



SIEBEL⁷
eBusiness

**SIEBEL SALES HANDHELD GUIDE
FOR WINDOWS-POWERED DEVICES**

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Introduction

This guide describes Siebel Sales 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. |
| Sales Professionals | Persons who use Siebel Sales Handheld to manage sales leads, opportunities, accounts, quotes, and so on. |

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.

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 and Methods”](#)
- [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 Siebel Sales 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

Siebel Sales Handheld Guide for Windows-Powered Devices

Version 7.5.3

Table 1. Changes Made in Version 7.5.3

| Topic | Revision |
|---|--|
| “Unsupported Features” on page 26 | Revised for 7.5.3: Added more information to this topic. |
| “Synchronization Security” on page 87 | 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 mobile sales representatives. 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.

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.

Companion Sync

Figure 1 on page 20 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.

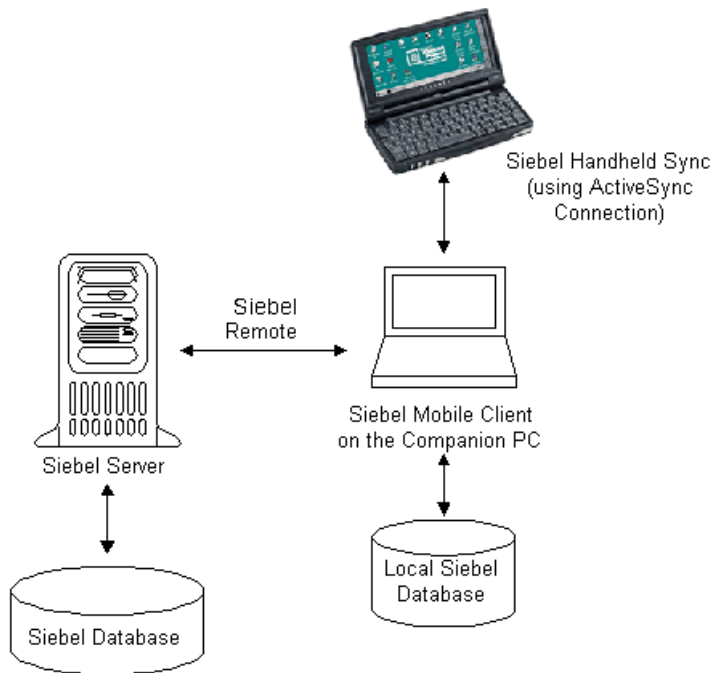


Figure 1. Companion Synchronization Architecture

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.

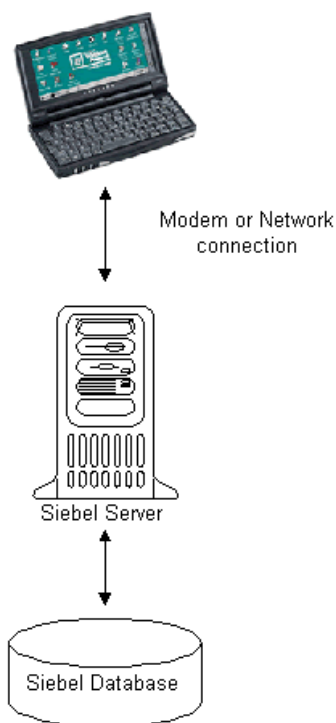


Figure 2. Direct Server Synchronization Architecture

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 29](#).

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 35](#) 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 43](#).

5 Update directives in the Siebel Handheld Client configuration file.

For more information, see [Chapter 4, “Data Filtering.”](#)

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 113](#).

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.

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](#).

Table 2. Configuring Siebel Client User Interface Elements

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

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 37](#) 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.

- 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.

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.

Table 3. Unsupported Functions

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

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

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.

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?
- 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

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 32](#).

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.

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 134](#) for more information on this user preference.

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.

Applet Focus Behavior

When navigating between views, there may be instances when you need to override the default behavior for giving focus to an applet

The GotoView method is used to navigate from one view to another. A button control is added to the applet in the view you want to navigate from, the button's methodInvoked property is set to GotoView and the button's View property is set to the view that is to be created. When the GotoView method is executed, it builds the specified view. If the view includes a parent and child applet, GotoView gives focus to the child applet. This is the desired behavior in most instances when you are simply navigating from one view to another.

If the desired behavior is to navigate to a new view and, additionally, create a new record, then you must use the GotoViewNewRecord method. This method calls two methods; it calls GotoView, and then it calls NewRecord, which creates a new record in the new view.

In some instances the default behavior of these methods does not produce the intended behavior. For example, in the Orders view of the Service Requests screen, when you tap the Create New Order button, it takes you to the Order Details view, which contains a parent form applet (Service Request Order) and a child list applet (Service Order Entry Line Item). In this instance, when the Create New Order button's GotoViewNewRecord method is executed, you want a new order to be created. However, the default behavior is to give focus to the child applet rather than creating a new record in the parent applet. Therefore, you need to override the default behavior of GotoView with the control user property OverrideDefaultApplet, and set the value to the applet that you want to give focus. The valid values are 0 (parent), 1 (child), 2 (grandchild), and so on. For example, if you create a button labeled "Create Service Request Order," you would define the following user properties:

| Name | Value |
|-----------------------|------------------------------------|
| View | SHCE Service Order Line Items View |
| OverrideDefaultApplet | 0 |

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

For more information, see [Appendix F, “Print Configuration Settings.”](#)

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.

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.

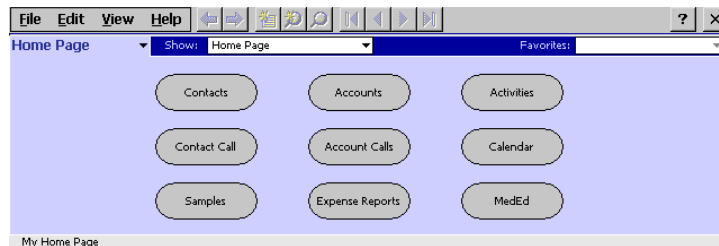


Figure 3. Home Page Applet Example

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. For more information on assigning user access to catalogs, see *Siebel eSales Administration Guide*.

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 32](#) for more information on toggle buttons.

Menu Bar

You can use the same menu configuration for handheld devices using the Pocket PC 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.

[Table 4](#) shows the supported toolbar functions for the Pocket PC 2002 operating system.

Table 4. Pocket PC 2002 Toolbar Functions

| 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 |

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.

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.

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).

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.

- 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. 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.

- 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.

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."](#)

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.

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 47](#). For more information on the Mail Template property, see [“Views with Associated Print Templates or Reports” on page 34](#).

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:

- 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.”](#)

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 83](#). For more information on the server log files, see [“Direct Server Sync Log Files” on page 174](#) and [“Companion Sync Log Files” on page 175](#). For more information filtering data, see [Chapter 4, “Data Filtering.”](#)

This chapter describes the application administration procedures for Siebel Sales Handheld. These administrative procedures help to make the application run more efficiently on the device.

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.)

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 (salesce.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

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.

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.

- **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.

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)"
```

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_Recent_Orders. See [“Query by Example Filters” on page 55](#) 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.

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 55](#) for more information on filter naming conventions.

Summary of PDQ Filter Availability

Table 5 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.

Table 5. Availability of PDQ Filters

| Filter Prefix | Synchronization Filters | Display Filters |
|--------------------------|-------------------------|---|
| PDA_ < filter name > | 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 |

Sales Handheld PDQ Filters

Table 6 shows the list of filters that come with the Sales Handheld product and the query defined for each filter. All filters are public—that is, they are visible to all end users. You may create additional PDQs or modify the ones that come with the product.

The Sales Handheld application includes all PDQs for all of the Siebel Handheld applications, some of which are not relevant to Sales Handheld. Therefore, it is recommended that you do a thorough audit of the PDQs and maintain only the ones that apply to your particular business.

NOTE: A default filter be defined for each screen (or business object) in the application. Only one default filter can be defined per screen or business object. The default filter for the Action business object (PDADef_*NoAccounts) does not apply to the Sales Handheld application and should be deleted. It is recommended that you designate another PDQ (for example, PDA_Active Accounts) the default PDQ by renaming it. For example, you would rename the PDA_Active Accounts filter to *PDADef_Active Accounts*).

Table 6. Sales Handheld PDQ Filters

| Business Object | PDA Name | Query |
|-----------------|--------------------------------|---|
| Account | PDAAll_All Accounts | 'Account'.Search = "" "'Account'.Sort = "Name, Location" |
| Account | PDADef_*No Accounts (Sales) | 'Account'.Search = [Id] IS NULL" |
| Account | PDA_Active Accounts | 'Account'.Search = "[Account Status] = LookupValue (""ACCOUNT_STATUS"", ""Active"")" "'Account'.Sort = "Name, Location" |
| Account | PDA_CA Accounts | 'Account'.Search = "[State] = LookupValue (""STATE_ABBREV"", ""CA"")" "'Account'.Sort = "Name, Location" |
| Action | PDAAll_All Activities | 'Action'.Search = "" "'Action'.Sort = "Due" |
| Action | PDADef_Uncomplete d Activities | 'Action'.Search = "[Status] < > LookupValue(""EVENT_STATUS"", ""Done"") OR [Status] IS NULL" "'Action'.Sort = "Due" |
| Action | PDA_*No Activities | 'Action'.Search = [Id] IS NULL" |
| Action | PDA_This Week's Activities | 'Action'.Search = "[Planned] > = Today() AND [Planned] < Today() + 7" "'Action'.Sort = "Due" |
| Contact | PDAAll_All Contacts | 'Contact'.Search = "" "'Contact'.Sort = "Last Name, First Name" |

Data Filtering

Predefined Query Filters

Table 6. Sales Handheld PDQ Filters

| Business Object | PDA Name | Query |
|------------------|------------------------------------|---|
| Contact | PDADef_*No Contacts | 'Contact'.Search = [Id] IS NULL" |
| Contact | PDA_CA Contacts | 'Contact'.Search = "[State] = LookupValue (""STATE_ABBREV"", ""CA"")" "'Contact'.Sort = "Last Name, First Name" |
| Employee | PDAAll_All Employees | 'Employee'.Search = "" "'Employee'.Sort = "Last Name, First Name" |
| Employee | PDADef_North American Organization | 'Employee'.Search = "EXISTS ([Organization] = ""North American Organization")" "'Employee'.Sort = "Last Name, First Name" |
| Employee | PDA_*No Employees | 'Employee'.Search = [Id] IS NULL" |
| Employee | PDA_All Employees | 'Employee'.Search = "" "'Employee'.Sort = "Last Name, First Name" |
| Expense | PDAAll_All Expense Reports | 'Expense'.Search = "" "'Expense'.Sort = "Start Date" |
| Expense | PDADef_All Expense Reports | 'Expense'.Search = "" "'Expense'.Sort = "Start Date" |
| Expense | PDA_*No Expense Reports | 'Expense'.Search = [Id] IS NULL" |
| Expense | PDA_In Progress Expense Reports | 'Expense'.Search = "[Status] = LookupValue(""EXP_STATUS"", ""In Progress"") OR [Status] = LookupValue(""EXP_STATUS"", ""Submitted"")" "'Expense'.Sort = "Submitted Date (DESCENDING)" |
| Internal Product | PDAAll_All Products | 'Internal Product'.Search = "" "'Internal Product'.Sort = "Name" |
| Internal Product | PDADef_Active Products | 'Internal Product'.Search = "[End Date] > = Today() OR [End Date] IS NULL" "'Internal Product'.Sort = "Name" |
| Internal Product | PDA_*No Products | 'Internal Product'.Search = [Id] IS NULL" |
| Internal Product | PDA_All Products | 'Internal Product'.Search = "" "'Internal Product'.Sort = "Name" |

Table 6. Sales Handheld PDQ Filters

| Business Object | PDA Name | Query |
|---------------------|----------------------------|---|
| Opportunity | PDAAll_All Opportunities | 'Opportunity'.Search = "" "'Opportunity'.Sort = "Primary Revenue Amount (DESCENDING), Primary Revenue Close Date (DESCENDING)"" |
| Opportunity | PDADef_Big Opportunities | 'Opportunity'.Search = "[Primary Revenue Amount] > ""500000"" "'Opportunity'.Sort = "Primary Revenue Amount (DESCENDING), Primary Revenue Close Date (DESCENDING)"" "'Account'.Sort = "Name, Location"" |
| Opportunity | PDA_*No Opportunities | 'Opportunity'.Search = [Id] IS NULL"" |
| Opportunity | PDA_Current Opportunities | 'Opportunity'.Search = "[Primary Revenue Close Date] > Today () - 30" "'Opportunity'.Sort = "Primary Revenue Close Date (DESCENDING)"" |
| Opportunity | PDA_New Opportunities | 'Opportunity'.Search = "[Row Status] = ""Y"""" "'Opportunity'.Sort = "Primary Revenue Amount (DESCENDING), Primary Revenue Close Date (DESCENDING)"" |
| Order Entry (Sales) | PDAAll_All Orders | 'Order Entry - Orders'.Search = " |
| Order Entry (Sales) | PDADef_Open Orders | 'Order Entry - Orders'.Search = [Status] < > LookupValue("FS_ORDER_STATUS", "Closed") AND [Status] < > LookupValue("FS_ORDER_STATUS", "Cancelled)"" |
| Order Entry (Sales) | PDA_*No Orders | 'Order Entry - Orders'.Search = [Id] IS NULL"" |
| Order Entry (Sales) | PDA_All Orders | 'Order Entry - Orders'.Search = " |
| Price List | PDAAll_All Price Lists | 'Price List'.Search = "" "'Price List'.Sort = "Name"" |
| Price List | PDADef_Current Price Lists | 'Price List'.Search = "[End Date] > Today()" "'Price List'.Sort = "Name"" |
| Price List | PDA_*No Price Lists | 'Price List'.Search = [Id] IS NULL"" |
| Price List | PDA_All Price Lists | 'Price List'.Search = "" "'Price List'.Sort = "Name"" |
| Quote | PDAAll_All Quotes | 'Quote'.Search = " |
| Quote | PDADef_All Quotes | 'Quote'.Search = " |

Table 6. Sales Handheld PDQ Filters

| Business Object | PDA Name | Query |
|-----------------|-------------------|---|
| Quote | PDA_*No Quotes | 'Quote'.Search = [Id] IS NULL"" |
| Quote | PDA_Active Quotes | 'Quote'.Search = [Active] = 'Y' OR [Status] = LookupValue(""QUOTE_STATUS"", ""Active"")"" |

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 58](#) 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 70](#) 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. For more information on assigning user access to catalogs, see *Siebel eSales Administration Guide*.

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.
- **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
```

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 70](#) 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 58](#) 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. Cross-reference 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 7](#) summarizes popup visibility types and the corresponding visibility codes.

Table 7. Visibility Codes

| 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 8](#) 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 7](#) 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.

Table 8. OverridePopupVisibility Syntax

| Name | Value |
|--|--|
| <code>OverridePopupVisibility</code> | <code>< buscomp field 1 > , < visibility type ></code> |
| <code>OverridePopupVisibility1</code> | <code>< buscomp field 2 > , < visibility type ></code> |
| <code>OverridePopupVisibility < n ></code> | <code>< buscomp field n + 1 > , < visibility type ></code> |

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.

Data Filtering

Filtering Data for Pick Applets

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.

- **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

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 86](#).

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 Topology Overview

The diagram in [Figure 4](#) 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*.

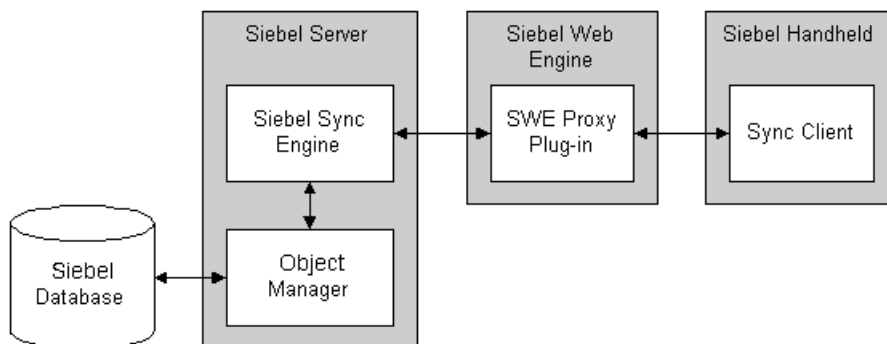


Figure 4. DSS Servers and Components

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 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

- 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 `salesce.cfg`, but you can change the name of this file.

- 2 Create a backup copy of the configuration file and name it `salesce.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 Sales for CE | The handheld application. This value must match the name of the application as it is specified in Siebel Tools. |
| | ApplicationTitle | Siebel Sales | 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 Sales | 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 | Siebel Sales Client | Required for Direct Server Sync, it is entered in the registry on the handheld device. |

| | Parameter | Default Value | Description |
|--------------------------|---------------|----------------|--|
| [PDA] section | AppDir | hhsync\salesce | The directory location for the user's synchronization files. |
| | PDAQBEFile | salesceqbe.txt | The Business Components filtering file used by the synchronization process. |
| | RemoteCfgName | | 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 9](#) for the specific values.)
- The amount of information that is logged. (See [Table 10](#) for the specific values.)

The different types of log records are described in [Table 9](#) and correspond to the following format: LoggingLevels = emdts.

Table 9. 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 10](#):

Table 10. Logging Levels

| 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 5 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.

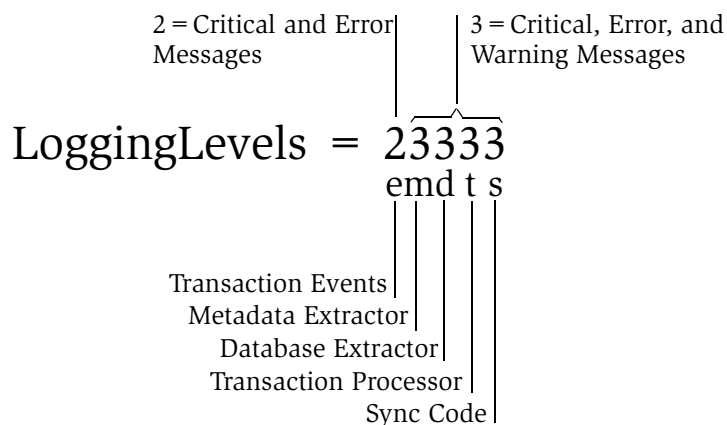


Figure 5. Logging Levels Parameter

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.

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

- 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 Sales 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 11](#) lists the parameters that you may need to modify in the setup.ini file, their default value, and a description of the parameter.

Table 11. Siebel Handheld Sync setup.ini Parameters

| Parameter | Default Value | Description |
|-----------------------|--|--|
| Version | 7.5.2 | Version of the desktop Siebel application against which the Siebel Handheld version synchronizes. |
| ApplicationName | Siebel Sales for 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 | Sales Handheld | The Siebel Handheld application name as shown on the splash screen. |
| MultiCurrency | True | Required for the application to handle multiple currencies. |
| DSSURL | <i>http://Web Server Name or IP address/Virtual Directory Name</i> | Required for Direct Server Sync. This value is entered in the registry on the handheld. See “Changing the DSS URL on Devices” on page 96 for more information on this parameter. |

Table 11. Siebel Handheld Sync setup.ini Parameters

| 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 94 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 95 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 11. Siebel Handheld Sync setup.ini Parameters

| 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 | N | 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 95 for more information on this parameter. |

Table 11. Siebel Handheld Sync setup.ini Parameters

| Parameter | Default Value | Description |
|-----------------------|----------------------|--|
| LogSSAErrors | N | 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 95 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 135.](#)

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
```

```
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 176](#).

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`. 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 6](#), 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.

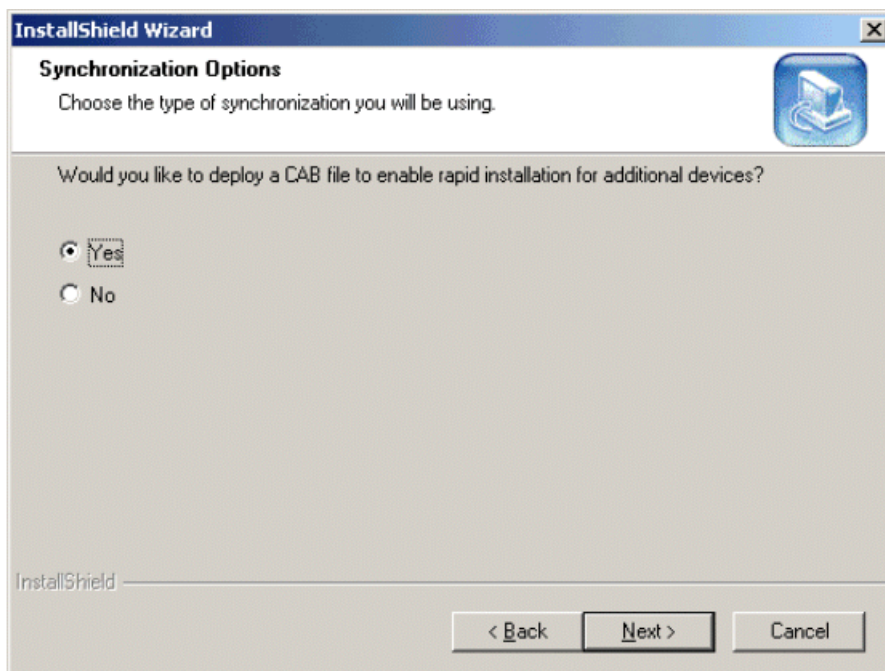


Figure 6. CAB File Option

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.

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 12](#) describes the settings for this parameter.

Table 12. Configuration File Setting

| 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. |

- 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 13) follow:

`HandheldSyncPickMode = Fieldname|Mode`

Table 13. Business Component User Property Parameters

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

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 “[Extended Insert Processing](#)” on page 105 for an example. Conversely, you can enable Extended Pick processing on specific business components if the configuration file setting has disabled the functionality.

Table 14 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 14. Combined Effect of Extended Pick Settings

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

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 15](#) shows the settings for this parameter.

Table 15. Configuration File Setting

| Configuration File Parameter | Mode 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 16) follow:

HandheldInsertFailMode = *Mode*

Table 16. Business Component User Property Parameter

| Business Component User Property | Parameter | Value | Description |
|----------------------------------|-------------|-------------|--------------------------------------|
| HandheldInsertFailMode | <i>Mode</i> | NoFail | Disables Extended Insert processing. |
| | | FailOnError | Enables Extended Insert processing. |

Table 17 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 17. 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 |

Table 17. Combined Effect of Extended Insert Settings

| Business Component Setting HandheldInsertFailMode= | Configuration File Setting DefaultHandheldInsertMode= | | |
|---|--|-------------|-------------|
| FailOnError | FailOnError | FailOnError | FailOnError |
| No Setting on Business Component | NoFail | FailOnError | NoFail |

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 83](#) 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\salesce

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

and the name of the file is: *hhsync.salesce.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.

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.

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

7

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 117](#) 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 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.

- 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 137](#) for the procedure for synchronizing your data.

See [Chapter 4, “Data Filtering,”](#) for more information on using Companion Sync and setting filters.

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 117](#) 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.

- 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 137](#) 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.

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 118](#) 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 113](#), and follow the instructions for installing the handheld application.
- 3** Synchronize your handheld application. See [“Synchronizing Data” on page 137](#) 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 137](#) and follow the instructions for synchronizing your data.

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

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 end-user tasks:

- Backing up and restoring data
- Synchronizing data

Components of the Handheld Interface

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

Figure 7 shows the components of the Pocket PC application.

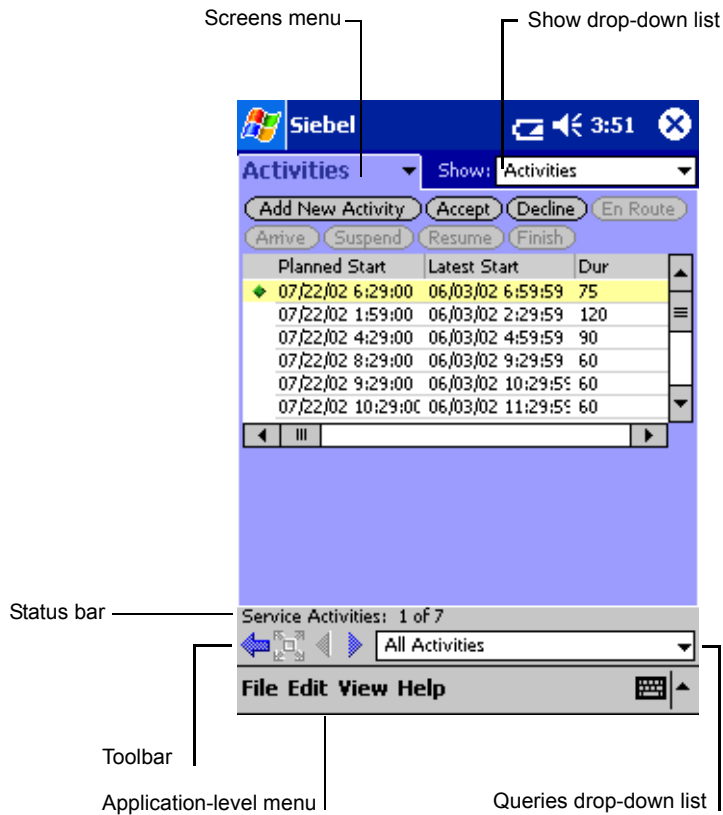


Figure 7. Pocket PC Application Window Components

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.

For information about configuring a start up view, see [“Setting User Preferences” on page 134](#).

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 58](#).

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 35](#) for more information on configuring your toolbar buttons.

Figure 8 is an example of the Pocket PC toolbar.

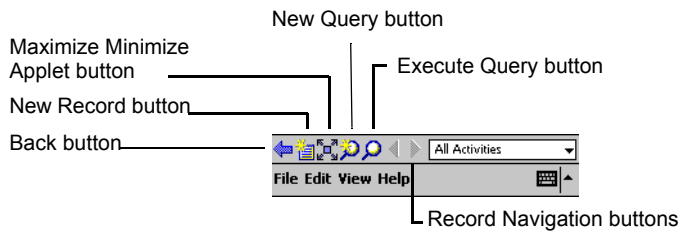


Figure 8. Pocket PC Toolbar Example

- 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.

Customizing the Toolbar

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

To add and remove buttons from the toolbar, drag and drop the desired buttons between the Choose Toolbar Buttons dialog box and 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.

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.

Status Bar

The status bar appears at the bottom of the application window. It provides information about the current view.

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 121](#).

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.

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 134](#).

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.

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.

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 through a set of records. The navigation buttons are described in [Table 18](#).

Table 18. Record Navigation Buttons

| 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. |

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**.

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.

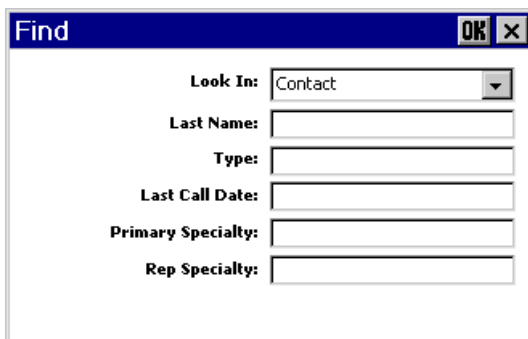
Finding and Querying Data

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 9](#) 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.



The image shows a screenshot of a 'Find' dialog box. The title bar is blue with the text 'Find' and two buttons: 'OK' and 'X'. Below the title bar, there are six input fields arranged vertically. The first field is labeled 'Look In:' and is a dropdown menu with 'Contact' selected. The other five fields are labeled 'Last Name:', 'Type:', 'Last Call Date:', 'Primary Specialty:', and 'Rep Specialty:', each with a corresponding empty text box.

Figure 9. Find Dialog Box

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 wildcard 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.

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.
- **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.
- **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.** 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.

Table 19 describes how to set the parameters to export data to specific applications.

Table 19. Exporting Data

| To export data to | Do the following |
|-------------------|--|
| Microsoft Word | Set Format 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 to HTML. |

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 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 20.

Table 20. Calendar Icons (1 of 2)





| Icon | Description |
|---|---|
|  | Current day without an appointment |
|  | Day with appointment before and after 12 pm |

Table 20. Calendar Icons (2 of 2)

| Icon | Description |
|---|-----------------------------------|
|  | Day with appointment before 12 pm |
|  | 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 134](#).

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

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.

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.

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 95](#).

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.

This chapter explains how to use *Siebel Sales Handheld* to complete tasks in a typical workflow performed by a mobile sales representative. Your company may follow a different workflow according to its business requirements.

Siebel Sales Handheld Overview

Siebel Sales Handheld provides mobile sales professionals with the sales tools and information to manage sales processes such as opportunity, account and contact management while they are in the field or away from their desk.

Although the sales process varies by organization, certain similarities do exist. Siebel Sales Handheld has been designed so that each organization can adapt its usage to best suit mobile business needs while building on similarities in practices found across many sales organizations. Organizations can use *Siebel Sales Handheld* in conjunction with the Siebel Sales Web client application or as a stand-alone product.

Sales representatives may use the handheld to record contact and account information, manage opportunities, schedule sales activities, check product and pricing information, provide quotes and orders, and create expense reports. In addition, sales administrators and sales managers can customize the software to fit current business needs.

Contacts are individuals with whom your company conducts business or expects to conduct business in the future. Contacts can be employees of other companies, independent consultants, vendors, or personal acquaintances. Contacts may be associated to several accounts, but a contact may be primary on only one account. Contacts may be associated with a number of opportunities, including those that are not related to their accounts.

You can access different Contacts screen views to manage your contacts.

- **My Contacts.** View your own contacts, with information that may include account, site location, and phone number.
- **More info.** Enter information about your contacts, which may include Account, preferred method of contact, and commentary.
- **Personal Contacts.** Create, edit and view personal contacts.
- **Opportunities.** Associate your contacts with opportunities you have created. For more information about adding Opportunities, see [“Creating Opportunities” on page 154](#).

Business Scenario

At a trade show, a sales representative exchanges business cards with the people she meets. Instead of waiting until she returns to her office, the sales representative uses Siebel Sales Handheld to enter essential contact information. When she returns to her office, she identifies individuals that may be possible sources for leads.

As the sales representative works with each contact, the possibility of doing business—an opportunity—may arise. If so, she can then create an opportunity and associate contacts and activities with it to track important milestones and key players for closing the deal.

Adding Contacts

Use the My Contacts or Personal Contacts views to enter information about your contacts. Contacts entered using the Personal Contacts view are not shared with team members.

To add a contact

- 1 Navigate to the Contacts screen.
- 2 From the Show drop-down list, select My Contacts (business), or Personal Contacts (personal).
- 3 Tap the New Record button, and complete the necessary fields.
- 4 From the Show drop-down list, choose More Info, and then complete additional fields, as needed.

The following table describes some fields in the Contact form.

| Fields | Comments |
|-------------------|--|
| Last Name | A required field that displays the contact's last name. |
| First Name | A required field that displays the contact's first name. |
| Job Title | A text field that displays the Contact's professional title. |
| Account | Displays the primary account with which the contact is associated. A contact may be associated to more than one account, but may be the primary contact on only one account at a time. To associate the Contact with an Account, navigate to the Contacts > Accounts view (if configured). |
| Work Phone Number | A text field that displays the contact's work telephone number. |
| Site | A default value that populates automatically based on the location of the primary account. |

Associating Contacts with Opportunities

A contact may be a source of revenue for your company. Potential revenue-generating events are called Opportunities. You will want to associate a contact with an existing opportunity to track information about both the opportunity and the contact. For more information, see [“Creating Opportunities” on page 154](#).

To associate a contact with an existing opportunity

- 1** Navigate to the Contacts screen.
- 2** From the Show drop-down list, select My Contacts.
- 3** In the Contacts list, select the contact with which the opportunity will be associated.
- 4** From the Show drop-down list, choose Opportunities.
- 5** In the Contact Opportunities view, tap the Opportunities list, and then tap the New Record button.
- 6** In the Add Opportunities dialog box, select the opportunity to associate with the contact, and then tap OK.

Tap New to enter a new opportunity.

- **My Team’s Accounts.** View information about active accounts managed by your team members.
- **Activities.** Respond to customer inquiries, quote requests, and perform account-related administrative tasks. For more information, see [“Creating Activities” on page 158](#).
- **Contacts.** Associate business contacts to accounts.
- **Addresses.** Enter primary and secondary address information for accounts.
- **Opportunities.** Associate accounts with existing opportunities. For information on creating new opportunities, see [“Creating Opportunities” on page 154](#).

Business Scenario

A prospect is interested in learning more about the products and services that your company sells. The sales representative sets up a time for a sales call later in the week.

During the sales call, the sales representative asks a number of questions to determine the account structure of the prospect's business to help the representative determine how best to fit the prospect's product needs. The sales representative learns that the prospect's business has a total of four locations, and that sales and service are billed through the main office, although each location receives a billing statement.

After the sales representative meets with the prospect, he creates the account structure for his business.

Creating Accounts

When you identify a possible lead, the lead can be added as an account. You can then begin to add and track information about the account.

To create an account

- 1** Navigate to the Accounts screen.
- 2** From the Show drop-down list, select My Accounts.
The My Accounts list appears.
- 3** Tap the New Record button.
- 4** In the new row, complete the necessary fields.

To add account addresses

- 1** Navigate to the Accounts screen.
- 2** In the My Accounts list, select the account record.
- 3** From the Show drop-down list, choose Addresses.
- 4** In the Account Addresses view, tap the Addresses list to select it, and then tap the New Record button.
- 5** Complete the fields for the address, and tap the Primary field to display a check mark if this is the primary address for the account.

To add additional account information

- 1** Navigate to the Accounts screen.
- 2** In the My Accounts list, select the Account Record.
- 3** From the Show drop-down list, choose More Info.

4 Complete the fields to add additional information.

The following table describes some fields in the More Info form. The name and address fields are automatically populated with information entered at the My Accounts and Addresses views.

| Fields | Comments |
|------------------|---|
| Parent Account | Select the parent account from the Pick Account pick list. |
| Account Type | Pick the Account Type from the list. Examples are Fulfillment Shipper, Commercial, Competitor. |
| Account Team | Displays the primary Account Team member with which the account is associated. To associate the account with one or more team members, navigate to the Account > Account Team view. |
| URL | Text entry. |
| Industries | Displays the primary industry with which the account is associated. |
| Price List | Choose applicable price list from the Pick Price List dialog box. |
| Current Volume | Enter amount, or tap the ellipses and enter Currency Code, Exchange Date and Amount in the dialog box. Then tap OK. |
| Potential Volume | Enter amount, or tap the ellipses and enter Currency Code, Exchange Date and Amount in the dialog box. Then tap OK. |
| Status | A list of values established by your company. Status examples might be Qualified, Silver, Active. |
| Currency | Select the currency code from the Pick Currency Code list. |

Associating Activities with Accounts

An activity is a task or event that is generally, but not always, performed for a contact, account, or opportunity. You will likely have many meetings, calls, presentations, and other activities surrounding an account.

Activities provide a place to enter and track this information. If the activity entered has a time associated with it, it will appear on the Activities and Calendar screens.

To associate activities with accounts

- 1** Navigate to the Accounts screen.
- 2** In the My Accounts list, select the account with which the activity will be associated.
- 3** From the Show drop-down list, select Activities.
- 4** In the Account Activities view, tap the Activities list to select it, and then tap the New Record button.
- 5** In the new row, complete the necessary fields.
The Type field defaults to Appointment.
- 6** Drill down on the default activity Type hyperlink to display the Activities screen's More Info view.
- 7** In the More Info form, add and edit details about the activity.
For more information, see [“Creating Activities” on page 158](#).

Associating Opportunities with Accounts

Accounts are a source of business for your company. An opportunity is a potential revenue-generating event and is another type of information that you can use to manage your accounts within *Siebel Sales Handheld*.

To add an opportunity to an account

- 1** Navigate to the Accounts screen.
- 2** From the Show drop-down list, select My Accounts.
- 3** In the My Accounts list, select the account to which the opportunity will be associated.
- 4** From the Show drop-down list, choose Opportunities.

5 In the Account Opportunities view, tap the Opportunities list to select it, and then tap the New Record button.

6 In the Opportunities list, complete the necessary fields for the new record.

The Account field is automatically populated with the name of the selected account. Sales stage selections are based on the sales methods used by your organization.

An opportunity is defined as a potential revenue-generating event. An opportunity is usually associated with an account and one or more contacts, products, activities, and quotes.

Examples of opportunities are:

- At a trade show, a company representative expresses interest in purchasing a product.
- When called by a telesales representative, a contact indicates interest in contracting maintenance services.
- In a conversation with an existing client, the client expresses an interest in upgrading to the newest product model.

Opportunity-related information is recorded and tracked in the views of the Opportunities screen. You access these views to complete the following tasks.

- **My Opportunities.** Enter and track information about new opportunities that may include the associated account, sales stage and anticipated revenue.
- **My Team's Opportunities.** View opportunities managed by members of your team.
- **More Info.** Update opportunities through the sales cycle from creation to closure.
- **Quotes.** Generate quotes based on opportunities. For more information, see [“Developing Quotes” on page 162](#).
- **Contacts, Products and Activities.** Associate business professionals, product information and tasks that must be accomplished to your opportunities.

Business Scenario

A sales representative is involved in revenue-generating and customer contact activities at her company. At a trade show she meets a prospective customer who could be a lead for a new business opportunity. Using her Siebel Sales Handheld application, the sales representative discovers that the company is listed in Siebel Sales as an account, but the person she met is not listed as a contact associated with the account.

After adding this person as a contact, the sales representative creates the opportunity. Next, the sales representative schedules meetings, records the associated activities, and associates other important contacts to the opportunity.

As the sales process continues, the sales representative gathers and updates information about the account, its contacts, and the opportunity. As the relationship grows, the sales representative can add, view, and share information and key knowledge with other members of the sales team.

Creating Opportunities

Each time you identify an opportunity, you should create a new record.

To create an opportunity

- 1 Navigate to the Opportunities screen, and from the Show drop-down list, choose My Opportunities.

The My Opportunities list appears.

- 2 Tap the New Record button, and complete the necessary fields.
- 3 From the Show drop-down list, choose More Info and complete additional fields.

The following table describes some fields in the Opportunities - More Info form.

| Field | Comments |
|---------|---|
| Name | A required value that identifies the opportunity. |
| Account | Allows you to associate an opportunity with an account. |

| Field | Comments |
|----------------|---|
| Description | A text area for additional information about the opportunity. |
| Site | A default value that populates automatically when you associate the opportunity to a specific account and location. |
| Primary | Displays the primary Sales Team member for the opportunity. To associate the opportunity with one or more team members, navigate to the Opportunity > Sales Team view (if configured). |
| Revenue | Allows you to enter the currency amount of the opportunity. This field defaults to zero. |
| Probability % | Allows you to enter the percentage of confidence you have that the deal will close with the specified revenue on the specified close date. Probability automatically updates based on the Sales Method and Sales Stage selected. |
| Expected Value | Displays a currency value that is calculated based on the potential revenue field multiplied by the value in the probability field. A lower percent in the probability field reduces the expected value that will be included in your revenue forecast. |
| Close Date | A required field that allows you to enter the expected date on which the opportunity will close. The default date is the same as the Created Date. It is important to modify the date, if the opportunity will close on a different date, since this date is used in revenue forecasting. |
| Lead Quality | A list of values established by your company that allows you to rank the quality of the lead. Default values include 1-Excellent, 2-Very High, 3-High, 4-Fair, 5-Poor. |
| Sales Method | A list of values established by your company that list the sales methodologies. For more information, see “Sales Methods” on page 156 . |
| Sales Stage | A list of values established by your company that lists the sales stages associated with the sales method you selected. |

Sales Methods

A sales method is a formalized approach or methodology used during the sales process. A sales method can encompass all activities associated with the sales process, from prospecting to forecasting to closing deals. This approach allows sales representatives to use the most appropriate method for opportunities.

The application administrator will create and implement the sales stages your company uses, and then establish values in your *Siebel* application that represent these methods and stages. A recommended business practice is to designate a default sales method in your Siebel application. This practice allows a sales method to be associated with each opportunity and aids in charting and reporting accuracy.

Sales methods can differ within a company. For instance, a sales method for managing a complex multimillion dollar opportunity may include 15 stages, while a sales method for a simple low-dollar opportunity may require only four stages.

For more information about creating or implementing sales stages, see *Applications Administration Guide*.

Associating a Contact with an Opportunity

As you work with an opportunity, you will want to maintain information about the contacts associated with the opportunity. For more information about contacts, see [“Adding Contacts” on page 147](#).

The Opportunities screen’s Contacts view allows you to associate and review contact-related information for an opportunity.

To associate a contact with an opportunity

- 1** Navigate to the Opportunities screen, and from the Show drop-down list choose My Opportunities.
- 2** In the My Opportunities list, select the opportunity with which you will associate a contact.
- 3** From the Show drop-down list, choose Contacts.
- 4** Tap the Contacts list to select it, and then tap the New Record button.

- 5 In the Add Contacts dialog box, select the contact or contacts you wish to add, and then tap OK.

NOTE: To select multiple records, tap the control key and select the contact records.

Associating a Product with an Opportunity

Specific products can be associated with an opportunity. For example, if a customer is interested in purchasing a new product model, this information can be entered in the Products view.

After the information is entered, you can drill down on the product to find additional information such as product features and prices.

To associate a product with an opportunity

- 1 Navigate to the Opportunities screen, and from the Show drop-down list, choose My Opportunities.
- 2 In the My Opportunities list, select the opportunity with which a products will be associated.
- 3 From the Show drop-down list, choose Products.
- 4 In the Opportunity Products view, tap the Products list to select it, and then tap the New Record button.
- 5 In the new row, tap the arrow in the Products field.
- 6 In the Pick Product dialog box, select the product, and then tap OK.
- 7 Complete the remaining fields, as needed.

Opportunity Quotes

The Opportunity Quotes view displays quotes that have been generated for a specific opportunity. After adding products to an opportunity in the Opportunity Products view, you can navigate to the Opportunity Quotes view to initiate Auto Quote functionality or to manually create a quote. For more information, see [“Creating Quotes” on page 162](#).

Managing Customer Relationships

An organization's records should accurately reflect the amount of work required and performed to maintain customer satisfaction. This practice avoids duplication of effort if a different or an additional team member has to get involved. It also keeps everyone up to date as to exactly what activities have occurred and when they have occurred.

Activities Overview

Activities are various tasks or events that are performed for contacts, accounts, and opportunities. Activities that are given start times are automatically entered on the activities screen and your calendar.

Business Scenario

While working away from his desk, a sales manager receives a call from a customer who wants to visit the sales manager's company for an executive summary meeting. The customer also wants the sales team to perform a product demonstration. The sales manager schedules the meeting using his handheld. After his next synchronization, the meeting appears on calendars of his team members. The sales manager delegates the tasks required to prepare for the meeting, such as preparing presentation slides, reserving a conference room, and configuring the demo system. These activities appear in the sales manager's Activities screen and calendar for the customer's account.

As the sales manager and his team members complete the activities, the activities are marked as done, providing key status information about the opportunity.

Creating Activities

Throughout the day, you have new tasks to accomplish and activities to monitor. These activities are part of your business. By keeping track of these activity records on your handheld, you make sure your team members know about these tasks, and you create a valuable history of your past interactions with customers.

To create a new activity

- 1 Navigate to the Activities screen.
The My Activities list appears.
- 2 Tap the New Record button, and in the new row, complete the necessary fields.
A default value is provided in the activity Type field.
- 3 Drill down on the hyperlink value in the Type field.
- 4 In the More Info form, pick the appropriate activity type from the list, and complete the fields.

Delegating Activities

If you work as part of a sales team or are the manager, an important part of managing your activities includes managing other people's activities. When an activity needs to be performed by someone else, you can reassign or delegate it to an employee.

To delegate an activity

- 1 Navigate to the Activities screen.
- 2 In the My Activities list, find the activity that needs to be delegated.
- 3 From the Show drop-down list, select Employees.
- 4 In the Activity Employees view, tap the Employees list to select it, and then tap the New Record button.
- 5 In the Add Employees list, select the employees to whom the activity will be assigned.
- 6 To make an employee the primary for the activity, tap the Primary field to display a check mark.

Associating Contacts with Activities

When you add an activity to your calendar, you may also want to have a record of contacts who will be participating in the activity.

To add contacts

- 1 Navigate to the Activities screen.
- 2 In the My Activities list, select the activity with which a contact will be associated.
- 3 From the Show drop-down list, select Contacts.
- 4 In the Activity Contacts view, tap the Contacts list to select it, and then tap the New Record button.
- 5 In the Add Contacts dialog box, select the contacts and then tap OK.

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 Daily, Weekly, or Monthly.
- 3 For My Weekly or My Monthly, select the day on which you want to schedule a general activity.
- 4 On the toolbar, tap the New Record button.

You may also tap an open time slot within the daily view.

- 5 In the new record, complete the necessary fields for the appointment or task.

Some fields are described in the following table.

| Field | Comments |
|---------------|---|
| Type | The type of activity. Activity types might be call, email-outbound, demonstration, and so on. |
| Planned Start | This date-time field defaults to the time selected when you created the new appointment. |

| Field | Comments |
|--------------|--|
| Duration | When the duration is updated, the planned completion time is automatically adjusted. |
| Account | Complete this field if the activity is related to a particular account. |
| Repeat | Tap the check box to display a check mark if the appointment or task is recurring. 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. |
| Repeat Until | The end date of a repeating appointment. |

To specify contact participants

- 1** Navigate to the Calendar screen and locate the day the task or appointment occurs.
- 2** Drill down on the task or appointment hyperlink to display the Calendar form.
- 3** From the Show drop-down list, select Contact Participants.
- 4** In the Calendar Contacts view, tap the Contacts list to select it, and then tap the New Record button.
- 5** In the Add Contacts dialog box, select contacts and tap OK.

To specify employee participants

- 1** Navigate to the Calendar screen and locate the day the task or appointment occurs.
- 2** Drill down on the task or appointment hyperlink to display the Calendar form.

If the appointment or task repeats over time, you will be asked to indicate if changes to the appointment should be applied to the specific occurrence, or to all occurrences. From the Show drop-down list, select Employee Participants.
- 3** From the Show drop-down list, select Employee Participants.

- 4 In the Calendar Employees view, tap the Employees list to select it, and then tap the New Record button.
- 5 In the Add Employees dialog box, select employees, and then tap OK.

Developing Quotes

When the customer is ready to purchase a product or service, you can develop a quote using Siebel Sales Handheld that includes specific prices for products and services with related payment terms.

Business Scenario

A mobile sales representative relies on quotes to create formal offers to clients for a variety of products and services that her company provides. Using Siebel Sales Handheld she can produce accurate offers at the customer site, with up-to-date product and pricing information. When details and pricing are finalized, the sales representative can print the quote and deliver it promptly to the customer.

Creating Quotes

Quotes includes effective dates, price lists, and discounts used in pricing products and services. Before any of this information can be added to a quote, however, the quote must be created with basic information.

To create a quote

- 1 Navigate to the Opportunities screen.
- 2 In the My Opportunities list, select the opportunity for which the quote will be generated.
- 3 From the Show drop-down list, select Quotes.
- 4 In the Opportunity Quotes view, tap the Quotes list to select it, and then tap the New Record button.

The new quote is automatically assigned a record identifier, a revision number, the default status of In Progress, and a created date.

- 5 In the Name field, enter a name for the quote.

When you tab to an adjacent field, the quote name becomes a hyperlink.

- 6 Drill down on the hyperlink in the Name field to display the More Info form where you can add quote details.

Using Auto Quote

If you are working with an opportunity for which the products and solutions have already been specified in the Opportunity Products view, there is a faster method to generate a quote. You can use the Auto Quote button.

When Auto Quote generates a quote from an opportunity, quote line items are created for each product under the opportunity that has the Auto Quote flag checked. The Quote Item fields are populated from the corresponding Opportunity Product's fields, as shown in the following table.

Table 21. Quote Item Fields Populated by Opportunity Product Fields

| Opportunity Product Fields | Quote Item Fields |
|---|--|
| Product | Product |
| Product Quantity | Extended Quantity Requested |
| Write-In Product (not exposed in application) | Write-In Product (not exposed in application) |
| Expected Delivery Date | Requested Delivery Date (not exposed in application) |
| ID (not exposed in application) | Opportunity Product ID (not exposed in application) |

In addition, information from the generated quote's Quote # field is copied to the Opportunity Products' Quote # field. The Part Number field of the generated Quote Item is determined by the quote item's product.

Table 22 shows the quote record fields that are automatically completed when Auto Quote is used to create a quote.

Table 22. Quote Fields Completed with Auto Quote

| Field | Value |
|--------------|--|
| Quote # | System generated |
| Revision | 1 |
| Name | Quote number, unless the user provides another value |
| Opportunity | The opportunity from which the quote is automatically generated. |
| Account | The account for the opportunity |
| Account Site | The location of the account associated with the opportunity |
| Status | In Progress |
| Active | Checked |
| Currency | The currency code for the opportunity |
| Price List | The price list associated with the opportunity's account |
| Sales Rep | User ID |
| Effective | Current date |
| Through | Current date plus 30 days (30 days is determined by the QUOTE_EXPIRATION_PERIOD LOV) |

To create a quote using Auto Quote

- 1 Navigate to the Opportunities screen.
- 2 In the My Opportunities list, select the opportunity for which the quote will be generated.
- 3 From the Show drop-down list, select Quotes.

- 4 In the Opportunity Quotes view, tap Auto Quote.
A new row appears in the Quotes list, with the Quote #, Revision, Status and Created date filled in.
- 5 Provide a quote name, edit other fields as necessary, and then drill down on the hyperlink in the quote Name field.
- 6 In the Quote detail form, enter additional information about the quote.
 - a Select the applicable predefined Discount that will be applied to the quote.
 - b Select the applicable predefined Price List.

NOTE: Auto Quote functionality is only available in the Opportunities screen Quotes view.

Adding Quote Items

Using the Quotes screen, you can add line items to quotes that you are developing. If the Auto Quote method is used, products associated with opportunities appear automatically as line items with any applicable discounts.

Line items can be used to:

- Add new products as line items
- Apply manual price adjustments to the line items using the Toggle button.

NOTE: Siebel Handheld does not support complex quotes (bundled line items). Only simple line items can be created.

To add line items

- 1 Navigate to the Opportunities screen.
- 2 In the My Opportunities list, select the opportunity with which the quote is associated.
- 3 In the Show drop-down list, select Quotes.

- 4 In the Opportunity Quotes view, locate the quote in the list and drill down on the Name hyperlink.

The quote detail form appears (Quotes > More Info).

- 5 From the Show drop-down list, select Quote Items.
- 6 In the Quote Line Items view, tap the Line Items list, and then tap the New Record button.
- 7 In the Line Items list, complete the required fields.

Quote Line Item price fields are automatically populated based on the product's price in the parent quote's price list.

If you are entering more than one line item, repeat [Step 6](#) and [Step 7](#) until each line item has been entered. Tap the Toggle button to display a form that you can use to add Item discounts and other adjustments.

To delete line items

- 1 Navigate to the Quotes screen.
- 2 In the My Quotes list, select the quote containing the line item that will be deleted, and choose Quote Items from the Show drop-down list.
- 3 In the Quotes Line Items view, select the quote item in the list.
- 4 From the Edit Menu, select Delete Record.

NOTE: Quote revisions are not supported on the handheld.

Printing Quotes

Once the customer has expressed significant interest, it is often appropriate to present a hard copy quote.

To print a quote

- 1 Navigate to the Quotes screen.

- 2 In the My Quotes list, select the quote containing the line items that will be printed.
- 3 From the Show drop-down list, select Quote Items.
- 4 Align the infrared ports on the handheld device and the printer.
- 5 In the parent Quotes form, tap the Print button.

Managing Orders

After you have completed the initial quote, and the customer has agreed to the products and prices you have presented, you create a sales order.

Creating Orders

You can create orders from quotes manually or by using the Auto Order button.

To create an Auto Order from your quote

- 1 Navigate to the Quotes screen.
- 2 In the My Quotes list, select the quote from which an order will be generated.
- 3 From the Show drop-down list, select Orders.
- 4 In the Quotes list, select the quote, and then in the Orders list tap AutoOrder.
A new record appears in the Orders list, with the order date, number, type, status and so on, filled in.
- 5 In the Orders list, drill down on the Order # hyperlink.
- 6 Tap the Orders Line Items list to select it, and then tap the New Record button.
- 7 A new row appears in the Line Items list.
- 8 Tap Select in the Products field, and then in the Pick Products dialog box, select the product to add as a line item.

To manually create an order

- 1 Navigate to Orders screen > My Orders.

- 2 In the My Sales Orders list, tap the New Record button.
- 3 Complete the necessary fields for the new order record.

From the Show drop-down list, choose More Info to display a form where you can add more details.

Adding Order Line Items

Once the initial sales order is created, you can complete the line items that make up the order.

- 1 Navigate to the Orders screen.
- 2 In the My Sales Orders list, select the order to which line items will be added.
- 3 From the Show drop-down list, select Line Items.
- 4 In the Order Line Item view, tap the Line Items list to select it, and then tap the New Record button.

A new row appears in the Line Items list with the Line # and Status fields completed.

- 5 Complete the fields for the line item.

Repeat [Step 4](#) and [Step 5](#) to add additional line items

The Totals field automatically updates with the Quantity Requested total, and the Order record Item Total and Total fields get updated based on the sum of the Line Item Start Price and Net Price fields, respectively.

Entering Terms and Totals

After completing the line items, navigate to the Order Terms view to enter shipping and payment information for the order.

To add terms and totals

- 1 Navigate to the Orders screen.
- 2 In the My Sales Orders list, select the order.

- 3 From the Show drop-down list, select Order Terms.
- 4 In the Order Terms view, tap the Terms form to select it.
- 5 In the Terms form, complete the necessary fields (such as Payment Terms, Ship Carrier, and so on).

NOTE: The basic Sales Handheld configuration does not include detailed shipping and billing fields. These fields are based on different business components and can be configured as required.

Tracking Expenses

You can track expenses and create expense reports using Siebel Sales Handheld.

To create an expense report

- 1 Navigate to the Expense Reports screen > My Expense Reports list appears.
- 2 In the Expense Reports list, tap the New Record button, and complete the necessary fields for the new record.
- 3 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.

To add detailed line items

- 1 Navigate to the Expense Reports screen.
- 2 In the My Expense Reports list, locate the expense report record.
- 3 From the Show drop-down list, select Expense Items.
- 4 In the Expense Report Line Items view, tap the Line Items list, and then tap the New Record button.

- 5 In the new row, complete the necessary fields for the line item.

You can not enter Line Items whose Start or End Date is outside of the Expense Report period.

NOTE: Siebel Sales Handheld Expense Reports functionality does not currently support the Mileage expense type or detailed Hotel expense tax itemization. If these expense types are required, you must enter these items using the desktop Siebel Sales application.

- 6 Repeat [Step 4](#) and [Step 5](#) to add line items.

The cumulative total of all expense line items is automatically displayed in the Totals field.

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.

- 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 118](#).

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 95](#).

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.

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

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 95](#) 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 95](#) 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 142](#).

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, 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.

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.

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:
 - $\text{Numusers} = \text{Server_Memory} * \text{threads_per_process_ratio} / 64 \text{ MB}$.
- 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 $500,000 \text{ KB} / 56 \text{ KB/sec} = 8928 \text{ seconds} = 148 \text{ minutes}$. 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.

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.

Screens and Views

B

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 Sales Handheld sample application are shown in [Table 23](#).

Table 23. Siebel Sales Handheld Screens and Views

| Screen | View Name on UI | View Name in Siebel Tools (salesce.cfg) |
|---------------|-------------------------|---|
| Contacts | My Contacts | SHCE Sales Visible Contact List View |
| | More Info | SHCE Sales Contact Details View |
| | Personal Contacts | SHCE Sales Personal Contact List View |
| | Opportunities | SHCE Sales Contact Detail - Opportunities View |
| Accounts | My Accounts | SHCE Sales Account List View |
| | My Team's Accounts | SHCE Sales Manager's Account List View |
| | More Info | SHCE Sales Account Detail View |
| | Activities | SHCE Sales Account Detail - Activities View |
| | Contacts | SHCE Sales Account Detail - Contacts View |
| | Addresses | SHCE Sales Account Detail - Business Address View |
| | Opportunities | SHCE Sales Account Detail - Opportunities View |
| Opportunities | My Opportunities | SHCE Sales Opportunity List View |
| | My Team's Opportunities | SHCE Sales Manager's Opportunity List View |
| | More Info | SHCE Sales Opportunity Detail View |
| | Activities | SHCE Sales Opportunity Detail - Activities View |

Table 23. Siebel Sales Handheld Screens and Views

| Screen | View Name on UI | View Name in Siebel Tools (salesce.cfg) |
|-----------------|---|--|
| | Contacts | SHCE Sales Opportunity Detail - Contacts View |
| | Quotes | SHCE Sales Opportunity Quote View |
| | Products | SHCE Sales Opportunity Detail - Products View |
| Employees | All Employees | SHCE Sales Employee List ReadOnly View |
| | Employees - More Info | SHCE Sales Employee Detail View |
| Calendar | Daily | SHCE Sales Calendar Daily View - My |
| | Weekly | SHCE Sales Calendar Weekly View - My |
| | Monthly | SHCE Sales Calendar Monthly View - My |
| | Employee Participants | SHCE Sales Calendar Employee Participants View |
| | Contact Participants | SHCE Sales Calendar Contact Participants View |
| | Note: This view does not have a view name in the UI. It is a drill-down view. | SHCE Sales Calendar Add/Modify View |
| Activities | My Activities | SHCE Sales Activity List View |
| | More Info | SHCE Sales Activity Detail View |
| | Contacts | SHCE Sales Activity Contact Participants View |
| | Employees | SHCE Sales Activity Employee Participants View |
| Expense Reports | My Expense Reports | SHCE Sales Expense List View |

Table 23. Siebel Sales Handheld Screens and Views

| Screen | View Name on UI | View Name in Siebel Tools (salesce.cfg) |
|---------------|------------------------|---|
| | More Info | SHCE Sales Expense List Detail View |
| | Expense Items | SHCE Sales Expense Item List View |
| Quotes | My Quotes | SHCE Sales Quote List View |
| | More Info | SHCE Sales Quote List Detail View |
| | Quote Items | SHCE Sales Quote Detail View |
| | Orders | SHCE Sales Quote Orders View |
| Orders | My Sales Orders | SHCE Sales Order Entry - My Orders View (Sales) |
| | More Info | SHCE Sales Order Entry - Detail Orders View (Sales) |
| | Line Items | SHCE Sales Order Entry - Line Items View (Sales) |
| | Order Terms | SHCE Sales Order Entry - Order Terms View (Sales) |
| Products | All Products | SHCE Sales Product List View |
| | More Info | SHCE Sales Product Detail View |
| Pricing | Price Lists | SHCE Sales Price List View |
| | More Info | SHCE Sales Price List Detail View |
| | Line Items | SHCE Sales Price List Line Item View |

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 24](#) lists the supported Business Components for Siebel Sales Handheld.

Table 24. Siebel Sales Handheld Business Components

| Supported Business Components |
|-------------------------------|
| Account |
| Action |
| Business Address |
| Contact |
| Contact (All) |
| Contact (Personal) |
| Employee |
| Employee (MM) |
| Expense |
| Expense Item |
| Internal Product |
| Opportunity |
| Opportunity Product |

Table 24. Siebel Sales Handheld Business Components

| Supported Business Components |
|--------------------------------------|
| Order Entry - Line Items |
| Order Entry - Orders |
| Price List |
| Quote |
| Quote Item |

Business Component Classes

Table 25 lists the supported Business Component classes for Siebel Sales Handheld.

Table 25. Siebel Sales Handheld Business Component Classes

| Supported Business Component Classes |
|--------------------------------------|
| CSSBCActivity |
| CSSBCBase |
| CSSBCBCExpitm |
| CSSBCExprpt |
| CSSBCLineItem |
| CSSBCOppty |
| CSSBCOrder |
| CSSBCPriceList |
| CSSBCProdBuyNow |
| CSSBCProdRev |
| CSSBCQuote |
| CSSBCQuoteItem |
| CSSBCUser |

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 Sales Handheld application. Refer to [Table 26](#) for the supported applet classes.

Table 26. Siebel Sales Handheld Applet Classes

| Supported Applet Classes |
|--------------------------|
| CSSFrame |
| CSSFrameAlarmList |
| CSSFrameBase |
| CSSFrameCECalAddModify |
| CSSFrameCEGridDay |
| CSSFrameCEGridMonth |
| CSSFrameCEGridWeek |
| CSSFrameCEHome |
| CSSFrameCEMultiPart |
| CSSFrameList |
| CSSFrameListBase |
| CSSFrameListExpitm |
| CSSFrameListQuote |
| CSSFrameListQuoteItem |
| CSSFrameQuote |

User Properties and Methods

D

This appendix documents the handheld-specific user properties and methods for the Siebel Handheld application.

User Properties

Table 27. User Properties

| 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 101 for more information. |
| HandheldSyncInsertMode | User property on a business component. When set to FailOnError, enables Extended Insert processing. See “Extended Insert Processing” on page 105 for more information. |
| OverridePopupVisibility | Overrides Popup Visibility Type on a business component. Use OverridePopupVisibility to change the visibility on a picklist without changing the Popup Visibility Type. See “Overriding the Popup Visibility” on page 72 for more information. |
| View | Used with the GotoView method. Specifies the view to be displayed when navigating from one view to another. See “Applet Focus Behavior” on page 33 for more information. |

Methods

The following details methods you can use for your Siebel Handheld application.

AutoQuote

The AutoQuote method generates a quote from an opportunity. The opportunity may contain one or more products. A quote item is generated for each product in the opportunity that has the AutoQuote field flag selected.

When the AutoQuote method is executed, the quote business component fields are populated with the values shown in [Table 28](#).

Table 28. AutoQuote Method

| Field | Value |
|------------------|--|
| Quote Number | This field is assigned a system-generated value. |
| Revision | 1 |
| Name | Quote Number (or user-provided name) |
| Opportunity | Opportunity from which AutoQuote was called. |
| Account | Opportunity's account |
| Account Location | Opportunity's account location |
| Status | In Progress |
| Active | Flag is set to on |
| Currency | Opportunity's currency code |
| Price List | Opportunity's price list |

Table 28. AutoQuote Method

| Field | Value |
|------------|--|
| Sales Rep | User's login |
| Start Date | Today's date |
| End Date | Today's date + 30 days (30 days is determined by the QUOTE_EXPIRATION_PERIOD LOV) |

The Quote Item business component fields are populated from the corresponding Opportunity Product's business component fields as shown in [Table 29](#):

Table 29. Population of Fields in Quote Item View

| Source Field | Destination Field |
|--------------------------------|---------------------------------------|
| From Opportunity Product View | Quote Item View |
| Product | Product |
| Product Quantity | Extended Quantity Requested |
| Write-In Product (Not exposed) | Write-In Product (Not exposed) |
| Expected Delivery Date | Requested Delivery Date (Not exposed) |
| ID (Not exposed) | Opportunity Product ID (Not exposed) |

Fields that are noted as "Not exposed" do not appear in the user interface.

In addition, the Quote Number field in the generated quote is copied back to the Opportunity Product view ([Table 30](#)).

Table 30. Population of Fields in Opportunity Product View

| Source Field | Destination Field |
|------------------------|------------------------------------|
| From Quote View | To Opportunity Product View |
| Quote Number | Quote Number (Not exposed) |

AutoOrder

The AutoOrder method generates an order from a quote. AutoOrder creates a corresponding line item for each quote item in the quote. The Order Entry Line Items business component fields are populated with the corresponding Quote Item business component fields as shown in [Table 31](#).

Table 31. Population of Fields in Order Entry - Line Items View

| Source Field | Destination Field |
|---------------------------------------|---|
| From Quotes – Quote Items View | To Order Entry - Line Items View |
| Extended Quantity Requested | Extended Quantity |
| Product | Product |
| Discount Amount (Not exposed) | Discount Amount (Not exposed) |
| Discount Percent | Discount Percent (Not exposed) |
| Description (Not exposed) | Description (Not exposed) |
| Requested Delivery Date (Not exposed) | Due Date (Not exposed) |
| Unit Price (Not exposed) | Unit Price (Not exposed) |
| Volume Discount Id (Not exposed) | Volume Discount Id (Not exposed) |
| Volume Discount Item Id (Not exposed) | Volume Discount Item Id (Not exposed) |
| Base Price | Base Price |

Table 31. Population of Fields in Order Entry - Line Items View

| Source Field | Destination Field |
|---------------------------------------|---|
| From Quotes – Quote Items View | To Order Entry - Line Items View |
| Adjusted List Price | Adjusted List Price |
| Covered Product Id (Not exposed) | Covered Product Id (Not exposed) |

If the quote item's product is a service product, then the following fields are also copied from the Quotes – Quote Items view to the Order Entry - Line Items view ([Table 32](#)).

Table 32. Copied Fields for Service Products

| Source Field | Destination Field |
|--------------------------------------|---|
| From Quote – Quote Items View | To Order Entry - Line Items View |
| Covered Quote Item Id (Not exposed) | Covered Quote Item Id (Not exposed) |
| Service Price Amount (Not exposed) | Service Price Amount (Not exposed) |
| Service Price Percent (Not exposed) | Service Price Percent (Not exposed) |
| Service Price Method (Not exposed) | Service Price Method (Not exposed) |

When AutoOrder is executed, the quote's Status field is updated to "Order Placed."

When AutoOrder is executed, the following fields in the Order Entry - Orders business component are pre-populated (automatically populated?) as shown in [Table 33](#).

Table 33. Pre-populated Fields in Order Entry - Orders Business Component

| Order Entry - Order Business Component Field | Value |
|---|------------------------|
| Order Number | System-generated value |
| Account | Quote's Account |

Table 33. Pre-populated Fields in Order Entry - Orders Business Component

| Order Entry - Order Business Component Field | Value |
|---|---|
| Account Location | Quote's Account Location |
| Contact Last Name | Quote's Contact Last Name |
| Contact First Name | Quote's Contact First Name |
| Order Priority | Medium |
| Status | Pending |
| Order Type | Sales Order |
| Active | Set to Active (Turned on? Flag is set to on?) |
| Order Date | Today's date |
| Discount | Quote's Discount |
| Price List | Quote's Price List |
| Currency Code | Quote's Currency Code |
| Requested Ship Date | Quote's Requested Ship Date (Not exposed) |
| Created | Today's date |
| Created By Name | User's login ID |
| Discount Amount (Not exposed) | Quote's Discount Amount (Not exposed) |
| Primary Organization Id (Not exposed) | Quote's Primary Organization Id (Not exposed) |

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.

- 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 223](#) 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. |

| Parameter | Description |
|---------------|--|
| RECORDDIVIDER | (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. |
| WRAP | (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. |

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. >

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 >

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) Static text or one of the following data tags: | | | | | | | | |
| | <table><thead><tr><th>Data tag</th><th>Description</th></tr></thead><tbody><tr><td>< page ></td><td>Page number</td></tr><tr><td>< date ></td><td>Date of the printing</td></tr><tr><td>< time ></td><td>Time of the printing</td></tr></tbody></table> | Data tag | Description | < page > | Page number | < date > | Date of the printing | < time > | Time of the printing |
| Data tag | Description | | | | | | | | |
| < page > | Page number | | | | | | | | |
| < date > | Date of the printing | | | | | | | | |
| < time > | Time of the printing | | | | | | | | |

Example <TAG:Footer Left = " < date > " Right = " < page > "

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. |

| Parameter | Description |
|------------------|--|
| UNDERLINE | (Optional) Specifies whether the text is underlined. Valid values are TRUE or FALSE (default). If TRUE, text is set to underline. |
| TEXT ALIGNMENT | (Optional) Specifies the text alignment. Valid values are LEFT (default), RIGHT, and CENTER. |

Example <TAG:Format Face = "Helvetica" Size = "10" >

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" >

| Parameter | Description |
|----------------|---|
| TAG:GetDate | (Required) Required tag indicator. |
| NUMBER OF DAYS | (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. |
| VARIABLE NAME | (Required) Name of variable where the value is stored. |
| DATE FORMAT | (Optional) TRUE prints the date in long date format (for example, Monday, February 11, 2002). FALSE prints the short date format (for example, 2/21/02). The default is FALSE. |

Example < TAG:GetDate Longformat = "TRUE" Variable = "LongDate" >

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" >

| Parameter | Description |
|-----------------|--|
| TAG:GetRegistry | (Required) Required tag indicator. |
| REGISTRY NAME | (Required) Value the registry. |
| VARIABLE NAME | (Required) Name of variable where the value is stored. |

Example <TAG:GetRegistry Name = "InstallDir" Variable = "Registry" >

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" >

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) Static text or one of the following data tags: | | | | | | | | |
| | <table><thead><tr><th>Data tag</th><th>Description</th></tr></thead><tbody><tr><td>< page ></td><td>Page number</td></tr><tr><td>< date ></td><td>Date of the printing</td></tr><tr><td>< time ></td><td>Time of the printing</td></tr></tbody></table> | Data tag | Description | < page > | Page number | < date > | Date of the printing | < time > | Time of the printing |
| Data tag | Description | | | | | | | | |
| < page > | Page number | | | | | | | | |
| < date > | Date of the printing | | | | | | | | |
| < time > | Time of the printing | | | | | | | | |

Example <TAG:Header Center = "Company Confidential" >

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 files 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.

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:GetTime secondoffset="-3600" variable="VarTime">
<TAG:GetTotal appletname="CS HH Product Bucket List Applet"
```

```
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" query="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>
```



```
<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
```


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 206](#).

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 216](#).

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 34.](#)) 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.

Table 34. Paper Dimensions

| 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.) |

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 35.](#))

Table 35. Printer Baud Rate

| 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 |

PrinterCompressed

Use PrinterCompressed to specify the data compression mode. (See [Table 36.](#)) For the printers supported in this release, always set PrinterCompressed to 1.

Table 36. 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 37.](#)) For the printers supported in this release, PrinterDither should always be set to 0.

Table 37. Print Dithering

| Value | Description |
|-------------|---------------------|
| 0 (default) | Use color diffusion |
| 1 | Use dithering |

PrinterDraftMode

Use PrinterDraftMode to specify the quality of the printing. (See [Table 38.](#)) For the printers supported in this release, PrinterDraftMode should always be set to 0.

Table 38. 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 39.](#)) 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.

Table 39. Printer Form Feed

| 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. |

PrinterHandshake

Use PrinterHandshake to define the serial port handshake. (See [Table 40.](#)) 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.

Table 40. Printer Handshake

| Value | Description |
|-------------|-------------------------------|
| 0 | Uses Xon/Xoff |
| 1 (default) | Uses hardware control lines |
| 2 | No handshaking of serial port |

PrinterOrientation

Specify whether the paper is to be oriented vertically (portrait) or horizontally (landscape). (See [Table 41.](#)) Not all printers can print in landscape orientation. Therefore, you will need to check the specifications for your printer.

Table 41. 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 42.](#))

If PrinterPort is an LPT port or a network path (2 or 9), then the PrinterBaudrate must be set to 0.

Table 42. Printer Port

| 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 42. Printer Port

| 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 43](#) for the list of supported printers.

Table 43. 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
```

```
PrinterDraftMode= 0
PrinterFormFeed= 0
PaperSize= 5
PaperWidth= 115
PaperHeight= 280
MarginLeft= 5
MarginRight= 5
MarginTop= 5
MarginBottom= 5
```

Print Configuration Settings

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