to synchronize data on the handheld device with data in the Siebel server database: Companion Sync (CS), Direct Server Sync (DSS) and Direct Server Sync via Proxy (DSSvP). The architecture of these methods is discussed in the following sections.

Synchronization Servers

There are two types of synchronization servers: direct synchronization servers and companion synchronization servers. A direct synchronization server runs in a Siebel server installation and can accept concurrent synchronization requests from multiple synchronization clients. When connecting to a direct synchronization server, the Siebel Handheld Sync client synchronizes its data with the server-side database.

In Direct Server Sync mode, the Siebel Handheld Synchronization client uses the HTTP protocol over a network connection to communicate with the handheld synchronization server. Users should configure their handheld devices for communication over the desired network.

A companion synchronization server runs on a companion personal computer with a Mobile Web Client installation. A companion synchronization server supports synchronization with a data source specified in a client configuration; the database resides on the companion PC. Synchronization Overview

Companion Sync

Figure 1 on page 22 illustrates Companion Synchronization architecture. Companion Sync allows users to synchronize the Siebel Handheld application and database with a Siebel Remote database on a Mobile Web Client.

Microsoft ActiveSync is used to connect the handheld device and the companion PC, through a serial or USB connection, or through a network connection. The user selects synchronization filters and launches Siebel Handheld Sync from the mobile client. The Sync server components that manage transaction processing and data extraction for the handheld database reside on the mobile client.

Figure 1 illustrates Companion Sync architecture.

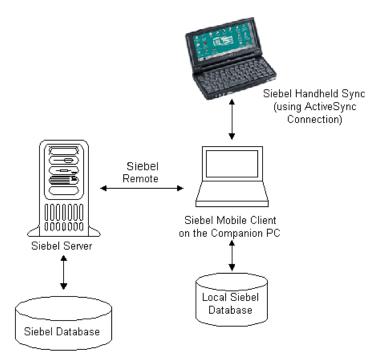


Figure 1. Companion Synchronization Architecture

Overview

Synchronization Overview

Direct Server Sync

Direct Server Sync allows users to synchronize their Siebel Handheld application and database directly with the Siebel server. The user connects the handheld device to the Siebel application server through a network connection that uses the HTTP protocol. The connection runs through an IIS Web server to the Siebel Gateway server and application server, where the Sync server components are installed. Figure 2 illustrates DSS architecture.

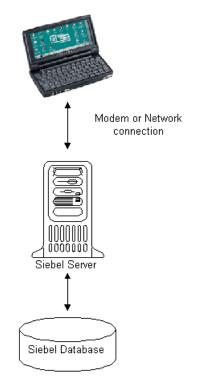


Figure 2. Direct Server Synchronization Architecture

Configuring the Siebel Handheld Client Application

Direct Server Sync via Proxy

Direct Server Sync via Proxy (DSSvP) allows users to synchronize their Siebel Handheld application and database directly with the Siebel server. The user connects the handheld device to the Siebel application server through ActiveSync and the network connection established by the companion PC. The connection runs through an IIS Web server to the Siebel Gateway server and application server, where the Sync server components are installed.

Configuring the Siebel Handheld Client Application

Complete the following steps to configure your handheld client application.

To configure the Siebel Handheld Client

1 Define the user functionality.

Determine which user interface elements (such as screens, views, toolbars, applets, find, and help) will be necessary for your Siebel Handheld Client end users. For more information, see "Defining User Functionality" on page 31.

2 Configure the Siebel Handheld Client user interface.

The process for configuring user interface elements in the Siebel Handheld Client is the same as the process for designing user interface elements in the Siebel Mobile Web Client. For more information, see "Configuring User Interface Elements" on page 36 and *Siebel Tools Reference*.

- **3** Identify all eScript or VB script used in the Siebel application, and make sure that it does not conflict with the handheld application configuration. Siebel Handheld applications do not currently support scripting.
- **4** Compile the new configuration.

For more information, see "Compiling the Application" on page 45.

5 Update directives in the Siebel Handheld Client configuration file.

For more information, see Chapter 4, "Data Filtering."

Configuring the Siebel Handheld Client Application

6 Test the new configuration.

Test the configuration, repeating Step 2 through Step 6, to address any configuration errors.

After completing the Siebel Handheld Client configuration, you are ready to install it on the handheld devices. To install the Siebel Handheld configuration on a handheld device, see the instructions in "Installing on the Handheld" on page 131.

Overview

Configuring the Siebel Handheld Client Application

This chapter describes the Siebel Handheld Client configuration process for application developers. The process for configuring a Siebel Handheld Client has a few differences, described in this chapter, from the process for configuring a Siebel Web Client.

NOTE: Readers should familiarize themselves with the Siebel Web Client configuration process described in *Siebel Tools Reference* before attempting to configure the Siebel Handheld Client.

Architectural Overview

The five layers in the Siebel Handheld architecture are comparable to those used on the Siebel Web Client:

Application layer. The application layer starts and closes the application.

User Interface layer. The user interface layer renders the display and interacts with users' actions.

Object Manager layer. The object manager layer provides a consistent object behavior and interaction between all business objects within the application.

Data Manager layer. The data manager layer maintains an object-oriented abstraction of the native data stored in the data repositories for the benefit of the object manager.

Database layer. The database layer includes the data that Siebel Handheld users will access.

Unsupported Features

You configure an application using Siebel Tools and compile the Siebel repository (.srf) file. During the synchronization process, information specific to the Siebel Handheld Client is extracted from the Siebel repository file. This information is used to create a repository meta language (.rml) file, which is downloaded to the handheld device. The repository meta language file has all of the layout information for the handheld device. For more information, see *Siebel Tools Reference*.

Unsupported Features

The differences between configuring user interface elements for the Siebel Web Client and the Siebel Handheld Client are shown in Table 2.

Client	Siebel Tools	SWT Template Files	Specialized Algorithms
Siebel Web Client	Yes	Yes	No
Siebel Handheld Client	Yes	No	Yes

Table 2. Configuring Siebel Client User Interface Elements

The following are not supported in Siebel Handheld applications:

- The following applet types are not supported:
 - Chart
 - Explorer
- More than two applets per view is not supported. A maximum of two applets may be displayed at one time.
- Group boxes are not supported. See "Group Boxes" on page 39 for information on how to accommodate this limitation.
- Alarm Manager is not supported. Therefore, if an alarm check box is added to an applet and the check box is selected, no alarm will sound.
- The base time zone is determined by the system settings on the server and cannot be changed on the handheld device.

Unsupported Features

- Alphabet tabs are not supported.
- Scripting is not supported. However, any scripts on the business components will be executed during synchronization.
- Siebel Workflow is not supported.

Multi-Value Groups (MVG)

The Multi-Value Group applet is not supported on the Siebel Handheld Client; however, the Multi-Value Group relationship is supported. The Multi-Value Group (MVG) control button does not appear on fields in Siebel Handheld Client applications. Instead, MVGs can be implemented as parent-child views. As a result, MVG fields are not editable within the parent record. In the Siebel Web Client, addresses of accounts are added, deleted, or edited through the Business Address MVG applet. However, in the Siebel Sales Handheld Client, these functions must be done through a Business Address child applet with an Account applet as its parent.

On the handheld, all MVG fields are displayed as read-only fields with the primary record visible. If you have an application or business requirement that requires the user to view or update all the records in the MVG, you must configure a separate view for that MVG. For example, the Address field in the Accounts or My Accounts view is an MVG. In the Siebel Handheld Client that field is read-only and displays the primary record. In order for the handheld user to see and update the addresses, the new Address view is configured in Siebel Tools. This new Address view is visible in the Show drop-down list.

CAUTION: Multi-Value Group fields are automatically displayed as read-only fields in the handheld application. If the fields are set to be editable, the application will crash during synchronization.

Unsupported Features

Functions

Siebel Handheld applications support most of the calculated fields and operations used in the Siebel Web applications with a few exceptions. See Table 3 for a list of the unsupported functions.

Function Name		
BCHasRows	GetXAval*	
DockingNodeId	IsDocked	
DockingNodeName	LanguageName	
DockingNodeRoutId	LocaleName	
EAILookupExternal	LookupMessage	
EAILookupSiebel	LookupTranslation	
EXISTS	NOT	
GetHQInstanceId	RepositoryId	
GetHQInstanceName	RepositoryName	
GetNumBCRows	RowIdToRowNum	
GetProfileAttr*	ToolsLanguage	

Table 3. Unsupported Functions

The NOT key word is not supported on booleans. Use the != operator instead. For example, "Active" != "Y".

The RowIdToRowNum function is supported differently in the handheld applications than in the Web applications. In Web applications, RowIdToRowNum converts a row Id to a numeric value. In the handheld applications, it returns the row ID itself.

Defining User Functionality

Defining User Functionality

The first step in configuring a Siebel Handheld Client is to determine which user interface elements are necessary. Keep in mind the differences in display size, memory capacity, and input methods between handheld devices and larger computers, such as desktop computers.

The goal is to create applications that are easy for your end users to use and which take advantage of the strengths of the handheld device platform. Because of processing speed, memory limitations, and form factor differences, you should only include those user interface elements that are necessary for users to complete their job responsibilities.

General Guidelines

The following list provides some general guidelines for defining user functionality:

- Limit the number of screens and views.
- Design each view so that it has one or two applets.

NOTE: In some instances, Siebel Systems found it necessary to create a view with three applets in its handheld applications. For these views, a toggle button was added to the applet so that the user can easily navigate between the two child applets.

 Design each applet so that it only contains columns and fields that are required for end-user tasks.

Use these guidelines when you design any new objects for the Siebel Handheld Client. This approach facilitates a logical separation of the Siebel Handheld Client user interface elements from the Siebel Web Client user interface elements. This is important because very few applets are shared between the two types of clients. Defining User Functionality

Taking Advantage of the Handheld Device

Siebel Handheld Client users have different requirements from Siebel Web Client users. Typically, handheld devices have limited screen space and use different methods for entering data, such as smaller keyboards or a touch-sensitive screen. By keeping the Siebel Handheld Client user experience in mind, you will build applications that will allow your users to be more productive. Some guidelines for taking advantage of the handheld device are discussed in the following sections.

Identify User Activities

To conserve memory (and thereby improve performance) and ease navigation, identify business processes that are required by end users and develop applications that support these processes. If more than one type of user needs a Siebel Handheld Client application, it is preferable to divide the application into multiple responsibilities rather than give all possible users access to all available screens and views. Responsibilities are fully configurable by the application developer.

Support Stop-and-Go Workflow

Design Siebel Handheld Client applications to support a stop-and-go workflow. End users interact daily with the Siebel Handheld Client application, performing job-related tasks. These end users frequently start the Siebel Handheld Client application, navigate to data, read or enter data, and later return to the application to resume entering information. Frequently, an end user needs to navigate to another view to retrieve information while in the middle of a task. Design your applications so that end users perform a minimum number of taps to navigate to the desired information.

Design Applications That Require Minimal Navigation

Design applications that are as flat as possible. In a Web-based application, you may have views with many applets, and the user toggles between the applets. However, for handheld applications, create a larger number of views with fewer applets to allow users to quickly find information with a minimal amount of toggling.

Design for the Handheld Screen

Consider the type of handheld device that is being used and the way the screen is laid out. Consider the following questions when designing your applets:

- Are the applets laid out side by side (on a HPC 2000 handheld device) or stacked one on top of another (on a Pocket PC handheld device)?
- If you are using a list applet, how wide is that list applet going to be? Is it a full-screen list applet or a child list applet?
- What are the most important fields and columns that a user needs to see at a glance before scrolling?
- If you have a form applet that is a parent, for example, what fields do you really need in order to avoid scrolling?

Because there is less screen space on a handheld device than on a laptop or desktop, the most important data should be immediately visible.

Creating a Handheld Project

The Siebel Handheld projects appear in the list of projects in Siebel Tools; when Project is selected in the Object Explorer, the list of projects is displayed in the Object List Editor.

Use a naming convention that allows you to easily identify applications, screens, views, and applets belonging to a particular Siebel Handheld application. This allows you to locate all the object definitions in a handheld application by querying on the name in the Object List Editor. For example, all of the Siebel Handheld Client screens, views, applets, toolbars, and menus use either an SHCE prefix (for example, SHCE Sales Account List View) or a CE suffix. Use the Object List Editor to query for views that contain the prefix SHCE or the suffix CE; doing so displays all of the Siebel Handheld Client views.

If you create a new Siebel Handheld application, create a new suffix or prefix to identify the name of the application and each screen, view, and applet name. For example, you could use PPC_SHCE for an application that is designed for handheld devices using the Pocket PC operating system.

Designing Screens and Views

Designing Screens and Views

Each view in a handheld application can display a maximum of two applets at a time, regardless of the number of applets in the view. If there are more than two applets in a view, the user can navigate to additional applets by toggling. For more information, see "Multiple Applet Views" on page 34.

Multiple Applet Views

Screen Allocation

The amount of screen space available for applets is determined by the handheld device's operating system and the type of applets in the view.

- **Pocket PC** For handheld devices using the Pocket PC operating system, the two applets are stacked one above the other. A parent form applet in a two-applet view displays up to five fields on the screen. The form applet dynamically resizes if there are fewer than five fields and, therefore, does not waste screen display space with empty lines. The maximum number of fields that are displayed at one time is configurable by setting the Max Parent Applet Size preference in the User Preferences dialog. See "Setting User Preferences" on page 155 for more information on this user preference.
- Handheld For handheld devices using the HPC 2000 operating system, additional screen space is provided for list applets. The following examples illustrate how the screen space is allocated depending upon the type of applets in the view.
 - For views containing a form applet (on the left) and a list applet (on the right), the form applet receives 3/8 of the screen space and the list applet receives the remaining 5/8 of the screen space.
 - For views containing two form applets or two list applets, the screen space is allocated equally between the two applets.
 - For views containing a list applet (on the left) and a form applet (on the right), the list applet receives 5/8 of the screen space and the form applet receives the remaining 3/8 of the screen space.

Toggling Between Multiple-Applet Views

The Siebel Handheld Client application displays up to two applets at one time. If the view has only one applet, the applet takes up the entire display area. For views with two or more applets, the first two applets in the view are displayed, and the user toggles to see the other applets. The first applet is always displayed and the second applet changes as you toggle.

By default, the user toggles by choosing the View > Toggle menu item. In addition, it is recommended that you provide a toggle button as a visual cue to the end user that there are additional applets. Add a toggle button to each applet except the first applet. Identify the button with a Toggle caption and set methodInvoked to ToggleApplet.

Drill-down Only Views

Some views may be drill-down only views—that is, they can only be accessed by navigating from another view. These views should not be accessible through the Show drop-down list. However, when the end user navigates to the view, the view title appears in the Show drop-down list. To configure a drill-down only view, set the view title as you would for any other view and set the ScreenMenu property to FALSE. See *Siebel Tools Reference* for more information.

Views with Associated Print Templates or Reports

Print templates are text files that you design and create for printing. After creating a print template, you associate it with an applet. When an end user chooses to print a view, the print template that is associated with the applet is automatically selected and used for printing. Follow these guidelines when creating print templates:

- Only one print template can be associated with an applet.
- The print template name for a particular display applet is registered in the Mail Template property in the Applet object associated with the applet.
- The template must be placed in the Templates directory.
- The template name that goes into the Mail Template property should not include a path name or extension. For example, if the full path of the template is \Program Files\Siebel Handheld\Templates\InvoiceTemplate.txt, you would enter only the root name InvoiceTemplate in the property field.

Configuring User Interface Elements

■ The template file itself must have a .txt extension on the device.

For more information, see Appendix F, "Print Configuration Settings."

Configuring the Activities View

The Planned Start and Duration fields on general activities and appointments must be populated in order to be displayed in the correct time slot in the Calendar view. The Planned Start field is exposed in the Activities > My Activities view. However, it is not displayed in the Contacts > Activities and Accounts > Activities views. It is recommended that you configure your application to expose the Planned Start field in these views.

Configuring User Interface Elements

When configuring user interface elements on the Siebel Handheld Client, also consider the processing speed and memory constraints of handheld devices. The constraint on processing speed affects the performance of a handheld device. The performance of a handheld device is also related to the number of screens and views downloaded to the handheld device. Because handheld devices are not meant to provide the same functionality as larger devices, such as laptops, the number of screens and views must be kept to a minimum on the handheld device.

Due to size constraints on handheld devices, the Siebel Handheld Client displays user interface elements differently from the Siebel Web Client. Consider these differences when configuring the Siebel Handheld Client application. For example, Siebel Handheld Client does not support an alphabetical index.

List Applets

List applets display in the Siebel Handheld Client application almost identically to their display on the Siebel Web Client. The list columns in the Siebel Handheld application are identical to the list columns that appear as Applet Web Template Items under the Applet Web Template.

The recommended strategy when configuring the Siebel Handheld Client is to use the list applets for record navigation and to rely on form applets to provide the record details.

The following are additional guidelines to follow when designing list applets:

- Configure specific list applets for your handheld application, rather than reusing Siebel Web Client list applets.
- Remove all but the essential list columns. Because there is limited screen area to display list columns, omit all unnecessary columns to minimize horizontal scrolling. You may either remove the columns from the application or set the Show in List property on the column to FALSE.
- Reorder the remaining list columns so that the most frequently used columns are furthest to the left.
- Reduce the default width of the list columns so that more columns can be viewed at one time.

These changes can minimize the amount of horizontal scrolling and column reordering that a user must do. Limiting the number of list columns to the essential ones minimizes the amount of data downloaded to the device, resulting in faster synchronization times and more economical use of device memory.

NOTE: All required fields on form and list applets appear with an asterisk (*). If an administrator specifies that a field is required, the field appears with an asterisk in the user interface.

When designing list applets, consider using hyperlinks on the list applet as a convenient way to drill into the form applet.

Use the Web Applet Designer in Siebel Tools to add, remove, or rearrange list columns. Open the applet in the Web Applet Designer and choose the List Columns option from the Format menu. For more information on the List Column options, see information about the Siebel Web Applet Designer in *Siebel Tools Reference*.

You may make columns available, but not visible by default, by setting the Show In List property of the column to FALSE. From the handheld application, you can make the columns visible from the View > Columns Displayed menu option. In order for the change to be reflected in the application, you must compile the application and synchronize with the handheld device. In addition, you must delete the \Program Files\Siebel Handheld\siebel.ssf file on the handheld. If this file is not deleted, the change to the Show In List parameter will not be reflected in the application.

Form Applets

Layout Sequence

When configuring for the handheld device, the Applet Web Template Items in the Applet Web Template determine the controls that appear on a form applet. The layout of form applets on the handheld device is determined by the HTML Sequence field set on control objects.

- **Handheld** On form applets on the HPC 2000 operating system, controls are laid out left-to-right, top-to-bottom, according to their HTML Sequence number.
- **Pocket PC** The HTML Sequence field determines the screen layout of a handheld device. Controls are ordered from top-to-bottom based on their HTML Sequence property values. Label and control pairs that do not fit on the same line as other label and control pairs wrap to the next line.

Labels

Keep field labels in applications using the Pocket PC operating system short (approximately 12 characters or fewer, depending on the character width). Use abbreviations where possible. Labels that are too long are truncated.

Group Boxes

Group boxes are not supported and are not displayed in form applets, even if they are added in the Web Applet Designer. Therefore, reword the field labels to include group box information if necessary. For example, you may have two group boxes on the form, one labeled Ship To and another labeled Bill To. Each group box includes a field named Address. Because group boxes are not supported, the Ship To and Bill To labels will be lost, and two fields with the identical Address label will remain. Therefore, you must rename the Address labels "Ship To Addr" and "Bill To Addr," or some other label that distinguishes them.

Auto Pop-Up Lists

Sometimes when a user is navigated to a new view, there is an action he or she must perform, for example, filling in a required field by selecting a value from a pop-up list. Rather than requiring the end user tap the control to open the pop-up list, you can configure the view so that the pop-up list automatically opens when the end user gets to that view. To configure a pop-up list to open automatically, add the user property on the applet with Name set to AutoPopupField. Depending on the type of applet, this property is set differently:

- For list applets, set the AutoPopupField property to the Business Component field name.
- For form applets, set the AutoPopupField property to the name of the control.

Home Page Applets

To configure a Home Page applet, create an applet that has controls of HTML Type Button only. Use the following guidelines in creating your Home Page applets:

- Set the MethodInvoked property of these controls to GotoView. Then add a user property for the control, and set the Name parameter to "View" and set the Value parameter to the view name.
- Set the Caption field.
- Set the HTML Sequence field according to the order in which the buttons are laid out on the device. The buttons appear on the Home Page applet of the handheld device, laid out in rows of three buttons.

■ Set the class property of the Applet to CSSFrameCEHome.



Figure 3. Home Page Applet Example

All pick data is not downloaded to the device due to the memory constraints on the device. Only pick data for fields that are editable is downloaded. Therefore, if you are doing a query on a pick field, you may not be able to display the picklist. When viewing a record in an applet, if a pick field is read-only, its pick button will be disabled. If end-users select a read-only field with a pick control, they receive the following error: No data available in picklist because field is read-only.

Data in picklists are filtered like any other data in a handheld application. For information on how to filter picklists, see Chapter 4, "Data Filtering."

NOTE: Catalogs control visibility of data in pick applets. To make sure that pick applets contain valid data, the administrator must add data to a relevant catalog and make sure users have visibility to the catalog using the Catalog screen's Access Groups view tab.

Buttons

Set the HTML Type field on buttons to Button, MiniButton, PushButton, or MiniButtonEditNew. All of these HTML Types map to the same button control on the handheld device.

Buttons with text labels on them are sized to the minimum width required to fit the text on the buttons.

NOTE: You cannot use scripting to augment the button functionality in handheld applications.

See "Toggling Between Multiple-Applet Views" on page 35 for more information on toggle buttons.

Menu Bar

You can use the same menu configuration for handheld devices using the Pocket PC or HPC 2000 operating system. The menu in Siebel Tools that is used for the handheld applications is SHCE Generic. The default menu bar configuration for the Siebel Handheld Client includes the following menus: File, Edit, View, and Help. You may remove or rename menus on the menu bar, but you cannot add new menus. You may reorder the menu items by changing the Position property for the menu items. Generally, use the default menu bar configuration for all of your Siebel Handheld Client applications.

Toolbars

This section describes how to configure the toolbar for your application.

Handheld Table 4 show the supported toolbar functions for the HPC 2000 operating system.

PC

Table 4. HPC 2000 Toolbar Functions
HPC 2000 Toolbar Functions
Back, Forward
New Record
New Query, Execute Query
Next Record, Previous Record, First Record, Last Record
Minimize, Maximize

The toolbar for the HPC 2000 operating system is not configurable.

Pocket PC Table 5 shows the supported toolbar functions for the Pocket PC 2002 operating system.

Pocket PC 2002 Toolbar Functions
Back, Forward
New Record
New Query, Execute Query
Next Record, Previous Record, First Record, Last Record
Minimize, Maximize
Delete Record

 Table 5. Pocket PC 2002 Toolbar Functions

On the Pocket PC 2002 operating system, the default toolbar can be configured in Siebel Tools by configuring the SHCE Main toolbar object. SHCE Main is the main toolbar that is downloaded to the handheld device. If a toolbar named SHCE Main does not exist in your repository, a default toolbar, *Main*, is downloaded instead.

The SHCE Main toolbar contains the default buttons for the device, Back, Forward, New Record, New Query, and Execute Query. Change the order of the buttons on the display by modifying the Position property of the toolbar items. Remove a toolbar button by deleting it or making it inactive.

You can add additional default buttons to the toolbar by creating toolbar items whose Command property matches the name of an active bitmap in the SHCE Command Icons bitmap category. Do not add bitmaps to the SHCE Command Icons bitmap category because only those commands, which are already provided, are supported on the device. No additional commands are supported. You can remove a bitmap or make a bitmap inactive if you do not want it to appear in the Customize Toolbar dialog box.

You can change the bitmap for a toolbar by reimporting the bitmap from the SHCE Command Icons bitmap category.

Preventing Synchronization Conflicts

An end user can personalize the toolbar by selecting View > Customize Toolbar.

For more information on toolbars, refer to Siebel Tools Reference.

Status Bar

The location and type of information available on the status bar depends on the operating system of the handheld device.

Pocket PC On the Pocket PC operating system, the status bar is located above the toolbar. The status bar displays the status of applet with focus, including the applet title and record item count (for example, Contacts: 1 of 13).

Handheld For handheld devices using the Handheld PC operating system, the status bar is located above the taskbar, at the bottom of the screen. The status bar displays information about both visible applets in the view.

Hyperlinks

Configuring a hyperlink or dynamic hyperlink in the Siebel Handheld Client is performed the same way as in the Siebel Web Client. For more information on configuring hyperlinks and dynamic hyperlinks, see *Siebel Tools Reference*.

Preventing Synchronization Conflicts

Because multiple users are synchronizing with the server, conflicts may occur when any single user synchronizes their handheld. For more information on how to configure your application to prevent synchronization conflicts, see Chapter 6, "Synchronization Conflict Handling and Recovery."

Recommended Configuration Guidelines

The Siebel Handheld Client application will perform best if you use the following guidelines:

■ Keep the number of views in your application to 30 or fewer.

Recommended Configuration Guidelines

- For optimal usability, limit each view to one or two applets.
- To minimize horizontal scrolling, limit the number of columns displayed in a list applet to no more than ten.
- There is no limit on the number of fields in form applets of single-applet views. However, to minimize scrolling, keep the number of fields to 20 or fewer.
- For each screen, create a view called My * or All * as a single list-applet view. For example, for the Activities screen, create a My Contacts view that has the Contacts list applet only.
- For each screen, create a single-applet More Info view. Create this applet as a form applet. For example, for the Contacts screen, create a More Info view that has the Contacts form applet only.
- Use a form applet for the parent for each parent-child view.
- In a multi-applet view, limit the number of fields in form applets to five or fewer for Pocket PC and 10 or fewer for Handheld PC. Add additional fields only if the field width is short—for example a check box field. Reduce the number of fields if the fields are multiline—for example, a Comments box that contains three lines of text.
- Do not include read-only check boxes in form applets. It is very difficult for users to discern that the check box is not editable.
- Limit the number of views within a screen to 12 or fewer so that the View drop-down list is not too long and unwieldy.
- Limit the number of screens to six or fewer so that the Screen drop-down list is not too long and unwieldy.
- Keep query names to about 15 characters or fewer, so that they fit in the Queries drop-down list. For example, North American Organization is too long for a query name, so you should change it to a shorter name, such as N. American Org. The number of characters is a general guide because characters vary in width (for example, W is wider than i).
- Keep screen names to about 15 characters or fewer, so that they fit in the Screen drop-down list. The number of characters is a general guide because characters vary in width.

Compiling the Application

- Keep view names to about 20 characters or fewer so that they fit in the View drop-down list. The number of characters is a general guide because characters vary in width.
- Limit the size of the dbfile.txt file to less than two megabytes (MB). The RDBMS on the handheld device will be approximately three times the size of dbfile.txt. If the data files are so large that they cannot be imported into the database with the available memory, users will not be able to successfully synchronize their data. See Chapter 4, "Data Filtering," for information on how to design data filters to limit the amount of data that is synchronized to the handheld.

Compiling the Application

Compiling the repository for the Siebel Handheld Client is identical to compiling on the Siebel Web Client (see *Siebel Tools Reference*). Perform a full compilation the first time; subsequent compilations can be incremental, replacing only the projects that are affected. This assumes that you have organized all of your handheld object definitions in one project or a limited set of projects.

When you compile your application, a Siebel repository file (.srf) is created and put in the destination directory you specified during the compile procedure. Make this .srf file the source of repository information for the Siebel Handheld test client machine, defining all Siebel applications for that client, when you move it to your local \Siebel\objects directory.

It is strongly recommended that you make a backup of the existing .srf file in your local \Siebel\objects directory before overwriting it with the new one. That way, if you make an error or you want to revert to the original application, you have a backup that you can easily restore. For more information, see *Siebel Tools Reference*.

Configuring Printing from the Handheld

Users may print from any view in the application. However, they are not necessarily printing what they see on their screen. They may print a portion of the data they view or data that is not viewable at the time. A print template defines the document that is to be printed. After the template has been defined, it must be associated with an applet in a view.

Application Development

Configuring Printing from the Handheld

This section provides information on the following topics:

- Defining documents
- Designing print applets
- Configuring applets for printing
- Creating print buttons
- Creating print templates

Defining Documents

Defining documents for printing includes several steps:

- Determine the documents your users will need to print.
- Determine the views from which they are most likely to print the documents.
- Lay out the document for printing.

Determining which documents users will need and the views from which they are most likely to print requires that you have a good understanding of the users' day-to-day work.

Whether the existing applets in a view include most of the required data or only a small portion is a secondary consideration. It is not likely that a printout of the existing applets, which are formatted for an electronic PDA interface, will provide an acceptable or usable printed document. In most instances, you need to create additional applets that are specifically used for printing data.

The printed document will be composed of several applets which are added to the view. The applets pull the data from the underlying business components which are a superset of the data in the view. These applets, in turn, direct the data to the print templates discussed in Appendix E, "Print Tagging Language."

Configuring Printing from the Handheld

Designing Print Applets

The print template references applets associated with the view and is how you specify what data appears in the printed document. As you design your applets, you should be aware of the print specifications of the printers used in the field. Portable printers typically print on two-inch or four-inch wide paper. You need to design your applets so that the data fits within the limits of the paper width. Keep your documents simple so that they will work with different sizes of paper. The following are some guidelines to use when designing your applets to accommodate the smaller paper sizes.

Form Applets

Data from only one business component can be displayed on each line in your document. When you design your form applets, keep in mind that you can display a maximum of two columns of data in form applets. You can specify that each column of data is preceded by an optional caption column. This means you can have up to four columns displayed in your document—two data columns and two caption columns. Alternatively, you may have no captions, and simply display one or two columns of data.

The ratio between caption and data columns is, respectively, 35 percent and 65 percent. This is a fixed relationship that cannot be customized in the template.

List Applets

When specifying the width of a column, you can either specify it with a unit of measurement or as a percentage of the total page width. For example, you can specify that the first column is 20 mm, and the second column is 40 mm. If the width of the paper you print to is narrower than 60 mm, the column widths automatically adjust to fit the printable width as a proportion of the specified width. Therefore, the first column will always be 33 percent, and the second column will be 67 percent of the paper width. The minimum width for a column is 8 mm, which includes a 3 mm gutter margin between columns.

You can specify any number of columns in your list applet. However, if the width of the column is less than 8 mm, the application ignores the column and does not print it.

Configuring Printing from the Handheld

On narrow paper widths, data from a field may not all fit on one line. Data that does not fit can be specified, in the Applet tag, to wrap to the next line and keep wrapping until the data in that field is completely displayed. The printable width of the page is equal to the paper width minus the left and right margins (PaperWidth – [LeftMargin + RightMargin]). These parameters are set in the setup.ini file. For more information on setting these parameters, see Appendix F, "Print Configuration Settings."

Configuring Applets for Printing

Configure print applets as you would any other applet using Siebel Tools. In addition, set the following properties for each applet in the view.

■ Set the HTML Popup Dimension value to 0x0.

The 0x0 setting hides the applet from the end user who should not see the applet that is used to generate the document. Exposing these applets would complicate a product that is tightly configured for an effective and efficient workflow on a small mobile device.

NOTE: For compatibility with previous versions, Siebel Systems continues to support the name, Popup Dimension, for this property. However, it is recommended that you use HTML Popup Dimension.

Set the name of the Mail Template to be the name of the print template file. For more information on the print template file, see "Creating Print Templates" on page 49. For more information on the Mail Template property, see "Views with Associated Print Templates or Reports" on page 35.

Configuring Print Buttons

While users can use the File > Print menu option to print a document, it is helpful to include a Print button on the applet to give users a visual reminder that it is possible to print from a particular view.

When you design your applets, keep the following in mind when deciding where to place the print button:

Configuring Default Predefined Queries

- Add the print button to the applet that is visible to the user. Do not add the print button to the print applet, which the user never sees.
- Consider what the desired behavior is when determining the placement of a print button.

For example, in a parent-child view, you may want to add the print button to the parent applet to ensure that the print button is always enabled. This is not necessarily true if the print button is placed on the child list applet. If there are no items in the list applet, the print button is disabled, and the end user will not be able to print from that view. If you only want the end user to print when there are list items, then placing the button on the child list applet is appropriate.

To configure a print button

- **1** From Siebel Tools, add a control to the print applet and specify HTML Type = Button.
- **2** Set Method Invoked = Print.
- **3** Set the Display Name property of the button. Generally, this is set to Print.

Creating Print Templates

Once you have identified and created the necessary views, you are ready to create print templates. A print template is a text file that includes instructions for printing a document. It specifies the data to be printed, document layout options, and text formatting. These instructions are specified using a print tagging language that is described in Appendix E, "Print Tagging Language."

Configuring Default Predefined Queries

You must configure the default predefined queries (PDQs) for ePharma Handheld. These PDQs affect how data is synchronized between the handheld device and the Siebel database.

For information about configuring the default PDQs, "Predefined Query Filters" on page 80.

Testing the Handheld Application

Testing the Handheld Application

Before deploying your application to your end users, be sure to thoroughly test the application by synchronizing to a handheld device. The handheld configuration is downloaded to the device where you can test the functionality and verify that you have the desired behavior. Another equally important aspect of handheld testing is to check to see how much data is downloaded to the device. If too many records are downloaded, this increases the length of time it takes to synchronize the handheld and slows down the application performance. Check the server log file to see how many records are downloaded for each business component. You must set the LoggingLevels parameter to 25555 to capture this information in the log file.

For more information on the LoggingLevels parameter, see "Configuring Server Logging Levels" on page 101. For more information on the server log files, see "Direct Server Sync Log Files" on page 232 and "Companion Sync Log Files" on page 233. For more information filtering data, see Chapter 4, "Data Filtering."

This chapter describes the application administration procedures for Siebel ePharma Handheld. These administrative procedures help to make the application run more efficiently on the device. In addition, this chapter describes the set of administrative tasks specific to tasks performed on Siebel ePharma Handheld, such as signature captures and audits.

The audience for this chapter is Siebel application administrators.

Assigning User Responsibilities

You must create user accounts and assign responsibilities and passwords for each handheld user. The steps are the same as those for creating user accounts, assigning responsibilities and passwords for the Siebel Web Client. See *Applications Administration Guide* for more information on this topic.

Administering Handheld Views

There are two administrative tasks associated with handheld views:

- If you have added a new view or changed the name of a view, you must add the view or update the name of the view in the Application Administration screen.
- Specify the default views in the configuration file.

Adding Views to the Application

Add new views to the Siebel Handheld application from the Application Administration screen in any Siebel Web Client application. You must be logged on as an administrator. (If you are using the Siebel Mobile Web Client to log in as an administrator, you must also specify the /editseeddata parameter.) Administering Handheld Views

To add new views to Siebel Handheld

1 Launch the Web Client application that uses the same database that the handheld application synchronizes to (or will use to synchronize to).

NOTE: If you launch the application from a mobile Web client, specify the /editseeddata parameter.

- **2** In the Siebel Web Client, from the application-level menu, choose View > Site Map > Application Administration > Views.
- **3** Add the new views.
- **4** From the application-level menu, choose View > Site Map > Application Administration > Responsibilities.
- **5** Associate each view with the appropriate handheld responsibility.
- **6** Add appropriate users to the responsibility.

NOTE: For more detailed instructions on adding views and associating views with responsibilities, see *Applications Administration Guide*.

Specifying Default Views in the Configuration File

The Siebel Handheld application uses a small subset of views in the Siebel enterprise application. Because there are memory resource constraints on the handheld devices, it is recommended that you extract only those views that are used on the handheld.

There are two methods for specifying which views will be extracted to the handheld. The first method is to compile an .srf of only those views that are relevant to the Siebel Handheld application. Or, alternatively, you may specify the handheld views in the Siebel Handheld configuration file located in the \siebsrvr\BIN\Language directory (Direct Server Sync deployments) or client\BIN\Language directory (Companion Sync deployments), where Language is the language of the application (for example, ENU for English).

The views are specified in the [PDA] section of the handheld configuration file (phce.cfg). By default, all views for the handheld application are listed here. Edit the list so that only those views which your application is using appear in the list. Use the following syntax to specify the views:

DefaultViews1 = "view_name" DefaultViews2 = "view_name" DefaultViews3 = "view_name" DefaultViewsn = "view_name"

where *view_name* is the name of the view as it appears in Siebel Tools. The name must match precisely or it will be ignored during synchronization. It is recommended that you copy and paste the name from Siebel Tools into the handheld configuration file.

The combination of the .srf file, the handheld .cfg file, and the user's responsibility determines which views are extracted. Siebel Server uses the information in the handheld configuration file and the .srf file during synchronization in the following way:

- If no default views are specified in the handheld configuration file, all the views in the .srf are extracted during synchronization. If the .srf contains only the handheld-specific views, then this is the same as listing each handheld view in the handheld configuration file.
- If default views are specified in the handheld configuration file, then only those views are extracted. If there are some views that do not match the views in the .srf file, these are ignored.
- If default views are specified in the handheld configuration file, but *none* of the views match those listed in the .srf file, then all the views in the .srf are extracted.

Preventing Synchronization With Another Handheld Device

Preventing Synchronization With Another Handheld Device

End users should not synchronize their mobile client database with any other handheld device except their own. Doing so can result in data integrity errors and data loss. Siebel Handheld ties a companion PC to a specific handheld device and prevents the end user from synchronizing with another end user's handheld device. Uninstalling the software from the companion PC and the handheld device does not remove this link. If you need to remove the link between the two, contact Siebel Technical Support for the hhunlock.exe utility.

Siebel ePharma Handheld Administration

Siebel administrators should see *Siebel Life Sciences Guide* for detailed information about managing samples. The following sections cover only those administration procedures that apply to the handheld version of ePharma.

The following sections cover the designated topics and procedures:

- Managing Samples Records
- Performing disclaimer administration
- Configuring the distributor name
- Verifying signature capture
- Performing a signature audit
- Preparing receipts for calls
- Signature capture validation
- Validation logic of the sign and submit buttons
- Validating the DEA number

Managing Samples Records

Administrators can manage samples inventory using either Siebel ePharma Handheld or Siebel Life Sciences, but should not use both. In order to keep samples inventories in sync, end users should be prevented from submitting a samples transaction on the server when the same record is still editable on their handheld device.

When a user submits a record, the status changes to Submitted and it becomes readonly, meaning no additional operations are allowed on the record. By updating a user property and writing two small Visual Basic scripts, you can specify that synchronized records are also read-only.

■ First, the administrator changes the value of the user property "Update Status To Synchronized" to Y.

Making this change invokes the UpdateStatusToSynchronized method on the Sample Txn business component.

- Then, the administrator writes a small Visual Basic script for this method to change the status on the Sample Txn to "Synchronized."
- Finally, the administrator writes another Visual Basic script to specify that the record becomes read-only when its status changes to "Synchronized."

This prevents users from accidentally submitting the sample transactions on the server while the same record is still editable on their handheld device.

Performing Disclaimer Administration

Your legal department may require that a change be made to the disclaimer text that appears below the signature area on the Siebel Signature Capture display of Siebel ePharma Handheld. Only one disclaimer can be active at a time.

To edit the disclaimer text

1 From the application–level menu, select View > Site Map > Samples Administration > Disclaimer Administration.

The Disclaimer Administration view appears.

Configuring the Distributor Name

- **2** In the Disclaimers list, add a record.
- **3** Enter the new text in the Disclaimer field.

The Status, Start Date, End Date, Created By, and Created fields are read-only.

4 Click Submit.

The submitted disclaimer becomes active, and the status and date fields are updated. When sales representatives next synchronize, the disclaimer on their Siebel ePharma Handhelds is updated.

Configuring the Distributor Name

The default name of the company appears on the Siebel Signature Capture display. You may need to change this name if, for example, there is a name change as a result of a merger between two companies.

In addition, a company may use a contract sales force to distribute some of its products. You can use the Distributor by Employee feature to customize the display to show the name of the contract distributor for the contract sales representatives and to show the name of the primary pharmaceutical company for its sales representatives.

To change the distributor name in the Siebel Signature Capture display

1 From the application–level menu, choose View > Site Map > Application Administration > System Preferences.

The System Preference Administration view appears.

2 Find the Company Name system preference and change the value to the new company name.

When the sales reps next synchronize their PDAs, the new company name is downloaded to their Siebel ePharma Handheld applications.

3 From the application–level menu, select View > Site Map > User Administration > Employees.

The Employee Administration view appears.

- **4** Select the employee from the Employees list.
- **5** In the More Info view, enter the account of the distributor in the External Account field. (The external account must already have been set up as an account.)

If the External Account field is blank for an employee, the company name set in the System Preference Administration view, set in Step 2, is used.

6 Repeat Step 4 and Step 5 for each employee of the distributor.

Performing a Signature Audit

The Siebel administrator is typically assigned responsibility for checking the validity of signatures recorded electronically. This is done using the Verify button in the Signature Audit Administration view. For more information about the logic behind the Verify button, see "Validation Logic of the Sign and Submit Buttons" on page 64.

As the samples administrator, you should check Signature Audit Administration regularly and perform signature capture verification to make sure that signatures collected from each contact are consistent.

Users may see an error message if Signature Audit Administration tasks are performed on a desktop computer running multiple versions of Siebel ePharma. Make sure that only the latest version of Siebel ePharma is running, and uninstall all previous versions.

To verify signatures

- **1** From the application–level menu, select View > Site Map > Samples Administration > Signature Audit Administration.
- **2** In the Sample Signatures list, create a query.
- **3** Visually compare the signatures for consistency.

Signature Capture Verification

Contact names are retained even if the Contact record is deleted. If a Contact record is deleted from View > Site Map > User Administration > Persons, the contact name is removed from all applets with reference to that contact's name in the S_CONTACT table. Therefore, if the Contact Id is deleted from the S_ACT_SIGN table, the last name and first name fields appear empty in the Sample Signature form in the Signature Audit Administration view.

However, the Contact Full name is not affected by deleting a contact record because it is stored in a text field in the same table. In the Signatures applet, the control above the signature displays the full name of the contact at the time of the call (that is, no reference to the S_CONTACT table). Because the contact's name is not removed from this applet, a permanent and complete electronic record of calls captured with signatures recorded electronically is maintained.

Signature Capture Verification

Signature capture verification compares information captured at the time of signature (the signature event string) with the current call information (the current call string) to assess if the call information has been modified. Reasons the call information might be modified include:

- Re-creation of a sample receipt
- Sample adjustments
- Fraud

Signature capture verification is launched from the Verify button on the Signature Audit Administration view. For an example of signature audit administration, see "Performing a Signature Audit" on page 57.

The Signature Key

When the signature is first created, a signature key is calculated from the signature and stored. When the signature is verified, this key is recalculated from the current signature and compared to the stored key. If the two keys do not match, the signature key checksum fails. A failed checksum indicates that the current signature has been altered since the time of capture. If the checksum fails, the signature is not displayed in the Signature Audit Administration view.

Signature Capture Verification

Outcomes of Checksums

The signature capture verification status (Passed, Adjusted, or Failed) is determined by the outcome of checksums: user property checksums, which compare text saved at the time of the signature capture with fields in the current call record and the signature key checksum. See Table 6 on page 59 for examples of checksum combinations.

NOTE: You may need to expose the Verification Status field using Siebel Tools. This is a configuration change that may need to be performed before implementation of Siebel ePharma Handheld. For more information, see the release notes documentation for Siebel ePharma Handheld.

Each user property checksum returns results for a different group of fields involved in the signature capture.

If	Then the verification status is set to
All checksums pass	Passed.
Any of the checksums fail	Failed.
One or two checksums return Adjusted and the others pass	Adjusted.

Table 6. Checksum Examples

User Properties for Signature Capture Verification

In the default installation of Siebel ePharma Handheld, there are three user properties that set fields for the checksums (Checksum Field: 1, Checksum Field: 2, and Checksum Field: 3). These user properties and their default configurations are described in the following sections.

Using Siebel Tools, you can create additional checksums. For more information, see "Creating New Checksum Field User Properties" on page 64.

Signature Capture Verification

Checksum Field: 1—Signature Header Text

This checksum compares the signature header text recorded at time of signature with the similar string in the current call record. The three possible outcomes (Passed, Adjusted, and Failed) for this checksum depend upon the signature header text strings and the (signature) Status field.

The Checksum Status is	If the signature event string
Passed	Equals the current call string.
Adjusted	Is different from the current call string and the (signature) Status is Inactive.
Failed	Is different from the current call string and the (signature) Status is Active.

Table 7. Checksum Status for Signature Header Text

Checksum Field: 2—Signature Body Text

This checksum compares the signature body text recorded at the time of signature with the similar string in the current call information.

The outcome (Passed and Adjusted) for this checksum depends on whether the signature body text strings match.

Table 8. Checksum Status for Signature Body Text

The Checksum Status is	If the signature event string
Passed	Equals the current call string.
Adjusted	Is different from the current call string.

Checksum Field: 3—Sales Representative's Row Number

This checksum compares the identity of the call creator at time of signature with the identity of the current creator of the call. The employee's row number is used to identify the call creator.

Configuring User Properties for Closing Inventory Periods

An employee's row number can be obtained by selecting the employee in the Employees view (View > Site Map > User Administration > Employees) and then selecting Help > About Record. The Employee's Row # appears in the About Record dialog box.

The outcome (Passed and Failed) for this checksum depends on whether the sales representative name text strings match.

The Checksum Status is	If the signature event string	
Passed	Equals the current call string.	
Failed	Is different from the current call string.	

Table 9. Checksum Status for Sales Representative's Row

Configuring User Properties for Closing Inventory Periods

The recommended process for closing an inventory period is:

- **1** Synchronize the handheld device with Siebel server immediately before closing the period.
- **2** Close the inventory period.
- **3** Synchronize the handheld device with Siebel server a second time, immediately after closing the inventory period.

End users must synchronize the handheld with Siebel server before closing the inventory period because there may be calls on the handheld that have not yet been synchronized with Siebel server. Only the current active period is downloaded to the handheld device. Therefore, after the current inventory period is closed, they must synchronize a second time in order to bring down the next active period.

Configuring User Properties for Closing Inventory Periods

To enforce this procedure, the inventory period closure logic has been added. When it is enabled, this logic goes into effect during the inventory period reconciliation. It ensures that the end user synchronizes his handheld with Siebel server before closing the inventory period, and it requires the end user to submit all outstanding calls (that is, when an electronic signature has been captured, but the call has not been submitted).

The following user properties have been created on the Pharma Inventory Period business component to support the inventory period closure logic:

- Inventory Closure Validation. The default value is N (No), and the Inventory Period Closure logic is not triggered. To activate the Inventory Period Closure logic, set this parameter to Y (Yes). Setting the parameter to Y forces the end user to synchronize the handheld with Siebel server prior to closing the inventory period.
- Acceptable Period to Complete Synchronization. The default value is 30 (minutes). When Inventory Closure Validation is set to Y, the Acceptable Period to Complete Synchronization user property determines a grace period during which the end user must synchronize the handheld before closing the inventory period. If the end user does not synchronize within the time period, he will not be permitted to close the inventory period.

If Inventory Closure Validation is enabled and the Acceptable Period to Complete Synchronization user property is not created, the default value of 30 minutes is used.

After the end user successfully closes the inventory period, he sees a message that prompts him to synchronize the handheld device with Siebel server. Note, however, this step is not enforced. However, if the end user fails to synchronize a second time, the handheld device will not receive the current period, and this can potentially cause synchronization errors the next time the end user synchronizes.

NOTE: The same logic is enforced during inventory reconciliation.

Configuring User Properties for Signature Capture Verification

Configuring User Properties for Signature Capture Verification

Use Siebel Tools to edit the following user properties:

- Turn checksums on or off
- Add additional fields to checksums
- Remove fields from checksums
- Create new checksums of the same form as Checksum Field: 3

Editing Checksum Field: 1—Signature Header Text

This checksum compares the Signature Header Text field in the Pharma Call Signature business component with the concatenated text string of the Header Text Fields (Header Text Field: 1 to Header Text Field: 7) in the Pharma Professional Call business component.

In Siebel Tools, you can edit these user properties by adding, deleting, or editing the Header Text Fields in the Pharma Professional Call business component. The maximum allowed number of Header Text Fields is 20 (Header Text Field: 20).

Editing Checksum Field: 2—Signature Body Text

This checksum compares the signature body text in the Pharma Call Signature business component with the concatenated text string of the Signature Body Text Fields (Signature Body Text Field: 1 to Signature Body Text Field: 3) in the Pharma Call Sample Dropped business component.

In Siebel Tools, you can edit these user properties by adding, deleting, or editing the Signature Body Text Fields in the Pharma Call Sample Dropped Call business component. The maximum allowed number of Signature Body Text Fields is 10 (Signature Body Text Field: 10).

Editing Checksum Field: 3—Sales Representative's Row Number

This checksum compares the "Created by" field of the Pharma Call Signature business component with the "Created by" field of the Pharma Professional Call business component.

In Siebel Tools, you can edit these user properties by replacing "Created by" with any field found in both business components.

Creating New Checksum Field User Properties

In Siebel Tools, you can create user properties for up to 25 checksums that compare fields in the Pharma Call Signature business component with fields in the Pharma Professional Call business component.

Use Checksum Field: 3 as a template to create new user properties with the same format.

Name the new user property Checksum Field: *n*, where *n* is less than or equal to 25.

Table 10. Checksum Field User Properties

User Property Name	Value
Checksum Field: 3	"Created by", "Created by"
Checksum Field: <i>n</i>	"field in Pharma Call Signature", "field in Pharma Professional Call"

Validation Logic of the Sign and Submit Buttons

You can edit the validation logic for the Signature and Submit buttons for professional and account calls.

Default Validation Logic Flowcharts

The default validation logic for the Signature and Submit buttons is shown in the following flowcharts:

- Signature button, Figure 4 on page 66
- Professional Call Submit button, Figure 5 on page 67
- Account Call Submit button, Figure 6 on page 68

Not all implementations of Siebel ePharma Handheld require the extensive validation as shown in the following flowcharts. Before most validation steps, the procedure consults a user property to determine if the field should be used during the validation. For example, if it is not necessary to validate the License Number field, the user property Validate License Number is set to false. The Signature button validation then skips the validation question "Is the License Number field populated?".

User Properties that can be used to alter validation logic are described in "Changing Validation Logic by Editing User Properties" on page 69.

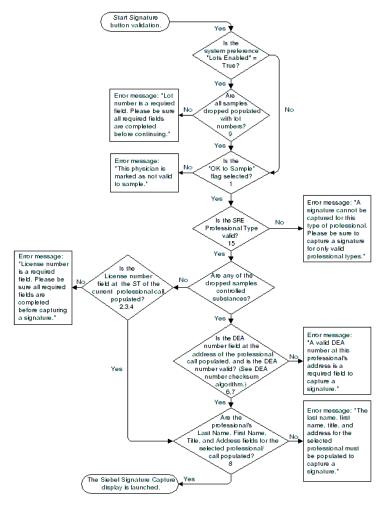


Figure 4. Default Validation Logic Flowchart for Signature Button

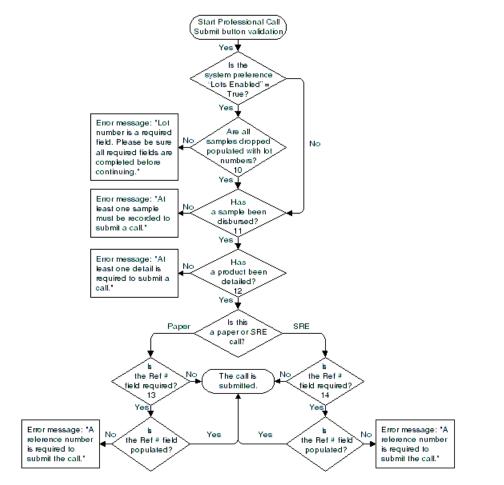


Figure 5. Default Validation Logic Flowchart for Professional Call Submit Button

Application Administration

Validation Logic of the Sign and Submit Buttons

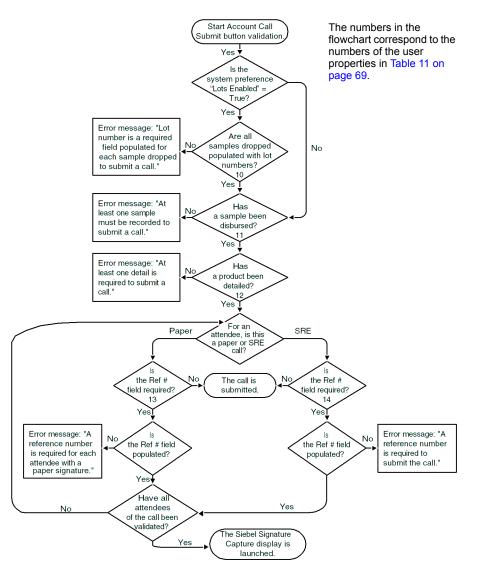


Figure 6. Default Validation Logic Flowchart for Account Call Submit Button

Changing Validation Logic by Editing User Properties

Validation logic uses user properties to determine if a field should be used during validation.

Table 11 explains the user properties you can use to alter the validation logic of the Sign, Professional Call Submit, and Account Call Submit buttons.

Table 11. User Properties for Setting Sign and Submit Button Logic

Flowchart Reference	User Property	Action if Y	Action if N	Default Value
1	"Validate OK to Sample" Use to enforce confirmation that the OK to Sample flag is selected before launching the Signature Capture display.	Enforce the OK to Sample validation.	Skip the OK to Sample validation.	Y
2	"Validate License Number" Use to enforce validation that the License # is populated before launching the Signature Capture display.	Enforce the License Number validation.	Skip the License Number validation.	Y
3	"Validate License Number Status" Use to enforce validation that the License # status = Active before launching the Signature Capture display.	Enforce the License Number Status validation.	Skip the License Number Status validation.	N
4	"Validate License Number Expiration" Use to enforce validation that the Expiration date on the License # is later than Today before launching the Signature Capture display.	Enforce the License Number Expiration validation.	Skip the License Number Expiration validation.	N

Application Administration

Validation Logic of the Sign and Submit Buttons

Flowchart Reference	User Property	Action if Y	Action if N	Default Value
N/A	"Validate Address DEA Number"	Enforce the Address	Skip the Address DEA	Y
	Use to enforce that the DEA number is valid (DEA # checksum algorithm) at the time the value is entered into the DEA # field on the Address child applet (on the handheld).	DEA Number validation (field is populated <i>and</i> number is valid).	Number validation (field is populated <i>and</i> number is valid).	
	This user property applies to both the laptop and the Siebel Handheld applications.			
6	"Validate Signature DEA Number" Use to enforce that the DEA number is populated and that the value is valid (DEA # checksum algorithm) before launching the Signature Capture display.	Enforce the DEA Number validation in the Signature button (field is populated <i>and</i> number is valid).	Skip the DEA Number validation in the Signature button (DEA number is valid per the checksum routing <i>and</i> the field is populated).	Y
7	"Validate DEA Number Expiration" Use to enforce validation that the Expiration date on the DEA is later than Today before launching the Signature Capture display.	Enforce the DEA Number Expiration validation in the Signature button (expiration date is later than today).	Skip the DEA Number Expiration validation in the Signature button (expiration date is later than today).	Ν
8	"Validate Professional Profile" Use to validate if the professional's Last Name, First Name, Title, and Address fields are populated before launching the Signature Capture display.	Enforce the Professional Profile validation.	Skip the Professional Profile validation.	Y
9	"Validate Sign Lot Number" Use to validate if the lot number is populated on launching the Signature Capture display.	Enforce the Signature button Lot Number validation.	Skip the Signature button Lot Number validation.	N

Table 11. User Properties for Setting Sign and Submit Button Logic

Flowchart Reference	User Property	Action if Y	Action if N	Default Value
10	"Validate Submit Lot Number" Use to validate if the lot number is populated on submitting a call.	Enforce the Submit button Lot Number validation.	Skip the Submit button Lot Number validation.	Y
11	"Sample Disbursed Required" Use to require that at least one sample be disbursed before submitting the call.	Enforce that at least one sample be disbursed.	Do not require at least one sample disbursed.	N
12	"Must Detail Products" Use to require that at least one product be detailed before submitting the call.	Enforce that at least one product be detailed.	Do not require at least one product detailed.	N
13	"Paper Reference Number Required" Use to require a sample reference number for calls with paper signatures.	Enforce the Paper Reference Number required validation.	Skip the Paper Reference Number required validation.	Y
14	"SRE Reference Number Required" Use to require a sample reference number for signature recorded electronically (SRE) calls.	Enforce the SRE Reference Number required validation.	Skip the SRE Reference Number required validation. (If the Ref # field is blank, it will be populated with the Row ID of the call.)	N
15	"SRE Professional Type" Use to require that the professional type be valid for signature recorded electronically (SRE) calls.	The professional type (for example, "Physician") must match the value of this user property. If the value is null, all professional types are valid.		null

Table 11. User Properties for Setting Sign and Submit Button Logic

Application Administration

Validating the DEA Number

Flowchart Reference	User Property	Action if Y	Action if N	Default Value
N/A	Submit Confirmation Note: If this user property does not exist (for example, in the standard Siebel ePharma application), behavior is equivalent to "Submit Confirmation" = Y.	Confirmation message appears when the Submit button is tapped.	No confirmation message appears when Submit button is tapped.	Y
N/A	Submit On Sign OK Note: If this user property does not exist (for example, in the standard Siebel ePharma application), behavior is equivalent to "Submit On Sign OK" = N.	Tapping the OK button on the Siebel Signature Capture display for new professional calls invokes the submit method. The submit method is not invoked for account calls nor for re-created professional calls.	Tapping the OK button on the Siebel Signature Capture display closes the display. To submit the call, tap the Submit button.	N

Table 11. User Properties for Setting Sign and Submit Button Logic

Validating the DEA Number

In the U.S., the DEA number is a federally authorized number for physicians at a specific address.

In Siebel ePharma Handheld, the DEA number is stored at the address level for each physician. Siebel ePharma Handheld can confirm that a valid DEA number is populated at the selected address for a professional call. Depending on how your Siebel ePharma Handheld application is configured, the valid DEA number check can be performed at the time of entering the DEA number, upon launching the Siebel Signature Capture display, or both.

If:

■ The product dropped is a controlled substance *and*

 The user property "Validate Address DEA Number" or "Validate Signature DEA Number" is true

then Siebel ePharma Handheld checks the validity of the DEA number by executing the algorithm described in Table 12.

Step	Algorithm	Example
1	The first two characters must be uppercase letters.	BB 1388568
2	Sum the first, third, and fifth digits.	1 + 8 + 5 = 14
3	Sum the second, fourth, and sixth digits.	3 + 8 + 6 = 17
4	Double the number obtained in step 3.	2 × 17 = 34
5	Sum the numbers from steps 2 and 4.	14 + 34 = 48
6	If the last digit of the DEA number is the same as the last digit of the number obtained in step 5, the DEA number is considered valid.	The last digit of BB138856 8 and 4 8 is the same, "8". This checksum indicates that the DEA number is valid.

Table 12. The DEA Number Checksum Algorithm

Preparing Receipts for Calls

As the Siebel administrator, you may be asked to print receipts for sample drops to a physician. From the Sample Event Administration view, you generate a list of sample drops and print receipts using the Sample Receipt report.

To print receipts for samples dropped

- **1** From the application-level menu, select View > Site Map > Samples Administration > Sample Event Administration.
- **2** In the Sample Events list, create a query.
- **3** From the application-level menu, select View > Reports to open the Sample Events dialog box.

Preparing Receipts for Calls

- **4** From the Select a Report drop–down list, select Sample Receipts and click Run.
- **5** To print the receipt, click the Print button in the Siebel Report Viewer window.

This chapter provides information on deploying and developing data filters. Effective filtering is a key component of handheld deployment. Filtering restricts the amount of data downloaded to the handheld device in order to accommodate the reduced memory and processing resources of the handheld device. The user experience is improved if Siebel Handheld users do not need to navigate through unnecessary records. Device performance and synchronization times are improved as well.

The audience for this chapter is Siebel application administrators and Siebel application developers.

Types of Data Filters

There are three filtering methods that can be used to control the data synchronized to the handheld, which are discussed in greater detail later in this chapter.

- Repository Configuration. By specifying links between business components in business objects, you are filtering the data that gets downloaded to the device. These links are defined in Siebel Tools by the application developer.
- **Query by Example Filters (QBEs).** QBEs are business component-level filters that are primarily used to filter data at the business component level across all business objects. It defines the overall set of data available to the handheld. This filtering mechanism is used to provide handheld-specific business component level filtering and to define the overall set of data available to the handheld application. QBEs can also be used to filter picklists. It is strongly recommended that these filters be thoughtfully designed and be in place before synchronizing data to the handheld.

Developing Data Filters

Predefined Query Filters (PDQs). PDQs, sometimes called synchronization filters, select data at the business object (screen) level. End users use PDQs to select the data downloaded during synchronization. The list of PDQs appear in the Set Filters dialog box.

Users select one PDQ filter per business object, or one per screen. Therefore, all views in the same screen must be associated with the same business object. The filters apply to the screen the same way PDQs apply to screens in the desktop applications. The data on all views within the Handheld application screen is filtered by the PDQ filter.

Developing Data Filters

Siebel Systems suggests the following general steps for developing Handheld synchronization filters.

- Identify the screens and views of your application. Then identify the business components that are required to support each screen and view, noting the areas where each business component occurs. For example, identify the form, list, or pick applets that are based on each business component.
- Within Siebel Tools, establish the base parent-child relationships and any reverse relationships at the component level.
- Review the business components that occur in picklists and consider creating default sync filter declarations for those that will cause large numbers of records to synchronize to the device. These declarations are maintained in the PDAQBE file.
- For each business component, determine whether it is possible to apply a search specification to all instances of the business component within the handheld application. Develop a set of suitable Query by Example (QBE) declarations in the PDAQBE file. Common examples of business components that are suitable for global QBEs include:
 - Employees (for large organizations)
 - Activities (for example, filter for current Activities, Activities of only certain kinds)

- Accounts (for example, by geography)
- Products (for example, active, orderable products)
- Orders (for example, open, closed in last three months)
- Create appropriate PDQ synchronization filters for each business object or screen and make sure that each screen includes a default filter. Default filters make sure that users avoid accidental download of an excessive number of records.

Query by Example Filters

During the synchronization process, the synchronization engine accesses a text file that contains handheld-specific filters applied at the business component level. These filters are QBE (Query by Example) statements that apply only to the handheld data extraction, so you can think of these QBE filters as handheld-specific business component search specifications. You can combine these QBE filters with PDQ synchronization filters or search specifications defined in Siebel Tools for flexible data filtering. There is one PDAQBE file per application on a server. (The PDAQBE file is the file defined by the PDAQBEFile parameter in the .cfg file. The PDAQBE file is located in the Siebel Root\siebsrvr\BIN*language* directory for DSS deployments and in the Siebel Root\client\BIN*language* directory for CS deployments.) Therefore, if you require different QBE definitions for different user populations, you will need a separate server for each PDAQBE file.

Unlike the PDQ filters, which are visible to the end user and can be selected through the Set Filters dialog box of Siebel Handheld Sync, QBE filters can only be created by the administrator and are hidden from the end user. QBE filters are always applied when the end user synchronizes a handheld device. Query by Example Filters

Adding Business Component Filters

The handheld PDAQBE file is installed by default into the \BIN*language* directory of the Siebel Application Server or Siebel Mobile Web Client where the handheld application is installed. The name of the file is application-specific, but always ends with PDAQBE file (for example, pharmaceqbe.txt, cgceqbe.txt, salesceqbe.txt). You can create new QBE filters or modify the default QBE filters by editing this file directly. Changes are applied to all subsequent synchronizations. You can also change the name of the file PDAQBE file by adding the following line to the [PDA] section of the Siebel Handheld application .cfg file:

```
PDAQBEFILE = "PDA filename"
```

NOTE: The Siebel Handheld application configuration file is located in the \bin\enu directory of the Siebel server for DSS or in the \bin\enu directory of the Siebel Mobile Web Client application for CS.

To create new business component filters, add rows to the PDAQBE file. The syntax for new filters is as follows:

```
DefaultSyncFilterXXX = Business Component Name/QBE Statement
```

where:

- XXX is a unique number. The numbers should be in sequential order.
- Business Component Name is the name of the business component to which the filter is applied.
- QBE Statement is the query language that limits the records downloaded for the specified business component.

For example, the following is a QBE Statement from the PDAQBE file:

```
DefaultSyncFilter1 = Action | [Status] = "Not Started" OR [Status] =
"In Progress" OR ([Status] IS NULL) OR [Status] = "On Hold" OR
([Status] = "Done" AND [Done] >= Today() - 7)
```

In this example, a Siebel Handheld filter has been created for the Action business component. This is the business component that underlies Activities in Siebel eBusiness Applications. This filter limits the Activities extracted for the Handheld application to those whose Status field is Not Started, In Progress, Null, On Hold, or Done. Activities whose Status is Done will only be allowed if the Done date occurred during the past week.

The example also demonstrates how these global QBE statements should be used during deployment. In the example, the QBE limits the handheld Activity records to those that are current. For every handheld application user and for every occurrence of the Activity business component, whether in a parent-child view or a pick applet, Activities are limited to those specified in this QBE. While this particular filter will not apply to every handheld deployment where Activities are used, most customers can use these global QBEs to rule out large sets of data not appropriate or necessary for the handheld application user.

Filtering Out List of Values

You can use QBE filters to filter out values that are not used in picklists in your handheld application. For example, there may be account types, such as Distributor and Competitor, that are only used by users in the Web Client application and are not used by sales representatives out in the field. By including only those values that are used by the sales representative, you simplify the application for the user and improve the application performance.

The following is an example of a QBE filter that filters List of Values (LOV):

```
DefaultSyncFilter1 = List of Values| ([Type])="ACCOUNT_TYPE") AND
(([Value] = "Reseller") OR ([Value] = "Retailer"))
```

In this example, regardless of the number of values that have been defined for LOV type ACCOUNT_TYPE, only the Reseller and Retailer values are extracted to the handheld.

Be careful when you use QBE filters on LOVs. Multiple screens and views may use List of Values, such as ACCOUNT_TYPE, and may require that different values appear in the list. To avoid data loss, carefully review your filters and verify that all the required values are included.

Predefined Query Filters

Siebel Handheld provides synchronization filters that allow users to select the data they want to synchronize to their handheld applications. These filters are specifically named Predefined Queries (PDQs) that reside in the Siebel database. During synchronization, Siebel Handheld Sync accesses the database and processes the handheld-specific PDQs. The user can select one synchronization filter from the Set Filters drop-down list for each screen in their application. The selected filter determines the parent data that gets downloaded to the device.

You may also define a sort specification in your PDQs. These sort specifications are applied when the data is displayed on the device and is helpful for displaying records in a particular order. An example of a PDQ that includes a sort specification is shown below. The sort specifies that Activity records display according to the required Start Date, so that the first activities to complete appear at the beginning of the activity list.

```
Name: PDA_Current Activities
Query: 'Action'.Search = "[Start Date] >= Today () - 90 AND [Start
Date] < Today () + 365"
'Action'.Sort = "Start Date (ASCENDING)"</pre>
```

General and Default PDQ Filters

There are two types of synchronization filters in Siebel Handheld—general and default filters.

- **General sync filters.** Filters users select to specify the records users want downloaded to their handheld application.
- **Default sync filters.** Filters displayed by default the first time the user taps the Select Filters button on the Handheld Sync user interface or if the user synchronizes without first selecting a filter.

The naming convention for general sync filters is:

PDA_<filter name>

An example of a general filter name is PDA_My Big Opportunities. See "Query by Example Filters" on page 77 for more information on filter naming conventions.

General filters with the PDA_ prefix appear in the Set Filters dialog when users synchronize their data and, if selected, in the handheld application in the Queries or Favorites drop-down list.

The naming convention for default sync filters is:

PDADef_<filter name> or PDADef *<filter name>

Default filters with the PDADef_prefix appear in the Set Filters dialog when the user synchronizes their data and, if selected, in the handheld application in the Queries or Favorites drop-down list. Default filters with the PDADef_* prefix only appear in the Set Filters dialog; this filter does not show up in the application.

There should only be one default query for each business object or screen. An example of a default filter is PDADef_Current Activities. The sync engine is case-sensitive, so pay close attention to using filter prefixes exactly as shown (PDA_, PDADef_).

CAUTION: Administrators must be sure to define a default filter for each screen in the handheld application. If no filters are applied during the synchronization process, an unacceptably high volume of data will probably be downloaded to the handheld device.

Configuring Default PDQs

The default PDQs that are included in Siebel ePharma Handheld are designed to be placeholders for the PDQs that your users will need. Table 13 shows the PDQs that must be created and set as the default PDQs.

Business Object	PDQ Name	PDQ Value
Account	PDADef_AccountSyncFilter	'Account'.Search = "[Account Status] = ""Active"" AND [My Position Id] = PositionId()"
Action	PDADef_ActionSyncFilter	'Action'.Search = "([Due] > = Today() - 30) AND ([Due] < = Today() + 30)"
Contact	PDADef_ContactSyncFilter	'Contact'.Search = "[My Position Id] = PositionId () AND [Status] = ""Active"""
Pharma Account Call - CE	PDADef_Last45DaysandPlanne dAcctCalls	'Pharma Account Call - CE'.Search = "([Start Date] > = Today() - 30 AND [Start Date] < = Today() + 7) AND [Account Status] = ""Active"" AND EXISTS ([Owned By Id] = PositionId())"
Pharma Professional Call - CE	PDADef_Last45DaysandPlanne dProfCalls	'Pharma Professional Call - CE'.Search = "([Start Date] > = Today() - 30 AND [Start Date] < = Today() + 30) AND [Contact Status] = ""Active"" AND EXISTS ([Owned By Id] = PositionId())"

Table 13. Default PDQs for ePharma

All Records PDQ

The All Records PDQ has special implications for Siebel Handheld users. When an All Records PDQ has been defined for a screen, the user can select it from the Favorites or Queries drop-down list in the application. This PDQ returns all records for the primary business component defined for the screen. The purpose of this query is to eliminate a potentially confusing scenario for users.

Suppose a user chooses a synchronization filter called My California Accounts that applies to the Account screen and causes only Accounts with State = CA to synchronize to the handheld application. However, during the course of the day, the handheld user creates a new Account on the device with State = NY. When the user leaves and later returns to the Accounts screen, the original PDQ (State = CA) is applied, and the new NY Account is absent from views within the screen. If the user selects the All Accounts PDQ from the Favorites drop-down list on the device, the NY Account reappears.

To avoid this kind of confusion, you should create a PDQ for each screen following this naming convention:

PDAAll_<filter name>

The query syntax should be written to return all records.

An example of the All Records PDQ:

Name: PDAAll_All Activities, Query: 'Action'.Search = "".

NOTE: This filter only appears in the application. It is not used during synchronization and does not appear in the Set Filters dialog.

See "Query by Example Filters" on page 77 for more information on filter naming conventions.

Summary of PDQ Filter Availability

Table 14 summarizes how the different filters are used. Some filters are synchronization filters—that is, they are only visible when the user synchronizes their data. Other filters are display filters—these filters are only available in the handheld application and are used to filter the records that are displayed on a screen. Some filters are both synchronization and display filters.

Filter Prefix	Synchronization Filters	Display Filters
PDA_ <filter name=""></filter>	Available	Available, if selected during synchronization from the Set Filters dialog
PDADef_ < filter name >	Available	Available, if selected during synchronization from the Set Filters dialog
PDADef_* < filter name >	Available	Not available
PDAAll_ < filter name >	Not available	Available

Table 14. Availability of PDQ Filters

Administration of PDQ Filters

The following sections provide recommendations for creating and managing filters with various synchronization methods.

Companion Deployments

Administrators typically provide their users with an initial set of PDQ filters and instruct them how to manage the synchronization filters themselves later. Create the desired Default, General, and All Records PDQ Synchronization filters in the Siebel Server database, using the Application Administration > Predefined Queries screen, or from within the Siebel application screen with which the PDQ is associated. After the appropriate PDQs are created, make the PDQs public by deselecting the Private flag. The next time the users synchronize, their local databases are updated with the new PDQs.

In addition to using administrator-defined PDQs, Companion Sync (CS) users can define their own synchronization filters in Siebel Web Client or Siebel Mobile Web Client applications using the special naming conventions. See the previous section, "Predefined Query Filters" on page 80 for more information on filter naming conventions. Synchronization filters (PDQs) created by a user are initially available for use only by that user. A user-defined PDQ can be made public by clearing the Private field in the PDQ record in the Predefined Queries view of the Application Administration screen.

NOTE: If you create a PDA PDQ, you need to restart the Handheld Component for that new PDQ to get registered as part of a Handheld synchronization.

There are several sample PDQs in the sample database, as well as in the Siebel 7 seed data.

Stand-Alone Deployments

For Direct Server Sync deployments, only administrators or users with access to the Siebel Application Server through a Web client can manage the PDQ sync filters. This simplifies end-user training, but requires you to carefully manage the filters on an ongoing basis.

Administrators manage most end user filtering needs through the use of public PDQs. These PDQs are made available to all end users and, therefore, must be defined with the needs of all end users in mind. Private filters, targeted for individual user needs, can be created only if the administrator logs into the Siebel Web Client application as an end user, navigates to the applicable screen, and creates the desired filter

Filtering Data for Pick Applets

Configuration file directives are used only in specific situations and should not be considered the primary method for filtering data. Modify these filters cautiously and only with the support of skilled Siebel configurators.

Use default Business Object declarations to force the extraction of data for a given business component in the context of a given Business Object and Visibility type. (See "Designating Visibility" on page 89 for more information on visibility designations.) The Default Business Object extractions are performed in the first phase of data extraction.

You will most often use these declarations to extract additional data that is not extracted as part of the user interface extraction. This may be useful for business components that are referenced programmatically by other business components, but are not exposed in the user interface. The default Business Object declarations are used to enforce the extraction of a subset of data to the handheld that would not have been otherwise extracted or, most commonly, to filter the data downloaded for dynamic picklists or pick applets.

All pick data is not downloaded to the device due to the memory constraints on the device. Only pick data for fields that are editable is downloaded. Therefore, if you are doing a query on a pick field, you may not be able to display the picklist. When viewing a record in an applet, if a pick field is read-only, its pick button will be disabled. If end-users select a read-only field with a pick control, they receive the following error: No data available in picklist because field is read-only.

NOTE: Catalogs control visibility of data in pick applets. To make sure that pick applets contain valid data, the administrator must add data to a relevant catalog and make sure users have visibility to the catalog using the Catalog screen's Access Groups view tab.

Configuration File Directives

Within the Siebel Handheld application .cfg file, there is a [PDA] section that contains a number of handheld-specific parameters. One of these parameters, the Default Business Objects declarations (DefaultBusObjs), can be used as a Handheld Sync data filtering tool. Two directives that are used to filter data are:

DefaultFields. This directive specifies which fields in the specified Business Component are downloaded to the device.

Filtering Data for Pick Applets

■ **DefaultBusObjs.** This directive determines the Business Objects and Business Components that are downloaded. This directive is used primarily for those Business Objects and Business Components that are used internally in the code, but do not have applets or views based on them.

In the DefaultBusObjs directive, you can specify that a QBE be applied to a Business Component. You can also use the directive to set the visibility on the Business Object. This visibility is applied to the parent Business Component of the Business Object.

However, be extremely careful when modifying these declarations. The default .cfg file created during installation of the application includes certain Default Business Object declarations that are required for the application to function properly. Be sure that Default Business Object declarations for business objects like Shift, System Preferences, List of Values, System, and others are never modified. The business objects that are required for internal application functioning differ by application, so consult Siebel Technical Support or Siebel Expert Services before modifying these parameters.

Examples of Business Object Declarations

You can set the PDQ in the Default Business Object declarations as described in the following examples.

The general format of a .cfg file is as follows:

```
DefaultBusObjs<##> = <Business Object name> | <Visibility> | <PDQ>
| <Business Component 1> | <QBE for Business Component 1> | <Business
Component 2> | <QBE for Business Component 2>
```

An example from the Handheld .cfg file:

```
DefaultBusObjs22 = Opportunity | 3 | | Account | [Account Status] =
"Active" | Action | [Start Date] >= Today () - 30 AND [Start Date]
< Today () + 90</pre>
```

Filtering Data for Pick Applets

The example Default Business Object declaration results in an extraction of the Account and Action business components where they occur with visibility of 3 within the Opportunity Screen. See "Designating Visibility" on page 89 for further information on visibility codes. The Account business component is filtered to include only Active status Accounts. The Action business component is filtered to include current Activities (those occurring in the previous months and over the next three months).

Note that there is no PDQ included in the example. A PDQ is only included when you want to force the use of a particular PDQ synchronization filter. See "Predefined Query Filters" on page 80 for more information on PDQ synchronization filters.

In the following example, the declaration is used to extract all of the Price List Line Items that will display within the Orders screen.

DefaultBusObjs13= Order Entry (Sales) |0| |Price List Item |

Note that this declaration lacks an associated QBE statement. When this is the case, all of the records available to the user for the given visibility are extracted.

Another less common way to use the Default Business Object declarations is to set a single PDQ synchronization filter for the Business Objects or Screens that are synchronized.

Designating Visibility

It is very important that you use the correct visibility designation in the Default Business Object declarations. The visibility entered should be the visibility that governs the data displayed for the business component within the context of the Business Object specified in the declaration. In the previous Example 1, visibility code 3 is designated. This corresponds to All Visibility, which is the visibility that applies to the Account business component when it is used in a pick applet. You determine the correct visibility to use by examining View and Business Component properties within Siebel Tools. When creating a Default Business Object declaration to restrict the volume of data extracted for a pick applet, begin by examining the Popup Visibility Type in Business Component Properties. Crossreference the visibility type to the list below, and enter the appropriate visibility code in the declaration. If the Popup Visibility Type field on the Business Component is null, the default value is All. Table 15 summarizes popup visibility types and the corresponding visibility codes.

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Popup Visibility Type	Visibility Codes
Sales Representative	0
Manager	1
Personal	2
All	3
None	4
Organization	5
Contact	6

NOTE: Do not use the Group, Catalog, and Sub Organization PopupVisibilityType. This is not supported in the CE handheld applications.

Overriding the Popup Visibility

If the Popup Visibility Type setting is not sufficiently restrictive (for example, All visibility), this can lead to a large number of records being extracted when the picklist is processed during synchronization. Making the Popup Visibility Type more restrictive reduces the number of records extracted for picklists. The OverridePopupVisibility user property for an applet overrides the Popup Visibility Type on a business component. Use this property when the desired visibility differs from the business component's Popup Visibility Type, and you do not want to change the Popup Visibility Type. If several picklists use the same business component, you can also use the OverridePopupVisibility user property to vary the visibility of the picklists in the different applets.

There are two considerations you should keep in mind if multiple applications are sharing the same repository. First, changing the Popup Visibility Type has a global effect for all instances where the business component is used. If multiple applications share the same repository and use the same business components, changing the Popup Visibility Type for a common business component could have an undesirable effect for another application. Second, if multiple applications share the same applet, the picklist in each applet shares the same visibility as defined by OverridePopupVisibility property. This is because the OverridePopupVisibility property is set on the containing applet. In Siebel Tools, go to Applet > Applet User Properties, and define the OverridePopupVisibility user property on the applet containing the control that opens the pick applet. See Table 16 for a description of the syntax. Assign a value to this property using the syntax shown, where < buscomp field n > is the underlying business component field of an applet control or column, and < visibility type > is the code corresponding to the desired visibility of the picklist's business component. (See Table 15 for a list of the visibility codes.) Because the name of the OverridePopupVisibility parameter must be unique, append a unique number to the name of the parameter for any other picklists, for example, OverridePopupVisibility1, OverridePopupVisibility2, and so on.

Name	Value
OverridePopupVisibility	< buscomp field 1 > , < visibility type >
OverridePopupVisibility1	< buscomp field 2 > , < visibility type >
OverridePopupVisibility < n >	 buscomp field n + 1 > , < visibility type >

Table 16. OverridePopupVisibility Syntax

NOTE: If OverridePopupVisibility is used, then the picklist and pick applet search specifications are ignored during synchronization when the records for the picklist are extracted.

This chapter discusses the following aspects of deploying the handheld application:

- Server installation, including how to optimize the server
- Web client installation
- Handheld installation, including administrative tasks that must be performed before the handheld application is deployed

The audience for this chapter is Siebel application developers, database administrators, and system administrators.

Scripting

The Siebel Handheld Client does not execute Siebel Visual Basic (VB) or Siebel eScript scripting.

The Siebel Web Client application runs Siebel VB or Siebel eScript scripts and specialized business component logic at synchronization time, rather than in real time on the handheld device. This has significant consequences in applets and controls, because scripts attached to applets and controls are ignored.

Be aware of the following additional issues with respect to scripts and validation:

Deactivating scripts. Do not deactivate existing scripts in Siebel Tools to make the handheld device or the synchronization process accept data it is excluding. The script is probably used by the Siebel Web Client, and you can cause damage elsewhere.

Deployment

Scripting

Calls to user interface methods. When a business component script makes a call to a user interface method (such as MsgBox), the script cannot be executed, and the record update, deletion, or addition is rejected during synchronization. Strictly speaking, a script attached to a business component should not interact with the user interface, but it is nevertheless a common practice.

Any Siebel Visual Basic code should be restricted to the business component level. Applet-level Siebel Visual Basic will not be executed and, therefore, should not be written for the Siebel Handheld Client application. As a substitute to using Siebel Visual Basic on the Siebel Handheld Client application, for real-time execution, use the following business component user properties:

- BC/Field Read Only Field...for making fields or business components read-only dynamically.
- Pickmap for fields on the picklist.

Do not use message boxes or prompts on the Siebel Visual Basic code used in conjunction with the Siebel Handheld Client application business components. If the business component is shared between the Siebel Handheld Client application and a laptop, use the following construct to determine if the code is being executed in real time on the laptop or during synchronization:

```
'ActiveViewName is only available when the script is called real time
on the laptop
If (TheApplication.ActiveViewName<>"") then
MsgBox"....."
End If
```

Server Installation

Server Installation

This section provides an overview of important factors to consider when planning Direct Server Synchronization (DSS) infrastructure. One aspect of successful planning and execution of a Siebel Handheld DSS deployment is to understand hardware and network requirements. While these factors are generally applicable to all deployments, there are unique aspects to each customer configuration and implementation strategy. Therefore, it is highly recommended that customers conduct detailed configuration, sizing, and production readiness reviews with Siebel Expert Services. This is especially important for complex deployments, such as those supporting large numbers of users over wide geographic areas.

For each new customer deployment of Siebel Handheld, there is a mandatory Siebel Professional Services program called the Siebel Mobile eBusiness Competency QuickStart Engagement or the Siebel Expert Services Handheld Review Package. For more information about this program, contact Siebel Global Services or your district manager.

You can also improve the performance and scalability of DSS deployments by working with the Siebel application server component parameters. For more information about the Siebel application server, see "Optimizing Server Process Management" on page 104.

NOTE: The recommendations in this chapter are general ones and are intended to raise your awareness of the key factors in handheld synchronization, performance, and scalability. These factors must be confirmed for your actual environment, and the usage patterns in your enterprise should be taken into consideration.

Server Installation

Server Topology Overview

The diagram in Figure 7 shows the servers and components that are required to deploy Direct Server Sync. The components are the Siebel database, Siebel server, Siebel Web engine, and Siebel Handheld. The synchronization components are the Siebel Sync engine which resides on Siebel server and the Sync client on Siebel Handheld.

NOTE: Companion Sync uses Siebel Remote to complete the synchronization process to the Siebel server from the laptop. For more information, see *Siebel Remote and Replication Manager Administration Guide*.

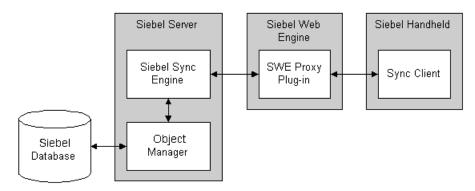


Figure 7. DSS Servers and Components

You can improve performance by properly selecting the machine that each server runs on (Web server, Siebel server, database server). For example, increasing the memory and number of spindles improves the database server performance, and increasing the number of CPUs and the amount of memory improves the performance of the application server.

Recommended Hardware and Network Configuration

There are many factors to take into account when designing and implementing your server and network hardware and architecture, and sizing your database. The critical factor in sizing a handheld implementation is the expected peak synchronization load. Specific application variables to consider in calculating this load are: the number of concurrent users, number of transactions, and size of the data file. These variables should be considered within the context of the hardware specifications, including memory and processor speed.

The following resources are available as you plan your Siebel Handheld implementation:

- Refer to Microsoft and manufacturer documentation for comprehensive information on server hardware and registry parameters.
- Refer to Siebel Technical Note 405, Siebel Handheld Synchronization for specific recommendations on the following topics:
 - Server Architecture
 - Server Hardware and Registry Parameters
 - Database Server Sizing
 - Database Tuning
 - Dial-Up and Network
 - Wireless
 - VPN (Virtual Private Networks)
- The Expert Services Handheld Review Package assists customers with planning their hardware and network for handheld implementations. Contact Siebel Global Services for more information about this program.

Server Installation

Server Installation for Direct Server Sync

The server components that are required for Siebel Handheld are installed when you install the Siebel server. See *Siebel Server Installation Guide for Microsoft Windows* for details on installing and configuring Siebel server. The Siebel server installer copies the necessary DLLs to create an Object Manager for Direct Server Sync and creates and configures a Server Component and Component Group. The rest of this subsection describes which options you must select to correctly install the software, along with creating or configuring additional Object Managers.

Installing the DSS Components Using the Siebel Server Installer

Install the Siebel server, following the instructions in the Siebel server installation guide for the operating system you are using. When you reach the Setup Type screen in the Installer wizard, you will see three installation options:

- **Typical.** This setup option installs all Siebel server components except those displayed.
- **Compact.** This setup option installs only those components necessary to run the Siebel server, but no additional components or help.
- **Custom.** This setup option lets you customize your installation by choosing the specific components you want to install.

To install the Direct Server Sync components with your Siebel Server installation

1 Choose the Custom setting, and then click Next.

NOTE: At this screen, you may also choose a different directory for your Siebel server installation.

- **2** Choose from the following components:
 - Object Manager Component
 - Handheld Synchronization
 - Siebel Data Quality Connector
 - Remote Search Support

Server Installation

Siebel Java Integrator

The listed Custom Installation options are all selectable.

NOTE: You must Handheld Synchronization to enable Direct Server Sync for your DSS installation.

3 Click Next.

Continue with the installation in *Siebel Server Installation Guide for Microsoft Windows*.

The install wizard automatically installs and configures the DSS components. In addition, the installer creates a configuration file that includes the parameters necessary to properly run the DSS server components and the Business Component filters file.

Editing the DSS Object Manager Configuration File

You must edit the configuration (.cfg) file associated with the DSS server components that you installed and configured to reflect your company's environment.

To edit your configuration file

1 In Windows Explorer, navigate to the directory where the Siebel server is installed and locate the configuration file associated with the DSS server component. By default, this directory is C:*Siebel Root*\ siebsrvr\BIN\ENU.

NOTE: By default, the name of the DSS Object Manager configuration file is phce.cfg, but you can change the name of this file.

2 Create a backup copy of the configuration file and name it phce.cfg.bak.

This step allows you to recover the original version of the file if you encounter errors.

3 Open the configuration file using Microsoft Notepad.

4 Enter parameter values appropriate for your deployment.

The following parameters in the .cfg file may need to be edited to reflect your environment. All other parameters in this section should not require change.

	Parameter	Default Value	Description
[Siebel] section	ApplicationName	Siebel ePharma CE	The handheld application. This value must match the name of the application as it is specified in Siebel Tools.
	ApplicationTitle	Siebel ePharma CE	The name of the Siebel Handheld application as shown on the Title bar on the browser. This parameter is only used if the Siebel Tools application developed for the handheld is run on the Web client.
	ApplicationSplashText	Siebel ePharma CE	The Siebel Handheld application name as shown on the splash screen. This parameter is only used if the Siebel Tools application developed for the handheld is run on the Web client.
	ComponentName		Required for Direct Server Sync, it is entered in the registry on the handheld device.

Server Installation

	Parameter	Default Value	Description
[PDA] section	AppDir	hhsync\phce	The directory location for the user's synchronization files.
	PDAQBEFile		The Business Components filtering file used by the synchronization process.
	RemoteCfgName	epharma.cfg	Name of the Siebel Mobile Web Client configuration file. If the parameter is not specified in the .cfg file, the default is siebel.cfg. This parameter is used by Siebel Handheld Sync to invoke Siebel Remote. It applies only when synchronizing using the Integrated Sync option.

- **5** Save your changes.
- **6** Restart the component or server.

Configuring Server Logging Levels

You can specify the level of logging to the server hhsync.*.log files by setting the LoggingLevels parameter in the [PDA] section of the .cfg file. By default, the parameter is set to the following:

[PDA]

LoggingLevels = 23333

Generally, you should start with the default values. These values work for most customers and were selected to optimize performance. If you are experiencing problems with the application, change the logging levels to 77777 to capture additional diagnostic information. Performance degrades slightly as you increase the logging levels, but in most instances, this is not discernible. Once the problem is resolved, reset the logging levels to their default values.

Each number specifies two things:

- The type of log record. (See Table 17 for the specific values.)
- The amount of information that is logged. (See Table 18 for the specific values.)

The different types of log records are described in Table 17 and correspond to the following format: LoggingLevels = emdts.

Table 17. Types of Log Records

Log Record	Description
e	Transaction events captured and returned to the client application as error messages
m	Log records created by the metadata extractor
d	Log records created by the database extractor
t	Log records created by the transaction processor
S	Log records created by the mainline synchronization code

Each type of log record (emdts) can be set to one of the logging levels described in Table 18:

Logging Level	Description
0	Suppress all log records
1	Process Critical records only
2	Process Critical and Error records only
3	Process Critical, Error, and Warning records only
4	Process Critical, Error, Warning, and Information records only
5	Process Critical, Error, Warning, Information, and Debug records

Figure 8 shows the default settings for the LoggingLevels parameter. The parameter specifies both the type of log record and the logging level. The figure describes the logging levels for the default setting.

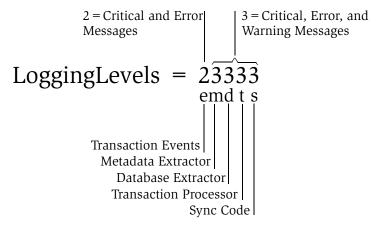


Figure 8. Logging Levels Parameter

CAUTION: The maximum level for transaction events (e) is 2. It is recommended that you do not lower the value for logging transaction events. If the transaction events level is set to 0 or 1, transaction error messages are not sent to the client, and transactions will silently fail.

NOTE: The salesceqbe.txt that is shipped with the application does not include a [PDA] section. What this means is that the defaults for all PDA parameters apply. For example, the default setting of 23333 applies for the LoggingLevels parameter. If the LoggingLevels parameter or any other PDA parameter needs to be changed, administrators can add this section to the end of the file and manually enter the parameter.

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Server Installation

Optimizing Server Process Management

Several parameters are outlined below that help optimize server processing for Direct Server Sync. To set these parameters, log into a Siebel client as a user with Administrative responsibility and navigate to Servers > Components > Component Parameters through the Screens menu. Select the SalesCE ObjManager (or the appropriate Siebel Handheld application) and update the following parameters to optimize threads per process. For further information and assistance, see Technical Note 405, *Siebel Handheld Synchronization*, and contact Siebel Global Services about the Siebel Expert Services Handheld Review Package.

- **Max tasks.** This parameter determines the maximum number of threads that can run concurrently for a given component. The value of this parameter should equal the maximum expected peak number of concurrent synchronizations.
- **Min MT servers.** This parameter determines how many multithreaded server processes are started by default for the Siebel Object Manager.
- Max MT Servers. This parameter defines the maximum number of processes supported by the instance of the Siebel Object Manager. The value for this parameter should be the same as Min MT servers and should be set so that threads per process (Max Tasks/Max MT Servers) is optimized.

Synchronization Performance and Scalability

There are a number of factors that affect the performance and scalability of handheld synchronization. It is very important that administrators and those involved in the design and deployment of Siebel Handheld understand the impact of usage parameters on synchronization performance and scalability. For more information, see Technical Note 405, *Siebel Handheld Synchronization* for application-specific variables affecting synchronization and data from synchronization scalability tests. In addition, the Siebel Expert Services Handheld Review Package assists customers with optimizing the synchronization performance of their handheld installations. Contact Siebel Global Services for more information about this program.

Using Multiple Synchronization Servers

As you scale your deployment, you may need to use multiple synchronization servers to accommodate all of your users. Your end users must be manually assigned to a particular server. Resonate products cannot be used for load balancing. Refer to Technical Note 405, *Siebel Handheld Synchronization* and to your hardware manufacturer's documentation for more information on scaling deployments.

Synchronization Security

In Siebel Handheld Version 7.5.3 and beyond, the synchronization data stream can be secured using SSL (Secure Sockets Layer).

Mobile Web Client Installation

You must edit the configuration (.cfg) file associated with syncmanager.exe (the

Companion Sync executable) that was installed with the Siebel Mobile Web Client

to reflect your user's environment. It may not be practical to individually edit each

Companion Sync user's .cfg file; therefore, it is recommended that you create one

edited file and distribute it to all your users with Siebel Anywhere. See Siebel

Anywhere Administration Guide for more information.

Handheld Device Installation

Before you deploy the handheld application, there are several tasks you need to perform:

- Editing the installation configuration file (setup.ini)
- Enable database backup
- Setting up installation on the CompactFlash card

Handheld Device Installation

- Verifying that the logging parameters are set correctly
- Changing the DSS URL
- Print Templates
- Creating a stand-alone installer (This is optional.)

Editing the Installation Configuration File

The Siebel Handheld application setup.ini file configures the Siebel Handheld Client application installer. Before you deploy a custom-configured Siebel Handheld application, you must update the parameters in the setup.ini file so that the correct values are written to the device registry before distributing the client installer to end users.

The setup.ini file resides in the Siebel Handheld application directory (for example, the ePharma Handheld directory) on the Siebel Handheld CD-ROM. To modify this file, create a Siebel Handheld installation directory on the network, or create and duplicate a custom CD-ROM for distribution to end users. This installation directory must include the same files and directory structure as the original CD-ROM. Then, modify the setup.ini file in the custom installation directory.

Table 19 lists the parameters that you may need to modify in the setup.ini file, their default value, and a description of the parameter.

Parameter	Default Value	Description
Version	7.5.2	Version of the desktop Siebel application against which the Siebel Handheld version synchronizes.
ApplicationName	Siebel ePharma CE	The handheld application. This value can be ignored in the setup.ini file because the value will be read from the configuration file on the server (for DSS) or the PC (for CS).
ApplicationSplashText	ePharma CE Handheld	The Siebel Handheld application name as shown on the splash screen.
MultiCurrency	True	Required for the application to handle multiple currencies.
DSSURL	http://Web Server Name or IP address/Virtual Directory Name	Required for Direct Server Sync. This value is entered in the registry on the handheld. See "Changing the DSS URL on Devices" on page 114 for more information on this parameter.

Table 19. Siebel Handheld Sync setup.ini Parameters

Deployment

Handheld Device Installation

Parameter	Default Value	Description
[Printing] Section		See Appendix F, "Print Configuration Settings,"for more information on the parameters used to configure printing.
[Backup] Section		Enables handheld database backups.
		See "Editing the Database Backup Parameters" on page 112 for more information on settings for the parameters in this section of the setup.ini file.
[ApplicationLocation] Section		Specifies where the handheld application and database are installed.
		See "Setting up Installation on a CompactFlash Card" on page 113 for more information on the parameters in this section of the setup.ini file.
InternetOptionReceiveTime out	600000	Length of time to receive data (except data extraction) from the server before the handheld client times out. This parameter only applies to synchronizations using Direct Server Sync.
		In milliseconds. The default value, 600000, is 10 minutes.
InternetOptionSendTimeout	600000	Length of time to send data to the server in a single call the handheld client times out. This parameter only applies to synchronizations using Direct Server Sync.
		In milliseconds. The default value, 600000, is 10 minutes.

Table 19. Siebel Handheld Sync setup.ini Parameters

Handheld Device Installation

Parameter	Default Value	Description
InternetOptionDataExtractionTimeout	900000	Length of time to extract data from the server to the handheld device the handheld client times out. This parameter only applies to synchronizations using Direct Server Sync.
LogSqlStmts	Ν	This outputs all SQL statements generated by the handheld application to a log file in the Siebel Handheld directory on the handheld. See "Configuring Handheld Logging Parameters" on page 113 for more information on this parameter.

Table 19. Siebel Handheld Sync setup.ini Parameters

Deployment

Handheld Device Installation

Parameter	Default Value	Description
LogSSAErrors	Ν	This outputs all system error messages generated by the handheld application to a log file in the Siebel Handheld directory on the handheld. See "Configuring Handheld Logging Parameters" on page 113 for more information on this parameter.
SyncLogReportingLevel	1	Specifies the level of logging by Siebel Handheld Sync.
		Valid values are:
		0 – includes critical errors for the Siebel Handheld Sync client and all messages that are displayed to the end user.
		1 – includes all error messages for the Siebel Handheld Sync client, repository version information, device Id, extraction Id, and last processed transaction Id.
		2 – includes transactions that are sent to the server, schema file and repository file activity, and device information.
TXNErrorLevel	1	Specifies the level of transaction errors returned by the server and displayed to the end user.
		Valid values are:
		0 – returns only critical messages from the server. This setting is not recommended.
		1 – returns all error messages from the server.

Enabling Database Backup

Siebel Systems provides a way to automatically back up a snapshot of the user's database and current settings, and to restore those settings in the event of a total device failure. The backup functionality automatically copies all the necessary files to a single compressed file. Each time the user backs up, the backup process creates a new copy of the file and deletes older backups. The backup process must close the application in order to copy the RDBMS and handheld configuration files. After the files are copied, it automatically restarts the application.

The backup feature must be enabled in the application. (For more information on enabling the backup feature, see "Setting Up Database Backups.") If the backup feature is enabled, a backup is created during every synchronization. This way, the user retains an up-to-date snapshot of the database, and older backup versions are removed.

When the database backup feature is enabled, a database backup occurs automatically at the end of each synchronization. This makes the overall time to synchronize somewhat longer. The size of the database and the speed of the CompactFlash card also affect the time it takes to complete synchronization.

NOTE: Backups should not be used as a replacement for synchronization.

Setting Up Database Backups

In order to back up the database:

- Provide users with an external memory card.
- Install the handheld application with the backup functionality enabled.
- Instruct users to back up their database on a regular basis.

Backing Up to External Media

It is recommended that you back up to external media—for example, a CompactFlash card.

Backing up data to a directory in memory is an option, if external media is not available on the handheld device. However, if the handheld device is damaged, the backup in memory may not be retrievable. Also, when backup data is stored in memory, the amount of memory available to run the application decreases, and application performance may suffer.

Editing the Database Backup Parameters

Before users can back up the database on their handheld devices, you must first enable the Backup menu item on the handheld application. This requires editing the setup.ini file to enable backup.

The following is an example of the default settings for the backup parameters:

[Backup] BackupLocation= \Storage Card\Siebel Backup BackupEnabled= N

BackupEnabled = [Y/N] The default is N (No). Change this setting to Y (Yes) to enable the Backup menu item and to trigger a backup to occur automatically after each synchronization.

If the product is installed with Backup = N, the backup menu item is disabled. You will need to change the parameter, then reinstall the product in order to enable the menu item.

BackupLocation = [Backup location] The default is an external storage card. Specify the location where you want the data backed up. It is recommended that you do not back up to internal RAM because this may have a negative effect on the performance of the application. However, if you back up to RAM, then specify the directory location where you want the data backed up.

For more information on the setup.ini file, see Chapter 7, "Installing the Handheld Application."

Restoring from a Backup

For information on restoring a database from a backup, see "Backing Up and Restoring Data" on page 155.

Setting up Installation on a CompactFlash Card

The default, when installing Siebel Handheld applications, is to install both the application and the database into RAM on the device. In most instances, there is sufficient available memory, and end users are satisfied with the application performance. There are situations, however, where you may need to optimize the application performance. You can improve performance by installing the Siebel Handheld application on an external storage device.

To improve the performance of the application, it is recommended that you install the application binary files on a CompactFlash card. By doing so, you can free up program memory. Installing the data on the CompactFlash card is not recommended because performance will likely degrade.

You can specify, in the application's setup.ini file, where the application files and database files are to be installed. By default, this is set to the handheld device. In the ApplicationLocation section of the setup.ini file, there are two parameters. The following shows the default settings for these parameters:

```
[ApplicationLocation]
ApplicationBinariesLocation=Device
ApplicationDataLocation=Device
```

- ApplicationBinariesLocation = Device. The default is Device. To improve application performance, set this to CF (CompactFlash).
- ApplicationDataLocation = Device. The default is Device. It is recommended that you always install the data files on the device.

After you have edited the setup.ini file, follow the instructions for installing the Siebel Handheld application on the client.

Configuring Handheld Logging Parameters

Before you deploy your application, verify that your logging parameters are set correctly in the setup.ini file. The parameters and their default values are:

[Logging]

```
LogSqlStmts = N
```

Handheld Device Installation

LogSSAErrors = N

The LogSQLStmts and LogSSAErrors parameters log messages to the sql_stmt_log.txt and ssa_errors_log.txt files, respectively. You may want to set these parameters to Y for debugging while you are developing your application. However, once you are ready to deploy your application, be sure to reset the values of both parameters to N. For more information on these log files, see "Handheld Device Logs" on page 234.

CAUTION: If the LogSQLStmts and LogSSAErrors parameters are set to Y, then the log files will get very large and use up the available memory on the handheld device.

Changing the DSS URL on Devices

Once the handheld application is installed, the DSS URL cannot be changed. If you need to change the DSS URL, contact Siebel Technical Support.

Installing Print Templates

If your application allows printing, you must include all print templates in the template subdirectory of the Siebel Handheld Install directory. The print templates are language-specific, so copy the templates to the template subdirectory within the language directory of the language you are deploying (for example, ...\ENU\Template). See the system requirements and supported platforms documentation for your application for the language codes.

See Appendix F, "Print Configuration Settings" for more information about Printing.

Installing from External Media

You may create an image of the Handheld Installer that can be loaded onto external media such as a CompactFlash card. When you create a stand-alone installer platform, a Cabinet file (CAB) is created in a location that you specify. On the Pocket PC platform, this file is named siebel.hpc2k_arm.cab. On the Handheld PC platform, this file is named siebel.hpc2k_arm.cab. You can copy the CAB file to a CompactFlash card, insert the card into the handheld device, and double-click on the file to install the Siebel Handheld application on the device.

NOTE: When installing the application on the device, the end user is asked if he or she wants to install the application in the default directory. Regardless of the user's answer, the application is always installed in the directory specified by the setup.ini file. Therefore, the only way to change the directory the application is installed in is to modify the parameters in the ApplicationLocation section of the setup.ini file.

Creating a Stand-Alone Installer

Users who synchronize in DSS mode may not have a PC, and so may not be able to create a partnership and synchronize using Microsoft ActiveSync. You can install the application for each user through a standard partnership, or you can configure a stand-alone installer as shown in the following pages.

During the installation, as shown in Figure 9, the InstallShield Wizard screen prompts you by asking, Would you like to deploy a CAB file to enable rapid installation for additional devices? You can configure a stand-alone installer by selecting Yes.

InstallShield Wizard	×
Synchronization Options Choose the type of synchronization you will be using.	
Would you like to deploy a CAB file to enable rapid installation for additional devices? • Yes • No	
InstallShield	ncel

Figure 9. CAB File Option

You are prompted to select a language for the application and to specify a location for the CAB file. The installer creates the CAB file in the location you specify.

The CAB file is a self-extracting file that includes all the files needed to install the Siebel Handheld application on the handheld device. When you double-click the file, the CAB file installs the application.

Deployment

Handheld Device Installation

Deployment

Handheld Device Installation

Synchronization Conflict Handling and Recovery

When multiple end users synchronize with a remote database, transaction conflicts may occur which can result in data loss. The Extended Pick and Extended Insert functionality minimizes synchronization conflicts. If transaction conflicts are unavoidable, then Siebel Handheld Journaling captures the transaction information so that the data can be recovered. The combination of Extended Pick, Extended Insert, and journaling eliminates the potential for data loss.

Preventing Synchronization Transaction Conflicts

There are two features that minimize synchronization transaction conflicts.

- Extended Pick processing
- Extended Insert processing

The next several sections describe these features in detail.

Extended Pick Processing

The handheld is used to capture and record transactions entered by the handheld user. During synchronization, these transactions are processed on the server. A situation may arise in which a transaction fails when it is applied to the Siebel server (through Direct Server Sync) or Siebel Mobile Web Client (through Companion Sync)—both of which are referred to as "server." For example, a Siebel ePharma Handheld user creates a professional call activity for one of his contacts. However, since he last synchronized with the server, the contact involved in this transaction was deleted from the server database. When he tries to synchronize his handheld, the server does not find his contact, and the call activity for the contact cannot be inserted into the server database. To generalize this example, any transaction that involves data selected through pick lists or pick applets will fail on the server if that pick data is not present at the time of synchronization.

With many handheld users synchronizing with Siebel server and modifying data at different times, this scenario is not uncommon.

The following describes how a pick transaction is recorded on the handheld device and processed on the server during synchronization. Assume that the handheld user wants to create a new call activity for the contact. In order to do this, the user inserts a new record in the Professional Call screen and "picks" the desired contact. When the contact is selected on the handheld, the Row Id of the contact (Contact Id) is recorded. However, on the handheld, the application does not record any of the pick map fields associated with the contact; only the Contact Id is recorded. When the user synchronizes his handheld, that Contact Id is used to locate the contact record in the server database. The Contact Id is then used to retrieve all of the fields used in the pick map for the Contact Id (Last Name, First Name, Middle Initial, Address, City, State, Zip Code, and so on).

In order to minimize pick processing failures, the handheld must record the pick row Id and all of the pick map data that is required for a successful transaction. This data must be recorded at the time of the pick, so that it can be passed to the server for processing. This enhanced functionality is called Extended Pick processing. Now, when the user synchronizes, the transaction is processed on the server as follows:

- The synchronization process first looks for the pick record on the server database. For example, to add an activity it looks for the contact and, if it finds the contact, it retrieves the necessary data and adds the activity. This is the default behavior.
- If the server does not find the pick map record in the database and extended pick processing is enabled, it retrieves the pick record Id and pick map data from the handheld transaction and applies the data directly to the server.

Enabling Extended Pick Processing

You can enable Extended Pick processing in two ways:

• Configuration file parameter

The configuration file parameter applies globally throughout the application. When enabled, every handheld pick transaction is subject to pick processing. The parameter is set as follows:

DefaultHandheldSyncPickMode = *Mode*

Table 20 describes the settings for this parameter.

Configuration File Parameter	<i>Mode</i> Value	Description
DefaultHandheldSyncPickMode	NoFail	Turns Extended Pick processing ON
	FailOnError	Turns Extended Pick processing OFF. This is the default behavior if the parameter is not specified in the .cfg file.

Table 20. Configuration File Setting

■ Business component user property

The user property is defined on specific business components. The syntax for setting Extended Pick on a business component and the parameter values (Table 21) follow:

HandheldSyncPickMode = *Fieldname* | *Mode*

Business Component User Property	Parameter	Value	Description
HandheldSyncPickMode	Fieldname	—	Specify the field name as defined in Siebel Tools.
	Mode	NoFail	Turns Extended Pick processing ON.
		FailOnError	Turns Extended Pick processing OFF.

Table 21. Business Component User Property Parameters

You may apply Extended Pick processing to multiple fields in a single business component, using the following syntax:

HandheldSyncPickMode = *Fieldname1* |*Mode1*, *Fieldname2* |*Mode2*

The setting on the business component takes precedence over the setting in the configuration file. For example, you can use the business component setting to nullify the global application of Extended Pick in the configuration file. See "Recommended Extended Pick Processing Settings" on page 123 for an example. Conversely, you can enable Extended Pick processing on specific business components if the configuration file setting has disabled the functionality.

Table 22 shows the combined effect of the settings in the configuration file and on a business component.

- The business component setting always takes precedence over the setting in the configuration file.
- If there is no setting on a particular business component, the configuration file setting applies.

■ If there is no setting in either the configuration file or on the business component, the default behavior is for Extended Pick to be turned OFF.

Table 22.	Combined	Effect	of Extended	Pick	Settings
-----------	----------	--------	-------------	------	----------

Business Component Setting HandheldSyncPickMode=	Configuration File Setting DefaultHandheldSyncPickMode=		
	NoFail FailOnError No Setting in .cfg		
NoFail	NoFail	NoFail	NoFail
FailOnError	FailOnError	FailOnError	FailOnError
No Setting on Business Component	NoFail	FailOnError	FailOnError

Recommended Extended Pick Processing Settings

It is recommended that you use the Extended Pick processing settings in the following way:

- Turn Extended Pick processing off globally. This is specified in the configuration (.cfg) file.
- Activate Extended Pick processing on the following fields for critical business components:
 - **Pharma Professional Call CE**. Last Name|NoFail, Address|NoFail, Contact Id|NoFail, Contact Address Id|NoFail
 - Pharma Call Products Detailed CE. Name NoFail
 - Pharma Call Sample Dropped CE. Name NoFail, Lot Name NoFail
 - Pharma Account Call CE. Account Name | NoFail, Address | NoFail, Account Id | NoFail, Account Address Id | NoFail
 - Pharma Promotional Items Dropped CE (Name). Name | NoFail

The ePharma Handheld application is shipped with these recommended settings.

NOTE: When Extended Pick processing is enabled, any update conflicts that occur for that pick field are resolved using the "Client Wins" conflict resolution directive. For fields that do not have Extended Pick processing enabled or that are not pick fields, this does not apply. Please make a note of this behavior when using this feature.

Extended Insert Processing

When the server executes an insert transaction and the insert fails, there are two ways the insert failure can be handled:

- A record is logged that indicates the insert failed, and synchronization continues. This is the default insert behavior. If it is enabled, the Handheld Sync Journal can be used to recover the data.
- The insert failure is logged, including details of the failure, and synchronization is interrupted. This is the extended insert behavior. Extended insert behavior guarantees that, should an insert fail, data loss does not occur since synchronization is stopped until the circumstances causing the failure are resolved.

NOTE: If Extended Insert processing takes place, synchronization is interrupted. The synchronization process will continue to fail until the problem is resolved. End users will need to contact their system administrators to recover from the failure. The recovery effort may involve modifying transactions queued for processing, modifying data on the server, or reentering transactions through the handheld application.

Enabling Extended Insert Processing

You can enable Extended Insert processing in two ways:

■ Configuration file parameter

The configuration file parameter applies globally throughout the application. When enabled, every failed insert interrupts synchronization. The parameter is set as follows:

DefaultHandheldInsertMode = *Mode*

Table 23 shows the settings for this parameter.

Table 23. Configuration File Setting

Configuration File Parameter	<i>Mode</i> Value	Description
DefaultHandheldInsertMode	NoFail	Disables Extended Insert processing. This is the default behavior if the parameter is not specified in the .cfg file.
	FailOnError	Enables Extended Insert processing.

■ Business component user property

The user property is defined on specific business components. The setting in the business component takes precedence over the configuration file setting. The syntax for setting the Extended Insert on a business component and the parameter values (Table 24) follow:

HandheldInsertFailMode = Mode

Table 24. Business Component User Property Parameter

Business Component User Property	Parameter	Value	Description
HandheldInsertFailMode	Mode	NoFail	Disables Extended Insert processing.
		FailOnError	Enables Extended Insert processing.

Table 25 shows the combined effect of the setting in the configuration file and the setting on a business component.

- The business component setting always takes precedence over the setting in the configuration file.
- If there is no setting on a particular business component, the configuration file setting applies.
- If there is no setting in either the configuration file or on the business component, the default behavior is for Extended Insert to be disabled.

Table 25. Combined Effect of Extended Insert Settings

Business Component Setting HandheldInsertFailMode=	Configuration File Setting DefaultHandheldInsertMode=		
	NoFail	FailOnError	No Setting in .cfg File
NoFail	NoFail	NoFail	NoFail
FailOnError	FailOnError	FailOnError	FailOnError
No Setting on Business Component	NoFail	FailOnError	NoFail

Recommended Extended Insert Processing Settings

It is recommended that you use the Extended Insert processing settings in the following way:

- Turn Extended Insert processing off globally. This is specified in the configuration (.cfg) file.
- Activate Extended Insert at the business component level for the following critical business components:
 - Pharma Professional Call CE
 - Pharma Call Products Detailed CE
 - Pharma Call Sample Dropped CE
 - Pharma Account Call CE

Recovering Data with Siebel Handheld Journaling

 Follow the recommendations for Extended Insert processing in conjunction with the recommendations for Extended Pick processing.

NOTE: When Extended Pick processing is not enabled, the likelihood of a pick failure resulting in an insert failure increases. Therefore, it is recommended that Extended Pick be used in conjunction with the FailOnError setting for Extended Insert.

Recovering Data with Siebel Handheld Journaling

Siebel Handheld Journaling compiles the details on all transaction conflicts in a log file dedicated for that purpose. This log file, in XML format, can be viewed in a Journal Viewer which allows administrators to review data and to copy and recover data.

In order to use the handheld journaling, three parameters in the handheld configuration (.cfg) file must be set.

The parameters and their default settings are as follows:

EnableJournaling = False LoggingLevels = 23333

- EnableJournaling = False. This parameter, when set to True, enables journaling. The default (False) disables journaling.
- LoggingLevels = 23333. Specifies the level of logging for log records. The default is the minimum level of logging required for journaling. See "Configuring Server Logging Levels" on page 101 for more information about configuring the LoggingLevels parameter.

Location and Name of Journal Log Files

The journal log file resides in the Siebel application directory on the server. The name of the file is derived from the AppDir parameter in the handheld .cfg file.

For example, if the AppDir parameter is set as follows:

AppDir = hhsync\phce

Companion Sync Journal Files

then the location of the file is: *Client Root*\log

and the name of the file is: hhsync.phce.journal.log.

Companion Sync Journal Files

Any journal log files that are generated during Companion Synchronization are saved in the Siebel application directory on the Mobile Web Client. To facilitate the administration of Companion Sync deployments, a mechanism is embedded in Siebel Handheld that uses MAPI integration to transfer the journal log files to the Siebel Administrator. When this functionality is enabled, if a journal log file is generated, it is automatically attached to an email and sent to an email alias. The administrator can then use an Outlook macro to concatenate these attachments into a single XML file that can then be viewed in the Journal Viewer.

NOTE: This functionality is only available to clients using Microsoft Outlook.

Automatic Forwarding of Journal Log Files

In order for the journal log files to be forwarded to the Siebel Administrator, the following parameters need to be set in the handheld .cfg file.

AdminEmail = JournalGenerations = 60

- AdminEmail—Email alias of the Siebel Administrator. The default is null. If this parameter is null, the email with the journal log file is not sent.
- **JournalGenerations**—Number of journal log files that are archived on the Mobile Web Client. The default value is 60. When the 61st journal log file is archived, the oldest file is deleted.

If a network connection is not available when the email is generated, the email resides in the end user's Outbox until a connection with the server is established. The forwarding of the log files requires no action on the part of the end user.

Viewing Transaction Errors

Concatenating Journal Log Files

Siebel Administrators will generally receive numerous emails from end users with journal log files attached. To facilitate viewing the journal log files, you can use an email macro to concatenate the various files into a single file. Contact Siebel Technical Support to obtain this macro.

When it is executed, the macro:

- Locates all email in the System Administrator's Inbox whose subject line begins with "Sync Journal for."
- Concatenates the text from the files that are attached to the emails into a single text file. The name of this file, by default, is centraljournal.log.
- Saves the file to the default location, D:\journalfiles.
- Deletes the emails after the attached files are processed.

Before you can use the macro, you must add the macro to Microsoft Outlook and create the directory where the concatenated journal log file is saved.

Macro Constants

You may modify the following constants and tailor them to your environment. The constants and their default values are:

- Const JOURNALROOTDIR = "d:\JournalFiles\"—Specifies the location of the concatenated journal log file.
- Const JOURNALFILE = "CentralJournal.log"—Specifies the name of the concatenated journal log file.

Viewing Transaction Errors

The Journal Viewer is used to view the journal log files and allows Siebel Administrators to recover data. Contact Siebel Technical Support to obtain the software for the Journal Viewer. Once you have received the software, run the Journal Viewer installer to install the viewer on your machine. Viewing Transaction Errors

To open a file

- **1** From the Windows Start menu, choose Programs > Journal Viewer to start the application.
- **2** Choose File > Open and open the journal log file you wish to view.

Using the Journal Viewer

When you open a journal log file in the Journal Viewer, you will see a list of log records. When you double-click on a record in the Journal Viewer, the Error Details window displays the following information for the record:

- Business component
- Previous field values and new field values
- Error message describing the sync conflict

Installing the Handheld Application

This chapter provides instructions for the end user for installing the Siebel Handheld application on their device. Installation instructions are provided for each of the different synchronization methods and for installing the application on a Compact Flash card. System administrators may also find the information in this chapter useful for maintaining their end users' systems.

Installing on the Handheld

There are two ways to install software onto any Windows-powered handheld device. The first is to create a partnership between a desktop or laptop PC and the handheld device using Microsoft ActiveSync. The second is to install the application from type of external media. See "Reinstalling or Upgrading the Handheld Application" on page 135 for more information.

It is important to remember that end users must synchronize their handhelds to download the application configuration and populate the database before they can use the application. Therefore, an administrator may install the application for an end user, but the synchronization must occur using the end user's name and password. Installing on the Handheld

Installing for Companion Sync Users

Before you install and use Companion Sync (CS) with the Siebel Handheld application, you must first install the Siebel Mobile client on your PC. The Mobile Client Installer copies the Companion Sync files to your personal computer. Then install the Siebel application on your handheld device.

NOTE: Users can only use Companion Sync to synchronize their Siebel Handheld application to a personal computer that already has the Siebel Mobile client installed.

To install the Siebel Handheld application and Siebel Handheld Sync using CS

- **1** Using Microsoft ActiveSync, establish a partnership between the handheld device and the personal computer.
- **2** On the PC, network, or CD-ROM, locate the folder where the Siebel Handheld Application folder is installed. In this folder, double-click setup.exe.
- **3** Choose the language you want to use for the installation and click OK.

The Welcome Screen appears.

4 Click Next.

The Synchronization Options screen appears.

- **5** Choose the Companion Sync option and click Next.
- 6 Select the desired language of the Siebel Handheld application and click Next.

A window appears showing the setup status, followed by several DOS windows, and the Add/Remove Programs dialog box.

Installing on the Handheld

7 At the Installing Applications dialog box, click Yes to install in the default directory.

NOTE: The default directory in the Applications dialog is the directory specified by the system administrator in a setup file. So that the application works correctly, the Siebel Installer installs the application in the default directory. Therefore, even if you specify a different location for the application, the application will be installed in the default location.

The Siebel Handheld installation automatically installs SSCE Service Pack 1 and overwrites existing files on your system. A message may appear asking if you want to replace existing files. Respond by tapping "Yes to All."

The Siebel Handheld application is installed on the handheld device. During the installation, the Installing Applications dialog box displays a progress bar.

It may take several minutes to install on the handheld device. When the application has been downloaded to the handheld device, the Application Downloading Complete dialog box appears on the PC.

8 Click OK.

A message appears informing you that setup has finished installing the Siebel Handheld application on your computer.

9 Click Finish.

The Siebel Handheld icon appears in the Start > Programs screen on the handheld device.

After installing the handheld application and Siebel Handheld Sync, you must perform an initial synchronization before you can use the application. If you are installing the application for the first time on the device, synchronize the Siebel Remote database with Siebel Server, then synchronize the Siebel Handheld and Siebel Remote databases. See "Synchronizing Data" on page 157 for the procedure for synchronizing your data.

See Chapter 4, "Data Filtering," for more information on using Companion Sync and setting filters.

Installing on the Handheld

Installing for Direct Server Sync Users

Most DSS users do not have access to a PC for creating a partnership with their handheld device. In this case, the administrator has to create partnerships with each user's device and install the application. Siebel Handheld applications can be installed in DSS mode using the Siebel Installer as described in this section.

To install the Siebel Handheld application using DSS

- **1** Using Microsoft ActiveSync, establish a partnership between the handheld device and the PC.
- **2** On the PC network or CD-ROM, locate the folder where the Siebel Handheld Application folder is installed. In this folder, double-click setup.exe.
- **3** From the Choose Setup Language window, choose the language you want to use for the installation and click OK.
- **4** From the Welcome screen, click Next.
- **5** At the Synchronization Options screen, choose the Direct Server Sync option and then click Next.

The next screen displays and asks, "Would you like to deploy a CAB file to enable rapid installation for additional devices?"

NOTE: If you want to create a stand-alone installer, choose Yes, and then click Next. See "Reinstalling or Upgrading the Handheld Application" on page 135 for details.

- **6** To install the application on the device, click Next.
- **7** Select the desired language of the Siebel Handheld Application, and click Next.

A window appears showing the setup status, followed by several DOS windows.

Reinstalling or Upgrading the Handheld Application

8 The Add/Remove Programs dialog appears. This is followed by the Installing Applications dialog that asks if you want to install in the default directory. Click Yes to install the Siebel Handheld application on the handheld device.

NOTE: The default directory in the Applications dialog is the directory specified by the system administrator in a setup file. So that the application works correctly, the Siebel Installer installs the application in the default directory. Therefore, even if you specify a different location for the application, the application will be installed in the default location.

The Siebel Handheld installation automatically installs SSCE Service Pack 1 and overwrites existing files on your system. A message may appear asking if you want to replace existing files. Respond by tapping "Yes to All."

During the installation, the Installing Applications dialog box displays a progress bar. It may take several minutes to install on the handheld device. When the application has been downloaded to the handheld device, the Application Downloading Complete dialog box displays on the PC.

9 Click OK.

A window appears informing you that setup has finished installing the Siebel Handheld application on your computer.

10 Click Finish.

The Siebel Handheld and Siebel Handheld Sync icons appear in the Startup screen on the handheld device.

After installing the handheld application and Siebel Handheld Sync, you must perform an initial synchronization before the application can be used. Refer to "Synchronizing Data" on page 157 for the procedure for synchronizing your data.

See Chapter 4, "Data Filtering," for more information on using Direct Server Sync and setting filters.

Reinstalling or Upgrading the Handheld Application

Follow the steps below to reinstall or upgrade your handheld application.

Uninstalling the Handheld Application

To reinstall or upgrade the handheld application

- **1** Before you reinstall the current application or upgrade to another version of the handheld application, you must first uninstall the current application on your device. See "Uninstalling the Handheld Application" on page 136 for more information.
- **2** Once you have uninstalled the application, you may then reinstall the application or install the newer version. See "Installing on the Handheld" on page 131, and follow the instructions for installing the handheld application.
- **3** Synchronize your handheld application. See "Synchronizing Data" on page 157 and follow the instructions for synchronizing your data.

NOTE: If you are using Companion Sync to synchronize your data, synchronize the Siebel Handheld database with the Siebel Remote database.

Uninstalling the Handheld Application

Uninstalling the application deletes the database files as well as the application files.

CAUTION: Before you uninstall your application, you must synchronize your database to save any changes to your data since the last synchronization. If you do not synchronize before uninstalling, these changes will be lost.

See "Synchronizing Data" on page 157 and follow the instructions for synchronizing your data.

Handheld	To uninstall the handheld application
PC	

- **1** Select Start > Settings > Control Panel.
- **2** Double tap Remove Programs.
- **3** From Remove Program Properties dialog, select the Siebel handheld application from the list of Programs and tap Remove.

Uninstalling the Handheld Application

Pocket PC To uninstall the handheld application

- **1** Select Start > Settings.
- **2** Select the System tab and tap Remove Programs.
- **3** From Remove Programs, select the Siebel handheld application and tap Remove.

NOTE: A dialog box will appear that says that a file cannot be deleted. This occurs because a file may still reside in memory. Ignore this message and tap OK to delete all application and database files. No additional steps are required to remove the application and database files.

Installing the Handheld Application

Uninstalling the Handheld Application

Working with Siebel Handheld Applications

This chapter provides an overview of the Siebel Handheld application's interface. Once you understand the basics of the interface, you will find it easier to complete your tasks. This chapter discusses:

- Navigating the interface
- Working with data
- Using the calendar
- Setting user preferences

In addition, this chapter also provides procedures for performing the following enduser tasks:

- Backing up and restoring data
- Synchronizing data

Components of the Handheld Interface

The components of the handheld interface include the Screens menu, Show dropdown list, application-level menu, Queries drop-down list, toolbar, and status bar.

Figure 10 shows components of the Handheld PC application including the Screens menu, Show drop-down list, Queries drop-down list, application toolbar, application menu, and the status bar.

Screen Status		nu _		_ Applica	tion-level m	nenu	- Show	drop-dov	vn list Toolbar		es drop down list	
	Eib	e <u>E</u> dit	<u> </u>	ew <u>H</u> elp	🖕 🔿 🏄			> ≥			?	\times
	Activities		1	👻 Show	👷 My Activitie	25	-		F	avorites:		-
		Activity		*Activity Typ	e Status	Description	Du	2	Duration	Last Name	First Name	
	General			Meeting		Set up mee	ting time 4/2	3/01 12:00:00) 1			
		General		Call - Outbour	nd In Progress	Call Ed Mar	tin to ex 7/2	/01 3:00:00 P		Martin	Edward	
		General		Activity-Chan	ne In Progress	Activity-Ch	iannel:Br 6/1	9/01 12:00:00)	Conway	Brad	
		General		Preparation		Prepare Ag	jenda 4/2	2/01 12:00:00) 1			
		General		Email		Send in Co	rporate 4/1	4/01 12:00:00	60			
		General		Meeting		Weekly Te	am Meeti		30			
		General		Customer Sat	Re In Progress	Customer S	Satisfactic		30			
		General		Administration	Not Started	Draft Nego	tiation St 2/2	3/02 12:19:32	2	Black	Madison	
		General		Siebel Respon	se In Progress	Send Prop	osal 4/2	5/02 12:10:41	L	Uart	Mark	-
	•										Þ	Γ
L	$-M_3$	Activities	: 1 of	153								
		Start 휞	€ My F	Handheld PC		Sebel Cler	nt				🛱 9:52 PM	3

Figure 10. Handheld PC Application Window Components

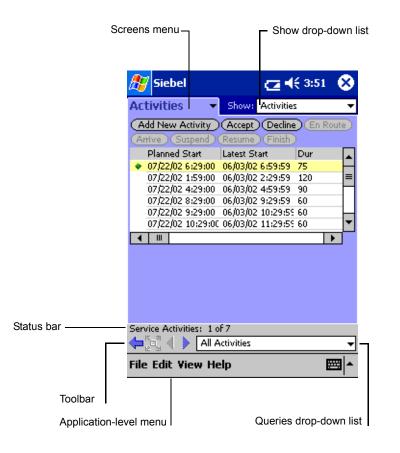


Figure 11 shows the components of the Pocket PC application.

Figure 11. Pocket PC Application Window Components

Screens Menu

The screens menu is the first level of navigation in the Siebel Handheld application. When you launch the Siebel Handheld application for the first time, this tab is labeled Screens unless you have configured a start up view to appear. When you tap the screens menu, a drop-down list of all available screens appears. Tap the desired screen in the list to navigate to it. Figure 10 shows that the Activities screen has been selected.

For information about configuring a start up view, see "Setting User Preferences" on page 155.

Show Drop-Down List

The Show drop-down list is the second level of navigation in the Siebel Handheld application. This is where you choose views for the selected screen.

Application-Level Menu

The application–level menu consists of the File, Edit, View, and Help menus. Tap a menu to select a menu option. The options that are available in each menu vary depending on the task you are performing.

Queries Drop-Down List

Up to two predefined queries (PDQs) are displayed in the Queries drop-down list. The list displays the query chosen when you synchronized (or the default filter if you did not change the Set Filters selection) and the All Records query, if it is defined. For more information, see "Predefined Query Filters" on page 80.

Siebel Toolbar

The Siebel toolbar has buttons for frequently used functionality like record navigation and querying.

NOTE: There may be a slight variation in your version of Siebel software, and the toolbar may not look exactly as shown here. You can configure your toolbar and specify which buttons are displayed. See "Configuring User Interface Elements" on page 36 for more information on configuring your toolbar buttons.

Figure 12 is an example of the Handheld PC toolbar.

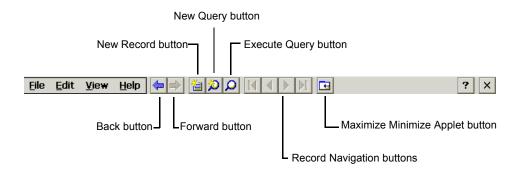


Figure 12. Handheld PC Toolbar Example

Figure 13 is an example of the Pocket PC toolbar.

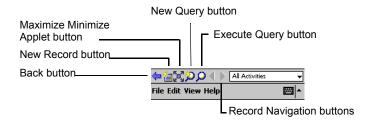


Figure 13. Pocket PC Toolbar Example

- Tap the New Record button to add a new record to the active list or form.
- Tap the Back button to navigate to the previous view.
- Tap the Forward button to navigate to the view you were in before you selected the Back button.
- Tap the Record Navigation buttons to move through records in a form or a list.
- Tap the New Query button to begin a new query in a form or a list.
- Tap the Execute Query button to run the query you just created.
- Tap the Maximize Minimize Applet button to expand the active applet so that it is the only applet displayed and takes up the entire screen display. This allows you to see more columns or more rows of data at one time. Tap again and the screen displays two applets.

NOTE: On the Handheld PC operating system, the Maximize Minimize Applet button works only on list applets. On the Pocket PC operating system, it works on both form and list applets.

Components of the Handheld Interface

Customizing the Toolbar

You can customize which buttons appear on your toolbar by selecting View > Customize Toolbar from the application menu.

- **Pocket PC** To add and remove buttons from the toolbar, drag and drop the desired buttons between the Choose Toolbar Buttons dialog box and the toolbar.
- Handheld PCFrom the Choose Toolbar dialog box, select the check boxes for the buttons you want to appear on the toolbar.

Minimize Button

The minimize button appears in the upper right corner of your window.

NOTE: Do not confuse the Minimize button that appears in the upper right corner with the Maximize Minimize Applet button that appears on the Toolbar.

Pocket PC When you tap the Minimize button, the application minimizes, but does not close. To reopen the application, from the Start menu, tap the Siebel Handheld icon. Minimizing the application merely hides it; it does not close the application.

NOTE: Be sure to close the application before you synchronize.

Handheld The Minimize button appears in the upper right corner of your screen. When you tap the button, the application closes.

Status Bar

The status bar appears at the bottom of the application window. It provides information about the current view. See Figure 10 on page 140 for an image of the status bar.

Navigating the Handheld Interface

Navigating the Handheld Interface

Navigating the Siebel Handheld application is achieved through the screens menu, the Show drop-down list, drilling down, drilling across, toolbar buttons, and toggling.

Screens Menu

The screens menu provides the first level of navigation. Here you select the screen you want to work in. For more information about the screens menu, see "Components of the Handheld Interface" on page 139.

Show Drop-Down List

The Show drop-down list is the second level of navigation. After you have selected a screen from the screens menu, select a view from the Show drop-down list. Views in the Show drop-down list are specific to each screen.

For example, in the Activities screen you can pick the My Activities view from the Show drop-down list.

More Info View

To view all of the information available for a record, make sure it is selected, and choose More Info from the Show drop-down list.

NOTE: Not all screens have a More Info view.

Toggling Between Applets

A maximum of two applets can be displayed at one time in a Siebel Handheld application. In situations where there are more than two applets configured and a Toggle button has been configured, you may tap the Toggle button on the applet. Or you may select View > Toggle from the menu to toggle between applets.

Navigating the Handheld Interface

Expandable Fields

Due to the limited screen size on the handheld, it is not always easy to view the data in a field without scrolling or resizing the field width. Therefore, some fields that could contain large amounts of text are expandable—that is, the data can be viewed in a text box. An ellipsis (...) appears in the field to indicate that the field is expandable. When you tap the ellipsis, a text box opens showing the data in that field. When you step off the field, the text box closes.

In form applets, an ellipsis is always visible in those fields that are expandable. However, in list applets, due to space constraints, the ellipsis is not always visible in expandable fields. When you tap on an expandable field in a list applet, the ellipsis appears. Once the ellipsis appears, you tap the ellipsis to open the text box.

Navigating a List of Records

Within the view you select from the Show drop-down list, you can view detailed information on a record. When records are displayed in a list, you can drill down or drill across the record to get additional details.

Drilling down occurs when you tap a hyperlink in a record and are taken to another view within the current screen. For example, if you are in the Accounts screen, and tap the Account Name hyperlink, you navigate to the details for that account. You do not leave the Accounts screen; you just move deeper into it.

NOTE: Hyperlinks are indicated by blue underlined text as long as they are set up this way in User Preferences. For more information see "Setting User Preferences" on page 155.

Drilling across a record occurs when you tap a hyperlink in a record and are taken to another view in a different screen. For example, tapping a hyperlink in the Accounts column of a contact record in the Contacts screen takes you to the record for that account in the Accounts screen. Navigating the Handheld Interface

Dynamic drilldown occurs when you tap a hyperlink in a record and are taken to another screen or just another view. Where you navigate to depends on the content in the drilldown field. For example, tapping a hyperlink in the Activity field in the Activities screen can take you to different places. If you tap an Account Call activity, you navigate to the Account Call screen. If you tap a Visit activity, you navigate to the Activities More Info view.

History Arrows

To navigate back to views you have recently displayed, tap the Back button. After you have used the Back button, you can use the Forward button to navigate back to your original screen and view.

NOTE: The History arrows only allow you navigate between views. They will not recover data that may have been entered or deleted in another view.

Record Navigation Buttons

Use the Record Navigation buttons to move back and forth though a set of records. The navigation buttons are described in Table 26.

Button	Description
	Navigates back to the first record in the list or form.
	Navigates back to the previous record in the list or form.
	Navigates forward to the next record in the list or form.
	Navigates forward to the last record in the list or form.

Table 26. Record Navigation Buttons

Entering Data

Entering Data

Pocket PC There are several different methods for entering data on the Pocket PC operating system. Tap the up arrow next to the Input Panel button to select a method. See the user guide for your device for information on using the different input methods.

Working with Columns

Data is displayed in lists and forms in your Siebel Handheld application. You can organize and work within it in a number of ways to better suit your needs.

There are several ways in which to organize columns in a list. You can:

- Sort data by up to three columns
- Resize columns
- Change the order in which the columns appear
- Show and hide columns
- Lock columns for horizontal scrolling

You can sort records in a list by tapping in the column header of the column in which you want to sort the records. If the green column sort indicator points up, the column is sorted in ascending order. If it points down, the column is sorted in descending order.

If you need to sort by more than one column, you can open the Sort Order dialog box to sort up to three columns at one time. Open the Sort Order dialog box by choosing View > Advanced Sort from the application-level menu.

Resize columns by tapping and dragging the divider between the column headings until the column is the desired size.

You can change the order of columns using the Columns Displayed dialog box. Open the Columns Displayed dialog box by choosing View > Columns Displayed. Finding and Querying Data

Show and hide columns using the Columns Displayed dialog box. In the Available columns list, select the items you want to show and tap the arrow to move the selected items to the Selected columns list. To hide columns, select the items and tap the arrow to move the selected items to the Available columns list.

Lock or unlock columns by tapping and holding the column header.

Finding and Querying Data

You can search for data using the Find or Query functionality in your Siebel Handheld application.

Find

Use Find to do a simple search for a record. You can access Find by choosing Edit > Find from the application-level menu. This launches the Find dialog box, in which you can enter your search criteria. The asterisk wildcard function (*) can be used in the search criteria. Figure 14 shows an example of the Find dialog window with the following fields: Look In, Last Name, Type, Last Call Date, Primary Specialty, and Rep Specialty.

NOTE: There may be a slight variation in your version of Siebel software, and the Find dialog box may not look exactly as shown here.

Find		OK ×
	Look In:	Contact 🔹
	Last Name:	
	Type:	
	Last Call Date:	
	Primary Specialty:	
	Rep Specialty:	

Figure 14. Find Dialog Box

Printing

Query

Use Query to locate a number of records containing a specific set of criteria. There are a number of ways in which to perform query tasks in your Siebel Handheld application.

Creating a Query

To begin a query, you can choose Edit > Query > New from the application-level menu, or you can tap the New Query button on the toolbar. Both will provide you with a blank form or list where you can enter your query criteria, depending on where you are in the application when you invoke the command. The asterisk wild card function (*) can be used in the search criteria.

Executing a Query

After you have created the query, you can execute it by choosing Edit > Query > Run from the application-level menu or by tapping the Execute Query button in the toolbar.

Refining a Query

You can refine your current query by choosing Edit > Query > Refine from the application-level menu.

Printing

You may print from any view in the handheld application that has been configured to support printing. When you print from the handheld, a document that has been configured for the view is printed. You can print directly to a printer, or, if you are not connected to a printer at the time, you can queue your print jobs and wait until you have access to a printer to print your documents.

NOTE: When you print from a view, you are not necessarily printing what is visible on the screen at the time. Every field on the screen may not be relevant for the document. The document may contain only a portion of what is in the view, and it may also contain data that is not viewable at the time. A separate applet, which often cannot be viewed in the user interface, is configured specifically for printing. Exporting Data

The print templates used to generate the printed documents are downloaded to the handheld during the synchronization process. After you have synchronized your handheld with the server or a desktop computer, you are ready to print.

For a list of supported printers, see the system requirements and supported platforms documentation for your application.

Printing From the Handheld Device

Your handheld device is configured for a particular printer by the Siebel administrator. You may print directly to this printer, or, if your handheld is not connected to a printer, the print job is sent to a print queue. Print jobs may be queued until you have access to a printer, at which time you may print all of the jobs in the queue.

Print from the Siebel Handheld application by choosing File > Print. If you are connected to a printer, the print job will run. If you are not connected to a printer, the print job is sent to a print queue. View the print queue by choosing File > Print Queue.

Exporting Data

You may export data from any view in your application in HTML format or as tab delimited text and save it to a file. This file can be viewed in applications such as Microsoft Pocket Word, Microsoft Pocket Excel, and Internet Explorer.

To export data, select File > Export... to open the Export dialog box.

In the Export dialog box, you may specify the following:

- **Format.** Specify either HTML or Tab delimited text file. (On the Handheld PC platform, this field is labeled Output format.)
- **Export.** Select Only active applet to export only the data in the active applet. Select All applets in view to export the data in all visible views. (On the Handheld PC platform, this field is labeled Applets to export.)
- **Output file name.** By default, the file is saved in the temp directory with the filename "output." You may tap Browse to specify a different location or filename.

- And paste output to clipboard. Select the checkbox to save the data to the clipboard.
- And open file. This option is only available on the Pocket PC platform. Select the checkbox to automatically open the file. When you tap OK in the Export dialog box, the data is exported to the specified file, and the file is automatically opened.
- And run. This option is only available on the Handheld PC platform. Tap Browse and navigate to an application on the device. When you tap OK, the application exports the data and opens the file with the application you specified.

NOTE: You must specify a valid output format for the application. See Table 27 for the correct formats to specify for the supported applications.

Table 27 describes how to set the parameters to export data to specific applications.

To export data to	Do the following
Microsoft Word	Set Format (or Output Format on the Handheld PC platform) to "Tab delimited text file."
Microsoft Excel	Select the "And paste output to clipboard" check box. The Output format may be set either to HTML or "Tab delimited text file." Paste the data from the clipboard into an Excel spreadsheet.
Internet Explorer	Set Format (or Output Format on the Handheld PC platform) to HTML.

Table 27. Exporting Data

Calendar and Calendar Views

To view your calendar, choose Calendar from the screens menu.

You can view your calendar in a monthly, a weekly, or a daily format. To navigate within the calendar, select the calendar view you want to see from the Show drop-down list.

Calendar and Calendar Views

Calendar Icons

Calendar icons appear in the monthly calendar to make it easier to see and understand your schedule at a glance. These calendar icons are explained in Table 28.

lcon	Description
1	Current day without an appointment
15 ♦	Day with appointment before and after 12 pm
17	Day with appointment before 12 pm
20 ▼	Day with appointment after 12 pm

Customizing the Calendar

You can customize aspects of your calendar from the User Preferences view. For more information, see "Setting User Preferences" on page 155.

NOTE: Siebel Handheld Calendar does not support modification of single instances of recurring activities. For example, if you delete or modify an appointment scheduled to recur daily for 10 days, the entire series will be deleted.

Setting User Preferences

Setting User Preferences

You can customize aspects of your Siebel Handheld application from the User Preferences dialog box. Access the User Preferences dialog box by choosing View > User Preferences from the application-level menu.

In the User Preferences dialog box you can:

- Set a default startup screen.
- Set number of maximum history threads to be saved.
- Set the maximum percentage of the display area that the parent applet can take up (Pocket PC operating system only).
- Change font size.
- Customize list spacing, column width settings, and grid lines.
- Customize your calendar's default view, start time, time slot interval, and default appointment duration.
- Specify screen aesthetics such as alternating colors for rows and showing drilldown sources as hyperlinks.

Backing Up and Restoring Data

It is recommended that you back up your data to an external device—for example, a CompactFlash card or a Secure ID card. If the handheld device is damaged, the backup may not be retrievable. If you store your backups in RAM, depending on the size of your application and data extract, you may decrease the amount of memory available for the application, and your application performance may suffer.

Backing Up and Restoring Data

Automatic Backup After Synchronization

The automatic backup feature must be enabled in the application by your System Administrator. If the backup feature is enabled, a backup is automatically created at the end of every synchronization. This way, you have an up-to-date snapshot of the database. You must never synchronize your data to the handheld device and then restore the database using an older copy of the database. If you do, the next time you synchronize, the application will try to rewrite changed transactions. This can cause data integrity problems. Therefore, when the database backup feature is enabled, a database backup occurs automatically at the end of each synchronization. Keep in mind that this will make the overall time to synchronize somewhat longer. The size of the database and the speed of the CompactFlash card also affect the time it takes to complete synchronization.

Backing Up Data

The following procedure describes how to back up the database on the handheld device.

To back up the database

1 From the application-level menu, choose File > Backup.

NOTE: If the Backup menu item is disabled, contact your system administrator to have backup enabled in your application.

A dialog box appears, telling you that backing up the data will restart the application and prompts you to confirm that you want to continue.

2 Tap Yes to start the backup.

A status dialog box appears indicating that the backup is in progress and may take a few minutes. The Handheld configuration files and data are copied to the backup location specified in the setup.ini file. Typically, the backup location is a CF or SD card. In some cases, the location is a directory in memory.

A dialog box appears telling you if the backup succeeded and asks if you want to return to the application.

3 Tap Yes to return to the application.

NOTE: If the backup fails, consult your system administrator.

Restoring Data from a Backup

In order to restore the application to its previous state, the user should contact the system administrator. Any work performed on the handheld device since the last backup will be lost.

To restore the database

- **1** Remove the external flash card from the damaged device and place it in a new handheld device where the application has been installed.
- **2** Navigate to the \Program Files\Siebel Handheld folder.
- **3** Start the restore by tapping the BackupUtility file twice.

A dialog box appears, asking you to confirm that you want to restore the device from a previous backup.

4 Tap Yes.

A status dialog box appears, indicating that the restore is in progress. The backup utility restores the files to the state when the backup was performed. A dialog box appears telling you if the restore was successful. If successful, it asks you to confirm that you want to restart the Siebel Handheld application.

5 Tap Yes to start using the application.

Synchronizing Data

You must synchronize the data on your handheld device:

- After you install or upgrade the handheld application
- Before uninstalling the handheld application

 On a regular basis to keep your data synchronized with Siebel Server and Siebel Mobile Web Client

The sections that follow describe how to synchronize using Companion Sync (CS), Direct Server Sync (DSS) and Direct Server Sync via Proxy (DSSvP), and provide some troubleshooting tips.

Using Siebel Handheld Synchronization

Siebel Handheld Synchronization differs depending on whether users synchronize through Companion Sync or Direct Server Sync. The following procedures show how to launch and use Handheld Synchronization for each method.

NOTE: A given user can only synchronize using one method. For example, it is not possible to install a handheld application that a particular user will synchronize both to the Siebel Mobile Web Client database through Companion Sync and also to the Siebel Server database directly through Direct Server Sync.

Using Companion Synchronization

End users that synchronize their data using Companion Sync must follow a three-step process to synchronize their handheld, remote, and server databases. Immediately before and after every Siebel Remote sync, you must perform a Companion Sync. This process can be time consuming for the end user and difficult for the administrator to enforce.

Integrated Sync eliminates the need for you to initiate three separate sync sessions for each Siebel Remote sync. Integrated Sync is a one-button process that automatically initiates each of the following synchronization steps:

1 Handheld Upload and Processing—Handheld transactions are uploaded to the companion PC and processed.

2 Siebel Remote Synchronization—The Siebel Mobile Client is synchronized with Siebel server. Transactions on the mobile client database are uploaded to Siebel server, and changes to Siebel server are downloaded to the mobile client database.

NOTE: If there is a handheld patch staged on the server, synchronization terminates and the patch is installed. After the patch installation is completed, the handheld user is prompted to synchronize again (using either Integrated Sync or Companion Sync) to complete the data extraction and download (that is, Step 3). It is critical that the handheld user synchronize a second time after the patch installation is completed. If he fails to do so, he will not be able to start the handheld application.

3 Handheld Data Extract and Download—Data is extracted from the mobile client database to the handheld device database.

You may use Companion Sync to synchronize your handheld with Siebel Mobile Client as many times as you wish between Integrated Sync sessions. However, it is recommended that you conduct Integrated Sync sessions frequently so that the Siebel Remote synchronization process does not take long periods of time to complete and update conflicts are minimized.

Synchronizing the Handheld for Companion Sync Users

When you synchronize, you have the option of either doing an Integrated Sync or Companion Sync. To do an Integrated Sync, select Perform Remote Sync when the Siebel Handheld Sync dialog box appears.

To perform Companion Sync

NOTE: You must close your handheld application before synchronizing your application.

1 From the companion PC, establish a Microsoft ActiveSync connection to the handheld device.

2 From the device, verify that the Siebel Handheld application is closed.

NOTE: On the Pocket PC 2002 operating system, the Minimize button (the button with the "X" in the top right corner of the application) minimizes but does not close the application. To close out the Handheld application in preparation for synchronization, you must use the File > Exit command.

3 From the companion PC, choose Start > Programs > Siebel Handheld Sync.

The Siebel Handheld Sync dialog box appears.

- **a** Enter your user name and password.
- **b** By default, Perform Remote Sync is selected. To perform an Integrated Sync, accept the default setting.

If you want to do Companion Sync only, then unselect the Perform Remote Sync box.

Selecting Bypass Set Filters skips the step of selecting the filters and immediately starts the synchronization process. If you select Bypass Set Filters, then the filters that you selected the last time you synchronized are used. If this is the first time you are synchronizing, then the default filters are used.

- **4** Tap Login.
- **5** Tap Set Filters.

The Filters dialog box appears.

- 6 From the Filter list box, select the screen for which you want to choose a filter.
- **7** From the Choose drop-down box, select the filter you want to associate with the screen you selected in Step 6.

NOTE: Tap Default Filters to restore the filter selection to the default setting.

8 Tap OK and tap Start to begin synchronization.

- **a** The Siebel Handheld Sync dialog box appears. If "Perform Remote Sync" was selected, this is followed by the Siebel Remote dialog box. When synchronization has successfully completed, the Finished dialog box appears.
- **b** If a handheld patch needs to be installed, the synchronization process is interrupted and the patch is installed. After the patch is installed, you must restart Siebel Handheld Sync to complete the data extract process. If you fail to do this, you will not be able to start your application.
- **c** The Finished dialog box appears indicating that the synchronization has successfully completed.
- **9** Tap OK to exit Siebel Handheld Sync.

NOTE: If synchronization errors occur, an error dialog box appears.

Using Direct Server Synchronization

There are two methods for synchronizing between the handheld device and the Siebel application server:

- Direct Server Sync (DSS) provides synchronization between the Siebel Handheld application and the Siebel application server.
- Direct Server Sync via Proxy (DSSvP) provides synchronization between the Siebel Handheld application and the Siebel application server, using the desktop or companion PC to provide the network connection between the handheld device and the server.

NOTE: DSSvP is only supported on the Pocket PC 2002 platform.

To synchronize with the Siebel application server

NOTE: You must close your handheld application before you synchronize with the Siebel application server.

1 If you are synchronizing using DSS, create a direct network connection through a modem or a direct LAN connection.

If you are synchronizing using DSSvP, establish an ActiveSync connection between the handheld device and the PC.

- **2** From the device, verify that the Siebel Handheld application is closed.
- **3** From the device, choose Start > Programs > Siebel Handheld Sync.

The Siebel Handheld Sync dialog box appears.

4 Enter your user name and password.

Selecting Bypass Set Filters skips the step of selecting the filters and immediately starts the synchronization process. If you select Bypass Set Filters, then the filters that you selected the last time you synchronized are used. If this is the first time you are synchronizing, then the default filters are used.

5 Tap Login.

The Siebel Handheld Sync dialog box appears.

6 Tap Set Filters.

The Filters dialog box appears.

- 7 From the Filter list box, select the screen for which you want to choose a filter.
- **8** From the Choose drop-down box, select the filter you want to associate with the screen you selected in Step 6.

NOTE: Tap Default Filters to restore the filter selection to the default setting.

9 Tap OK, and then tap Start to begin synchronization.

NOTE: If a handheld patch needs to be installed, the synchronization process is interrupted and the patch is installed. After the patch is installed, you must restart Siebel Handheld Sync to complete the data extract process. If you fail to do this, you will not be able to start your application.

The Finished dialog box appears indicating the synchronization has successfully completed.

10 Tap OK to exit Siebel Handheld Sync.

NOTE: If synchronization errors occur, an error dialog box appears.

Troubleshooting

This section lists potential error messages that are associated with synchronization. In addition, this section explains how to fix transaction errors.

General Synchronization Errors

There are a number of different errors that can occur when synchronization does not complete successfully, for example:

- Faulty wire connection
- Server crash
- Insufficient memory
- Login error

When these errors occur, the user should exit Siebel Handheld Sync and launch the application again.

NOTE: When you restart Siebel Handheld Sync, you may see an error message that says that another instance of syncmanager.exe is running. You will be asked whether you want to terminate the first instance or not, and you should choose Yes.

Improving Application Performance

Transaction Conflicts

Transaction conflicts are minimized when customers adhere to the standard configuration practices outlined in this document. However, even when proper configuration practices are followed, conflicts can occur for a variety of reasons. For example, if a field value is updated on both the handheld client and the server between synchronization events, a transaction update conflict will occur. In this instance, the user will be presented with an error dialog after synchronization has completed.

A transaction consists of one or more smaller transactions called mini-transactions. For example, if you update several fields in a record, the update to the record counts as a single transaction, and each update to a field is a mini-transaction. The Siebel Handheld application behaves in the same way as the Siebel Web application in that if any part of the transaction fails, the entire transaction fails. Assume, for example, that you update four fields in a record. If, during synchronization, three fields update correctly and one field fails to be updated, none of the fields in the record is updated.

Improving Application Performance

If you find that the performance of the Siebel Handheld application is very slow or begins to degrade, the following can help to improve the application performance:

- Verify that your device meets the minimum memory requirements. See Siebel System Requirements and Supported Platforms documentation for your Siebel application.
- When you run the Siebel Handheld application, it is recommended that you do not run any other applications. By doing so, you maximize the amount of memory that is available to run the application.
- Increase the amount of memory that is allocated for running applications.
- Installing the binaries to a CompactFlash card. For more information, see "Setting up Installation on a CompactFlash Card" on page 113.

Handheld To increase application memory PC

1 From the Start menu, select Settings > Control Panel > System.

Improving Application Performance

- **2** In the System Properties dialog box, go to the Memory tab.
- **3** Move the slider bar so that more memory is allocated to Program Memory, then tap OK.

Pocket PC To increase application memory

- **1** From the Start menu, select Settings.
- **2** Select the System tab and tap Memory.
- **3** Move the slider bar so that more memory is allocated to Program Memory, then tap OK.

Working with Siebel Handheld Applications

Improving Application Performance

Siebel ePharma Handheld helps pharmaceutical companies increase sales representative productivity by providing a portable means to access and record key information. With Siebel ePharma Handheld, sales representatives can use waiting time between calls to record call notes, update customer profiles, schedule new calls, or prepare for their next call. Pharmaceutical companies can use Siebel ePharma Handheld in conjunction with Siebel Life Sciences Web client application or as a standalone product.

This chapter explains how to use Siebel ePharma Handheld to complete tasks in a typical work sequence performed by a sales representative. Your company may follow a different sequence according to its business requirements.

Sales representatives can use the handheld to record contact and account calls, capture electronic signatures directly in the handheld device, manage samples, create expense reports, and plan MedEd events. Administrators, such as sales administrators and sales managers, can customize the software to fit business needs.

Managing Contacts

A *contact* is typically a physician, nurse, pharmacist or other medical professional. In a more general sense, a contact is any individual a pharmaceutical company deems significant to their business process, such as a formulary director, contracts administrator, or medical education event speaker.

Sales representatives use Siebel ePharma Handheld to add and update contact profile information which may include adding new contacts, creating new contact addresses, tracking affiliations between contacts and accounts, recording the best times to call on a contact, transcribing relevant notes, and viewing prescription data. Managing Contacts

This section describes how to manage contact information using all of the views accessible from the Contacts screen's Show drop-down list, except for Calls and Activities.

Contact Management Procedures

The following procedures are included in this section:

- "Adding Contacts" on page 169
- "Adding Contact Addresses" on page 170
- "Adding and Editing License Information" on page 171
- "Specifying the Best Time to Call on a Contact" on page 172
- "Adding Private or Shared Notes About a Contact" on page 173
- "Indicating Affiliations Between Contacts and Accounts" on page 173
- "Viewing Prescription Data" on page 174

For information on the Calls and Activities views, see "Creating Contact Calls" on page 187 or "Creating General Activities" on page 202.

Adding Contacts

Using the Contacts screen and the My Contacts view, you can add contacts and update contact information directly in Siebel ePharma Handheld.

To add contacts

1 Navigate to the Contacts screen.

The My Contacts list appears.

- **2** On the toolbar, tap the New Record button.
- **3** Complete the Last Name, First Name, Main Phone, Type, and Title fields for the new record.

To add additional contact information

- **1** Navigate to the Contacts screen.
- **2** In the My Contacts list, select the contact record.
- **3** From the Show drop-down list, choose More Info.
- **4** Add or edit information in the available fields.

The fields are described in the following table.

Field	Comments
Address	Read only. A contact can have more than one address. One address must be specified as primary. Addresses are entered using the Addresses view. For more information on adding addresses, see "Adding Contact Addresses" on page 170.
Last Call Date	Read only. The date of the most recent call that has been submitted.
OK to Sample	Checking this box indicates that it is permissible to drop samples off with this contact.
Primary Specialty	Read-only. Siebel administrators define this value.
Rep Specialty	The specialty or area of expertise associated with this contact within the contact's organization.

Managing Contacts

Field	Comments
Route	Allows users to select when to visit an account from a predefined route schedule.
Title	Must be filled in before a contact can sign for receipt of samples.
Туре	Indicates the type of contact.

Adding Contact Addresses

Contact addresses are entered in the Addresses view. Since a contact can have multiple addresses, and multiple contacts may share an address, take care when editing an address as the changes may affect more than one contact.

When entering addresses, specify one address as the primary. Each sales representative can specify a different primary address for an assigned contact. For example, one representative might specify a private office as the primary address, while another representative might designate a hospital department as the primary address.

The More Info form only displays the primary address, not all the addresses associated with the contact.

To add contact addresses

- **1** Navigate to the Contacts screen.
- **2** In the My Contacts list, select a record.
- **3** From the Show drop-down list, select Addresses.

The Addresses view appears.

- **4** Tap the list of addresses to select it.
- **5** On the toolbar, tap the New Record button.
- **6** In the Addresses list, do one of the following:
 - Tap New to add a record, and then complete the necessary fields.
 - Tap an existing address in the list, and then tap OK.

7 In the Address list, tap the check box in the record's Primary field to designate the record as the contact's primary address.

A check mark appears in the box to designate the primary address.

Adding and Editing License Information

Using the License Numbers view, you can add the contact's professional license number, such as a state medical license number or a physician investigator's AMA number.

Before a physician can sign for samples dropped, you must enter the physician's license numbers and additional license information. The contact must have a valid license number for the state corresponding to the address where samples are disbursed.

To add and edit license information

- **1** Navigate to the Contacts screen.
- **2** In the My Contacts list, select the contact.
- **3** From the Show drop-down list, select License Numbers.

The License Numbers view appears.

- **4** Tap the License Numbers list to select it, and then do one of the following:
 - On the toolbar, tap the New Record button, and then complete the fields for State, Licence number, License Expiration Date, and license Status.
 - Tap a License Number record to select it, and then edit the information in the fields.

Managing Contacts

Specifying the Best Time to Call on a Contact

Using the Best Time to Call view, you can enter the best times to call on a contact based on a selected address. You can then query for contacts available during a specific time period.

To specify the best times to call on contacts

- **1** Navigate to the Contacts screen.
- **2** In the My Contacts list, select the contact.
- **3** From the Show drop-down list, select Best Times to Call.
- **4** Tap the Best Times to Call list to select it.
- **5** On the toolbar, tap the New Record button.

A new row appears in the Best Times to Call list.

6 Complete the fields for the record, as described in the following table.

Field	Comments
Address	Indicates which contact address pertains to this best time to call information. Select the address from the Pick Location dialog box, and tap OK. The Pick Location dialog box displays all addresses associated with that contact.
Start Day	Indicates the day that the contact is available for a call at that address.
Start Time	Indicates the start time for the selected day that the contact is available for a call.
End Time	Indicates the end time for contact availability.
Comments	Text field for information about time period constraints and other relevant notes.

Adding Private or Shared Notes About a Contact

Using the Private Notes and Shared Notes views you can create and update notes on contacts. Private notes are visible only to the creator of the note; shared notes are available to other sales representatives calling on the contact.

To add notes about contacts

- **1** Navigate to the Contacts screen.
- **2** In the My Contacts list, select the contact.
- **3** From the Show drop-down list, select one of the following:
 - **Private Notes.** Limits access to the note to the person creating it.
 - **Shared Notes.** Allows all account team members to access the note.
- **4** Tap the Private Notes or Shared Notes list to select it.
- **5** On the toolbar, tap the New Record button.

A new row appears in the list.

6 Complete the necessary fields for the record.

Tap in the Note field, and then tap the ellipsis (...) to view the entire note while you are entering text.

Indicating Affiliations Between Contacts and Accounts

Using the Affiliations view, you can associate a contact with an account. One reason to establish these affiliations is for call reporting purposes. Affiliations between accounts and contacts also can be established using the Accounts screen.

To specify affiliations between contacts and accounts

- **1** Navigate to the Contacts screen.
- **2** In the My Contacts list, select the contact.
- **3** From the Show drop-down list, select Affiliations.

The Account Affiliations view appears.

Managing Contacts

- **4** Tap the Account Affiliations list to select it, and then tap the New Record button.
- **5** Complete the necessary fields for the new record.

Some of the fields are automatically populated based on the chosen Account. Other fields are described in the following table.

Field	Comments
Account	The account to be affiliated with the selected contact. Select a predefined account from the Pick Account list, and then tap OK.
Comments	Text field for user comments.
Direct	If a check mark appears in this field, profile data for the contact is routed to members of the team assigned to the affiliated account.
	If no check mark appears in this field, the profile data is routed only to the members of the team assigned to the contact. Tap the check box to specify a direct affiliation between a contact and an account.
Primary	If a check mark appears in this field, the account is the primary affiliation for the contact. Tap the check box to display a check mark.
Start Date	The beginning date on which the contact became affiliated with this account.

Viewing Prescription Data

Using the Rx Data view, you can view prescription data to better target medical professionals. Data about physicians and prescribed drugs helps pharmaceutical companies define their market for better strategic business planning and national account management. Prescription data can be analyzed to measure market potential, target customers, align sales territories, and track market shifts.

To view prescription data

- **1** Navigate to the Contacts screen.
- **2** In the My Contacts list, select a contact.
- **3** From the Show drop-down list, select Rx Data.

The Rx data associated with the contact appears in the RX Data list.

4 In the list, review the prescription data on a market-by-market basis.

Managing Accounts

An *account* is any health care business that generates sales for your company or that could potentially generate business. Typical examples of accounts include hospitals, clinics, HMOs, wholesalers, group purchasing organizations (GPOs), and pharmacies. An account can also be any organization with which multiple contacts are associated, such as a group practice or an assisted-living facility.

Sales representatives in the field use Siebel ePharma Handheld to add and update account profile information. Representatives use Siebel ePharma Handheld to add new accounts, create new account addresses, record the best times to call on an account, and record relevant notes. Sales representatives can also view sales data on Siebel ePharma Handheld to help them evaluate the business potential of accounts.

This section describes how to manage account information using all of the Accounts views accessible from the Show drop-down list, except the Calls and Activities views. For information on those views, see "Creating Account Calls" on page 197 or "Creating General Activities" on page 202.

Account Management Procedures

The following procedures are included in this section:

- Adding Accounts on page 176
- Adding Account Addresses on page 177
- Specifying Best Times to Call Accounts on page 178
- Adding Notes About Accounts on page 178
- Indicating Affiliations Between Accounts and Professionals on page 179
- Viewing Sales Data on page 180

Managing Accounts

Adding Accounts

Accounts are businesses and organizations that either currently generate sales for your company or have the potential to do so. You can add or edit accounts using the My Accounts view.

NOTE: Only a Siebel administrator can delete an account.

To add an account

1 Navigate to the Accounts screen.

The My Accounts list appears.

- **2** On the toolbar, tap the New Record button.
- **3** Complete the necessary fields for the new record.
- **4** To enter information in additional fields, select More Info from the Show dropdown list.

Some of the fields are described in the following table.

Field	Comments
Account	Account name. Tapping the account name hyperlink opens the Call Activities view.
Address	The account can have more than one address. One address must be specified as primary. Account addresses must be entered in the Addresses view. For more information on adding addresses, see "Adding Account Addresses" on page 177.
Site	A unique location identifier that distinguishes this account from any other accounts with the same name.
Mkt Potential	Used to evaluate the business potential of the account.

Managing Accounts

Adding Account Addresses

Addresses for accounts are entered in the Addresses view. Since an account can have multiple addresses, care should be taken when editing an account address, as changes affect all accounts associated with the address.

When entering account addresses, designate one address as the primary. Each sales representative assigned to an account can specify a different primary address. For example, one representative might specify a private office as the primary address, while another representative might specify a hospital department as the primary address.

The More Info form displays the primary address, not all the addresses for the contact.

To add account addresses

- **1** Navigate to the Accounts screen.
- **2** In the My Accounts list, select an account.
- **3** From the Show drop-down list, select Addresses.
- **4** Tap the Addresses list to select it.
- **5** On the toolbar, tap the New Record button.
- **6** In the Add Address dialog box, do one of the following:
 - Tap New to create a new address record, and then complete the fields.
 - Select an existing address from the list, and then tap OK.
- **7** In the Primary field, tap the check box to display a check mark if this is the account's primary address.

Specifying Best Times to Call Accounts

Use the Best Times to Call view to specify appropriate time periods for account calls.

To specify best times to call accounts

- **1** Navigate to the Accounts screen.
- **2** In the My Accounts list, select an account.
- **3** From the Show drop-down list, select Best Times to Call.

The Accounts Best Times to Call view appears.

- **4** Tap the Best Times to Call list to select it.
- **5** On the toolbar, tap the New Record button.
- **6** Complete the necessary fields for the new record.

The fields are described in the following table.

Field	Comments
Start Day	Indicates the days that the contact is available for a call.
Start Time	Indicates the time that the contact is available for a call.
End time	Indicates end of available time period.
Comments	Text field for schedule information.

Adding Notes About Accounts

Using the Private Notes and Shared Notes views, you can create and update private and shared account notes. Private notes are visible only to the note creator; shared notes are available to other sales representatives calling on the account.

To add account notes

- **1** Navigate to the Accounts screen.
- **2** In the My Accounts list, select an account.

Managing Accounts

- **3** From the Show drop-down list, select one of the following:
 - **Private Notes.** Limits access to the note to the person creating it.
 - Shared Notes. Allows all account team members to access the note.
- **4** Tap the Notes list to select it.
- **5** On the toolbar, tap the New Record button.
- **6** Complete the fields for the new record.

Tap in the Note field, and then tap the ellipsis (...) to view the entire note while you are entering text.

Indicating Affiliations Between Accounts and Professionals

For accounts where you have contact with multiple professionals, you can indicate the affiliation of those professionals with the account by using the Affiliations view. Creating affiliations between accounts and contacts promotes efficiency in call reporting.

To indicate affiliations between accounts and contacts

- **1** Navigate to the Accounts screen.
- **2** In the Accounts list, select an account.
- **3** From the Show drop-down list, select Affiliations.
- **4** Tap the Contact Affiliations list to select it.
- **5** On the toolbar, tap the New Record button.

Managing Accounts

6 Complete the necessary fields for the new record.

Some of the fields are described in the following table.

Field	Comments
Last Name	The contact affiliated with this account. Tap the field, select the contact from the Pick Contact list, and then tap OK.
Start Date	The beginning date on which the account became affiliated with this contact.
Direct	Tap the check box to display a check mark.
	If a check mark appears in this field, profile data for that person is routed to all members of the team assigned to the affiliated account.
	If no check mark appears in this field, the profile data is routed only to members of the team assigned to the person.

Viewing Sales Data

Sales data can be analyzed to measure market potential, target customers, align sales territories, and track market shifts. Sales data is typically syndicated information that is loaded periodically by the Siebel administrator.

You can review this information using the Sales Data view.

To view sales data

- **1** Navigate to the Accounts screen.
- **2** In the Accounts list, select the account.
- **3** From the Show drop-down list, select Sales Data.
- **4** Review the data in the list on a product-by-product basis.

Planning and Recording Calls

Planning calls in Siebel ePharma Handheld consists of configuring personal lists and creating account and contact calls. Recording calls involves entering information on products detailed, samples and promotional items dropped, and decision issues that occurred during the call.

About Personal Lists

Personal lists allow for faster call reporting by limiting the number of products that appear in drop-down lists in the Call Products Detailed, Samples Dropped, and Promotional Items Dropped views.

About Contact and Account Calls

Contact and account calls are types of activity records, although contact and account calls cannot be created from the Activities view.

Contact calls can be created by tapping the New Call or Auto Call button from the My Contacts view, by creating a new record from the Contacts screen's Calls view, or by creating a new record from the Contact Calls screen.

Account calls can be created by tapping the New Call or Auto Call button from the Accounts screen, by creating a new record from the Accounts screen's Calls view, or by creating a new record from the Account Call screen.

- Contact call. Used to track a planned or past call activity with a contact. You can record details about contact calls such as the products detailed, the samples and promotional items dropped, and decision issues discussed. Before you can record details about a contact call, you must set up personal lists.
- Account call. Used to track a planned or past call activity at an account. You can record products detailed, attendees, promotional items dropped, and decision issues discussed.

About Auto Call, Smart Call, and Auto Update

Siebel ePharma Handheld provides several features to manage contact and account call records:

■ **Smart Call.** Specifying a Smart Call template for the call record associates a prepopulated call template with this call.

A Smart Call is a template that you can apply to contact calls and account calls to simplify and speed up the call-reporting process. A Smart Call defines a set of information about the products detailed, the samples distributed, and the issues discussed on a call. Smart Call templates are created in Siebel ePharma, not in the handheld application.

Smart Calls can be also used for calls related to a particular campaign or promotional effort, or for everyday call reporting. They are intended for situations where sales representatives report details about a number of calls that are identical in content (the same products are detailed in the same order, the same samples are dropped, and so on). After you apply a Smart Call template to a call, you can make additional edits in any fields in the Contact Call screen's Details view.

■ **Auto Call**. Selecting the Auto Call button creates a new call and populates the record with items from the personal lists.

Auto Call is designed to help minimize the time in front of a physician by prepopulating the call with products from your personal list. Apply Auto Call as a part of the call planning process. Once the call has been created, you can access auto-created calls to record call information directly on the handheld in front of a physician.

Auto Call speeds up call reporting because you do not have to individually select the products and samples while recording the call. After selecting Auto Call, the Status field in the Contacts view displays Auto-Created.

■ **Auto Update.** Selecting Auto Update deletes from the database unused autocreated call records.

Business Scenarios

The following scenarios depict typical work sequences followed by sales managers and representatives using Siebel ePharma and ePharma Handheld. Your company may follow a different sequence according to its business requirements.

Setting Up Personal Lists

A sales representative has recently joined a pharmaceutical company that uses Siebel ePharma Handheld in the field. During her sales training, the representative's sales manager tells her that before she can record calls within the system, she must first set up her personal lists. The sales manager explains that personal lists allow faster call reporting by limiting the number of products that appear in the application's drop-down lists. The sales manager then demonstrates how to add products to the sales representative's Details, Samples Dropped, and Promotional Items views. Following her manager's instruction, the sales representative updates her personal lists and is ready to record call details.

Planning Calls in Siebel ePharma and Recording Calls in Siebel ePharma Handheld

A sales representative for a pharmaceutical company wants to set up visits to her customers over the next few days. To do so, she first uses Siebel ePharma on her laptop to plan contact calls. Then she synchronizes the data with Siebel ePharma Handheld on her handheld device, which she carries with her to record call details.

To plan her calls, she begins by analyzing the physicians' prescribing habits. She then queries on geographical location, specialties, and time lapse since she last called on them to determine which physicians she should call on.

Using Siebel ePharma, she applies a Smart Call template to those calls so that information about the samples products is automatically copied into the call records. She has now prepopulated the calls with the details that she wants to speak about with each physician as well as the samples she wants to drop off.

The sales representative synchronizes her handheld so that she can carry these details with her and record her progress throughout the day. The information she has available on her handheld includes previous calls and other activities, notes, and physician prescription history.

Before meeting with the physician, she goes to the samples closet in his office and drops off the samples. She records the lot numbers on her handheld device.

When she meets with the doctor, she describes the samples she has left for him, explains the benefits of key products, and discuss the doctor's concerns. He expresses interest in additional product samples so she records additional samples to the contact call. She then captures the doctor's signature on the handheld device.

After the meeting, the sales representative records the information on the products detailed and promotional items and issues discussed. After she has reviewed the information and verified that it is accurate, she submits the call.

Planning and Recording Calls in Siebel ePharma Handheld

That same day, another sales representative sets off to visit several clinics. Unlike the first sales representative, this representative does not schedule his calls on his laptop beforehand for two reasons. First, he plans to call on group practices with many physicians, and he cannot be sure which physician will be signing for the samples. Secondly, he prefers to enter sample information manually rather than using a Smart Call template.

Before he enters the first clinic, he queries for physicians associated with that address. Seven names appear. When he walks in, he encounters one of the doctors so he selects that physician's record and adds a new call. While speaking with the doctor about the benefits of the product, the sales representative hands him some samples and records the samples dropped information. He then obtains the doctor's signature on the handheld device. After adding a comment about the call and recording products detailed, the sales representative submits the call.

Call Management Procedures

This section provides the following procedures related to planning, recording, and submitting calls.

- Updating personal lists:
 - To create personal lists on page 186
- Creating, recording, and submitting contact calls:
 - To add a contact call from the Contacts view on page 187

- To add a contact call from the Contact Calls view on page 189
- To apply a Smart Call template on page 189
- To delete unused records created from the Auto Call button on page 190
- To record information about products detailed on page 191
- To record information about samples dropped on page 192
- To record information about promotional items dropped on page 193
- To record information about decision issues discussed during the call on page 194
- To capture a signature on page 195
- To submit a completed contact call on page 195
- Creating, recording, and submitting account calls:
 - To add an account call from the Accounts view on page 197
 - To add an account call from the Account Call view on page 198
 - To delete unused account call records created from the Auto Call button on page 199
 - To enter products detailed information for an account call on page 200
 - To enter attendee information for an account call on page 200
 - To submit a completed account call on page 201

Creating Personal Lists

Personal lists determine which products appear in the drop-down lists of the Call Products Detailed, Samples Dropped, and Promotional Items Dropped views. Limiting the number of products in the lists allows for faster call reporting.

Before you *can record call details, you must* configure personal lists of the products you promote, the products you distribute as samples, and the products you provide as promotional items. In addition, you must specify at least one product in a personal list or the corresponding drop-down list will be empty when you try to enter call details.

Setting up personal lists is a one-time setup procedure. After you have completed this task, you do not need to repeat it. You can revise personal lists at any time to delete or add products as necessary.

To create personal lists

- **1** Navigate to the Personal Lists screen.
- **2** From the Show drop-down list, select Products, Promotional Items, or Samples to include that item on this personal list.
- **3** On the toolbar, tap the New Record button.
- **4** In the new row, complete the necessary fields.

Some of the fields are described in the following table.

Field	Comments
Order	Enter a number that indicates where this product should appear in the drop-down list. This field appears in the Product list, Samples list, and Promotional Items list.
	For example, if you want a product in the Product list to appear first, enter 1. If this field is null for <i>all</i> products in the list, the products will appear in alphabetical order. If this field is null for some products but not for others, records with a null Order field appear at the beginning of the list, in alphabetical order.
Product	The products being detailed during contact and account calls. This field appears in the Personal Lists, Products view.

Field	Comments
Promotional Item	The promotional items being dropped during contact and account calls. This field appears in the Personal Lists, Promotional Items view.
Sample	The products to be dropped as samples during contact and account calls. This field appears in the Personal Lists, Samples view.

Creating Contact Calls

You can create contact calls and update contact call details using Siebel ePharma Handheld. Because contact calls are a type of activity, they also appear in the Calendar view.

As a shortcut for creating contact calls, you optionally may apply a Smart Call to the new record or auto-create a record to populate it with predefined data. For more information, see "About Auto Call, Smart Call, and Auto Update" on page 181. Before you can enter information about products detailed, samples, and promotional items dropped during a contact call, you must set up personal lists. For more information, see "Creating Personal Lists" on page 186.

To add a contact call from the Contacts view

- **1** Navigate to the Contacts screen.
- **2** In the Contacts list, select a contact.

NOTE: If you are using the Auto Call feature, you can select several contacts from the list. Selecting the Auto Call button creates new calls for the selected contacts. Users should be advised that selecting more than one contact at a time to generate Auto Calls impacts performance.

- **3** In the Contacts list, do one of the following:
 - Tap the Auto Call button to populate the new call with items from your Personal List and then select Calls from the Show drop-down list.

After selecting Auto Call, the Status field in the Contacts Calls view displays "Auto-Created."

• Tap the New Call button and complete the fields in the new form.

Some of the fields are described in the following table.

Field	Comments
Last Name	The contact to be visited during this call.
Ref #	A reference number for this call. This reference number becomes the transaction number (Transaction # field) for a samples transaction corresponding to this call.
Smart Call	Smart Call is a prepopulated call template that can be associated with this call. Make a selection from the Pick Smart Call dialog box.
Status	The status of this call. The default value is Planned. After synchronization, this value changes to Synchronized for calls that have not been submitted.
	You cannot select the value Submitted. To change the status of the call to Submitted, you must submit the call.
Paper Sign	Indicates that the contact provided a paper signature for a sample disbursement.
Remake Receipt	Used to create an updated sample receipt and signature in the event that the original call information was incorrect.
	For example, if Dr. Smith mistakenly signs for the receipt of samples on a request form having a different physician's name (such Dr. Jones), then the sample form is inaccurate. In this example, the sales representative must change the name on the original call to the correct physician (Dr. Smith) and have Dr. Smith sign again.
	Using the Remake Receipt check box, the sales representative can capture of a second signature on the corrected sample form. Siebel ePharma Handheld automatically tracks the appropriate audit trail information required by the FDA in the remake receipt functionality.

- **4** To specify which products to detail during the call:
 - **a** From the Show drop-down list, select Details.
 - **b** Tap the Call Products Detailed list to select it, add a new record, and complete the necessary fields.
- **5** To specify which samples to drop off during the call:

- **a** From the Show drop-down list, select Samples Dropped.
- **b** Tap the Samples Dropped list to select it, add a new record, and complete the necessary fields.
- **6** To specify which products are promotional items:
 - **a** From the Show drop-down list, select Promotional Items.
 - **b** Tap the Promotional Items list to select it, add a new record, and complete the necessary fields.
- **7** To specify which issues were discussed during a call:
 - **a** From the Show drop-down list, select Issues.

NOTE: Decision issues are the objections a contact may raise when evaluating a product before making a prescribing decision.

b Tap the Issues list to select it, add a new record, and complete the necessary fields.

For more information on how to enter information, see "Recording Contact Calls" on page 191.

NOTE: If you applied a Smart Call to the call, you may only need to verify that the information in the four lists is accurate.

To add a contact call from the Contact Calls view

- **1** Navigate to the Contact Call screen.
- **2** Tap the Contact Call form to select it.
- **3** On the toolbar, tap the New Record button.
- **4** Complete the necessary fields.

To apply a Smart Call template

1 Navigate to the Contact Call screen.

- **2** Tap the Contact Call form to select it.
- **3** On the toolbar, tap the New Record button.
- **4** In the new record, complete the necessary fields.
- **5** In the Smart Call field, tap the drop-down list arrow.
- **6** In the Pick Smart Call dialog box, select a Smart Call template.

To delete unused records created from the Auto Call button

- **1** Using the Sign button:
 - From the parent Contact Call form, tap the Sign button.

Selecting the Sign button deletes all dropped records from unused samples, making sure that the physician only signs for samples that he or she was actually given. To delete detailed records for unused products, select the Submit button.

- **2** Using the Auto Update button:
 - From the My Contacts view, tap the Auto Update button.

For example, suppose you have used the Auto Call button to create three contact calls, but were unable to visit one of the physicians. Selecting Auto Update deletes the unused record.

NOTE: Performance is impacted if users select Auto Update when they have more than one unused auto-created call. It is recommended that users have no more than three unused auto-created calls when using the Auto Update feature.

Recording Contact Calls

Contact calls are used to track a planned or past call activity with a contact. You can enter contact call details directly in Siebel ePharma Handheld.

To record a contact call, users must complete the following tasks:

- Enter information on products detailed
- Enter information about samples dropped
- Enter information about promotional items dropped (optional)
- Record any decision issues (optional)
- Submit the call

The next sections explain how to perform each of these tasks. If you have not yet set up your personal lists, you must do so before you can proceed with the next steps. For more information, see "Creating Personal Lists" on page 186.

To record information about products detailed

- **1** Navigate to the Contact Call screen.
- **2** Select the desired contact call.

NOTE: If you have not yet set up your personal lists, you must do so before you can proceed with the next step.

3 From the Show drop-down list, select Details.

The Product Details view appears.

- **4** Tap the Product Details list to select it.
- **5** On the toolbar, tap the New Record button to add a record for each product discussed during the call.

6 Complete the fields for each record.

Some of the fields are described in the following table.

Field	Comments
Indication	The purpose or therapeutic area for which a drug is designed.
Priority	Priority of this product relative to others discussed during the call.
Name	The name of the product detailed during the call. The products appearing in this drop-down list are based on the products added to your Personal list. For more information on adding products to your personal lists, see "Creating Personal Lists" on page 186

To record information about samples dropped

- **1** Navigate to the Contact Call screen.
- **2** Select the desired contact call.
- **3** In the Contact Call form, enter a reference number (if required) in the Ref # field.
- **4** From the Show drop-down list, select Samples Dropped.

The Samples Dropped list appears.

5 Tap the Samples Dropped list to select it, and then add a record and complete the fields for each product dropped during the call.

Some of the fields are described in the following table.

Field	Comments
Lot #	The lot number (if applicable) of the products dropped during the call. If tracking samples by lot number, select a lot number in the Pick Lot dialog box.
Name	The name of the products dropped during the call. The products appearing in this drop-down list are based on the products available in your samples inventory. For more information on samples, see "Managing Samples" on page 206.
Quantity	The quantity of samples dropped during the call.

NOTE: If the samples you dropped do not appear in the Name field drop-down list, you may need to acknowledge the receipt of the samples within the system. Go to the Samples Received view and submit any records with a status of In Progress. For more information, see "Acknowledging Receipt of a Samples Transfer" on page 219. If the samples you dropped still do not appear, contact your samples administrator.

To record information about promotional items dropped

- **1** Navigate to the Contact Call screen.
- **2** Select the desired contact call.
- **3** From the Show drop-down list, select Promotional Items.

The Promotional Items view appears.

4 In the Promotional Items list, add a record for each item dropped during the call, and complete the necessary fields.

Some of the fields are described in the following table.

Field	Comments
Name	The promotional item dropped during the call. The items appearing in this drop-down list are based on items added to your Personal Promotional Items list. For more information, see Creating Personal Lists on page 186.
Quantity	The quantity of the promotional item dropped during the call.

To record information about decision issues discussed during the call

- **1** Navigate to the Contact Call screen.
- **2** Select the desired contact call.
- **3** From the Show drop-down list, select Issues.

The Professional Issues view appears.

- **4** Tap the Issues list to select it.
- **5** On the toolbar, tap New Record to add a record for each issue discussed during the call.
- **6** Complete the necessary fields for each new record.

NOTE: Decision issues are the objections a contact may raise when evaluating a product before making a prescribing decision.

You can use Siebel ePharma Handheld to electronically capture signatures. For the application to accept a signature:

- Make sure the title field for the contact from Contacts, My Contacts view is populated.
- Make sure the contact's license number appears in the License # field of the Contact view. Licenses are associated with the contact's address.

To capture a signature

- **1** Navigate to the Contact Call screen.
- **2** Select the desired parent Contact Call form.
- **3** Tap the Sign button to launch the Signature Capture view.

The Signature Capture view contains the company name, samples recorded when the call gets submitted, a disclaimer (as set up by the administrator on the Web client), and contact information.

If you want to invert the signature display, tap the Signature Flip button instead of the Sign button. Inverting the signature display allows you to extend the handheld device toward the contact for a signature without turning the device around.

- **4** In the Signature Capture view, have the contact sign on the white surface.
- **5** Perform one of the following actions:
 - Tap OK to submit the record.
 - Tap Cancel to abort the procedure.
 - Tap Clear to erase the signature area.
 - Tap Change Contact to select the correct contact whose signature you are capturing.

NOTE: The application automatically locks the keyboard hot keys when the Signature Capture view is displayed.

To submit a completed contact call

- **1** Navigate to the Contact Call screen.
- **2** Select the desired contact call.

NOTE: You cannot submit a call with a future date.

Using ePharma Handheld

Planning and Recording Calls

- **3** Verify that the information for the Contact Call is accurate and complete. For more information, see:
 - To record information about products detailed on page 191
 - To record information about samples dropped on page 192
 - To record information about promotional items dropped on page 193
 - To record information about decision issues discussed during the call on page 194

NOTE: After you submit a call, you cannot modify any fields except the Comment field.

4 If you dropped samples when making the call, verify that you entered a samples reference number in the Ref *#* field in the Contact Call form.

CAUTION: If you are a mobile user, submit your calls *before* connecting to the server, and then synchronize. Mobile users should *not* submit calls while connected to the server or they run the risk of introducing errors into their inventory counts.

5 Contact Call form, tap Submit.

If the call passes all of the validations, the application:

- Creates a samples disbursement transaction with a line item for each dropped sample recorded for the call.
- Submits a disbursement transaction to update the samples inventory. If the submission of the disbursement transaction is successful, the application changes the call's Status field to Submitted.
- Sets appropriate fields in the call record to read-only.

For more information on submitting records, see "How Siebel Samples Management Works with Calls" on page 209.

Creating Account Calls

Account Calls are used to track a planned or past call activity at an account. You can enter account call details directly in Siebel ePharma Handheld.

For more information on entering call details, see "Recording Account Calls" on page 199.

NOTE: Before users can enter information about products detailed and attendees associated with an account call, they must set up their personal lists. For more information, see "Creating Personal Lists" on page 186.

To add an account call from the Accounts view

- **1** Navigate to the Accounts screen.
- **2** In the Accounts list, do one of the following:
 - Select the Auto Call button to populate the new call with items from the Personal Lists, and then select Calls from the Show drop-down list.

NOTE: When you select Auto Call in the My Accounts view, the application populates the product Details list for all attendees associated with the account call. When you select Auto Call in the Account Calls, Attendees view, the application populates the Samples Dropped list for the selected attendees.

After selecting Auto Call, the Status field in the Accounts view displays "Auto-Created."

■ Tap the New Call button and complete the fields in the new form.

Some of the fields are described in the following table.

Field	Comments
Name	The account to be visited during this call. Make a selection from the Pick Account dialog box.
Site	A unique location identifier that distinguishes this account from any other accounts with the same name.
Smart Call	The Smart Call template to be associated with this call. Make a selection from the Pick Smart Call dialog box.
	A Smart Call is a template that you apply to contact calls that defines information about the products detailed, samples and promotional items distributed, and issues discussed on a call. After you apply a Smart Call template to a call, you can make additional edits.
Status	The status of this call. The default value is Planned. You cannot select the value Submitted. To change the status of the call to Submitted, you must submit the call. For more information, see "To submit a completed account call" on page 201.

- **3** From the Show drop-down list, select the following and add records, if necessary:
 - Details
 - Attendees
- **4** From the parent Account Call form, select the Submit button.

For more information entering information in the Details and Attendees lists and submitting a call, see "Recording Account Calls" on page 199.

To add an account call from the Account Call view

- **1** Navigate to the Account Call screen.
- **2** On the toolbar, tap the New Record button.
- **3** In the Account Call form, complete the necessary fields.

To delete unused account call records created from the Auto Call button

- **1** Using the Sign button from an Attendee Call:
 - From the Attendee Call form, select the Sign button.

Selecting the Sign button deletes all unused samples dropped records, making sure that the physician only signs for samples that he or she was actually given. To delete unused products detailed records, select the Submit button.

- **2** Using the Auto Update button:
 - From the My Accounts view, select the Auto Update button.

For example, suppose you used the Auto Call button to create three contact calls but were unable to visit one of the physicians. Selecting Auto Update deletes the unused record.

NOTE: Performance will be impacted if you select Auto Update when you have more than one unused auto-created call. Users are advised to have no more than three unused auto-created calls when using the Auto Update feature.

Recording Account Calls

Account calls are used to track a planned or past call activity with an account. You can enter account call details directly in Siebel ePharma Handheld.

To record an account call, users must complete the following procedures:

- Enter information on products detailed
- Enter attendee information (the names of contacts met and any samples dropped)
- Enter information about any activities related to the call (optional)
- Submit the call

The next sections explain how to perform each of these tasks. You must set up your personal lists before you can complete this procedure. For more information, see "Creating Personal Lists" on page 186.

To enter products detailed information for an account call

- **1** Navigate to the Account Call screen.
- **2** Select the desired account call.
- **3** From the Show drop-down list, select Details.
- **4** In the Details list, add a record for each product detailed during the call, and complete the necessary fields.

Some of the fields are described in the following table.

Field	Comments
Indication	The purpose or therapeutic area for which a drug is designed.
Priority	Priority of this product relative to others discussed during the call.
Name	The product detailed during the call. The products appearing in this drop-down list are based on the products added to your Personal List.

To enter attendee information for an account call

- **1** Navigate to the Account Call screen.
- **2** Select the desired account call.
- **3** From the Show drop-down list, select Attendee.
- **4** Tap the Attendee list, to select it.
- **5** On the toolbar, tap the New Record button to add a new record for each attendee.
- **6** Complete the fields for each attendee.
 - **a** In the Last Name field, tap the drop-down list arrow.

b From the Pick Contact dialog box, select those contacts you want to add as attendees.

The application creates an attendee call record (similar to a contact call) for each contact you include as an attendee of the account call. These attendee call records are child records of the account call and can be accessed by going to the Account Call and finding the associated attendee. Drilling down on the attendee last name hyperlink enable you to navigate to and access the appropriate attendee call details view.

- **7** To create an attendee call, do one of the following:
 - Select the Auto Call button to populate the attendee call with items from the personal lists, and then select Calls from the Show drop-down list.

After selecting Auto Call, the Status field in the Accounts view displays "Auto-Created."

 Drill down on the Last Name hyperlink and complete the fields in the Contact Calls details.

NOTE: You must set up your personal lists before you can complete the next step. For more information, see "Creating Personal Lists" on page 186.

To submit a completed account call

- **1** Navigate to the Account Call screen.
- **2** Select the desired account call.

NOTE: You cannot submit a call with a future date.

3 Verify that the information for the Account Call is accurate and complete.

For more information, see:

• To enter products detailed information for an account call on page 200

Creating General Activities

• To enter attendee information for an account call on page 200

CAUTION: If you are a mobile user, submit your calls *before* connecting to the server, and then synchronize. Mobile users should *not* submit calls while connected to the server or they run the risk of introducing errors into their inventory counts.

4 In the Account Call form, select Submit.

For more information on the validation process when a user selects the Submit button, see "Validation Logic of the Sign and Submit Buttons" on page 4-26.

If the call passes all of the validations, the application:

- Creates a samples disbursement transaction with a line item for each dropped sample recorded for the call.
- Submits a disbursement transaction to update the samples inventory. If the submission of the disbursement transaction is successful, the application changes the call's Status field to Submitted.
- Sets many fields in the call record to read-only.

NOTE: If attendees are recorded in an account call, an attendee call is created for each attendee, and the process described above is performed for each attendee call. Attendee calls are the same as contact calls except that they do not appear in the Activities view and they are submitted automatically when the account call is submitted.

Creating General Activities

Sales representatives use general activities to manage time and schedule demands and to keep their manager informed of their workload. A general activity in Siebel ePharma Handheld is used to track non-call tasks such as to-do items, personal events, and correspondence. In a typical scenario, a sales manager for a pharmaceutical company uses the Activities screen to create and track the activities on which she plans to spend her time during the next month. After scheduling a contact call with a customer, she uses the Calendar to review scheduled activities for the upcoming weeks.

This section provides procedures for adding activities from the Activities and Calendar views.

Adding General Activities From Activities

All activities with valid dates and times appear in the Siebel ePharma Handheld Calendar views as well as in the Activities views. The Calendar views provide a visual representation of each user's scheduled activities.

NOTE: The Planned Start and Duration fields in general activities and appointments must contain entries in order for the appointments and activities to appear in the correct time period in the Daily Calendar view. While the Planned Start field is visible in the Activities screen's My Activities view, this field is not visible in the Contacts screen's Activities and Accounts > Activities views. The Planned Start field can be exposed during application configuration.

To add a general activity from the Activities view

- **1** Navigate to the Activities screen.
- **2** On the toolbar, tap the New Record button.

Creating General Activities

3 In the new row, complete the necessary fields.

NOTE: Select More Info from the Show drop-down list to edit additional fields for each record.

Some of the fields are described in the following table.

Field	Comments
Activity	Activities entered here are set as "General" and are not editable. Calls created from the New Call button are set as "Contact Call" or "Account Call" depending on whether these calls were created for a contact or an account. Previously created Contact Calls and Account Calls are displayed on the Activities view.
Activity Type	The type of activity. The values displayed in this drop-down list depend on the value of the Activity field. For example, the activity types that you can select for a contact call are different from those that you can select for a general activity.
Assigned To	The sales representative responsible for the activity. The Assigned To field in all Activities views (Activities, My Activities list; Activities, More Info form; Contacts, Activities list; and Accounts, Activities list) is read-only.
Duration	The length of time, in minutes, that you expect the activity to take.
Last Name	The last name of the contact associated with the activity. The Last Name field on the Activities, My Activities view and the Accounts, Activities view is read-only.

Adding General Activities Using Calendar

General activities and appointments must have the Planned Start and Duration fields populated in order to be displayed in the correct time slot on the Daily Calendar view.

To add a general activity in the Calendar view

- **1** Navigate to the Calendar screen.
- **2** From the Show drop-down list, select My Daily, My Weekly, or My Monthly.

- **3** For My Weekly or My Monthly, select the day and time on which you want to schedule a general activity.
- **4** On the toolbar, tap the New Record button or double-tap on a row.
- **5** In the new record, complete the necessary fields.

Some of the fields are described in the following table.

Field	Comments
Account	Complete this field if the activity is related to a particular account.
Planned Start	If you started from the Daily Calendar view, this date reflects the time selected when you created the new appointment. If you started from the Weekly Calendar or Monthly Calendar view, the first time slot of the day is supplied.
Туре	The type of activity. The values displayed in this drop-down depend on the kind of activity.
Repeat Until	The end date of a repeating appointment. If you do not select a value, 12 more appointments will be scheduled.

- **6** To specify contact participants:
 - **a** From the Show drop-down list, select Contact Participants.
 - **b** Tap the Contacts list to select it.
 - **c** On the toolbar, tap the New Record button.
 - **d** In the Add Contacts dialog box, select participants and then tap OK.
- **7** To specify employee participants:
 - **a** From the Show drop-down list, select Employee Participants.
 - **b** Tap the Employee Participants list to select it.
 - **c** On the toolbar, tap the New Record button.
 - **d** In the Add Employees dialog box, select participants, and then tap OK.

Managing Samples

Most pharmaceutical manufacturers provide free samples to health care professionals in an effort to influence the prescribing habits of physicians and accounts across the United States and the world. In the United States, samples distribution is regulated by the FDA and must be reconciled at least once a year.

Siebel ePharma Handheld maintains a samples transaction record for samples transfer, receipt, disbursement, order, and inventory adjustment. The application assigns each samples transaction record a unique identifier for tracking purposes. Depending on the type of transaction, you can display this identifier as a transaction number, an order number, an invoice number, or a transfer number.

This section describes managing and maintaining an electronic inventory of samples and promotional items within Siebel ePharma Handheld. As part of managing samples, you can track an electronic inventory of samples stock, create request orders and transfers for samples, and acknowledge receipt of sample transfers directly in Siebel ePharma Handheld. You can use either Siebel ePharma or Siebel ePharma Handheld to manage your samples, however you cannot use both applications to handle samples transactions. Reconciling inventory must be performed in Siebel ePharma.

Procedures for Managing Samples

This section provides instructions for the following procedures:

- Creating a Samples Order on page 215
- Creating a Samples Transfer on page 217
- Acknowledging Receipt of a Samples Transfer on page 219
- Adjusting a Samples Transaction on page 221

Keeping Server and Handheld Samples Records in Sync

Administrators can manage samples inventory using either Siebel ePharma Handheld or Siebel ePharma, but should not use both. In order to keep samples inventories in sync, end users should be prevented from submitting a samples transaction on the server when the same record is still editable on their handheld device.

When a user submits a record, the status changes to Submitted and it becomes readonly, meaning no additional operations are allowed on the record. By updating a user property and writing two small Visual Basic scripts, you can specify that synchronized records are also read-only.

■ First, the administrator changes the value of the user property "Update Status To Synchronized" to Y.

Making this change invokes the UpdateStatusToSynchronized method on the Sample Txn business component.

- Then, the administrator writes a small Visual Basic script for this method to change the status on the Sample Txn to "Synchronized."
- Finally, the administrator writes another Visual Basic script to specify that the record becomes read-only when its status changes to "Synchronized."

This prevents users from accidentally submitting the sample transactions on the server while the same record is still editable on their handheld device.

Business Scenario

This scenario is an example of a workflow performed by an end user. Your company may follow a different workflow according to its business requirements.

Near the end of the quarter, a sales representative in the U.S. prepares for FDAmandated inventory reconciliation. She is required to take a physical inventory of her samples and make sure the quantities match the electronic inventory. To do so, she needs to make sure that all her sample transactions are up-to-date for the current period before submitting the inventory count.

The sales representative remembers that she made a sample disbursement mistake earlier in the day. She accidentally had a physician sign for 10 samples when she really only dropped off five. Therefore, she needs to make a samples adjustment for this transaction.

In Siebel ePharma Handheld, she finds the sample transaction record. Then, she selects the adjust quantity feature, which automatically shifts the transaction status to "In Progress" for the new adjustment record and to "Adjusted" for the already-submitted sample transaction. When she submits the adjustment record, Siebel ePharma Handheld updates her inventory to reflect the lower quantity that was disbursed and changes the sample quantity for the actual call from ten to five.

The sales representative also had some samples that had expired, which she physically mailed back to her samples administrator. She now has to record this transaction into her electronic inventory. In the Samples Transfer view, she creates a new record. Then she adds three new sample line item records and selects the Submit button. This changes the status to submitted, locks the records, and updates the handheld inventory to reflect the transfer.

The sales representative is now ready for the actual inventory count. While physically standing in her personal samples closet with her handheld device, she opens the Samples Inventory Count view. From this view, she sees the products listed in her personal inventory according to the electronic count. She goes down the list, product by product, lot by lot, counting each product and lot number combination. She enters the actual quantity that she finds into Siebel ePharma Handheld and notices that the application automatically updates the difference field to reflect discrepancies between the on-hand and electronic inventory. When she is finished, she verifies that the differences are zero. She is now ready to submit her inventory count. Submitting causes a new inventory period to open, displaying the current date and time.

How Siebel Samples Management Works with Calls

This section describes how Siebel Samples Management works with the Contact Call Detail and Account Call Detail views. For more information on recording calls, see "Planning and Recording Calls" on page 181.

When you select the Submit button in either the Contact Call and Account Call forms, the application verifies that:

The call's date and time is the same as or earlier than the current date and time.
 A call cannot be submitted with a future date.

If dropped samples are recorded for the call, the application checks that:

- The Ref# field is not empty. This is controlled by the user properties setting. If the user property for reference number required is set to Y, then the application displays an error message if this field is not populated by the user. Otherwise, the application will automatically populate this field.
- The samples exist in the inventory for the period indicated by the call's date and time.
- The period into which the samples will be recorded is an unreconciled period. If it is a reconciled period, a warning message appears.
- A valid lot number has been specified for dropped samples tracked by lot number.

If the call passes these checks, the application:

• Creates a samples disbursement transaction with a line item for each dropped sample recorded for the call.

- Submits a disbursement transaction to update the samples inventory. If the submission of the disbursement transaction is successful, the application changes the call's Status field to Submitted.
- Converts many fields in the call record to read-only.

An administrator can change the fields that become read-only after a call is submitted.

NOTE: If attendees are recorded in an account call, an attendee call is created for each attendee, and the process described above is performed for each attendee call. Attendee calls are the same as contact calls except that they do not appear in the Activities view and they are submitted automatically when the account call is submitted.

About Inventory Periods

Siebel Samples Management provides three types of inventory periods for maximum flexibility. These period types are described in Table 29.

Period Type	Description
Active	The current period; it shows no end date and it is not reconciled. You can enter any type of samples transaction, including adding new products; inventory counts will be adjusted accordingly.
Inactive	A past, unreconciled period; it shows an end date but has not been reconciled yet. Except for adding new products into inventory, you can enter any type of samples transaction.
Reconciled	A past, inactive period; reconciled periods will not display on the handheld application.

Table 29. Samples Inventory Periods

About Establishing an Initial Inventory Count

Establishing an initial master inventory is only necessary if you are manually entering and tracking samples. Either an administrator or an end user may establish an inventory. However, because Siebel Samples Management routes and maintains transactions by Employee ID, only the user who creates an inventory (the initial inventory count) can create or manipulate that inventory.

Before adding products to the master inventory, you must verify that the products are correctly defined for inventory tracking. In particular, make sure that the products are Orderable and have either Inventory or Lot # tracking.

NOTE: End users do not need to perform the procedures described in this section if their initial counts consist only of samples transfers routed to them by their samples administrator. Instead, they should simply acknowledge the receipt of those shipments. For more information, see "To acknowledge receipt of a samples transfer" on page 219. However, end users do need to perform the procedures described in this section if their initial counts contain any records that they entered manually. End users who enter records manually must submit those counts and reconcile the initial inventory period.

To establish an initial master inventory:

- **Count products on hand.** Establish an inventory count by physically counting the products currently on hand. This process creates a list of the products in your inventory and an inventory period solely for your initial count.
- Add products and submit count. Add products to the inventory and submit an initial count. (See "To add products to inventory and submit an initial count" on page 211.)
- **Submit adjustments.** Create and submit adjustments for the initial count. (See "To create and submit initial count adjustments" on page 214.)
- **Reconcile.** Reconcile the initial inventory period using Siebel ePharma.

To add products to inventory and submit an initial count

1 Navigate to the Samples Adjustments screen.

2 From the Show drop-down list, select Inventory Count.

The Inventory Count list appears.

- **3** On the toolbar, tap the New Record button to add a new row.
- **4** Complete the necessary fields.

NOTE: Some of the fields are described in the following table. Users cannot sort on the Difference and On Hand Qty fields in the Inventory Count applet.

Field	Comments
Count	The amount of your initial inventory.
Difference	Shows a negative number after you enter a value in the Count field.
Lot	The lot number for this sample.
Sample	The name of the sample to be added.

5 Tap Submit.

The Difference field is cleared for all records. The application transfers the number you entered in the Count field to the On Hand Quantity field and clears the Count field.

Once you submit an initial count, the Siebel Samples Management deactivates the inventory period into which you entered your initial counts and creates a new active inventory period. You can view this change using the My Samples History filter.

6 From the Show drop-down list, select Samples History.

The Samples History view appears. The inventory period into which you entered your initial counts becomes inactive—a date and time appear in the End Date field, and there is no check mark in the Active field. In addition, a new active period has been opened.

NOTE: You cannot submit an adjustment transaction if the product is not currently active. Siebel Samples Management considers a product inactive if the administrator has made it inactive, or the product does not exist in the inventory count list.

To create and submit initial count adjustments

- **1** Navigate to the Samples Adjustments screen.
- **2** From the Show drop-down list, select Adjustments.

The Samples Adjustments list appears.

3 On the toolbar, tap the New Record button add a new record.

The Sample Adjustment Details form and list appear.

4 Complete the necessary fields.

Some of the fields are described in the following table.

Field	Comments
Adjustment Reason	Select Initial Count from the drop-down list.
Transaction #	The application automatically generates an unique identifier. You can change this value.
Transaction Date	The date of the adjustment transaction. Make sure that this date falls within the valid date ranges for the appropriate Inventory Period.
Status	The application automatically changes this field value to Submitted when you submit the adjustment.

- **5** From the Show drop-down list, select the Adj. Details view.
- **6** On the toolbar, tap the New Record button.
- **7** Complete the necessary fields.

Repeat Step 3 and Step 4 to enter a line item for each sample needing adjustment.

8 Tap Submit.

The values in the Transaction Status field (in the Samples Adjustment form) and the Item Status fields (in the Line Items list) change to Submitted.

NOTE: You must reconcile using Siebel ePharma. For more information, see *Siebel Life Sciences Guide*.

About Siebel ePharma Handheld Samples Views

Siebel ePharma Handheld contains these main screens related to sample management:

- Samples. Navigate to this screen to display a history of samples and an inventory list.
- **Samples Adjustments.** Navigate to this screen to adjust sample transaction records, such as correcting quantities dropped off, or to display your on-hand inventory count.
- Samples Receipts. Navigate to this screen to acknowledge the receipt of a samples transfer or to display a list of receipts, and to review receipt details.
- **Samples Transfers.** Navigate to this screen to create a transfer, to display a list of transfers to or from your inventory, and to review transfer details.
- **Samples Orders.** Navigate to this screen to create an order for samples, to display a history of orders, and to review order details.

Creating a Samples Order

You can request additional samples by creating a samples order using Siebel ePharma Handheld.

After synchronizing, Siebel ePharma routes the samples order to the samples administrator. The samples administrator then creates a samples transfer that is routed back to the requestor. After the requestor acknowledges receipt of the transfer, Siebel Samples Management automatically enters the new inventory into their inventory counts.

To create a samples order

- **1** Navigate to the Samples Orders screen.
- **2** From the Show drop-down list, select Orders.
- **3** On the toolbar, tap the New Record button.
- **4** In the new record, complete the necessary fields.

The application automatically sets the Order Date field to a date and time in the active period. It also automatically generates values for the Order # field, but it can be edited. You might want to edit this value to have the items appear in a particular order (other than the order in which you entered them).

NOTE: It is not necessary to change the Order Type field. You can include both samples and promotional items in a single order.

- **5** Drill down on the Order *#* hyperlink.
- **6** Tap the Samples Order Details list on the right to select it.
- **7** On the toolbar, tap the New Record button.
- **8** Complete the necessary fields for the new record.

Some of the fields are described in the following table.

Field	Comments
Item Status	Initially set to In Progress. The application automatically changes this field value to Submitted when you submit the transaction.
Sample	The product to be ordered. Tap the arrow in the Sample field, choose the product from the Pick Product list, and then tap OK.
Quantity	The sample quantity that you are ordering.

9 Repeat Step 7 and Step 8 to enter a line item for each product or promotional item you want to order.

10 Tap Submit.

NOTE: You cannot modify or delete an order after it has been submitted.

The values of the Status field (in the form) and the Item Status field (in the list) change to Submitted.

Creating a Samples Transfer

You can create a samples transfer to exchange samples between one another or to return samples to the home office.

After the samples transfer is submitted into the system, the recipient receives a samples transfer. After the recipient acknowledges the receipt of the transaction, the application enters the new inventory into his or her inventory count.

NOTE: Samples returns are defined as transfer transactions for which corresponding received shipment transactions have *not* been created. Returned samples are subtracted from the sender's inventory counts but are *not* added to the master inventory, as they are typically expired or damaged products.

To create a samples transfer

- **1** Navigate to the Samples Transfers screen.
- **2** From the Show drop-down list, select Transfers.
- **3** On the toolbar, tap the New Record button.

4 In the new row, complete the necessary fields.

Some of the fields are described in the following table.

Field	Comments
Transfer #	The application automatically generates a unique identifier. You can change this value.
Transfer Date	The application automatically generates a date and time value that falls in the active period.
Transfer Status	The application automatically changes this field value to Submitted when you submit the transaction.
Transfer Last Name	The employee to whom you are transferring the samples. If the value of the Transfer Type field is Transfer Out, then you must complete this field. Leave this field empty if the value of the Transfer Type field is Return.
Transfer Type	 Select the appropriate value: Transfer Out - Indicates you are transferring samples to another employee. Return - Indicates you are returning samples to the home office. Samples are typically returned because they are expired or damaged products that should be destroyed. Transfers with the Transfer Type field set to Return do not generate shipment transactions (because there is no recipient), and they are <i>not</i> added to the master inventory counts.

- **5** Drill down on the Transfer *#* hyperlink.
- **6** Tap the Sent Samples Details list to select it.
- **7** On the toolbar, select the New Record button.

8 In the new row, complete the necessary fields.

Some of the fields are described in the following table.

Field	Comments
Item Status	The application automatically changes this field value to Submitted when you submit the transaction.
Lot #	The lot number for this samples transfer.
Quantity	The quantity that you are transferring.
Sample	The samples being transferred.

- **9** Repeat Step 7 and Step 8 to enter a line item for each product or promotional item you are transferring.
- **10** Tap Submit.

NOTE: You cannot modify or delete a transfer transaction after it has been submitted. The transaction will appear in the Samples History list as part of the Inventory List view.

Acknowledging Receipt of a Samples Transfer

Siebel Samples Management supports two ways of electronically moving samples inventory:

- By creating a samples transfer (see "Creating a Samples Transfer" on page 217)
- By creating a samples order (see "Creating a Samples Order" on page 215)

In either case, the application creates a samples transfer transaction and routes it to the recipient for acknowledgement. After the recipient submits a receipt, the application transfers the new inventory into the recipient's active inventory period. You can then view the new inventory in the Samples History view.

To acknowledge receipt of a samples transfer

1 Navigate to the Samples Receipts screen.

2 In the Samples Receipts view, drill down on the Invoice *#* hyperlink.

The Receipts Details view appears. In the form, samples transfers that have not been acknowledged as received show an Invoice Status value of In Progress. Those that have been acknowledged as received show an Invoice Status value of Submitted.

- **3** In the Receipts Details list, modify the Received Quantity field if the value does not accurately reflect the quantity received.
- **4** Tap Submit.

NOTE: The samples transfer quantities do not appear in end users' inventory counts until they submit a samples receipt. However, after the samples receipt has been submitted, it cannot be modified or deleted.

The values in the Invoice Status field (Received Samples list) and the Item Status field (Line Items list) change to Submitted.

- **5** To verify the submitted transfer was recorded:
 - **a** Navigate to the Samples screen.
 - **b** From the Show drop-down list, select Samples History.

The Samples History view appears.

c Highlight the appropriate inventory period to view the line items of the received transfers.

Adjusting a Samples Transaction

You can adjust inventory counts of samples stock by making adjustments to past samples transactions directly in Siebel ePharma Handheld. Common reasons for adjusting past transactions include product loss or expiration, counting mistakes, or data entry errors. End users can add products or adjust quantities for any type of samples transaction (disbursement, transfer, order, and so on).

NOTE: End users cannot add a product to your inventory that did not exist when the original transaction was created.

The inventory list view displays all the samples for the selected inventory period.

To add a product to a samples transaction

- **1** Navigate to the Samples screen.
- **2** From the Show drop-down list, select Samples History.
- **3** In the Inventory Periods list, select the period containing the transaction.
- **4** In the Sample History list, select the transaction you would like to update.

You can identify the transaction record in the Samples History list by the Transaction Date, Last Name, or Transaction # field values.

NOTE: To make it easier to find a transaction, sort the records in the Samples History list by the field you are using to identify the transaction. For example, if you know the Transaction *#*, sort the list by that field to locate the records you are looking for.

5 In the Samples History list, tap Add, and then tap OK.

6 In the new row, complete the necessary fields.

When you add a record, the application adds a new line-item record for the transaction in the Samples History list and sets the line-item record's Item field Status to In Progress. With the exception of the Item Status value, the new record is a copy of the record selected in Step 4.

Some of the fields are described in the following table.

Field	Comments
Item Status	The application automatically changes this field value to Submitted when you submit the adjustment.
	For any row that shows an item status of Submitted, you can also see one or more rows with the identical sample name and transaction number but with an item status of In Progress or Adjusted.
	Valid values include:
	 In Progress - Indicates that the adjustment record has not yet been submitted, so it can still be modified. However, the record's data is not reflected in the inventory count.
	 Submitted - Indicates that the record has been submitted and therefore cannot be modified. Since it has been submitted, the record's data is reflected in the inventory count.
	 Adjusted - Indicates that a previously submitted record has been superseded by a subsequent adjustment record. The record cannot be modified.
Lot #	The correct lot number for this sample. Select the Add button to update this field.
Sample	Verify that the correct product name is selected. Select the Add button to update this field.
Transaction #	The transaction number or, in the case of samples disbursements, the reference number. The Transaction # value corresponds to the Ref # value displayed in the Contact Call Detail view.
Transaction Type	Displays the type of transfer. Valid values include Transfer Out and Transfer In.

To adjust a quantity in a samples transaction

- **1** Navigate to the Samples screen.
- **2** From the Show drop-down list, select Samples History.
- **3** In Inventory Periods list, select the period containing the transaction.

The samples for the selected period are displayed in the list on the right.

4 In the Samples History list, select the transaction you would like to update.

You can identify the transaction record in the Samples History list by the Transaction Date, Last Name, or Transaction # field values.

5 Tap Adjust Qty and then tap OK.

The application copies the line-item record for the transaction in the Samples History list and sets the line-item record's Item Status field to In Progress.

- **6** In the Samples History list, enter the correct quantity in the Quantity field.
- **7** Tap Submit, and then tap OK.

The application adds the new item with an Item Status of Submitted and changes the original item record (whose quantity you adjusted) to an Item Status of Adjusted. The new quantity is reflected in the on-hand quantities in the Inventory Count view.

Setting Up MedEd Events

This section describes how a pharmaceutical company can use Siebel ePharma Handheld to plan a medical education (MedEd) event. A MedEd event refers to a promotional or educational event attended by physicians and medical professionals. An event functions as a forum for exchanging information on a particular disease, illness, therapeutic class or product. A medical education event can be as simple as a lunch-and-learn in a physician's office or as complex as a seminar series or national sales meeting.

Sales representatives in the field can use Siebel ePharma Handheld to view and create MedEd events and invite contacts to MedEd events.

Setting Up MedEd Events

MedEd Procedures

This section provides instructions for the following procedures:

- Creating a MedEd Event on page 225
- Inviting Professionals to MedEd Events on page 225

Creating a MedEd Event

You can create MedEd events directly in Siebel ePharma Handheld.

To create a MedEd event

- **1** Navigate to the MedEd screen.
- **2** From the Show drop-down list, select My MedEd Events.
- **3** On the toolbar, select the New Record button.
- **4** In the new list, complete the necessary fields.

Some of the fields are described in the following table.

Field	Comments
Budget	The amount of money budgeted for the event.
CME Credit	Number of CME (Continued Medical Education) credits that can be earned at the event.
Created By	User name for the person who created the MedEd event.
End Date	Date and time that the event ends. Set the time fields before selecting a calendar day.
Start Date	Date and time that the event starts. Set the time fields before selecting a calendar day.
Event Status	Indicates whether the event is active, cancelled, completed, in progress, inactive, or planned.
Туре	The category of medical education event being offered.

Inviting Professionals to MedEd Events

When you have scheduled a MedEd event and have decided what sessions will be offered, you can invite health care professionals to attend.

To invite a contact to a MedEd event

1 Navigate to the MedEd screen.

Creating Expense Reports

- **2** From the Show drop-down list, select Invitees.
- **3** Tap the Contacts list to select it.
- **4** On the toolbar, select the New Record button.
- **5** In the new row, complete the fields.

Some of the fields are described in the following table.

Field	Comments	
First Name	Completed based on the last Name selection.	
Last Name	ast Name The contact/invitee. Select from the Pick Contact list.	
Invitee Status	Indicates whether the invitee has confirmed attendance, is on a wait list, and so on. Pending is the default value.	
Role	Describes the selected contact's role at the session.	

Creating Expense Reports

You can track expenses and create expense reports using Siebel ePharma Handheld.

To create an expense report

- **1** Navigate to the Expense Reports screen.
- **2** From the Show drop-down list, select My Expense Reports.
- **3** On the toolbar, tap the New Record button.
- **4** In the new row, complete the necessary fields.
- **5** From the Show drop-down list, select More Info to view additional fields.

NOTE: You must complete the Submit To field or you will get an error message and your expense report will not be saved.

Creating Expense Reports

To add detailed line items

- **1** Navigate to the Expense Reports screen.
- **2** From the Show drop-down list, select My Expense Reports.
- **3** In the Expense Reports list, drill down on the Name hyperlink.
- **4** Tap the Line Items list to select it.
- **5** On the toolbar, tap the New Record button.
- **6** In the new row, complete the necessary fields.

You can enter Line Items whose Start or End Date is outside of the Expense Report period.

7 Repeat Step 4 through Step 6 to add line items.

Using ePharma Handheld

Creating Expense Reports

This appendix addresses some of the common issues faced while deploying Siebel Handheld. The appendix presents troubleshooting tips in three areas:

- Installation
- Performance
- Log Files

The audience for this appendix is Siebel database administrators, system administrators, and application administrators.

Installation

Siebel Handheld supports a specific and limited set of devices, handheld OS, desktop OS, server OS, server databases, and languages. This range of devices and platform support varies widely across the range of Siebel Handheld releases and must be carefully checked to confirm support. See the system requirements and supported platforms documentation for your Siebel application for information on supported Handheld OS, desktop OS, server OS, and server databases.

Client Installation, Backup, and Restore

If you run into problems while installing the handheld application on client devices from a desktop PC, refer to the following checklist. Most installation problems are covered by this checklist.

- Is the device certified and supported? Refer to the system requirements and supported platforms documentation for the handheld application.
- Confirm that the device has 64 MB of RAM with the majority of it available for the Siebel Handheld application.

Synchronization

- Is an ActiveSync connection running (green icon)? If not, check your computer to make sure that the serial or USB port is activated and functioning correctly.
- If previous versions of Siebel Handheld were installed to the device, did you uninstall the application? See "Uninstalling the Handheld Application" on page 136.

Siebel Handheld binaries may also be installed to a CompactFlash card to conserve (RAM) memory. The application will still be loaded into memory when it executes. To install to the CompactFlash card, set the ApplicationBinariesLocation and ApplicationDataLocation parameters in the setup.ini file. See "Setting up Installation on a CompactFlash Card" on page 113.

Siebel Handheld (application only - no data) may also be backed up to a CompactFlash card to aid in deployments. Using the built-in backup utility that comes with Compaq (QUtilities) and HP Jornada (HP Backup) devices, a backup image may be created which can then be restored onto other devices. The initial backup image should be made of a device that has *not* done an initial synchronization. An initial synchronization will still be required by each user to receive the configuration and data.

It is also possible to back up Siebel Handheld to a PC using the Backup/Restore feature within ActiveSync.

Synchronization

Synchronization problems can be caused by incorrect settings in the Siebel Handheld setup.ini or .cfg files. Be sure that application names, data sources, and SRFs are correct.

Make sure to set the URL setting (DSSURL) in the client setup.ini for direct server synchronization installations. Be sure to list the views (DefaultViews) in the application .cfg file. Also, do not forget to grant the user visibility to these views in the Application Administration > Responsibilities view.

NOTE: Check the log files and confirm the accuracy of the generated connect string.

Companion Sync Checklist

Use the following checklist to troubleshoot problems you encounter using Companion Sync.

- Is the latest version of ActiveSync (v.3.5 or later) installed and running?
- Is ActiveSync connected (green icon)?
- Do you have the correct data source defined in the handheld .cfg file?
- If you have problems logging in, check to make sure that you can use the same credentials to log into the desktop client.
- Remember to keep a 1:1 ratio of users to devices. Only a single user may log in to sync each device. Failure to do so causes data corruption.

Direct Server Sync Checklist

Use the following checklist to troubleshoot problems you encounter using Direct Server Sync.

- Did you install all client and server components successfully?
- Is there a PDA OM running on the Siebel Server?
- Did you bounce the IIS, SWE, and Siebel Server after installation?
- Do you have network access to the URL for DSS? Can you ping the IIS server from inside and, if applicable, from outside the firewall?
- Can you successfully run a SWE command?
- Do you have the correct DSS URL defined in the setup.ini file?
- Is the network connection working from the device? Try Pocket IE.
- If you have problems logging in, check to make sure that you can use the same credentials to log into the desktop client.
- Remember to keep a 1:1 ratio of users to devices. Only a single user may log in to sync each device. Failure to do so causes data corruption.

Log Files

Re-synchronizing Problems

Generally if, for whatever reason, synchronization is terminated, the end user is prompted with a message and the synchronization process ends. In this situation the synchronization session is allowed to close. However, if the connection with the server is unintentionally broken, the session may not have a chance to close before the connection is broken. Therefore, if the end user tries to immediately synchronize again, he may get an error message and may not be able to synchronize. Should this occur, the end user should wait for a period of time (generally, 15 minutes) to allow the session to time out and terminate. Once the session terminates, the end user should be able to synchronize again.

Log Files

This section discusses issues related to log files.

Direct Server Sync Log Files

To assist Siebel Technical Support, collect the following files when logging a Siebel Handheld service request. The following files are found on the machine where Siebel Server is installed:

- All server sync user files in the Siebel Root\siebsrvr\hhsync\application directory\user id\node id directory
- Server NT application event log extract
- Server NT system event log extract
- All files in the *Siebel Root*\siebsrvr\log directory including hhsync.*.log files

The hhsync.*.log files log every message returned by Object Manager (including informational messages, synchronization errors, debugging messages, and warnings.) The information logged depends on the logging level set in the .cfg file.

■ All files from all subdirectories under the *Siebel Root*\siebsrvr\logarchive directory.

 Server perfmon log files (showing memory, network, disk performance), if available.

The following files are found on the machine where the Web Server (that is, IIS) is installed:

- SWE log files from *Siebel Root*\eappweb\log (all files)
- IIS server NT application event log extract
- IIS server system event log extract
- IIS server perfmon log files (showing memory, network, disk performance), if available

Companion Sync Log Files

To assist Siebel Technical Support, collect the following log files when logging a Siebel Handheld service request. The following files are found on the companion PC where Siebel Mobile Web Client is installed:

- Client Siebel Handheld Sync log file: \log\syncmanager_log.txt
- All files in the *Siebel Root*\client\hhsync*application directory**user id**node id* directory
- NT application event log extract
- NT system event log extract
- All files in the *Siebel Root*\client\log directory including hhsync.*.log files

The hhsync.*.log files log every message returned by Object Manager (including informational messages, synchronization errors, debugging messages, and warnings.)

Perfmon log files (showing memory, network, disk performance), if available

Troubleshooting

Log Files

Handheld Device Logs

The following log files are found in the /Program Files/Siebel Handheld directory on the handheld device:

- **dbimport_log.txt**—This file is a log of the database objects that were imported during synchronization. The file is located in the \Program Files\Siebel Handheld directory on the handheld client.
- sql_stmt_log.txt—This file logs all SQL statements generated by the application. You must set a parameter in the setup.ini file to turn this log on. The log file is located in the \Program Files\Siebel Handheld directory on the handheld client. See "Configuring Handheld Logging Parameters" on page 113 for more information about setting the parameter.
- ssa_errors_log.txt—This file is a log of all system error messages. You must set a parameter in the setup.ini file to turn this log on. The log file is located in the \Program Files\Siebel Handheld directory on the handheld client. See "Configuring Handheld Logging Parameters" on page 113 for more information about setting the parameter.
- syncmanager_log.txt—This file contains all of the messages displayed on the Sync Manager dialog box as well as some basic information about synchronization, such as data source and connect string. You can set the logging level for this file using the SyncLogReportingLevel parameter in the setup.ini file.

For Direct Server Sync deployments, the file is located in the \Program Files\Siebel Handheld directory on the handheld client. For Companion Sync deployments, the file is located in the *Siebel Root*\client\log on the companion PC.

Logging Handheld Synchronization Errors

Siebel Handheld Sync logs all the strings that the user sees in the sync message window as well as many informational messages that do not get displayed in the UI. These informational messages are used to help track down where an error occurred. Siebel Handheld Sync determines which messages get logged based on a value stored in the registry under the key SyncLogReportingLevel. The values range from 0 to 4; 0 logs all error messages and strings that the user sees, and 4 logs all data that Siebel Handheld Sync sends and receives.

If Siebel Handheld Sync fails for some reason, check the syncmanager_log.txt file immediately after the failure. If you need more detail, increase the logging level and run Siebel Handheld Sync again. Use the LoggingLevels parameter in the setup.ini file to change the logging level. Furthermore, each time a user synchronizes, the syncmanager_log.txt file is overwritten with the new data.

SQLTrace

Use SQLTrace for diagnostic purposes if you encounter serious configuration errors or performance problems and cannot otherwise diagnose the problem. The problem may quickly become apparent in the log entries from SQL tracing.

To enable SQL tracing, set the EnableSqlTrace parameter in the .cfg file. By default, EnableSqlTrace = FALSE, and SQL tracing is disabled. Set EnableSqlTrace = TRUE to enable tracing. Log entries are written to the hhsync.*.log server log file.

NOTE: SQL tracing only logs SQL statements for one user at time. SqlTrace is applied to the first user who synchronizes after tracing is enabled.

CAUTION: When SQL tracing is enabled, synchronization is severely and adversely affected. Therefore, it is recommended that you turn SQL tracing on for a limited time to diagnose a specific problem, then turn SQL tracing off.

End User Error Messages

End users may encounter error messages when they synchronize their data. For more information on these messages, see "Troubleshooting" on page 163.

Web Server Timeout Errors

If synchronization times are long due to the size of the database file or the speed of the network connection, your end users may encounter Web server timeout errors and synchronization failures. First try to resolve this problem by reducing the size of your extract and configuring your server performance. If after doing this, your end users continue to experience timeout errors, then increase the timeout parameter on IIS for the default Web Server.

Follow the procedure for your platform to change the timeout parameter.

To change the timeout parameter on Windows 2000

- **1** From the Start menu, select Programs > Administrative Tools > Internet Services Manager.
- **2** From the Internet Information Services window, select the local machine, rightclick on the Default Web Site, and select Properties from the pop-up list.
- **3** From the Web Site Properties window, select the Web Site tab.
- **4** Under the Connections heading, locate the Connection Timeout property and increase the number of seconds.
- 5 Click OK.

To change the timeout parameter on Windows NT

- **1** From the Start menu, select Programs > Windows NT 4.0 Option Pack > Microsoft Personal Web Server > Internet Service Manager.
- **2** Under Internet Information Server, right-click on the Default Web Site and select Properties from the pop-up list.
- **3** From the Web Site Properties window, select the Web Site tab.
- **4** Under the Connections heading, locate the Connection Timeout property and increase the number of seconds.
- **5** Click OK.

Performance

This section discusses ways you can optimize your client performance, server performance, and network performance.

Client Performance

Client performance is affected primarily by the device capability (minimum 206 MHz processor and 64 MB RAM), configuration, and the quantity of data loaded onto the device. In general, screen-to-screen and view-to-view navigation times of 3 to 4 seconds or less should be considered normal.

It is strongly recommended that customers follow these general guidelines to optimize the performance of their handheld applications:

- Keep configuration under 30 views.
- Keep RML file size under 1.75 MB.
- Keep database files (dbfile.txt) under 2 MB.

Use filters as outlined in the Siebel 2000 Handheld Synchronization Technical Note.

- Keep the number of records for each business component under 2,500.
- Avoid installing other applications on the device at the same time.
- Users should synchronize their data frequently.

Additional configuration information can be found in the Siebel Technical Note 405, *Siebel Handheld Synchronization*.

The Professional Services Mobile eBusiness Competency group has a Siebel Handheld Quickstart program that is mandatory for all new Siebel Handheld customers to assess their configuration and deployment.

The Siebel Handheld client will benefit from periodic closing and restarting the application to release memory consumed by the handheld operating system. Use File > Exit in the menu to exit from the Siebel Handheld application.

Performance

If an external VGA driver is or has been loaded on the device in the past and is no longer needed, be sure to unload it, because it is known to have significant performance impacts on handheld devices.

Server Performance

Server performance affects the performance and scalability of Direct Server Sync processes. Customers should engage Expert Services to do a Scalability Review. The following guidelines are general in nature and pertain to the Siebel Handheld sync components running on a Siebel Server:

- Use Performance Monitor to track memory and processor performance on the Siebel server.
- Make sure that the Servers (IIS, GW, OM and DB) are on the same high speed LAN segment.
- Siebel Handheld Sync components will stress Siebel Server and database performance because of the intensive interactions during large concurrent synchronizations.
- Estimate that 64 MB is used per Siebmtsh.exe instance.
- To calculate the theoretical maximum concurrent users:
 - Numusers = Server_Memory*threads_per_process_ratio/64 MB.
- Optimize the Threads per Process Ratio (Max Tasks/Max MT Servers) per Technical Note 405, *Siebel Handheld Synchronization*.
- Set Max Tasks = Max. number of concurrent users (for example, 150).
- Set MinMTServers = MaxMTServers (for example, 30 for 5:1 ratio, if this is determined to be appropriate).

To optimize and tune a Siebel DB server:

- Use Performance Monitor to track memory and processor performance on the DB server.
- Turn on SQL tracing and search for long-running SQL calls.
- Estimate 64 MB of RAM for each concurrent user.

- Consider creating indexes to tune the queries (only performed with the assistance of Siebel Expert Services).
- Consider using a RAID 0 + 1 disk array with an expanded number of spindles to optimize database performance.

NOTE: Make sure that DB Server settings are set to recommended values. Timeouts should be set at the Siebel Server. Be careful that the timeout is set longer than the longest SQL query.

Network Performance

The condition of the network affects Direct Server Sync performance and scalability. In general, a low-latency, high-bandwidth network is preferred with dedicated rather than shared network connections. The following are general network considerations:

- Make sure there is adequate bandwidth throughout the entire round-trip of network packets and estimate where bottlenecks will occur due to high concurrent load. For example, if 50 users are concurrently synchronizing 1 MB each, 50 MB of data must pass through the network. If this data is passing through a single leased 56 KB per second line, then this data will minimally take 500,000 KB/56 KB/sec = 8928 seconds = 148 minutes. In reality, a 56 KB per second line will offer only 30-40 KB per second average throughput, which causes further bandwidth constraints. Check the total available bandwidth of network providers (private or public ISP).
- Verify that you have low latency lines with ping round trips of less than 1 second (1000 ms) with no dropped packets.
- Verify if roundtrips occur with less than 10 hops.
- Check the actual throughput of network connections by performing simple file transfers with no Siebel software.
- Nonvalidated VPN software from third parties accounts for 30 to 60 percent of additional packet overhead because of the encryption.

Siebel Services

Network problems can usually be resolved by working with network providers to size network connections and optimize network routing. Consider the use of burst networks, quality of service contracts, private networks, and dedicated modem banks directly into a high-speed LAN environment. Noisy phone lines in some countries may benefit from the use of an external modem card from Xircom or Pretec instead of the built-in modem on the HP Jornada 720.

Siebel Services

You may wish to consult experts who have experience designing and configuring handheld applications, and who are knowledgeable about optimizing the performance of the applications.

Siebel Professional Services

To make deployment planning and implementation successful, Siebel Handheld customers are encouraged to engage the Siebel Mobile eBusiness Competency group. The Siebel Professional Services team has developed a Siebel Handheld Quickstart solution which defines the strategy, approach, and roadmap for successful Siebel Handheld deployments. Working directly with experienced handheld experts from the Mobile eBusiness Competency, customers can develop a complete deployment strategy, approach, and roadmap to facilitate their handheld implementation in a short time period.

Siebel Expert Services

All Siebel Systems customers should work with Siebel Expert Services to conduct detailed configuration and hardware sizing reviews. This helps customers make sure they have implemented the most effective and efficient solutions possible. Siebel Handheld customers benefit by making sure Siebel Handheld applications are configured according to best practices and that server environments are properly designed.

Siebel Handheld Client supports a subset of the screens and views supported by the Siebel Web Client application. Other screens and views can be configured for your Siebel Handheld Client application if they are based on currently supported classes. Application developers and application administrators will find the information in this appendix useful.

If you configure screens and views based on unsupported classes, you may see anomalous results. For information on how to determine the classes used by other screens and views, see *Object Types Reference*.

Screens and Views

The screens and views shipped with the Siebel ePharma Handheld sample application are shown in Table 30.

Screen	View Name on UI
Contacts	My Contacts
Contacts	More Info
Contacts	Private Notes
Contacts	Shared Notes
Contacts	License Numbers
Contacts	Activities
Contacts	Calls
Contacts	Affiliations

Table 30. Siebel ePharma Handheld Screens and Views

Screens and Views

Screen	View Name on UI
Contacts	Best Time to Call
Contacts	Addresses
Contacts	Rx Data
Accounts	My Accounts
Accounts	Shared Notes
Accounts	More Info
Accounts	Private Notes
Accounts	Activities
Accounts	Best Times to Call
Accounts	Addresses
Accounts	Calls
Accounts	Affiliations
Accounts	Sales Data
Activities	My Activities
Activities	More Info
Calendar	Daily
Calendar	Weekly
Calendar	Monthly
Calendar	Contact Participants
Calendar	Employee Participants
Calendar	Add/Modify Activity (note: not displayed from the drop-down menu)
Contact Call	Details
Contact Call	Promotional Items

Table 30. Siebel ePharma Handheld Screens and Views

Screens and Views

Screen	View Name on UI
Contact Call	Issues
Contact Call	Samples Dropped
Account Call	Details
Account Call	Attendee
Home Page	Home Page
Personal Lists	Details
Personal Lists	Promotional Items
Personal Lists	Samples
Med Ed	My Med Ed Events
Med Ed	Invitees
Expense Reports	My Expense Reports
Expense Reports	More Info
Expense Reports	Expense Items
Samples	Samples History
Samples	Inventory List
Samples Adjustments	Inventory Count
Samples Adjustments	Adjustments
Samples Adjustments	Adj. Details
Samples Receipts	Receipts
Samples Receipts	Receipt Details
Samples Transfers	Transfers
Samples Transfers	Transfer Details
Samples Orders	Orders
Samples Orders	Order Details

Table 30. Siebel ePharma Handheld Screens and Views

Screens and Views

Screens and Views

Siebel Handheld Client supports a subset of the business components and classes supported by the Siebel Web Client application. This appendix lists the supported business components, business component classes, and applet classes.

Business Components

Table 31 lists the supported Business Components for Siebel ePharma Handheld.

Supported Business Components
Account
Account Contact Affiliation
Account Note
Account Private Note
Action
Action Contact
Action Employee
Admin SEA Field
CSLS Contact Best Times - CE
CUT Address - CE
CUT Address for Account/Contact
CUT Address Inter Table - CE
Com Organization

Table 31. Siebel ePharma Handheld Business Components

Supported Business Components
Contact
Contact Account Affiliation
Contact (All)
Currency
Database Version
Decision Issue
Employee
Employee (MM)
Expense
Expense Item
Expense Item Type
Internal Division
Internal Product
LS Product Indiction
Language Def
List of Values
List of Values Child
List of Values Dynamic
Opportunity
Order Entry - Order Types
Order Entry - Orders
Period
Pharma Account Call - CE
Pharma Address Inter Table - CE

Table 31. Siebel ePharma Handheld Business Components

Supported Business Components
Pharma Area
Pharma Call Decision Issue
Pharma Call Decision Issue - CE
Pharma Call Products Detailed
Pharma Call Products Detailed - CE
Pharma Call Sample Dropped - CE
Pharma Call Signature
Pharma GA Markets
Pharma GA Rx Consumption
Pharma Internal Product
Pharma Inventory Period
Pharma Inventory Period - CE
Pharma ME Event
Pharma ME Event Professional Invitee Inter Table
Pharma Personal Inventory - CE
Pharma Personal Products - CE
Pharma Personal Promotional Items - CE
Pharma Personal Samples - CE
Pharma Product Issue
Pharma Professional Addresses - CE
Pharma Professional Call - CE
Pharma Professional Note
Pharma Professional Position
Pharma Professional Primary Specialty

Table 31. Siebel ePharma Handheld Business Components

Supported Business Components	
Pharma Professional Private Note	
Pharma Professional State Licenses	
Pharma Professional Items Dropped - CE	
Pharma Sales Consumption	
Pharma Sample And Promo Order	
Pharma Sample And Promo Order Item	
Pharma Sample Order And Adjustment	
Pharma Sample Order And Adjustment Item	
Pharma Sample Stocked Lots	
Pharma Sample Stocked Products	
Pharma Sample Transaction History Item - CE	
Pharma Samples	
Pharma Signature Disclaimer	
Pharma Template Call	
Picklist Generic	
Picklist Hierarchical	
Position	
Price List	
Query List	
Retail Outlet Best Call Time	
SIS HH Contact Activity	
Shift	
Shift Exception	
System Preferences	

Table 31. Siebel ePharma Handheld Business Components

Table 31. Siebel ePharma Handheld Business Components

Supported Business Components

Time Expense Map

Time Zone

Business Component Classes

Business Component Classes

Table 32 lists the supported Business Component classes for Siebel ePharmaHandheld.

Supported Business Component Classes	
CSSBCAccountSIS	CSSBCPosition
CSSBCAutoProduct	CSSBCPriceList
CSSBCBase	CSSBCProdRev
CSSBCBSampleLot	CSSBCProductDetailed
CSSBCContactSIS	CSSBCPromoItemsDropped
CSSBCDivision	CSSBCSample
CSSBCDocInvoice	CSSBCSampleDropped
CSSBCExpitm	CSSBCSampleInventory
CSSBCExprpt	CSSBCStateModel
CSSBCFINOppty	CSSBCStateModelState
CSSBCFINSActivity	CSSBCStateTransition
CSSBCHHInventoryPeriod	CSSBCUser
CSSBCHHPharmaCall	CSSBusComp
CSSBCHHSample	CSSCommandShell
CSSBCHHSampleItem	CSSExpenseAutoGenService
CSSBCInventoryPeriod	CSSOMAlarmMgr
CSSBCLineItem	CSSPreferencesService
CSSBCPeriod	CSSQueryExporter
CSSBCPharmaAddress	CSSSIABCOrder
CSSBCPharmaCall	CSSSISOMPricerService

Table 32. Siebel ePharma Handheld Business Component Classes

Applet Classes

Supported Business Component Classes	
CSSBCPharmaCallComponent	CSSSMCacheService
CSSBCPharmaDisclaimer	CSSTimeSheetAutoGenService
CSSBCPharmaSign	

Table 32. Siebel ePharma Handheld Business Component Classes

Applet Classes

You may create additional screens and views for your handheld application. Any new screens and views must be based on classes and business components that are supported for the ePharma Handheld application. Refer to Table 33 for the supported applet classes.

	Appier
Applet Classes	
CSSDurationFrameList	
CSSFrame	
CSSFrameAcctCall	
CSSFrameBase	
CSSFrameCECalAddModify	
CSSFrameCEGridDay	
CSSFrameCEGridMonth	
CSSFrameCEGridWeek	
CSSFrameCEHome	
CSSFrameCEMultPart	
CSSFrameList	

Table 33.	Siebel	ePharma	Handheld	Applet	Classes
-----------	--------	---------	----------	--------	---------

Business Components and Classes

Siebel ePharma Handheld Objects That Should Not Be Modified

Applet Classes
CSSFrameListBase
CSSFrameListExpitm
CSSFrameListPharmaActivity
CSSFrameListSample
CSSFrameListSampleItem
CSSFrameNewCall
CSSFramePopupCurrency
CSSFrameProfCall
CSSFrameSISAction
CSSFrameSample
CSSSWEFrameListPick
CSSSWEFrameListTargetAssoc
CSSSWEFrameListVisibilityAssc
CSSSWEFrameListVisibilityPick
CSSSubmitFrame

Table 33. Siebel ePharma Handheld Applet Classes

Siebel ePharma Handheld Objects That Should Not Be Modified

Refer to Siebel Tools Reference for guidelines on modifying existing objects.

Siebel ePharma Handheld Objects That Should Not Be Modified

There are certain objects in the Siebel ePharma Handheld Client which should *not* be changed. Table 34 lists these objects.

CAUTION: If these objects are changed, the behavior of the Siebel ePharma Handheld application cannot be predicted.

Type of Object	Objects	
Business Objects	Action - Account - CE	
	Action - Asset - CE	
	Action - Contact - CE	
	Action - Internal Product - CE	
	Action - Service Request - CE	
	Asset - Contact - CE	
	Asset - FS Inventory Location - CE	
	FS Activity Rec Parts & Tools - Order - CE	
	FS InvLoc Product - Internal Product - CE	
	FS Part Browser - FS Inventory Location - CE	
	Line Items - Action - CE	
Business Objects (continued)	Line Items - Internal Product - CE	
	Order - Asset - CE	
	Order - Service Request - CE	
	Service Request - Account - CE	
	Service Request - Asset - CE	
	Service Request - Contact - CE	
	Service Request - Internal Product - CE	

Table 34. Siebel ePharma Objects that Should Not Be Modified

Business Components and Classes

Siebel ePharma Handheld Objects That Should Not Be Modified

Type of Object	Objects
Business Components	Action - CE
	Service Request - CE
	Hidden Picklists BusComp - CE

Table 34	Siebel ePharma	Objects that	Should Not	Be Modified
Table 34.	Siever er narma	Unjects that	Should Not	De mounieu

User Properties

This appendix documents the handheld-specific user properties and methods for the Siebel Handheld application.

Global User Properties

The following user properties apply to all business components.

Name	Description
HandheldSyncPickMode	User property on a field of a business component. When set to NoFail, turns Extended Pick processing ON. See "Extended Pick Processing" on page 119 for more information.
HandheldSyncInsertMode	User property on a business component. When set to FailOnError, enables Extended Insert processing. See "Extended Insert Processing" on page 124 for more information.

Table 35. User Properties

CUT Address – CE Business Component

CUT Address – CE Business Component			
User Property	Value	Description	
Propagate Address BC Fields	City,Postal Code,State,Street,Addre ss,Country	Specifies the fields that must be updated in the S_ADDR_PER table that are propagated to the inter table. Fields are separated by commas.	
Propagate Address Fields To Parent BC	City City CE, Postal Code Postal Code CE, State State CE,Street Address Street Address CE, Country Country CE	Specifies the source and destination fields that are propagated to the parent business component. Source and destination fields are separated by a vertical bar () and the pairs of fields are separated by commas. In the example City City CE, "City" is the source field and "City CE" is the destination field.	

Table 36. User Properties for CUT Address – CE Business Component

Pharma Account Call – CE Business Component

Table 37. User Properties for Pharma Account Call - CE Business Component

User Property	Value	Default Value	Description
Cascading Fields	,Field name,	,Start Date,Start Time,Account Id,Address,Account Address Id, Account State,Duration Minutes,Brick Id,	Specifies fields that must be cascaded to the attendee call. These fields have to be made force active in the child business component. Use field names as defined in Siebel Tools. Add a comma to the beginning and end of the field name.
Must Detail Products	Y or N	Y	Specifies whether a product must be detailed or not before the call can be submitted.

Pharma Account Call – CE Business Component

Pharma Account Call – CE Business Component			
User Property	Value	Default Value	Description
OnlySubmitByP osition	Y or N	Y	Specifies whether the position that entered the record is the only position that can submit the call.
Read Only If Status Synchronized	Y or N	N	Specifies whether the record is Read Only if the call status is "Synchronized."
SubCall Component CE	,Business Component Name,	Pharma Professional Call - CE	Child business component to which the changes are cascaded. Use business component names as defined in Siebel Tools.
Template Components	,Business Component Name,	Pharma Call Products Detailed - CE	Specifies the business components that need to be copied from the call template when a smart call is applied to a call. Use business component names as defined in Siebel Tools.
Update After Submit	,Field name,	,Comment,	Specifies fields that are editable after the call is submitted. Use field names as defined in Siebel Tools. Add a comma to the beginning and end of the field name.
Update Status To Synchronized	Y or N	Y	Specifies whether the status of calls downloaded to the handheld is updated to "Synchronized." When the status is "Synchronized," the calls are read-only on the server

Table 37. User Properties for Pharma Account Call – CE Business Component

Global User Properties

Pharma Address Business Component

Pharma Address Business Component			
User Property	Value	Description	
Propagate Address BC Fields	City,Postal Code,State,Street Address, Country	Specifies the fields that must be updated in the S_ADDR_PER table that are propagated to the inter table. Fields are separated by commas.	
Propagate Address Fields To Parent BC	City City, Postal Code Postal Code, State State,Street Address Street Address, Country Country	Specifies the source and destination fields that are propagated to the parent business component.	
Update Inter Table BC Fields	DEA#,DEA Expr	Specifies list of fields that must be updated in the inter table (S_CON_ADDR).	

Table 38. User Properties for Pharma Address Business Component

Pharma Professional Call – CE Business Component

Table 39. User Prop	perties for Pharma	Professional Call -	• CE Business Component
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User Property	Value	Default Value	Description
Attendee Call Read Only	,Field name,	,Start Date,Start Time,Call Status,Sub Type,Address,Duration Minutes,Last Name, (default)	Specifies read-only fields when the call is an attendee call. Use the field names as they are defined in Siebel Tools. Add a comma to the beginning and end of the field name.
Electronic Signature Read Only	,Field name,	,Last Name,Address,Chosen Template,Start Date,CallStatus,Paper Signature,	Specifies fields that are read-only after a signature is taken. Use the field names as they are defined in Siebel Tools. Add a comma to the beginning and end of the field name.

Pharma Professional Call – CE Business Component

Pharma Professional Call – CE Business Component			
User Property	Value	Default Value	Description
Must Detail Products	Y or N	N	Specifies whether a product must be detailed before the call is submitted.
OnlySubmitByP osition	Y or N	Y	Specifies whether the position that entered the record is the only position that can submit the call.
Paper Reference Number Required	Y or N	Y	Specifies whether the reference number is required or not in order to submit a call with a paper signature.
Paper Signature Read Only	,Field name,	,Call Status,Signature Captured,	Specifies fields that are read-only when Paper Signature is true. Use the field names as they are defined in Siebel Tools. Add a comma to the beginning and end of the field name.
Read Only If Status Synchronized	Y or N	Ν	Specifies whether the record is Read Only if the call status is "Synchronized."
SRE Professional Types	Professional Type	No default	Specifies a list of professions. Add a comma to the beginning and end of the professional type. An example would be: ,Physician,Central Lab Technician,
SRE Reference Number Required	Y or N	Ν	Specifies whether a reference number is required before the call can be submitted.
Sample Disbursed Required	Y or N	N	Specifies whether samples must be dropped when the call is submitted.
Template Components	,Business Component Name,	Pharma Call Products Detailed - CE,Pharma Call Sample Dropped - CE	Specifies the business components that need to be copied from the call template when a smart call is applied to a call. Use business component names as defined in Siebel Tools.

Table 39. User Properties for Pharma Professional Call – CE Business Component

Global User Properties

Table 39. User Properties for Pharma Professional Call – CE Business Component

Pharma Professional Call – CE Business Component				
User Property	Value	Default Value	Description	
Update After Recreate Receipt	,Field name,	,Last Name,Address,Start Date,Comment,Signature Captured,	Specifies fields that are editable when Recreate Receipt is selected. Use field names as defined in Siebel Tools. Add a comma to the beginning and end of the field name.	
Update After Submit	,Field name,	,Comment,	Specifies fields that are editable after the call is submitted. Use field names as defined in Siebel Tools. Add a comma to the beginning and end of the field name.	
Update Status To Synchronized	Y or N	Y	Specifies whether the status of calls downloaded to the handheld is updated to "Synchronized." When the status is "Synchronized," the calls are read-only on the server	
Validate DEA Number	Y or N	Y	Specifies whether the DEA Number must be validated before the user can sign and submit the call.	
Validate DEA Number Expiration	Y or N	Y	Specifies whether DEA Expiration Date must be validated before the user can sign and submit the call.	
Validate License Number	Y or N	Y	Specifies whether License Number must be validated before the user can sign and submit the call.	
Validate License Number Expiration	Y or N	Y	Specifies whether License Number Expiration must be validated before the user can sign and submit the call.	
Validate License Number Status	Y or N	Y	Specifies whether License Number Status must be validated before the user can sign and submit the call.	
Validate OK to Sample	Y or N	Y	Specifies whether it is OK to drop a sample to a contact the call.	

Pharma Professional Call – CE Business Component

Pharma Professional Call – CE Business Component			
User Property	Value	Default Value	Description
Validate Professional Profile	Y or N	Y	
Validate Sign Lot Number	Y or N	Y	Specifies whether Lot Number is required before the user can sign.
Validate Submit Lot Number	Y or N	Y	Specifies whether Lot Number is required before the user can submit the call.

Table 39. User Properties for Pharma Professional Call – CE Business Component

Pharma Address Inter Table – CE Business Component

Table 40. User Properties for Pharma Address Inter Table – CE Business Component

Pharma Address Inter Table – CE Business Component			
User Property	Value	Default Value	Description
Validate DEA Number	Y or N	Y	Specifies whether the DEA number must be validated. An example of a valid DEA number is: AA1234563.

Global User Properties

Pharma Call Decision Issue – CE Business Component

Table 41. User Properties for Pharma Call Decision Issue - CE Business Component

Pharma Call Decision Issue – CE Business Component			
User Property	Value	Default Value	Description
Template Fields	,Field name,	Name	Specifies the fields that need to be copied from the call template when a smart call is applied. Use field names as defined in Siebel Tools. Add a comma to the beginning and end of the field name.

Pharma Call Products Detailed – CE Business Component

Table 42. User Properties for Pharma Call Products Detailed – CE Business Component

Pharma Call Products Detailed – CE Business Component

User Property	Value	Default Value	Description
Max Auto Generated Priority	number	3	Maximum number of priorities that are automatically generated.
Skip Conflict Resolution for Duplicate Records	Y or N	Y	Specifies the behavior of Object Manager when it encounters a duplicate record during synchronization. If Y, the Object Manager drops the record from the handheld client and keeps the record on the server.
Template Fields	,Field name,	Name,Priority,Indication	Specifies the fields that are copied from the call template when a smart call is applied. Use field names as defined in Siebel Tools. Add a comma to the beginning and end of the field name.

Pharma Inventory Period – CE Business Component

Pharma Inventory Period – CE Business Component			
User Property	Value	Default Value	Description
Maximum Periods	Number	2	Specifies the number of unreconciled periods, including the active period.

Table 43. Pharma Inventory Period – CE Business Component

Pharma Call Sample Dropped – CE Business Component

Table 44.	User Properties	for Pharma Call	Sample Dropped -	CE Business Component
Table TT.	oser i roperties	, ivi i narma van	Jampie Dioppeu –	or provinces component

Pharma Call Sample Dropped – CE Business Component			
User Property	Value	Default Value	Description
Signature Body Text Field: 1	Field name	Quantity	Field name that must appear in the signature body text.
Signature Body Text Field: 2	Field name	Name	Field name that must appear in the signature body text.
Signature Body Text Field: 3	Field name	Vendor Name	Field name that must appear in the signature body text.
Skip Conflict Resolution	Y or N	Y	Specifies the behavior of Object Manager when it encounters a duplicate record during synchronization. If Y, the Object Manager drops the record from the handheld client and keeps the record on the server.
Template Fields	,Field name,	,Name,Lot Name,Quantity,	Specifies the fields that need to be copied from the call template when a smart call is applied. Use field names as defined in Siebel Tools. Add a comma to the beginning and end of the field name.

Pharma Call Sample Dropped – CE Business Component

Global User Properties

Pharma Promotional Items Dropped

Table 45. User Properties for Pharma Promotional Items Dropped - CE

Pharma Promotional Items Dropped – CE Business Component			
User Property	Value	Default Value	Description
Template Fields	,Field name,	,Name,Quantity,	Specifies the fields that need to be copied from the call template when a smart call is applied. Use field names as defined in Siebel Tools. Add a comma to the beginning and end of the field name.

Pharma Promotional Itams Dronned - CF Rusiness Component

This chapter describes the print tagging language that is used to create print templates for your handheld device.

The audience for this appendix is Siebel application developers.

Overview

You can create the print template file in any text editor.

 Tags are enclosed in angle brackets and identified with the keyword TAG, followed by a colon.

For example: < TAG: >

 Parameters are specified with a keyword, followed by an equals sign. Arguments are in uppercase, surrounded by quotation marks.

For example, Font = "FONT FACE"

■ Values are in uppercase and lowercase, surrounded by quotation marks.

For example: Font = "Helvetica"

- Tags may appear in any order in the file. The only required tag is the Title tag.
- Variables within a print template must be uniquely named. Variable names must be one-word strings and spaces are not allowed.

The following tags are used to specify the format of the print output, which applets are included, and the query that is executed:

- Applet—Specifies which applets are used in the document.
- Comment—Adds comments that do not appear in the final document.

Overview

- Divider—Adds visual lines to visually separate different parts of the document.
- Footer—Adds information such as page numbers, date, and time.
- Format—Specifies characteristics such as font, boldface, italics, and underline.
- Header—Adds information such as page numbers, date, and time.
- Page Break—Specifies a break in the text, forcing the text that follows to appear on the next page.
- Picture—Adds graphic images to the document.
- Title—Specifies a name for the template that appears in the print job list.

In addition, you may add static text in the print template.

The following print tags allow you to calculate additional information and add it to your reports:

- GetTotal—Calculates the total for a column of data
- GetField—Gets the value of a field
- GetCount—Calculates the number of records

You can also calculate dates and times using the GetDate and GetTime tags, and you can retrieve the value of the registry using GetRegistry.

All of this information is stored in variables that you specify. In addition, you can assign any value to a variable using the SetVariable tag. You can present this information in your report using the Cell and EndofLine tags to create tables of information. See "Using Variables in Print Templates" on page 291 for an example of how variables can be used to present information in print templates.

Applet

Description Specifies the applet to be printed.

Usage Any data that appears in your document must be generated from the applets in the view. Therefore, you must create applets that will produce the data required for your document.

Use the Applet tag to specify any number of list or form applets within the template and to locate the applet in your document. In the form view, a maximum of two fields per row are supported.

Syntax < TAG:Applet Name = "APPLET NAME" Query = "QUERY STRING" Caption = "CAPTION" Headerdivider = "HEADERDIVIDER" Recorddivider = "RECORDDIVIDER" Wrap = "WRAP" >

Parameter	Description
TAG:Applet	(Required) Applet tag indicator.
APPLET NAME	(Required) Applet name as defined in Siebel Tools.
QUERY STRING	(Optional) Specifies the query string directly set to the business component supporting the document.
	If the query string is not specified, the currently active query string in the view is applied to expose the relevant records.
CAPTION	(Optional) Specifies whether the captions in the form applets are suppressed.
	Valid values are TRUE (default) and FALSE. This parameter does not apply to list applets. Column headings in list applets are always enabled.
HEADERDIVIDER	(Optional) Specifies whether a divider is printed below the column heading in list applets.
	Valid values are TRUE and FALSE (default). This parameter does not apply to form applets.

Description
(Optional) Specifies whether a horizontal divider is printed between records in list applets.
Valid values are TRUE and FALSE (default). This parameter does not apply to form applets.
(Optional) Specifies whether text field values are word wrapped.
Valid values are TRUE and FALSE (default). This parameter does not apply to numeric fields.

Example < TAG:Applet Name = "Order List" Headerdivider = "TRUE" >

Cell

- **Description** Prints the string stored in STRING or VARIABLE NAME at the specified location on the current line.
 - **Usage** Use the Cell tag to create cells of data in a row in a table. Use it with the EndOfLine tag. If the data exceeds the width of the cell specified by Startat and Endat, it wraps to the next line.
 - **Syntax** < TAG:Cell Startat = "START" Endat = "END" Name = "STRING" Variable = "VARIABLE NAME" Align = ALIGNMENT"

Parameter	Description
TAG:Cell	(Required) Required tag indicator.
START	(Required) Specifies the starting point of the cell, expressed as a percentage of the printable page width. For example, if START = 10, then the cell starts at the point that is 10% from the left edge of the printable width.
END	(Required) Specifies the end point of the cell, expressed as a percentage of the printable page width. For example, if END = 50, then the cell ends at the point that is 50% from the left edge of the printable width.
STRING	(Optional) String value. If Variable is not specified, then String is a required parameter.
VARIABLE NAME	(Optional) Name of variable where the value is stored. If String is not specified, then Variable is a required parameter.
ALIGNMENT	(Optional) Specifies the alignment of the string. Valid values are LEFT (default), CENTER, and RIGHT.

Overview

```
Example
            < TAG:Divider Weight = "3" Startat = "20" Endat = "80" >
            < TAG:Cell Startat = "0" Endat = "50" name = "TOTAL:" Align = "RIGHT" >
            < TAG:Cell Startat = "50" Endat = "100" Variable = "vvv1total" Align = "RIGHT" >
            < TAG:EndOfLine >
            < TAG:Cell Startat = "0" Endat = "50" name = "TOTAL Defective:"
            Align = "RIGHT" >
            < TAG:Cell Startat = "50" Endat = "100" Variable = "vvvDefectiveTotal"
            Align = "RIGHT" >
            < TAG:EndOfLine >
            < TAG:Cell Startat = "0" Endat = "50" name = "TOTAL Good:" Align = "RIGHT" >
            < TAG:Cell Startat = "50" Endat = "100" Variable = "vvvGoodTotal"
            Align = "RIGHT" >
            < TAG:EndOfLine >
            < TAG:Cell Startat = "0" Endat = "50" name = "Defective Count:"
            Align = "RIGHT" >
            < TAG:Cell Startat = "50" Endat = "100" Variable = "vvvDefectiveCount"
            Align = "RIGHT" >
            < TAG:EndOfLine >
            < TAG:Cell Startat = "0" Endat = "50" name = "Good Count:" Align = "RIGHT" >
            < TAG:Cell Startat = "50" Endat = "100" Variable = "vvvGoodCount"
            Align = "RIGHT" >
            < TAG:EndOfLine >
            < TAG:Cell Startat = "50" Endat = "100" Variable = "vvv3reg" >
            < TAG:EndOfLine >
            < TAG:Cell Startat = "50" Endat = "100" Variable = "vvv5str" >
            < TAG:EndOfLine >
            < TAG:Cell Startat = "0" Endat = "30" Variable = "vvv4date" >
            < TAG:Cell Startat = "30" Endat = "70" Variable = "vvv4longdate" >
            < TAG:Cell Startat = "70" Endat = "100" Variable = "vvv8time" >
            < TAG:EndOfLine >
```

Comment

Description Adds code comments to the print template.

Usage Use to add explanatory notes or documentation to explain and maintain the print template. Comment tags are ignored during printing and do not appear in the printed document.

Syntax < REM: COMMENT >

Parameter	Description
REM	(Required) Comment tag indicator.
COMMENT	(Optional) Comment text.

Example < REM: Quotation Print Template. This template includes four applets. >

Overview

Divider

Description Renders a horizontal line across the width of the page.

- **Usage** Use to visually separate the different sections of your document. The Divider tag can be used between other tags; therefore, you may add a line between two applets. However, you cannot embed a Divider within an applet.
- **Syntax** < TAG:Divider Weight = "WEIGHT" Startat = "START" Endat = "END" > \

Parameter	Description	
TAG:Divider	(Required) Divider tag indicator.	
WEIGHT	(Optional) Specifies line thickness.	
	Valid values are 1–5. The default value is 1, which produces a line 0.2 mm wide. Increasing the value by 1 increases the width by 0.2 mm. A 5 produces a line that is 1 mm wide.	
START	(Optional) Percentage that specifies the starting point of the line. The default is 0%, the farthest left point.	
END	(Optional) Percentage that specifies the end point of the line. The default is 100%, the farthest right point.	

Example < TAG:Divider Weight = "2" Startat = "20" Endat = "80" >

EndOfLine

Description	Specifies the end of a row and advances to the next line.
Usage	Use to create rows of data in a table. Used with the Cell tag.
Syntax	< TAG:EndOfLine >
Example	< TAG:Cell Startat = "0" Endat = "50" Name = "TOTAL:" Align = "RIGHT" > < TAG:Cell Startat = "50" Endat = "100" Variable = "vvv1total" Align = "RIGHT" > < TAG:EndOfLine >

Overview

Footer

- **Description** Adds footer information such as page numbers, the current date, and the current time.
 - **Usage** You may, for example, always want the text "Thank you for your business!" to appear on the bottom of your receipts. If so, you may include this text in a Footer tag.

The Footer tag may be specified anywhere in the template file; however, it will always appear at the very bottom of your document. Only one Footer tag is applied to the document. If you have multiple Footer tags in the file, only the last Footer tag is used; any other Footer tags are ignored.

If you include a Footer tag in your template, then you must set the BottomMargin in setup.ini to a minimum of 20.

The footer has three sections, Left, Center, and Right, which are used to position the information in the footer.

The text in the footer is formatted in 10 point, Helvetica font. If Helvetica is not available on your system, the default font is used. You cannot customize text formatting of the Footer tag. The Format tag does not affect the formatting of the footer.

Syntax < TAG:Footer Left = "DATA" Center = "DATA" Right = "DATA" >

Parameter	Description	
TAG:Footer	(Required) Footer tag indicator.	
DATA	(Optional) Stat	tic text or one of the following data tags:
	Data tag	Description
	< page >	Page number
	< date >	Date of the printing
	< time >	Time of the printing

Overview

Example < TAG:Footer Left = " < date > " Right = " < page > "

Overview

Format

- **Description** Specifies the characteristics of the text—the typeface or font, whether the text is in boldface, italics, or underlined, and the text alignment.
 - **Usage** The font specification specifies the characteristics of all text that follows the tag until the next Format tag.

The text alignment tag (Align) behaves somewhat differently. When the applet is rendered, the field alignment specification takes precedence over the Align parameter.

Syntax < TAG:Format Face = "FONT FACE" Size = "FONT SIZE" Bold = "BOLD" Italic = "ITALIC" Underline = "UNDERLINE" Align = "TEXT ALIGNMENT" >

Parameter	Description	
TAG:Format	(Required) Format tag indicator.	
FONT FACE	(Required) Specifies the typeface of the text.	
	Any typeface installed on the handheld device may be specified. There is no default for this parameter.	
FONT SIZE	(Required) Specifies the text size.	
	Any installed font size for an installed typeface on the handheld device may be specified. There is no default for this parameter.	
BOLD	(Optional) Specifies whether the text is in bold.	
	Valid values are TRUE or FALSE (default). If TRUE, text is set to bold.	
ITALIC	(Optional) Specifies whether the text is in italic.	
	Valid values are TRUE or FALSE (default). If TRUE, text is set to italic.	

(Optional) Specifies whether the text is underlined.	
Valid values are TRUE or FALSE (default). If TRUE, text is set to underline.	
(Optional) Specifies the text alignment. Valid values are LEFT (default), RIGHT, and CENTER.	

Example < TAG:Format Face = "Helvetica" Size = "10" >

Overview

GetCount

- **Description** Calculates the number of records in the selected rows and assigns this value to a variable.
 - **Usage** Use GetCount to calculate the number of records and print this value in your report.
 - Syntax < TAG:GetCount Appletname = "APPLET NAME" Query = "QUERY STRING" Variable = "VARIABLE NAME" >

Parameter	Description	
TAG:GetCount	(Required) Required tag indicator.	
APPLET NAME	(Required) Name of the applet.	
QUERY STRING	(Optional) Search specification for the rows to be included in the row set. If not specified, the current search specification is used.	
	The syntax for the query string is: Field Name Query Statement. You may specify one or more query strings separated by a vertical bar ().	
	For example, Query = "Name LIKE 'Sieb*'" "Location LIKE 'H*'"	
VARIABLE NAME	(Required) Name of variable where the value is stored.	

Example < TAG:GetCount Appletname = "CS HH Product Bucket List Applet" Query = "Status|Good" Variable = "StatusGood" >

GetDate

- **Description** Gets the current date, offsets the date by the number of days specified in Dayoffset, and stores the result in a variable.
 - **Usage** Use GetDate to print a specific date in your report.
 - **Syntax** < TAG:GetDate Dayoffset = "NUMBER OF DAYS" Variable = "VARIABLE NAME" Logformat = "DATE FORMAT" >

(Required) Required tag indicator.	
(Optional) Number of days by which the current date is offset. For example, –100 subtracts 100 days from the current date; 100 adds 100 days to the current date. The default is 0.	
equired) Name of variable where the value is stored.	
ptional) TRUE prints the date in long date format (for ample, Monday, February 11, 2002). FALSE prints the short te format (for example, 2/21/02). The default is FALSE.	
I r c	

Example < TAG:GetDate Longformat = "TRUE" Variable = "LongDate" >

Overview

GetField

- **Description** Gets the value of the specified column of the first row of selected rows and assigns the result to a variable.
 - **Usage** Use GetField to print a value without developing a print applet. Design the query and sort strings so that the desired record is the first record in the selected rows. GetField only allows you to get the value in the first record.
 - **Syntax** < TAG:GetField AppletName = "APPLET NAME" Fieldname = "FIELD NAME" Query = "QUERY STRING" Sort = "SORT STRING" Variable = "VARIABLE NAME" >

Parameter	Description	
TAG:GetField	(Required) Required tag indicator.	
APPLET NAME	(Required) Name of the applet.	
FIELD NAME	(Required) Name of the field or column.	
QUERY STRING	(Optional) Search specification for the rows to be included in the total. If not specified, the current search specification is used.	
SORT STRING	(Optional) Sort specification. If not specified, the current sort specification is used.	
	The syntax is: Field Name [ASC][DESC]. The default is ASC (Ascending).	
	For example: Sort = "Account DESC, Date". In the example, the Account field is sorted in descending order, then the date field is sorted in ascending order.	
VARIABLE NAME	(Required) Name of variable where the value is stored.	

Example < TAG:GetField AppletName = "CS HH Product Bucket List Applet" Fieldname = "Quantity" Variable = "ProdBucketListField" >

GetRegistry

Description Gets a value in the registry for Siebel Handheld and assigns it to a variable.

Usage Use GetRegistry to print the contents of the registry key in your report.

Syntax < TAG:GetRegistry Name = "REGISTRY NAME" Variable = "VARIABLE NAME" >

TAG:GetRegistry(Required) Required tag indicator.REGISTRY NAME(Required) Value the registry.VARIABLE NAME(Required) Name of variable where the value is stored.	Parameter	Description	
	TAG:GetRegistry	(Required) Required tag indicator.	
VARIABLE NAME (Required) Name of variable where the value is stored	REGISTRY NAME	(Required) Value the registry.	
(Required) Name of Variable where the Varia b stored.	VARIABLE NAME	(Required) Name of variable where the value is stored.	

Example < TAG:GetRegistry Name = "InstallDir" Variable = "Registry" >

Overview

GetTime

- **Description** Gets the current time, offsets the time by the number of seconds specified in Secondoffset, and assigns the result to a variable.
 - **Usage** Use GetTime to print a specific time in your report.
 - Syntax < TAG:GetTime Secondoffset = "NUMBER OF SECONDS" Variable = "VARIABLE NAME" >

Parameter	Description	
TAG:GetTime	(Required) Required tag indicator.	
NUMBER OF SECONDS	(Optional)Number of seconds by which the current time is offset. For example, –100 subtracts 100 seconds from the current time; 100 adds 100 seconds to the current time. The default is 0.	
VARIABLE NAME	(Required) Name of variable where the value is stored.	

Example < TAG:GetTime Secondoffset = "3600" Variable = "Time" >

GetTotal

- **Description** Calculates the total for the specified column for all selected rows and assigns the value to a variable.
 - **Usage** Use GetTotal to calculate a column total and display the total in your report.
 - **Syntax** < TAG:GetTotal AppletName = "APPLET NAME" FieldName = "FIELD NAME" Query = "QUERY STRING" Variable = "VARIABLE NAME" >

Parameter	Description		
TAG:GetTotal	(Required) Required tag indicator.		
APPLET NAME	(Required) Name of the applet.		
FIELD NAME	(Required) Name of the field or column. Specify a field or column with numeric data. If you specify a field with non-numeric data, a 0 is assigned to the variable.		
QUERY STRING	(Optional) Search specification for the rows to be included in the total. If not specified, the current search specification is used.		
	The syntax for the query string is: Field Name Query Statement. You may specify one or more query strings separated by a vertical bar ().		
	For example, Query = "Name LIKE 'Sieb*'" "Location LIKE 'H*'"		
VARIABLE NAME	(Required) Name of variable where the value is stored.		

Example < TAG:GetTotal AppletName = "CS HH Product Bucket List Applet" Fieldname = "Quantity" Variable = "ProdBucketListTotal" >

Overview

Header

- **Description** Adds header information such as page numbers, the current date, and the current time.
 - **Usage** You may always want the current date and time to appear on your invoices. If so, you may include this information in a Header tag.

The Header tag may be specified anywhere in the template file; however, it always appears at the very top of your document. Only one Header tag is applied to the document. If you have multiple Header tags in the file, only the last Header tag is used; any other Header tags are ignored.

If you include a Header tag in your template, then you must set TopMargin in setup.ini to a minimum of 20.

The header has three sections, Left, Center, and Right, which are used to position the information in the header. The Left parameter aligns the text with the left margin, and the Right parameter right aligns the text with the right margin. The Center parameter centers the text in the header.

The text in the header is formatted in 10 point, Helvetica font. If Helvetica is not available on your system, the default font is used. You cannot customize text formatting of the Header tag. The Format tag does not affect the format of the header.

Syntax < TAG:Header Left = "DATA" Center = "DATA" Right = "DATA"

Parameter	Description	
TAG:Header	(Required) Header tag indicator.	
DATA	(Optional) Sta	atic text or one of the following data tags:
	Data tag	Description
	< page >	Page number
	< date >	Date of the printing
	< time >	Time of the printing

Example < TAG:Header Center = "Company Confidential" >

Overview

Page Break

Description Forces text that follows the tag to appear on the next page.

Usage Use this for multipage documents or forms.

Syntax < TAG:PageBreak >

Parameter	Description
TAG:PageBreak	(Required) Page break tag indicator.

Example < TAG:PageBreak >

Picture

Description	Specifies	graphic file	es included	in the	print template.

Usage Use to add graphic images, such as a company logo, to your documents.

The supported file formats are BMP and JPG.

Graphics files are located in the \Program Files\Siebel Handheld\templates directory on the handheld device. Specify the full path name of the file for the Name parameter.

Scaling or graphics operations, such as inverse image, are not supported.

The Alignment and Position parameters are used together to place the graphic. Alignment specifies the left edge, the center, or the right edge of the graphic. Position is distance, specified in millimeters, from the left edge of the paper.

- If Alignment = "Left" and Position = "30", then the left edge of the graphic is set 30 millimeters from the left edge of the paper.
- If Alignment = "Center" and Position = "30", the center of the graphic is set 30 millimeters from the left edge of the paper.
- If Alignment = "Right" and Position = "30", the right edge of the graphic is set 30 millimeters from the left edge of the paper.

If Position is not specified, it defaults to 0. Depending on the Alignment setting, the graphic is left-aligned (Alignment = "Left"), the graphic is right-aligned (Alignment = "Right"), or the graphic is centered (Alignment = "Center")

Syntax < TAG:Picture Name = "FILE NAME" Alignment = "ALIGNMENT" Position = "POSITION" >

Parameter	Description
TAG:Picture	(Required) Picture tag indicator.
FILE NAME	(Required) Specifies the full path and name of the graphics file.

Parameter	Description
ALIGNMENT	(Optional) Specifies the left edge, the center, or the right edge of the graphic. Used with the Position parameter to specify the horizontal position of the graphic.
	Valid values are LEFT (default), CENTER, and RIGHT.
POSITION	(Optional) Specified in millimeters, it is the distance from the left edge of the paper. Used with the Alignment parameter to specify the horizontal position of the graphic. The default is 0.

Example < TAG:Picture Name = "\Program Files\Siebel Handheld\templates\logo.bmp" Alignment = "Right" Position = "88" >

SetVariable

Description	Sets a value to a	variable.
-------------	-------------------	-----------

Usage Use SetVariable to assign a value to a variable. You can then print the value by specifying the variable in the Cell tag.

Syntax < TAG:SetVariable Name = "VALUE" Variable = "VARIABLE NAME >

Parameter	Description
TAG:SetVariable	(Required) Required tag indicator.
VALUE	(Required) A value.
VARIABLE NAME	(Required) Name of variable where the value is stored.

Example < TAG:SetVariable = "100" Variable = "TotalQuantity" >

Static Text

You may add static text anywhere in your template by using the current Format settings. The text goes across the entire page width. If it exceeds the width of the page, it wraps to the next line.

Example This quote is valid for 60 days from the date on this quotation.

Print Template File Examples

Title

Description Name used to identify the template.

Usage The Title tag is a required tag in your print template file.

When you print your document, this title appears in the print job list. This title does not appear on the document that is printed. Use static text to add the document title to your template.

Syntax < TAG:Title Title = "TITLE" >

Parameter	Description
TAG:Title	(Required) Title tag indicator.
TITLE	(Required) Title text. May be between 1–255 characters.

Example < TAG:Title Title = "Quotation" >

Print Template File Examples

The following is an example of a print template file.

Using Variables in Print Templates

The following example shows how to use variables in a print template.

```
<TAG:Title Title="Inventory Report">
<REM: *******Variable Assignment Examples***********
<TAG:SetVariable name="THIS IS VARIABLE" variable="VarStr">
<TAG:GetRegistry name="InstallDir" variable="VarReg">
<TAG:GetDate dayoffset="10" variable="VarDate">
<TAG:GetDate longformat="TRUE" variable="VarLongDate">
<TAG:GetDate longformat="TRUE" variable="VarLongDate">
<TAG:GetTime secondoffset="-3600" variable="VarTime">
<TAG:GetTotal appletname="CS HH Product Bucket List Applet"
```

Using Variables in Print Templates

```
fieldname="Quantity" variable="VarTotal">
<TAG:GetTotal appletname="CS HH Product Bucket List Applet"
fieldname="Quantity" query="Status|Good" variable="VarGoodTotal">
<TAG:GetTotal appletname="CS HH Product Bucket List Applet"
fieldname="Quantity" guery="Status Defective"
variable="VarDefectiveTotal">
<TAG:GetField appletname="CS HH Product Bucket List Applet"
fieldname="Quantity" variable="VarQuantityField">
<TAG:GetCount appletname="CS HH Product Bucket List Applet"
query="Status|Good" variable="VarGoodCount">
<TAG:GetCount appletname="CS HH Product Bucket List Applet"
query="Status Defective" variable="VarDefectiveCount">
<REM: ********Variable Assignment Examples End**********>
<REM: Inventory Print Template. This template includes 3 applets.
The ENU template>
<TAG:Format Face="Helvetica" Size="16" Align="Center">
[Distributor Name
Street Address
City, Country Postal Code
Phone Number Fax Number]
<TAG:Format Face="Helvetica" Size="20" Bold="TRUE" Align="Center">
Inventory Report
<TAG:Format Face="Helvetica" Size="8" >
<TAG:Applet Name="CS HH Inv Loc Print Applet" Caption="TRUE"
Wrap="TRUE">
<TAG:Applet Name="CS HH Product Bucket List Applet" Line="FALSE"
Headerdivider="TRUE" Recorddivider="FALSE" Wrap="TRUE">
<REM: *************Variable Usage Example****************
<TAG:Divider Weight="3" startat="20" endat="80">
<TAG:Cell startat="0" endat="50" name="TOTAL:" Align="RIGHT">
<TAG:Cell startat="50" endat="100" variable="VarTotal"
Align="RIGHT">
<TAG:EndOfLine>
<TAG:Cell startat="0" endat="50" name="TOTAL Defective:"
Align="RIGHT">
<TAG:Cell startat="50" endat="100" variable="VarDefectiveTotal"
Align="RIGHT">
<TAG:EndOfLine>
```

Using Variables in Print Templates

```
<TAG:Cell startat="0" endat="50" name="TOTAL Good:" Align="RIGHT">
<TAG:Cell startat="50" endat="100" variable="VarGoodTotal"
Align="RIGHT"
<TAG:EndOfLine>
<TAG:Cell startat="0" endat="50" name="Defective Count:"
Align="RIGHT">
<TAG:Cell startat="50" endat="100" variable="VarDefectiveCount"
Align="RIGHT">
<TAG: EndOfLine>
<TAG:Cell startat="0" endat="50" name="Good Count:" Align="RIGHT">
<TAG:Cell startat="50" endat="100" variable="VarGoodCount"
Align="RIGHT">
<TAG:EndOfLine>
<TAG:Cell startat="50" endat="100" variable="VarReg">
<TAG: EndOfLine>
<TAG:Cell startat="50" endat="100" variable="VarStr">
<TAG:EndOfLine>
<TAG:Cell startat="0" endat="30" variable="VarDate">
<TAG:Cell startat="30" endat="70" variable="VarLongDate">
<TAG:Cell startat="70" endat="100" variable="VarTime">
<TAG:EndOfLine>
<REM: ***********Variable Usage Example End****************
<TAG:Divider Weight="2">
<TAG:Format Face="Helvetica" Size="12" Align="LEFT">
Warehouse Signature
<TAG:Divider Weight="2">
<TAG:Format Face="Helvetica" Size="12" Align="RIGHT">
Rep Signature
```

Print Tagging Language

Using Variables in Print Templates

F

You configure printing attributes in the setup.ini file. This appendix describes the printing parameters for Siebel application developers and application administrators.

Overview

The administrator sets up the default printer setting in the setup.ini file located in the setup directory.

There are a number of parameters to specify printing on the handheld. The parameters specify the following:

- Printer attributes (printer model, port, baud rate, and printer handshake)
- Printing attributes (portrait or landscape orientation, print density and quality, use of compression techniques, and advancing continuous-feed paper)
- Dimensions of the paper (U.S. or European standard paper sizes or custom-size paper)
- Margin settings of the pages (left, right, top, and bottom margins)

These parameters are specified in the [Printing] section of the setup.ini file located in the setup directory. The file contains default settings for all the printing parameters. Review the settings in the file to verify that these settings will work for your printing environment. If necessary, edit the settings as required. You may use any text editor to edit the file.

See Appendix E for a list of the printing parameters and valid values.

The parameters are set using the following syntax:

PARAMETER_NAME = VALUE

For example: PrinterType = 1

The parameters are listed below in alphabetical order by the parameter name.

MarginBottom

Use the MarginBottom parameter to specify the dimensions of the bottom margin of your page. Specify the margin in millimeters using a whole number; decimal fractions are not valid. The default is 5 millimeters.

The data specified in the Footer tag of the print template is printed in the margin specified by MarginBottom. Therefore, if the print template includes a Footer tag, you must specify a wide enough bottom margin to accommodate the footer. MarginBottom should be set to a minimum of 20 millimeters. For more information, see "Footer" on page 274.

MarginLeft

Use the MarginLeft parameter to specify the width of the left margin of your page. Specify the margin in millimeters using a whole number; decimal fractions are not valid. The default is 5 millimeters.

MarginRight

Use the MarginRight parameter to specify the width of the right margin of your page. Specify the margin in millimeters using a whole number; decimal fractions are not valid. The default is 5 millimeters.

MarginTop

Use the MarginTop parameter to specify the dimensions of the top margin of your page. Specify the margin in millimeters using a whole number; decimal fractions are not valid. The default is 5 millimeters.

The data specified in the Header tag of the print template is printed in the margin specified by MarginTop. Therefore, if the print template includes a Header tag, you must specify a wide enough top margin to accommodate the footer. MarginTop should be set to a minimum of 20 millimeters. For more information, see "Header" on page 284.

PaperHeight

If the paper that your printer uses is not one of the supported standard sizes, then set PaperSize to 5 (custom paper dimensions). Then, specify the height of the paper, in millimeters, using the PaperHeight parameter. You must use a whole number; decimal fractions are not valid. The default is 280 millimeters. If you specify a value of 1–4 for PaperSize, the PaperHeight parameter is ignored.

Use the PaperWidth parameter to specify the width of the paper.

PaperSize

Specify one of the standard paper sizes or specify a custom paper size. (See Table 46.) If you specify custom paper size (5), you must also specify the PaperWidth and PaperHeight parameters. The default is custom paper dimensions.

See also PaperWidth and PaperHeight.

Value	Description
1	Letter size (8.5" x 11.5")
2	A4 (210 mm x 297 mm)
3	B5 (176 mm x 250 mm)
4	Legal size (8.5" x 14")
5 (default)	Custom paper dimensions (Specify PaperWidth and PaperHeight parameters.)

Table 46. Paper Dimensions

PaperWidth

If the paper that your printer is printing to is not one of the supported standard sizes, then set PaperSize to 5 (custom paper dimensions). Then, you must specify the width measurement of the paper, in millimeters, using the PaperWidth parameter. You must use a whole number; decimal fractions are not valid. The default is 5 millimeters. If you specify a value of 1–4 for PaperSize, the PaperWidth parameter is ignored.

Use the PaperHeight parameter to specify the length of the paper.

PrinterBaudrate

Use PrinterBaudrate to specify the speed of the data transmission for the printer. (See Table 47.)

Value	Description
0	Always use 0 for LPT or Network printer ports or for COM ports that communicate with the printer at 4800 baud.
1 (default)	9600 baud
2	19200 baud
3	38400 baud
4	57600 baud
5	115200 baud

Table 47. Printer Baud Rate

PrinterCompressed

Use PrinterCompressed to specify the data compression mode. (See Table 48.) For the printers supported in this release, always set PrinterCompressed to 1.

Table 48. Data Compression

Value	Description
0	No compression techniques used
1 (default)	Use any known compression

PrinterDensity

Use the PrinterDensity parameter to get a lighter or darker output from the printer. Start with the default setting, 2, which corresponds to the printer manufacturer's default. As you get feedback from the field, you may need to adjust this setting.

The valid values are 0–4 where 0 is the lightest print density, 4 is the heaviest print density, and 2 is average print density.

PrinterDither

Use to specify the method by which different colors are represented. (See Table 49.) For the printers supported in this release, PrinterDither should always be set to 0.

Table 49. Print Dithering

Value	Description
0 (default)	Use color diffusion
1	Use dithering

PrinterDraftMode

Use PrinterDraftMode to specify the quality of the printing. (See Table 50.) For the printers supported in this release, PrinterDraftMode should always be set to 0.

Table 50.Print Quality

Value	Description
0 (default)	Use the highest quality printing
1	Use a lower quality printing if available

PrinterFormFeed

Use PrinterFormFeed to specify how paper advances to the next page. (See Table 51.) If using sheets of paper, set PrinterFormFeed to 0.

Specify 1 or 2 for continuous-feed paper:

Set PrinterFormFeed to 1 if you do not need to conserve paper or if you want pages of uniform length. The printer scrolls to the length specified by the PageHeight parameter and trims the page there. Set PrinterFormFeed to 2 to conserve paper or if it does not matter if your pages are of varying length. In this case, the printer scrolls 25 millimeters beyond the last printed line and trims the page there. The scroll distance, 25 mm, is not customizable.

For both values, 1 and 2, the page length never exceeds PageHeight.

Value	Description
0 (default)	Printer sends a form feed command to the printer at the end of each page. Use this setting for sheet paper.
1	Printer scrolls the page to the length specified by the PaperHeight parameter.
2	Printer scrolls the page 25 millimeters past the last printed line of the page.

Table 51. Printer Form Feed

PrinterHandshake

Use PrinterHandshake to define the serial port handshake. (See Table 52.) The PrinterHandshake parameter applies only when the printer port is a Com1 or Com2 port. If PrinterPort is set to Com1 or Com2, then set PrinterHandshake to 1.

Value	Description
0	Uses Xon/Xoff
1 (default)	Uses hardware control lines
2	No handshaking of serial port

 Table 52.
 Printer Handshake

PrinterOrientation

Specify whether the paper is to be oriented vertically (portrait) or horizontally (landscape). (See Table 53.) Not all printers can print in landscape orientation. Therefore, you will need to check the specifications for your printer.

Table 53. Paper Orientation

Value	Description
1 (default)	Portrait (vertical)
2	Landscape (horizontal)

PrinterPort

Specify the port to which the printer is connected with the PrinterPort parameter. (See Table 54.)

If PrinterPort is an LPT port or a network path (2 or 9), then the PrinterBaudrate must be set to 0.

Value	Description
0	Com1: serial port
1	Com2: serial port
2	LPT: parallel port
3 (default)	IR Infrared port
4	Com3: serial port
5	Com4: serial port
6	Com5: serial port
7	Com6: serial port
8	Print to file OUTPUT.PRN
9	Print to network address

Table 54. Printer Port

Print Configuration Settings

Overview

Value	Description
10	Bluetooth BlueCard solution by Wireless Solutions
11	Socket PNC Bluetooth card support
12	Bluetooth BlueCard solution by Anycom
13	Com7: serial port
14	Com8: serial port

PrinterType

Specify the type of printer using the PrinterType parameter. See Table 55 for the list of supported printers.

Table 55.Printer Type

Value	Description
6	Pentax PocketJet 200
14 (default)	O'Neil microFlash2i and microFlash4t printers
108	O'Neil microFlash8i printer

Default Printing Settings

The following are the printing parameters from the setup.ini file. The values shown are the default settings.

```
[Printing]
PrinterType= 14
PrinterPort= 3
PrinterBaudrate= 1
PrinterHandshake= 1
PrinterOrientation= 1
PrinterDensity= 2
PrinterCompressed= 1
PrinterDither= 0
```

Print Configuration Settings

Overview

PrinterDraftMode= 0 PrinterFormFeed= 0 PaperSize= 5 PaperWidth= 115 PaperHeight= 280 MarginLeft= 5 MarginRight= 5 MarginTop= 5 MarginBottom= 5

Print Configuration Settings

Overview

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