Porting Applications to Palm OS® Cobalt

Exploring Palm OS®

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Exploring Palm OS: Porting Applications to Palm OS Cobalt
Document Number 3119-003
November 9, 2004
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http://www.palmos.com/dev/support/docs/.

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Part II: 68K vs ARM-Native APIs

About This Document

This book is for developers of 68K-based Palm OS applications who wish to update their applications so that they run on Palm OS Cobalt. It discusses both how to update your application to run under the Palm OS Application Compatibility Environment (PACE) or how to rewrite it as an ARM-native application that can take full advantage of Palm OS Cobalt.

Developers who are new to Palm OS programming should focus on the other books in the *Exploring Palm OS* series instead.

The *Exploring Palm OS* Series

This book is a part of the *Exploring Palm OS* series. Together, the books in this series document and explain how to use the APIs exposed to third-party developers by the fully ARM-native versions of Palm OS, beginning with Palm OS Cobalt. Each of the books in the *Exploring Palm OS* series explains one aspect of the Palm operating system, and contains both conceptual and reference documentation for the pertinent technology.

IMPORTANT: The *Exploring Palm OS* series is intended for developers creating native applications for Palm OS Cobalt. If you are interested in developing applications that work through PACE and that also run on earlier Palm OS releases, read the latest versions of the *Palm OS Programmer's API Reference* and *Palm OS Programmer's Companion* instead.

As of this writing, the complete *Exploring Palm OS* series consists of the following titles:

- *Exploring Palm OS: Programming Basics*
- *Exploring Palm OS: Memory, Databases, and Files*
- *Exploring Palm OS: User Interface*
- *Exploring Palm OS: User Interface Guidelines* (coming soon)
- *Exploring Palm OS: System Management*

- *Exploring Palm OS: Text and Localization*
- *Exploring Palm OS: Input Services*
- *Exploring Palm OS: High-Level Communications*
- *Exploring Palm OS: Low-Level Communications*
- *Exploring Palm OS: Telephony and SMS*
- *Exploring Palm OS: Multimedia*
- *Exploring Palm OS: Security and Cryptography*
- *Exploring Palm OS: Creating a FEP* (coming soon)
- *Exploring Palm OS: Porting Applications to Palm OS Cobalt*
- *Exploring Palm OS: Palm OS File Formats*

Additional Resources

- Documentation

  PalmSource publishes its latest versions of this and other documents for Palm OS developers at

  http://www.palmos.com/dev/support/docs/

- Training

  PalmSource and its partners host training classes for Palm OS developers. For topics and schedules, check

  http://www.palmos.com/dev/training

- Knowledge Base

  The Knowledge Base is a fast, web-based database of technical information. Search for frequently asked questions (FAQs), sample code, white papers, and the development documentation at

  http://www.palmos.com/dev/support/kb/

Changes to This Document

This section describes the changes made in each version of this document.

3119-002

Minor editorial corrections.

3119-001

The first release of this document for Palm OS Cobalt, version 6.0.

Part I
Porting Techniques

The chapters in this section are intended to help a developer of a 68K-based Palm OS application port that application to Palm OS Cobalt. These chapters are intended to provide guidance through the porting process.

If you intend for your application to run under PACE in Palm OS Cobalt, read Chapter 1, "68K Application Compatibility," on page 3. Note, however, that PACE provides no additional functionality beyond that provided by earlier releases of Palm OS. Developers wishing to take advantage of the additional capabilities of Palm OS Cobalt need to turn their applications into ARM-native applications. Chapter 2, "The Porting Process," on page 21, along with the chapters in Part II on page 43 and ultimately all of the other books in the *Exploring Palm OS* series help you to do that.

1

68K Application Compatibility

The Palm Application Compatibility Environment, or PACE, is a 68K emulator that supports execution of well-behaved 68K-based Palm OS applications on devices that use an ARM processor.

PACE allows the majority of existing 68K-based Palm OS applications to run on devices that use an ARM processor. Users can beam an application from a 68K device to an ARM-based device and run the application. The Palm Application Compatibility Environment helps provide a migration path for developers. The developer can continue to use existing 68K-based tools to build their application.

Design Objectives

The Palm Application Compatibility Environment is designed to allow well-behaved 68K applications to run at 68K speeds or faster on an ARM-based device, with minimum code and memory overhead. A well-behaved application is one that:

- only uses documented Palm OS APIs
- does not access hardware directly
- does not access the display memory directly
- does not access low memory globals
- does not access the fields of Palm OS structures directly
- runs on Palm OS Emulator with a debug Palm OS Garnet ROM without encountering any errors

Performance

Performance of a 68K application varies greatly depending on how much time it spends executing 68K instructions compared to the time it spends calling Palm OS functions.

Code that consists only of 68K instructions, such as a prime number generator, will run slower than an ARM-native version of the same code since the 68K instructions are emulated. For reference, the time it takes to execute emulated 68K instructions on a 70 MHz ARM device is roughly the same as the time it takes to execute the same instructions on a Palm Vx device. Most applications spend a great deal of time inside operating system calls, however, and those calls execute at the full speed of the ARM processor (note that there may be additional overhead for some Palm OS functions, depending on how close the native function's API is to the 68K API). Thus most 68K applications running under PACE will actually run much faster than they would on a device with a 68K processor.

Developer SDK

Because an application that runs under PACE is like any other 68K application, when writing applications to run under PACE you continue to use the tools and headers available for 68K-based Palm OS application development.

Applications are no longer allowed access to many internal, publicly-defined structures (such as the `ControlType` structure). To make up for this, some accessor functions were added in Palm OS 4.0, and additional accessor functions were added to the Palm OS glue library shipped with the Palm OS Garnet SDK.

The 68K Palm debugger and other tools which depend on the 68K debugger APIs (such as the Metrowerks debugger) are supported by the Palm Application Compatibility Environment.

API Restrictions

Most well-behaved applications run under the Palm OS Garnet version of PACE with no problems. Due to differences in the underlying operating system in Palm OS Cobalt, however, PACE is

somewhat more restricting on Palm OS Cobalt devices. The following sections detail those restrictions.

Deprecated APIs

Very few deprecated APIs (such as `CategoryEditV20()`) are supported for native ARM applications. The Palm Application Compatibility Environment still supports these deprecated APIs, unless they are listed in Table 1.1 on page 7.

Unsupported APIs

A number of Palm OS APIs are not supported by PACE. These are APIs that either are documented as private, are internal-only APIs (yet appear in public header files), or are APIs that developer support has advised developers to not use. A list of unsupported APIs can be found under "Unsupported Palm OS Functions" on page 6.

Card Number Argument

The native ARM version of Palm OS no longer has the concept of memory cards. For this reason, the card number concept is faked for emulated 68K applications. If an application calls `MemNumCards()`, a value of 1 is always returned. If an application calls any function that takes *`cardNum`* as an argument and the value for *`cardNum`* is not zero, an error is returned to the application.

Record Unique IDs

In previous versions of Palm OS, only 24 bits of a record's unique ID were stored in the record header. In Palm OS Cobalt, however, all 32 bits are unique. The function that returns a record's unique ID returns a 32-bit value; to ensure the greatest degree of compatiblity an application should save all 32 bits of the record's unique ID, and not truncate the result to 24 bits.

Effect of Calling an Unsupported or Deprecated Palm OS Function

If a 68K application calls an unsupported or deprecated Palm OS function, an alert is displayed and the application is terminated. The alert contains the message "An error occurred in the application you are using. Note the error code and contact the developer of this application" followed by an error number in parentheses. When the user presses the OK button, the application is forced to exit. The debug version of this error alert has two more numbers displayed (to help you pinpoint the problem) and a Cancel button. If you tap the Cancel button, PACE tries to connect to the 68K Palm Debugger so you can determine why and where the error is occurring.

Unsupported Palm OS Functions

Table 1.1 is a list of Palm OS functions that are not supported by PACE in Palm OS Cobalt. The following are the reasons why these functions are not supported.

Documented as "System Use Only": These functions are documented as "System Use Only" in the *Palm OS Programmer's API Reference* and thus should never have been called by applications.

Should have been documented as "system use only": These functions were intended for internal PalmSource use only but were documented.

Obsolete: These functions are not implemented because they have long been obsolete. Current Palm OS applications should no longer be using them.

Implemented as a "NOP" function: Typically, these are functions that should not have been called by applications. Because some applications may call them, however, PACE supports them. However, they do nothing and simply return.

Rarely-used function: Functions that are only used internally by Palm OS, by serial drivers, or by OEM extensions. They are not functions that an application would use. PACE does not implement these functions.

Unimplemented in Palm OS Cobalt: Functions that were supported by PACE in Palm OS Garnet but are no longer supported by PACE in Palm OS Cobalt. The vast majority of these are intended for system use only, and the remaining few are very rarely used by applications.

Table 1.1 Unsupported Palm OS functions

Function	Unsupported because...
`AlmAlarmCallback()`	Documented as "System Use Only"
`AlmCancelAll()`	Documented as "System Use Only"
`AlmDisplayAlarm()`	Documented as "System Use Only"
`AlmTimeChange()`	Documented as "System Use Only"
`ConGetS()`	Rarely-used function
`ConPutS()`	Rarely-used function
`DayDrawDays()`	Rarely-used function
`DayDrawDaySelector()`	Rarely-used function
`DayHandleEvent()`	Should have been documented as "System Use Only"
`DbgCommSettings()`	Rarely-used function
`DbgGetMessage()`	Rarely-used function
`DlkControl()`	Rarely-used function
`DlkDispatchRequest()`	Rarely-used function
`DlkStartServer()`	Rarely-used function
`DmInit()`	Documented as "System Use Only"
`EvtDequeueKeyEvent()`	Documented as "System Use Only"
`EvtEnqueuePenPoint()`	Was documented as "System Use Only." In Palm OS Cobalt, returns `sysErrNotAllowed`. On debug ROMs, displays a fatal alert.

Table 1.1 Unsupported Palm OS functions *(continued)*

Function	Unsupported because...
`EvtGetPenBtnList()`	Rarely-used function
`EvtGetSilkscreenAreaList()`	Rarely-used function
`EvtGetSysEvent()`	Documented as “System Use Only”
`EvtKeyQueueSize()`	In Palm OS Cobalt, returns `sysErrNotAllowed`. On debug ROMs, displays a fatal alert.
`EvtPenQueueSize()`	In Palm OS Cobalt, returns `sysErrNotAllowed`. On debug ROMs, displays a fatal alert.
`EvtProcessSoftKeyStroke()`	In Palm OS Cobalt, returns `sysErrNotAllowed`. On debug ROMs, displays a fatal alert.
`EvtSetKeyQueuePtr()`	Documented as “System Use Only”
`EvtSetPenQueuePtr()`	Documented as “System Use Only”
`EvtSysInit()`	Documented as “System Use Only”
`ExpCardGetSerialPort()`	Unimplemented in Palm OS Cobalt
`ExpCardInserted()`	Documented as “System Use Only”
`ExpCardRemoved()`	Documented as “System Use Only”
`ExpSlotDriverInstall()`	Unimplemented in Palm OS Cobalt
`ExpSlotDriverRemove()`	Unimplemented in Palm OS Cobalt
`ExpSlotLibFind()`	Unimplemented in Palm OS Cobalt
`ExpSlotRegister()`	Documented as “System Use Only”
`ExpSlotUnregister()`	Documented as “System Use Only”
`FplAdd()`	Obsolete
`FplAToF()`	Obsolete
`FplBase10Info()`	Obsolete

Table 1.1 Unsupported Palm OS functions *(continued)*

Function	Unsupported because...
`FplDiv()`	Obsolete
`FplFloatToLong()`	Obsolete
`FplFloatToULong()`	Obsolete
`FplFree()`	Implemented as a “NOP” function
`FplFToA()`	Obsolete
`FplInit()`	Implemented as a “NOP” function
`FplLongToFloat()`	Obsolete
`FplMul()`	Obsolete
`FplSub()`	Obsolete
`FrmAddSpaceForObject()`	Documented as “System Use Only”
`FtrInit()`	Documented as “System Use Only”
`GrfFree()`	Documented as “System Use Only”
`GrfInit()`	Documented as “System Use Only”
`InsPtCheckBlink()`	Documented as “System Use Only”
`InsPtEnable()`	Implemented as a “NOP” function
`InsPtEnabled()`	Implemented as a “NOP” function
`InsPtGetHeight()`	Implemented as a “NOP” function
`InsPtGetLocation()`	Implemented as a “NOP” function
`InsPtInitialize()`	Documented as “System Use Only”
`InsPtSetHeight()`	Implemented as a “NOP” function
`InsPtSetLocation()`	Implemented as a “NOP” function
`KbdDraw()`	Documented as “System Use Only”
`KbdErase()`	Documented as “System Use Only”

Table 1.1 Unsupported Palm OS functions *(continued)*

Function	Unsupported because...
`KbdGetLayout()`	Documented as “System Use Only”
`KbdGetPosition()`	Documented as “System Use Only”
`KbdGetShiftState()`	Documented as “System Use Only”
`KbdHandleEvent()`	Documented as “System Use Only”
`KbdSetLayout()`	Documented as “System Use Only”
`KbdSetPosition()`	Documented as “System Use Only”
`KbdSetShiftState()`	Documented as “System Use Only”
`KeyboardStatusFree()`	Documented as “System Use Only”
`KeyboardStatusNew()`	Documented as “System Use Only”
`MemCardFormat()`	Documented as “System Use Only”
`MemHandleFlags()`	Documented as “System Use Only”
`MemHandleOwner()`	Documented as “System Use Only”
`MemHandleResetLock()`	Documented as “System Use Only”
`MemHeapFreeByOwnerID()`	Documented as “System Use Only”
`MemHeapInit()`	Documented as “System Use Only”
`MemInit()`	Documented as “System Use Only”
`MemInitHeapTable()`	Documented as “System Use Only”
`MemKernelInit()`	Documented as “System Use Only”
`MemPtrFlags()`	Documented as “System Use Only”
`MemPtrOwner()`	Documented as “System Use Only”
`MemPtrResetLock()`	Documented as “System Use Only”
`MemSemaphoreRelease()`	Documented as “System Use Only”
`MemSemaphoreReserve()`	Documented as “System Use Only”

Table 1.1 Unsupported Palm OS functions *(continued)*

Function	Unsupported because...
`MemStoreSetInfo()`	Documented as "System Use Only"
`OmGetIndexedLocale()`	Unimplemented in Palm OS Cobalt
`OmGetNextSystemLocale()`	Unimplemented in Palm OS Cobalt
`OmSetSystemLocale()`	Unimplemented in Palm OS Cobalt
`PenCalibrate()`	Implemented as a "NOP" function
`PenClose()`	Documented as "System Use Only"
`PenGetRawPen()`	Documented as "System Use Only"
`PenOpen()`	Documented as "System Use Only"
`PenRawToScreen()`	Was documented as "System Use Only." In Palm OS Cobalt, returns `sysErrNotAllowed`. On debug ROMs, displays a fatal alert.
`PenResetCalibration()`	Implemented as a "NOP" function
`PenScreenToRaw()`	Was documented as "System Use Only." In Palm OS Cobalt, returns `sysErrNotAllowed`. On debug ROMs, displays a fatal alert.
`PenSleep()`	Was documented as "System Use Only." In Palm OS Cobalt this is implemented as a "NOP" function.
`PenWake()`	Was documented as "System Use Only." In Palm OS Cobalt this is implemented as a "NOP" function.
`ResLoadForm()`	Rarely-used function
`SerReceiveISP()`	Implemented as a "NOP" function
`SlkProcessRPC()`	Documented as "System Use Only"
`SlkSetSocketListener()`	Rarely-used function

Table 1.1 Unsupported Palm OS functions *(continued)*

Function	Unsupported because...
`SlkSysPktDefaultResponse()`	Documented as “System Use Only”
`SndInit()`	Documented as “System Use Only”
`SndInterruptSmfIrregardless()`	Rarely-used function
`SndPlaySmfIrregardless()`	Rarely-used function
`SndPlaySmfResourceIrregardless()`	Rarely-used function
`SrmOpenBackground()`	Rarely-used function
`SrmSleep()`	Implemented as a “NOP” function
`SrmWake()`	Implemented as a “NOP” function
`SysBatteryDialog()`	Documented as “System Use Only”
`SysColdBoot()`	Documented as “System Use Only”
`SysDisableInts()`	Was documented as “System Use Only.” In Palm OS Cobalt this is implemented as a “NOP” function.
`SysDoze()`	Documented as “System Use Only”
`SysFatalAlertInit()`	Undocumented “system use only”function.
`SysInit()`	Documented as “System Use Only”
`SysLaunchConsole()`	Documented as “System Use Only”
`SysNewOwnerID()`	Documented as “System Use Only”
`SysNotifyBroadcastFromInterrupt()`	Rarely-used function
`SysRestoreStatus()`	Was documented as “System Use Only.” In Palm OS Cobalt this is implemented as a “NOP” function.
`SysSemaphoreSet()`	Documented as “System Use Only”
`SysSetTrapAddress()`	Rarely-used function

Table 1.1 Unsupported Palm OS functions *(continued)*

Function	Unsupported because...
`SysUILaunch()`	Documented as “System Use Only”
`SysUnimplemented()`	Documented as “System Use Only”
`TimInit()`	Documented as “System Use Only”
`VFSInstallFSLib()`	Unimplemented in Palm OS Cobalt
`VFSRemoveFSLib()`	Unimplemented in Palm OS Cobalt
`WinAddWindow()`	Documented as “System Use Only”
`WinDisableWindow()`	Was documented as “System Use Only.” In Palm OS Cobalt this is implemented as a “NOP” function.
`WinEnableWindow()`	Was documented as “System Use Only.” In Palm OS Cobalt this is implemented as a “NOP” function.
`WinGetFirstWindow()`	Rarely-used function
`WinInitializeWindow()`	Was documented as “System Use Only.” In Palm OS Cobalt this is implemented as a “NOP” function.
`WinMoveWindowAddr()`	Documented as “System Use Only”
`WinRemoveWindow()`	Documented as “System Use Only”
`WinScreenInit()`	Documented as “System Use Only”

Accessing the PIM Application Databases

Some 68K applications access the PIM application databases. In Palm OS Cobalt the PIM applications are ARM-native applications, and those applications now use Schema databases to hold application data. Although the “classic” PIM application databases are no longer present, PACE does what it can to “do the right thing” when it detects that a 68K application is attempting to access a PIM application database.

NOTE: The PIM database access solution described here depends entirely on the presence of the ARM-native PIM applications. As well, those applications must correctly support the `sysAppLaunchCmdImportRecord`, `sysAppLaunchCmdExportRecord` and `sysAppLaunchCmdDeleteRecord` launch commands. PACE further assumes that the database names, database schema names, and field IDs haven't changed (additional fields may be present, however, and the field order can be changed).

When an application tries to access a 68K PIM application database—either to open or to find it—PACE creates the 68K database, opens it, initializes its application info block (using category names from the corresponding native PIM app) and creates a cache of all records in the corresponding ARM-native PIM application database. Each cache entry contains the following information:

- the unique ID of the native record
- handle to the 68K record
- index of the 68K record
- category that the record belongs to
- attribute flags (dirty and deleted)

Each entry is initialized with the unique ID and category information. All other fields are cleared.

When the application then tries to read a record (for example, by calling `DmQueryRecord()` or `DmGetRecord()`), PACE sends a `sysAppLaunchCmdExportRecord` request to the native application. In response, the native application returns the record in vcard format. PACE converts the vcard information into a 68K PIM application record and stores that record into the 68K PIM application database that was created when the database was opened. The index and record handle of this record are stored in the cache; any further requests for the record will return the record handle from the cache.

If the application creates a new record, PACE creates a record in the 68K PIM application database, adds an entry to the cache, and initializes the cache entry's unique ID to `NULL`.

When the application writes to the new record, PACE marks the record in the cache as "dirty" so that it will be written back to the ARM-native PIM application database when the database is flushed. At that time, PACE converts the 68K record to its vcard representation and then sends a `sysAppLaunchCmdImportRecord` request to the native application. Records are flushed:

- when a database is closed
- whenever another record is created
- before a unique ID is returned to an application (in response to a call to `DmGetRecordInfo()`).

When an application deletes a PIM database record, PACE marks the record in the cache as "deleted" and sends a `sysAppLaunchCmdDeleteRecord` request to the native application.

Once the 68K application closes the PIM application database, PACE flushes any dirty records that have yet to be written, frees up memory allocated for the cache, and closes and deletes the 68K PIM application database.

The two functions `DmFindDatabase()` and `DmGetNextDatabaseByTypeCreator()` have the side effect of leaving the 68K PIM application database around. To clean up these stray databases, PACE deletes any existing 68K PIM application databases whenever a 68K application exits. Note that if you call `DmOpenDatabase()` after locating a database with either of these two functions, and later call `DmCloseDatabase()`, the database will be deleted when the close function is called.

Although `DmFindDatabase()` leaves the 68K PIM application database around, other Data Manager calls may cause PACE to delete it. Because of this, if you are going to open a PIM application database by calling `DmFindDatabase()` followed by `DmOpenDatabase()` (as opposed to the more common method of using `DmOpenDatabaseByTypeCreator()`), avoid making other

Data Manager calls on the PIM application database between the call to `DmFindDatabase()` and `DmOpenDatabase()`.

Limitations

The PIM application database access solution provided by PACE has a number of limitations. For one, not all database access functions are supported. Here is a list of the known limitations:

- It can be slow. The ARM-native PIM applications are sub-launched for each PIM database read, write, or delete.
- Category changes are not reflected back to the native PIM application. Category information should be treated as read-only.
- All three "varieties" of record delete—`DmDeleteRecord()`, `DmRemoveRecord()` and `DmArchiveRecord()`—become requests for the native PIM application to delete the record.
- Some things in the application info blocks are "hard-coded." For example, the ToDo sort order is always priority/due date and the Address Book labels are hard-coded to English text labels.
- The `totalBytes` and `dataBytes` sizes returned from `DmDatabaseSize()` come from the 68K database and thus are usually wrong. They would only be correct if every record has been read in from the ARM-native PIM application database.
- Some database record access functions are not supported, including `DmRemoveSecretRecords()`, `DmMoveCategory()` and `DmDeleteCategory()`.
- There are some limitations with private records. Private records will be masked or hidden when a 68K PIM application is run, but changing the "maskedness" or "hiddenness" has no effect while running the 68K PIM application.
- Because records are not immediately written to the ARM-native PIM application databases, some data may be lost while running a 68K PIM application replacement if the system is reset while the application is running.

Summary of PIM Database Access APIs

Table 1.2 lists those functions for which PACE checks to see if a PIM application database is being accessed. If so, PACE acts as described in the second column.

Table 1.2 Functions that PACE monitors for PIM database access

Function	How treated by PACE
`CategoryCreateList()`	Calls through to the native OS.
`CategoryEdit()`	Calls through to the native OS.
`CategoryFind()`	Calls through to the native OS.
`CategoryFreeList()`	Calls through to the native OS.
`CategoryGetName()`	Calls through to the native OS.
`CategoryGetNext()`	Calls through to the native OS.
`CategorySelect()`	Calls through to the native OS.
`CategorySetName()`	Calls through to the native OS.
`DmArchiveRecord()`	PACE handles calls to this function.
`DmAttachRecord()`	PACE handles calls to this function.
`DmCloseDatabase()`	PACE handles calls to this function.
`DmDatabaseInfo()`	Calls through to the native OS.
`DmDatabaseProtect()`	Calls through to the native OS. Note that applications are not expected to call this function with a PIM database.
`DmDatabaseSize()`	PACE handles calls to this function.
`DmDeleteCategory()`	Not supported when accessing a PIM database. `sysErrNotAllowed` is returned.
`DmDeleteDatabase()`	Calls through to the native OS. Note that applications are not expected to call this function with a PIM database.

Table 1.2 Functions that PACE monitors for PIM database access *(continued)*

Function	How treated by PACE *(continued)*
`DmDeleteRecord()`	PACE handles calls to this function.
`DmDetachRecord()`	PACE handles calls to this function.
`DmFindDatabase()`	PACE handles calls to this function.
`DmFindRecordByID()`	PACE handles calls to this function.
`DmFindRecordByOffsetInCategory()`	PACE handles calls to this function.
`DmFindSortPosition()`	PACE handles calls to this function.
`DmGetAppInfoID()`	Calls through to the native OS.
`DmGetDatabaseLockState()`	Calls through to the native OS. Note that applications rarely call this function with a PIM database.
`DmGetNextDatabaseByTypeCreator()`	PACE handles calls to this function.
`DmGetPositionInCategory()`	PACE handles calls to this function.
`DmGetRecord()`	PACE handles calls to this function.
`DmInsertionSort()`	PACE handles calls to this function.
`DmMoveCategory()`	Not supported when accessing a PIM database. `sysErrNotAllowed` is returned.
`DmMoveRecord()`	PACE handles calls to this function.
`DmNewHandle()`	PACE handles calls to this function.
`DmNewRecord()`	PACE handles calls to this function.
`DmNextOpenDatabase()`	Calls through to the native OS. Note that applications rarely call this function with a PIM database.
`DmNumRecords()`	PACE handles calls to this function.
`DmNumRecordsInCategory()`	PACE handles calls to this function.

Table 1.2 Functions that PACE monitors for PIM database access *(continued)*

Function	How treated by PACE *(continued)*
`DmOpenDatabase()`	PACE handles calls to this function.
`DmOpenDatabaseByTypeCreator()`	PACE handles calls to this function.
`DmOpenDatabaseInfo()`	Calls through to the native OS.
`DmOpenDBNoOverlay()`	PACE handles calls to this function.
`DmQueryNextInCategory()`	PACE handles calls to this function.
`DmQueryRecord()`	PACE handles calls to this function.
`DmQuickSort()`	PACE handles calls to this function.
`DmRecordInfo()`	PACE handles calls to this function.
`DmReleaseRecord()`	PACE handles calls to this function.
`DmRemoveRecord()`	PACE handles calls to this function.
`DmRemoveSecretRecords()`	Not supported when accessing a PIM database. `sysErrNotAllowed` is returned.
`DmResetRecordStates()`	Calls through to the native OS. Note that applications rarely call this function with a PIM database.
`DmResizeRecord()`	PACE handles calls to this function.
`DmSetDatabaseInfo()`	Calls through to the native OS.
`DmSetRecordInfo()`	PACE handles calls to this function.

2

The Porting Process

Converting a 68K-based Palm OS application to a native ARM application running on Palm OS Cobalt can usually be done in two steps:

1. Perform a basic port, keeping the new code as close to the original as possible. This results in a running application that looks and feels—and is—nearly identical to the original.
2. Change sections of the application to take advantage of the new capabilities of Palm OS Cobalt. Depending upon your application, you might modify it so that it uses schema databases, or you might re-architect it so that portions of the application run in one or more separate threads.

This book is intended to help you with step 1; this chapter outlines a basic process for doing a straight port and discusses some of the more commonly-encountered problem areas. There isn't a general procedure for performing step 2. Depending upon which Palm OS Cobalt features you want to take advantage of, consult the appropriate books in the *Exploring Palm OS* series to learn more about how you would write software that can take advantage of those features.

The Basic Porting Procedure

The following are a series of steps one can take to convert a basic 68K-based Palm OS application to a native ARM application. Note that the order of these steps is not critical. As well, depending on your application some of these steps may not apply, and additional steps may well be necessary.

1. Before you begin, verify that your project builds and runs cleanly on the Palm OS Garnet version 5.3 simulator. Enable all debugging checks, and fix any errors or warnings that arise.

2. Convert all resources.

   Previously, Palm OS application resources were stored in an encoded format in `.rsrc` files if you used CodeWarrior, or in `.rcp` or `.ro` files otherwise. In Palm OS Cobalt resources are stored using an XML format in one or more `.xrd` files. Accordingly, each resource must be converted to the new format. Among the tools that make up the Palm OS Cobalt development suite is the "Generate XRD Wizard." This tool lets you

   – convert all resources from an existing PRC, or

   – convert `.rsrc` files

   Note that you must pass to the Wizard the files inside the `Resource.frk` folder, if on Windows. Developers on Mac OS must convert their resource files to Window format (with all data in the data fork, not in the resource fork), while PilRC users can create a PRC and pass that to the Wizard.

3. Create a new empty Palm OS project of the appropriate type. Exactly how you do this depends upon your development environment.

4. Add copies of your 68K-based project's files to the empty project. This includes source files, header files, and the converted resource files that were created in step 2.

5. Open your C source files and comment out #includes for specific Palm OS header files. Instead, make sure that your C source files include `PalmOS.h`.

6. Unless you are trying to maintain a single set of source files that can be compiled for either ARM or 68K—something that can be tricky to do and would prevent you from taking advantage of the many new capabilities of Palm OS Cobalt—change declarations of variables of type `Err` to `status_t`. Note that in Palm OS Cobalt `status_t` is a signed 32-bit integer, while `Err` was defined in the 68K-based SDKs to be an unsigned 16-bit integer. Error values are all less than zero. Some functions may now return "status" codes that aren't

errors; these values are greater than zero. Because of this, you should rewrite any code that looks like this:

```
if (err) {
   // handle errors here. This is WRONG in Palm OS Cobalt
}
```

Ideally, you should check for specific error codes. To check for a no-error condition, compare the returned value against `errNone`.

While you are at it—and because it is little more than another set of search-and-replace operations—you may want to change how other variables are declared to better conform with the data types used by the Palm OS Cobalt APIs. For instance, change variables of type `UInt16` to `uint16_t`. Table 2.1 lists the basic data types used in the Palm OS Garnet headers and their corresponding Palm OS Cobalt data types.

Table 2.1 Palm OS Cobalt basic data types

Palm OS Garnet-style data type	Palm OS Cobalt-style data type
`Char`	`char`
`Err`	`status_t`
`Int16`	`int16_t`
`Int32`	`int32_t`
`Int64`	`int64_t`
`Int8`	`int_8`
`UInt16`	`uint16_t`
`UInt32`	`uint32_t`
`UInt64`	`uint64_t`

Table 2.1 Palm OS Cobalt basic data types *(continued)*

Palm OS Garnet-style data type	Palm OS Cobalt-style data type
`UInt8`	`uint8`
`WChar`	`wchar32_t`, or `wchar16_t` if you need an explicit 16-bit value for UTF-16/UCS-2 Unicode support. (Although this type is declared in the Palm OS Protein headers, it should be regarded as deprecated).

The header file `PalmTypesCompatibility.h` maps these data types for you using a series of typedefs. Although it is indirectly included in `PalmOS.h`—`SslLib.h` includes it—don't count on it being part of `PalmOS.h` in future SDK releases. Either change your data types as outlined above, or specifically `#include` this header file in each of your source files in order to get these mappings. `PalmTypesCompatibility.h` is most useful when you are trying to create a single set of source files that can be compiled using either the Palm OS Garnet or Palm OS Cobalt SDKs. See "Compatibility Headers" on page 27 for more information on the compatibility header files.

NOTE: If your application included `PalmCompatibility.h` to allow it to use older-style data types—such as `Int`, `Short`, and `DWord`—you will have to change your declarations to use the new data types. `PalmCompatibility.h` is not among the Palm OS Cobalt header files.

7. Remove the call to the `RomVersionCompatible()` function, or at least update the function so that it checks for version 6.0 as a minimum version number. Note that the `AppLaunchWithCommand()` function, commonly called from within `RomVersionCompatible()`, is not part of the Palm OS Cobalt ARM-native API set.

   If you leave the `RomVersionCompatible()` function in place, be sure to remove the check for Palm OS 1.0; it isn't needed since by design ARM-native Palm OS Cobalt

applications won't launch on devices running an earlier version of Palm OS (5.x or earlier).

8. Build your project, and deal with the errors that arise. These errors are the result of differences between the 68K APIs and the Palm OS Cobalt ARM-native APIs. The following are differences that result in many of the errors you'll see:
   - As discussed under "Missing UNIX Header Files" on page 28, the `Core/System/UNIX` directory is not part of the Palm OS Cobalt ARM-native API set.
   - APIs that access a resource file and used to depend on the resource search chain now need to be pointed to the resource file that contains the resource. Until you make the needed changes, the compiler will complain that some of your function calls don't pass enough parameters (and the missing parameter is a `DmOpenRef`). See "No Resource Search Chain" on page 29 for tips on dealing with these errors.
   - Functions that formerly took a *`cardNo`* parameter no longer do so. See "The cardNo Parameter" on page 31 for the list of affected functions, and some tips on handling this change. Note that the "V50" versions of these functions still take a *`cardNo`* parameter, but be aware that the V50 functions work with Classic, not Extended, databases.
   - Calls to Palm OS Glue functions need to be replaced by calls to the function underlying each Palm OS Glue function. See "No Palm OS Glue" on page 32 for more details on dealing with these missing functions.
   - Code that directly accessed system structures that are now private, or have undergone significant change, will be flagged. Update the code to use the appropriate accessor function(s) as discussed under "Changes in System Structures" on page 33.
   - Most functions that were previously deprecated—as indicated by an operating system version number on the end of the function name (`CategoryEditV20()`, for example)—are not included in the Palm OS Cobalt ARM-native APIs. If your application uses one or more of these functions, see the appropriate chapters in Part II of this book for the corresponding function to call.

- Per "Renamed Functions" on page 35, a number of functions have new names in Palm OS Cobalt, meaning that your compiler will flag any attempts to call the function by its old name.
- The way in which `DmGetNextDatabaseByTypeCreator()` is used has changed significantly. See "DmGetNextDatabaseByTypeCreator() Changes" on page 37.
- In Palm OS Cobalt applications no longer use the Net Library in order to connect to, and transfer data to and from, other machines using the standard TCP/IP protocols. Instead, you'll have to change your application to use the standard Berkeley sockets APIs declared in `sys/sockets.h`.
- There are now 1000 ticks per second, and this value is true on real devices, on emulators, and on the Simulator. Also, tick values are stored in unsigned 64-bit integers. Pay close attention to functions that take a tick value parameter, particularly if you pass a non-zero constant value. See "Changes in the Number of Ticks Per Second" on page 37.
- You'll likely need to do some casting in order to make the compiler happy; a number of function parameters and return types have changed sizes. In some cases you may need to re-declare variables to avoid a loss of precision.
- There is little left of the Graffiti Manager. In Palm OS Cobalt you typically use the Pen Input Manager instead. One of the more common operations was to set the shift state using `GrfSetState()`. In Palm OS Cobalt to set the input area to "shifted" mode, use:

```
PINSetInputMode(pinInputModeShift);
```

For more on the Pen Input Manager and user input in general, see *Exploring Palm OS: Input Services*.

A discussion on how you might deal with many of the above issues can be found in one of the sections under "Common Compile-Time Errors" on page 28. For details on the differences between the API sets, see Part II of this book.

9. Test your application, and deal with the errors that you see. See "Common Run-Time Errors" on page 38 for some of the more common run-time errors you may encounter, and tips on how to deal with them.

Compatibility Headers

The Palm OS Cobalt ARM-native API set includes a number of "compatibility" header files. These revert some of the API name changes, and accommodate some of the simpler function parameter list modifications that were made due to the lack of a resource search chain and the elimination of the concept of internal memory cards.

These compatibility headers are not included by default; you must include the appropriate compatibility headers in each of your application source files as necessary. Note that because they simply allow you to put off a set of rather simple changes, you should consider dispensing with these header files and simply altering your application's source to directly deal with the changes.

The following are the compatibility header files defined by the Palm OS Cobalt ARM-native SDK:

DataMgrCompatibility.h: Redirects a number of functions to their "V50" (deprecated) counterparts, and accounts for a number of APIs that have been renamed.

ExgMgrCompatibility.h: Declares three deprecated functions.

FloatMgrCompatibility.h: Declares a number of constants, structures, and macros formerly used in conjunction with the Float Manager.

IrLibCompatibility.h: Declares a number of APIs that allow applications to directly interact with the IR Library.

LocaleMgrCompatibility.h: Declares a set of `NumberFormatType` values. Rather than use these values, however, applications should be rewritten to use the format preference selected by the user (`prefNumberFormat`). If you need a locale-specific format, pass `lmChoiceNumberFormat` to `LmGetLocaleSetting()`.

MemoryMgrCompatibility.h: Declares a number of functions that take a *cardNo* parameter. This allows your application to continue to work with card number values. Note, however, that the card number you pass must always be 0, and returned card number values are always 0.

ModemMgrCompatibility.h: Declares a number of APIs that allow applications to directly control a modem.

PalmTypesCompatibility.h: Allows your application to continue to employ the basic data types used in the Palm OS Garnet SDK. Also declares the `min()`, `max()`, and `OffsetOf()` macros.

SysEventCompatibility.h: Declares an enum and a struct using their Palm OS Garnet names; applications should use the new enum and structure declared in Palm OS Cobalt. See Chapter 112, "SysEvent.h," on page 455 for details.

WindowCompatibility.h: Declares a single function that was part of the Palm OS Garnet PINS API and used to set window constraints. In Palm OS Cobalt this function does nothing.

Common Compile-Time Errors

The following sections go into some detail about a few of the more common errors you may encounter after compiling your ported application for the first time. These sections are presented in no particular order.

Missing UNIX Header Files

The header files mentioned in step 5. on page 22 are not the only header files that are not present. The `Core/System/UNIX` directory is also not part of the Palm OS Cobalt ARM-native API set. Use the header files declared in the `posix` and `streams` directories instead. So, for instance, instead of this:

```
#include <unix_string.h>
```

do this:

```
#include <posix/string.h>
```

Note that there is not a direct mapping between the header files in `Core/System/UNIX` and those in the `posix` and `streams` directories. As well, differences between the UNIX and POSIX APIs may require you to modify or even rewrite those portions of your application that employ these APIs.

No Resource Search Chain

Prior to Palm OS Cobalt, Palm OS had the concept of a "resource search chain." This was a list of all open resource databases that would be searched by certain APIs. For compatibility purposes (mainly to support PACE) Palm OS Cobalt declares a number of "V50" APIs—such as `DmGetResourceV50()`—that continue to operate on the resource search chain. This functionality is only for backwards compatibility, however, and shouldn't be relied on going forward. Instead, your application should wherever possible explicitly identify the resource database that contains the resource in question.

Table 2.2 lists the affected APIs. These APIs now take an additional parameter, a `DmOpenRef` that indicates the open resource database that contains the resource.

Table 2.2 Functions that have an added `DmOpenRef` parameter

`DmGetResource()`	`ErrAlert()`[1]
`FrmAlert()`	`FrmCustomAlert()`
`FrmCustomResponseAlert()`	`FrmGotoForm()`
`FrmHelp()`	`FrmInitForm()`
`FrmPopupForm()`	`MenuInit()`
`MenuSetActiveMenuRscID()`	`ResLoadConstant()`
`ResLoadForm()`	`ResLoadMenu()`

Table 2.2 Functions that have an added `DmOpenRef` parameter *(continued)*

`ResLoadString()`	`SysCopyStringResource()`[2]
`SysStringByIndex()`	

1. Previously this was a macro declared in `ErrorBase.h`. In Palm OS Cobalt this is a function declared in `Form.h`.
2. Note that unlike the other functions listed in this table, the `DmOpenRef` is the second parameter, not the first.

Because all of the resources explicitly accessed by most Palm OS applications reside within the application PRC itself, you can usually accommodate this change by doing the following:

1. Declare a global variable of type `DmOpenRef`.
2. Early on in the execution of your program—in `StartApplication()`, perhaps—initialize this variable so that it contains a reference to your application's PRC. The loader contains two functions that make retrieving this very easy: `SysGetModuleDatabase()` and `SysGetRefNum()`.

```
status_t error;

if((error = SysGetModuleDatabase(SysGetRefNum(), NULL,
      &g_AppDB)) < errNone)
   return error;
```

   Note that `SysGetModuleDatabase()` performs an IPC, and thus is a bit slow. Because of this, you may not want to call this function for every launch code, but instead only for those where the global referencing your application's PRC is needed.

3. Pass the global variable you declared in step 1 to each function that now needs an exploit reference to your application's resource database.

System Resources

Because the resource search chain is no longer supported, you cannot rely upon it to help you locate system resources. If your application employs system resources, you'll have to modify it to access those resources directly. Note that some system resources

may have different resource IDs from their Palm OS Garnet counterparts, and some no longer exist at all.

The standard Edit menu continues to exist; its resource ID is 10000. As well, the alert icon bitmaps remain and can be used by applications. See `UIResources.h` for the set of system resources that can be used by Palm OS Cobalt applications.

The cardNo Parameter

Palm Powered handhelds were originally designed to have ROM and RAM located on one or more memory modules that were known as **cards**. (These cards were a logical construct used by the operating system and are in no way connected with the removable memory cards supported by the Expansion Manager.) In the 68K API set a number of functions take or return a *`cardNo`* (card number) parameter to identify on which card the memory being referenced is located. Because almost all Palm Powered devices only had one memory card, many Palm OS applications assume that the *`cardNo`* parameter is always 0. PACE requires that this parameter be set to 0.

In Palm OS Cobalt this memory module concept is no longer supported, so the *`cardNo`* parameter is no longer needed. Table 2.3 lists those functions that are affected. When porting 68K code to the ARM-native environment, everywhere you have a call to one of these functions you'll have to remove the *`cardNo`* parameter.

Table 2.3 Functions that no longer take a *`cardNo`* parameter

`AlmGetAlarm()`	`AlmSetAlarm()`
`AttnForgetIt()`	`AttnGetAttention()`
`AttnGetCounts()`	`AttnIterate()`
`AttnUpdate()`	`DmCreateDatabase()`
`DmDatabaseInfo()`	`DmDatabaseSize()`
`DmDeleteDatabase()`	`DmFindDatabase()`
`DmGetDatabase()`	`DmGetNextDatabaseByTypeCreator()`

Table 2.3 Functions that no longer take a *cardNo* parameter *(continued)*

`DmNumDatabases()`	`DmOpenDatabase()`
`DmOpenDBNoOverlay()`	`DmSetDatabaseInfo()`
`(*ExgDbWriteProcPtr)()`	`FileDelete()`
`FileOpen()`	`FindSaveMatch()`
`MemHeapID()`	`MemLocalIDToGlobal()`
`MemLocalIDToLockedPtr()`	`MemLocalIDToPtr()`
`MemNumHeaps()`	`MemNumRAMHeaps()`
`SysAppLaunch()`	`SysCurAppDatabase()`
`SysGetROMToken()`	`SysNotifyRegister()`
`SysNotifyUnregister()`	`SysUIAppSwitch()`
`VFSExportDatabaseToFile()`	`VFSExportDatabaseToFileCustom()`
`VFSImportDatabaseFromFile()`	`VFSImportDatabaseFromFileCustom()`

No Palm OS Glue

The primary purpose of the Palm OS Glue libraries and macros was to allow developers to write code that would continue to work across the widest range of Palm OS devices, even as the APIs changed from one Palm OS release to another. Because Palm OS Cobalt, version 6.0 exposes the first—and currently only—set of ARM-native Palm OS APIs, "glue" functions and macros are not necessary.

In most cases, where your application used to call a glue function or use a glue macro it should use the underlying operating system function instead. This is usually a function with the same name as the glue function or macro, with the word "Glue" removed. So, for instance, instead of calling `WinGlueDrawChar()` your application should be updated to call `WinDrawChar()` instead.

For a complete list of the Palm OS Glue functions exposed by the latest 68K-based SDK, and the corresponding ARM-native functions you should use in your ported application, see Chapter 79, "PalmOSGlue," on page 335.

Changes in System Structures

The Palm OS defines a number of data structures for use by the operating system. To aid in the debugging process many of these structures were declared in the public APIs, and notes in both the header files and the documentation warned developers not to access the contents of these structures directly.

In Palm OS Cobalt the internals of many of these structures are no longer publicly declared. For instance, in the latest Palm OS Garnet SDK the `FormType` structure is declared as follows:

```
typedef struct FormType
#ifdef ALLOW_ACCESS_TO_INTERNALS_OF_FORMS // These fields...
{
   WindowType window;
   UInt16 formId;
   FormAttrType attr;
   WinHandle bitsBehindForm;
   FormEventHandlerType *handler;
   UInt16 focus;
   UInt16 defaultButton;
   UInt16 helpRscId;
   UInt16 menuRscId;
   UInt16 numObjects;
   FormObjListType *objects;
}
#endif
FormType;
```

In Palm OS Cobalt, the `FormType` structure is declared as follows:

```
typedef struct FormType FormType
```

If, prior to porting your application to Palm OS Cobalt, you had successfully built your application with all debug checks enabled, the change in how these structures are defined should have no effect. If your application was directly accessing the contents of one

of these structures, however, you'll have to rewrite those portions to use the appropriate accessor functions.

To determine the proper way to access the contents of one of these system structures, see the description of that structure in the reference documentation that is shipped with the Palm OS Garnet SDK: the *Palm OS Programmer's API Reference*.

Redefined System Structures

Some system structures continue to be declared in such a way as to make their contents directly accessible. However, the structure's contents may have changed. For instance, in the Palm OS Garnet SDK the `BitmapType` structure is defined as follows:

```
typedef struct BitmapType
#ifdef ALLOW_ACCESS_TO_INTERNALS_OF_BITMAPS   // These ...
   {
   Int16 width;
   Int16 height;
   UInt16 rowBytes;
   BitmapFlagsType flags;
   UInt8 pixelSize;
   UInt8 version;
   }
#endif
BitmapType;
```

In Palm OS Cobalt this structure is declared like this, with the fields renamed to show the endianness changes:

```
typedef struct BitmapType {
   int16_t widthBE16;
   int16_t heightBE16;
   uint16_t rowBytesBE16;
   uint16_t flagsBE16;
   uint8_t pixelSize;
   uint8_t version;
} BitmapType
```

Although your application could be modified to access this structure's fields directly, wherever possible use accessor functions instead. So, for example, if your application was determining the dimensions of a bitmap by accessing the `BitmapType` structure's

width and height fields directly, it should instead be rewritten to call `BmpGetDimensions()`.

Renamed Functions

For various reasons a number of APIs in the Palm OS Cobalt API set were brought forward from the Palm OS Garnet API set with new names. Often this was done to make the purpose of a function more immediately apparent, or to bring the name of a function more in line with similar functions that use a different naming pattern. For instance, the Palm OS Garnet function `BmpBitsSize()` is named `BmpGetSizes()` in the ARM-native API set. If the compiler informs you that a particular API is not declared, check the appropriate chapter in Part II, "68K vs ARM-Native APIs," to see if it has been renamed.

Table 2.4, below, lists some of the commonly-used APIs that were renamed for Palm OS Cobalt.

Table 2.4 New names of some commonly-used APIs

Old API name	New API name
`DmFindSortPosition()`	`DmGetRecordSortPosition()`
`DmGetResourceIndex()`	`DmGetResourceByIndex()`
`DmPositionInCategory()`	`DmGetPositionInCategory()`
`DmSearchRecord()`	`DmSearchRecordOpenDatabases()`
`DmSearchResource()`	`DmSearchResourceOpenDatabases()`
`DmSeekRecordInCategory()`	`DmFindRecordByOffsetInCategory()`
`DmComparF()`	`DmCompareFunctionType()`
`DmResID`	`DmResourceID`
`DmResType`	`DmResourceType`
`SortRecordInfoType`	`DmSortRecordInfoType`

Memory Manager Functions

Although the functions provided by the Memory Manager continue to work as documented, many of them simply call the standard POSIX memory management functions. You are encouraged to call these functions directly, rather than using the Memory Manager functions. So for instance, instead of `MemMove()` you could call `memmove()`. Refer to `posix/stdlib.h` for `malloc()` and related functions, and `posix/string.h` for functions such as `memmove()`, `memset()`, and so on.

IMPORTANT: When changing a function call from, for instance, `MemMove()` to `memmove()`, carefully examine the parameters to make sure that they correspond exactly. In particular, pay attention to parameter ordering; some of the Palm OS functions do not use the same parameter ordering as their POSIX counterparts.

String Functions

As with the Memory Manager functions, you can use the POSIX string functions in place of many of the Palm OS `Str...` string functions. The POSIX functions are typically faster than their Palm OS counterparts. Note, however, that the POSIX functions don't necessarily respect the device's locale and don't necessarily work with multi-byte characters as the Palm OS versions do. So, while you can safely call `strlen()` in place of `StrLen()`, and `strcmp()` in place of `StrCompareAscii()`, other functions aren't directly interchangeable. For example:

- `StrCompare()` performs a localized string comparison.
- `StrToLower()` and `StrToUpper()` respect the current locale.
- `StrChr()` and `StrStr()` properly deal with multibyte characters.
- `StrNCopy()` and `StrNCat()` won't truncate the string in the middle of a multibyte character.

DmGetNextDatabaseByTypeCreator() Changes

`DmGetNextDatabaseByTypeCreator()` must now be used in conjunction with the new `DmOpenIteratorByTypeCreator()` function; you indicate what you are searching for when calling the latter function. `DmGetNextDatabaseByTypeCreator()` now optionally returns information about the found database in addition to its database ID.

If you just want to locate a single database, and not iterate through all databases that match the given criteria, consider calling `DmFindDatabaseByTypeCreator()` instead.

Changes in the Number of Ticks Per Second

In Palm OS Cobalt, version 6.0 there are 1000 ticks per second (but code should use the `SysTicksPerSecond()` macro instead of relying on a constant value). Because of this, variables that hold tick counts should be declared as `uint64_t`; this is what is returned from functions such as `TimGetTicks()`.

The number of ticks per second should not be counted upon to remain unchanged. Palm OS Cobalt defines a number of macros that allow you to work with time values and intervals using more natural units, such as seconds or milliseconds. The various `SysTimeIn...` macros, such as `SysTimeInMilliSecs()`, allow you to convert a system time value (a time interval, in ticks) to more conventional units. To convert from such units back to a system time value, use one of the `SysTimeTo...` macros, such as `SysTimeToMilliSecs()`. Consider rewriting your applications to avoid working directly with ticks; this will insulate your applications from any future changes in the number of ticks per second.

Although the `TimGetTicks()` function could be used in a loop to implement a delay, applications should be rewritten to use the `SysTaskDelay()` function instead. The `SysTaskDelay()` function automatically puts the unit into low-power mode during the delay. Using `TimGetTicks()` in a loop consumes much more current.

ERROR_CHECK_LEVEL Not Defined

In Palm OS Cobalt the `ERROR_CHECK_LEVEL` #define has been replaced by `BUILD_TYPE`. In 68K-based SDKs, `ERROR_CHECK_LEVEL` could either be set to `ERROR_CHECK_NONE`, `ERROR_CHECK_PARTIAL`, or `ERROR_CHECK_FULL`. `BUILD_TYPE`, on the other hand, is either set to `BUILD_TYPE_DEBUG` or `BUILD_TYPE_RELEASE`, depending on whether you are building your project for debugging or for release.

The `ErrDisplay...`, `ErrFatalDisplay...`, and `ErrNonFatalDisplay...` macros have been adjusted accordingly. Note, however, that these macros are only provided for compatibility purposes; applications should now use `ErrFatalError...` and `DbgOnlyFatalError...` instead. Also note that Palm OS Cobalt supports the POSIX `assert()` macro (defined in `posix/assert.h`).

For more on the use of these #defines and macros, see "Displaying Development Errors" on page 113 of *Exploring Palm OS: System Management*.

Common Run-Time Errors

The following sections describe some of the errors you may encounter when running your application. Errors of this type won't be caught by the compiler. These sections are presented in no particular order.

The "Save Behind" Bit

Versions of Palm OS prior to Palm OS Cobalt saved and restored the area of the screen obscured by a form if Save Behind was selected in the form's resource. For ARM-native applications Palm OS Cobalt doesn't honor the Save Behind setting; in a debug build it will warn you of this fact when a form is displayed that has Save Behind set.

To deal with this, you need to:

1. Turn off Save Behind. You can do this by opening each form in "Palm OS Resource Editor" (double-click it). Select the form, and un-check "Save Behind" if it has been checked. Alternatively, you can just open the XRD file in a text editor

and change "SAVE_BEHIND" to "FALSE". The line you need to change in the XRD file looks like this:

```
<SAVE_BEHIND> TRUE </SAVE_BEHIND>
```

2. Make sure that your application correctly responds to updates. That is, make sure that it draws when it receives a `frmUpdateEvent` (and only when it receives a `frmUpdateEvent`).

For more on dealing with forms, see Chapter 2, "Working with Forms and Dialogs," on page 15 of *Exploring Palm OS: User Interface*.

Restrictions on Callbacks

There is no guarantee that your code will still be loaded, or that it will be loaded at the same location in memory after an application switch. Therefore, the use of callbacks to communicate between executable modules, while technically allowed in certain rare cases, is no longer encouraged. Instead, use custom launch codes to communicate between executable modules. This applies to notifications, the Attention Manager, and the like.

Also note that data structures passed along with launch codes—`SysNotifyParamType` structures that accompany notifications, for example—should not contain embedded pointers.

Note that callbacks within an executable module—to form event handlers, list drawing routines, and such—are fine.

Streaming Sound Callbacks

Don't use the streaming sound callbacks to cause sounds to play after an application has quit. Instead, create a background thread and play the sounds from within that thread.

Custom Drawing

As explained under "Drawing or Updating a Form" on page 27 of *Exploring Palm OS: User Interface*, custom drawing in update-based windows should only be done in response to a `frmUpdateEvent`. If you use legacy or transitional windows you can draw whenever you like. However, if you do any custom drawing you must handle

`frmUpdateEvent`. To trigger a `frmUpdateEvent`, call `WinInvalidateRect()` or `WinInvalidateWindow()`.

Many of the window drawing operations (documented under "WinDrawOperation" on page 699 of *Exploring Palm OS: User Interface*) are deprecated in the Palm OS Cobalt ARM-native APIs. Pay particular attention to `winInvert` and `winSwap`; these do not work when drawing text, drawing unfilled rectangles, or drawing to update-based windows. When you try to use them in these instances, nothing is drawn to the screen.

PIM Database Access

The PIM applications have been rewritten to use schema databases. Applications that directly access the PIM databases will quickly discover that the classic databases used by the 68K-based versions of the PIM applications are either not present or are empty. Such applications will have to be rewritten[1]. See *Exploring Palm OS: Memory, Databases, and Files* for information on reading and writing schema databases. *Exploring Palm OS: Palm OS File Formats* describes the schema of the PIM application databases.

Differences in Endianness

68K applications live in a big-endian world. Palm OS Cobalt, on the other hand, uses the ARM processor in little-endian mode. Because of this, to allow the exchange of data between a handheld running Palm OS Cobalt and one running Palm OS Garnet or an earlier Palm OS version, you'll need to develop a "wire format"—a processor-independent format—for the data being exchanged. The PIM applications do this by adopting standard exchange formats such as vCalendar.

Note that byte ordering can affect your application's conduits as well. If your application uses a conduit you can add byte-swapping routines to your conduit as needed.

1. 68K-based applications that run courtesy of PACE continue to work, however; see "Accessing the PIM Application Databases" on page 13 for specifics.

Application Process Tear-down

Applications run in a dedicated process. When the application quits, the application is torn down. Because of this, you no longer use `MemPtrSetOwner()` to share a block of memory between applications.

NOTE: Palm OS Cobalt maintains a "legacy heap" largely for use by PACE. All "legacy" memory (memory allocated from 68K code) resides in this heap. The legacy heap is persistent across invocations of PACE and native ARM applications. It is limited in size, and is size-checked at application shut-down. The legacy heap respects all of the behavior of the heap model used in Palm OS versions prior to Palm OS Cobalt, including the behavior related to owner IDs.

The fact that the application process is torn down when your application quits also means that:

- You can't use callback notifications. There is no guarantee that your code will be loaded, or that it will be loaded at the same location after an application switch.
- You can't use embedded pointers in the `SysNotifyParamType` structures that accompany your notifications.

Beyond the Basic Port

Once your application is up and running natively on Palm OS Cobalt, you may want to take advantage of the many new features of the Palm OS Cobalt operating system. Features such as schema databases, multithreading, and the new multimedia subsystem can be used to greatly enhance a Palm OS application, making it richer and more powerful.

Even if you don't want to take advantage of these major new features, however, note that some of the programming techniques you had to employ in a 68k-based Palm OS application were "defensive" in nature—they were to work around limitations in the operating system. Palm OS Cobalt lifts many of these restrictions, so although the old code will continue to work, you may wish to

simplify your application by removing any code that exists to work around these limitations. In particular, note that:

- Using handles is rarely beneficial in Palm OS Cobalt, so use pointers for simplicity.
- Global variables are now available for all launch codes and for shared libraries.
- Memory chunks are no longer limited to a maximum of 64 KB. Extended database records can exceed 64 KB as well (but note that Classic databases retain this restriction).
- Code segmentation of large applications is no longer necessary.
- Applications can now be multi-threaded.
- All applications are now shared libraries, exporting `PilotMain()`. Applications can also export other functions. Shared libraries are much easier to write in Palm OS Cobalt: there are no trap dispatch tables, and you can use global variables. To use a shared library, simply link against the library's stub file.
- MathLib has been ported to ARM. Note that in Palm OS Cobalt version 6.0 MathLib is not in ROM, however. It may well be in ROM in later releases of Palm OS Cobalt.

Part II
68K vs ARM-Native APIs

The chapters in this section are a file-by-file comparison of the header files declared in the Palm OS Garnet SDK with their Palm OS Cobalt equivalents. New APIs introduced in Palm OS Cobalt—those for Schema databases, or threading, for example—are not listed here; for documentation on those see the appropriate *Exploring Palm OS* book. These chapters are intended solely for a developer with an existing 68K-based application in the initial stages of porting that application to Palm OS Cobalt.

NOTE: Although all of the Palm OS Garnet APIs are listed and categorized, much of the information on how to deal with a deleted or modified API in Palm OS Cobalt has yet to be written. If you need material that should be in this book but isn't, contact PalmSource for a more up-to-date draft.

3

AboutBox.h

No changes. Note that these APIs are considered "System Use Only" and should not be used by applications.

Unchanged APIs

Table 3.1 Unchanged functions

`AbtShowAbout()`

4

AddressSortLib.h

These APIs were always classified as "System Use Only" and are no longer publicly supported.

Deleted APIs

Table 4.1 Deleted functions

`AddrDBSort()`	`AddrJDBSort()`

Table 4.2 Deleted #defines

`AddressSortLibTrapAddrDBSort`	`AddressSortLibTrapAddrJDBSort`
`addrSortLibCreator`	`addrSortLibType`

5

AlarmMgr.h

Deleted APIs

Table 5.1 Deleted functions

Deleted API	Use instead
`AlmAlarmCallback()`	
`AlmCancelAll()`	
`AlmDisplayAlarm()`	
`AlmTimeChange()`	

Table 5.2 Deleted macros

Deleted API	Use instead
`AlmGetProcAlarm()`	
`AlmSetProcAlarm()`	

Table 5.3 Deleted #defines

Deleted API	Use instead
`almProcAlarmCardNo`	

Table 5.4 Deleted enumerated types

Deleted API	Use instead
`AlmProcCmdEnum`	

Table 5.5 Deleted application-defined functions

Deleted API	Use instead
`AlmAlarmProcPtr()`	

Modified APIs

Table 5.6 Modified functions

Modified API	Description of change
`uint32_t AlmGetAlarm (DatabaseID, uint32_t *)`	No longer has a *`cardNo`* parameter.
`status_t AlmSetAlarm (DatabaseID, uint32_t, uint32_t, Boolean)`	No longer has a *`cardNo`* parameter.

Table 5.7 Modified structures

Modified API	Description of change
`SysAlarmTriggeredParamType`	Padding bytes added.
`SysDisplayAlarmParamType`	Padding bytes added.

Unchanged APIs

Table 5.8 Unchanged functions

`AlmEnableNotification()`

Table 5.9 Unchanged #defines

`almErrFull`	`almErrMemory`

6

AppLaunchCmd.h

Deleted APIs

Table 6.1 Deleted macros

Deleted API	Use instead
`AppCallWithCommand()`	
`AppLaunchWithCommand()`	
`LaunchWithCommand()`	

Table 6.2 Deleted structures

Deleted API	Use instead
`MailAddRecordParamsType`	
`MsgAddRecordParamsType`	

Table 6.3 Deleted types

Deleted API	Use instead
`MailAddRecordParamsPtr`	
`MsgAddRecordParamsPtr`	

Table 6.4 Deleted #defines

Deleted API	Use instead
MsgDeletedCategory	
MsgDraftCategory	
MsgFiledCategory	
MsgInboxCategory	
MsgOutboxCategory	

Table 6.5 Deleted enumerated types

Deleted API	Use instead
AddressLookupFields	
MailMsgPriorityType	

Modified APIs

Table 6.6 Modified #defines

Modified API	Description of change
#define addrLookupStringLength 20	

Unchanged APIs

Table 6.7 Unchanged structures

`AddrLookupParamsType`	`PrefActivePanelParamsType`

Table 6.8 Unchanged types

`AddrLookupParamsPtr`	`PrefActivePanelParamsPtr`

Table 6.9 Unchanged #defines

`prefAppLaunchCmdSetActivePanel`

7

AttentionMgr.h

In Palm OS Cobalt the Attention Manager uses a launch code to request services from your application; callback functions are no longer supported.

The card number parameter has been removed from a number of Attention Manager function prototypes.

Deleted APIs

Table 7.1 Deleted application-defined functions

Deleted API	Use instead
`AttnCallbackProc()`	Applications now receive notice of Attention Manager actions only via a launch code. Callbacks are no longer supported.

Modified APIs

Table 7.2 Modified functions

Modified API	Description of change
`Boolean AttnForgetIt (DatabaseID, uint32_t)`	The card number parameter has been removed.
`status_t AttnGetAttention (DatabaseID, uint32_t, AttnLevelType, AttnFlagsType, uint16_t, uint16_t)`	The card number parameter and the callback parameter have both been removed. Callbacks are no longer supported.
`uint16_t AttnGetCounts (DatabaseID, uint16_t *, uint16_t *)`	The card number parameter has been removed.

Table 7.2 Modified functions

Modified API	Description of change
`void AttnIterate (DatabaseID, uint32_t)`	The card number parameter has been removed.
`Boolean AttnUpdate (DatabaseID, uint32_t, AttnFlagsType *, uint16_t *, uint16_t *)`	The card number parameter and the callback parameter have both been removed. Callbacks are no longer supported.

Table 7.3 Modified structures

Modified API	Description of change
`AttnCommandArgsType`	Padding bytes have been added to the various structures that make up this union.
`AttnLaunchCodeArgsType`	Padding bytes have been added to this structure.

Unchanged APIs

Table 7.4 Unchanged functions

`AttnDoSpecialEffects()`	`AttnIndicatorEnable()`
`AttnIndicatorEnabled()`	`AttnListOpen()`

Table 7.5 Unchanged structures

`AttnNotifyDetailsType`

Table 7.6 Unchanged types

`AttnCommandType`	`AttnFlagsType`
`AttnLevelType`	

Table 7.7 Unchanged #defines

attnErrMemory	kAttnCommandCustomEffect
kAttnCommandDrawDetail	kAttnCommandDrawList
kAttnCommandGoThere	kAttnCommandGotIt
kAttnCommandIterate	kAttnCommandPlaySound
kAttnCommandSnooze	kAttnFlagsAllBits
kAttnFlagsAlwaysCustomEffect	kAttnFlagsAlwaysLED
kAttnFlagsAlwaysSound	kAttnFlagsAlwaysVibrate
kAttnFlagsCapabilitiesMask	kAttnFlagsCustomEffectBit
kAttnFlagsEverything	kAttnFlagsHasCustomEffect
kAttnFlagsHasLED	kAttnFlagsHasSound
kAttnFlagsHasVibrate	kAttnFlagsLEDBit
kAttnFlagsNoCustomEffect	kAttnFlagsNoLED
kAttnFlagsNoSound	kAttnFlagsNothing
kAttnFlagsNoVibrate	kAttnFlagsSoundBit
kAttnFlagsUserSettingsMask	kAttnFlagsUserWantsCustomEffec t
kAttnFlagsUserWantsLED	kAttnFlagsUserWantsSound
kAttnFlagsUserWantsVibrate	kAttnFlagsUseUserSettings
kAttnFlagsVibrateBit	kAttnFtrCapabilities
kAttnFtrCreator	kAttnIndicatorHeight
kAttnIndicatorLeft	kAttnIndicatorTop
kAttnIndicatorWidth	kAttnLevelInsistent
kAttnLevelSubtle	kAttnListMaxIconWidth
kAttnListTextOffset	

8

Bitmap.h

Applications that were treating the various bitmap structures as opaque should find little changed in Palm OS Cobalt. Applications that do access the internals these structures directly should use the appropriate accessor functions instead. See Chapter 12, "Bitmap Reference," on page 173 of *Exploring Palm OS: User Interface* for a detailed description of each structure and the functions you would use to access that structure's contents.

Deleted APIs

Table 8.1 Deleted functions

Deleted API	Use instead
`BmpBitsSize()`	`BmpGetSizes()`
`WinHighDensityDispatch()`	Nothing. This function was "System Use Only."

Table 8.2 Deleted macros

Deleted API	Use instead
`HIGH_DENSITY_TRAP()`	Nothing. High-density support is a standard part of the operating system in Palm OS Cobalt.

Table 8.3 Deleted structures

Deleted API	Use instead
`BitmapFlagsType`	The structure of the bitmap flags is now private. Applications must use accessor functions instead.

Table 8.4 Deleted #defines

Deleted API	Use instead
`HDSelector...`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.

Modified APIs

Table 8.5 Modified functions

Modified API	Description of change
`uint32_t BmpSize (const BitmapType *)`	This function used to return an unsigned 16-bit integer.

Table 8.6 Modified structures

Modified API	Description of change
`BitmapType`	The internals of this structure should be considered private; applications should manipulate bitmaps using the supplied functions only.
`BitmapTypeV0`	The internals of this structure should be considered private; applications should manipulate bitmaps using the supplied functions only.
`BitmapTypeV1`	The internals of this structure should be considered private; applications should manipulate bitmaps using the supplied functions only.
`BitmapTypeV2`	The internals of this structure should be considered private; applications should manipulate bitmaps using the supplied functions only.

Table 8.6 Modified structures *(continued)*

Modified API	Description of change
`BitmapTypeV3`	The internals of this structure should be considered private; applications should manipulate bitmaps using the supplied functions only.
`ColorTableType`	The `numEntries` field has been renamed to `entryCount`.

Table 8.7 Modified enumerated types

Modified API	Description of change
`BitmapCompressionType`	Formerly an enum, this is now a typedef that accepts one of the values declared by the new `BitmapCompressionTag` enum.
`DensityType`	Formerly an enum, this is now a typedef that accepts one of the values declared by the new `DensityTag` enum.
`PixelFormatType`	Formerly an enum, this is now a typedef that accepts one of the values declared by the new `PixelFormatTag` enum. The PixelFormatTag enum has two new values, both of which define pixel formats with an alpha channel: `pixelFormat5551`, and `pixelFormat4444`.

Unchanged APIs

Table 8.8 Unchanged functions

`BmpColortableSize()`	`BmpCompress()`
`BmpCreate()`	`BmpCreateBitmapV3()`

Table 8.8 Unchanged functions

BmpDelete()	BmpGetBitDepth()
BmpGetBits()	BmpGetColortable()
BmpGetCompressionType()	BmpGetDensity()
BmpGetDimensions()	BmpGetNextBitmap()
BmpGetNextBitmapAnyDensity()	BmpGetSizes()
BmpGetTransparentValue()	BmpGetVersion()
BmpSetDensity()	BmpSetTransparentValue()

Table 8.9 Unchanged macros

ColorTableEntries()

Table 8.10 Unchanged structures

BitmapDirectInfoType	RGBColorType

Table 8.11 Unchanged types

BitmapPtr	BitmapPtrV0
BitmapPtrV1	BitmapPtrV2
BitmapPtrV3	

Table 8.12 Unchanged #defines

BitmapVersionOne	BitmapVersionThree
BitmapVersionTwo	BitmapVersionZero
kTransparencyNone	

9

BtCommVdrv.h

Deleted APIs

Table 9.1 Deleted structures

`BtVdOpenParams`	`BtVdOpenParamsClient`
`BtVdOpenParamsServer`	`BtVdUuidList`

Table 9.2 Deleted enumerated types

`BtVdClientMethod`	`BtVdRole`

10

BtExgLib.h

Deleted APIs

Table 10.1 Deleted #defines

Deleted API	Use instead
btexgBdAddrSeparator	
btexgFtrCreator	
btexgFtrNumVersion	
btexgLibName	
btexgLibTrapLast	
btExgLibTrapUnload	
btexgMultiScheme	
btexgMultiSufix	
btexgPrefix	
btexgScheme	
btexgSimplifiedPrefix	
btexgSingleScheme	
btexgSingleSufix	
btexgURLSeparator	

Modified APIs

Table 10.2 Modified structures

Modified API	Description of change
`ExgCtlGetURLType`	

Unchanged APIs

Table 10.3 Unchanged #defines

`exgLibCtlGetURL`

11

BtLib.h

Deleted APIs

Table 11.1 Deleted functions

Deleted API	Use instead
BtLibDiscoverMultipleDevices()	
BtLibDiscoverSingleDevice()	
BtLibGetSelectedDevices()	
BtLibHandleEvent()	
BtLibHandleTransportEvent()	
BtLibRegisterManagementNotification()	
BtLibServiceClose()	
BtLibServiceIndicateSessionStart()	
BtLibServiceOpen()	
BtLibServicePlaySound()	
BtLibSleep()	
BtLibUnregisterManagementNotification ()	
BtLibWake()	

Table 11.2 Deleted macros

Deleted API	Use instead
BTLIB_TRAP	

Modified APIs

Table 11.3 Modified functions

Modified API	Description of change
status_t BtLibAddrAToBtd (const char *, BtLibDeviceAddressType *)	
status_t BtLibAddrBtdToA (BtLibDeviceAddressType *, char *, uint16_t)	
status_t BtLibCancelInquiry (int32_t)	
status_t BtLibClose (int32_t)	
status_t BtLibGetGeneralPreference (int32_t, BtLibGeneralPrefEnum, void *, uint16_t)	
status_t BtLibGetRemoteDeviceName (int32_t, BtLibDeviceAddressType *, BtLibGetNameEnum)	
status_t BtLibLinkConnect (int32_t, BtLibDeviceAddressType *)	

Table 11.3 Modified functions *(continued)*

Modified API	Description of change
`status_t BtLibLinkDisconnect (int32_t, BtLibDeviceAddressType *)`	
`status_t BtLibLinkGetState (int32_t, BtLibDeviceAddressType *, BtLibLinkPrefsEnum, void *, uint16_t)`	
`status_t BtLibLinkSetState (int32_t, BtLibDeviceAddressType *, BtLibLinkPrefsEnum, void *, uint16_t)`	
`status_t BtLibOpen (int32_t *)`	
`status_t BtLibPiconetCreate (int32_t, Boolean, Boolean)`	
`status_t BtLibPiconetDestroy (int32_t)`	
`status_t BtLibPiconetLockInbound (int32_t)`	
`status_t BtLibPiconetUnlockInbound (int32_t, Boolean)`	
`status_t BtLibSdpCompareUuids (int32_t, BtLibSdpUuidType *, BtLibSdpUuidType *)`	
`status_t BtLibSdpGetPsmByUuid (BtLibSocketRef, BtLibDeviceAddressType *, BtLibSdpUuidType *, uint8_t)`	

Table 11.3 Modified functions *(continued)*

Modified API	Description of change
`status_t BtLibSdpGetServerChannelByUuid (BtLibSocketRef, BtLibDeviceAddressType *, BtLibSdpUuidType *, uint8_t)`	
`status_t BtLibSdpParseRawDataElement (int32_t, const uint8_t *, uint16_t *, uint32_t *)`	
`status_t BtLibSdpServiceRecordCreate (int32_t, BtLibSdpRecordHandle *)`	
`status_t BtLibSdpServiceRecordDestroy (int32_t, BtLibSdpRecordHandle)`	
`status_t BtLibSdpServiceRecordGetAttribute (int32_t, BtLibSdpRecordHandle, BtLibSdpAttributeIdType, BtLibSdpAttributeDataType *, uint16_t, uint16_t)`	
`status_t BtLibSdpServiceRecordGetNumListEntries (int32_t, BtLibSdpRecordHandle, BtLibSdpAttributeIdType, uint16_t, uint16_t *)`	

Table 11.3 Modified functions *(continued)*

Modified API	Description of change
`status_t BtLibSdpServiceRecordGetNumLists (int32_t, BtLibSdpRecordHandle, BtLibSdpAttributeIdType, uint16_t *)`	
`status_t BtLibSdpServiceRecordGetRawAttribute (int32_t, BtLibSdpRecordHandle, BtLibSdpAttributeIdType, uint8_t *, uint16_t *)`	
`status_t BtLibSdpServiceRecordGetSizeOfRawAttribute (int32_t, BtLibSdpRecordHandle, BtLibSdpAttributeIdType, uint16_t *)`	
`status_t BtLibSdpServiceRecordGetStringOrUrlLength (int32_t, BtLibSdpRecordHandle, BtLibSdpAttributeIdType, uint16_t *)`	
`status_t BtLibSdpServiceRecordMapRemote (BtLibSocketRef, BtLibDeviceAddressType *, BtLibSdpRemoteServiceRecordHandle, BtLibSdpRecordHandle)`	

Table 11.3 Modified functions *(continued)*

Modified API	Description of change
`status_t BtLibSdpServiceRecordSetAttribute (int32_t, BtLibSdpRecordHandle, BtLibSdpAttributeIdType, BtLibSdpAttributeDataType *, uint16_t, uint16_t)`	
`status_t BtLibSdpServiceRecordSetAttributesForSocket (BtLibSocketRef, BtLibSdpUuidType *, uint8_t, const char *, uint16_t, BtLibSdpRecordHandle)`	
`status_t BtLibSdpServiceRecordSetRawAttribute (int32_t, BtLibSdpRecordHandle, BtLibSdpAttributeIdType, const uint8_t *, uint16_t)`	
`status_t BtLibSdpServiceRecordsGetByServiceClass (BtLibSocketRef, BtLibDeviceAddressType *, BtLibSdpUuidType *, uint16_t)`	
`status_t BtLibSdpServiceRecordStartAdvertising (int32_t, BtLibSdpRecordHandle)`	
`status_t BtLibSdpServiceRecordStopAdvertising (int32_t, BtLibSdpRecordHandle)`	

Table 11.3 Modified functions *(continued)*

Modified API	Description of change
`status_t BtLibSdpVerifyRawDataElement (int32_t, const uint8_t *, uint16_t, uint8_t)`	
`status_t BtLibSecurityFindTrustedDevice Record (int32_t, BtLibDeviceAddressType *, uint16_t *)`	
`status_t BtLibSecurityGetTrustedDeviceR ecordInfo (int32_t, uint16_t, BtLibDeviceAddressType *, char *, uint8_t, BtLibClassOfDeviceType *, uint32_t *, Boolean *)`	
`status_t BtLibSecurityNumTrustedDeviceR ecords (int32_t, Boolean, uint16_t *)`	
`status_t BtLibSecurityRemoveTrustedDevi ceRecord (int32_t, uint16_t)`	
`status_t BtLibSetGeneralPreference (int32_t, BtLibGeneralPrefEnum, void *, uint16_t)`	
`status_t BtLibSocketAdvanceCredit (BtLibSocketRef, uint8_t)`	
`status_t BtLibSocketClose (BtLibSocketRef)`	

Table 11.3 Modified functions *(continued)*

Modified API	Description of change
`status_t BtLibSocketConnect (BtLibSocketRef, BtLibSocketConnectInfoType *)`	
`status_t BtLibSocketCreate (BtLibSocketRef *, BtLibProtocolEnum)`	
`status_t BtLibSocketGetInfo (BtLibSocketRef, BtLibSocketInfoEnum, void *, uint32_t)`	
`status_t BtLibSocketListen (BtLibSocketRef, BtLibSocketListenInfoType *)`	
`status_t BtLibSocketRespondToConnection (BtLibSocketRef, Boolean)`	
`status_t BtLibSocketSend (BtLibSocketRef, uint8_t *, uint32_t)`	
`status_t BtLibStartInquiry (int32_t, uint8_t, uint8_t)`	

Unchanged APIs

Table 11.4 Unchanged macros

`BtLibL2CapHToNL()`	`BtLibL2CapHToNS()`
`BtLibL2CapNToHL()`	`BtLibL2CapNToHS()`
`BtLibRfCommHToNL()`	`BtLibRfCommHToNS()`
`BtLibRfCommNToHL()`	`BtLibRfCommNToHS()`

Table 11.4 Unchanged macros *(continued)*

`BtLibSdpGetRawDataElementSize()`	`BtLibSdpGetRawElementType()`
`BtLibSdpHToNL()`	`BtLibSdpHToNS()`
`BtLibSdpNToHL()`	`BtLibSdpNToHS()`

12

BtLibTypes.h

Deleted APIs

Table 12.1 Deleted structures

Deleted API	Use instead
BtLibServiceNofityDetailType	

Table 12.2 Deleted #defines

Deleted API	Use instead
btLibLangFijian	
btLibManagementEventNotificati onType	
btLibName	
BtLibServiceNotifyType	
btLibTrap...	

Table 12.3 Deleted enumerated types

Deleted API	Use instead
BtLibAccessibleModeEnum	
BtLibConnectionRoleEnum	
BtLibGeneralPrefEnum	
BtLibGetNameEnum	

Table 12.3 Deleted enumerated types *(continued)*

Deleted API	Use instead
BtLibLinkModeEnum	
BtLibLinkPrefsEnum	
BtLibManagementEventEnum	
BtLibProtocolEnum	
BtLibSdpUuidSizeEnum	
BtLibServiceNotifyEventType	
BtLibSocketEventEnum	
BtLibSocketInfoEnum	

Table 12.4 Deleted application-defined functions

Deleted API	Use instead
BtLibManagementProcPtr()	
BtLibSocketProcPtr()	

Modified APIs

Table 12.5 Modified structures

Modified API	Description of change
BtLibDeviceAddressType	
BtLibFriendlyNameType	
BtLibManagementEventType	
BtLibPinType	
BtLibProfileDescriptorListEntryType	

Table 12.5 Modified structures *(continued)*

Modified API	Description of change
BtLibProtocolDescriptorListEntryType	
BtLibSocketConnectInfoType	
BtLibSocketEventType	
BtLibSocketListenInfoType	
BtLibStringType	
BtLibUrlType	

Table 12.6 Modified types

Modified API	Description of change
typedef int32_t BtLibSocketRef	

Table 12.7 Modified #defines

Modified API	Description of change
#define btLibErrNoError 0	

Unchanged APIs

Table 12.8 Unchanged macros

BtLibSdpUuidInitialize()

Table 12.9 Unchanged structures

BtLibLanguageBaseTripletType	BtLibSdpAttributeDataType
BtLibSdpUuidType	

Table 12.10Unchanged types

BtLibClassOfDeviceType	BtLibL2CapChannelIdType
BtLibL2CapPsmType	BtLibRfCommServerIdType
BtLibSdpAttributeIdType	BtLibSdpRecordHandle
BtLibSdpRemoteServiceRecordHandle	

Table 12.11Unchanged #defines

btLibAvailability	btLibBrowseGroupList
btLibCharSet_Adobe_Standard_Encoding	btLibCharSet_Adobe_Symbol_Encoding
btLibCharSet_ANSI_X3_110_1983	btLibCharSet_ASMO_449
btLibCharSet_Big5	btLibCharSet_Big5_HKSCS
btLibCharSet_BS_4730	btLibCharSet_BS_viewdata
btLibCharSet_CSA_Z243_4_1985_1	btLibCharSet_CSA_Z243_4_1985_2
btLibCharSet_CSA_Z243_4_1985_gr	btLibCharSet_CSN_369103
btLibCharSet_DEC_MCS	btLibCharSet_DIN_66003
btLibCharSet_dk_us	btLibCharSet_DS_2089
btLibCharSet_EBCDIC_AT_DE	btLibCharSet_EBCDIC_AT_DE_A
btLibCharSet_EBCDIC_CA_FR	btLibCharSet_EBCDIC_DK_NO
btLibCharSet_EBCDIC_DK_NO_A	btLibCharSet_EBCDIC_ES
btLibCharSet_EBCDIC_ES_A	btLibCharSet_EBCDIC_ES_S
btLibCharSet_EBCDIC_FI_SE	btLibCharSet_EBCDIC_FI_SE_A
btLibCharSet_EBCDIC_FR	btLibCharSet_EBCDIC_IT
btLibCharSet_EBCDIC_PT	btLibCharSet_EBCDIC_UK

Table 12.11Unchanged #defines *(continued)*

btLibCharSet_EBCDIC_US	btLibCharSet_ECMA_cyrillic
btLibCharSet_ES	btLibCharSet_ES2
btLibCharSet_EUC_JP	btLibCharSet_EUC_KR
btLibCharSet_Extended_UNIX_Code_Fixed_Width_for_Japanese	btLibCharSet_GB2312
btLibCharSet_GB_1988_80	btLibCharSet_GB_2312_80
btLibCharSet_GOST_19768_74	btLibCharSet_greek7
btLibCharSet_greek7_old	btLibCharSet_greek_ccitt
btLibCharSet_HP_DeskTop	btLibCharSet_HP_Legal
btLibCharSet_HP_Math8	btLibCharSet_HP_Pi_font
btLibCharSet_hp_roman8	btLibCharSet_HZ_GB_2312
btLibCharSet_IBM00858	btLibCharSet_IBM00924
btLibCharSet_IBM01140	btLibCharSet_IBM01141
btLibCharSet_IBM01142	btLibCharSet_IBM01143
btLibCharSet_IBM01144	btLibCharSet_IBM01145
btLibCharSet_IBM01146	btLibCharSet_IBM01147
btLibCharSet_IBM01148	btLibCharSet_IBM01149
btLibCharSet_IBM037	btLibCharSet_IBM038
btLibCharSet_IBM1026	btLibCharSet_IBM273
btLibCharSet_IBM274	btLibCharSet_IBM275
btLibCharSet_IBM277	btLibCharSet_IBM278
btLibCharSet_IBM280	btLibCharSet_IBM281
btLibCharSet_IBM284	btLibCharSet_IBM285
btLibCharSet_IBM290	btLibCharSet_IBM297
btLibCharSet_IBM420	btLibCharSet_IBM423

Table 12.11Unchanged #defines *(continued)*

btLibCharSet_IBM424	btLibCharSet_IBM437
btLibCharSet_IBM500	btLibCharSet_IBM775
btLibCharSet_IBM850	btLibCharSet_IBM851
btLibCharSet_IBM852	btLibCharSet_IBM855
btLibCharSet_IBM857	btLibCharSet_IBM860
btLibCharSet_IBM861	btLibCharSet_IBM862
btLibCharSet_IBM863	btLibCharSet_IBM864
btLibCharSet_IBM865	btLibCharSet_IBM866
btLibCharSet_IBM868	btLibCharSet_IBM869
btLibCharSet_IBM870	btLibCharSet_IBM871
btLibCharSet_IBM880	btLibCharSet_IBM891
btLibCharSet_IBM903	btLibCharSet_IBM904
btLibCharSet_IBM905	btLibCharSet_IBM918
btLibCharSet_IBM_Symbols	btLibCharSet_IBM_Thai
btLibCharSet_IEC_P27_1	btLibCharSet_INIS
btLibCharSet_INIS_8	btLibCharSet_INIS_cyrillic
btLibCharSet_INVARIANT	btLibCharSet_ISO_10367_box
btLibCharSet_ISO_10646_UCS_2	btLibCharSet_ISO_10646_UCS_4
btLibCharSet_ISO_10646_UCS_Basic	btLibCharSet_ISO_10646_Unicode_Latin1
btLibCharSet_ISO_10646_UTF_1	btLibCharSet_ISO_2022_CN
btLibCharSet_ISO_2022_CN_EXT	btLibCharSet_ISO_2022_JP
btLibCharSet_ISO_2022_JP_2	btLibCharSet_ISO_2022_KR
btLibCharSet_ISO_2033_1983	btLibCharSet_ISO_5427
btLibCharSet_ISO_5427_1981	btLibCharSet_ISO_5428_1980

Table 12.11Unchanged #defines *(continued)*

btLibCharSet_ISO_646_basic_1983	btLibCharSet_ISO_646_irv_1983
btLibCharSet_ISO_6937_2_25	btLibCharSet_ISO_6937_2_add
btLibCharSet_ISO_8859_1	btLibCharSet_ISO_8859_10
btLibCharSet_iso_8859_13	btLibCharSet_iso_8859_14
btLibCharSet_ISO_8859_15	btLibCharSet_ISO_8859_1_Windows_3_0_Latin_1
btLibCharSet_ISO_8859_1_Windows_3_1_Latin_1	btLibCharSet_ISO_8859_2
btLibCharSet_ISO_8859_2_Windows_Latin_2	btLibCharSet_ISO_8859_3
btLibCharSet_ISO_8859_4	btLibCharSet_ISO_8859_5
btLibCharSet_ISO_8859_6	btLibCharSet_ISO_8859_6_E
btLibCharSet_ISO_8859_6_I	btLibCharSet_ISO_8859_7
btLibCharSet_ISO_8859_8	btLibCharSet_ISO_8859_8_E
btLibCharSet_ISO_8859_8_I	btLibCharSet_ISO_8859_9
btLibCharSet_ISO_8859_9_Windows_Latin_5	btLibCharSet_ISO_8859_supp
btLibCharSet_iso_ir_90	btLibCharSet_ISO_Unicode_IBM_1261
btLibCharSet_ISO_Unicode_IBM_1264	btLibCharSet_ISO_Unicode_IBM_1265
btLibCharSet_ISO_Unicode_IBM_1268	btLibCharSet_ISO_Unicode_IBM_1276
btLibCharSet_IT	btLibCharSet_JIS_C6220_1969_jp
btLibCharSet_JIS_C6220_1969_ro	btLibCharSet_JIS_C6226_1978
btLibCharSet_JIS_C6226_1983	btLibCharSet_JIS_C6229_1984_a

Table 12.11Unchanged #defines *(continued)*

btLibCharSet_JIS_C6229_1984_b	btLibCharSet_JIS_C6229_1984_b_add
btLibCharSet_JIS_C6229_1984_hand	btLibCharSet_JIS_C6229_1984_hand_add
btLibCharSet_JIS_C6229_1984_kana	btLibCharSet_JIS_Encoding
btLibCharSet_JIS_X0201	btLibCharSet_JIS_X0212_1990
btLibCharSet_JUS_I_B1_002	btLibCharSet_JUS_I_B1_003_mac
btLibCharSet_JUS_I_B1_003_serb	btLibCharSet_KOI8_R
btLibCharSet_KOI8_U	btLibCharSet_KSC5636
btLibCharSet_KS_C_5601_1987	btLibCharSet_latin_greek
btLibCharSet_Latin_greek_1	btLibCharSet_latin_lap
btLibCharSet_macintosh	btLibCharSet_Microsoft_Publishing
btLibCharSet_MNEM	btLibCharSet_MNEMONIC
btLibCharSet_MSZ_7795_3	btLibCharSet_NATS_DANO
btLibCharSet_NATS_DANO_ADD	btLibCharSet_NATS_SEFI
btLibCharSet_NATS_SEFI_ADD	btLibCharSet_NC_NC00_10_81
btLibCharSet_NF_Z_62_010	btLibCharSet_NF_Z_62_010__1973_
btLibCharSet_NS_4551_1	btLibCharSet_NS_4551_2
btLibCharSet_PC8_Danish_Norwegian	btLibCharSet_PC8_Turkish
btLibCharSet_PT	btLibCharSet_PT2
btLibCharSet_SCSU	btLibCharSet_SEN_850200_B
btLibCharSet_SEN_850200_C	btLibCharSet_Shift_JIS
btLibCharSet_TIS_620	btLibCharSet_T_101_G2

Table 12.11Unchanged #defines *(continued)*

btLibCharSet_T_61_7bit	btLibCharSet_T_61_8bit
btLibCharSet_UNICODE_1_1	btLibCharSet_UNICODE_1_1_UTF_7
btLibCharSet_UNKNOWN_8BIT	btLibCharSet_US_ASCII
btLibCharSet_us_dk	btLibCharSet_UTF_16
btLibCharSet_UTF_16BE	btLibCharSet_UTF_16LE
btLibCharSet_UTF_7	btLibCharSet_UTF_8
btLibCharSet_Ventura_International	btLibCharSet_Ventura_Math
btLibCharSet_Ventura_US	btLibCharSet_videotex_suppl
btLibCharSet_VIQR	btLibCharSet_VISCII
btLibCharSet_windows_1250	btLibCharSet_windows_1251
btLibCharSet_windows_1252	btLibCharSet_windows_1253
btLibCharSet_windows_1254	btLibCharSet_windows_1255
btLibCharSet_windows_1256	btLibCharSet_windows_1257
btLibCharSet_windows_1258	btLibCharSet_Windows_31J
btLibClientExecutableUrl	btLibCOD_Audio
btLibCOD_Capturing	btLibCOD_Information
btLibCOD_LimitedDiscoverableMode	btLibCOD_Major_Any
btLibCOD_Major_Audio	btLibCOD_Major_Computer
btLibCOD_Major_Lan_Access_Point	btLibCOD_Major_Mask
btLibCOD_Major_Misc	btLibCOD_Major_Peripheral
btLibCOD_Major_Phone	btLibCOD_Major_Unclassified
btLibCOD_Minor_Any	btLibCOD_Minor_Audio_Any

Table 12.11Unchanged #defines *(continued)*

btLibCOD_Minor_Audio_Headset	btLibCOD_Minor_Audio_Unclassified
btLibCOD_Minor_Comp_Any	btLibCOD_Minor_Comp_Desktop
btLibCOD_Minor_Comp_Handheld	btLibCOD_Minor_Comp_Laptop
btLibCOD_Minor_Comp_Palm	btLibCOD_Minor_Comp_Server
btLibCOD_Minor_Comp_Unclassified	btLibCOD_Minor_Lan_0
btLibCOD_Minor_Lan_17	btLibCOD_Minor_Lan_33
btLibCOD_Minor_Lan_50	btLibCOD_Minor_Lan_67
btLibCOD_Minor_Lan_83	btLibCOD_Minor_Lan_99
btLibCOD_Minor_Lan_Any	btLibCOD_Minor_Lan_NoService
btLibCOD_Minor_Mask	btLibCOD_Minor_Phone_Any
btLibCOD_Minor_Phone_Cellular	btLibCOD_Minor_Phone_Cordless
btLibCOD_Minor_Phone_Modem	btLibCOD_Minor_Phone_Smart
btLibCOD_Minor_Phone_Unclassified	btLibCOD_Networking
btLibCOD_ObjectTransfer	btLibCOD_Rendering
btLibCOD_ServiceAny	btLibCOD_Service_Mask
btLibCOD_Telephony	btLibDESD_16BYTES
btLibDESD_1BYTE	btLibDESD_2BYTES
btLibDESD_4BYTES	btLibDESD_8BYTES
btLibDESD_ADD_16BITS	btLibDESD_ADD_32BITS
btLibDESD_ADD_8BITS	btLibDESD_MASK
btLibDETD_ALT	btLibDETD_BOOL
btLibDETD_MASK	btLibDETD_NIL
btLibDETD_SEQ	btLibDETD_SINT

Table 12.11Unchanged #defines *(continued)*

btLibDETD_TEXT	btLibDETD_UINT
btLibDETD_URL	btLibDETD_UUID
btLibDeviceAddressSize	btLibDocumentationUrl
btLibErr...	btLibFeatureCreator
btLibFeatureVersion	btLibIconUrl
btLibL2DiscConfigOptions	btLibL2DiscConfigReject
btLibL2DiscConfigUnacceptable	btLibL2DiscConnNoResources
btLibL2DiscConnPsmUnsupported	btLibL2DiscConnSecurityBlock
btLibL2DiscLinkDisc	btLibL2DiscQosViolation
btLibL2DiscReasonUnknown	btLibL2DiscRequestTimeout
btLibL2DiscSecurityBlock	btLibL2DiscUserRequest
btLibLangAbkihazian	btLibLangAfar
btLibLangAfrikaans	btLibLangAlbanian
btLibLangAmharic	btLibLangArabic
btLibLangArmenian	btLibLangAssamese
btLibLangAymara	btLibLangAzerbaijani
btLibLangBashkir	btLibLangBasque
btLibLangBengali	btLibLangBhutani
btLibLangBihari	btLibLangBislama
btLibLangBreton	btLibLangBulgarian
btLibLangBurmese	btLibLangByelorussian
btLibLangCambodian	btLibLangCatalan
btLibLangChinese	btLibLangCorsican
btLibLangCroation	btLibLangCzech

Table 12.11Unchanged #defines *(continued)*

btLibLangDanish	btLibLangDutch
btLibLangEnglish	btLibLangEsperanto
btLibLangEstonian	btLibLangFaroese
btLibLangFinnish	btLibLangFrench
btLibLangFrisian	btLibLangGalician
btLibLangGeorgian	btLibLangGerman
btLibLangGreek	btLibLangGreenlandic
btLibLangGuarani	btLibLangGujarati
btLibLangHausa	btLibLangHebrew
btLibLangHindi	btLibLangHungarian
btLibLangIcelandic	btLibLangIndonesian
btLibLangInterlingua	btLibLangInterlingue
btLibLangInupiak	btLibLangIrish
btLibLangItalian	btLibLangJapanese
btLibLangJavanese	btLibLangKannada
btLibLangKashmiri	btLibLangKazakh
btLibLangKinyarwanda	btLibLangKirghiz
btLibLangKirundi	btLibLangKorean
btLibLangKurdish	btLibLangLaothian
btLibLangLatin	btLibLangLatvian
btLibLangLingala	btLibLangLithuanian
btLibLangMacedonian	btLibLangMalagasy
btLibLangMalay	btLibLangMalayalam
btLibLangMaltese	btLibLangMaori

Table 12.11Unchanged #defines *(continued)*

btLibLangMarathi	btLibLangMoldavian
btLibLangMongolian	btLibLangNaura
btLibLangNepali	btLibLangNorwegian
btLibLangOccitan	btLibLangOriya
btLibLangOromo	btLibLangPashto
btLibLangPersian	btLibLangPolish
btLibLangPortuguese	btLibLangPunjabi
btLibLangQuechua	btLibLangRhaeto_Romance
btLibLangRomanian	btLibLangRussian
btLibLangSamoan	btLibLangSangho
btLibLangSanskrit	btLibLangScotsGaelic
btLibLangSerbian	btLibLangSerbo_Croation
btLibLangSesotho	btLibLangSetswanna
btLibLangShona	btLibLangSindhi
btLibLangSinghalese	btLibLangSiswati
btLibLangSlovak	btLibLangSlovenian
btLibLangSomali	btLibLangSpanish
btLibLangSundanese	btLibLangSwahili
btLibLangSwedish	btLibLangTagalog
btLibLangTajik	btLibLangTamil
btLibLangTatar	btLibLangTelugu
btLibLangThai	btLibLangTibetan
btLibLangTigrinya	btLibLangTonga
btLibLangTsonga	btLibLangTurkish

Table 12.11Unchanged #defines *(continued)*

btLibLangTurkmen	btLibLangTwi
btLibLanguageBaseAttributeIdList	btLibLangUkranian
btLibLangUrdu	btLibLangUzbek
btLibLangVietnamese	btLibLangVolapuk
btLibLangWelsh	btLibLangWolof
btLibLangXhosa	btLibLangYiddish
btLibLangYoruba	btLibLangZulu
btLibMaxDeviceNameLength	btLibMeStatusAuthenticateFailure
btLibMeStatusCommandDisallowed	btLibMeStatusConnnectionTimeout
btLibMeStatusHardwareFailure	btLibMeStatusHostTimeout
btLibMeStatusInvalidHciParam	btLibMeStatusInvalidLmpParam
btLibMeStatusLimitedResources	btLibMeStatusLmpPduNotAllowed
btLibMeStatusLmpResponseTimeout	btLibMeStatusLmpTransdCollision
btLibMeStatusLocalTerminated	btLibMeStatusLowResources
btLibMeStatusMaxAclConnections	btLibMeStatusMaxConnections
btLibMeStatusMaxScoConnections	btLibMeStatusMemoryFull
btLibMeStatusMissingKey	btLibMeStatusNoConnection
btLibMeStatusPageTimeout	btLibMeStatusPairingNotAllowed
btLibMeStatusPersonalDevice	btLibMeStatusPowerOff
btLibMeStatusRepeatedAttempts	btLibMeStatusRoleChangeNotAllowed
btLibMeStatusScoAirModeRejected	btLibMeStatusScoIntervalRejected

Table 12.11Unchanged #defines *(continued)*

btLibMeStatusScoOffsetRejected	btLibMeStatusSecurityError
btLibMeStatusUnknownHciCommand	btLibMeStatusUnknownLmpPDU
btLibMeStatusUnspecifiedError	btLibMeStatusUnsupportedFeature
btLibMeStatusUnsupportedLmpParam	btLibMeStatusUnsupportedRemote
btLibMeStatusUserTerminated	btLibNotYetSupported
btLibProfileDescriptorList	btLibProtocolDescriptorList
btLibProviderNameOffset	btLibSdpUUID_PROT_FTP
btLibSdpUUID_PROT_HTTP	btLibSdpUUID_PROT_IP
btLibSdpUUID_PROT_L2CAP	btLibSdpUUID_PROT_OBEX
btLibSdpUUID_PROT_RFCOMM	btLibSdpUUID_PROT_SDP
btLibSdpUUID_PROT_TCP	btLibSdpUUID_PROT_TCS_AT
btLibSdpUUID_PROT_TCS_BIN	btLibSdpUUID_PROT_UDP
btLibSdpUUID_PROT_WSP	btLibSdpUUID_SC_BROWSE_GROUP_DESC
btLibSdpUUID_SC_CORDLESS_TELEPHONY	btLibSdpUUID_SC_DIALUP_NETWORKING
btLibSdpUUID_SC_FAX	btLibSdpUUID_SC_GENERIC_AUDIO
btLibSdpUUID_SC_GENERIC_FILE_TRANSFER	btLibSdpUUID_SC_GENERIC_NETWORKING
btLibSdpUUID_SC_GENERIC_TELEPHONY	btLibSdpUUID_SC_HEADSET
btLibSdpUUID_SC_HEADSET_AUDIO_GATEWAY	btLibSdpUUID_SC_INTERCOM
btLibSdpUUID_SC_IRMC_SYNC	btLibSdpUUID_SC_IRMC_SYNC_COMMAND

Table 12.11Unchanged #defines *(continued)*

btLibSdpUUID_SC_LAN_ACCESS_PPP	btLibSdpUUID_SC_OBEX_FILE_TRANSFER
btLibSdpUUID_SC_OBEX_OBJECT_PUSH	btLibSdpUUID_SC_PNP_INFO
btLibSdpUUID_SC_PUBLIC_BROWSE_GROUP	btLibSdpUUID_SC_SERIAL_PORT
btLibSdpUUID_SC_SERVICE_DISCOVERY_SERVER	btLibSdpUUID_SC_WAP
btLibSdpUUID_SC_WAP_CLIENT	btLibServiceClassIdList
btLibServiceDescriptionOffset	btLibServiceId
btLibServiceNameOffset	btLibServiceRecordState
btLibServiceShutdownAclDrop	btLibServiceShutdownAppUse
btLibServiceShutdownDetached	btLibServiceShutdownPowerCycled
btLibServiceShutdownTimeout	btLibTimeToLive
BT_L2CAP_MTU	BT_L2CAP_RANDOM_PSM
BT_RF_DEFAULT_FRAMESIZE	BT_RF_MAX_FRAMESIZE
BT_RF_MIN_FRAMESIZE	

13

BtPrefsPnlTypes.h

Deleted APIs

Table 13.1 Deleted structures

BluetoothPanelPrefsType	SvcCalledFromAppPBType

Table 13.2 Deleted types

SvcCalledFromAppPBPtr

Table 13.3 Deleted #defines

BTLIB_DEFAULT_ACCESS	BTLIB_DEFAULT_ALLOWWAKEUP
BTLIB_DEFAULT_DISCOVERABLE	BTLIB_DEFAULT_USECACHE
kBluetoothPanelPrefID	kBluetoothPanelPrefVersion
sysFileCBluetoothPanel	sysFileCBluetoothPanelOld

Table 13.4 Deleted enumerated types

SvcCalledFromAppCmdEnum

14

Category.h

A handful of functions have a new parameter identifying a resource database from which certain strings should be taken, and a number of deprecated APIs have been removed.

Deleted APIs

Table 14.1 Deleted functions

Deleted API	Use instead
`CategoryCreateListV10()`	`CategoryCreateList()`
`CategoryEditV10()`	`CategoryEdit()`
`CategoryEditV20()`	`CategoryEdit()`
`CategoryFreeListV10()`	`CategoryFreeList()`
`CategorySelectV10()`	`CategorySelect()`

Modified APIs

Table 14.2 Modified functions

Modified API	Description of change
`void CategoryCreateList (DmOpenRef, ListType *, uint16_t, Boolean, Boolean, uint8_t, DmOpenRef, uint32_t, Boolean)`	Contains an additional parameter identifying the resource database from which the text of the Edit Categories list item is taken.
`Boolean CategoryEdit (DmOpenRef, uint16_t *, DmOpenRef, uint32_t, uint8_t)`	Contains an additional parameter identifying the resource database from which the dialog's title is taken.

Table 14.2 Modified functions *(continued)*

Modified API	Description of change
`void CategoryInitialize (AppInfoPtr, DmOpenRef, uint16_t)`	Contains an additional parameter identifying the resource database from which the application info strings are taken.
`Boolean CategorySelect (DmOpenRef, const FormType *, uint16_t, uint16_t, Boolean, uint16_t *, char *, uint8_t, DmOpenRef, uint32_t)`	Contains an additional parameter identifying the resource database from which the text of the Edit Categories list item is taken.

Unchanged APIs

Table 14.3 Unchanged functions

`CategoryFind()`	`CategoryGetName()`
`CategoryFreeList()`	`CategoryGetNext()`
`CategorySetName()`	`CategorySetTriggerLabel()`
`CategoryTruncateName()`	

Table 14.4 Unchanged structures

`AppInfoType`

Table 14.5 Unchanged types

`AppInfoPtr`

Table 14.6 Unchanged #defines

`categoryDefaultEditCategoryString`	`categoryHideEditCategory`

15

Chars.h

Deleted APIs

Table 15.1 Deleted #defines

Deleted API	Use instead
vchrInputAreaControl	

Unchanged APIs

Table 15.2 Unchanged macros

ChrHorizEllipsis()	ChrNumericSpace()

Table 15.3 Unchanged #defines

alarmChr	autoOffChr
backlightChr	backspaceChr
brightnessChr	calcChr
chrAcknowledge	chrAmpersand
chrApostrophe	chrAsterisk
chrBackspace	chrBell
chrCancel	chrCapital_A
chrCapital_B	chrCapital_C
chrCapital_D	chrCapital_E
chrCapital_F	chrCapital_G

Table 15.3 Unchanged #defines *(continued)*

chrCapital_H	chrCapital_I
chrCapital_J	chrCapital_K
chrCapital_L	chrCapital_M
chrCapital_N	chrCapital_O
chrCapital_P	chrCapital_Q
chrCapital_R	chrCapital_S
chrCapital_T	chrCapital_U
chrCapital_V	chrCapital_W
chrCapital_X	chrCapital_Y
chrCapital_Z	chrCardIcon
chrCarriageReturn	chrCircumflexAccent
chrColon	chrComma
chrCommandStroke	chrCommercialAt
chrDataLinkEscape	chrDelete
chrDeviceControlFour	chrDeviceControlOne
chrDeviceControlThree	chrDeviceControlTwo
chrDigitEight	chrDigitFive
chrDigitFour	chrDigitNine
chrDigitOne	chrDigitSeven
chrDigitSix	chrDigitThree
chrDigitTwo	chrDigitZero
chrDollarSign	chrDownArrow
chrEllipsis	chrEndOfMedium
chrEndOfText	chrEndOfTransmission

Table 15.3 Unchanged #defines *(continued)*

chrEndOfTransmissionBlock	chrEnquiry
chrEqualsSign	chrEscape
chrExclamationMark	chrFileSeparator
chrFormFeed	chrFullStop
chrGraveAccent	chrGreaterThanSign
chrGroupSeparator	chrHorizontalTabulation
chrHyphenMinus	chrLeftArrow
chrLeftCurlyBracket	chrLeftParenthesis
chrLeftSquareBracket	chrLessThanSign
chrLineFeed	chrLowLine
chrNegativeAcknowledge	chrNull
chrNumberSign	chrNumericSpace
chrOta	chrOtaSecure
chrPageDown	chrPageUp
chrPercentSign	chrPlusSign
chrQuestionMark	chrQuotationMark
chrRecordSeparator	chrRightArrow
chrRightCurlyBracket	chrRightParenthesis
chrRightSquareBracket	chrSemicolon
chrShiftIn	chrShiftOut
chrShortcutStroke	chrSmall_A
chrSmall_B	chrSmall_C
chrSmall_D	chrSmall_E
chrSmall_F	chrSmall_G

Table 15.3 Unchanged #defines *(continued)*

chrSmall_H	chrSmall_I
chrSmall_J	chrSmall_K
chrSmall_L	chrSmall_M
chrSmall_N	chrSmall_O
chrSmall_P	chrSmall_Q
chrSmall_R	chrSmall_S
chrSmall_T	chrSmall_U
chrSmall_V	chrSmall_W
chrSmall_X	chrSmall_Y
chrSmall_Z	chrSolidus
chrSpace	chrStartOfHeading
chrStartOfText	chrSubstitute
chrSynchronousIdle	chrTab
chrTilde	chrUnitSeparator
chrUpArrow	chrVerticalLine
chrVerticalTabulation	colonChr
commaChr	commandChr
confirmChr	contrastChr
crChr	downArrowChr
enterDebuggerChr	escapeChr
exgTestChr	findChr
graffitiReferenceChr	hard1Chr
hard2Chr	hard3Chr
hard4Chr	hardAntennaChr

Table 15.3 Unchanged #defines *(continued)*

hardBrightnessChr	hardContrastChr
hardCradle2Chr	hardCradleChr
hardKeyMax	hardKeyMin
hardPowerChr	irReceiveChr
keyboardAlphaChr	keyboardChr
keyboardNumericChr	lateWakeupChr
launchChr	leftArrowChr
linefeedChr	lockChr
lowBatteryChr	menuChr
nextFieldChr	nullChr
otaChr	otaSecureChr
pageDownChr	pageUpChr
periodChr	powerOffChr
prevFieldChr	quoteChr
radioCoverageFailChr	radioCoverageOKChr
resumeSleepChr	returnChr
rightArrowChr	ronamaticChr
sendDataChr	spaceChr
startConsoleChr	tabChr
upArrowChr	vchrAcerMax
vchrAcerMin	vchrAlarm
vchrAlphaSmartMax	vchrAlphaSmartMin
vchrAttnAllowClose	vchrAttnIndicatorTapped
vchrAttnReopen	vchrAttnStateChanged

Table 15.3 Unchanged #defines *(continued)*

vchrAttnUnsnooze	vchrAutoOff
vchrBacklight	vchrBrightness
vchrCalc	vchrCardCloseMenu
vchrCFlashMax	vchrCFlashMin
vchrCommand	vchrConfirm
vchrContrast	vchrEnterDebugger
vchrExgIntData	vchrExgTest
vchrExpCardInserted	vchrExpCardRemoved
vchrFind	vchrGraffitiReference
vchrHard1	vchrHard10
vchrHard2	vchrHard3
vchrHard4	vchrHard5
vchrHard6	vchrHard7
vchrHard8	vchrHard9
vchrHardAntenna	vchrHardBrightness
vchrHardContrast	vchrHardCradle
vchrHardCradle2	vchrHardKeyMax
vchrHardKeyMin	vchrHardPower
vchrIrGotData	vchrIrReceive
vchrKeyboard	vchrKeyboardAlpha
vchrKeyboardNumeric	vchrLateWakeup
vchrLaunch	vchrLegendMax
vchrLegendMin	vchrLock
vchrLowBattery	vchrMenu

Table 15.3 Unchanged #defines *(continued)*

vchrNextField	vchrPageDown
vchrPageUp	vchrPalmMax
vchrPalmMin	vchrPhoenixMax
vchrPhoenixMin	vchrPowerOff
vchrPrevField	vchrRadioCoverageFail
vchrRadioCoverageOK	vchrResetAutoOff
vchrResumeSleep	vchrRockerCenter
vchrRockerDown	vchrRockerLeft
vchrRockerRight	vchrRockerUp
vchrRonamatic	vchrSendData
vchrSlinkyMax	vchrSlinkyMin
vchrSonyMax	vchrSonyMin
vchrSPTMax	vchrSPTMin
vchrStartConsole	vchrThumbWheelBack
vchrThumbWheelDown	vchrThumbWheelPush
vchrThumbWheelUp	vchrThumperMax
vchrThumperMin	vchrTsm1
vchrTsm2	vchrTsm3
vchrTsm4	vchrTsmMode

Table 15.4 Unchanged enumerated types

symbol11Chars	symbol7Chars
symbolChars	

16

Clipboard.h

The clipboard APIs are essentially unchanged in Palm OS Cobalt.

Deleted APIs

Table 16.1 Deleted #defines

Deleted API	Use instead
`cbdMaxTextLength`	Nothing.
`numClipboardForamts`	`numClipboardFormats`

Modified APIs

Table 16.2 Modified structures

Modified API	Description of change
`ClipboardItem`	The contents of this structure are now private.

Table 16.3 Modified enumerated types

Modified API	Description of change
`ClipboardFormatType`	Formerly an enum, this is now a typedef that accepts values defined by the `clipboardFormats` enum.

Unchanged APIs

Table 16.4 Unchanged functions

`ClipboardAddItem()`	`ClipboardAppendItem()`
`ClipboardGetItem()`	

Table 16.5 Unchanged #defines

`numClipboardFormats`

Table 16.6 Unchanged enumerated types

`clipboardFormats`

17

CMCommon.h

The Connection Management Protocol APIs exposed by this header file weren't generally useful to third-party developers. Accordingly, in Palm OS Cobalt they have been made private.

Deleted APIs

Table 17.1 Deleted structures

CmpBodyType	CmpCommandHeaderType
CmpCommPrefsType	CmpGenericCommandType
CmpHShakeCompleteReqType	CmpXCommPrefsIPAddrRespType
CmpXCommPrefsPrefsRespType	CmpXCommPrefsReqType

Table 17.2 Deleted types

CmpBodyPtr	CmpGenericCommandPtr

Table 17.3 Deleted #defines

cmpAbortFlagVersionError	cmpCmdIDMask
cmpCommPrefsFlagSupportLongOffsets	cmpCommPrefsFlagSupportPktCRC16
cmpCommPrefsFlagSupportShortOffsets	cmpCommPrefsFlagUseLongOffsets
cmpCommPrefsFlagUsePktCRC16	cmpCommPrefsFlagUseShortOffsets
cmpFirstArgID	cmpInitFlagChangeBaudRate
cmpInitFlagLongPacketEnable	cmpInitFlagRcvTOut1Min
cmpInitFlagRcvTOut2Min	cmpInitialBaudRate

Table 17.3 Deleted #defines *(continued)*

`cmpMaxInitiateSec`	`cmpRespBit`
`cmpWakeupFlagLongPacketEnable`	`cmpWakeupTransactionID`

Table 17.4 Deleted enumerated types

`cmpCmdXCommPrefs` command arguments enum	`cmpCmdXCommPrefs` response arguments enum
`cmpCmdHShakeComplete` command arguments enum	`CmpCmdEnum`
`CmpRespErrEnum`	`CmpType`

18

CMLConst.h

The CML constants, like the Internet Manager APIs, are not supported in Palm OS Cobalt.

Deleted APIs

Table 18.1 Deleted #defines

cmlAlignISize	cmlAlignSize
cmlAsciiCharSize	cmlAsciiCR
cmlAsciiFormFeed	cmlAsciiLineFeed
cmlAsciiSpace	cmlCharSize
cmlClearSize	cmlColorSize
cmlCompressionTypeDef	cmlContentTypeImageGIF
cmlContentTypeImageJPEG	cmlContentTypeImagePalmOS
cmlContentTypeOther	cmlContentTypeStrApplicationCml
cmlContentTypeStrBinDefault	cmlContentTypeStrImageGIF
cmlContentTypeStrImageJPEG	cmlContentTypeStrImagePalmOS
cmlContentTypeStrTextHTML	cmlContentTypeStrTextPlain
cmlContentTypeTextCml	cmlContentTypeTextHTML
cmlContentTypeTextPlain	cmlDatePickerSize
cmlEncodingTypeStrNULL	cmlFlagCellHasColSpan
cmlFlagCellHasHAlign	cmlFlagCellHasHeight
cmlFlagCellHasRowSpan	cmlFlagCellHasVAlign
cmlFlagCellHasWidth	cmlFlagCellNoWrap

Table 18.1 Deleted #defines *(continued)*

cmlFlagFormIsLocalAction	cmlFlagFormIsSecure
cmlFlagFormIsStandalone	cmlFlagHRAlign
cmlFlagHRCustom	cmlFlagHRIsPercent
cmlFlagHRNoShade	cmlFlagImageEmbedded
cmlFlagImageHasAlign	cmlFlagImageHasAlt
cmlFlagImageHasBorder	cmlFlagImageHasHSpace
cmlFlagImageHasSrc	cmlFlagImageHasVSpace
cmlFlagImageLocalPQA	cmlFlagImageLocalPQF
cmlFlagInputChecked	cmlFlagInputHasName
cmlFlagInputHasText	cmlFlagInputHasValue
cmlFlagInputMultiple	cmlFlagInputSelected
cmlFlagLinkHasHref	cmlFlagLinkHasTitle
cmlFlagLinkInternal	cmlFlagLinkIsBinary
cmlFlagLinkIsButton	cmlFlagLinkIsFakeRemote
cmlFlagLinkIsFragment	cmlFlagLinkIsLocalRef
cmlFlagLinkIsSameDoc	cmlFlagLinkIsSecure
cmlFlagListModType	cmlFlagListModValue
cmlFlagSize	cmlFlagTableHasAlign
cmlFlagTableHasBorder	cmlFlagTableHasCellPadding
cmlFlagTableHasCellSpacing	cmlFlagTableHasKeepCol
cmlFlagTableHasKeepRow	cmlFlagTableHasWidth
cmlFormatSize	cmlFormSize
cmlHorizontalRuleSize	cmlHyperlinkSize
cmlImageTypeSize	cmlInputCheckBoxSize

Table 18.1 Deleted #defines *(continued)*

cmlInputHiddenSize	cmlInputPasswordSize
cmlInputRadioSize	cmlInputResetSize
cmlInputSubmitSize	cmlInputTextAreaSize
cmlInputTextSize	cmlLinkColorTypeSize
cmlListItemSize	cmlListTypeSize
cmlLongTagSize	cmlMaxTag
cmlSelectItemCustomSize	cmlSelectSize
cmlShortTagMax	cmlShortTagSize
cmlTableCellSize	cmlTableSize
cmlTagNull	cmlTextSizeSize
cmlTimePickerSize	

Table 18.2 Deleted enumerated types

CmlAlignEnum	CMLCharEnum
CmlClearEnum	CmlCompressionType
CmlIAlignEnum	CmlLinkColorEnum
CmlListEnum	CMLTag
CmlVAlignEnum	

19

ConnectionMgr.h

The Palm OS Cobalt Connection Manager is a completely redesigned component used to create, configure and establish any type of connection on the handheld. The Connection Manager contains and expands to a great extent the Connection Manager and the various configuration panels that were part of previous Palm OS releases. Due to the extensive nature of this redesign, those portions of an application that interacted with the Connection Manager should be completely rewritten. See Chapter 1, "Connections," of *Exploring Palm OS: High-Level Communications* for a complete description of the Connection Manager in Palm OS Cobalt.

Deleted APIs

Table 19.1 Deleted functions

`CncAddProfile()`	`CncDeleteProfile()`
`CncGetProfileInfo()`	`CncGetProfileList()`
`CncProfileCloseDB()`	`CncProfileCount()`
`CncProfileCreate()`	`CncProfileDelete()`
`CncProfileGetCurrent()`	`CncProfileGetIDFromIndex()`
`CncProfileGetIDFromName()`	`CncProfileGetIndex()`
`CncProfileOpenDB()`	`CncProfileSetCurrent()`
`CncProfileSettingGet()`	`CncProfileSettingSet()`

Table 19.2 Deleted macros

`CncDefineParameterType()`	`CncDefineParamID()`
`CncDefineSystemFlagMask()`	`CncGetParamType()`

Table 19.2 Deleted macros *(continued)*

CncGetSystemFlagBitnum()	CncGetTrueParamID()
CncIsFixedLengthParamType()	CncIsSystemFlags()
CncIsSystemRange()	CncIsThirdPartiesRange()
CncIsVariableLengthParamType()	CNCMGR_TRAP()
OLD_CNCMGR_TRAP()	

Table 19.3 Deleted structures

CncProfileNotifyDetailsType

Table 19.4 Deleted types

CncProfileID

Table 19.5 Deleted #defines

cncErr...	cncProfileNameSize
kCncDeviceKindLocalNetwork	kCncDeviceKindModem
kCncDeviceKindPhone	kCncDeviceKindSerial
kCncErr...	kCncFlowControlAuto
kCncFlowControlOFF	kCncFlowControlON
kCncFtrCncMgrCreator	kCncFtrCncMgrVersion
kCncMgrVersion	kCncNoParam
kCncNoParamSize	kCncNotifyAlertUserModifier
kCncNotifyBecomeCurrentModifier	kCncNotifyCreateRequest
kCncNotifyDeleteRequest	kCncNotifyModifyRequest
kCncNotifyUpdateListRequest	kCncParamBaud
kCncParamBaudSize	kCncParamBluetoothDeviceAddr

Table 19.5 Deleted #defines *(continued)*

kCncParamBluetoothDeviceAddrSize	kCncParamBluetoothDeviceName
kCncParamBluetoothDeviceNameMaxSize	kCncParamBuffer
kCncParamCountryIndex	kCncParamCountryIndexSize
kCncParamDeviceKind	kCncParamDeviceKindSize
kCncParamDialingMode	kCncParamDialingModeSize
kCncParamFixedLen	kCncParamFixedLength
kCncParamFlowControl	kCncParamFlowControlSize
kCncParamIDMask	kCncParamInitString
kCncParamInitStringMaxSize	kCncParamIntlModemCountryStringList
kCncParamIntlModemResetStringList	kCncParamInvisible
kCncParamInvisibleBit	kCncParamInvisibleSize
kCncParamLocked	kCncParamLockedBit
kCncParamLockedSize	kCncParamName
kCncParamNameMaxSize	kCncParamNoDetails
kCncParamNoDetailsBit	kCncParamNoDetailsSize
kCncParamNonEditable	kCncParamNonEditableBit
kCncParamNonEditableSize	kCncParamOSRange
kCncParamPort	kCncParamPortSize
kCncParamReadOnly	kCncParamReadOnlyBit
kCncParamReadOnlySize	kCncParamReceiveTimeOut
kCncParamReceiveTimeOutSize	kCncParamReservedBit10
kCncParamReservedBit11	kCncParamReservedBit12
kCncParamReservedBit13	kCncParamReservedBit14

Table 19.5 Deleted #defines *(continued)*

kCncParamReservedBit15	kCncParamReservedBit18
kCncParamReservedBit19	kCncParamReservedBit20
kCncParamReservedBit21	kCncParamReservedBit22
kCncParamReservedBit23	kCncParamReservedBit24
kCncParamReservedBit25	kCncParamReservedBit26
kCncParamReservedBit27	kCncParamReservedBit28
kCncParamReservedBit29	kCncParamReservedBit30
kCncParamReservedBit31	kCncParamReservedBit5
kCncParamReservedBit6	kCncParamReservedBit7
kCncParamReservedBit8	kCncParamReservedBit9
kCncParamResetString	kCncParamResetStringMaxSize
kCncParamSerialPortFlags	kCncParamSerialPortFlagsSize
kCncParamString	kCncParamSystemBit16
kCncParamSystemBit17	kCncParamSystemFlag
kCncParamSystemFlags	kCncParamSystemFlagSize
kCncParamSystemFlagsNum	kCncParamSystemFlagsSize
kCncParamThirdPartiesRange	kCncParamTimeOut
kCncParamTimeOutSize	kCncParamTTCreator
kCncParamTTCreatorSize	kCncParamTTType
kCncParamTTTypeSize	kCncParamTypeMask
kCncParamUInt16	kCncParamUInt16Size
kCncParamUInt32	kCncParamUInt32Size
kCncParamUInt8	kCncParamUInt8Size
kCncParamVariableLen	kCncParamVariableLength

Table 19.5 Deleted #defines *(continued)*

kCncParamVersion	kCncParamVersionSize
kCncParamVolume	kCncParamVolumeSize
kCncParam_PSDCreator	kCncParam_PSDCreatorSize
kCncParam_PSDName	kCncParam_PSDNameSize
kCncParam_PSDParameterBuffer	kCncParam_PSDType
kCncParam_PSDTypeSize	kCncProfileClassicResetStringSize
kCncProfileInvalidId	kCncProfileNameSize
kCncProfileNotifyCurrentVersion	kCncProfileUsualInitStringSize
kCncProfileUsualResetStringSize	kCncProfileVersion
kNotifyRequestMofifiersMask	sysTrap...

20

ConsoleMgr.h

Deleted APIs

Table 20.1 Deleted functions

`ConGetS()`	`ConPutS()`

21

Control.h

Because Palm OS Cobalt has no concept of a resource search chain, you must explicitly identify the resource database from which resources are to be taken. This adds an additional parameter to `CtlNewGraphicControl()`, `CtlNewSliderControl()`, and `CtlSetGraphics()`.

The internals of a number of structures are now private.

Modified APIs

Table 21.1 Modified functions

Modified API	Description of change
`GraphicControlType *CtlNewGraphicControl (void **formPP, uint16_t, ControlStyleType, DmOpenRef, DmResourceID, DmResourceID, Coord, Coord, Coord, Coord, uint8_t, Boolean)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the bitmap and selected bitmap resources.
`SliderControlType *CtlNewSliderControl (void **formPP, uint16_t, ControlStyleType, DmOpenRef, DmResourceID, DmResourceID, Coord, Coord, Coord, Coord, uint16_t, uint16_t, uint16_t, uint16_t)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the bitmaps to use for the slider thumb and background.
`void CtlSetGraphics (ControlType *, DmOpenRef, DmResourceID, DmResourceID)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the bitmap and selected bitmap resources.

Table 21.2 Modified structures

Modified API	Description of change
`ControlAttrType`	The internals of this structure are now private.
`ControlType`	The internals of this structure are now private.
`GraphicControlType`	The internals of this structure are now private.
`SliderControlType`	The internals of this structure are now private.

Table 21.3 Modified enumerated types

Modified API	Description of change
`ButtonFrameType`	Formerly an enum, this is now a typedef that takes one of the values defined by the `buttonFrames` enum.
`ControlStyleType`	Formerly an enum, this is now a typedef that takes one of the values defined by the `controlStyles` enum.

Unchanged APIs

Table 21.4 Unchanged functions

`CtlDrawControl()`	`CtlEnabled()`
`CtlEraseControl()`	`CtlGetLabel()`
`CtlGetSliderValues()`	`CtlGetValue()`
`CtlHandleEvent()`	`CtlHideControl()`
`CtlHitControl()`	`CtlNewControl()`
`CtlSetEnabled()`	`CtlSetLabel()`

Table 21.4 Unchanged functions *(continued)*

`CtlSetSliderValues()`	`CtlSetUsable()`
`CtlSetValue()`	`CtlShowControl()`
`CtlValidatePointer()`	

Table 21.5 Unchanged types

`ControlPtr`

Table 21.6 Unchanged enumerated types

`buttonFrames`	`controlStyles`

22

CPMLib68KInterface.h

The CPM Library APIs are largely unchanged, except for the fact that all functions used to take as their first parameter the CPM Library reference number, and now they do not.

Deleted APIs

Table 22.1 Deleted #defines

Deleted API	Use instead
`cpmLibTrap...`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.

Modified APIs

In all of the functions listed below, you previously supplied the CPM Library reference number as the first parameter. In Palm OS Cobalt this no longer needed, so the parameter has been removed in the ARM-native APIs.

Table 22.2 Modified functions

`CPMLibAddRandomSeed`	`CPMLibClose`
`CPMLibDecrypt`	`CPMLibDecryptFinal`
`CPMLibDecryptInit`	`CPMLibDecryptUpdate`
`CPMLibEncrypt`	`CPMLibEncryptFinal`
`CPMLibEncryptInit`	`CPMLibEncryptUpdate`
`CPMLibEnumerateProviders`	`CPMLibExportCipherInfo`

Table 22.2 Modified functions *(continued)*

CPMLibExportHashInfo	CPMLibExportKeyInfo
CPMLibExportVerifyInfo	CPMLibGenerateKey
CPMLibGenerateRandomBytes	CPMLibGetInfo
CPMLibGetProviderInfo	CPMLibHash
CPMLibHashFinal	CPMLibHashInit
CPMLibHashUpdate	CPMLibImportCipherInfo
CPMLibImportHashInfo	CPMLibImportKeyInfo
CPMLibImportVerifyInfo	CPMLibOpen
CPMLibReleaseCipherInfo	CPMLibReleaseHashInfo
CPMLibReleaseKeyInfo	CPMLibReleaseVerifyInfo
CPMLibSetDebugLevel	CPMLibSetDefaultProvider
CPMLibSleep	CPMLibVerify
CPMLibVerifyFinal	CPMLibVerifyInit
CPMLibVerifyUpdate	CPMLibWake

23

CPMLibCommon.h

The CPM Library common APIs are essentially unchanged in Palm OS Cobalt.

Deleted APIs

Table 23.1 Deleted #defines

Deleted API	Use instead
cpmErrNoGlobals	cpmErrNoAppContext

Unchanged APIs

Table 23.2 Unchanged structures

APCipherInfoPtr	APCipherInfoStruct
APHashInfoPtr	APHashInfoStruct
APKeyInfoPtr	APKeyInfoStruct
APProviderContextPtr	APProviderContextStruct
APProviderInfoPtr	APProviderInfoStruct
APVerifyInfoPtr	APVerifyInfoStruct
CPMInfoPtr	CPMInfoStruct

Table 23.3 Unchanged types

APAlgorithmEnum	APHashEnum
APKeyClassEnum	APKeyDerivationEnum
APKeyDerivationUsageEnum	APKeyUsageEnum

Table 23.3 Unchanged types *(continued)*

APModeEnum	APPaddingEnum
VerifyResultPtr	

Table 23.4 Unchanged #defines

apAlgorithmTypeUnspecified	apAsymmetricTypeBlumGoldwasser
apAsymmetricTypeDSA	apAsymmetricTypeECDHC
apAsymmetricTypeECDSA	apAsymmetricTypeECIES
apAsymmetricTypeECMQVC	apAsymmetricTypeECNR
apAsymmetricTypeElgamal	apAsymmetricTypeLUC
apAsymmetricTypeLUCELG	apAsymmetricTypeNR
apAsymmetricTypeRabin	apAsymmetricTypeRSA
apAsymmetricTypeRW	APF_CIPHER
APF_HASH	APF_HW
APF_KEYDERIVE	APF_KEYGEN
APF_KEYPAIRGEN	APF_MP
APF_SIGN	APF_VERIFY
apHashTypeHAVAL	apHashTypeMD2
apHashTypeMD5	apHashTypeNone
apHashTypePanama	apHashTypeRIPEMD160
apHashTypeSHA1	apHashTypeSHA256
apHashTypeSHA384	apHashTypeSHA512
apHashTypeTiger	apHashTypeUnspecified
apKeyAgreementTypeDH	apKeyAgreementTypeDH2
apKeyAgreementTypeLUCDIF	apKeyAgreementTypeMQV

Table 23.4 Unchanged #defines *(continued)*

apKeyAgreementTypeXTRDH	apKeyClassPrivate
apKeyClassPublic	apKeyClassSymmetric
apKeyClassUnspecified	apKeyDerivationTypePKCS12
apKeyDerivationTypePKCS5v1	apKeyDerivationTypePKCS5v2
apKeyDerivationTypePKIX	apKeyDerivationTypeTLS
apKeyDerivationUnspecified	apKeyDerivationUsageEncryption
apKeyDerivationUsageIV	apKeyDerivationUsageMAC
apKeyDerivationUsageUnspecifie d	apKeyUsageAll
apKeyUsageCertificateSigning	apKeyUsageDataEncrypting
apKeyUsageEncryption	apKeyUsageKeyEncrypting
apKeyUsageMessageIntegrity	apKeyUsageSigning
apKeyUsageUnspecified	apModeCounter
apModeTypeCBC	apModeTypeCBC_CTS
apModeTypeCFB	apModeTypeECB
apModeTypeNone	apModeTypeOFB
apModeTypeUnspecified	apPaddingTypeNone
apPaddingTypeOAEP	apPaddingTypePKCS1Type1
apPaddingTypePKCS1Type2	apPaddingTypePKCS5
apPaddingTypeSSLv23	apPaddingTypeUnspecified
apSymmetricType3DES_EDE2	apSymmetricType3DES_EDE3
apSymmetricType3WAY	apSymmetricTypeARC4
apSymmetricTypeBBS	apSymmetricTypeBlowfish
apSymmetricTypeCAST128	apSymmetricTypeCAST256
apSymmetricTypeDES	apSymmetricTypeDESX_XDX3

Table 23.4 Unchanged #defines *(continued)*

apSymmetricTypeDiamond2	apSymmetricTypeGOST
apSymmetricTypeIDEA	apSymmetricTypeMARS
apSymmetricTypePanama	apSymmetricTypeRC2
apSymmetricTypeRC4	apSymmetricTypeRC5
apSymmetricTypeRC6	apSymmetricTypeRijndael
apSymmetricTypeSAFER	apSymmetricTypeSapphire
apSymmetricTypeSEAL	apSymmetricTypeSerpent
apSymmetricTypeSHARK	apSymmetricTypeSkipjack
apSymmetricTypeSquare	apSymmetricTypeTEA
apSymmetricTypeTwofish	apSymmetricTypeWAKE
cpmCreator	cpmErr...
cpmFtrCreator	cpmFtrNumVersion
IMPORT_EXPORT_TYPE_DER	IMPORT_EXPORT_TYPE_RAW
IMPORT_EXPORT_TYPE_XML	LOG_ALERT
LOG_CRIT	LOG_DEBUG
LOG_EMERG	LOG_ERR
LOG_INFO	LOG_NOTICE
LOG_WARNING	

24

Crc.h

The Cyclic Redundancy Check (CRC) APIs are unchanged in Palm OS Cobalt. Note that a 32-bit function, `Crc32CalcBlock()`, has been added.

Unchanged APIs

Table 24.1 Unchanged functions

`Crc16CalcBigBlock()`	`Crc16CalcBlock()`

25

CTP.h

CTP bit manipulation routines were used primarily by wireless network protocols. They were never publicly documented, and likely not used by any third-party application developers. Accordingly, they are not included in the set of APIs exposed in Palm OS Cobalt.

Deleted APIs

Table 25.1 Deleted macros

`CtpMaxEncodedURLSize()`

Table 25.2 Deleted #defines

`ctpCharsEscapedByClient`	`ctpContentDepth`
`ctpContentVersion`	`ctpContentVersion1`
`ctpContentVersion2`	`ctpContentVersionFirst`
`ctpContentVersionLast`	`ctpContentWidth`
`ctpConvAlgorithm`	`ctpDeviceBits1Cp1252Secondary`
`ctpDeviceBits1Ctp1252Secondary`	`ctpDeviceBits1PostCharsetBitMask`
`ctpDeviceBits1PostCharsetBitShift`	`ctpHeaderVersion`
`ctpMaxResponseSize`	`ctpServerBits1DocumentCharsetBitMask`
`ctpServerBits1DocumentCharsetBitShift`	`ctpServerBits1DoNotCache`

Table 25.2 Deleted #defines *(continued)*

ctpServerBits1SecondaryCharset Used	ctpSupportCml5Bit
ctpSupportCml8Bit	ctpSupportDecompress
ctpSupportLZ77	ctpSupportLZ77Primer1
wcDevCaps1CommBandwidthBits	wcDevCaps1CommBandwidthBitsShi ft
wcDevCaps1Lz77	wcDevCaps1MemOSFreeBits
wcDevCaps1MemOSFreeBitsShift	wcDevCaps1PalmOSHeapSizeBits
wcDevCaps1PalmOSHeapSizeBitsSh ift	wcDevCaps1PalmOSVerBits
wcDevCaps1PalmOSVerBitsShift	wcDevCaps1Reserved1Shift
wcDevCaps1Reserved2	wcDevCaps1Reserved2Shift
wcDevCaps1ScreenBitDepth1	wcDevCaps1ScreenBitDepth16
wcDevCaps1ScreenBitDepth2	wcDevCaps1ScreenBitDepth4
wcDevCaps1ScreenBitDepth8	wcDevCaps1ScreenBits
wcDevCaps1ScreenBitShift	

Table 25.3 Deleted enumerated types

CTPCmdEnum	CTPConvEnum
CTPErrEnum	CTPNetIDEnum
CTPReqExtEnum	CTPReqExtExtEnum
CTPRspExtExtURLEnum	CTPRspExtURLEnum
CTPSchemeEnum	

26

DataMgr.h

The card number parameter has been removed from a number of functions.

A number of functions have been renamed to better reflect their operation.

Databases are no longer uniquely identified solely by name, so `DmFindDatabase()` now takes a creator ID in addition to the database name. This function also has a new parameter that allows you to specify which of Schema, Extended, or Classic databases should be searched for, and it now optionally returns information about the found database.

`DmGetNextDatabaseByTypeCreator()` must now be used in conjunction with the new `DmOpenIteratorByTypeCreator()` function; you indicate what you are searching for when calling that function. `DmGetNextDatabaseByTypeCreator()` now optionally returns information about the found database in addition to its database ID.

Palm OS Cobalt doesn't support resource chains (except for backwards compatibility purposes). Consequently, you now have to identify the resource database to be searched when using `DmGetResource()`.

NOTE: Early in the porting process you may want to `#include DataMgrCompatibility.h` (after the `#include` for `PalmOS.h`). This header file defines a number of APIs and macros that allow applications calling certain deleted functions and functions with modified prototypes to compile and run. This compatibility header should not be counted on long-term, however, so later in the porting process you should remove the `#include` and fix any problems that result.

Deleted APIs

Table 26.1 Deleted functions

Deleted API	Use instead
`DmDatabaseProtect()`	`DmSetDatabaseProtection()`
`DmFindSortPositionV10()`	`DmGetRecordSortPosition()`
`DmGet1Resource()`	`DmGetResource()` or `DmGetResourceByIndex()`
`DmGetAppInfoID()`	`DmGetAppInfo()`
`DmInit()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`DmOpenDatabaseInfo()`	`DmGetOpenInfo()`
`DmRecordInfo()`	`DmGetRecordAttr()`, `DmGetRecordCategory()`, `DmGetRecordID()`, or `DmQueryNextInCategory()`
`DmSetRecordInfo()`	`DmSetRecordAttr()` and/or `DmSetRecordID()`
`DmWriteCheck()`	`DmWrite()`

Modified APIs

Table 26.2 Modified functions

Modified API	Description of change
`status_t DmCreateDatabase (const char *, uint32_t, uint32_t, Boolean)`	The card number parameter has been removed.
`status_t DmCreateDatabaseFromImage (MemPtr, DatabaseID *)`	Now has an additional parameter through which the caller can obtain the name of the newly-created database.

Table 26.2 Modified functions *(continued)*

Modified API	Description of change
`status_t DmDatabaseInfo (DatabaseID, DmDatabaseInfoPtr)`	The card number parameter has been removed, and all returned information is returned using a single `DmDatabaseInfoType` structure rather than through a large number of individual parameters.
`status_t DmDatabaseSize (DatabaseID, uint32_t *, uint32_t *, uint32_t *)`	The card number parameter has been removed.
`status_t DmDeleteDatabase (DatabaseID)`	The card number parameter has been removed.
`DatabaseID DmFindDatabase (const char *, uint32_t, DmFindType, DmDatabaseInfoPtr)`	Now takes a creator ID in addition to the database name to reflect the fact that databases are no longer uniquely identified solely by name. The card number parameter has been removed. A parameter has been added that allows you to specify which of Schema, Extended, or Classic databases should be searched for. This function now optionally returns information about the found database.
`DatabaseID DmGetDatabase (uint16_t)`	The card number parameter has been removed.
`status_t DmGetDatabaseLockState (DmOpenRef, uint8_t *, uint32_t *, uint32_t *)`	Now returns an error code if the lock state couldn't be obtained.

Table 26.2 Modified functions *(continued)*

Modified API	Description of change
`status_t DmGetNextDatabaseByTypeCreator (DmSearchStatePtr, DatabaseID *, DmDatabaseInfoPtr)`	This function must now be used in conjunction with the new `DmOpenIteratorByTypeCreator()` function; you indicate what you are searching for when calling that function. This function now optionally returns information about the found database in addition to its database ID.
`MemHandle DmGetResource (DmOpenRef, DmResourceType, DmResourceID)`	Palm OS Cobalt doesn't support resource chains (except for backwards compatibility purposes). Consequently, you now have to identify the resource database to be searched.
`uint16_t DmNumDatabases (void)`	The card number parameter has been removed.
`DmOpenRef DmOpenDatabase (DatabaseID, uint16_t)`	The card number parameter has been removed.
`DmOpenRef DmOpenDBNoOverlay (DatabaseID, uint16_t)`	The card number parameter has been removed.
`status_t DmSetDatabaseInfo (DatabaseID, DmDatabaseInfoPtr)`	The card number parameter has been removed, and all database information is specified using a single `DmDatabaseInfoType` structure rather than through a large number of individual parameters.

Table 26.3 Modified #defines

Modified API	Description of change
`#define dmAllHdrAttrs (dmHdrAttrResDB | dmHdrAttrReadOnly | dmHdrAttrAppInfoDirty | dmHdrAttrBackup | dmHdrAttrOKToInstallNewer | dmHdrAttrResetAfterInstall | dmHdrAttrCopyPrevention | dmHdrAttrStream | dmHdrAttrHidden | dmHdrAttrLaunchableData | dmHdrAttrRecyclable | dmHdrAttrBundle | dmHdrAttrSchema | dmHdrAttrSecure | dmHdrAttrOpen)`	Added the `dmHdrAttrSchema` and `dmHdrAttrSecure` bits.
`#define dmMaxRecordIndex ( (uint16_t) 0xFFFE )`	Formerly was `0xffff`.
`#define dmSysOnlyHdrAttrs ( dmHdrAttrResDB | dmHdrAttrSchema | dmHdrAttrSecure | dmHdrAttrOpen )`	Added the `dmHdrAttrSchema` and `dmHdrAttrSecure` bits.

Renamed APIs

Table 26.4 Renamed functions

Old name	New name
`DmFindSortPosition()`	`DmGetRecordSortPosition()`
`DmGetResourceIndex()`	`DmGetResourceByIndex()`
`DmPositionInCategory()`	`DmGetPositionInCategory()`
`DmSearchRecord()`	`DmSearchRecordOpenDatabases()`
`DmSearchResource()`	`DmSearchResourceOpenDatabases()`
`DmSeekRecordInCategory()`	`DmFindRecordByOffsetInCategory()`

Table 26.5 Renamed structures

Old name	New name
`SortRecordInfoType`	`DmSortRecordInfoType`

Table 26.6 Renamed types

Old name	New name
`DmResID`	`DmResourceID`
`DmResType`	`DmResourceType`
`SortRecordInfoPtr`	`DmSortRecordInfoPtr`

Table 26.7 Renamed application-defined functions

Old name	New name
`DmComparF()`	`DmCompareFunctionType()`

Unchanged APIs

Table 26.8 Unchanged functions

DmArchiveRecord()	DmAttachRecord()
DmAttachResource()	DmCloseDatabase()
DmDeleteCategory()	DmDeleteRecord()
DmDetachRecord()	DmDetachResource()
DmFindRecordByID()	DmFindResource()
DmFindResourceType()	DmGetLastErr()
DmGetRecord()	DmInsertionSort()
DmMoveCategory()	DmMoveRecord()
DmNewHandle()	DmNewRecord()
DmNewResource()	DmNextOpenDatabase()
DmNextOpenResDatabase()	DmNumRecords()
DmNumRecordsInCategory()	DmNumResources()
DmOpenDatabaseByTypeCreator()	DmQueryNextInCategory()
DmQueryRecord()	DmQuickSort()
DmReleaseRecord()	DmReleaseResource()
DmRemoveRecord()	DmRemoveResource()
DmRemoveSecretRecords()	DmResetRecordStates()
DmResizeRecord()	DmResizeResource()
DmResourceInfo()	DmSet()
DmSetResourceInfo()	DmStrCopy()
DmWrite()	

Table 26.9 Unchanged structures

DmSearchStateType

Table 26.10Unchanged types

DmOpenRef	DmSearchStatePtr

Table 26.11Unchanged #defines

dmAllCategories	dmAllRecAttrs
dmCategoryLength	dmDBNameLength
dmDefaultRecordsID	dmErr...
dmHdrAttrAppInfoDirty	dmHdrAttrBackup
dmHdrAttrBundle	dmHdrAttrCopyPrevention
dmHdrAttrHidden	dmHdrAttrLaunchableData
dmHdrAttrOKToInstallNewer	dmHdrAttrOpen
dmHdrAttrReadOnly	dmHdrAttrRecyclable
dmHdrAttrResDB	dmHdrAttrResetAfterInstall
dmHdrAttrStream	dmModeExclusive
dmModeLeaveOpen	dmModeReadOnly
dmModeReadWrite	dmModeShowSecret
dmModeWrite	dmRecAttrBusy
dmRecAttrCategoryMask	dmRecAttrDelete
dmRecAttrDirty	dmRecAttrSecret
dmRecNumCategories	dmRecordIDReservedRange
dmSeekBackward	dmSeekForward
dmSysOnlyRecAttrs	dmUnfiledCategory
dmUnusedRecordID	

27

DateTime.h

The date/time APIs are largely unchanged in Palm OS Cobalt. The one real change is in the `TimeZoneToAscii()` function, where the way in which you specify the time zone has changed.

Deleted APIs

Table 27.1 Deleted macros

Deleted API	Use instead
`TimeSeparator()`	`TimeGetFormatSeparator()` function.
`Use24HourFormat()`	`TimeIs24HourFormat()` function.

Modified APIs

Table 27.2 Modified functions

Modified API	Description of change
`void TimeZoneToAscii (const char *, char *)`	Rather than specifying the time zone as some amount of minutes east of GMT and a locale, this function now takes one of the time zone ID strings found in the UI Library's `TimeZoneSet.xrd` file.

Table 27.3 Modified structures

Modified API	Description of change
`TimeType`	The individual fields are now 8 bits of a `uint16_t`, rather than simply being declared as an unsigned 8-bit integer.

Table 27.4 Modified enumerated types

Modified API	Description of change
`DateFormatType`	Formerly an enum, this is now a typedef that takes a value defined by the `DateFormatTag` enum.
`DaylightSavingsTypes`	Formerly an enum, this is now a typedef that takes a value defined by the `DaylightSavingsTag` enum.
`DayOfMonthType`	Formerly an enum, this is now a typedef that takes a value defined by the `DayOfWeekTag` enum.
`TimeFormatType`	Formerly an enum, this is now a typedef that takes a value defined by the `TimeFormatTag` enum.

Table 27.5 Modified #defines

Modified API	Description of change
`#define dateStringLength 15`	Was 9.
`#define dowDateStringLength 31`	Was 19.
`#define dowLongDateStrLength 47`	Was 25.
`#define longDateStrLength 31`	Was 15.
`#define timeStringLength 15`	Was 9.

Unchanged APIs

Table 27.6 Unchanged functions

`DateAdjust()`	`DateDaysToDate()`
`DateSecondsToDate()`	`DateTemplateToAscii()`
`DateToAscii()`	`DateToDays()`

Table 27.6 Unchanged functions *(continued)*

DateToDOWDMFormat()	DayOfMonth()
DayOfWeek()	DaysInMonth()
TimAdjust()	TimDateTimeToSeconds()
TimeToAscii()	TimSecondsToDateTime()
TimTimeZoneToUTC()	TimUTCToTimeZone()

Table 27.7 Unchanged macros

DateToInt()	TimeToInt()

Table 27.8 Unchanged structures

DateTimeType	DateType

Table 27.9 Unchanged types

DatePtr	DateTimePtr
TimePtr	

Table 27.10 Unchanged enumerated types

DateTemplate*xxx* values enum

Table 27.11 Unchanged #defines

april	august
dateTemplateChar	dateTemplateLeadZeroModifier
dateTemplateLongModifier	dateTemplateRegularModifier
dateTemplateShortModifier	DayOfWeekType
daysInFourYears	daysInLeapYear

Table 27.11Unchanged #defines *(continued)*

daysInSeconds	daysInWeek
daysInYear	december
february	firstYear
friday	hoursInMinutes
hoursInSeconds	hoursPerDay
january	july
june	lastYear
march	maxDays
maxSeconds	may
minutesInSeconds	monday
monthsInYear	noTime
november	numberOfYears
october	saturday
secondsInSeconds	september
sunday	thursday
timeZoneStringLength	tuesday
wednesday	

28

Day.h

The day selection APIs are largely unchanged in Palm OS Cobalt.

Modified APIs

Table 28.1 Modified structures

Modified API	Description of change
`DaySelectorType`	The contents of this structure are now private.

Table 28.2 Modified enumerated types

Modified API	Description of change
`SelectDayType`	No longer an enum, this is now a typedef that accepts values defined by the `SelectDayTag` enum.

Unchanged APIs

Table 28.3 Unchanged functions

Table 28.4

`DayDrawDays()`	`DayDrawDaySelector()`
`DayHandleEvent()`	

Table 28.5 Unchanged types

`DaySelectorPtr`

29

DebugMgr.h

Deleted APIs

Table 29.1 Deleted functions

Deleted API	Use instead
`DbgCommSettings()`	
`DbgGetMessage()`	
`DbgInit()`	
`DbgSrcBreak()`	
`DbgSrcMessage()`	

Table 29.2 Deleted structures

Deleted API	Use instead
`DbgCtlEnumInfoType`	
`DbgCtlHandlerInfoType`	

Table 29.3 Deleted #defines

Deleted API	Use instead
`dbgCtlAllHandlersID`	
`dbgCtlFirstCustomOp`	
`dbgCtlHandled`	

Table 29.3 Deleted #defines *(continued)*

Deleted API	Use instead
`dbgCtlHandlerNameLen`	
`dbgCtlHandlerVerLen`	
`dbgCtlNotHandled`	

Table 29.4 Deleted enumerated types

Deleted API	Use instead
System-defined debug control operations enum	

Table 29.5 Deleted application-defined functions

Deleted API	Use instead
`DbgControlFuncType()`	
`DbgCtlEnumCallbackFunc()`	

Unchanged APIs

Table 29.6 Unchanged functions

`DbgBreak()`	`DbgMessage()`

30

DLCommon.h

Deleted APIs

Table 30.1 Deleted structures

DlpAddSyncLogEntryReqType	DlpCallApplicationReqHdrTypeV10
DlpCallApplicationReqTypeV10	DlpCallApplicationRespHdrTypeV10
DlpCallApplicationRespTypeV10	DlpCallAppReqHdrType
DlpCallAppReqType	DlpCallAppRespHdrType
DlpCallAppRespType	DlpCardInfoHdrType
DlpCardInfoType	DlpCloseDBExReqType
DlpCreateDBReqHdrType	DlpCreateDBReqType
DlpDateTimeType	DlpDBInfoHdrType
DlpDBInfoType	DlpDeleteDBReqHdrType
DlpDeleteDBReqType	DlpDeleteRecordReqType
DlpDeleteResourceReqType	DlpEndOfSyncReqType
DlpExpCardInfoReqType	DlpExpCardInfoRespHdrType
DlpExpCardInfoRespType	DlpExpCardPresentReqType
DlpExpSlotMediaTypeReqType	DlpExpSlotMediaTypeRespType
DlpExpSlotsEnumerateRespHdrType	DlpExpSlotsEnumerateRespType
DlpFindDBBasicRespHdrType	DlpFindDBBasicRespType

Table 30.1 Deleted structures *(continued)*

DlpFindDBByNameReqHdrType	DlpFindDBByNameReqType
DlpFindDBByOpenHandleReqType	DlpFindDBByTypeCreatorReqType
DlpFindDBSizeRespType	DlpGenericArgType
DlpGenericArgWrapperType	DlpGenericBodyType
DlpGetSysDateTimeRespType	DlpLongArgType
DlpLongArgWrapperType	DlpLoopBackTestReqHdrType
DlpLoopBackTestReqType	DlpLoopBackTestRespHdrType
DlpLoopBackTestRespType	DlpMoveCategoryReqType
DlpOpenDBReqHdrType	DlpOpenDBReqType
DlpReadAppPreferenceReqType	DlpReadAppPreferenceRespHdrTyp e
DlpReadAppPreferenceRespType	DlpReadBlockReqType
DlpReadBlockRespHdrType	DlpReadBlockRespType
DlpReadDBListReqType	DlpReadDBListRespHdrType
DlpReadDBListRespType	DlpReadFeatureReqType
DlpReadFeatureRespType	DlpReadNetSyncInfoRespHdrType
DlpReadNetSyncInfoRespType	DlpReadNextRecInCategoryReqTyp e
DlpReadOpenDBInfoRespType	DlpReadRecordByIDReqType
DlpReadRecordByIndexReqType	DlpReadRecordIDListReqType
DlpReadRecordIDListRespHdrType	DlpReadRecordIDListRespType
DlpReadRecordRespHdrType	DlpReadRecordRespType
DlpReadResourceByIndexReqType	DlpReadResourceByTypeReqType
DlpReadResourceRespHdrType	DlpReadResourceRespType
DlpReadStorInfoExRespType	DlpReadStorInfoReqType

Table 30.1 Deleted structures *(continued)*

DlpReadStorInfoRespHdrType	DlpReadStorInfoRespType
DlpReadSysInfoReqType	DlpReadSysInfoRespType
DlpReadSysInfoVerRespType	DlpReadUserInfoRespHdrType
DlpReadUserInfoRespType	DlpReqHeaderType
DlpReqType	DlpRespHeaderType
DlpRespType	DlpSetDBInfoReqHdrType
DlpSetDBInfoReqType	DlpSetSysDateTimeReqType
DlpShortArgType	DlpShortArgWrapperType
DlpSmallArgType	DlpSmallArgWrapperType
DlpTinyArgType	DlpTinyArgWrapperType
DlpVersionType	DlpVFSDirCreateReqHdrType
DlpVFSDirCreateReqType	DlpVFSDirEntryEnumerateHdrType
DlpVFSDirEntryEnumerateRespTyp e	DlpVFSDirEntryEnumrerateReqTyp e
DlpVFSDirEntryType	DlpVFSExportDBToFileReqHdrType
DlpVFSExportDBToFileReqType	DlpVFSFileCloseReqType
DlpVFSFileCreateReqHdrType	DlpVFSFileCreateReqType
DlpVFSFileCustomControlHdrType	DlpVFSFileCustomControlReqHdrT ype
DlpVFSFileCustomControlReqType	DlpVFSFileCustomControlRespTyp e
DlpVFSFileDeleteReqHdrType	DlpVFSFileDeleteReqType
DlpVFSFileEOFReqType	DlpVFSFileOpenReqHdrType
DlpVFSFileOpenReqType	DlpVFSFileOpenRespType
DlpVFSFileReadCallbackParamTyp e	DlpVFSFileReadReqType

Table 30.1 Deleted structures *(continued)*

DlpVFSFileReadRespType	DlpVFSFileRenameReqHdrType
DlpVFSFileRenameReqType	DlpVFSFileResizeReqType
DlpVFSFileSeekReqType	DlpVFSFileTellReqType
DlpVFSFileTellRespType	DlpVFSFileWriteCallbackParamType
DlpVFSFileWriteReqType	DlpVFSFileWriteRespType
DlpVFSGetAttributesReqType	DlpVFSGetAttributesRespType
DlpVFSGetDatesReqType	DlpVFSGetDatesRespType
DlpVFSGetDefaultDirReqHdrType	DlpVFSGetDefaultDirReqType
DlpVFSGetDefaultDirRespHdrType	DlpVFSGetDefaultDirRespType
DlpVFSGetFileSizeReqType	DlpVFSGetFileSizeRespType
DlpVFSImportDBFromFileReqHdrType	DlpVFSImportDBFromFileReqType
DlpVFSImportDBFromFileRespType	DlpVFSSetAttributesReqType
DlpVFSSetDatesReqType	DlpVFSVolumeEnumerateHdrType
DlpVFSVolumeEnumerateRespType	DlpVFSVolumeFormatHdrType
DlpVFSVolumeFormatReqType	DlpVFSVolumeGetLabelReqType
DlpVFSVolumeGetLabelRespType	DlpVFSVolumeInfoReqType
DlpVFSVolumeInfoRespType	DlpVFSVolumeSetLabelReqHdrType
DlpVFSVolumeSetLabelReqType	DlpVFSVolumeSizeReqType
DlpVFSVolumeSizeRespType	DlpWriteAppPreferenceReqHdrType
DlpWriteAppPreferenceReqType	DlpWriteBlockReqHdrType
DlpWriteBlockReqType	DlpWriteNetSyncInfoReqHdrType
DlpWriteNetSyncInfoReqType	DlpWriteRecordCallbackParamType

Table 30.1 Deleted structures *(continued)*

DlpWriteRecordReqHdrType	DlpWriteRecordReqType
DlpWriteRecordRespType	DlpWriteRecordStreamReqType
DlpWriteRecordStreamRespType	DlpWriteResourceCallbackParamType
DlpWriteResourceReqHdrType	DlpWriteResourceReqType
DlpWriteResourceStreamReqType	DlpWriteUserInfoReqHdrType
DlpWriteUserInfoReqType	

Table 30.2 Deleted types

DlpCloseDBReqType	DlpCreateDBReqPtr
DlpDeleteDBReqPtr	DlpExpCardInfoReqPtr
DlpExpCardInfoRespPtr	DlpExpCardPresentReqPtr
DlpExpSlotMediaTypeReqPtr	DlpExpSlotsEnumerateRespPtr
DlpGenericArgPtr	DlpGenericArgWrapperPtr
DlpGenericBodyPtr	DlpLongArgPtr
DlpLongArgWrapperPtr	DlpOpenDBReqPtr
DlpReqHeaderPtr	DlpReqPtr
DlpRespHeaderPtr	DlpRespPtr
DlpSetSysDateTimeReqPtr	DlpShortArgPtr
DlpShortArgWrapperPtr	DlpVFSDirCreateReqPtr
DlpVFSDirEntryEnumerateRespPtr	DlpVFSDirEntryEnumrerateReqPtr
DlpVFSExportDBToFileReqPtr	DlpVFSFileCloseReqPtr
DlpVFSFileCreateReqPtr	DlpVFSFileCustomControlReqPtr
DlpVFSFileCustomControlRespPtr	DlpVFSFileDeleteReqPtr
DlpVFSFileEOFReqPtr	DlpVFSFileOpenReqPtr

Table 30.2 Deleted types *(continued)*

DlpVFSFileReadCallbackParamPtr	DlpVFSFileReadReqPtr
DlpVFSFileRenameReqPtr	DlpVFSFileResizeReqPtr
DlpVFSFileSeekReqPtr	DlpVFSFileTellReqPtr
DlpVFSFileWriteReqPtr	DlpVFSGetAttributesReqPtr
DlpVFSGetDatesReqPtr	DlpVFSGetDefaultDirReqPtr
DlpVFSGetDefaultDirRespPtr	DlpVFSGetFileSizeReqPtr
DlpVFSImportDBFromFileReqPtr	DlpVFSSetAttributesReqPtr
DlpVFSSetDatesReqPtr	DlpVFSVolumeEnumerateRespPtr
DlpVFSVolumeFormatReqPtr	DlpVFSVolumeGetLabelReqPtr
DlpVFSVolumeInfoReqPtr	DlpVFSVolumeSetLabelReqPtr
DlpVFSVolumeSizeReqPtr	DlpWriteRecordCallbackParamPtr
DlpWriteRecordStreamReqPtr	DlpWriteResourceCallbackParamPtr
DlpWriteResourceStreamReqPtr	

Table 30.3 Deleted #defines

dlpAddSyncLogEntryReqArgID	dlpAppPrefReqFlagBackedUp
dlpCleanUpDatabaseReqArgID	dlpCloseDBExOptAllFlags
dlpCloseDBExOptFlagUpdateBackupDate	dlpCloseDBExOptFlagUpdateModDate
dlpCmdTimeoutSec	dlpCreateDBReqArgID
dlpCreateDBRespArgID	dlpDBFlagAppInfoDirty
dlpDBFlagBackup	dlpDBFlagCopyPrevention
dlpDBFlagOKToInstallNewer	dlpDBFlagOpen
dlpDBFlagReadOnly	dlpDBFlagResDB

Table 30.3 Deleted #defines *(continued)*

dlpDBFlagResetAfterInstall	dlpDbInfoMiscFlagExcludeFromSy nc
dlpDbInfoMiscFlagRamBased	dlpDbInfoUnknownDbIndex
dlpDeleteDBReqArgID	dlpDeleteRecFlagByCategory
dlpDeleteRecFlagDeleteAll	dlpDeleteRecordReqArgID
dlpDeleteResFlagDeleteAll	dlpDeleteResourceReqArgID
dlpEndOfSyncReqArgID	dlpExpCardInfoReqArgID
dlpExpCardInfoTypeRespArgID	dlpExpCardPresentReqArgID
dlpExpSlotMediaTypeReqArgID	dlpExpSlotMediaTypeRespArgID
dlpExpSlotsEnumerateRespArgID	dlpFindDBOptFlagGetAttributes
dlpFindDBOptFlagGetMaxRecSize	dlpFindDBOptFlagGetSize
dlpFindDBSrchFlagNewSearch	dlpFindDBSrchFlagOnlyLatest
dlpFirstArgID	dlpFuncIDMask
dlpFuncRespFlag	dlpGetSysDateTimeRespArgID
dlpLastPilotV10FuncID	dlpLongArgFlag
dlpLongArgIDMask	dlpLoopBackTestReqArgID
dlpLoopBackTestRespArgID	dlpMaxHostAddrLength
dlpMaxLongArgSize	dlpMaxShortArgSize
dlpMaxSmallArgSize	dlpMaxTinyArgSize
dlpMaxUserNameSize	dlpMoveCategoryReqArgID
dlpNetSyncInfoModLanSyncOn	dlpNetSyncInfoModSyncPCAddr
dlpNetSyncInfoModSyncPCMask	dlpNetSyncInfoModSyncPCName
dlpOpenDBModeExclusive	dlpOpenDBModeRead
dlpOpenDBModeShowSecret	dlpOpenDBModeWrite
dlpOpenDBReqArgID	dlpOpenDBRespArgID

Table 30.3 Deleted #defines *(continued)*

dlpOpenFileModeExclusive	dlpOpenFileModeRead
dlpOpenFileModeReadWrite	dlpOpenFileModeWrite
dlpReadAppPrefActualSize	dlpReadAppPreferenceReqArgID
dlpReadAppPreferenceRespArgID	dlpReadBlockReqArgID
dlpReadBlockRespArgID	dlpReadDBListFlagMultiple
dlpReadDBListFlagRAM	dlpReadDBListFlagROM
dlpReadDBListReqArgID	dlpReadDBListRespArgID
dlpReadDBListRespFlagMore	dlpReadFeatureReqArgID
dlpReadFeatureRespArgID	dlpReadNetSyncInfoRespArgID
dlpReadNextModRecReqArgID	dlpReadNextRecInCategoryReqArg ID
dlpReadOpenDBInfoArgID	dlpReadOpenDBInfoRespArgID
dlpReadRecordIDListFlagSortDB	dlpReadRecordIDListReqArgID
dlpReadRecordIDListRespArgID	dlpReadRecordRespArgID
dlpReadResourceRespArgID	dlpReadUserInfoRespArgID
dlpRecAttrArchived	dlpRecAttrBusy
dlpRecAttrDeleted	dlpRecAttrDirty
dlpRecAttrSecret	dlpResetRecordIndexReqArgID
dlpResetSyncFlagsReqArgID	dlpSetDBInfoNoVerChange
dlpSetSysDateTimeReqArgID	dlpShortArgIDMask
dlpSmallArgFlag	dlpUserInfoModName
dlpUserInfoModSyncDate	dlpUserInfoModSyncPC
dlpUserInfoModUserID	dlpUserInfoModViewerID
dlpVFSDirCreateReqArgID	dlpVFSDirEntryEnumerateRespArg ID

Table 30.3 Deleted #defines *(continued)*

dlpVFSDirEntryEnumrerateReqArgID	dlpVFSExportDBToFileReqArgID
dlpVFSFileCloseReqArgID	dlpVFSFileCreateReqArgID
dlpVFSFileCustomControlReqArgID	dlpVFSFileCustomControlRespArgID
dlpVFSFileDeleteReqArgID	dlpVFSFileEOFReqArgID
dlpVFSFileEOFRespArgID	dlpVFSFileOpenReqArgID
dlpVFSFileOpenRespArgID	dlpVFSFileReadReqArgID
dlpVFSFileReadRespArgID	dlpVFSFileRenameReqArgID
dlpVFSFileResizeReqArgID	dlpVFSFileSeekReqArgID
dlpVFSFileTellReqArgID	dlpVFSFileTellRespArgID
dlpVFSFileWriteReqArgID	dlpVFSFileWriteRespArgID
dlpVFSGetAttributesReqArgID	dlpVFSGetAttributesRespArgID
dlpVFSGetDatesReqArgID	dlpVFSGetDatesRespArgID
dlpVFSGetDefaultDirectoryRespArgID	dlpVFSGetDefaultDirReqArgID
dlpVFSGetFileSizeReqArgID	dlpVFSGetFileSizeRespArgID
dlpVFSImportDBFromFileReqArgID	dlpVFSImportDBFromFileRespArgID
dlpVFSSetAttributesReqArgID	dlpVFSSetDatesReqArgID
dlpVFSVolumeEnumerateRespArgID	dlpVFSVolumeFormatReqArgID
dlpVFSVolumeGetLabelReqArgID	dlpVFSVolumeGetLabelRespArgID
dlpVFSVolumeInfoReqArgID	dlpVFSVolumeInfoRespArgID
dlpVFSVolumeSetLabelReqArgID	dlpVFSVolumeSizeReqArgID
dlpVFSVolumeSizeRespArgID	dlpWriteAppPreferenceReqArgID
dlpWriteBlockReqArgID	dlpWriteNetSyncInfoReqArgID

Table 30.3 Deleted #defines *(continued)*

`dlpWriteRecordReqArgID`	`dlpWriteRecordReqFlagDataIncluded`
`dlpWriteRecordRespArgID`	`dlpWriteRecordStreamReqArgID`
`dlpWriteRecordStreamRespArgID`	`dlpWriteResourceReqArgID`
`dlpWriteResourceStreamReqArgID`	`dlpWriteUserInfoReqArgID`

Table 30.4 Deleted enumerated types

`dlpReadSysInfo` request arguments enum	`dlpReadSysInfo` response arguments enum
`dlpReadStorageInfo` request arguments enum	`dlpReadStorageInfo` response arguments enum
`dlpCallApplication` request arguments enum	`dlpCallApplication` response arguments enum
`dlpFindDB` request arguments enum	`dlpFindDB` response arguments enum
`dlpSetDBInfo` request arguments enum	`DlpCloseDBReqArgID`
`DlpFuncID`	`DlpReadRecordReqArgID`
`DlpReadResourceReqArgID`	`DlpRespErrorCode`
`DlpSyncTermCode`	

31

DLServer.h

Deleted APIs

Table 31.1 Deleted functions

Deleted API	Use instead
`DlkDispatchRequest()`	
`DlkStartServer()`	

Table 31.2 Deleted structures

Deleted API	Use instead
`DlkCondFilterEntryType`	
`DlkCondFilterTableHdrType`	
`DlkCondFilterTableType`	
`DlkDBCreatorList`	
`DlkEventDatabaseOpenedType`	
`DlkServerParamType`	
`DlkServerSessionType`	
`DlkUserInfoHdrType`	
`DlkUserInfoType`	

Table 31.3 Deleted types

Deleted API	Use instead
DlkCondFilterEntryPtr	
DlkCondFilterTableHdrPtr	
DlkCondFilterTablePtr	
DlkServerParamPtr	
DlkServerSessionPtr	
DlkUserInfoPtr	

Table 31.4 Deleted #defines

Deleted API	Use instead
dlkMaxLogSize	
dlkStateFlagSyncDateSet	
dlkStateFlagVerExchanged	
dlkUserInfoPrefVersion	

Table 31.5 Deleted enumerated types

Deleted API	Use instead
DlkCtlEnum	
DlkEventType	

Table 31.6 Deleted application-defined functions

Deleted API	Use instead
DlkEventProcPtr()	
DlkUserCanProcPtr()	

Modified APIs

Table 31.7 Modified structures

Modified API	Description of change
`DlkCallAppReplyParamType`	

Table 31.8 Modified #defines

Modified API	Description of change
`#define dlkMaxUserNameLength (40)`	

Unchanged APIs

Table 31.9 Unchanged functions

`DlkControl()`	`DlkGetSyncInfo()`
`DlkSetLogEntry()`	

Table 31.10 Unchanged #defines

`dlkErr...`	`dlkUserNameBufSize`

Table 31.11 Unchanged enumerated types

`DlkSyncStateType`

32

Encrypt.h

The encryption APIs are unchanged in Palm OS Cobalt.

Unchanged APIs

Table 32.1 Unchanged functions

`EncDES()`	`EncDigestMD4()`
`EncDigestMD5()`	

33

ErrorBase.h

Deleted APIs

Table 33.1 Deleted functions

Deleted API	Use instead
`ErrAlertCustom()`	
`ErrDisplayFileLineMsg()`	
`ErrExceptionList()`	
`ErrThrow()`	

Table 33.2 Deleted macros

Deleted API	Use instead
`ErrAlert()`	

Table 33.3 Deleted #defines

Deleted API	Use instead
`errMaxMsgLength`	
`uilibErrorClass`	

Modified APIs

Table 33.4 Modified structures

Modified API	Description of change
`ErrExceptionType`	

Table 33.5 Modified types

Modified API	Description of change
`typedef long *ErrJumpBuf[16]`	

Table 33.6 Modified #defines

Modified API	Description of change
`#define actvErrorClass 0x80002000`	
`#define almErrorClass 0x80000900`	
`#define appErrorClass 0x80008000`	
`#define attnErrorClass 0x80002E00`	
`#define bltErrorClass 0x80002300`	
`#define blthErrorClass 0x80003100`	
`#define cmpErrorClass 0x80000D00`	
`#define cncErrorClass 0x80001F00`	
`#define cpmErrorClass 0x80003800`	

Table 33.6 Modified #defines *(continued)*

Modified API	Description of change
`#define dispErrorClass 0x80002200`	
`#define dlkErrorClass 0x80000E00`	
`#define dmErrorClass 0x80000200`	
`#define emuErrorClass 0x80001C00`	
`#define errInfoClass 0x80007F00`	
`#define errNone 0x00000000`	
`#define ErrTry { ErrExceptionType _TryObject; _TryObject.err = 0; ErrExceptionListAppend(&_TryOb ject); if (ErrSetJump(_TryObject.state) == 0) {`	
`#define evtErrorClass 0x80000700`	
`#define exgErrorClass 0x80001500`	
`#define expErrorClass 0x80002900`	
`#define fileErrorClass 0x80001600`	
`#define flpErrorClass 0x80000680`	
`#define flshErrorClass 0x80001D00`	

Table 33.6 Modified #defines *(continued)*

Modified API	Description of change
`#define fplErrorClass 0x80000600`	
`#define ftrErrorClass 0x80000C00`	
`#define grfErrorClass 0x80001000`	
`#define htalErrorClass 0x80001300`	
`#define hwrErrorClass 0x80003000`	
`#define inetErrorClass 0x80001400`	
`#define intlErrorClass 0x80002C00`	
`#define lmErrorClass 0x80002B00`	
`#define lz77ErrorClass 0x80002700`	
`#define mdmErrorClass 0x80001100`	
`#define memErrorClass 0x80000100`	
`#define menuErrorClass 0x80002600`	
`#define netErrorClass 0x80001200`	
`#define oemErrorClass 0x80007000`	
`#define omErrorClass 0x80002500`	

Table 33.6 Modified #defines *(continued)*

Modified API	Description of change
`#define padErrorClass 0x80000F00`	
`#define pdiErrorClass 0x80002D00`	
`#define penErrorClass 0x80000B00`	
`#define pinsErrorClass 0x80005000`	
`#define pwrErrorClass 0x80001E00`	
`#define radioErrorClass 0x80002100`	
`#define rfutErrorClass 0x80001700`	
`#define secErrorClass 0x80001B00`	
`#define serErrorClass 0x80000300`	
`#define slkErrorClass 0x80000400`	
`#define smsErrorClass 0x80002800`	
`#define sndErrorClass 0x80000800`	
`#define sslErrorClass 0x80003900`	
`#define statErrorClass 0x80005100`	

Table 33.6 Modified #defines *(continued)*

Modified API	Description of change
`#define sysErrorClass 0x80000500`	
`#define telErrorClass 0x80002F00`	
`#define timErrorClass 0x80000A00`	
`#define tsmErrorClass 0x80001900`	
`#define txtErrorClass 0x80001800`	
`#define udaErrorClass 0x80003200`	
`#define vfsErrorClass 0x80002A00`	
`#define webErrorClass 0x80001A00`	
`#define winErrorClass 0x80002400`	

Unchanged APIs

Table 33.7 Unchanged functions

`ErrLongJump()`	`ErrSetJump()`

Table 33.8 Unchanged macros

`ErrCatch()`

Table 33.9 Unchanged types

`ErrExceptionPtr`

Table 33.10Unchanged #defines

`ErrEndCatch`

34

ErrorMgr.h

Although the Error Manager APIs are unchanged and continue to work in Palm OS Cobalt, there are several new macros that should be used instead.

Unchanged APIs

Table 34.1 lists those macros that existed in previous Palm OS releases along with the new macros that PalmSource recommends you use instead.

Table 34.1 Unchanged macros

Existing Macro	Recommended
`ErrDisplay()`	`ErrFatalError()`
`ErrFatalDisplay()`	`ErrFatalError()`
`ErrFatalDisplayIf()`	`ErrFatalErrorIf()`
`ErrNonFatalDisplay()`	`DbgOnlyFatalError()`
`ErrNonFatalDisplayIf()`	`DbgOnlyFatalErrorIf()`

35

Event.h

There are relatively few changes in the Event APIs. A couple of functions that formerly returned `void` now return a status value. The `EvtCopyEvent()` function is no longer supported, and neither is the `winDisplayChangedEvent`.

There are a number of new functions declared in Event.h primarily to enable the passing of events across process boundaries. Of particular importance is `EvtCreateBackgroundThread()`. This function creates a new background thread and returns a queue through which you can communicate with that thread. See Chapter 7, "Event," in *Exploring Palm OS: Programming Basics* for a complete description of all of the Palm OS Cobalt event APIs.

Deleted APIs

Table 35.1 Deleted functions

Deleted API	Use instead
`EvtCopyEvent()`	Palm OS Cobalt doesn't export a function that provides similar functionality.

Table 35.2 Deleted #defines

Deleted API	Use instead
`winDisplayChangedEvent`	

Modified APIs

Table 35.3 Modified functions

Modified API	Description of change
`status_t EvtAddEventToQueue (const EventType *)`	Now returns an error code if the event queue is full.
`status_t EvtAddUniqueEventToQueue (const EventType *, uint32_t, Boolean)`	Now returns an error code if the event queue is full.
`status_t EvtGetPen (Coord *, Coord *, Boolean *)`	Now returns an error code.

Table 35.4 Modified structures

Modified API	Description of change
`EventType`	The `winDisplayChanged` struct has been removed from this union, and the following structures have been added: `tsmFepChange`, `tsmFepDisplayOptions`, `tsmFepSelectOption`, `gsiStateChange`.

Table 35.5 Modified enumerated types

Modified API	Description of change
`eventsEnum`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `eventsEnumTag` enum.

Unchanged APIs

Table 35.6 Unchanged functions

`EvtEventAvail()`	`EvtGetEvent()`

Table 35.7 Unchanged macros

`EvtKeydownIsVirtual()`

Table 35.8 Unchanged types

`EventPtr`

36

ExgLib.h

Deleted APIs

Table 36.1 Deleted functions

Deleted API	Use instead
`ExgLibAccept()`	
`ExgLibClose()`	
`ExgLibConnect()`	
`ExgLibDisconnect()`	
`ExgLibGet()`	
`ExgLibOpen()`	
`ExgLibPut()`	
`ExgLibReceive()`	
`ExgLibRequest()`	
`ExgLibSend()`	
`ExgLibSleep()`	
`ExgLibWake()`	

Table 36.2 Deleted #defines

Deleted API	Use instead
`exgLibTrap...`	

Unchanged APIs

Table 36.3 Unchanged functions

`ExgLibControl()`	`ExgLibHandleEvent()`

Table 36.4 Unchanged #defines

`exgIntDataChr`

37

ExgLocalLib.h

Modified APIs

Table 37.1 Modified structures

Modified API	Description of change
ExgLocalSocketInfoType	

Unchanged APIs

Table 37.2 Unchanged types

ExgLocalOpType

Table 37.3 Unchanged #defines

exgLocalLibName	exgLocalOpAccept
exgLocalOpGet	exgLocalOpGetSender
exgLocalOpNone	exgLocalOpPut
exgLocalScheme	

38

ExgMgr.h

NOTE: Early in the porting process you may want to `#include ExgMgrCompatibility.h` (after the `#include` for `PalmOS.h`). This header file defines a number of APIs and macros that allow applications calling certain deleted functions and functions with modified prototypes to compile and run. This compatibility header should not be counted on long-term, however, so later in the porting process you should remove the `#include` and fix any problems that result.

Deleted APIs

Table 38.1 Deleted types

Deleted API	Use instead
`ExgSocketPtr`	

Modified APIs

Table 38.2 Modified functions

Modified API	Description of change
`status_t ExgAccept (ExgSocketPtr)`	
`status_t ExgConnect (ExgSocketPtr)`	

Table 38.2 Modified functions *(continued)*

Modified API	Description of change
`status_t ExgDBRead (ExgDBReadProcPtr, ExgDBDeleteProcPtr, void *, DatabaseID *, Boolean *, Boolean)`	
`status_t ExgDBWrite (ExgDBWriteProcPtr, void *, const char *, DatabaseID)`	
`status_t ExgDisconnect (ExgSocketPtr, status_t)`	
`status_t ExgGet (ExgSocketPtr)`	
`status_t ExgPut (ExgSocketPtr)`	
`uint32_t ExgReceive (ExgSocketPtr, void *, uint32_t, status_t *)`	
`uint32_t ExgSend (ExgSocketPtr, const void *const, uint32_t, status_t *)`	

Table 38.3 Modified structures

Modified API	Description of change
`ExgAskParamType`	
`ExgCtlGetURLType`	
`ExgDialogInfoType`	
`ExgGoToType`	
`ExgPreviewInfoType`	
`ExgSocketType`	

Table 38.4 Modified application-defined functions

Modified API	Description of change
`Boolean (*ExgDBDeleteProcPtr) (const char *, uint16_t, DatabaseID, void *)`	

Unchanged APIs

Table 38.5 Unchanged functions

`ExgControl()`	`ExgDoDialog()`
`ExgGetDefaultApplication()`	`ExgGetRegisteredApplications()`
`ExgGetRegisteredTypes()`	`ExgGetTargetApplication()`
`ExgInit()`	`ExgNotifyGoto()`
`ExgNotifyPreview()`	`ExgNotifyReceive()`
`ExgNotifyReceiveV35()`	`ExgRegisterData()`
`ExgRegisterDatatype()`	`ExgRequest()`
`ExgSetDefaultApplication()`	

Table 38.6 Unchanged types

`ExgAskParamPtr`	`ExgGoToPtr`

Table 38.7 Unchanged #defines

`exgBeamPrefix`	`exgBeamScheme`
`exgDataPrefVersion`	`exgErr...`
`exgGet`	`exgGetPrefix`
`exgGetScheme`	`exgLibAPIVersion`
`exgLibCtlGetPreview`	`exgLibCtlGetTitle`

Table 38.7 Unchanged #defines *(continued)*

exgLibCtlGetURL	exgLibCtlGetVersion
exgLibCtlSpecificOp	exgLocalPrefix
exgMaxDescriptionLength	exgMaxTitleLen
exgMaxTypeLength	exgMemError
exgNoAsk	exgPreviewDialog
exgPreviewDraw	exgPreviewFirstUser
exgPreviewLastUser	exgPreviewLongString
exgPreviewQuery	exgPreviewShortString
exgRegCreatorID	exgRegExtensionID
exgRegSchemeID	exgRegTypeID
exgSendBeamPrefix	exgSendPrefix
exgSendScheme	exgSeparatorChar
exgTitleBufferSize	exgUnwrap

Table 38.8 Unchanged enumerated types

ExgAskResultType

Table 38.9 Unchanged application-defined functions

ExgDBReadProcPtr()	ExgDBWriteProcPtr()

39

ExpansionMgr.h

68K-style slot drivers are no longer supported. In Palm OS Cobalt the slot driver is replaced by a **block device driver** (also called a storage driver). Applications no longer manipulate slot drivers directly.

Deleted APIs

Table 39.1 Deleted functions

Deleted API	Use instead
`ExpCardGetSerialPort()`	A slot-driver-specific function.
`ExpCardInserted()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`ExpCardRemoved()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`ExpInit()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`ExpSlotDriverInstall()`	Nothing. Applications cannot manipulate slot drivers in this release of Palm OS Cobalt.
`ExpSlotDriverRemove()`	Nothing. Applications cannot manipulate slot drivers in this release of Palm OS Cobalt.
`ExpSlotLibFind()`	Nothing. Applications cannot manipulate slot drivers in this release of Palm OS Cobalt.

Table 39.1 Deleted functions *(continued)*

Deleted API	Use instead
`ExpSlotRegister()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`ExpSlotUnregister()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.

Table 39.2 Deleted macros

Deleted API	Use instead
`EXPMGR_TRAP()`	Nothing. The Expansion Manager is a standard part of the operating system in Palm OS Cobalt.

Table 39.3 Deleted #defines

Deleted API	Use instead
`expCardGetSerialPort`	Nothing. This was a function selector for a function that is no longer exported.
`expCardInfo`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`expCardInserted`	Nothing. This was a function selector for a function that is no longer exported.
`expCardPresent`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`expCardRemoved`	Nothing. This was a function selector for a function that is no longer exported.

Table 39.3 Deleted #defines *(continued)*

Deleted API	Use instead
`expInit`	Nothing. This was a function selector for a function that is no longer exported.
`expMaxSelector`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`expSlotDriverInstall`	Nothing. This was a function selector for a function that is no longer exported.
`expSlotDriverRemove`	Nothing. This was a function selector for a function that is no longer exported.
`expSlotEnumerate`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`expSlotLibFind`	Nothing. This was a function selector for a function that is no longer exported.
`expSlotRegister`	Nothing. This was a function selector for a function that is no longer exported.
`expSlotUnregister`	Nothing. This was a function selector for a function that is no longer exported.
`sysTrapExpansionMgr`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.

Table 39.4 Deleted application-defined functions

Deleted API	Use instead
`ExpPollingProcPtr()`	

Modified APIs

Table 39.5 Modified #defines

Modified API	Description of change
`#define expMgrVersionNum ((uint16_t)300)`	Was 200.

Unchanged APIs

Table 39.6 Unchanged functions

`ExpCardInfo()`	`ExpCardPresent()`
`ExpSlotEnumerate()`	

Table 39.7 Unchanged structures

`ExpCardInfoType`

Table 39.8 Unchanged #defines

`expCapabilityHasStorage`	`expCapabilityReadOnly`
`expCapabilitySerial`	`expCardInfoStringMaxLen`
`expFtrIDVersion`	`expHandledSound`
`expHandledVolume`	`expInvalidSlotRefNum`
`expIteratorStart`	`expIteratorStop`
`expErr...`	`expMediaType_Any`
`expMediaType_CompactFlash`	`expMediaType_MacSim`
`expMediaType_MemoryStick`	`expMediaType_MultiMediaCard`
`expMediaType_PoserHost`	`expMediaType_RAMDisk`
`expMediaType_SecureDigital`	`expMediaType_SmartMedia`

40

FatalAlert.h

The Fatal Alert APIs are unchanged in Palm OS Cobalt.

Unchanged APIs

Table 40.1 Unchanged functions

`SysFatalAlert()`	`SysFatalAlertInit()`

Table 40.2 Unchanged #defines

`fatalDoNothing`	`fatalEnterDebugger`
`fatalReset`	

41

FeatureMgr.h

Feature numbers are now 32-bit (unsigned) values; in Palm OS Garnet they were 16-bit values. This affects the parameter lists of nearly every Feature Manager function.

Deleted APIs

Table 41.1 Deleted functions

Deleted API	Use instead
`FtrInit()`	Nothing. This function was documented as "System Use Only."

Table 41.2 Deleted #defines

Deleted API	Use instead
`ftrErrAlreadyExists`	See the documentation for the affected function in the Feature Manager chapter of *Exploring Palm OS: System Management*.
`ftrErrROMBased`	See the documentation for the affected function in the Feature Manager chapter of *Exploring Palm OS: System Management*.

Modified APIs

Table 41.3 Modified functions

Modified API	Description of change
`status_t FtrGet (uint32_t, uint32_t, uint32_t *)`	The second parameter, the feature number, was formerly an unsigned 16-bit number.
`status_t FtrPtrFree (uint32_t, uint32_t)`	The second parameter, the feature number, was formerly an unsigned 16-bit number.
`status_t FtrPtrNew (uint32_t, uint32_t, size_t, void **newPtrP)`	The second parameter, the feature number, was formerly an unsigned 16-bit number, and the third parameter, `size`, used to be a `UInt32`.
`status_t FtrPtrResize (uint32_t, uint32_t, size_t, void **newPtrP)`	The second parameter, the feature number, was formerly an unsigned 16-bit number, and the third parameter, `newSize`, used to be a `UInt32`.
`status_t FtrSet (uint32_t, uint32_t, uint32_t)`	The second parameter, the feature number, was formerly an unsigned 16-bit number.
`status_t FtrUnregister (uint32_t, uint32_t)`	The second parameter, the feature number, was formerly an unsigned 16-bit number.

Unchanged APIs

Table 41.4 Unchanged functions

`FtrGetByIndex()`

Table 41.5 Unchanged #defines

`ftrErr...`

42

Field.h

The Palm OS Cobalt Field APIs have very few changes. Some function parameters and return types that were formerly unsigned 16-bit integers are now unsigned 32-bit integers. The `FieldType` structure is now completely opaque. Finally, a couple of APIs that were defined but not ever publicly used have been removed.

Deleted APIs

Table 42.1 Deleted structures

Deleted API	Use instead
`FieldUndoType`	Nothing. This structure was defined but not used by any exported APIs.
`LineInfoType`	Nothing. This structure was used only in the `FieldType` structure, the contents of which are now completely private.

Table 42.2 Deleted types

Deleted API	Use instead
`LineInfoPtr`	Nothing. This type was used only in the `FieldType` structure, the contents of which are now completely private.

Table 42.3 Deleted enumerated types

Deleted API	Use instead
`UndoMode`	Nothing. This enum was only used by the `FieldUndoType` structure, which in turn was not used by any exported APIs.

Modified APIs

Table 42.4 Modified functions

Modified API	Description of change
`uint32_t FldCalcFieldHeight (const char *, Coord)`	This function used to return an unsigned 16-bit integer.
`uint32_t FldGetNumberOfBlankLines(const FieldType *)`	This function used to return an unsigned 16-bit integer.
`void FldGetScrollValues (const FieldType *, uint32_t *, uint32_t *, uint32_t *)`	The three final parameters used to be pointers to unsigned 16-bit integers.
`uint32_t FldGetVisibleLines (const FieldType *)`	This function used to return an unsigned 16-bit integer.
`void FldScrollField (FieldType *, uint32_t, WinDirectionType)`	*`linesToScroll`* was an unsigned 16-bit integer.
`void FldSendHeightChangeNotification (const FieldType *, size_t, int32_t);`	*`numLines`* was an unsigned 16-bit integer.

Table 42.5 Modified structures

Modified API	Description of change
`FieldType`	The internals of this structure are now completely private.

Table 42.6 Modified #defines

Modified API	Description of change
`#define maxFieldTextLen SIZE_MAX`	Was `0x7fff`. Note that `SIZE_MAX` is defined in `stdint.h` (as 2147483647).

Table 42.7 Modified enumerated types

Modified API	Description of change
`JustificationType`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `justifications` enum.

Unchanged APIs

Table 42.8 Unchanged functions

`FldCompactText()`	`FldCopy()`
`FldCut()`	`FldDelete()`
`FldDirty()`	`FldDrawField()`
`FldEraseField()`	`FldFreeMemory()`
`FldGetAttributes()`	`FldGetBounds()`
`FldGetFont()`	`FldGetInsPtPosition()`
`FldGetMaxChars()`	`FldGetScrollPosition()`
`FldGetSelection()`	`FldGetTextAllocatedSize()`
`FldGetTextHandle()`	`FldGetTextHeight()`
`FldGetTextLength()`	`FldGetTextPtr()`
`FldGrabFocus()`	`FldHandleEvent()`
`FldInsert()`	`FldMakeFullyVisible()`
`FldNewField()`	`FldPaste()`
`FldRecalculateField()`	`FldReleaseFocus()`
`FldScrollable()`	`FldSendChangeNotification()`
`FldSetAttributes()`	`FldSetBounds()`
`FldSetDirty()`	`FldSetFont()`
`FldSetInsertionPoint()`	`FldSetInsPtPosition()`

Table 42.8 Unchanged functions *(continued)*

FldSetMaxChars()	FldSetMaxVisibleLines()
FldSetScrollPosition()	FldSetSelection()
FldSetText()	FldSetTextAllocatedSize()
FldSetTextHandle()	FldSetTextPtr()
FldSetUsable()	FldUndo()
FldWordWrap()	

Table 42.9 Unchanged structures

FieldAttrType

Table 42.10Unchanged types

FieldAttrPtr	FieldPtr

Table 42.11Unchanged #defines

maxFieldLines	undoBufferSize

Table 42.12Unchanged enumerated types

justifications

43

FileStream.h

The card number parameter has been removed from those functions that took a card number.
Because databases in Palm OS Cobalt are uniquely identified by a combination of name and creator ID (rather than just their name, as in previous Palm OS releases), a creator ID parameter has been added to `FileDelete()`.

Modified APIs

Table 43.1 Modified functions

Modified API	Description of change
`status_t FileDelete (const char *, uint32_t)`	The card number parameter has been removed. Because databases in Palm OS Cobalt are uniquely identified by a combination of name and creator ID (rather than just their name, as in previous Palm OS releases), a creator ID parameeter has been added.
`FileHand FileOpen (const char *, uint32_t, uint32_t, uint32_t, status_t *)`	The card number parameter has been removed.

Unchanged APIs

Table 43.2 Unchanged functions

`FileClose()`	`FileControl()`
`FileReadLow()`	`FileSeek()`
`FileTell()`	`FileTruncate()`
`FileWrite()`	

Table 43.3 Unchanged macros

FileClearerr()	FileDmRead()
FileEOF()	FileError()
FileFlush()	FileGetLastError()
FileRead()	FileRewind()

Table 43.4 Unchanged types

FileHand

Table 43.5 Unchanged #defines

fileErr...	fileModeAllFlags
fileModeAnyTypeCreator	fileModeAppend
fileModeDontOverwrite	fileModeExclusive
fileModeLeaveOpen	fileModeReadOnly
fileModeReadWrite	fileModeTemporary
fileModeUpdate	fileNullHandle

Table 43.6 Unchanged enumerated types

FileOpEnum	FileOriginEnum

44

Find.h

The find APIs are unchanged in Palm OS Cobalt. Card number parameters and fields have been removed where they were once defined. The `FindStrInStr()` function has been removed in favor of the `TxtFindString()` function. The `FindParamsType` structure is now opaque, and the `FindMatchType` and `GoToParamsType` structures have had new fields added to them.

Note that prior to Palm OS Cobalt you couldn't launch Find when a modal dialog was active. In Palm OS Cobalt you can, so, like any other button tap, launching Find dismisses the currently active dialog by simulating a tap on its default button. As well, in Palm OS releases up to but not including Palm OS Cobalt, the `sysAppLaunchCmdFind` launch code is sent to all applications. In Palm OS Cobalt, however, it is only sent to the active application, to all 68K applications, and to those Palm OS Protein applications that have the `ALPF_FLAG_NOTIFY_FIND` attribute set to `true` in their Application Launch Preferences Resource.

Deleted APIs

Table 44.1 Deleted functions

Deleted API	Use instead
`FindStrInStr()`	`TxtFindString()`

Table 44.2 Deleted #defines

Deleted API	Use instead
`maxFinds`	Nothing. This was used in the definition of the `FindParamsType` structure, the internals of which are now private.

Modified APIs

Table 44.3 Modified functions

Modified API	Description of change
`Boolean FindSaveMatch (FindParamsPtr, uint32_t, uint32_t, size_t, size_t, uint32_t, uint32_t, DatabaseID)`	The card number parameter has been removed, 16-bit fields have been expanded to 32 bits, and an additional parameter has been added to let you specify the length of the matched text.

Table 44.4 Modified structures

Modified API	Description of change
`FindMatchType`	No longer has card number fields (either for the application or for the database in which the record was found). The `matchFieldNum` field contains a column ID if the match was made in a schema database record. This structure now contains a `matchLen` field that contains the length, in bytes, of the matched data. Finally, the fields in this structure have been rearranged and additional reserved fields have been added.

Table 44.4 Modified structures

Modified API	Description of change
`FindParamsType`	The contents of this structure are now private and should not be accessed by applications.
`GoToParamsType`	No longer has a card number field (`dbCardNo`). New fields have been added for the unique ID of the record that contains the match, the length of the matched text, and a string buffer containing the matched text itself. Also, the fields in this structure have been rearranged and additional reserved fields have been added for padding and alignment purposes.

Table 44.5 Modified #defines

Modified API	Description of change
`#define maxFindStrLen 48`	Was 16.

Unchanged APIs

Table 44.6 Unchanged functions

`Find()`	`FindDrawHeader()`
`FindGetLineBounds()`	

Table 44.7 Unchanged types

`FindMatchPtr`	`FindParamsPtr`
`GoToParamsPtr`	

45

FixedMath.h

The error-correcting versions of `FixedDiv()` and `FixedMul()` are no longer supported.

Deleted APIs

Table 45.1 Deleted functions

Deleted API	Use instead
`ECFixedDiv()`	`FixedDiv()`
`ECFixedMul()`	`FixedMul()`

Table 45.2 Deleted types

Deleted API	Use instead
`FixedType`	`Fixed`

Table 45.3 Deleted #defines

Deleted API	Use instead
`FIXED_POINT_32_BIT`	This was previously used to conditionally enable 1.5x scaling support. 1.5x scaling is always supported in Palm OS Cobalt.

Unchanged APIs

Table 45.4 Unchanged macros

`FixedAdd()`	`FixedDiv()`
`FixedFraction()`	`FixedFromInteger()`
`FixedMul()`	`FixedPower2Div()`
`FixedPower2Mul()`	`FixedSub()`
`FixedToInteger()`	

Table 45.5 Unchanged #defines

Modified API	Description of change
`kFixedBias`	`kFixedFractionMask`
`kFixedOneAndOneHalf`	`kFixedOneHalf`
`kFixedTwo`	`kFixedTwoThirds`

46

FloatMgr.h

NOTE: Early in the porting process you may want to `#include FloatMgrCompatibility.h` (after the `#include` for `PalmOS.h`). This header file defines a number of APIs and macros that allow applications calling certain deleted functions and functions with modified prototypes to compile and run. This compatibility header should not be counted on long-term, however, so later in the porting process you should remove the `#include` and fix any problems that result.

Deleted APIs

Table 46.1 Deleted functions

Deleted API	Use instead
`FlpAToF()`	
`FlpBufferAToF()`	
`FlpBufferCorrectedAdd()`	
`FlpBufferCorrectedSub()`	
`FlpSelectorErrPrv()`	
`FlpVersion()`	

Table 46.2 Deleted macros

Deleted API	Use instead
FLOAT_EM_TRAP()	
FLOAT_TRAP()	
FlpGetSign()	
FlpIsZero()	

Table 46.3 Deleted #defines

Deleted API	Use instead
BIG_ENDIAN	
flpEqual	
flpGreater	
flpLess	
flpMaxFloatSelector	
flpUnordered	
sysFloatAToF	
sysFloatBase10Info	
sysFloatCorrectedAdd	
sysFloatCorrectedSub	
sysFloatEm_d_add	
sysFloatEm_d_cmp	
sysFloatEm_d_cmpe	
sysFloatEm_d_div	
sysFloatEm_d_dtof	
sysFloatEm_d_dtoi	

Table 46.3 Deleted #defines *(continued)*

Deleted API	Use instead
sysFloatEm_d_dtoll	
sysFloatEm_d_dtoq	
sysFloatEm_d_dtou	
sysFloatEm_d_dtoull	
sysFloatEm_d_feq	
sysFloatEm_d_fge	
sysFloatEm_d_fgt	
sysFloatEm_d_fle	
sysFloatEm_d_flt	
sysFloatEm_d_fne	
sysFloatEm_d_for	
sysFloatEm_d_fun	
sysFloatEm_d_itod	
sysFloatEm_d_lltod	
sysFloatEm_d_mul	
sysFloatEm_d_neg	
sysFloatEm_d_qtod	
sysFloatEm_d_sub	
sysFloatEm_d_ulltod	
sysFloatEm_d_utod	
sysFloatEm_fp_get_fpscr	
sysFloatEm_fp_round	
sysFloatEm_fp_set_fpscr	

Table 46.3 Deleted #defines *(continued)*

Deleted API	Use instead
sysFloatEm_f_add	
sysFloatEm_f_cmp	
sysFloatEm_f_cmpe	
sysFloatEm_f_div	
sysFloatEm_f_feq	
sysFloatEm_f_fge	
sysFloatEm_f_fgt	
sysFloatEm_f_fle	
sysFloatEm_f_flt	
sysFloatEm_f_fne	
sysFloatEm_f_for	
sysFloatEm_f_ftod	
sysFloatEm_f_ftoi	
sysFloatEm_f_ftoll	
sysFloatEm_f_ftoq	
sysFloatEm_f_ftou	
sysFloatEm_f_ftoull	
sysFloatEm_f_fun	
sysFloatEm_f_itof	
sysFloatEm_f_lltof	
sysFloatEm_f_mul	
sysFloatEm_f_neg	
sysFloatEm_f_qtof	

Table 46.3 Deleted #defines *(continued)*

Deleted API	Use instead
sysFloatEm_f_sub	
sysFloatEm_f_ulltof	
sysFloatEm_f_utof	
sysFloatFToA	
sysFloatVersion	

Modified APIs

Table 46.4 Modified functions

Modified API	Description of change
status_t FlpBase10Info (double, uint32_t *, int16_t *, int16_t *)	
double FlpCorrectedAdd (double, double, int16_t)	
double FlpCorrectedSub (double, double, int16_t)	
status_t FlpFToA (double, char *)	

Table 46.5 Modified #defines

Modified API	Description of change
#define flpDivByZero FE_DIVBYZERO	
#define flpDownward FE_DOWNWARD	
#define flpErrOutOfRange ERANGE	
#define flpInexact FE_INEXACT	

Table 46.5 Modified #defines *(continued)*

Modified API	Description of change
`#define flpInvalid FE_INVALID`	
`#define flpModeMask 0`	
`#define flpModeShift 0`	
`#define flpOverflow FE_OVERFLOW`	
`#define flpToNearest FE_TONEAREST`	
`#define flpTowardZero FE_TOWARDZERO`	
`#define flpUnderflow FE_UNDERFLOW`	
`#define flpUpward FE_UPWARD`	
`#define flpVersion 0x05000000`	

Unchanged APIs

Table 46.6 Unchanged macros

`FlpGetExponent()`	`FlpNegate()`
`FlpSetNegative()`	`FlpSetPositive()`

Table 46.7 Unchanged structures

`FlpCompDouble`	`FlpCompFloat`
`FlpDoubleBits`	`_sfpe_64_bits`

Table 46.8 Unchanged types

`FlpDouble`	`FlpFloat`
`FlpLongDouble`	`sfpe_long_long`
`sfpe_unsigned_long_long`	

47

Font.h

Aside from some minor changes in function parameter sizes, and the renaming of a couple of structures, the Font APIs are largely unchanged in Palm OS Cobalt.

Deleted APIs

Table 47.1 Deleted functions

Deleted API	Use instead
`FntWCharWidth()`	`FntCharWidth()`

Table 47.2 Deleted structures

Deleted API	Use instead
`FontCharInfoType`	Nothing. This structure was defined but not used by the public APIs.
`FontDensityType`	`FontDensityTypeType`
`FontTypeV2`	`FontTypeV2Type`. Note that applications should never access the contents of this structure directly.

Table 47.3 Deleted types

Deleted API	Use instead
`FontCharInfoPtr`	Nothing. This pointer type was defined but not used by the public APIs.

Table 47.4 Deleted #defines

Deleted API	Use instead
`fntMissingChar`	Applications were likely not using this. It was defined to have a value of -1.

Modified APIs

Table 47.5 Modified functions

Modified API	Description of change
`void FntGetScrollValues (const char *, Coord, size_t, uint32_t *, uint32_t *)`	The final two parameters, `linesP` and `topLine`, previously pointed to an unsigned 16-bit integer.
`void FntWordWrapReverseNLines (const char *, Coord, uint32_t *, size_t *)`	The third parameter, indicating the number of lines to scroll, previously pointed to an unsigned 16-bit integer.

Table 47.6 Modified enumerated types

Modified API	Description of change
`FontID`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `fontID` enum.

Unchanged APIs

Table 47.7 Unchanged functions

`FntAverageCharWidth()`	`FntBaseLine()`
`FntCharHeight()`	`FntCharsInWidth()`
`FntCharsWidth()`	`FntCharWidth()`
`FntDefineFont()`	`FntDescenderHeight()`
`FntGetFontPtr()`	`FntLineHeight()`

Table 47.7 Unchanged functions *(continued)*

`FntLineWidth()`	`FntWidthToOffset()`
`FntWordWrap()`	`FntGetFont()`
`FntSetFont()`	

Table 47.8 Unchanged macros

`FntIsAppDefined()`

Table 47.9 Unchanged structures

`FontType`

Table 47.10Unchanged types

`FontPtr`	`FontTablePtr`

Table 47.11Unchanged #defines

`checkboxFont`	`fntTabChrWidth`

Table 47.12Unchanged enumerated types

`fontID`

48

FontSelect.h

The one function declared in `FontSelect.h` remains unchanged for Palm OS Cobalt.

Unchanged APIs

Table 48.1 Unchanged functions

`FontSelect()`

49

Form.h

The Form APIs have undergone a general cleanup. This involved the removal of unused declarations and the hiding of structure contents that developers had previously been warned not to rely on.

In order to deal with the fact that Palm OS Cobalt doesn't support a resource search chain, a number of functions now take an additional parameter through which you explicitly identify the resource database that contains a needed resource.

Deleted APIs

Table 49.1 Deleted functions

Deleted API	Use instead
`FrmActiveState()`	Nothing. This function was documented as "System Use Only."
`FrmAddSpaceForObject()`	Nothing. This function was documented as "System Use Only."
`FrmGetDIAPolicyAttr()`	Nothing; your application now controls the state of the input area directly, so this function is no longer needed. See *Exploring Palm OS: Input Services* for more information on controlling the input area.
`FrmGetUserModifiedState()`	Nothing. This function was documented as "System Use Only."

Table 49.1 Deleted functions

Deleted API	Use instead
`FrmSetDIAPolicyAttr()`	`PINSetInputAreaState()`. See *Exploring Palm OS: Input Services* for more information on controlling the input area.
`FrmSetNotUserModified()`	Nothing. This function was documented as "System Use Only."

Table 49.2 Deleted macros

Deleted API	Use instead
`FrmRestoreActiveState()`	Nothing. This macro simply called a function that was documented as "System Use Only."
`FrmSaveActiveState()`	Nothing. This macro simply called a function that was documented as "System Use Only."

Table 49.3 Deleted structures

Deleted API	Use instead
`FormAttrType`	Nothing. This structure was only needed by the `FormType` structure, the internals of which are now private. Applications should not have been accessing this structure directly.
`FormFrameType`	Nothing. This structure was defined but not used by any of the APIs exposed in the last pre-Palm OS Cobalt SDK.
`FormLineType`	Nothing. This structure was defined but not used by any of the APIs exposed in the last pre-Palm OS Cobalt SDK.

Table 49.3 Deleted structures *(continued)*

Deleted API	Use instead
`FormObjAttrType`	Nothing. This structure was only used by structures who's contents are no longer publicly exposed. Applications should not have been accessing this structure directly.
`FormObjectType`	Nothing. This structure was defined but only used by `FormObjListType`, which was not used by any of the APIs exposed in the last pre-Palm OS Cobalt SDK.
`FormObjListType`	Nothing. This structure was defined but not used by any of the APIs exposed in the last pre-Palm OS Cobalt SDK.
`FormPopupType`	Nothing. This structure was defined but only used by `FormObjectType`, which was not used by any of the APIs exposed in the last pre-Palm OS Cobalt SDK.
`FormRectangleType`	Nothing. This structure was defined but not used by any of the APIs exposed in the last pre-Palm OS Cobalt SDK.
`FormTitleType`	Nothing. This structure was defined but only used by `FormObjectType`, which was not used by any of the APIs exposed in the last pre-Palm OS Cobalt SDK.

Table 49.4 Deleted #defines

Deleted API	Use instead
`FORM_GADGET_TYPE_IN_CALLBACK_DEFINED`	Nothing. In Palm OS Cobalt the `FormGadgetTypeInCallback` structure is always defined.
`frmDIAPolicyCustom`	Nothing; your application now controls the state of the input area directly, so this #define is no longer needed. See *Exploring Palm OS: Input Services* for more information on controlling the input area.
`frmDIAPolicyStayOpen`	Nothing; your application now controls the state of the input area directly, so this #define is no longer needed. See *Exploring Palm OS: Input Services* for more information on controlling the input area.

Table 49.5 Deleted enumerated types

Deleted API	Use instead
`AlertType`	Formerly an enum, this is now a typedef that takes one of the values defined by the `alertTypes` enum.
`FormObjectKind`	Formerly an enum, this is now a typedef that takes one of the values defined by the `formObjects` enum.

Modified APIs

Table 49.6 Modified functions

Modified API	Description of change
`uint16_t FrmAlert (DmOpenRef, uint16_t)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the alert resource.
`uint16_t FrmCustomAlert (DmOpenRef, uint16_t, const char *, const char *, const char *)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the alert resource.
`uint16_t FrmCustomResponseAlert (DmOpenRef, uint16_t, const char *, const char *, const char *, char *, int16_t, FormCheckResponseFuncPtr)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the alert resource.
`void FrmGotoForm (DmOpenRef, uint16_t)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the form to be displayed.
`void FrmHelp (DmOpenRef, uint16_t)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the help message string.
`FormType *FrmInitForm (DmOpenRef, uint16_t)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the form.
`FormBitmapType *FrmNewBitmap (FormType **formPP, DmOpenRef, uint16_t, Coord, Coord)`	You no longer supply a symbolic ID for the bitmap. Also, there is now an additional parameter through which you explicitly identify the resource database that contains the bitmap.

Table 49.6 Modified functions *(continued)*

Modified API	Description of change
`FormType *FrmNewForm (uint16_t, const char *, Coord, Coord, Coord, Coord, Boolean, uint16_t, DmOpenRef, uint16_t, DmOpenRef, uint16_t)`	Now contains two additional parameters through which you explicitly identify the resource databases that contain the form's online help and menus.
`void FrmPopupForm (DmOpenRef, uint16_t)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the form to be opened.
`void FrmSetMenu (FormType *, DmOpenRef, uint16_t)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the menu.

Table 49.7 Modified structures

Modified API	Description of change
`AlertTemplateType`	The internals of this structure are now completely private.
`FormActiveStateType`	This structure has increased in size. Note that it remains, as it has always been, abstract; applications shouldn't ever try to access this structure's contents directly.
`FormBitmapType`	The internals of this structure are now completely private.
`FormGadgetType`	The internals of this structure are now completely private.
`FormLabelType`	The internals of this structure are now completely private.

Table 49.7 Modified structures *(continued)*

Modified API	Description of change
`FormType`	The internals of this structure are now completely private.
`FrmGraffitiStateType`	The internals of this structure are now completely private.

Table 49.8 Modified #defines

Modified API	Description of change
`#define noFocus (frmInvalidObjectId)`	This #define is effectively unchanged, but note that it previously was defined as a constant value, and now its value is dependent on the value of `frmInvalidObjectId`.

Unchanged APIs

Table 49.9 Unchanged functions

`FrmCloseAllForms()`	`FrmCopyLabel()`
`FrmCopyTitle()`	`FrmDeleteForm()`
`FrmDispatchEvent()`	`FrmDoDialog()`
`FrmDrawForm()`	`FrmEraseForm()`
`FrmGetActiveField()`	`FrmGetActiveForm()`
`FrmGetActiveFormID()`	`FrmGetControlGroupSelection()`
`FrmGetControlValue()`	`FrmGetFirstForm()`
`FrmGetFocus()`	`FrmGetFormBounds()`
`FrmGetFormId()`	`FrmGetFormPtr()`
`FrmGetGadgetData()`	`FrmGetLabel()`
`FrmGetNumberOfObjects()`	`FrmGetObjectBounds()`

Table 49.9 Unchanged functions *(continued)*

FrmGetObjectId()	FrmGetObjectIndex()
FrmGetObjectIndexFromPtr()	FrmGetObjectPosition()
FrmGetObjectPtr()	FrmGetObjectType()
FrmGetTitle()	FrmGetWindowHandle()
FrmHandleEvent()	FrmHideObject()
FrmNewGadget()	FrmNewGsi()
FrmNewLabel()	FrmPointInTitle()
FrmRemoveObject()	FrmReturnToForm()
FrmSaveAllForms()	FrmSetActiveForm()
FrmSetCategoryLabel()	FrmSetControlGroupSelection()
FrmSetControlValue()	FrmSetEventHandler()
FrmSetFocus()	FrmSetGadgetData()
FrmSetGadgetHandler()	FrmSetObjectBounds()
FrmSetObjectPosition()	FrmSetTitle()
FrmShowObject()	FrmUpdateForm()
FrmUpdateScrollers()	FrmValidatePtr()
FrmVisible()	

Table 49.10Unchanged macros

ECFrmValidatePtr()

Table 49.11Unchanged structures

FormGadgetAttrType	FormGadgetTypeInCallback

Table 49.12Unchanged types

FormCheckResponseFuncPtr	FormEventHandlerPtr
FormPtr	

Table 49.13Unchanged #defines

formGadgetDeleteCmd	formGadgetDrawCmd
formGadgetEraseCmd	formGadgetHandleEventCmd
frmInvalidObjectId	frmNoSelectedControl
frmRedrawUpdateCode	frmResponseCreate
frmResponseQuit	

Table 49.14Unchanged enumerated types

alertTypes	formObjects

Table 49.15Unchanged application-defined functions

FormCheckResponseFuncType()	FormEventHandlerType()
FormGadgetHandlerType()	

50

FSLib.h

Due to security and architectural requirements imposed by the new runtime model, Palm OS Cobalt doesn't support the creation of or direct access to file system plug-ins by third-party developers. Accordingly, the FSLib APIs are now private.

Deleted APIs

Table 50.1 Deleted functions

`FSCustomControl()`	`FSDirCreate()`
`FSDirEntryEnumerate()`	`FSFileClose()`
`FSFileCreate()`	`FSFileDelete()`
`FSFileEOF()`	`FSFileGetAttributes()`
`FSFileGetDate()`	`FSFileOpen()`
`FSFileRead()`	`FSFileRename()`
`FSFileResize()`	`FSFileSeek()`
`FSFileSetAttributes()`	`FSFileSetDate()`
`FSFileSize()`	`FSFilesystemType()`
`FSFileTell()`	`FSFileWrite()`
`FSLibAPIVersion()`	`FSLibClose()`
`FSLibOpen()`	`FSLibSleep()`
`FSLibWake()`	`FSVolumeFormat()`
`FSVolumeGetLabel()`	`FSVolumeInfo()`
`FSVolumeMount()`	`FSVolumeSetLabel()`
`FSVolumeSize()`	`FSVolumeUnmount()`

Table 50.2 Deleted macros

`FSDirDelete()`	`FS_LIB_TRAP()`

Table 50.3 Deleted #defines

`fsLibAPIVersion`	`FSMaxSelector`
`FSTrap...`	

51

Graffiti.h

Prior to Palm OS Cobalt applications could access the Graffiti® and Graffiti 2 handwriting recognition engines directly. This is no longer the case in Palm OS Cobalt. Accordingly, except for the Graffiti-related feature constants, all of the APIs formerly declared in `Graffiti.h` will not be found in the Palm OS Cobalt headers.

Deleted APIs

Table 51.1 Deleted functions

`GrfAddMacro()`	`GrfAddPoint()`
`GrfBeginStroke()`	`GrfCleanState()`
`GrfDeleteMacro()`	`GrfFieldChange()`
`GrfFilterPoints()`	`GrfFindBranch()`
`GrfFlushPoints()`	`GrfFree()`
`GrfGetAndExpandMacro()`	`GrfGetGlyphMapping()`
`GrfGetMacro()`	`GrfGetMacroName()`
`GrfGetNumPoints()`	`GrfGetPoint()`
`GrfGetState()`	`GrfInit()`
`GrfInitState()`	`GrfMatch()`
`GrfMatchGlyph()`	`GrfProcessStroke()`
`GrfSetState()`	

Table 51.2 Deleted macros

HasExpansionSequence()	HasSpecialSequence()
HasVirtualSequence()	

Table 51.3 Deleted structures

GrfMatchInfoType	GrfMatchType

Table 51.4 Deleted types

GrfMatchInfoPtr

Table 51.5 Deleted #defines

expandDateChar	expandStampChar
expandTimeChar	grfErr...
grfExpansionSequence	grfMaxMatches
grfNameLength	grfNoShortCut
grfShiftSequence	grfSpecialSequence
grfTempShiftExtended	grfTempShiftLower
grfTempShiftPunctuation	grfTempShiftUpper
grfVirtualSequence	GRF_TRAP

Unchanged APIs

Table 51.6 Unchanged #defines

`grfFtrInputAreaFlagCollapsible`	`grfFtrInputAreaFlagDynamic`
`grfFtrInputAreaFlagLandscape`	`grfFtrInputAreaFlagLefthanded`
`grfFtrInputAreaFlagLiveInk`	`grfFtrInputAreaFlagReverseLandscape`
`grfFtrInputAreaFlagReversePortrait`	

52

GraffitiReference.h

The APIs declared in this header file are essentially unchanged in Palm OS Cobalt.

Deleted APIs

Table 52.1 Deleted #defines

Deleted API	Use instead
`GRF_TRAP`	Nothing. Functions aren't accessed using traps as in Palm OS Garnet.

Table 52.2 Deleted enumerated types

Deleted API	Use instead
`ReferenceType`	Formerly an enum, this is now a typedef that takes one of the values defined by the `ReferenceTag` enum.

Unchanged APIs

Table 52.3 Unchanged functions

`SysGraffitiReferenceDialog()`

53

GraffitiShift.h

The Graffiti Shift APIs are essentially unchanged.

Modified APIs

Table 53.1 Modified enumerated types

Modified API	Description of change
`GsiShiftState`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `GsiShiftStateTag` enum.

Unchanged APIs

Table 53.2 Unchanged functions

`GsiEnable()`	`GsiEnabled()`
`GsiInitialize()`	`GsiSetLocation()`
`GsiSetShiftState()`	

Table 53.3 Unchanged #defines

`glfCapsLock`	`glfNumLock`
`kMaxGsiHeight`	`kMaxGsiWidth`

54

Helper.h

The Helper APIs are essentially unchanged in Palm OS Cobalt.

Modified APIs

Table 54.1 Modified #defines

Modified API	Description of change
`#define kHelperAppMaxActionNameSize 48`	Was 32.
`#define kHelperAppMaxNameSize 72`	Was 48.

Unchanged APIs

Table 54.2 Unchanged structures

`HelperNotifyEnumerateListType`	`HelperNotifyEventType`
`HelperNotifyExecuteType`	`HelperNotifyValidateType`

Table 54.3 Unchanged types

`HelperNotifyActionCodeType`

Table 54.4 Unchanged #defines

`kHelperNotifyActionCodeEnumerate`	`kHelperNotifyActionCodeExecute`
`kHelperNotifyActionCodeValidate`	`kHelperNotifyCurrentVersion`

55

HelperServiceClass.h

The Helper Service Class APIs are unchanged in Palm OS Cobalt.

Unchanged APIs

Table 55.1 Unchanged structures

`HelperServiceEMailDetailsType`	`HelperServiceSMSDetailsType`

Table 55.2 Unchanged #defines

`kHelperServiceClassIDEMail`	`kHelperServiceClassIDFax`
`kHelperServiceClassIDSMS`	`kHelperServiceClassIDVoiceDial`

56

HostControl.h

Deleted APIs

Table 56.1 Deleted functions

Deleted API	Use instead
`HostDbgClearDataBreak()`	
`HostDbgSetDataBreak()`	
`HostGremlinCounter()`	
`HostGremlinIsRunning()`	
`HostGremlinLimit()`	
`HostGremlinNew()`	
`HostGremlinNumber()`	
`HostImportFileWithID()`	
`HostProfileGetCycles()`	
`HostSaveScreen()`	
`HostSessionSave()`	

Table 56.2 Deleted macros

Deleted API	Use instead
`HOST_TRAP()`	

Table 56.3 Deleted structures

Deleted API	Use instead
`HostGremlinInfoType`	

Table 56.4 Deleted #defines

Deleted API	Use instead
`hostSelector...`	

Table 56.5 Deleted enumerated types

Deleted API	Use instead
`HostErrType` values enum	
`HostIDType` values enum	
`HostPlatformType` values enum	
`HostSignalType` values enum	
`HostGet/SetFileAttr` flags enum	

Modified APIs

Table 56.6 Modified functions

Modified API	Description of change
`HostErrType HostExportFile (const char *, const char *)`	
`long HostGetHostVersion (void)`	
`HostErrType HostImportFile (const char *)`	
`void HostTraceOutputB (unsigned, const void *, long)`	

Table 56.6 Modified functions *(continued)*

Modified API	Description of change
`void HostTraceOutputVT (unsigned, const char *, va_list)`	
`void HostTraceOutputVTL (unsigned, const char *, va_list)`	

Table 56.7 Modified types

Modified API	Description of change
`typedef long HostBoolType`	
`typedef long HostClockType`	
`typedef long HostErrType`	
`typedef long HostIDType`	
`typedef long HostPlatformType`	
`typedef long HostSignalType`	
`typedef long HostSizeType`	
`typedef long HostTimeType`	

Table 56.8 Modified #defines

Modified API	Description of change
`#define hostSelectorLastTrapNumber 0x0CFF`	

Unchanged APIs

Table 56.9 Unchanged functions

HostAscTime()	HostClock()
HostCloseDir()	HostCTime()
HostErrNo()	HostExgLibAccept()
HostExgLibClose()	HostExgLibConnect()
HostExgLibControl()	HostExgLibDisconnect()
HostExgLibGet()	HostExgLibHandleEvent()
HostExgLibOpen()	HostExgLibPut()
HostExgLibReceive()	HostExgLibRequest()
HostExgLibSend()	HostExgLibSleep()
HostExgLibWake()	HostFClose()
HostFEOF()	HostFError()
HostFFlush()	HostFGetC()
HostFGetPos()	HostFGetS()
HostFOpen()	HostFPrintF()
HostFPutC()	HostFPutS()
HostFRead()	HostFree()
HostFReopen()	HostFScanF()
HostFSeek()	HostFSetPos()
HostFTell()	HostFWrite()
HostGestalt()	HostGetDirectory()
HostGetEnv()	HostGetFile()
HostGetFileAttr()	HostGetHostID()
HostGetHostPlatform()	HostGetPreference()

Table 56.9 Unchanged functions *(continued)*

HostGMTime()	HostIsCallingTrap()
HostIsSelectorImplemented()	HostLocalTime()
HostLogFile()	HostMalloc()
HostMkDir()	HostMkTime()
HostOpenDir()	HostProfileCleanup()
HostProfileDetailFn()	HostProfileDump()
HostProfileInit()	HostProfileStart()
HostProfileStop()	HostPutFile()
HostReadDir()	HostRealloc()
HostRemove()	HostRename()
HostRmDir()	HostSessionClose()
HostSessionCreate()	HostSessionOpen()
HostSessionQuit()	HostSetFileAttr()
HostSetLogFileSize()	HostSetPreference()
HostSignalResume()	HostSignalSend()
HostSignalWait()	HostSlotHasCard()
HostSlotMax()	HostSlotRoot()
HostStat()	HostStrFTime()
HostTime()	HostTmpFile()
HostTmpNam()	HostTraceClose()
HostTraceInit()	HostTraceOutputT()
HostTraceOutputTL()	HostTruncate()
HostUTime()	

Table 56.10Unchanged structures

HostDirEntType	HostDIRType
HostFILEType	HostStatType
HostTmType	HostUTimeType

Table 56.11Unchanged types

HostBool	HostControlSelectorType
HostControlTrapNumber	HostErr
HostFILE	HostID
HostPlatform	HostSignal

Table 56.12Unchanged #defines

hostErrorClass	hostSelector...
HOST_NAME_MAX	kPalmOSEmulatorFeatureCreator
kPalmOSEmulatorFeatureNumber	

57

ImcUtils.h

This header file provided APIs to handle Internet Mail Consortium specifications. As with the Internet Manager APIs, these APIs are not provided in Palm OS Cobalt.

Deleted APIs

Table 57.1 Deleted functions

`ImcReadFieldNoSemicolon()`	`ImcReadFieldQuotablePrintable()`
`ImcReadPropertyParameter()`	`ImcReadWhiteSpace()`
`ImcSkipAllPropertyParameters()`	`ImcStringIsAscii()`
`ImcWriteNoSemicolon()`	`ImcWriteQuotedPrintable()`

Table 57.2 Deleted #defines

`endOfLineChr`	`EOF`
`groupDelimeterChr`	`imcFilenameLength`
`imcLineSeparatorString`	`imcUnlimitedChars`
`paramaterNameDelimiterChr`	`parameterDelimeterChr`
`valueDelimeterChr`	

Table 57.3 Deleted application-defined functions

`GetCharF()`	`PutStringF()`

58

INetMgr.h

The Internet Manager was included on certain Palm, Inc. handhelds only; it was not supported in Palm OS Garnet and is not supported in Palm OS Cobalt.

Deleted APIs

Table 58.1 Deleted functions

`INetLibCacheGetObject()`	`INetLibCacheGetObjectV2()`
`INetLibCacheList()`	`INetLibCachePurge()`
`INetLibCheckAntennaState()`	`INetLibClose()`
`INetLibConfigAliasGet()`	`INetLibConfigAliasSet()`
`INetLibConfigDelete()`	`INetLibConfigIndexFromName()`
`INetLibConfigList()`	`INetLibConfigMakeActive()`
`INetLibConfigRename()`	`INetLibConfigSaveAs()`
`INetLibCTPSend()`	`INetLibGetEvent()`
`INetLibIndexedCacheFind()`	`INetLibOpen()`
`INetLibPrepareCacheForHistory()`	`INetLibSettingGet()`
`INetLibSettingSet()`	`INetLibSleep()`
`INetLibSockClose()`	`INetLibSockConnect()`
`INetLibSockFileGetByIndex()`	`INetLibSockHTTPAttrGet()`
`INetLibSockHTTPAttrSet()`	`INetLibSockHTTPReqCreate()`
`INetLibSockHTTPReqSend()`	`INetLibSockOpen()`
`INetLibSockRead()`	`INetLibSockSettingGet()`

Table 58.1 Deleted functions *(continued)*

INetLibSockSettingSet()	INetLibSockStatus()
INetLibSockWrite()	INetLibURLCrack()
INetLibURLGetInfo()	INetLibURLOpen()
INetLibURLsAdd()	INetLibURLsCompare()
INetLibWake()	INetLibWiCmd()
INetLibWirelessIndicatorCmd()	

Table 58.2 Deleted structures

INetCacheEntryType	INetCacheInfoType
INetConfigNameType	INetEventType
INetURLInfoType	INetURLType

Table 58.3 Deleted #defines

inetCacheCompareByMasterURL	inetCacheCompareByTime
inetCacheCompareByURL	inetCfgNameCTPDefault
inetCfgNameCTPWireless	inetCfgNameCTPWireline
inetCfgNameDefault	inetCfgNameDefWireless
inetCfgNameDefWireline	inetConfigNameSize
inetCreator	inetDefaultFlashProxyID
inetErr...	inetFlashProxyID
inetFtrNumCtpDeviceBits1	inetFtrNumVersion
inetLastEvent	inetLibConfigAliasGet
inetLibConfigAliasSet	inetLibConfigDelete
inetLibConfigIndexFromName	inetLibConfigList
inetLibConfigMakeActive	inetLibConfigRename

Table 58.3 Deleted #defines *(continued)*

inetLibConfigSaveAs	inetLibFtrCreator
inetLibName	inetLibTrap...
inetLibType	INETLIB_TRAP
inetOpenURLFlagForceEncOff	inetOpenURLFlagForceEncOn
inetOpenURLFlagKeepInCache	inetOpenURLFlagLookInCache
inetPortFTP	inetPortGopher
inetPortHTTP	inetPortHTTPS
inetPortNews	inetSockReadyEvent
inetSockStatusChangeEvent	inetURLInfoFlagIsInCache
inetURLInfoFlagIsRemote	inetURLInfoFlagIsSecure
netProxyIPDefaultHGA	netProxyIPDefaultHGAStr
netProxyIPManhattanHGA	

Table 58.4 Deleted enumerated types

INetCompressionTypeEnum	INetContentTypeEnum
INetHTTPAttrEnum	INetProxyEnum
INetSchemeEnum	INetSettingEnum
INetSockSettingEnum	INetStatusEnum
INetTransportEnum	WiCmdEnum

59

InsPoint.h

The insertion point APIs were primarily for use by the operating system; they were called on behalf of the application by various operating system components (such as the Form APIs). Because applications had no real need for the APIs listed here, they are not exposed in Palm OS Cobalt.

Deleted APIs

Table 59.1 Deleted functions

`InsPtCheckBlink()`	`InsPtEnable()`
`InsPtEnabled()`	`InsPtGetHeight()`
`InsPtGetLocation()`	`InsPtInitialize()`
`InsPtSetHeight()`	`InsPtSetLocation()`

Table 59.2 Deleted #defines

`insPtBlinkInterval`	`insPtWidth`

60

IntlMgr.h

The International Manager is no longer separate from the Text Manager in Palm OS Cobalt.

Deleted APIs

Table 60.1 Deleted functions

`IntlGetRoutineAddress()`	`IntlSetRoutineAddress()`

Table 60.2 Deleted macros

`INTL_TRAP()`

Table 60.3 Deleted types

`IntlSelector`

Table 60.4 Deleted #defines

`intlErrInvalidSelector`	`intlIntlGetRoutineAddress`
`intlIntlHandleEvent`	`intlIntlInit`
`intlIntlSetRoutineAddress`	`intlIntlStrictChecks`
`intlMaxSelector`	`intlMgrBestFit`
`intlMgrExists`	`intlMgrStrict`
`intlTxtByteAttr`	`intlTxtCaselessCompare`
`intlTxtCharAttr`	`intlTxtCharBounds`
`intlTxtCharEncoding`	`intlTxtCharIsValid`

Table 60.4 Deleted #defines *(continued)*

intlTxtCharSize	intlTxtCharWidth
intlTxtCharXAttr	intlTxtCompare
intlTxtConvertEncoding	intlTxtConvertEncodingV35
intlTxtEncodingName	intlTxtFindString
intlTxtGetChar	intlTxtGetNextChar
intlTxtGetPreviousChar	intlTxtGetTruncationOffset
intlTxtGetWordWrapOffset	intlTxtMaxEncoding
intlTxtNameToEncoding	intlTxtParamString
intlTxtPrepFindString	intlTxtReplaceStr
intlTxtSetNextChar	intlTxtStrEncoding
intlTxtTransliterate	intlTxtWordBounds

61

IrLib.h

Versions of Palm OS prior to 6.0 offered a separate library, called IRLib, for performing infrared communications. This library has been deprecated and should not be used when creating new applications. All functions, and essentially all macros, formerly declared in `IrLib.h` are not declared in Palm OS Cobalt.

Application developers using Palm OS Cobalt have three options for communicating over IR:

- The Exchange Manager provides a high-level interface that handles all of the communication details transparently. See Chapter 4, "Object Exchange," on page 105 of *Exploring Palm OS: High-Level Communications* for more information.
- The Serial Manager provides a virtual driver that implements the IrComm protocol. To use IrComm, you specify `sysFileCVirtIrComm` as the port you want to open and use the Serial Manager APIs to send and receive data on that port. See Chapter 2, "The Serial Manager," on page 5 of *Exploring Palm OS: Low-Level Communications* for information on how to use the Serial Manager APIs.
- The Sockets API lets you use the same functions you would use for other communications methods to perform IR communications. IR communication using the sockets API is documented in *Exploring Palm OS: Low-Level Communications*; see Chapter 6, "Introduction to Infrared Communication (Beaming)," on page 75.

NOTE: Early in the porting process you may want to `#include IrLibCompatibility.h` (after the `#include` for `PalmOS.h`). This header file defines a number of APIs and macros that allow applications calling certain deleted functions and functions with modified prototypes to compile and run. This compatibility header should not be counted on long-term, however, so later in the porting process you should remove the `#include` and fix any problems that result.

Deleted APIs

Table 61.1 Deleted functions

IrBind()	IrClose()
IrConnectIrLap()	IrConnectReq()
IrConnectRsp()	IrDataReq()
IrDisconnectIrLap()	IrDiscoverReq()
IrHandleEvent()	IrIAS_Add()
IrIAS_Next()	IrIAS_Query()
IrIAS_SetDeviceName()	IrIsIrLapConnected()
IrIsMediaBusy()	IrIsNoProgress()
IrIsRemoteBusy()	IrLocalBusy()
IrMaxRxSize()	IrMaxTxSize()
IrOpen()	IrSetDeviceInfo()
IrTestReq()	IrUnbind()
IrWaitForEvent()	

Table 61.2 Deleted macros

IrAdvanceCredit()	IrIAS_GetInteger()
IrIAS_GetIntLsap()	IrIAS_GetObjectID()
IrIAS_GetOctetString()	IrIAS_GetOctetStringLen()
IrIAS_GetType()	IrIAS_GetUserString()
IrIAS_GetUserStringCharSet()	IrIAS_GetUserStringLen()
IrIAS_StartResult()	IrSetConTypeLMP()
IrSetConTypeTTP()	

Table 61.3 Deleted structures

`IrStatsType`	`ListEntry`
`_hconnect`	

Table 61.4 Deleted types

`BOOL`

Table 61.5 Deleted #defines

`irGetScanningMode`	`irGetStatistics`
`irLibTrap...`	`irRestoreScanning`
`irSetBaudMask`	`irSetScanningMode`
`irSetSerialMode`	`irSetSupported`
`irSuppressScanning`	`LCON_FLAGS_TTP`

Modified APIs

Table 61.6 Modified structures

Modified API	Description of change
`IrCallBackParms`	The order of the fields in this structure has changed, and the reserved fields needed for alignment padding are no longer present.
`IrConnect`	The `flags`, `reserved`, `callBack`, `packet`, `packets`, and `sendCredit` fields are no longer present, and the structure now contains a `data` field that contains 32 unsigned bytes.

Table 61.6 Modified structures *(continued)*

Modified API	Description of change
`IrDeviceList`	The `nItems` field is now 32 bits long, and the reserved field needed for alignment padding is no longer present.
`IrIasAttribute`	The `len` and `valLen` fields are now declared as `size_t`, and the reserved fields needed for alignment padding are no longer present.
`IrIasObject`	The `len` field is now declared as `size_t`, the `nAttribs` field is now 16 bits long, and an `objectID` field has been added.
`IrPacket`	This structure has changed radically; only the `buff` and `len` fields remain unchanged. All other fields are no longer present. New `status` and `next` fields (plus a `reserved1` field) have been added.
`_IrIasQuery`	The `queryLen`, `resultBufSize`, and `resultLen` fields are now declared as `size_t`. The reserved field needed for alignment padding is no longer present. The `listLen` and `offset` fields have traded places, and `offset` is now 32 bits long. Finally, `overFlow` is now a Boolean.

Unchanged APIs

Table 61.7 Unchanged macros

`IasGetU16()`	`IasGetU32()`

Table 61.8 Unchanged structures

IrDeviceAddr	IrDeviceInfo
IrIasQuery	

Table 61.9 Unchanged types

IrCharSet	IrEvent
IrStatus	

Table 61.10Unchanged #defines

exgIrObexScheme	IAS_ATTRIB_INTEGER
IAS_ATTRIB_MISSING	IAS_ATTRIB_OCTET_STRING
IAS_ATTRIB_UNDEFINED	IAS_ATTRIB_USER_STRING
IAS_GET_VALUE_BY_CLASS	IAS_RET_NO_SUCH_ATTRIB
IAS_RET_NO_SUCH_CLASS	IAS_RET_SUCCESS
IAS_RET_UNSUPPORTED	irFtrCreator
irFtrNumVersion	irLibName
irOpenOptBackground	irOpenOptDisconnect12
irOpenOptDisconnect16	irOpenOptDisconnect20
irOpenOptDisconnect25	irOpenOptDisconnect3
irOpenOptDisconnect30	irOpenOptDisconnect40
irOpenOptDisconnect8	irOpenOptSpeed115200
irOpenOptSpeed19200	irOpenOptSpeed38400
irOpenOptSpeed57600	irOpenOptSpeed9600
IR_CHAR_ASCII	IR_CHAR_ISO_8859_1
IR_CHAR_ISO_8859_2	IR_CHAR_ISO_8859_3

Table 61.10Unchanged #defines *(continued)*

IR_CHAR_ISO_8859_4	IR_CHAR_ISO_8859_5
IR_CHAR_ISO_8859_6	IR_CHAR_ISO_8859_7
IR_CHAR_ISO_8859_8	IR_CHAR_ISO_8859_9
IR_CHAR_UNICODE	IR_DEVICE_LIST_SIZE
IR_HINT_COMPUTER	IR_HINT_EXT
IR_HINT_FAX	IR_HINT_FILE
IR_HINT_HTTP	IR_HINT_IRCOMM
IR_HINT_LAN	IR_HINT_MESSAGE
IR_HINT_MODEM	IR_HINT_OBEX
IR_HINT_PDA	IR_HINT_PNP
IR_HINT_PRINTER	IR_HINT_TELEPHONY
IR_MAX_ATTRIBUTES	IR_MAX_CON_PACKET
IR_MAX_DEVICE_INFO	IR_MAX_IAS_ATTR_SIZE
IR_MAX_IAS_NAME	IR_MAX_LSAP
IR_MAX_QUERY_LEN	IR_MAX_TEST_PACKET
IR_MAX_TTP_CON_PACKET	IR_MAX_XID_LEN
IR_STATUS_DISCONNECT	IR_STATUS_FAILED
IR_STATUS_LINK_OK	IR_STATUS_MEDIA_BUSY
IR_STATUS_MEDIA_NOT_BUSY	IR_STATUS_NO_IRLAP
IR_STATUS_NO_PROGRESS	IR_STATUS_PENDING
IR_STATUS_SUCCESS	LEVENT_DATA_IND
LEVENT_DISCOVERY_CNF	LEVENT_LAP_CON_CNF
LEVENT_LAP_CON_IND	LEVENT_LAP_DISCON_IND
LEVENT_LM_CON_CNF	LEVENT_LM_CON_IND

Table 61.10Unchanged #defines *(continued)*

LEVENT_LM_DISCON_IND	LEVENT_LM_SEND_IND
LEVENT_PACKET_HANDLED	LEVENT_STATUS_IND
LEVENT_TEST_CNF	LEVENT_TEST_IND

Table 61.11Unchanged application-defined functions

IrCallBack()	IrIasQueryCallBack()

62

Keyboard.h

In Palm OS Cobalt the on-screen keyboard is a pinlet. Thus, the keyboard functions (which were for the most part "system use only" have mostly been replaced by the more general-purpose Pen Input Manager functions, which are available for use by applications. See Chapter 10, "Pen Input Manager," on page 73 of *Exploring Palm OS: Input Services* for the set of APIs declared by the Pen Input Manager, and Chapter 2, "Working with the Dynamic Input Area," on page 7 of that same book for information on working with the dynamic input area in general.

Deleted APIs

Table 62.1 Deleted functions

Deleted API	Use instead
`KbdDraw()`	Nothing. This function was documented as "System Use Only."
`KbdErase()`	Nothing. This function was documented as "System Use Only."
`KbdGetLayout()`	Nothing. This function was documented as "System Use Only."
`KbdGetPosition()`	Nothing. This function was documented as "System Use Only."
`KbdGetShiftState()`	Nothing. This function was documented as "System Use Only."
`KbdHandleEvent()`	Nothing. This function was documented as "System Use Only."
`KbdSetLayout()`	Nothing. This function was documented as "System Use Only."

Table 62.1 Deleted functions *(continued)*

Deleted API	Use instead
`KbdSetPosition()`	Nothing. This function was documented as "System Use Only."
`KbdSetShiftState()`	Nothing. This function was documented as "System Use Only."
`KeyboardStatusFree()`	Nothing. This function was documented as "System Use Only."
`KeyboardStatusNew()`	Nothing. This function was documented as "System Use Only."
`SysKeyboardDialogV10()`	`SysKeyboardDialog()`

Table 62.2 Deleted structures

Deleted API	Use instead
`KeyboardStatus`	Nothing. This was an internal structure that was not to be used by applications.

Table 62.3 Deleted #defines

Deleted API	Use instead
`kbdBackspaceKey`	Nothing. This constant was not to be used by applications.
`kbdCapsKey`	Nothing. This constant was not to be used by applications.
`kbdNoKey`	Nothing. This constant was not to be used by applications.
`kbdReturnKey`	Nothing. This constant was not to be used by applications.
`kbdShiftKey`	Nothing. This constant was not to be used by applications.

Table 62.3 Deleted #defines *(continued)*

Deleted API	Use instead
`kbdTabKey`	Nothing. This constant was not to be used by applications.
`KeyboardCapslockFlag`	Nothing. This constant was not to be used by applications.
`KeyboardShiftFlag`	Nothing. This constant was not to be used by applications.

Modified APIs

Table 62.4 Modified enumerated types

Modified API	Description of change
`KeyboardType`	Formerly an enum, this is now a typedef that takes one of the values defined by the new `KeyboardTag` enum.

Unchanged APIs

Table 62.5 Unchanged functions

`SysKeyboardDialog()`

63

KeyMgr.h

The Key Manager APIs are unchanged in Palm OS Cobalt.

Unchanged APIs

Table 63.1 Unchanged functions

`KeyCurrentState()`	`KeyRates()`
`KeySetMask()`	

Table 63.2 Unchanged #defines

`keyBitAntenna`	`keyBitContrast`
`keyBitCradle`	`keyBitHard1`
`keyBitHard2`	`keyBitHard3`
`keyBitHard4`	`keyBitPageDown`
`keyBitPageUp`	`keyBitPower`
`keyBitsAll`	`slowestKeyDelayRate`
`slowestKeyPeriodRate`	

64

Launcher.h

This header file declared a single function that hasn't been needed since Palm OS 3.0.

Deleted APIs

Table 64.1 Deleted functions

Deleted API	Use instead
`SysAppLauncherDialog()`	Nothing. This function existed in the 68K API set only for compatibility with versions of Palm OS earlier than 3.0. In those early releases the Launcher was a popup, not an application, and this function displayed that popup.

65

List.h

There is only one substantive change in the List APIs: the ListDrawDataFuncType() callback function takes one additional parameter, a pointer to the list in which the item is to be drawn.

Deleted APIs

Table 65.1 Deleted structures

Deleted API	Use instead
`ListAttrType`	Nothing. This structure was only used by the `ListType` structure, which is now completely private.

Modified APIs

Table 65.2 Modified structures

Modified API	Description of change
`ListType`	The contents of this structure are now completely private.

Table 65.3 Modified application-defined functions

Modified API	Description of change
`void ListDrawDataFuncType (int16_t, RectangleType *, char **itemsText, struct ListType *)`	The callback receives an additional parameter: a pointer to the list in which the item is to be drawn.

Unchanged APIs

Table 65.4 Unchanged functions

`LstDrawList()`	`LstEraseList()`
`LstGetNumberOfItems()`	`LstGetSelection()`
`LstGetSelectionText()`	`LstGetTopItem()`
`LstGetVisibleItems()`	`LstHandleEvent()`
`LstMakeItemVisible()`	`LstNewList()`
`LstPopupList()`	`LstScrollList()`
`LstSetDrawFunction()`	`LstSetHeight()`
`LstSetListChoices()`	`LstSetPosition()`
`LstSetSelection()`	`LstSetTopItem()`

Table 65.5 Unchanged types

`ListDrawDataFuncPtr`	`ListPtr`

Table 65.6 Unchanged #defines

`noListSelection`

66

LocaleMgr.h

Minor changes only. The bulk of the changes arise from the fact that the 68K trap dispatch mechanism isn't used in Palm OS Cobalt.

Deleted APIs

Table 66.1 Deleted macros

Deleted API	Use instead
`LMDISPATCH_TRAP()`	Nothing. The 68K trap dispatch mechanism isn't used in Palm OS Cobalt.

Table 66.2 Deleted types

Deleted API	Use instead
`LmRoutineSelector`	Nothing. The 68K trap dispatch mechanism isn't used in Palm OS Cobalt.

Table 66.3 Deleted #defines

Deleted API	Use instead
`DIRECT_LOCALE_CALLS`	Nothing; this constant was only used to control how Locale Manager functions were called and is not needed in Palm OS Cobalt.
`lmChoiceLanguageName`	Pass `lmChoiceCountryName` to `LmGetLocaleSetting()` to get the country name, then supply that name to `LmISONameToLanguage()`.

Table 66.3 Deleted #defines *(continued)*

Deleted API	Use instead
`lmGetLocaleSetting, lmGetNumLocales, lmInit, lmLocaleToIndex, lmMaxRoutineSelector`	Nothing. These constants were used with the 68K trap dispatch mechanism, which isn't used in Palm OS Cobalt.
`SUPPORT_LANGUAGE_NAME`	Nothing; this constant determined whether or not the `lmChoiceLanguageName` locale setting was available. It is not in Palm OS Cobalt; see the description of the `lmChoiceLanguageName` #define, above.

Modified APIs

Table 66.4 Modified #defines

Modified API	Description of change
`#define kMaxCountryNameLen 31`	In Palm OS versions prior to Palm OS Cobalt, country names are limited to 19 characters (plus the null terminator).
`#define kMaxCurrencyNameLen 31`	In Palm OS versions prior to Palm OS Cobalt, currency names are limited to 19 characters (plus the null terminator).
`#define kMaxCurrencySymbolLen 10`	In Palm OS versions prior to Palm OS Cobalt, symbol names are limited to 19 characters (plus the null terminator).
`#define lmAnyCountry ((LmCountryType)'\?\?')`	In Palm OS versions prior to Palm OS Cobalt, this constant has a value of 65535.
`#define lmAnyLanguage ((LmLanguageType)'\?\?')`	In Palm OS versions prior to Palm OS Cobalt, this constant has a value of 65535.

Unchanged APIs

Table 66.5 Unchanged functions

LmGetLocaleSetting()	LmGetNumLocales()
LmLocaleToIndex()	

Table 66.6 Unchanged structures

_LmLocaleType	LmLocaleType

Table 66.7 Unchanged types

CountryType	LanguageType
LmLocaleSettingChoice	

Table 66.8 Unchanged #defines

lmChoiceCountryName	lmChoiceCurrencyDecimalPlaces
lmChoiceCurrencyName	lmChoiceCurrencySymbol
lmChoiceDateFormat	lmChoiceInboundDefaultVObjectEncoding
lmChoiceLocale	lmChoiceLongDateFormat
lmChoiceMeasurementSystem	lmChoiceNumberFormat
lmChoiceOutboundVObjectEncoding	lmChoicePrimaryEmailEncoding
lmChoicePrimarySMSEncoding	lmChoiceSecondaryEmailEncoding
lmChoiceSecondarySMSEncoding	lmChoiceSupportsLunarCalendar
lmChoiceTimeFormat	lmChoiceTimeZone
lmChoiceUniqueCurrencySymbol	lmChoiceWeekStartDay
lmErr...	

67

Localize.h

The APIs formerly declared in `Localize.h` are, in Palm OS Cobalt, declared in `LocaleMgrTypes.h` and `LocaleMgr.h`. The one function has had its prefix modified to reflect this move.

Modified APIs

Table 67.1 Modified enumerated types

Modified API	Description of change
`NumberFormatType`[1]	Formerly an enum, this is now a typedef that takes a value defined by a private enum. Developers should not have been parsing values of this type.

1. In Palm OS Cobalt this typedef is declared in `LocaleMgrTypes.h`.

Renamed APIs

Table 67.2 Renamed functions

Renamed API	New API Name
`LocGetNumberSeparators()`	`LmGetNumberSeparators()`[1]

1. In Palm OS Cobalt this function is declared in `LocaleMgr.h`.

68

Lz77Mgr.h

The LZ77 APIs are not supported in Palm OS Cobalt.

Deleted APIs

Table 68.1 Deleted functions

`Lz77LibBufferGetInfo()`	`Lz77LibBufferSetInfo()`
`Lz77LibChunk()`	`Lz77LibClose()`
`Lz77LibMaxBufferSize()`	`Lz77LibOpen()`
`Lz77LibSleep()`	`Lz77LibWake()`

Table 68.2 Deleted macros

`lz77ErrIsFatal()`

Table 68.3 Deleted types

`Lz77ErrorType`

Table 68.4 Deleted #defines

`lz77Compress`	`lz77Creator`
`lz77Err...`	`lz77Expand`
`Lz77LastSupportedVerID`	`lz77LibName`
`lz77LibTrap...`	`lz77Success`
`Lz77VerID`	

69

MemoryMgr.h

Applications no longer use Memory Manager functions when accessing the storage heap. The Data Manager now declares those functions that you use to access the storage heap.

Note that many of the APIs provided by the Memory Manager exist to simplify the process of porting an application from an earlier version of Palm OS. Palm OS Cobalt applications can make use of the standard C memory management functions—functions such as `malloc()`, `realloc()`, and `free()`—instead.

Some new functions have been added that allow you to interact with the dynamic heap.

Palm OS Cobalt does not support the concept of internal memory cards (a feature of early Palm Powered devices, not to be confused with expansion cards such as SD cards and Memory Sticks), so the "card number" parameter has been removed from those functions that supported it and functions that existed solely to support such memory cards are no longer supported.

NOTE: Early in the porting process you may want to `#include MemoryMgrCompatibility.h` (after the `#include` for `PalmOS.h`). This header file defines a number of APIs and macros that allow applications calling certain deleted functions and functions with modified prototypes to compile and run. This compatibility header should not be counted on long-term, however, so later in the porting process you should remove the `#include` and fix any problems that result.

Deleted APIs

Table 69.1 Deleted functions

Deleted API	Use instead
`MemCardFormat()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemCardInfo()`	Nothing. Internal memory cards are no longer supported.
`MemChunkNew()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemHandleCardNo()`	Nothing. Internal memory cards are no longer supported.
`MemHandleFlags()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemHandleLockCount()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemHandleOwner()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemHandleResetLock()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemHeapFreeByOwnerID()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemHeapInit()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.

Table 69.1 Deleted functions *(continued)*

Deleted API	Use instead
`MemInit()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemInitHeapTable()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemKernelInit()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemNumCards()`	Nothing. Internal memory cards are no longer supported.
`MemPtrCardNo()`	Nothing. Internal memory cards are no longer supported.
`MemPtrFlags()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemPtrOwner()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemPtrResetLock()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemSemaphoreRelease()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`MemSemaphoreReserve()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.

Table 69.1 Deleted functions *(continued)*

Deleted API	Use instead
`MemStoreInfo()`	Nothing. Internal memory cards are no longer supported.
`MemStoreSetInfo()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.

Table 69.2 Deleted #defines

Deleted API	Use instead
`memErrNoRAMOnCard`	Nothing. Internal memory cards are no longer supported.
`memErrRAMOnlyCard`	Nothing. Internal memory cards are no longer supported.
`memErrROMOnlyCard`	Nothing. Internal memory cards are no longer supported.

Modified APIs

Table 69.3 Modified functions

Modified API	Description of change
`uint16_t MemHeapID (uint16_t)`	The card number parameter has been removed.
`void *MemLocalIDToGlobal (LocalID)`	The card number parameter has been removed.
`void *MemLocalIDToLockedPtr (LocalID)`	The card number parameter has been removed.
`void *MemLocalIDToPtr (LocalID)`	The card number parameter has been removed.

Table 69.3 Modified functions *(continued)*

Modified API	Description of change
`uint16_t MemNumHeaps (void)`	The card number parameter has been removed.
`uint16_t MemNumRAMHeaps (void)`	The card number parameter has been removed.

Unchanged APIs

Table 69.4 Unchanged functions

`MemChunkFree()`	`MemCmp()`
`MemDebugMode()`	`MemHandleDataStorage()`
`MemHandleFree()`	`MemHandleHeapID()`
`MemHandleLock()`	`MemHandleNew()`
`MemHandleResize()`	`MemHandleSetOwner()`
`MemHandleSize()`	`MemHandleToLocalID()`
`MemHandleUnlock()`	`MemHeapCheck()`
`MemHeapCompact()`	`MemHeapDynamic()`
`MemHeapFlags()`	`MemHeapFreeBytes()`
`MemHeapScramble()`	`MemHeapSize()`
`MemLocalIDKind()`	`MemMove()`
`MemPtrDataStorage()`	`MemPtrHeapID()`
`MemPtrNew()`	`MemPtrRecoverHandle()`
`MemPtrResize()`	`MemPtrSetOwner()`
`MemPtrSize()`	`MemPtrToLocalID()`
`MemPtrUnlock()`	`MemSet()`
`MemSetDebugMode()`	

Table 69.5 Unchanged macros

MemPtrFree()

Table 69.6 Unchanged #defines

memDebugModeAllHeaps	memDebugModeCheckOnAll
memDebugModeCheckOnChange	memDebugModeFillFree
memDebugModeRecordMinDynHeapFree	memDebugModeScrambleOnAll
memDebugModeScrambleOnChange	memErr...
memNewChunkFlagAtEnd	memNewChunkFlagAtStart
memNewChunkFlagNonMovable	memNewChunkFlagPreLock

Table 69.7 Unchanged enumerated types

LocalIDKind

70

Menu.h

The only real changes to the Menu APIs are:

- the addition of a `DmOpenRef` parameter to a handful of functions (through which you specify a resource file from which resources are to be taken; this is to work around the fact that the resource search chain is not supported in Palm OS Cobalt),
- the hiding of the contents of the `MenuBarType` structure (the contents of this structure had been exposed for debugging purposes; applications were never to have accessed this structure's contents directly),
- the removal of some APIs that were exposed but never intended for use by application developers.

Deleted APIs

Table 70.1 Deleted structures

Deleted API	Use instead
`MenuBarAttrType`	Nothing. This structure was only used in the definition of the `MenuBarType` structure, which is now opaque. Applications should not have been accessing this structure directly.
`MenuCmdBarButtonType`	Nothing. This structure was only used in the definition of the `MenuCmdBarType` structure, which was defined but not used by the public APIs.
`MenuCmdBarType`	Nothing. This structure was defined but not used by the public APIs.

Table 70.1 Deleted structures *(continued)*

Deleted API	Use instead
`MenuItemType`	Nothing. This structure was only used in the definition of the `MenuItemType` structure, which is no longer exported. Applications should not have been accessing this structure directly.
`MenuPullDownType`	Nothing. This structure was only used in the definition of the `MenuBarType` structure, which is now opaque. Applications should not have been accessing this structure directly.

Table 70.2 Deleted types

Deleted API	Use instead
`MenuPullDownPtr`	Nothing. This type was only used in the definition of the `MenuBarType` structure, which is now opaque. Applications should not have been accessing this structure directly.

Modified APIs

Table 70.3 Modified functions

Modified API	Description of change
`status_t MenuCmdBarAddButton (uint8_t, DmOpenRef, uint16_t, MenuCmdBarResultType, uint32_t, char *)`	Takes an additional parameter: a `DmOpenRef` to the resource database that contains the bitmap to display on the button.
`Boolean MenuCmdBarGetButtonData (int16_t, DmOpenRef *, uint16_t *, MenuCmdBarResultType *, uint32_t *, char *)`	Takes an additional parameter: a pointer through which you can elect to receive a `DmOpenRef` to the resource database that contains the bitmap displayed on the button.
`MenuBarType *MenuInit (DmOpenRef, uint16_t)`	Takes an additional parameter: a `DmOpenRef` to the resource database that contains the menu.
`void MenuSetActiveMenuRscID (DmOpenRef, uint16_t)`	Takes an additional parameter: a `DmOpenRef` to the resource database that contains the menu.

Table 70.4 Modified structures

Modified API	Description of change
`MenuBarType`	The contents of this structure are now completely private.

Table 70.5 Modified enumerated types

Modified API	Description of change
`MenuCmdBarResultType`	Formerly an enum, this is now a typedef that takes one of the values defined by the `MenuCmdBarResultTag` enum.

Unchanged APIs

Table 70.6 Unchanged functions

MenuAddItem()	MenuCmdBarDisplay()
MenuDispose()	MenuDrawMenu()
MenuEraseStatus()	MenuGetActiveMenu()
MenuHandleEvent()	MenuHideItem()
MenuSetActiveMenu()	MenuShowItem()

Table 70.7 Unchanged types

MenuBarPtr

Table 70.8 Unchanged #defines

menuButtonCause	menuCmdBarMaxTextLength
menuCmdBarOnLeft	menuCmdBarOnRight
menuCommandCause	menuErr...
MenuSeparatorChar	noMenuItemSelection
noMenuSelection	separatorItemSelection

71

ModemMgr.h

NOTE: Early in the porting process you may want to `#include ModemMgrCompatibility.h` (after the `#include` for `PalmOS.h`). This header file defines a number of APIs and macros that allow applications calling certain deleted functions and functions with modified prototypes to compile and run. This compatibility header should not be counted on long-term, however, so later in the porting process you should remove the `#include` and fix any problems that result.

Deleted APIs

Table 71.1 Deleted functions

Deleted API	Use instead
`MdmDial()`	
`MdmHangUp()`	

Table 71.2 Deleted enumerated types

Deleted API	Use instead
Speaker volume settings enum	

Modified APIs

Table 71.3 Modified structures

Modified API	Description of change
`MdmInfoType`	

Unchanged APIs

Table 71.4 Unchanged types

`MdmInfoPtr`

Table 71.5 Unchanged #defines

`mdmCmdBufSize`	`mdmCmdSize`
`mdmDefCmdTimeOut`	`mdmDefDCDWaitSec`
`mdmDefDTWaitSec`	`mdmDefSpeakerVolume`
`mdmErr...`	`mdmMaxStringSize`
`mdmResetStrInCmdBuf`	`mdmRespBufSize`

Table 71.6 Unchanged enumerated types

`MdmStageEnum`

Table 71.7 Unchanged application-defined functions

`MdmUserCanProcPtr()`

72

NetBitUtils.h

In Palm OS Cobalt applications no longer use the Net Library (and, accordingly, the Net Bit Utilities that were used in conjunction with the Net Library) in order to connect to and transfer data to and from other machines using the standard TCP/IP protocols. Instead, Palm OS Cobalt application should use the standard Berkeley sockets APIs declared in `sys/sockets.h`.

NOTE: The Berkeley sockets APIs are not complete. In particular, the following are not supported in Palm OS Cobalt: AF_UNIX address family, PF_UNIX protocol family, `socketpair()`, and any UNIX-style asynchronous features, such as signals, options, or flags.

Deleted APIs

Table 72.1 Deleted functions

`NetLibBitGetFixed()`	`NetLibBitGetIntV()`
`NetLibBitGetUIntV()`	`NetLibBitMove()`
`NetLibBitPutFixed()`	`NetLibBitPutIntV()`
`NetLibBitPutUIntV()`	

Table 72.2 Deleted macros

`BitGetFixed()`	`BitGetIntV()`
`BitGetUIntV()`	`BitMove()`
`BitPutFixed()`	`BitPutIntV()`
`BitPutUIntV()`	`NetHToNL()`

Table 72.2 Deleted macros *(continued)*

`NetHToNS()`	`NetNToHL()`
`NetNToHS()`	

Table 72.3 Deleted #defines

`bitsInByte`	`bitVarIntMaxBits`
`bitVarIntMaxBytes`	`netPrvRefnum`

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NetMgr.h

In Palm OS Cobalt applications no longer use the Net Library in order to connect to and transfer data to and from other machines using the standard TCP/IP protocols. Instead, Palm OS Cobalt application should use the standard Berkeley sockets APIs declared in `sys/sockets.h`.

NOTE: The Berkeley sockets APIs are not complete. In particular, the following are not supported in Palm OS Cobalt: AF_UNIX address family, PF_UNIX protocol family, `socketpair()`, and any UNIX-style asynchronous features, such as signals, options, or flags.

Deleted APIs

Table 73.1 Deleted functions

`NetLibAddrAToIN()`	`NetLibAddrINToA()`
`NetLibClose()`	`NetLibConfigAliasGet()`
`NetLibConfigAliasSet()`	`NetLibConfigDelete()`
`NetLibConfigIndexFromName()`	`NetLibConfigList()`
`NetLibConfigMakeActive()`	`NetLibConfigRename()`
`NetLibConfigSaveAs()`	`NetLibConnectionRefresh()`
`NetLibDmReceive()`	`NetLibFinishCloseWait()`
`NetLibGetHostByAddr()`	`NetLibGetHostByName()`
`NetLibGetMailExchangeByName()`	`NetLibGetServByName()`
`NetLibIFAttach()`	`NetLibIFDetach()`
`NetLibIFDown()`	`NetLibIFGet()`

Table 73.1 Deleted functions *(continued)*

NetLibIFSettingGet()	NetLibIFSettingSet()
NetLibIFUp()	NetLibMaster()
NetLibOpen()	NetLibOpenConfig()
NetLibOpenCount()	NetLibOpenIfCloseWait()
NetLibReceive()	NetLibReceivePB()
NetLibSelect()	NetLibSend()
NetLibSendPB()	NetLibSettingGet()
NetLibSettingSet()	NetLibSleep()
NetLibSocketAccept()	NetLibSocketAddr()
NetLibSocketBind()	NetLibSocketClose()
NetLibSocketConnect()	NetLibSocketListen()
NetLibSocketOpen()	NetLibSocketOptionGet()
NetLibSocketOptionSet()	NetLibSocketShutdown()
NetLibTracePrintF()	NetLibTracePutS()
NetLibWake()	

Table 73.2 Deleted macros

netFDClr()	netFDIsSet()
netFDSet()	netFDZero()
NetNow()	

Table 73.3 Deleted structures

NetConfigNameType	NetHostInfoBufType
NetHostInfoType	NetIOParamType
NetIOVecType	NetMasterPBType

Table 73.3 Deleted structures *(continued)*

NetServInfoBufType	NetServInfoType
NetSocketAddrINType	NetSocketAddrRawType
NetSocketAddrType	NetSocketLingerType
NetSocketNoticeEventType	NetSocketNoticeMailboxType
NetSocketNoticeType	SysNotifyNetLibIFMediaType
SysNotifyNetSocketType	

Table 73.4 Deleted types

NetFDSetType	NetIPAddr
NetSocketRef	

Table 73.5 Deleted #defines

netCfgNameCTPWireless	netCfgNameCTPWireline
netCfgNameDefault	netCfgNameDefWireless
netCfgNameDefWireline	netConfigIndexCurSettings
netConfigNameSize	netCreator
netDNSMaxAddresses	netDNSMaxAliases
netDNSMaxDomainLabel	netDNSMaxDomainName
netDrvrHWNameLen	netDrvrTypeNameLen
netErr...	netFDSetSize
netFtrCommandBlocks	netFtrCreator
netFtrNumVersion	netIFCreatorLoop
netIFCreatorPPP	netIFCreatorRAM
netIFCreatorSLIP	netIFFileType
netIFMaxHWAddrLen	netIFNameLen

Table 73.5 Deleted #defines *(continued)*

netIOFlagDontRoute	netIOFlagOutOfBand
netIOFlagPeek	netIOVecMaxLen
netIPAddrLocal	netLibConfigAliasGet
netLibConfigAliasSet	netLibConfigDelete
netLibConfigIndexFromName	netLibConfigList
netLibConfigMakeActive	netLibConfigRename
netLibConfigSaveAs	netLibOpenConfig
netLibTrap...	netLibType
netMaxIPAddrStrLen	netPrefsType
netProtoMaxName	netServMaxAliases
netServMaxName	netSocketNoticeConnectInbound
netSocketNoticeConnectOutbound	netSocketNoticeErr
netSocketNoticeTCPClosed	netSocketNoticeTCPReceive
netSocketNoticeTCPRemoteClosed	netSocketNoticeTCPTransmit
netSocketNoticeUDPReceive	netSocketProtoIPICMP
netSocketProtoIPRAW	netSocketProtoIPTCP
netSocketProtoIPUDP	netTracingAppMsgs
netTracingErrors	netTracingFuncs
netTracingMsgs	netTracingPktData
netTracingPktData40	netTracingPktIFHi
netTracingPktIFLow	netTracingPktIFMid
netTracingPktIP	netTracingPkts
netWLAppEventFlagCTPOnly	netWLAppEventFlagDisplayErrs

Table 73.6 Deleted enumerated types

NetIFSettingEnum	NetLibIFMediaEventNotificationTypeEnum
NetMasterEnum	NetRadioStateEnum
NetSettingEnum	NetSocketAddrEnum
NetSocketDirEnum	NetSocketOptEnum
NetSocketOptLevelEnum	NetSocketTypeEnum
NoticeTypeEnum	

Table 73.7 Deleted application-defined functions

NetSocketNoticeCallbackPtr()

74

NotifyMgr.h

Minor changes only. A few rarely-used notifications have been eliminated.

Deleted APIs

Table 74.1 Deleted functions

Deleted API	Use instead
`SysNotifyBroadcastFromInterrupt()`	`SysNotifyBroadcast()`

Table 74.2 Deleted structures

Deleted API	Use instead
`SysNotifyDisplayResizedDetailsType`	`_WinResizedEventType` (this structure accompanies a `winResizedEvent`).
`SysNotifyInputAreaDrawingDetailsType`	Nothing. The `sysNotifyInputAreaDrawingEvent` notification is not broadcast in Palm OS Cobalt.
`SysNotifyInputAreaPendownDetailType`	Nothing. The `sysNotifyInputAreaPendownEvent` notification is not broadcast in Palm OS Cobalt.
`SysNotifySelectDayDetailsType`	Nothing. The `sysNotifySelectData` notification is not broadcast in Palm OS Cobalt.

Table 74.3 Deleted #defines

Deleted API	Use instead
`sysNotifyDisplayResizedEvent`	`winResizedEvent`. Rather than being concerned with the input area opening and closing, simply respond to changes in your window size as needed.
`sysNotifyGsiDrawIndicator`	Nothing. This notification is not broadcast in Palm OS Cobalt.
`sysNotifyInputAreaDrawingEvent`	Nothing. This notification is not broadcast in Palm OS Cobalt.
`sysNotifyInputAreaPendownEvent`	Nothing. This notification is not broadcast in Palm OS Cobalt.
`sysNotifyNoDatabaseID`	`sysNotifyNoDatabaseH`
`sysNotifySelectDay`	Nothing. This notification is not broadcast in Palm OS Cobalt.

Modified APIs

Table 74.4 Modified functions

Modified API	Description of change
`status_t SysNotifyBroadcastDeferred (SysNotifyParamType *, uint32_t)`	The final parameter, *`paramSize`*, used to be declared as a 16-bit integer..

Table 74.4 Modified functions *(continued)*

Modified API	Description of change
`status_t SysNotifyRegister (DatabaseID, uint32_t, SysNotifyProcPtr, int32_t, void *, uint32_t)`	The card number parameter has been removed. The `priority` parameter is now a 32-bit integer (formerly it was an 8-bit integer). An additional parameter has been added with which you specify the size of the user data.
`status_t SysNotifyUnregister (DatabaseID, uint32_t, int32_t)`	The card number parameter has been removed, and the `priority` parameter is now a 32-bit integer (formerly it was an 8-bit integer).

Table 74.5 Modified structures

Modified API	Description of change
`SysNotifyAppLaunchOrQuitType`	Padding has been added. Note that the `cardNo` field remains in this structure.
`SysNotifyDBChangedType`	The `dbName` field has been renamed to `name`. The fields that identify the appInfo and sortInfo blocks are now handles, rather than `LocalID`s. The `cardNo` field has been removed, and fields for the `displayName` and `encoding` have been added. Finally, the order of the fields in this structure has changed.
`SysNotifyDBCreatedType`	The `dbName` field has been renamed to `name`. The `cardNo` field has been removed. The `resDB` boolean that indicated whether or not the database was a resource database has been replaced by an `attributes` field that contains a number of database attributes. Finally, the order of the fields in this structure has changed.

Table 74.5 Modified structures *(continued)*

Modified API	Description of change
`SysNotifyDBDeletedType`	The `dbName` field has been renamed to `name`. The `cardNo` field has been removed. The order of the fields in this structure has changed, and a `reserved` field has been added.
`SysNotifyDBDirtyType`	The `dbName` field has been renamed to `name`. Field have been added to hold the database's ID and attributes. The order of the fields in this structure has changed, and a `reserved` field has been added.
`SysNotifyDBInfoType`	The `dbID` field (database ID), formerly a `LocalID`, is now declared to be a `MemHandle`.
`SysNotifyParamType`	An additional padding field has been added.

Table 74.6 Modified #defines

Modified API	Description of change
`#define sysNotifyDefaultQueueSize 100`	In Palm OS Garnet this constant has a value of 30 for regular builds, 10 for debug builds.

Unchanged APIs

Table 74.7 Unchanged functions

`SysNotifyBroadcast()`

Table 74.8 Unchanged structures

SleepEventParamType	SysNotifyDisplayChangeDetailsType
SysNotifyLocaleChangedType	SysNotifyPenStrokeType
SysNotifyVirtualCharHandlingType	

Table 74.9 Unchanged #defines

cncNotifyProfileEvent	DBChangedFieldSetAppInfo
DBChangedFieldSetAttributes	DBChangedFieldSetBckUpDate
DBChangedFieldSetCrDate	DBChangedFieldSetCreator
DBChangedFieldSetModDate	DBChangedFieldSetModNum
DBChangedFieldSetName	DBChangedFieldSetSortInfo
DBChangedFieldSetType	DBChangedFieldSetVersion
sysExternalConnectorAttachEvent	sysExternalConnectorDetachEvent
sysNotifyAntennaRaisedEvent	sysNotifyAppLaunchingEvent
sysNotifyAppQuittingEvent	sysNotifyBroadcasterCode
sysNotifyCardInsertedEvent	sysNotifyCardRemovedEvent
sysNotifyDBChangedEvent	sysNotifyDBCreatedEvent
sysNotifyDBDeletedEvent	sysNotifyDBDirtyEvent
sysNotifyDeleteProtectedEvent	sysNotifyDeviceUnlocked
sysNotifyDisplayChangeEvent	sysNotifyEarlyWakeupEvent
sysNotifyEventDequeuedEvent	sysNotifyForgotPasswordEvent
sysNotifyGotUsersAttention	sysNotifyHelperEvent
sysNotifyIdleTimeEvent	sysNotifyInsPtEnableEvent
sysNotifyIrDASniffEvent	sysNotifyKeyboardDialogEvent
sysNotifyLateWakeupEvent	sysNotifyLocaleChangedEvent

Table 74.9 Unchanged #defines *(continued)*

sysNotifyMenuCmdBarOpenEvent	sysNotifyNetLibIFMediaEvent
sysNotifyNormalPriority	sysNotifyPhoneEvent
sysNotifyPOSEMountEvent	sysNotifyProcessPenStrokeEvent
sysNotifyResetFinishedEvent	sysNotifyRetryEnqueueKey
sysNotifySecuritySettingEvent	sysNotifySleepNotifyEvent
sysNotifySleepRequestEvent	sysNotifySyncFinishEvent
sysNotifySyncStartEvent	sysNotifyTimeChangeEvent
sysNotifyVersionNum	sysNotifyVirtualCharHandlingEvent
sysNotifyVolumeMountedEvent	sysNotifyVolumeUnmountedEvent
sysSleepAutoOff	sysSleepPowerButton
sysSleepResumed	sysSleepUnknown

Table 74.10Unchanged application-defined functions

SysNotifyProcPtr()

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OverlayMgr.h

The functionality provided by the Overlay Manager in earlier Palm OS releases is, in Palm OS Cobalt, supplied by the Data Manager and by the Locale Manager. Those APIs that deal directly with locales can be found in the Locale Manager, while those APIs that work with overlays are declared as part of the Data Manager API set.

Deleted APIs

Table 75.1 Deleted functions

Deleted API	Use instead
`OmGetCurrentLocale()`	`DmGetOverlayLocale()`
`OmGetIndexedLocale()`	Use `LmGetNumLocales()` to get the number of known locales. Use `LmGetLocaleSetting()` to obtain information about a locale given its index.
`OmGetNextSystemLocale()`	Iterate through the known locales by index (from 0 to one less than the value returned by `LmGetNumLocales()`) and use `LmGetLocaleSetting()` to obtain information about a locale given its index.
`OmGetRoutineAddress()`	Nothing. This function is not needed in Palm OS Cobalt.
`OmGetSystemLocale()`	`LmGetSystemLocale()`
`OmLocaleToOverlayDBName()`	`DmGetOverlayDatabaseName()`
`OmOverlayDBNameToLocale()`	`DmGetOverlayDatabaseLocale()`
`OmSetSystemLocale()`	`LmSetSystemLocale()`

Table 75.2 Deleted macros

Deleted API	Use instead
`OMDISPATCH_TRAP()`	Nothing. The 68K trap dispatch mechanism isn't used in Palm OS Cobalt.

Table 75.3 Deleted structures

Deleted API	Use instead
`OmSearchStateType`	In previous versions of Palm OS this structure is used by `OmGetNextSystemLocale()`, a function that is not supported in Palm OS Cobalt. Instead, iterate through the known locales by index (from 0 to one less than the value returned by `LmGetNumLocales()`) and use `LmGetLocaleSetting()` to obtain information about a locale given its index. You can then determine whether or not the locale meets your desired criteria.

Table 75.4 Deleted types

Deleted API	Use instead
`OmLocaleType`	`LmLocaleType`
`OmSelector`	Nothing. In previous versions of Palm OS this type is used by `OmGetRoutineAddress()`, a function that is neither needed nor supported in Palm OS Cobalt.

Table 75.5 Deleted #defines

Deleted API	Use instead
`omErr...`	`lmErr...` or `dmErr...`, as appropriate.
`omFtrCreator`	Nothing. In Palm OS Cobalt there are no overlay- or locale-related features that vary from one version to the next.
`omFtrDefaultLocale`	`LmGetROMLocale()`
`omFtrShowErrorsFlag`	Nothing. The display of overlay- and locale-related errors is not controllable.
`omGetCurrentLocale, omGetIndexedLocale, omGetNextSystemLocale, omGetRoutineAddress, omGetSystemLocale, omInit, omLocaleToOverlayDBName, omOpenOverlayDatabase, omOverlayDBNameToLocale, omSetSystemLocale, omMaxSelector`	Nothing. These constants were used with the 68K trap dispatch mechanism and with `OmGetRoutineAddress()`, neither of which are used in Palm OS Cobalt.
`omOverlayRscID`	
`omOverlayRscType`	`sysFileTOverlay`

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PalmCompatibility.h

This header file was provided in the Palm OS Garnet SDK largely so that you could postpone modifying your application to use the latest data types. As part of the process of turning your application into a full-fledged Palm OS Cobalt application, you should perform the appropriate search-and-replace operations to use the data types used by the Palm OS Cobalt APIs.

Deleted APIs

Table 76.1 Deleted macros

Deleted API	Use instead
`EIGHTWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`ELEVENWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`FIVEWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`FOURWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`NINEWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`ONEWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`ScrDisplayMode()`	`WinScreenMode()`
`ScrInit()`	Nothing. The function that this was mapped to, `WinScreenInit()`, was documented as "System Use Only."

Table 76.1 Deleted macros *(continued)*

Deleted API	Use instead
`SEVENWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`SIXWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`TENWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`THREEWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`TWELVEWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.
`TWOWORD_INLINE()`	Inline the function as instructed by your compiler's documentation.

Table 76.2 Deleted types

Deleted API	Use instead
`BooleanPtr`	`Boolean *`
`Byte`	`uint8_t`
`BytePtr`	`uint8_t *`
`CharPtr`	`char *`
`DWord`	`uint32_t`
`DWordPtr`	`uint32_t *`
`Handle`	`MemHandle`
`Int`	`int16_t`
`IntPtr`	`int16_t *`
`Long`	`int32_t`
`LongPtr`	`int32_t *`

Table 76.2 Deleted types *(continued)*

Deleted API	Use instead
Ptr	MemPtr
SByte	int8_t
SBytePtr	int8_t *
SChar	int8_t
SCharPtr	int8_t *
SDWord	int32_t
SDWordPtr	int32_t *
Short	int16_t
ShortPtr	int16_t *
SWord	int16_t
SWordPtr	int16_t *
UChar	uint8_t
UCharPtr	uint8_t *
UInt	uint16_t
UInt16Ptr	uint16_t *
UIntPtr	uint16_t *
ULong	uint32_t
ULongPtr	uint32_t *
UShort	uint16_t
UShortPtr	uint16_t *
VoidHand	MemHandle
VoidPtr	MemPtr
WCharPtr	uint16_t *

Table 76.2 Deleted types *(continued)*

Deleted API	Use instead
`Word`	`uint16_t`
`WordPtr`	`uint16_t *`

Table 76.3 Deleted #defines

Deleted API	Use instead
`countryCount`	
`countryFirst`	
`countryLast`	
`countryNameLength`	
`currencyNameLength`	
`currencySymbolLength`	
`dayFullNamesStrID`	
`daysOfWeekLongStrListID`	
`daysOfWeekShortStrListID`	
`daysOfWeekStdStrListID`	
`daysOfWeekStrID`	
`expErrInvalidSlotRefNumber`	
`ExpMediaType_Any`	
`ExpMediaType_CompactFlash`	
`ExpMediaType_MacSim`	
`ExpMediaType_MemoryStick`	
`ExpMediaType_MultiMediaCard`	
`ExpMediaType_PoserHost`	

Table 76.3 Deleted #defines *(continued)*

Deleted API	Use instead
ExpMediaType_RAMDisk	
ExpMediaType_SecureDigital	
ExpMediaType_SmartMedia	
FSFileAttributesGet	
FSFileAttributesSet	
FSFileDateGet	
FSFileDateSet	
fsFilesystemType_AFS	
fsFilesystemType_EXT2	
fsFilesystemType_FAT	
fsFilesystemType_FFS	
fsFilesystemType_HFS	
fsFilesystemType_HFSPlus	
fsFilesystemType_HPFS	
fsFilesystemType_MFS	
fsFilesystemType_NFS	
fsFilesystemType_Novell	
fsFilesystemType_NTFS	
fsFilesystemType_VFAT	
fsOriginBeginning	
fsOriginCurrent	
fsOriginEnd	
FSVolumeLabelGet	

Table 76.3 Deleted #defines *(continued)*

Deleted API	Use instead
FSVolumeLabelSet	
FS_LIB_APIVersion	
invalidSlotRefNum	
languageCount	
languageFirst	
languageLast	
monthFullNamesStrID	
monthNamesLongStrListID	
monthNamesShortStrListID	
monthNamesStdStrListID	
monthNamesStrID	
scrAND	
scrANDNOT	
scrCopy	
scrCopyNOT	
scrDisplayModeGet	
scrDisplayModeGetDefaults	
scrDisplayModeGetSupportedDepths	
scrDisplayModeGetSupportsColor	
scrDisplayModeSet	
scrDisplayModeSetToDefaults	
ScrOperation	
scrOR	

Table 76.3 Deleted #defines *(continued)*

Deleted API	Use instead
scrXOR	
SlotDrvr_LIB_APIVersion	
Slot_SECTOR_SIZE	
sysResIDCountries	
sysResTCountries	
VFSFileAttributesGet	
VFSFileAttributesSet	
VFSFileDateGet	
VFSFileDateSet	
VFSMountClass_Simulator	
VFSMountClass_SlotDriver	
VFSVolumeLabelGet	
VFSVolumeLabelSet	

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PalmLocale.h

In Palm OS Cobalt countries and languages are defined by their respective ISO standard codes, rather than integer values as in previous Palm OS releases. This is reflected in the changes made to PalmLocale.h. As well, two of the country names were misspelled in previous Palm OS releases; this has been corrected in the Palm OS Protein headers.

Deleted APIs

Table 77.1 Deleted macros

Deleted API	Use instead
`COUNTRY_VALUE()`	Explicitly cast the value to a `CountryType`. Note, however, that Palm OS Cobalt uses ISO 3166 country codes, which are two-character `LmCountryType` values.
`LANGUAGE_VALUE()`	Explicitly cast the value to a `LanguageType`. Note, however, that Palm OS Cobalt uses ISO 639 language codes, which are two-character `LmLanguageType` values.

Table 77.2 Deleted #defines

Deleted API	Use instead
`cCountryNum`	Nothing.
`cMorrocco`	`cMorocco`
`cSyranArabRepublic`	`cSyrianArabRepublic`

Table 77.2 Deleted #defines *(continued)*

Deleted API	Use instead
`encodingNameAscii`	
`encodingNameBig5`	
`encodingNameBig5_HKSCS`	
`encodingNameCP1252`	
`encodingNameCP932`	
`encodingNameGB2312`	
`encodingNameHZ`	
`encodingNameISO8859_1`	
`encodingNamePalmGSM`	
`encodingNameShiftJIS`	
`encodingNameUCS2`	
`encodingNameUTF8`	
`lLanguageNum`	Nothing.
`lUnused`	Nothing.
`rez`	Nothing - this constant was for PalmSource use only.

Modified APIs

Table 77.3 Modified #defines

Modified API	Description of change
`#define c`*`CountryName`* `((LmCountryType)'`*`XX`*`')`	Countries are now identified by an ISO 3166 two-character code.

Table 77.3 Modified #defines *(continued)*

Modified API	Description of change
`#define charEncodingMax CHAR_ENCODING_VALUE(91)`	The constant value has changed to reflect the number of supported character encodings.
`#define l`*`LanguageName`* `((LmLanguageType)'`*`xx`*`')`	Countries are now identified by an ISO 639 two-character code.

Unchanged APIs

Table 77.4 Unchanged macros

`CHAR_ENCODING_VALUE()`

Table 77.5 Unchanged #defines

`charEncodingAscii`	`charEncodingAsmo708`
`charEncodingAsmo708Fr`	`charEncodingAsmo708Plus`
`charEncodingBig5`	`charEncodingBig5Plus`
`charEncodingBig5_HKSCS`	`charEncodingCP1250`
`charEncodingCP1251`	`charEncodingCP1252`
`charEncodingCP1253`	`charEncodingCP1254`
`charEncodingCP1255`	`charEncodingCP1255V`
`charEncodingCP1256`	`charEncodingCP1257`
`charEncodingCP1258`	`charEncodingCP437`
`charEncodingCP737`	`charEncodingCP775`
`charEncodingCP850`	`charEncodingCP852`
`charEncodingCP853`	`charEncodingCP855`
`charEncodingCP857`	`charEncodingCP860`

Table 77.5 Unchanged #defines *(continued)*

charEncodingCP861	charEncodingCP863
charEncodingCP864	charEncodingCP865
charEncodingCP866	charEncodingCP869
charEncodingCP874	charEncodingCP932
charEncodingCP949	charEncodingEucJp
charEncodingEucKr	charEncodingGB2312
charEncodingGBK	charEncodingGSM
charEncodingHZ	charEncodingISO2022CN
charEncodingISO2022Jp	charEncodingISO2022Kr
charEncodingISO8859_1	charEncodingISO8859_2
charEncodingISO8859_3	charEncodingISO8859_4
charEncodingISO8859_5	charEncodingISO8859_6
charEncodingISO8859_7	charEncodingISO8859_8
charEncodingISO8859_8I	charEncodingISO8859_9
charEncodingKoi8	charEncodingKoi8R
charEncodingMacAra	charEncodingMacCyr
charEncodingMacintosh	charEncodingMacIslande
charEncodingMacTurc	charEncodingMacUkraine
charEncodingMacXCroate	charEncodingMacXGr
charEncodingMacXLat2	charEncodingMacXRomania
charEncodingPalmBig5	charEncodingPalmGB
charEncodingPalmGSM	charEncodingPalmLatin
charEncodingPalmSJIS	charEncodingShiftJIS
charEncodingTis620	charEncodingUCS2

Table 77.5 Unchanged #defines *(continued)*

charEncodingUCS4	charEncodingUnknown
charEncodingUTF16	charEncodingUTF16BE
charEncodingUTF16LE	charEncodingUTF32
charEncodingUTF32BE	charEncodingUTF32LE
charEncodingUTF7	charEncodingUTF7_IMAP
charEncodingUTF8	charEncodingVietnet
charEncodingViqr	charEncodingViscii
charEncodingVncii	charEncodingXAutoJp
charEncodingXKamenicky	maxEncodingNameLength

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PalmLocRawData.h

Deleted APIs

Table 78.1 Deleted macros

PALM_RAW_DATA_VALUE()

Table 78.2 Deleted structures

RawLocPacketType

Table 78.3 Deleted types

LocPacketSizeType	palmLocRawDataType
RawLocDataFirstByteType	

Table 78.4 Deleted #defines

palmLocRawDataBellSouthTowerID	palmLocRawDataCDMA
palmLocRawDataDoCoMoIP	palmLocRawDataEnd
palmLocRawDataGSM	palmLocRawDataNone
palmLocRawDataPDC	palmLocRawDataTDMA
sizeofRawLocPacketTypeHeader	

79

PalmOSGlue

This chapter summarizes changes to the APIs declared in the following Palm OS Garnet header files:

- `BmpGlue.h`
- `CtlGlue.h`
- `DateGlue.h`
- `FldGlue.h`
- `FntGlue.h`
- `FrmGlue.h`
- `IntlGlue.h`
- `LmGlue.h`
- `LstGlue.h`
- `MemGlue.h`
- `OmGlue.h`
- `ResGlue.h`
- `SysGlue.h`
- `TblGlue.h`
- `TsmGlue.h`
- `TxtGlue.h`
- `UIColorGlue.h`
- `WinGlue.h`

The Palm OS Glue APIs were designed to allow developers to write code that was backwardly-compatible with earlier releases of Palm OS. They are not needed in Palm OS Cobalt since there isn't an earlier set of ARM-native APIs with which a Palm OS Cobalt application could be compatible. Applications that used the Palm OS Glue functions should be written to use the underlying operating system function which is usually—but not always—

named the same as the glue function with the word "Glue" removed. So, for instance, instead of calling `CtlGlueGetFont()` your application should call `CtlGetFont()`.

Deleted APIs

Table 79.1 Deleted functions

Deleted API	Use instead
`BmpGlueGetBitDepth()`	`BmpGetBitDepth()`
`BmpGlueGetBits()`	`BmpGetBits()`
`BmpGlueGetCompressionType()`	`BmpGetCompressionType()`
`BmpGlueGetDimensions()`	`BmpGetDimensions()`
`BmpGlueGetNextBitmap()`	`BmpGetNextBitmap()`
`BmpGlueGetTransparentValue()`	`BmpGetTransparentValue()`
`BmpGlueSetTransparentValue()`	`BmpSetTransparentValue()`
`CtlGlueGetControlStyle()`	`CtlGetControlStyle()`
`CtlGlueGetFont()`	`CtlGetFont()`
`CtlGlueGetGraphics()`	`CtlGetGraphics()`
`CtlGlueIsGraphical()`	`CtlIsGraphicControl()`
`CtlGlueNewSliderControl()`	`CtlNewSliderControl()`
`CtlGlueSetFont()`	`CtlSetFont()`
`CtlGlueSetFrameStyle()`	`CtlSetFrameStyle()`
`CtlGlueSetLeftAnchor()`	`CtlSetLeftAnchor()`
`DateGlueTemplateToAscii()`	`DateTemplateToAscii()`
`DateGlueToDOWDMFormat()`	`DateToDOWDMFormat()`
`FldGlueGetLineInfo()`	`FldGetLineInfo()`
`FntGlueGetDefaultFontID()`	`FntGetDefaultFontID()`

Table 79.1 Deleted functions *(continued)*

Deleted API	Use instead
`FntGlueTruncateString()`	`FntTruncateString()`
`FntGlueWCharWidth()`	`FntCharWidth()`
`FntGlueWidthToOffset()`	`FntWidthToOffset()`
`FrmGlueGetActiveField()`	`FrmGetActiveField()`
`FrmGlueGetDefaultButtonID()`	`FrmGetDefaultButtonID()`
`FrmGlueGetEventHandler()`	`FrmGetEventHandler()`
`FrmGlueGetHelpID()`	`FrmGetHelpID()`
`FrmGlueGetLabelFont()`	`FrmGetLabelFont()`
`FrmGlueGetMenuBarID()`	`FrmGetMenuBarID()`
`FrmGlueGetObjectUsable()`	`FrmGetObjectUsable()`
`FrmGlueGetObjIDFromObjPtr()`	`FrmGetObjectIdFromObjectPtr()`
`FrmGlueSetDefaultButtonID()`	`FrmSetDefaultButtonID()`
`FrmGlueSetHelpID()`	`FrmSetHelpID()`
`FrmGlueSetLabelFont()`	`FrmSetLabelFont()`
`IntlGlueGetRoutineAddress()`	There is no single function that corresponds to this, but see "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`TxtLatinByteAttr()`	
`LmGlueGetLocaleSetting()`	`LmGetLocaleSetting()`
`LmGlueGetNumLocales()`	`LmGetNumLocales()`
`LmGlueGetSystemLocale()`	`LmGetSystemLocale()`
`LmGlueLocaleToIndex()`	`LmLocaleToIndex()`
`LstGlueGetDrawFunction()`	

Table 79.1 Deleted functions *(continued)*

Deleted API	Use instead
`LstGlueGetFont()`	`LstGetFont()`
`LstGlueGetItemsText()`	`LstGetItemsText()`
`LstGlueGetTopItem()`	`LstGetTopItem()`
`LstGlueSetFont()`	`LstSetFont()`
`LstGlueSetIncrementalSearch()`	`LstSetIncrementalSearch()`
`MemGluePtrNew()`	`MemPtrNew()`
`OmGlueGetCurrentLocale()`	`LmGetLocaleSetting()`
`OmGlueGetSystemLocale()`	`LmGetSystemLocale()`
`ResGlueLoadConstant()`	`ResLoadConstant()`
`SysGlueGetTrapAddress()`	There is no single function that corresponds to this, but see "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`TblGlueGetColumnMasked()`	`TblGetColumnMasked()`
`TblGlueGetItemPtr()`	`TblGetItemPtr()`
`TblGlueGetNumberOfColumns()`	`TblGetNumberOfColumns()`
`TblGlueGetTopRow()`	`TblGetTopRow()`
`TblGlueSetSelection()`	`TblSetSelection()`
`TsmGlueGetFepMode()`	`TsmGetFepMode()`
`TsmGlueSetFepMode()`	`TsmSetFepMode()`
`TxtGlueByteAttr()`	`TxtByteAttr()`
`TxtGlueCaselessCompare()`	`TxtCaselessCompare()`
`TxtGlueCharAttr()`	`TxtCharAttr()`
`TxtGlueCharBounds()`	`TxtCharBounds()`

Table 79.1 Deleted functions *(continued)*

Deleted API	Use instead
`TxtGlueCharEncoding()`	`TxtCharEncoding()`
`TxtGlueCharIsValid()`	`TxtCharIsValid()`
`TxtGlueCharIsVirtual()`	`TxtCharIsVirtual()` macro
`TxtGlueCharSize()`	`TxtCharSize()`
`TxtGlueCharWidth()`	`FntCharWidth()`
`TxtGlueCharXAttr()`	`TxtCharXAttr()`
`TxtGlueCompare()`	`TxtCompare()`
`TxtGlueConvertEncoding()`	`TxtConvertEncoding()`
`TxtGlueEncodingName()`	`TxtEncodingName()`
`TxtGlueFindString()`	`TxtFindString()`
`TxtGlueGetChar()`	`TxtGetChar()`
`TxtGlueGetHorizEllipsisChar()`	`ChrHorizEllipsis()` macro
`TxtGlueGetNextChar()`	`TxtGetNextChar()`
`TxtGlueGetNumericSpaceChar()`	`ChrNumericSpace()` macro
`TxtGlueGetPreviousChar()`	`TxtGetPreviousChar()`
`TxtGlueGetTruncationOffset()`	`TxtGetTruncationOffset()`
`TxtGlueLowerChar()`	
`TxtGlueLowerStr()`	
`TxtGlueMaxEncoding()`	`TxtMaxEncoding()`
`TxtGlueParamString()`	`TxtParamString()`
`TxtGluePrepFindString()`	`TxtPrepFindString()`
`TxtGlueReplaceStr()`	`TxtReplaceStr()`
`TxtGlueSetNextChar()`	`TxtSetNextChar()`

Table 79.1 Deleted functions *(continued)*

Deleted API	Use instead
`TxtGlueStrEncoding()`	`TxtStrEncoding()`
`TxtGlueStripSpaces()`	
`TxtGlueTransliterate()`	`TxtTransliterate()`
`TxtGlueTruncateString()`	`TxtTruncateString()`
`TxtGlueUpperChar()`	
`TxtGlueUpperStr()`	
`TxtGlueWordBounds()`	`TxtWordBounds()`
`UIColorGlueGetNumTableEntries()`	
`WinGlueDrawChar()`	`WinDrawChar()`
`WinGlueDrawTruncChars()`	`WinDrawTruncChars()`
`WinGlueGetFrameType()`	`WinGetFrameType()`
`WinGlueSetFrameType()`	`WinSetFrameType()`

Table 79.2 Deleted macros

Deleted API	Use instead
`SysGlueTrapExists()`	There is no single function that corresponds to this, but see "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`TxtGlueCharIsAlNum()`	`TxtCharIsAlNum()`
`TxtGlueCharIsAlpha()`	`TxtCharIsAlpha()`
`TxtGlueCharIsCntrl()`	`TxtCharIsCntrl()`
`TxtGlueCharIsDelim()`	`TxtCharIsDelim()`
`TxtGlueCharIsDigit()`	`TxtCharIsDigit()`

Table 79.2 Deleted macros *(continued)*

Deleted API	Use instead
`TxtGlueCharIsGraph()`	`TxtCharIsGraph()`
`TxtGlueCharIsHex()`	`TxtCharIsHex()`
`TxtGlueCharIsLower()`	`TxtCharIsLower()`
`TxtGlueCharIsPrint()`	`TxtCharIsPrint()`
`TxtGlueCharIsPunct()`	`TxtCharIsPunct()`
`TxtGlueCharIsSpace()`	`TxtCharIsSpace()`
`TxtGlueCharIsUpper()`	`TxtCharIsUpper()`
`TxtGlueNextCharSize()`	`TxtNextCharSize()`
`TxtGluePreviousCharSize()`	`TxtPreviousCharSize()`

Unchanged APIs

Table 79.3 Unchanged enumerated types

`fontDefaults`	`FontDefaultType`

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PalmTypes.h

The basic data types used by the Palm OS Cobalt APIs are different from those declared in the 68K-based SDKs. In Palm OS Cobalt a signed 16-bit integer is declared as an `int16_t`, whereas in a Palm OS Garnet application you would have declared it as `Int16`.

Be aware that the Palm OS Protein C/C++ Compiler treats the `char` type as unsigned. Code compiled using a compiler that treats the `char` type as signed may need to be modified in order to function correctly.

NOTE: Early in the porting process you may want to `#include PalmTypesCompatibility.h` (after the `#include` for `PalmOS.h`). This header file defines a number of APIs and macros that allow applications using Palm OS Garnet data types to compile and run. This compatibility header should not be counted on long-term, however, so later in the porting process you should remove the `#include` and fix any problems that result.

Unlike with the 68K-based versions of Palm OS, Palm OS Cobalt does not use traps to handle calls to operating system functions.

Deleted APIs

Table 80.1 Deleted macros

Deleted API	Use instead
`ASM_SYS_TRAP()`	Nothing. Palm OS Cobalt functions aren't accessed via a trap.
`SYS_TRAP()`	Nothing. Palm OS Cobalt functions aren't accessed via a trap.

Table 80.2 Deleted #defines

Deleted API	Use instead
`bitsInByte`	8
`loop_forever`	`for (;;)`
`sysDbgBreakpointTrapNum`	Nothing. Palm OS Cobalt functions aren't accessed via a trap.
`sysDbgTrapNum`	Nothing. Palm OS Cobalt functions aren't accessed via a trap.
`sysDispatchTrapNum`	Nothing. Palm OS Cobalt functions aren't accessed via a trap.
`USE_TRAPS`	Nothing. Palm OS Cobalt functions aren't accessed via a trap.

Table 80.3 Deleted enumerated types

Deleted API	Use instead
`true/false` enum	`TRUE` and `FALSE` #define values

Modified APIs

Table 80.4 Modified types

Modified API	Description of change
`typedef int32_t Err`	
`typedef int16_t Int16`	
`typedef int32_t Int32`	
`typedef int8_t Int8`	
`typedef uint16_t UInt16`	
`typedef uint32_t UInt32`	
`typedef uint8_t UInt8`	

Unchanged APIs

Table 80.5 Unchanged macros

`OffsetOf()`

Table 80.6 Unchanged structures

`MemHandle`

Table 80.7 Unchanged types

`Boolean`	`Char`[1]
`Coord`	`LocalID`
`MemPtr`	`WChar`[2]

1. The Palm OS Protein C/C++ Compiler treats the `char` type as unsigned. Code compiled using a compiler that treats the `char` type as signed may need to be modified in order to function correctly.
2. Although still declared in the Palm OS Protein headers, the `WChar` type is deprecated. Use `wchar32_t`, or `wchar16_t` if you need an explicit 16-bit value for UTF-16/UCS-2 Unicode support.

Table 80.8 Unchanged #defines

`NULL`

Table 80.9 Unchanged application-defined functions

`ProcPtr()`

81

PalmUtils.h

The macros and #defines that were formerly declared to let you identify unused parameters, IDs, and attributes are not declared in the Palm OS Cobalt SDK. How you do this is compiler-specific; consult your compiler documentation for specifics.

Deleted APIs

Table 81.1 Deleted macros

Deleted API	Use instead
`UNUSED_PARAM()`	Either supply or omit the parameter, as needed by your compiler.
`UNUSED_PARAM_ID()`	Either supply or omit the ID, as needed by your compiler.

Table 81.2 Deleted #defines

Deleted API	Use instead
`UNUSED_PARAM_ATTR`	"`__attribute__ ((__unused__))`" or nothing, as appropriate for your compiler.

Unchanged APIs

Table 81.3 Unchanged macros

`max()`	`min()`

82

Password.h

The password APIs are unchanged in Palm OS Cobalt. Note, however, that these APIs are provided largely to ease the porting of applications from earlier Palm OS releases. ARM-native Palm OS Cobalt applications should Authentication Manager APIs instead. See *Exploring Palm OS: Security and Cryptography* for a complete description of the security capabilities of Palm OS Cobalt.

Deleted APIs

Table 82.1 Deleted #defines

Deleted API	Use instead
`pwdEncryptionKeyLength`	APKeyInfoType structure.

Unchanged APIs

Table 82.2 Unchanged functions

`PwdExists()`	`PwdRemove()`
`PwdSet()`	`PwdVerify()`

Table 82.3 Unchanged #defines

`pwdLength`

83

PceNativeCall.h

The APIs that were declared in `PceNativeCall.h` existed solely to allow applications running in PACE to call ARM-native executables. These APIs are still supported in PACE but are of no use in an ARM-native environment.

Deleted APIs

Table 83.1 Deleted functions

`PceNativeCall()`

Table 83.2 Deleted macros

`PceNativeTrapNo()`

Table 83.3 Deleted #defines

`kPceNativeTrapNoMask`	`kPceNativeWantA0`

Table 83.4 Deleted application-defined functions

`Call68KFuncType()`	`NativeFuncType()`

84

PdiConst.h

Unchanged APIs

Table 84.1 Unchanged #defines

kPdiPAN_ALTREP	kPdiPAN_CHARSET
kPdiPAN_CN	kPdiPAN_CONTEXT
kPdiPAN_CUTYPE	kPdiPAN_DELEGATED_FROM
kPdiPAN_DELEGATED_TO	kPdiPAN_DIR
kPdiPAN_ENCODE	kPdiPAN_ENCODING
kPdiPAN_FBTYPE	kPdiPAN_FMTTYPE
kPdiPAN_LANGUAGE	kPdiPAN_MEMBER
kPdiPAN_PARTSTAT	kPdiPAN_RANGE
kPdiPAN_RELATED	kPdiPAN_RELTYPE
kPdiPAN_ROLE	kPdiPAN_RSVP
kPdiPAN_SENT_BY	kPdiPAN_SOUND
kPdiPAN_STATUS	kPdiPAN_TIME
kPdiPAN_TYPE	kPdiPAN_URI
kPdiPAN_UTC_OFFSET	kPdiPAN_VALUE
kPdiPAN_X	kPdiPAV_CONTEXT_WORD
kPdiPAV_CUTYPE_GROUP	kPdiPAV_CUTYPE_INDIVIDUAL
kPdiPAV_CUTYPE_RESOURCE	kPdiPAV_CUTYPE_ROOM
kPdiPAV_CUTYPE_UNKNOWN	kPdiPAV_ENCODING_8BIT

Table 84.1 Unchanged #defines *(continued)*

kPdiPAV_ENCODING_B	kPdiPAV_ENCODING_BASE64
kPdiPAV_ENCODING_Q	kPdiPAV_ENCODING_QUOTED_PRINTABLE
kPdiPAV_FBTYPE_BUSY	kPdiPAV_FBTYPE_BUSY_TENTATIVE
kPdiPAV_FBTYPE_BUSY_UNAVAILABLE	kPdiPAV_FBTYPE_FREE
kPdiPAV_PARTSTAT_ACCEPTED	kPdiPAV_PARTSTAT_COMPLETED
kPdiPAV_PARTSTAT_DECLINED	kPdiPAV_PARTSTAT_DELEGATED
kPdiPAV_PARTSTAT_IN_PROCESS	kPdiPAV_PARTSTAT_NEEDS_ACTION
kPdiPAV_PARTSTAT_TENTATIVE	kPdiPAV_RANGE_THISANDFUTURE
kPdiPAV_RANGE_THISANDPRIOR	kPdiPAV_RELATED_END
kPdiPAV_RELATED_START	kPdiPAV_RELTYPE_CHILD
kPdiPAV_RELTYPE_PARENT	kPdiPAV_RELTYPE_SIBLING
kPdiPAV_ROLE_ATTENDEE	kPdiPAV_ROLE_CHAIR
kPdiPAV_ROLE_NON_PARTICIPANT	kPdiPAV_ROLE_OPT_PARTICIPANT
kPdiPAV_ROLE_ORGANIZER	kPdiPAV_ROLE_OWNER
kPdiPAV_ROLE_REQ_PARTICIPANT	kPdiPAV_RSVP_FALSE
kPdiPAV_RSVP_TRUE	kPdiPAV_STATUS_ACCEPTED
kPdiPAV_STATUS_COMPLETED	kPdiPAV_STATUS_CONFIRMED
kPdiPAV_STATUS_DECLINED	kPdiPAV_STATUS_DELEGATED
kPdiPAV_STATUS_NEEDS_ACTION	kPdiPAV_STATUS_SENT
kPdiPAV_STATUS_TENTATIVE	kPdiPAV_TYPE_BBS
kPdiPAV_TYPE_CAR	kPdiPAV_TYPE_CELL
kPdiPAV_TYPE_DOM	kPdiPAV_TYPE_FAX
kPdiPAV_TYPE_HOME	kPdiPAV_TYPE_INTERNET

Table 84.1 Unchanged #defines *(continued)*

kPdiPAV_TYPE_INTL	kPdiPAV_TYPE_ISDN
kPdiPAV_TYPE_MODEM	kPdiPAV_TYPE_MSG
kPdiPAV_TYPE_PAGER	kPdiPAV_TYPE_PARCEL
kPdiPAV_TYPE_PCS	kPdiPAV_TYPE_POSTAL
kPdiPAV_TYPE_PREF	kPdiPAV_TYPE_VCARD
kPdiPAV_TYPE_VIDEO	kPdiPAV_TYPE_VOICE
kPdiPAV_TYPE_WORK	kPdiPAV_TYPE_X400
kPdiPAV_VALUE_BINARY	kPdiPAV_VALUE_BOOLEAN
kPdiPAV_VALUE_CAL_ADDRESS	kPdiPAV_VALUE_DATE
kPdiPAV_VALUE_DATE_TIME	kPdiPAV_VALUE_DURATION
kPdiPAV_VALUE_FLOAT	kPdiPAV_VALUE_INTEGER
kPdiPAV_VALUE_PERIOD	kPdiPAV_VALUE_PHONE_NUMBER
kPdiPAV_VALUE_RECUR	kPdiPAV_VALUE_TEXT
kPdiPAV_VALUE_TIME	kPdiPAV_VALUE_URI
kPdiPAV_VALUE_UTC_OFFSET	kPdiPAV_VALUE_VCARD
kPdiPAV_X_X_IRMC_N	kPdiPAV_X_X_IRMC_ORG
kPdiPAV_X_X_PALM_MAIN	kPdiPAV_X_X_PALM_N
kPdiPAV_X_X_PALM_ORG	kPdiPRN_AALARM
kPdiPRN_ACTION	kPdiPRN_ADR
kPdiPRN_AGENT	kPdiPRN_ATTACH
kPdiPRN_ATTENDEE	kPdiPRN_BDAY
kPdiPRN_BEGIN	kPdiPRN_BEGIN_VCALENDAR
kPdiPRN_BEGIN_VCARD	kPdiPRN_BEGIN_VEVENT
kPdiPRN_BEGIN_VFREEBUSY	kPdiPRN_BEGIN_VJOURNAL

Table 84.1 Unchanged #defines *(continued)*

kPdiPRN_BEGIN_VTIMEZONE	kPdiPRN_BEGIN_VTODO
kPdiPRN_CALSCALE	kPdiPRN_CATEGORIES
kPdiPRN_CLASS	kPdiPRN_COMMENT
kPdiPRN_COMPLETED	kPdiPRN_CONTACT
kPdiPRN_CREATED	kPdiPRN_DALARM
kPdiPRN_DESCRIPTION	kPdiPRN_DTEND
kPdiPRN_DTSTAMP	kPdiPRN_DTSTART
kPdiPRN_DUE	kPdiPRN_DURATION
kPdiPRN_EMAIL	kPdiPRN_END
kPdiPRN_END_VCALENDAR	kPdiPRN_END_VCARD
kPdiPRN_END_VEVENT	kPdiPRN_END_VFREEBUSY
kPdiPRN_END_VJOURNAL	kPdiPRN_END_VTIMEZONE
kPdiPRN_END_VTODO	kPdiPRN_EXDATE
kPdiPRN_EXRULE	kPdiPRN_FN
kPdiPRN_FREEBUSY	kPdiPRN_GEO
kPdiPRN_KEY	kPdiPRN_LABEL
kPdiPRN_LAST_MODIFIED	kPdiPRN_LOCATION
kPdiPRN_LOGO	kPdiPRN_MAILER
kPdiPRN_METHOD	kPdiPRN_N
kPdiPRN_NAME	kPdiPRN_NICKNAME
kPdiPRN_NOTE	kPdiPRN_ORG
kPdiPRN_ORGANIZER	kPdiPRN_PERCENT_COMPLETE
kPdiPRN_PHOTO	kPdiPRN_PRIORITY
kPdiPRN_PRODID	kPdiPRN_PROFILE

Table 84.1 Unchanged #defines *(continued)*

kPdiPRN_RDATE	kPdiPRN_RECURRENCE_ID
kPdiPRN_RELATED_TO	kPdiPRN_REPEAT
kPdiPRN_REQUEST_STATUS	kPdiPRN_RESOURCES
kPdiPRN_REV	kPdiPRN_ROLE
kPdiPRN_RRULE	kPdiPRN_SEQUENCE
kPdiPRN_SORT_STRING	kPdiPRN_SOUND
kPdiPRN_SOURCE	kPdiPRN_STATUS
kPdiPRN_SUMMARY	kPdiPRN_TEL
kPdiPRN_TITLE	kPdiPRN_TRANSP
kPdiPRN_TRIGGER	kPdiPRN_TZ
kPdiPRN_TZID	kPdiPRN_TZNAME
kPdiPRN_TZOFFSET	kPdiPRN_TZOFFSETFROM
kPdiPRN_TZOFFSETTO	kPdiPRN_TZURL
kPdiPRN_UID	kPdiPRN_URL
kPdiPRN_VERSION	kPdiPRN_X_PALM_CATEGORY
kPdiPRN_X_PALM_CUSTOM	kPdiPVF_ADR_COUNTRY
kPdiPVF_ADR_EXTENDED	kPdiPVF_ADR_LOCALITY
kPdiPVF_ADR_POSTAL_CODE	kPdiPVF_ADR_POST_OFFICE
kPdiPVF_ADR_REGION	kPdiPVF_ADR_STREET
kPdiPVF_GEO_LATITUDE	kPdiPVF_GEO_LONGITUDE
kPdiPVF_N_ADDITIONAL	kPdiPVF_N_FAMILY
kPdiPVF_N_GIVEN	kPdiPVF_N_PREFIXES
kPdiPVF_N_SUFFIXES	kPdiType_BINARY
kPdiType_BOOLEAN	kPdiType_CAL_ADDRESS

Table 84.1 Unchanged #defines *(continued)*

kPdiType_DATE	kPdiType_DATE_TIME
kPdiType_DURATION	kPdiType_FLOAT
kPdiType_INTEGER	kPdiType_PERIOD
kPdiType_PHONE_NUMBER	kPdiType_RECUR
kPdiType_TEXT	kPdiType_TIME
kPdiType_URI	kPdiType_UTC_OFFSET
kPdiType_VCARD	

85

PdiLib.h

Deleted APIs

Table 85.1 Deleted macros

Deleted API	Use instead
`PDI_LIB_TRAP()`	

Table 85.2 Deleted #defines

Deleted API	Use instead
`kPdiEnableBase64`	

Modified APIs

Table 85.3 Modified functions

Modified API	Description of change
`PdiDictionary *PdiDefineReaderDictionary (PdiReaderType *, PdiDictionary *, Boolean)`	
`status_t PdiDefineResizing (PdiReaderType *, uint16_t, uint16_t)`	

Table 85.3 Modified functions *(continued)*

Modified API	Description of change
`PdiDictionary *PdiDefineWriterDictionary (PdiWriterType *, PdiDictionary *, Boolean)`	
`status_t PdiEnterObject (PdiReaderType *)`	
`status_t PdiLibClose (void)`	
`status_t PdiLibOpen (void)`	
`void PdiReaderDelete (PdiReaderType **ioReader)`	
`PdiReaderType *PdiReaderNew (UDAReaderType *, uint16_t)`	
`status_t PdiReadParameter (PdiReaderType *)`	
`status_t PdiReadProperty (PdiReaderType *)`	
`status_t PdiReadPropertyField (PdiReaderType *, char **bufferPP, uint16_t, uint16_t)`	
`status_t PdiReadPropertyName (PdiReaderType *)`	
`status_t PdiSetCharset (PdiWriterType *, CharEncodingType)`	
`status_t PdiSetEncoding (PdiWriterType *, uint16_t)`	
`status_t PdiWriteBeginObject (PdiWriterType *, uint16_t)`	

Table 85.3 Modified functions *(continued)*

Modified API	Description of change
`status_t PdiWriteParameter (PdiWriterType *, uint16_t, Boolean)`	
`status_t PdiWriteParameterStr (PdiWriterType *, const char *, const char *)`	
`status_t PdiWriteProperty (PdiWriterType *, uint16_t)`	
`status_t PdiWritePropertyBinaryValue (PdiWriterType *, const char *, uint16_t, uint16_t)`	
`status_t PdiWritePropertyFields (PdiWriterType *, char *fields[], uint16_t, uint16_t)`	
`status_t PdiWritePropertyStr (PdiWriterType *, const char *, uint8_t, uint8_t)`	
`status_t PdiWritePropertyValue (PdiWriterType *, char *, uint16_t)`	
`void PdiWriterDelete (PdiWriterType **ioWriter)`	
`PdiWriterType *PdiWriterNew (UDAWriterType *, uint16_t)`	

Table 85.4 Modified structures

Modified API	Description of change
`PdiReaderType`	
`PdiWriterType`	

Table 85.5 Modified #defines

Modified API	Description of change
`#define kPdiPalmCompatibility (kPdiEscapeMultiFieldValues | kPdiEnableQuotedPrintable | kPdiBypassLocaleCharEncoding)`	

Unchanged APIs

Table 85.6 Unchanged macros

`PdiParameterPairTest()`

Table 85.7 Unchanged types

`PdiDictionary`

Table 85.8 Unchanged #defines

`kPdiASCIIEncoding`	`kPdiB64Encoding`
`kPdiBeginObjectEventMask`	`kPdiBEncoding`
`kPdiBypassLocaleCharEncoding`	`kPdiCommaFields`
`kPdiConvertComma`	`kPdiConvertSemicolon`
`kPdiDefaultBufferDeltaSize`	`kPdiDefaultBufferMaxSize`
`kPdiDefaultFields`	`kPdiEnableB`

Table 85.8 Unchanged #defines *(continued)*

kPdiEnableFolding	kPdiEnableQuotedPrintable
kPdiEndObjectEventMask	kPdiEOFEventMask
kPdiEscapeEncoding	kPdiEscapeMultiFieldValues
kPdiGroupNameEventMask	kPdiLibName
kPdiNoEncoding	kPdiNoFields
kPdiOpenParser	kPdiParameterNameEventMask
kPdiParameterValueEventMask	kPdiPropertyDefinedEventMask
kPdiPropertyNameEventMask	kPdiPropertyValueCRLFEventMask
kPdiPropertyValueEventMask	kPdiPropertyValueFieldEventMas k
kPdiPropertyValueItemEventMask	kPdiPropertyValueMoreCharsEven tMask
kPdiQPEncoding	kPdiResizableBuffer
kPdiSemicolonFields	kPdiWriteData
kPdiWriteMultiline	kPdiWriteText
pdiErr...	PdiLibTrap...
PdiWriteEndObject	

86

PenInputMgr.h

The Pen Input Manager controls how an application interacts with a dynamic input area. In Palm OS Cobalt, the dynamic input area runs a separate thread called a pinlet. Because of this change and because of changes to the Window Manager, applications work with the input area differently than they did previously.

- Most applications can become dynamic input area aware just by defining size constraints. You can now do so using a `WINDOW_CONSTRAINTS_RESOURCE` in the resource file rather than calling `WinSetConstraintsSize()`.
  - `FrmSetDIAPolicyAttr()` is obsolete. All forms with size constraints are dynamic input area aware.
  - Setting the input area state to `pinInputAreaUser` is no longer necessary. This default state is always in effect unless the application specifically overrides it.
  - Applications are no longer allowed to disable the input trigger.
- The form's window is resized for you as the input area is opened and closed. The application receives a `winResizedEvent` with the new bounds for the form. The Form Manager defines a `FrmPerformLayout()` function that can handle the rearranging of many user interface elements automatically based on rules you specify when the form is loaded. See *Exploring Palm OS: User Interface* for more information.
- The Pen Input Manager defines new functions that allow the application to control the pinlet; however, most applications will not need to use these functions. Users should decide which pinlet they want to use, just as they decide whether they want the input area opened or closed.

Deleted APIs

Table 86.1 Deleted functions

Deleted API	Use instead
`PINGetInputTriggerState()`	The input area trigger is always enabled unless the current application is a legacy application.
`PINSetInputTriggerState()`	

Table 86.2 Deleted enumerated types

Deleted API	Use instead
`PINInputAreaStateType`	The input area states are now #defines. `pinInputAreaUser` has been removed because it is no longer necessary. Palm OS Cobalt always uses the last user state of the input area unless the application specifically overrides it. Other constants that were system use only have also been removed.
`PINInputTriggerStateType`	Applications are no longer allowed to control the input trigger state.

Unchanged APIs

Table 86.3 Unchanged functions

`PINGetInputAreaState()`	`PINSetInputAreaState()`
`StatHide()`	`StatShow()`

Table 86.4 Unchanged #defines

`pinAPIVersion1_0`	`pinAPIVersion1_1`
`pinAPIVersion2_0`	`pinCreator`
`pinErrInvalidParam`	`pinErrNoSoftInputArea`
`pinFtrAPIVersion`	

87

PenMgr.h

The Pen Manager is obsolete. Applications should use the pen events if they want to track the pen.

Deleted APIs

Table 87.1 Deleted functions

`PenCalibrate()`	`PenClose()`
`PenGetRawPen()`	`PenOpen()`
`PenRawToScreen()`	`PenResetCalibration()`
`PenScreenToRaw()`	`PenSleep()`
`PenWake()`	

Table 87.2 Deleted #defines

`penErrBadParam`	`penErrIgnorePoint`

88

PhoneLookup.h

The Phone Lookup APIs are unchanged in Palm OS Cobalt.

Unchanged APIs

Table 88.1 Unchanged functions

`PhoneNumberLookup()`	`PhoneNumberLookupCustom()`

89

Preferences.h

Applications should no longer access the system preferences database directly, but should instead get and set individual preference values using the declared functions.

Deleted APIs

Table 89.1 Deleted functions

Deleted API	Use instead
`PrefGetAppPreferencesV10()`	`PrefGetAppPreferences()`
`PrefGetPreferences()`	`PrefGetPreference()`
`PrefOpenPreferenceDB()`	Locate the preferences database with `DmFindDatabaseByTypeCreator (`*type*`, sysFileCSystem, dmFindExtendedDB, NULL)` where *type* is either `sysFileTSavedPreferences` or `sysFileTPreferences`, depending on whether or not you are opening the saved preferences database; and then open the database by calling `DmOpenDBNoOverlay()`.
`PrefOpenPreferenceDBV10()`	See the explanation for `PrefOpenPreferenceDB()`, above.
`PrefSetAppPreferencesV10()`	`PrefSetAppPreferences()`
`PrefSetPreferences()`	`PrefSetPreference()`

Table 89.2 Deleted structures

Deleted API	Use instead
`ButtonDefaultAppType`	
`ButtonDefaultListType`	
`SystemPreferencesType`	Nothing. This structure was always considered to be private.
`SystemPreferencesTypeV10`	Nothing. This structure was always considered to be private.

Table 89.3 Deleted types

Deleted API	Use instead
`SystemPreferencesPtr`	Nothing. This was a pointer to a structure that was always considered to be private.

Table 89.4 Deleted #defines

Deleted API	Use instead
`default...`	
`peggedAutoOffDuration`	
`peggedAutoOffDurationSecs`	
`preferenceDataVer...`	Nothing. Access individual preference values by calling `PrefGetPreference()` or `PrefGetAppPreferences()`.
`prefLeftHanded`	
`prefRightHanded`	

Table 89.5 Deleted enumerated types

Deleted API	Use instead
`AnimationLevelType`	
`SecurityAutoLockType`	

Modified APIs

Table 89.6 Modified functions

Modified API	Description of change
`int16_t PrefGetAppPreferences (uint32_t, uint16_t, void *, uint32_t *, Boolean)`	The *`prefsSize`* parameter was 16-bit, but is now 32-bit.
`void PrefSetAppPreferences (uint32_t, uint16_t, int16_t, const void *, uint32_t, Boolean)`	The *`prefsSize`* parameter was 16-bit, but is now 32-bit.

Table 89.7 Modified enumerated types

Modified API	Description of change
`MeasurementSystemType`	Now a typedef and an associated enum (`MeasurementSystemTag`).
`SoundLevelTypeV20`	Now a typedef and an associated enum (`SoundLevelTypeV20Tag`).
`SystemPreferencesChoice`	Now a typedef and an associated enum (`SystemPreferencesChoiceTag`). As well, several values within the associated enum have changed:

Table 89.7 Modified enumerated types *(continued)*

Modified API	Description of change
	• `prefCountry` is now `prefCountry68K`, and is intended for use only from applications running under PACE—although such applications should really use the `prefLocale` value instead. ARM-native applications should call `LmGetFormatsLocale()` to find out what locale the user has selected in the Formats panel, and `LmSetFormatsLocale()` to change it. • `prefLanguage` is now `prefLanguage68K`, and is intended for use only from applications running under PACE—although such applications should really use the `prefLocale` value instead. ARM-native applications should call `LmGetFormatsLocale()` to find out what locale the user has selected in the Formats panel, and `LmSetFormatsLocale()` to change it.

Table 89.7 Modified enumerated types *(continued)*

Modified API	Description of change
	• `prefLocale` is now `prefFormatsLocale68K`, and is intended for use only from applications running under PACE—although such applications should really use the `prefLocale` value instead. ARM-native applications should call `LmGetFormatsLocale()` to find out what locale the user has selected in the Formats panel, and `LmSetFormatsLocale()` to change it.

Unchanged APIs

Table 89.8 Unchanged functions

`PrefGetPreference()`	`PrefSetPreference()`

Table 89.9 Unchanged #defines

`noPreferenceFound`

90

PrivateRecords.h

The private record APIs are largely unchanged in Palm OS Cobalt.

Deleted APIs

Table 90.1 Deleted enumerated types

Deleted API	Use instead
`privateRecordViewEnum`	`privateRecordViewEnum` is now a typedef that contains values that are defined by the `privateRecordViewTag` enum.

Unchanged APIs

Table 90.2 Unchanged functions

`SecSelectViewStatus()`	`SecVerifyPW()`

91

Progress.h

The Progress APIs are only slightly modified from their Palm OS Garnet counterparts.

Deleted APIs

Table 91.1 Deleted functions

Deleted API	Use instead
`PrgStartDialogV31()`	`PrgStartDialog()`

Table 91.2 Deleted macros

Deleted API	Use instead
`PrgUserCancel()`	`PrgUserCancel()` (this is a function in Palm OS Cobalt).

Modified APIs

Table 91.3 Modified functions

Modified API	Description of change
`void PrgUpdateDialog (ProgressPtr, status_t, uint16_t, const char *, Boolean)`	The second parameter, *`err`*, formerly was a `UInt16`; it is now a `status_t`.

Table 91.4 Modified structures

Modified API	Description of change
`PrgCallbackData`	Three new fields have been added: `bitmapDatabase`, `displaySkipBtn`, and `skipped`. `textLen` is now a 32-bit value (previously it was 16 bits), and `timeout` is now a 64-bit value (previously it was 32 bits). Finally, various padding fields and spare bits have been added, and the fields within the structure has been re-ordered.
`ProgressType`	The contents of this structure, formerly exposed only for debugging purposes, are now completely opaque; structure fields can no longer be accessed directly.

Unchanged APIs

Table 91.5 Unchanged functions

`PrgHandleEvent()`	`PrgStartDialog()`
`PrgStopDialog()`	

Table 91.6 Unchanged #defines

`progressMaxButtonText`	`progressMaxMessage`
`progressMaxTitle`	

Table 91.7 Unchanged application-defined functions

`PrgCallbackFunc()`

92

Rect.h

The rectangle APIs are unchanged in Palm OS Cobalt. Note that three functions are now defined as a macros.

Deleted APIs

Table 92.1 Deleted functions

Deleted API	Use instead
`RctCopyRectangle()`	`RctCopyRectangle()` macro.
`RctOffsetRectangle()`	`RctOffsetRectangle()` macro.
`RctSetRectangle()`	`RctSetRectangle()` macro.

Unchanged APIs

Table 92.2 Unchanged functions

`RctGetIntersection()`	`RctInsetRectangle()`
`RctPtInRectangle()`	

Table 92.3 Unchanged structures

`AbsRectType`	`PointType`
`RectangleType`	

Table 92.4 Unchanged types

`RectanglePtr`

93

ScrollBar.h

Minor changes only. The `ScrollBarType` structure is now opaque; its fields cannot be directly accessed. Various parameters passed to or retrieved from `SclSetScrollBar()` and `SclGetScrollBar()` have changed from 16-bit integers to 32-bit integers.

Deleted APIs

Table 93.1 Deleted structures

Deleted API	Use instead
`ScrollBarAttrType`	Nothing. This structure was only used to interpret one of the fields of the `ScrollBarType` structure, which is now opaque.

Table 93.2 Deleted enumerated types

Deleted API	Use instead
`ScrollBarRegionType`	Nothing. This enum was only used to interpret one of the fields of the `ScrollBarAttrType` structure, which is now private.

Modified APIs

Table 93.3 Modified functions

Modified API	Description of change
`void SclGetScrollBar (const ScrollBarPtr, int32_t *, int32_t *, int32_t *, int32_t *)`	All parameters but the first used to point to variables of type `Int16`.
`void SclSetScrollBar (const ScrollBarPtr, int32_t, const int32_t, const int32_t, const int32_t)`	All parameters but the first used to be `Int16`.

Table 93.4 Modified structures

Modified API	Description of change
`ScrollBarType`	The contents of this structure, formerly exposed only for debugging purposes, are now completely opaque; structure fields can no longer be accessed directly.

Unchanged APIs

Table 93.5 Unchanged types

`ScrollBarPtr`

Table 93.6 Unchanged functions

`SclDrawScrollBar()`	`SclHandleEvent()`

94

SelDay.h

The day selection APIs are largely unchanged in Palm OS Cobalt. Deprecated APIs have been deleted.

Deleted APIs

Table 94.1 Deleted functions

Deleted API	Use instead
`SelectDayV10()`	Deprecated function. Use `SelectDay()` instead.

Unchanged APIs

Table 94.2 Unchanged functions

`SelectDay()`

Table 94.3 Unchanged #defines

`daySelectorMaxYear`	`daySelectorMinYear`

95

SelTime.h

The time selection APIs are largely unchanged in Palm OS Cobalt. Deprecated APIs have been deleted.

Deleted APIs

Table 95.1 Deleted functions

Deleted API	Use instead
`SelectTimeV33()`	Deprecated function. Use `SelectTime()` instead.

Unchanged APIs

Table 95.2 Unchanged functions

`SelectOneTime()`	`SelectTime()`

Table 95.3 Unchanged structures

`HMSTime`

96

SelTimeZone.h

The parameter list for the one function that was declared in this header file, `SelectTimeZone()`, has changed. Note that a "V50" version of `SelectTimeZone()` is available with the old parameter list to ease the porting process.

Modified APIs

Table 96.1 Modified functions

Modified API	Description of change
`Boolean SelectTimeZone (char *, const char *, SelectTimeZoneDisplayType)`	In Palm OS Cobalt time zones are identified by a string, rather than an unsigned 16-bit integer and a locale. The boolean that specified whether the time was displayed along with the date has been replaced by a `SelectTimeZoneDisplayType` constant.

97

SerialDrvr.h

Under Palm OS Cobalt the Serial Manager is implemented as a STREAMS driver and a compatibility library that lets you continue to use the Serial Manager API. The virtual driver APIs listed here, that were used in previous versions of Palm OS, are no longer supported.

Deleted APIs

Table 97.1 Deleted structures

DrvrInfoType	DrvrRcvQType
SrmRcvQType	

Table 97.2 Deleted types

DrvrHWRcvQPtr	DrvrInfoPtr
SrmRcvQPtr	

Table 97.3 Deleted #defines

kDrvrCODEType	kDrvrCreator
kDrvrResID	kDrvrVersion
kDrvrVersion3	kDrvrVersion4
kMaxPortDescStrLen	kPortDescStrID
portBkgndModeSupported	portCncMgrVisible
portConsolePort	portCradlePort
portExternalPort	portIRDACapable

Table 97.3 Deleted #defines *(continued)*

portModemPort	portPhysicalPort
portPrivateUse	portRS232Capable
portUSBCapable	

Table 97.4 Deleted enumerated types

DrvrEntryOpCodeEnum	DrvrIRQEnum
DrvrStatusEnum	

Table 97.5 Deleted application-defined functions

DrvEntryPointProcPtr()	GetSizeProcPtr()
GetSpaceProcPtr()	SignalCheckPtr()
WriteBlockProcPtr()	WriteByteProcPtr()

98

SerialLinkMgr.h

The Serial Link Manager APIs are, for all practical purposes, unchanged from their Palm OS Garnet counterparts.

Deleted APIs

Table 98.1 Deleted functions

Deleted API	Use instead
`SlkProcessRPC()`	Nothing. This function was documented as "system use only" and should never have been used by applications.
`SlkSysPktDefaultResponse()`	Nothing. This function was documented as "system use only" and should never have been used by applications.

Modified APIs

Table 98.2 Modified structures

Modified API	Description of change
`SlkWriteDataType`	Padding bytes have been added.

Table 98.3 Modified #defines

Modified API	Description of change
`slkSocketFirstDynamic`	The value of this constant has changed (from 4 to 5).

Unchanged APIs

Table 98.4 Unchanged functions

`SlkClose()`	`SlkCloseSocket()`
`SlkFlushSocket()`	`SlkOpen()`
`SlkOpenSocket()`	`SlkReceivePacket()`
`SlkSendPacket()`	`SlkSetSocketListener()`
`SlkSocketPortID()`	`SlkSocketSetTimeout()`

Table 98.5 Unchanged macros

`slkGetPacketBodySize()`	`slkGetPacketByteVal()`
`slkGetPacketDest()`	`slkGetPacketDWordVal()`
`slkGetPacketHdrChecksum()`	`slkGetPacketSignature1()`
`slkGetPacketSignature2()`	`slkGetPacketSrc()`
`slkGetPacketTotalChecksum()`	`slkGetPacketTransId()`
`slkGetPacketType()`	`slkGetPacketWordVal()`
`slkSetPacketBodySize()`	`slkSetPacketByteVal()`
`slkSetPacketDest()`	`slkSetPacketDWordVal()`
`slkSetPacketHdrChecksum()`	`slkSetPacketSignature1()`
`slkSetPacketSignature2()`	`slkSetPacketSrc()`
`slkSetPacketTotalChecksum()`	`slkSetPacketTransId()`
`slkSetPacketType()`	`slkSetPacketWordVal()`

Table 98.6 Unchanged structures

`SlkPktFooterType`	`SlkPktHeaderType`
`SlkSocketListenType`	

Table 98.7 Unchanged types

SlkPktFooterPtr	SlkPktHeaderChecksum
SlkPktHeaderPtr	SlkSocketListenPtr
SlkWriteDataPtr	

Table 98.8 Unchanged #defines

slkErrAlreadyOpen	slkErrBadParam
slkErrBodyLimit	slkErrBuffer
slkErrBusy	slkErrChecksum
slkErrFormat	slkErrHandle
slkErrNoDefaultProc	slkErrNotOpen
slkErrOutOfSockets	slkErrResponse
slkErrSocketNotOpen	slkErrTimeOut
slkErrTransId	slkErrWrongDestSocket
slkErrWrongPacketType	slkErrWrongPktType
slkPktHeaderSigFirst	slkPktHeaderSignature1
slkPktHeaderSignature2	slkPktHeaderSigSecond
slkPktHeaderSigThird	slkPktTypeLoopBackTest
slkPktTypePAD	slkPktTypeSystem
slkPktTypeUnused1	slkSocketConsole
slkSocketDebugger	slkSocketDLP
SlkSocketRefNum	slkSocketRemoteUI

Table 98.9 Unchanged application-defined functions

SlkSocketListenerProcPtr()

99

SerialMgr.h

Beyond the removal of a few APIs that were previously identified as "System Use Only," the Serial Manager APIs are largely unchanged in Palm OS Cobalt.

Note that virtual drivers aren't supported on Palm OS Garnet and later. This includes Palm OS Cobalt.

Deleted APIs

Table 99.1 Deleted functions

Deleted API	Use instead
`SerialMgrInstall()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`SrmSelectorErrPrv()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.

Table 99.2 Deleted macros

Deleted API	Use instead
`SERIAL_TRAP()`	Nothing. This macro wasn't to be used by applications.

Table 99.3 Deleted structures

Deleted API	Use instead
`SrmCallbackEntryType`	Nothing. This structure was used in conjunction with the `SerControl()` function `SerCtlEmuSetBlockingHook`, which is no longer supported.

Table 99.4 Deleted types

Deleted API	Use instead
`SrmCallbackEntryPtr`	Nothing. This type was used in conjunction with the `SerControl()` function `SerCtlEmuSetBlockingHook`, which is no longer supported.

Table 99.5 Deleted #defines

Deleted API	Use instead
`maxSerialSelector`	Nothing: this was related to the trap selectors.
`serDevCncMgrVisible`	
`serDevModemPort`	
`srmSettingsFlagRTSInactive`	
`sysSerial...`	Nothing: these were trap selectors.

Table 99.6 Deleted enumerated types

Deleted API	Use instead
`SrmTransferModeType`	

Table 99.7 Deleted application-defined functions

Deleted API	Use instead
`BlockingHookProcPtr()`	Nothing. This application-defined function was used in conjunction with the `SerControl()` function `SerCtlEmuSetBlockingHook`, which is no longer supported.

Modified APIs

Table 99.8 Modified structures

Modified API	Description of change
`SrmOpenConfigType`	Padding bytes have been added.

Table 99.9 Modified #defines

Modified API	Description of change
`#define serMgrVersion 3`	The version number has been incremented to 3.
`#define srmDefaultCTSTimeout (srmDefaultCTSTimeoutV4*10)`	Previously the timeout value was in ticks. It is now in milliseconds.
`#define srmDefaultSettings (srmSettingsFlagBitsPerChar8 | srmSettingsFlagStopBits1 | srmSettingsFlagRTSAutoM | srmSettingsFlagFlowControlIn | srmSettingsFlagCTSAutoM)`	The final flag—for CTS transmit flow control—has been added.

Table 99.10Modified enumerated types

Modified API	Description of change
`SrmCtlEnum`	`srmCtlEmuSetBlockingHook` is no longer one of the enumerated values.

Unchanged APIs

Table 99.11 Unchanged functions

SrmClearErr()	SrmClose()
SrmControl()	SrmCustomControl()
SrmExtOpen()	SrmExtOpenBackground()
SrmGetDeviceCount()	SrmGetDeviceInfo()
SrmGetStatus()	SrmOpen()
SrmOpenBackground()	SrmPrimeWakeupHandler()
SrmReceive()	SrmReceiveCheck()
SrmReceiveFlush()	SrmReceiveWait()
SrmReceiveWindowClose()	SrmReceiveWindowOpen()
SrmSend()	SrmSendCheck()
SrmSendFlush()	SrmSendWait()
SrmSetReceiveBuffer()	SrmSetWakeupHandler()
SrmSleep()	SrmWake()

Table 99.12 Unchanged structures

DeviceInfoType

Table 99.13 Unchanged types

DeviceInfoPtr	SrmOpenConfigPtr

Table 99.14 Unchanged #defines

serDevConsolePort	serDevCradlePort
serDevIRDACapable	serDevRS232Serial

Table 99.14Unchanged #defines *(continued)*

serDevUSBCapable	serErrAlreadyOpen
serErrBadConnID	serErrBadParam
serErrBadPort	serErrConfigurationFailed
serErrLineErr	serErrNoDevicesAvail
serErrNoMem	serErrNotOpen
serErrNotSupported	serErrStillOpen
serErrTimeOut	serFncConsole
serFncDebugger	serFncHotSync
serFncPPPSession	serFncSLIPSession
serFncTelephony	serFncUndefined
serLineErrorBreak	serLineErrorCarrierLost
serLineErrorFraming	serLineErrorHShake
serLineErrorHWOverrun	serLineErrorParity
serLineErrorSWOverrun	serPortConsolePort
serPortCradlePort	serPortCradleRS232Port
serPortCradleUSBPort	serPortIDMask
serPortIrPort	serPortLocalHotSync
srmCtlCustomStart	srmCtlSystemStart
srmSettingsFlagBitsPerChar5	srmSettingsFlagBitsPerChar6
srmSettingsFlagBitsPerChar7	srmSettingsFlagBitsPerChar8
srmSettingsFlagBitsPerCharM	srmSettingsFlagCTSAutoM
srmSettingsFlagFlowControlIn	srmSettingsFlagParityEvenM
srmSettingsFlagParityOnM	srmSettingsFlagRTSAutoM
srmSettingsFlagStopBits1	srmSettingsFlagStopBits2

Table 99.14Unchanged #defines *(continued)*

srmSettingsFlagStopBitsM	srmSettingsFlagXonXoffM
srmStatusBreakSigOn	srmStatusCtsOn
srmStatusDsrOn	srmStatusRtsOn
sysFtrNewSerialPresent	sysFtrNewSerialVersion

Table 99.15Unchanged application-defined functions

WakeupHandlerProcPtr()

100

SerialMgrOld.h

Prior to Palm OS Cobalt there was both the "Old Serial Manager" and the "Serial Manager." The "Old Serial Manager" is not supported in Palm OS Cobalt. Applications should use the Serial Manager instead.

Deleted APIs

Table 100.1Deleted functions

Deleted API	Use instead
`SerClearErr()`	`SrmClearErr()`
`SerClose()`	`SrmClose()`
`SerControl()`	`SrmControl()`
`SerDbgAssureOpen()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`SerGetSettings()`	`SrmControl()`
`SerGetStatus()`	`SrmGetStatus()`
`SerOpen()`	`SrmOpen()`
`SerPrimeWakeupHandler()`	`SrmPrimeWakeupHandler()`
`SerReceive()`	`SrmReceive()`
`SerReceive10()`	`SrmReceive()`
`SerReceiveCheck()`	`SrmReceiveCheck()`
`SerReceiveFlush()`	`SrmReceiveFlush()`

Table 100.1Deleted functions *(continued)*

Deleted API	Use instead
`SerReceiveISP()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`SerReceiveWait()`	`SrmReceiveWait()`
`SerReceiveWindowClose()`	`SrmReceiveWindowClose()`
`SerReceiveWindowOpen()`	`SrmReceiveWindowOpen()`
`SerSend()`	`SrmSend()`
`SerSend10()`	`SrmSend()`
`SerSendCheck()`	`SrmSendCheck()`
`SerSendFlush()`	`SrmSendFlush()`
`SerSendWait()`	`SrmSendWait()`
`SerSetMapPort()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`SerSetReceiveBuffer()`	`SrmSetReceiveBuffer()`
`SerSetSettings()`	`SrmControl()`
`SerSetWakeupHandler()`	`SrmSetWakeupHandler()`
`SerSleep()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`SerWake()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.

Table 100.2Deleted structures

Deleted API	Use instead
`SerCallbackEntryType`	Nothing. This structure was used in conjunction with the `SerControl()` function `SerCtlEmuSetBlockingHook`, which is no longer supported.
`SerSettingsType`	The functions that used this structure are no longer supported. The function you use instead, `SrmControl()`, doesn't need any such structure.

Table 100.3Deleted types

Deleted API	Use instead
`SerCallbackEntryPtr`	Nothing. This type was used in conjunction with the `SerControl()` function `SerCtlEmuSetBlockingHook`, which is no longer supported.
`SerSettingsPtr`	The functions that used this type are no longer supported. The function you use instead, `SrmControl()`, doesn't need it.

Table 100.4Deleted #defines

Deleted API	Use instead
`serCtlFirstCustomEntry`	`srmCtlCustomStart`
`serDefaultCTSTimeout`	`srmDefaultCTSTimeout`
`serDefaultSettings`	`srmDefaultSettings`
`serPortDefault`	Use the `prefDefSerialPlugIn` preference value.

Table 100.4Deleted #defines *(continued)*

Deleted API	Use instead
serPortMaskLocal	~serPortLocalHotSync
serSettingsFlagBitsPerChar5	srmSettingsFlagBitsPerChar5
serSettingsFlagBitsPerChar6	srmSettingsFlagBitsPerChar6
serSettingsFlagBitsPerChar7	srmSettingsFlagBitsPerChar7
serSettingsFlagBitsPerChar8	srmSettingsFlagBitsPerChar8
serSettingsFlagBitsPerCharM	srmSettingsFlagBitsPerCharM
serSettingsFlagCTSAutoM	srmSettingsFlagCTSAutoM
serSettingsFlagParityEvenM	srmSettingsFlagParityEvenM
serSettingsFlagParityOnM	srmSettingsFlagParityOnM
serSettingsFlagRTSAutoM	srmSettingsFlagRTSAutoM
serSettingsFlagStopBits1	srmSettingsFlagStopBits1
serSettingsFlagStopBits2	srmSettingsFlagStopBits2
serSettingsFlagStopBitsM	srmSettingsFlagStopBitsM
serSettingsFlagXonXoffM	srmSettingsFlagXonXoffM

Table 100.5Deleted enumerated types

Deleted API	Use instead
SerCtlEnum	SrmCtlEnum

Table 100.6Deleted application-defined functions

Deleted API	Use instead
`SerBlockingHookHandler()`	Nothing. This application-defined function was used in conjunction with the `SerControl()` function `SerCtlEmuSetBlockingHook`, which is no longer supported.
`SerWakeupHandler()`	`WakeupHandlerProcPtr()`

Unchanged APIs

Table 100.7Unchanged #defines

`serErrAlreadyOpen`	`serErrBadConnID`
`serErrBadParam`	`serErrBadPort`
`serErrLineErr`	`serErrNoMem`
`serErrNotOpen`	`serErrNotSupported`
`serErrStillOpen`	`serErrTimeOut`
`serLineErrorBreak`	`serLineErrorCarrierLost`
`serLineErrorFraming`	`serLineErrorHShake`
`serLineErrorHWOverrun`	`serLineErrorParity`
`serLineErrorSWOverrun`	`serPortLocalHotSync`

101

SerialSdrv.h

Under Palm OS Cobalt the Serial Manager is implemented as a STREAMS driver and a compatibility library that lets you continue to use the Serial Manager API. The Serial Driver APIs listed here, that were used in previous versions of Palm OS, are no longer supported.

Deleted APIs

Table 101.1Deleted functions

`DrvClose()`	`DrvControl()`
`DrvOpen()`	`DrvReadChar()`
`DrvStatus()`	`DrvWriteChar()`

Table 101.2Deleted structures

`SdrvAPIType`

Table 101.3Deleted types

`SdrvAPIPtr`	`SdrvDataPtr`
`__D0`	

Table 101.4Deleted #defines

`kSdrvResType`	`sdrvOpCodeCustomStart`
`sdrvOpCodeSystemStart`	

Table 101.5Deleted enumerated types

`SdrvCtlOpCodeEnum`

Table 101.6Deleted application-defined functions

`SdrvCloseProcPtr()`	`SdrvControlProcPtr()`
`SdrvOpenProcPtr()`	`SdrvStatusProcPtr()`
`SdrvWriteCharProcPtr()`	`SerialMgrISPProcPtr()`

102

SerialVdrv.h

Under Palm OS Cobalt the Serial Manager is implemented as a STREAMS driver and a compatibility library that lets you continue to use the Serial Manager API. The virtual driver APIs listed here, that were used in previous versions of Palm OS, are no longer supported.

Deleted APIs

Table 102.1Deleted functions

`VDrvClose()`	`VDrvControl()`
`VDrvCustomControl()`	`VDrvDbgRead()`
`VDrvDbgWrite()`	`VDrvOpen()`
`VDrvStatus()`	

Table 102.2Deleted structures

`VdrvAPIType`	`VdrvConfigType`

Table 102.3Deleted types

`VdrvAPIPtr`	`VdrvConfigPtr`
`VdrvDataPtr`	

Table 102.4Deleted #defines

`kVdrvResType`	`vdrvOpCodeCustomStart`
`vdrvOpCodeSystemStart`	

Table 102.5Deleted enumerated types

`VdrvCtlOpCodeEnum`

Table 102.6Deleted application-defined functions

`VdrvCloseProcPtr()`	`VdrvControlCustomProcPtr()`
`VdrvControlProcPtr()`	`VdrvOpenProcPtr()`
`VdrvOpenProcV4Ptr()`	`VdrvReadProcPtr()`
`VdrvStatusProcPtr()`	`VdrvWriteProcPtr()`

103

SlotDrvrLib.h

68K-style slot drivers are no longer supported. In Palm OS Cobalt the slot driver is replaced by a **block device driver** (also called a storage driver). Applications can no longer use the slot driver APIs to directly access a block device driver.

Note that those structures and constants formerly defined here that are needed by the Expansion Manager APIs are now defined in `ExpansionMgr.h`.

Deleted APIs

Table 103.1Deleted functions

`SlotCardGetSerialPort()`	`SlotCardInfo()`
`SlotCardIsFilesystemSupported()`	`SlotCardLowLevelFormat()`
`SlotCardMediaType()`	`SlotCardMetrics()`
`SlotCardPresent()`	`SlotCardRelease()`
`SlotCardReserve()`	`SlotCardSectorRead()`
`SlotCardSectorWrite()`	`SlotClose()`
`SlotCustomControl()`	`SlotLibAPIVersion()`
`SlotMediaType()`	`SlotOpen()`
`SlotPowerCheck()`	`SlotSleep()`
`SlotWake()`	

Table 103.2Deleted macros

`SlotDrvr_LIB_TRAP()`

Table 103.3Deleted #defines

slotDrvrAPIVersion	slotLibPowerFlag_FormatMedia
slotLibPowerFlag_WakeUp	slotSectorSize
SlotTrap...	

Unchanged APIs

Table 103.4Unchanged structures

CardMetricsType

Table 103.5Unchanged #defines

slotDrvrBootablePartition
slotDrvrNonBootablePartition
slotDrvrPartitionTypeFAT12
slotDrvrPartitionTypeFAT16Over32MB
slotDrvrPartitionTypeFAT16Under32MB

104

SmsLib.h

Deleted APIs

Table 104.1Deleted structures

Deleted API	Use instead
`SmsReceiveCDMAParamsType`	
`SmsReceiveGSMParamsType`	
`SmsReceiveParamsType`	
`SmsReportParamsType`	
`SmsSendCDMAParamsType`	
`SmsSendGSMParamsType`	
`SmsSendParamsType`	

Table 104.2Deleted types

Deleted API	Use instead
`SmsReceiveTDMAParamsPtr`	
`SmsSendTDMAParamsPtr`	

Table 104.3Deleted #defines

Deleted API	Use instead
`kSmsErrMaxSizeExceeded`	
`kSmsExtensionTypeLength`	

Table 104.3Deleted #defines *(continued)*

Deleted API	Use instead
kSmsFtrNumVersion	
kSmsGsmTextEncoding	
kSmsIncompleteType	
kSmsMaxPhoneSize	
kSmsMessageRegExtensionType	
kSmsMessageType	
kSmsNBSConverter	
kSmsNetworkAuto	
kSmsNetworkCDMA	
kSmsNetworkGSM	
kSmsNetworkPDC	
kSmsNetworkTDMA	
kSmsNoConverter	
kSmsReportRegExtensionType	
kSmsReportType	
kSmsRowDataEncoding	
kSmsTextEncoding	

Modified APIs

Table 104.4Modified structures

Modified API	Description of change
SmsParamsType	
SmsPrefType	

Unchanged APIs

Table 104.5Unchanged #defines

`exgLibSmsIncompleteDeleteOp`	`exgLibSmsIncompleteGetCountOp`
`exgLibSmsPrefDisplayOp`	`exgLibSmsPrefGetDefaultOp`
`exgLibSmsPrefGetOp`	`exgLibSmsPrefSetOp`
`kSmsLibName`	`kSmsScheme`

105

SoundMgr.h

The Sound Manager APIs in Palm OS Cobalt are largely unchanged from their Palm OS Garnet counterparts (for the most notable exceptions, see Table 105.4, "Modified functions," on page 420).

NOTE: Don't use the streaming sound callbacks to cause sounds to play after an application has quit. Instead, create a background thread and play the sounds from within that thread.

Deleted APIs

Table 105.1Deleted functions

Deleted API	Use instead
`SndInit()`	Nothing; this function was documented as System Use Only, so it should not have been used by Palm OS applications.
`SndInterruptSmfIrregardless()`	`SndInterruptSmf()`.
`SndPlaySmfIrregardless()`	`SndPlaySmf()`, or spawn a background thread and play the MIDI sound in that thread.
`SndPlaySmfResourceIrregardless()`	`SndPlaySmfResource()`, or spawn a background thread and play the MIDI sound in that thread.

Table 105.2Deleted structures

Deleted API	Use instead
`SndMidiRecType`	Nothing. This structure was not used by any of the publicly-exported APIs.

Table 105.3Deleted enumerated types

Deleted API	Use instead
`SndFormatTag`	The unnamed enum that contains all of the former `SndFormatTag`'s values.
`SndSampleTag`	The `audio_type_t` enum.

Modified APIs

Table 105.4Modified functions

Modified API	Description of change
`status_t SndPlaySmfResource (uint32_t, DmOpenRef, int16_t, SystemPreferencesChoice)`	Because Palm OS Cobalt doesn't have the concept of a resource search chain, you now must explicitly identify the resource database containing the MIDI sound being played. Accordingly, this function now takes a new parameter: a `DmOpenRef`.
`status_t SndStreamCreate (SndStreamRef *, SndStreamMode, uint32_t, SndSampleType, SndStreamWidth, SndStreamBufferCallback, void *, uint32_t)`	In Palm OS Cobalt a parameter was added to this function prototype indicating whether or not the callback function was an ARM-native function. In Palm OS Cobalt this parameter is unnecessary; it has been removed.
`status_t SndStreamCreateExtended (SndStreamRef *, SndStreamMode, SndFormatType, uint32_t, SndSampleType, SndStreamWidth, SndStreamVariableBufferCallback, void *, uint32_t)`	In Palm OS Cobalt a parameter was added to this function prototype indicating whether or not the callback function was an ARM-native function. In Palm OS Cobalt this parameter is unnecessary; it has been removed.

Table 105.5Modified structures

Modified API	Description of change
`SndCommandType`	A padding field has been added before `param1` for alignment purposes.
`SndMidiListItemType`	The `dbID` and `cardNo` fields used in prior Palm OS releases to identify the database containing the MIDI file have been replaced with a single `DatabaseID` named `dbH`.
`SndMidiRecHdrType`	A padding field has been added to the end of the structure for alignment purposes.

Table 105.6Modified types

Modified API	Description of change
`typedef audio_type_t SndSampleType`	Formerly an Int16, `SndSampleType` is now an enum.

Table 105.7Modified enumerated types

Modified API	Description of change
`SndSysBeepTag`	The Palm OS Cobalt version of this enum has two additional enum values: `sndCardInserted` and `sndCardRemoved`, used to signal that an external storage card has been inserted or removed from the device's slot.

Unchanged APIs

Table 105.8Unchanged functions

SndCreateMidiList()	SndDoCmd()
SndGetDefaultVolume()	SndPlayResource()
SndPlaySmf()	SndPlaySystemSound()
SndSetDefaultVolume()	SndStreamDelete()
SndStreamDeviceControl()	SndStreamGetPan()
SndStreamGetVolume()	SndStreamPause()
SndStreamSetPan()	SndStreamSetVolume()
SndStreamStart()	SndStreamStop()

Table 105.9Unchanged structures

SndCallbackInfoType	SndSmfCallbacksType
SndSmfChanRangeType	SndSmfOptionsType

Table 105.10Unchanged types

SndBlockingFuncPtr	SndCmdIDType
SndCommandPtr	SndComplFuncPtr
SndFormatType	SndPtr
SndSmfCmdEnum	SndStreamMode
SndStreamRef	SndStreamWidth
SndSysBeepType	

Table 105.11 Unchanged #defines

sndDefaultAmp	sndErrBadChannel
sndErrBadParam	sndErrBadStream
sndErrFormat	sndErrInterrupted
sndErrInvalidStream	sndErrMemory
sndErrNotImpl	sndErrOpen
sndErrQEmpty	sndErrQFull
sndFlagAsync	sndFlagNormal
sndFlagSync	sndFtrIDVersion
sndMaxAmp	sndMgrVersionNum
sndMidiNameLength	sndMidiRecSignature
sndPanCenter	sndPanFullLeft
sndPanFullRight	sndSmfPlayAllMilliSec

Table 105.12 Unchanged enumerated types

SndCmdIDTag	SndSmfCmdEnumTag
SndStreamModeTag	SndStreamWidthTag
sndSystemVolume/sndGameVolume/ sndAlarmVolume "cookie" values enum	

Table 105.13 Unchanged application-defined functions

SndBlockingFuncType()	SndComplFuncType()
SndStreamBufferCallback()	SndStreamVariableBufferCallback()

106

SslLib.h

The SSL Library functions no longer take an SSL Library reference number as their first parameter. A couple of APIs (the `SslExtendedItem`, `SslExtendedItems`, and `SslVerify` structures, and the `sslVerify...` constants) are no longer declared in the public headers; if you need to use them, you must declare them yourself. And the SSL Verify callback receives `CertMgrVerifyFail...` values to indicate that an error occurred, rather than `sslErrVerify...` values.

Deleted APIs

Table 106.1Deleted macros

Deleted API	Use instead
`sslErrVerify()`	`CertMgrVerifyFailure()`

Table 106.2Deleted structures

Deleted API	Use instead
`SslExtendedItem`	See "The SslExtendedItem Structure" on page 381 of *Exploring Palm OS: Security and Cryptography*.
`SslExtendedItems`	See "The SslExtendedItems Structure" on page 380 of *Exploring Palm OS: Security and Cryptography*.
`SslVerify`	See "The SslVerify Structure" on page 377 of *Exploring Palm OS: Security and Cryptography*.

Table 106.3Deleted #defines

Deleted API	Use instead
`kSsl...`	Nothing. Palm OS Cobalt functions aren't accessed via a trap.
`sslErrVerifyBadSignature`	`CertMgrVerifyFailSignature`
`sslErrVerifyConstraintViolation`	`CertMgrVerifyFailBasicConstraints`
`sslErrVerifyNotAfter`	`CertMgrVerifyFailNotAfter`
`sslErrVerifyNotBefore`	`CertMgrVerifyFailNotBefore`
`sslErrVerifyNoTrustedRoot`	`CertMgrVerifyFailUnknownIssuer`
`sslErrVerifyUnknownCriticalExtension`	`CertMgrVerifyFailCriticalExtension`
`sslVerifyDone`	`6`
`sslVerifyExtensions`	`5`
`sslVerifyFindParent`	`1`
`sslVerifyNotAfterFindParent`	`4`
`sslVerifyNotBefore`	`3`
`sslVerifySignature`	`2`

Modified APIs

Table 106.4Modified functions

Modified API	Description of change
`status_t SslClose (SslContext *, uint16_t, uint32_t)`	You no longer need to supply an SSL library reference number.
`void SslConsume (SslContext *, int32_t)`	You no longer need to supply an SSL library reference number.

Table 106.4Modified functions *(continued)*

Modified API	Description of change
`status_t SslContextCreate (SslLib *, SslContext **)`	You no longer need to supply an SSL library reference number.
`void SslContextDestroy (SslContext *)`	You no longer need to supply an SSL library reference number.
`int32_t SslContextGetLong (SslContext *, SslAttribute)`	You no longer need to supply an SSL library reference number.
`status_t SslContextGetPtr (SslContext *, SslAttribute, void **)`	You no longer need to supply an SSL library reference number.
`status_t SslContextSetLong (SslContext *, SslAttribute, long)`	You no longer need to supply an SSL library reference number. The final parameter formerly was declared as an Int32.
`status_t SslContextSetPtr (SslContext *, SslAttribute, void *)`	You no longer need to supply an SSL library reference number.
`status_t SslFlush (SslContext *, int32_t *)`	You no longer need to supply an SSL library reference number.
`status_t SslLibClose (void)`	You no longer need to supply an SSL library reference number.
`status_t SslLibCreate (SslLib **)`	You no longer need to supply an SSL library reference number.
`void SslLibDestroy (SslLib *)`	You no longer need to supply an SSL library reference number.
`int32_t SslLibGetLong (SslLib *, SslAttribute)`	You no longer need to supply an SSL library reference number.
`status_t SslLibGetPtr (SslLib *, SslAttribute, void **)`	You no longer need to supply an SSL library reference number.

Table 106.4Modified functions *(continued)*

Modified API	Description of change
`status_t SslLibName (void)`	You no longer need to supply an SSL library reference number.
`status_t SslLibOpen (void)`	You no longer need to supply an SSL library reference number.
`status_t SslLibSetLong (SslLib *, SslAttribute, int32_t)`	You no longer need to supply an SSL library reference number.
`status_t SslLibSetPtr (SslLib *, SslAttribute, void *)`	You no longer need to supply an SSL library reference number.
`status_t SslLibSleep (void)`	You no longer need to supply an SSL library reference number.
`status_t SslLibWake (void)`	You no longer need to supply an SSL library reference number.
`status_t SslOpen (SslContext *, uint16_t, uint32_t)`	You no longer need to supply an SSL library reference number.
`status_t SslPeek (SslContext *, void **, int32_t *, int32_t)`	You no longer need to supply an SSL library reference number.
`int32_t SslRead (SslContext *, void *, int32_t, status_t *)`	You no longer need to supply an SSL library reference number.
`int16_t SslReceive (SslContext *, void *, uint16_t, uint16_t, void *, uint16_t *, int32_t, status_t *)`	You no longer need to supply an SSL library reference number. Also, the *`fromLen`* parameter is now a pointer; on entry, it points to the size of the *`fromAddr`* buffer. On exit, the indicated value contains the actual size of the returned address in the *`fromAddr`* buffer.

Table 106.4Modified functions *(continued)*

Modified API	Description of change
`int16_t SslSend (SslContext *, const void *, uint16_t, uint16_t, void *, uint16_t, int32_t, status_t *)`	You no longer need to supply an SSL library reference number. Also, the final parameter used to point to a variable of type `Err`.
`int32_t SslWrite (SslContext *, const void *, int32_t, status_t *)`	You no longer need to supply an SSL library reference number. Also, the final parameter used to point to a variable of type `Err`.

Table 106.5Modified structures

Modified API	Description of change
`SslCipherSuiteInfo`	The `export` field was renamed to be `exportCipher`.
`SslSocket`	The `socket` field, formerly declared to be a `NetSocketRef`, is now an `int32_t`. The `err` field is now a `status_t`. The `addr` field, formerly declared to be a `NetSocketAddrType`, is now simply an array of eight unsigned chars.

Table 106.6Modified #defines

Modified API	Description of change
`sslErrVerifyCallback`	The value of this #define has changed.

Unchanged APIs

Table 106.7Unchanged structures

SslCallback	SslCallback_st
SslContext	SslIoBuf
SslLib	SslSession

Table 106.8Unchanged types

SslAttribute

Table 106.9Unchanged #defines

kSslDBName	kSslLibCreator
kSslLibType	sslAlertAccessDenied
sslAlertBadCertificate	sslAlertBadRecordMac
sslAlertCertificateExpired	sslAlertCertificateRevoked
sslAlertCertificateUnknown	sslAlertCloseNotify
sslAlertDecodeError	sslAlertDecompressionFailure
sslAlertDecryptError	sslAlertDecryptionFailed
sslAlertExportRestricion	sslAlertHandshakeFailure
sslAlertIllegalParameter	sslAlertInsufficientSecurity
sslAlertInternalError	sslAlertNoCertificate
sslAlertNoRenegotiation	sslAlertProtocolVersion
sslAlertRecordOverflow	sslAlertUnexpectedMessage
sslAlertUnknownCa	sslAlertUnsupportedCertificate
sslAlertUserCancled	sslArgInfoAlert
sslArgInfoCert	sslArgInfoHandshake

Table 106.9Unchanged #defines *(continued)*

sslArgInfoReadAfter	sslArgInfoReadBefore
sslArgInfoWriteAfter	sslArgInfoWriteBefore
sslCloseDontSendShutdown	sslCloseDontWaitForShutdown
sslCloseUseDefaultTimeout	sslCmdFree
sslCmdGet	sslCmdInfo
sslCmdNew	sslCmdRead
sslCmdReset	sslCmdSet
sslCmdVerify	sslCmdWrite
sslCompat1RecordPerMessage	sslCompatAll
sslCompatBigRecords	sslCompatNetscapeCaDnBug
sslCompatReuseCipherBug	sslCsiAuthNULL
sslCsiAuthRsa	sslCsiCipherNull
sslCsiCipherRc4	sslCsiDigestMd2
sslCsiDigestMd5	sslCsiDigestNull
sslCsiDigestSha1	sslCsiKeyExchNull
sslCsiKeyExchRsa	sslCs_RSA_RC4_128_MD5
sslCs_RSA_RC4_128_SHA1	sslCs_RSA_RC4_40_MD5
sslCs_RSA_RC4_56_SHA1	sslErrBadArgument
sslErrBadDecode	sslErrBadLength
sslErrBadOption	sslErrBadPeerFinished
sslErrBadSignature	sslErrBufferTooSmall
sslErrCbAbort	sslErrCert
sslErrCertDecodeError	sslErrCsp
sslErrDivByZero	sslErrEof

Table 106.9Unchanged #defines *(continued)*

sslErrExtraHandshakeData	sslErrFailed
sslErrFatalAlert	sslErrHandshakeEncoding
sslErrHandshakeProtocol	sslErrInitNotCalled
sslErrInternalError	sslErrIo
sslErrMissingProvider	sslErrNoDmem
sslErrNoMethodSet	sslErrNoModInverse
sslErrNoRandom	sslErrNotFound
sslErrNotImplemented	sslErrNullArg
sslErrOk	sslErrOutOfMemory
sslErrReadAppData	sslErrReallocStaticData
sslErrRecordError	sslErrUnexpectedRecord
sslErrUnsupportedCertType	sslErrUnsupportedSignatureType
sslErrWrongMessage	sslFlgInfoAlert
sslFlgInfoCert	sslFlgInfoHandshake
sslFlgInfoIo	sslHsStateCert
sslHsStateCertB	sslHsStateCertReq
sslHsStateCertReqB	sslHsStateCkEx
sslHsStateCleanup	sslHsStateClientCert
sslHsStateClientHello	sslHsStateClosed
sslHsStateDone	sslHsStateFinished
sslHsStateFlush	sslHsStateGenerateKeys
sslHsStateHelloRequest	sslHsStateNone
sslHsStateReadCcs	sslHsStateReadFinished
sslHsStateReadFinishedB	sslHsStateReadFinishedC

Table 106.9Unchanged #defines *(continued)*

sslHsStateServerDone	sslHsStateServerHello
sslHsStateShutdown	sslHsStateSkEx
sslHsStateSkExAnonDh	sslHsStateSkExDh
sslHsStateSkExRsa	sslHsStateStart
sslHsStateWrite	sslHsStateWriteCcs
sslHsStateWriteClose	sslHsStateWriteFlush
sslLastApiFlush	sslLastApiNone
sslLastApiOpen	sslLastApiRead
sslLastApiShutdown	sslLastApiWrite
sslLastIoNone	sslLastIoRead
sslLastIoWrite	sslModeClear
sslModeFlush	sslModeSsl
sslModeSslClient	sslOpenBufferedReuse
sslOpenDelayHandshake	sslOpenModeClear
sslOpenModeSsl	sslOpenNewConnection
sslOpenNoAutoFlush	sslOpenUseDefaultTimeout
sslVersionSSLv3	

Table 106.10Unchanged application-defined functions

SslCallbackFunc()

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SslLibAsn1.h

Deleted APIs

Table 107.1Deleted macros

Deleted API	Use instead
asn1FldRdnOidN()	
asn1FldRdnValueN()	
asn1FldRsaExp()	
asn1FldRsaInv()	
asn1FldRsaPrime()	
asn1FldX509ExBytesN()	
asn1FldX509ExCriticalN()	
asn1FldX509ExOidN()	

Table 107.2Deleted #defines

Deleted API	Use instead
asn1BitString	
asn1BmpString	
asn1Boolean	
asn1EmbeddedPdv	
asn1Enumerated	
asn1Eoc	

Table 107.2Deleted #defines *(continued)*

Deleted API	Use instead
asn1ExItemTypeRdn	
asn1ExItemTypeRSA	
asn1ExItemTypeX509	
asn1ExItemTypeX509Ex	
asn1ExItemTypeX509ExData	
asn1External	
asn1FldRdnOid	
asn1FldRdnValue	
asn1FldRsaD	
asn1FldRsaDmp1	
asn1FldRsaDmq1	
asn1FldRsaE	
asn1FldRsaIqmp	
asn1FldRsaN	
asn1FldRsaNumPrimes	
asn1FldRsaP	
asn1FldRsaQ	
asn1FldX509CertIssuerId	
asn1FldX509CertSubjectId	
asn1FldX509ExBasicConstraintsC a	
asn1FldX509ExBasicConstraintsP athLenConstraint	
asn1FldX509ExBytes	

Table 107.2Deleted #defines *(continued)*

Deleted API	Use instead
asn1FldX509ExCritical	
asn1FldX509ExOid	
asn1FldX509Extensions	
asn1FldX509IssuerRdn	
asn1FldX509IssuerUniqueIdentif ier	
asn1FldX509NotAfter	
asn1FldX509NotBefore	
asn1FldX509PubKey	
asn1FldX509PubKeyBody	
asn1FldX509PubKeyOid	
asn1FldX509PubKeyParams	
asn1FldX509SerialNumber	
asn1FldX509Signature	
asn1FldX509SignatureOid	
asn1FldX509SignatureParams	
asn1FldX509SubjectRdn	
asn1FldX509SubjectUniqueIdenti fier	
asn1FldX509Version	
asn1GeneralizedTime	
asn1GeneralString	
asn1GraphicString	
asn1Ia5String	

Table 107.2Deleted #defines *(continued)*

Deleted API	Use instead
asn1Integer	
asn1Iso64String	
asn1Null	
asn1NumericString	
asn1Object	
asn1ObjectDescriptor	
asn1OctetString	
asn1PrintableString	
asn1Real	
asn1Sequence	
asn1Set	
asn1T61String	
asn1TeletexString	
asn1UniversalString	
asn1UtcTime	
asn1Utf8String	
asn1VideotexString	
asn1VisibleString	

Unchanged APIs

Table 107.3Unchanged structures

Asn1OidBer

Table 107.4Unchanged #defines

asn1Ary_authorityKeyIdentifier	asn1Ary_basicConstraints
asn1Ary_certificateIssuer	asn1Ary_certificatePolicies
asn1Ary_commonName	asn1Ary_countryName
asn1Ary_cRLDistributionPoints	asn1Ary_cRLNumber
asn1Ary_deltaCRLIndicator	asn1Ary_description
asn1Ary_dnQualifier	asn1Ary_emailAddress
asn1Ary_extKeyUsage	asn1Ary_givenName
asn1Ary_initials	asn1Ary_instructionCode
asn1Ary_invalidityDate	asn1Ary_issuerAltName
asn1Ary_issuingDistributionPoint	asn1Ary_keyUsage
asn1Ary_localityName	asn1Ary_MD2
asn1Ary_md2WithRSAEncryption	asn1Ary_MD5
asn1Ary_md5WithRSA	asn1Ary_md5WithRSAEncryption
asn1Ary_microsoftCommercialCodeSigning	asn1Ary_microsoftEncryptedFileSystem
asn1Ary_microsoftIndividualCodeSigning	asn1Ary_microsoftServerGatedCrypto
asn1Ary_microsoftTrustListSigning	asn1Ary_name
asn1Ary_nameConstraints	asn1Ary_netscapeServerGatedCrypto

Table 107.4Unchanged #defines *(continued)*

asn1Ary_organizationName	asn1Ary_organizationUnitName
asn1Ary_policyConstraints	asn1Ary_policyMappings
asn1Ary_privateKeyUsagePeriod	asn1Ary_reasonCode
asn1Ary_rsaEncryption	asn1Ary_serialNumber
asn1Ary_SHA1	asn1Ary_sha1WithRSA
asn1Ary_sha1WithRSAEncryption	asn1Ary_stateOrProvinceName
asn1Ary_subjectAltName	asn1Ary_subjectDirectoryAttributes
asn1Ary_subjectKeyIdentifier	asn1Ary_surnameName
asn1Ary_title	asn1Ary_uniqueIdentifier
asn1Len_authorityKeyIdentifier	asn1Len_basicConstraints
asn1Len_certificateIssuer	asn1Len_certificatePolicies
asn1Len_commonName	asn1Len_countryName
asn1Len_cRLDistributionPoints	asn1Len_cRLNumber
asn1Len_deltaCRLIndicator	asn1Len_description
asn1Len_dnQualifier	asn1Len_emailAddress
asn1Len_extKeyUsage	asn1Len_givenName
asn1Len_initials	asn1Len_instructionCode
asn1Len_invalidityDate	asn1Len_issuerAltName
asn1Len_issuingDistributionPoint	asn1Len_keyUsage
asn1Len_localityName	asn1Len_MD2
asn1Len_md2WithRSAEncryption	asn1Len_MD5
asn1Len_md5WithRSA	asn1Len_md5WithRSAEncryption
asn1Len_microsoftCommercialCodeSigning	asn1Len_microsoftEncryptedFileSystem

Table 107.4Unchanged #defines *(continued)*

asn1Len_microsoftIndividualCodeSigning	asn1Len_microsoftServerGatedCrypto
asn1Len_microsoftTrustListSigning	asn1Len_name
asn1Len_nameConstraints	asn1Len_netscapeServerGatedCrypto
asn1Len_organizationName	asn1Len_organizationUnitName
asn1Len_policyConstraints	asn1Len_policyMappings
asn1Len_privateKeyUsagePeriod	asn1Len_reasonCode
asn1Len_rsaEncryption	asn1Len_serialNumber
asn1Len_SHA1	asn1Len_sha1WithRSA
asn1Len_sha1WithRSAEncryption	asn1Len_stateOrProvinceName
asn1Len_subjectAltName	asn1Len_subjectDirectoryAttributes
asn1Len_subjectKeyIdentifier	asn1Len_surnameName
asn1Len_title	asn1Len_uniqueIdentifier
asn1OidBer_authorityKeyIdentifier	asn1OidBer_basicConstraints
asn1OidBer_certificateIssuer	asn1OidBer_certificatePolicies
asn1OidBer_commonName	asn1OidBer_countryName
asn1OidBer_cRLDistributionPoints	asn1OidBer_cRLNumber
asn1OidBer_deltaCRLIndicator	asn1OidBer_description
asn1OidBer_dnQualifier	asn1OidBer_emailAddress
asn1OidBer_extKeyUsage	asn1OidBer_givenName
asn1OidBer_initials	asn1OidBer_instructionCode
asn1OidBer_invalidityDate	asn1OidBer_issuerAltName

Table 107.4Unchanged #defines *(continued)*

asn1OidBer_issuingDistributionPoint	asn1OidBer_keyUsage
asn1OidBer_localityName	asn1OidBer_MD2
asn1OidBer_md2WithRSAEncryption	asn1OidBer_MD5
asn1OidBer_md5WithRSA	asn1OidBer_md5WithRSAEncryption
asn1OidBer_microsoftCommercialCodeSigning	asn1OidBer_microsoftEncryptedFileSystem
asn1OidBer_microsoftIndividualCodeSigning	asn1OidBer_microsoftServerGatedCrypto
asn1OidBer_microsoftTrustListSigning	asn1OidBer_name
asn1OidBer_nameConstraints	asn1OidBer_netscapeServerGatedCrypto
asn1OidBer_organizationName	asn1OidBer_organizationUnitName
asn1OidBer_policyConstraints	asn1OidBer_policyMappings
asn1OidBer_privateKeyUsagePeriod	asn1OidBer_reasonCode
asn1OidBer_rsaEncryption	asn1OidBer_serialNumber
asn1OidBer_SHA1	asn1OidBer_sha1WithRSA
asn1OidBer_sha1WithRSAEncryption	asn1OidBer_stateOrProvinceName
asn1OidBer_subjectAltName	asn1OidBer_subjectDirectoryAttributes
asn1OidBer_subjectKeyIdentifier	asn1OidBer_surnameName
asn1OidBer_title	asn1OidBer_uniqueIdentifier

Table 107.4Unchanged #defines *(continued)*

asn1Str_authorityKeyIdentifier	asn1Str_basicConstraints
asn1Str_certificateIssuer	asn1Str_certificatePolicies
asn1Str_commonName	asn1Str_countryName
asn1Str_cRLDistributionPoints	asn1Str_cRLNumber
asn1Str_deltaCRLIndicator	asn1Str_description
asn1Str_dnQualifier	asn1Str_emailAddress
asn1Str_extKeyUsage	asn1Str_givenName
asn1Str_initials	asn1Str_instructionCode
asn1Str_invalidityDate	asn1Str_issuerAltName
asn1Str_issuingDistributionPoint	asn1Str_keyUsage
asn1Str_localityName	asn1Str_MD2
asn1Str_md2WithRSAEncryption	asn1Str_MD5
asn1Str_md5WithRSA	asn1Str_md5WithRSAEncryption
asn1Str_microsoftCommercialCodeSigning	asn1Str_microsoftEncryptedFileSystem
asn1Str_microsoftIndividualCodeSigning	asn1Str_microsoftServerGatedCrypto
asn1Str_microsoftTrustListSigning	asn1Str_name
asn1Str_nameConstraints	asn1Str_netscapeServerGatedCrypto
asn1Str_organizationName	asn1Str_organizationUnitName
asn1Str_policyConstraints	asn1Str_policyMappings
asn1Str_privateKeyUsagePeriod	asn1Str_reasonCode
asn1Str_rsaEncryption	asn1Str_serialNumber

Table 107.4Unchanged #defines *(continued)*

asn1Str_SHA1	asn1Str_sha1WithRSA
asn1Str_sha1WithRSAEncryption	asn1Str_stateOrProvinceName
asn1Str_subjectAltName	asn1Str_subjectDirectoryAttributes
asn1Str_subjectKeyIdentifier	asn1Str_surnameName
asn1Str_title	asn1Str_uniqueIdentifier

108

SslLibMac.h

When compared with their 68K-based counterparts, the macros declared in `SslLibMac.h` are missing the *`refnum`* parameter. This parameter used to be needed in order to identify the SSL library. In Palm OS Cobalt this parameter is not necessary and has been removed.

Modified APIs

The macros listed in Table 108.1 no longer take a *`refnum`* parameter identifying the SSL library. In Palm OS Cobalt this parameter is not necessary.

Table 108.1Modified macros

SslContextGet_AppInt32()	SslContextGet_AppPtr()
SslContextGet_AutoFlush()	SslContextGet_BufferedReuse()
SslContextGet_CipherSuite()	SslContextGet_CipherSuiteInfo()
SslContextGet_CipherSuites()	SslContextGet_ClientCertRequest()
SslContextGet_Compat()	SslContextGet_DontSendShutdown()
SslContextGet_DontWaitForShutdown()	SslContextGet_Error()
SslContextGet_HsState()	SslContextGet_InfoCallback()
SslContextGet_InfoInterest()	SslContextGet_IoFlags()
SslContextGet_IoStruct()	SslContextGet_IoTimeout()
SslContextGet_LastAlert()	SslContextGet_LastApi()
SslContextGet_LastIo()	SslContextGet_Mode()
SslContextGet_PeerCert()	SslContextGet_PeerCommonName()
SslContextGet_ProtocolVersion()	SslContextGet_RbufSize()

Table 108.1Modified macros *(continued)*

SslContextGet_ReadBufPending()	SslContextGet_ReadOutstanding()
SslContextGet_ReadRecPending()	SslContextGet_ReadStreaming()
SslContextGet_SessionReused()	SslContextGet_Socket()
SslContextGet_SslSession()	SslContextGet_SslVerify()
SslContextGet_Streaming()	SslContextGet_VerifyCallback()
SslContextGet_WbufSize()	SslContextGet_WriteBufPending()
SslContextSet_AppInt32()	SslContextSet_AppPtr()
SslContextSet_AutoFlush()	SslContextSet_BufferedReuse()
SslContextSet_CipherSuites()	SslContextSet_Compat()
SslContextSet_DontSendShutdown()	SslContextSet_DontWaitForShutdown()
SslContextSet_Error()	SslContextSet_InfoCallback()
SslContextSet_InfoInterest()	SslContextSet_IoFlags()
SslContextSet_IoStruct()	SslContextSet_IoTimeout()
SslContextSet_LastAlert()	SslContextSet_Mode()
SslContextSet_ProtocolVersion()	SslContextSet_RbufSize()
SslContextSet_ReadStreaming()	SslContextSet_Socket()
SslContextSet_SslSession()	SslContextSet_VerifyCallback()
SslContextSet_WbufSize()	SslLibGet_AppInt32()
SslLibGet_AppPtr()	SslLibGet_AutoFlush()
SslLibGet_BufferedReuse()	SslLibGet_CipherSuites()
SslLibGet_Compat()	SslLibGet_DontSendShutdown()
SslLibGet_DontWaitForShutdown()	SslLibGet_InfoCallback()
SslLibGet_InfoInterest()	SslLibGet_Mode()
SslLibGet_ProtocolVersion()	SslLibGet_RbufSize()

Table 108.1Modified macros *(continued)*

SslLibGet_ReadStreaming()	SslLibGet_VerifyCallback()
SslLibGet_WbufSize()	SslLibSet_AppInt32()
SslLibSet_AppPtr()	SslLibSet_AutoFlush()
SslLibSet_BufferedReuse()	SslLibSet_CipherSuites()
SslLibSet_Compat()	SslLibSet_DontSendShutdown()
SslLibSet_DontWaitForShutdown()	SslLibSet_InfoCallback()
SslLibSet_InfoInterest()	SslLibSet_Mode()
SslLibSet_ProtocolVersion()	SslLibSet_RbufSize()
SslLibSet_ReadStreaming()	SslLibSet_VerifyCallback()
SslLibSet_WbufSize()	

Unchanged APIs

Table 108.2Unchanged #defines

sslAttrAppInt32	sslAttrAppPtr
sslAttrAutoFlush	sslAttrBufferedReuse
sslAttrCertPeerCert	sslAttrCertPeerCommonName
sslAttrCertSslVerify	sslAttrClientCertRequest
sslAttrCompat	sslAttrCspCipherSuite
sslAttrCspCipherSuiteInfo	sslAttrCspCipherSuites
sslAttrCspSslSession	sslAttrDontSendShutdown
sslAttrDontWaitForShutdown	sslAttrError
sslAttrErrorState	sslAttrHsState
sslAttrInfoCallback	sslAttrInfoInterest
sslAttrIoFlags	sslAttrIoSocket

Table 108.2Unchanged #defines *(continued)*

sslAttrIoStruct	sslAttrIoTimeout
sslAttrLastAlert	sslAttrLastApi
sslAttrLastIo	sslAttrLibAppInt32
sslAttrLibAppPtr	sslAttrLibAutoFlush
sslAttrLibBufferedReuse	sslAttrLibCompat
sslAttrLibDontSendShutdown	sslAttrLibDontWaitForShutdown
sslAttrLibInfoCallback	sslAttrLibInfoInterest
sslAttrLibMode	sslAttrLibProtocolVersion
sslAttrLibRbufSize	sslAttrLibReadStreaming
sslAttrLibVerifyCallback	sslAttrLibWbufSize
sslAttrMode	sslAttrProtocolVersion
sslAttrRbufSize	sslAttrReadBufPending
sslAttrReadOutstanding	sslAttrReadRecPending
sslAttrReadStreaming	sslAttrSessionReused
sslAttrStreaming	sslAttrVerifyCallback
sslAttrWbufSize	sslAttrWriteBufPending

109

StdIOPalm.h

Deleted APIs

Table 109.1Deleted functions

`SioAddCommand()`	`Siofgetc()`
`Siofgets()`	`Siofprintf()`
`Siofputc()`	`Siofputs()`
`Siogets()`	`SioMain()`
`Sioprintf()`	`Sioputs()`
`Siosystem()`	`Siovfprintf()`

Table 109.2Deleted macros

`fgetc()`	`fgets()`
`fputc()`	`fputs()`
`getchar()`	`gets()`
`putc()`	`putchar()`
`puts()`	`system()`
`vfprintf()`	`vsprintf()`

Table 109.3Deleted structures

`SioGlobalsType`

Table 109.4Deleted types

FILE

Table 109.5Deleted #defines

EOF	fprintf
printf	sioDBType
sprintf	stderr
stdin	stdout

Table 109.6Deleted application-defined functions

SioMainProcPtr()

110

StdIOProvider.h

Deleted APIs

Table 110.1Deleted functions

`SioClearScreen()`	`SioExecCommand()`
`SioFree()`	`SioHandleEvent()`
`SioInit()`	

Table 110.2Deleted structures

`SioProvGlobalsType`

111

StringMgr.h

The only change of note in the String Manager APIs is in the declaration of the `StrN...` functions: the final parameter that specifies the maximum number of bytes on which to operate changed from an `Int32` to a `size_t`.

Deleted APIs

Table 111.1Deleted functions

Deleted API	Use instead
`StrPrintF()`	`sprintf`(). Note that `StringMgr.h` contains a `#define` that maps "`StrPrintF`" to "`sprintf`".
`StrVPrintF()`	`vsprintf`(). Note that `StringMgr.h` contains a `#define` that maps "`StrVPrintF`" to "`vsprintf`".

Modified APIs

Table 111.2Modified functions

Modified API	Description of change
`size_t StrLen (const char *)`	This function used to return a `UInt16`.
`int16_t StrNCaselessCompare (const char *, const char *, size_t)`	The final parameter, 'n', used to be declared as `Int32`.
`char *StrNCat (char *, const char *, size_t)`	The final parameter, 'n', used to be declared as `Int32`.

Table 111.2Modified functions *(continued)*

Modified API	Description of change
`int16_t StrNCompare (const char *, const char *, size_t)`	The final parameter, 'n', used to be declared as `Int32`.
`int16_t StrNCompareAscii (const char *, const char *, size_t)`	The final parameter, 'n', used to be declared as `Int32`.
`char *StrNCopy (char *, const char *, size_t)`	The final parameter, 'n', used to be declared as `Int32`.

Unchanged APIs

Table 111.3Unchanged functions

`StrAToI()`	`StrCaselessCompare()`
`StrCat()`	`StrChr()`
`StrCompare()`	`StrCompareAscii()`
`StrCopy()`	`StrDelocalizeNumber()`
`StrIToA()`	`StrIToH()`
`StrLocalizeNumber()`	`StrStr()`
`StrToLower()`	

Table 111.4Unchanged #defines

`maxStrIToALen`

112

SysEvent.h

The contents of the `SysEventType` structure's `data` union has both gained and lost members. This union no longer contains `keyUp` or `keyHold`, and now has `winFocusGained`, `winFocusLost`, `winUpdate`, and `winResized` members.

Deleted APIs

Table 112.1Deleted macros

Deleted API	Use instead
`PenGetPoint()`	`EvtGetPen()`

Table 112.2Deleted structures

Deleted API	Use instead
`SysEventStoreType`	Nothing. This structure showed how events were stored in the event queue, and was really for system use only.

Modified APIs

Table 112.3Modified structures

Modified API	Description of change
`SysEventType`	The `tapCount` field, formerly an unsigned 8-bit integer, has been expanded to 32-bits. The `data` union no longer contains `keyUp` or `keyHold`, and now has `winFocusGained`, `winFocusLost`, `winUpdate`, and `winResized` members. Padding bytes have been added to this structure as well.
`_GenericEventType`	This structure now consists of sixteen 16-bit unsigned integers; formerly it only contained eight of them.
`_TSMConfirmType`	Padding bytes have been added.

Table 112.4Modified enumerated types

Modified API	Description of change
`SysEventsEnum`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `sysEventsEnumTag` enum.

Unchanged APIs

Table 112.5Unchanged structures

`_KeyDownEventType`	`_KeyHoldEventType`
`_KeyUpEventType`	`_PenUpEventType`
`_TSMFepButtonType`	`_TSMFepModeEventType`
`_WinEnterEventType`	`_WinExitEventType`

Table 112.6Unchanged #defines

appEvtHookKeyMask	autoRepeatKeyMask
capsLockMask	commandKeyMask
controlKeyMask	doubleTapKeyMask
evtNoWait	evtWaitForever
libEvtHookKeyMask	numLockMask
optionKeyMask	poweredOnKeyMask
shiftKeyMask	virtualKeyMask

113

SysEvtMgr.h

The changes to the System Event Manager arise primarily from the following:

- Palm OS Cobalt doesn't have "silkscreen buttons." The functionality provided by those buttons can be found in the Palm OS Cobalt status bar and in individual pinlets.
- Palm OS Cobalt doesn't have separate low-level event queues for key presses and digitizer strokes. To ease porting of existing applications, where reasonable it provides functions that emulate the functionality provided in earlier Palm OS releases.

As well, a handful of functions that have historically been documented as "system use only" are not supported in Palm OS Cobalt.

Deleted APIs

Table 113.1Deleted functions

Deleted API	Use instead
`EvtEnqueuePenPoint()`	Nothing. This function was documented as "system use only" and should not have been used by applications.
`EvtGetPenBtnList()`	There is no direct counterpart to this in Palm OS Cobalt. The functionality provided in earlier Palm OS releases by the silkscreen buttons can, in Palm OS Cobalt, be found either on the status bar or in a pinlet. Third-party developers cannot examine or manipulate the contents of the status bar in Palm OS Cobalt version 6.0.

Table 113.1Deleted functions *(continued)*

Deleted API	Use instead
`EvtGetSilkscreenAreaList()`	Nothing. This function was documented as "system use only" in Palm OS Garnet.
`EvtGetSysEvent()`	Nothing. This function was documented as "system use only" and should not have been used by applications.
`EvtKeyQueueSize()`	Nothing. In Palm OS Cobalt there isn't a separate queue for key events. (Functions that act upon the key queue—such as `EvtFlushKeyQueue()`—merely emulate a key queue. In reality they act upon those events that are key events in the main event queue.)
`EvtPenQueueSize()`	Nothing. In Palm OS Cobalt there isn't a separate queue for pen events. (Functions that act upon the pen queue—such as `EvtDequeuePenPoint()`—merely emulate a pen queue. In reality they act upon those events that are pen events in the main event queue.)
`EvtProcessSoftKeyStroke()`	`HWRProcessStroke()`
`EvtSetKeyQueuePtr()`	Nothing. This function was documented as "system use only" and should not have been used by applications.
`EvtSetPenQueuePtr()`	Nothing. This function was documented as "system use only" and should not have been used by applications.
`EvtSysInit()`	Nothing. This function was documented as "system use only" and should not have been used by applications.

Table 113.2Deleted structures

Deleted API	Use instead
`PenBtnInfoType`	There is no direct counterpart to this in Palm OS Cobalt. The functionality provided in earlier Palm OS releases by the silkscreen buttons can, in Palm OS Cobalt, be found either on the status bar or in a pinlet. Third-party developers cannot examine or manipulate the contents of the status bar in Palm OS Cobalt version 6.0.
`PenBtnListType`	There is no direct counterpart to this in Palm OS Cobalt. The functionality provided in earlier Palm OS releases by the silkscreen buttons can, in Palm OS Cobalt, be found either on the status bar or in a pinlet. Third-party developers cannot examine or manipulate the contents of the status bar in Palm OS Cobalt version 6.0.
`SilkscreenAreaType`	Nothing. This structure was used only with the `EvtGetSilkscreenAreaList()` function, which was documented as "system use only" in Palm OS Garnet and is not supported in Palm OS Cobalt.

Table 113.3Deleted types

Deleted API	Use instead
`PenBtnInfoPtr`	There is no direct counterpart to this in Palm OS Cobalt. The functionality provided in earlier Palm OS releases by the silkscreen buttons can, in Palm OS Cobalt, be found either on the status bar or in a pinlet. Third-party developers cannot examine or manipulate the contents of the status bar in Palm OS Cobalt version 6.0.

Table 113.4Deleted #defines

Deleted API	Use instead
`alphaGraffitiSilkscreenArea`	Nothing. This constant was used only with the `SilkscreenAreaType` structure, which is not supported in Palm OS Cobalt.
`numericGraffitiSilkscreenArea`	Nothing. This constant was used only with the `SilkscreenAreaType` structure, which is not supported in Palm OS Cobalt.
`silkscreenRectGraffiti`	Nothing. This constant was used only with the `SilkscreenAreaType` structure, which is not supported in Palm OS Cobalt.
`silkscreenRectScreen`	Nothing. This constant was used only with the `SilkscreenAreaType` structure, which is not supported in Palm OS Cobalt.

Table 113.5Deleted enumerated types

Deleted API	Use instead
`EvtSetAutoOffCmd`	Formerly an enum, this is now a typedef that takes one of the values defined by the `EvtSetAutoOffTag` enum.

Modified APIs

Table 113.6Modified functions

Modified API	Description of change
`status_t EvtDequeueKeyEvent (EventType *, Boolean)`	The final parameter, *`peek`*, which allows you to specify whether or not the key should be left in the key queue, was declared to be an unsigned 16-bit integer in Palm OS Garnet. Note that this function was documented as System Use Only.
`Boolean EvtSetNullEventTick (int64_t)`	In Palm OS Garnet the `tick` parameter is a 32-bit unsigned integer.

Unchanged APIs

Table 113.7Unchanged functions

`EvtDequeuePenPoint()`	`EvtDequeuePenStrokeInfo()`
`EvtEnableGraffiti()`	`EvtEnqueueKey()`
`EvtFlushKeyQueue()`	`EvtFlushNextPenStroke()`
`EvtFlushPenQueue()`	`EvtKeyQueueEmpty()`
`EvtResetAutoOffTimer()`	`EvtSetAutoOffTimer()`
`EvtSysEventAvail()`	`EvtWakeup()`
`EvtWakeupWithoutNilEvent()`	

Table 113.8Unchanged #defines

`evtErrParamErr`	`evtErrQueueEmpty`
`evtErrQueueFull`	

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SystemMgr.h

Deleted APIs

Table 114.1Deleted functions

Deleted API	Use instead
`SysBatteryInfoV20()`	`SysBatteryInfo()`
`SysGetTrapAddress()`	`SysGetEntryAddresses()`
`SysLibFind()`	
`SysLibLoad()`	`SysLoadModule()` or `SysLoadModuleByDatabaseID()`
`SysLibRemove()`	`SysUnloadModule()`

Table 114.1Deleted functions *(continued)*

Deleted API	Use instead
`SysSetTrapAddress()`	In Palm OS Cobalt functions aren't accessed via traps, so this 68K function has no direct counterpart. This function was most often used to patch a given function, however, and there is a mechanism for doing that in Palm OS Cobalt. The operating system is presented to an application as a set of shared libraries; see Chapter 6, "Shared Libraries," on page 71 of *Exploring Palm OS: System Management* for more information.
`SysTicksPerSecond()`	The `SysTicksPerSecond()` macro is the most straightforward substitution. However, note that Palm OS Cobalt introduces a number of `SysTimeIn...` and `SysTimeTo...` macros that convert between a system time value (a system tick count) and a more natural set of units such as seconds or milliseconds. Applications should be rewritten to employ these macros and deal with time using more natural units.

The functions listed in Table 114.2 were documented as "system use only" and should not have been used by applications. Thse functions are not publicly declared in Palm OS Cobalt.

Table 114.2Deleted "system use only" functions

`SysAppExit()`	`SysAppStartup()`
`SysBatteryDialog()`	`SysColdBoot()`
`SysDisableInts()`	`SysDoze()`
`SysEvGroupCreate()`	`SysEvGroupRead()`

Table 114.2Deleted "system use only" functions *(continued)*

SysEvGroupSignal()	SysEvGroupWait()
SysInit()	SysKernelInfo()
SysLaunchConsole()	SysLibClose()
SysLibInstall()	SysLibOpen()
SysLibSleep()	SysLibTblEntry()
SysLibWake()	SysMailboxCreate()
SysMailboxDelete()	SysMailboxFlush()
SysMailboxSend()	SysMailboxWait()
SysNewOwnerID()	SysPowerOn()
SysResSemaphoreCreate()	SysResSemaphoreDelete()
SysResSemaphoreRelease()	SysResSemaphoreReserve()
SysRestoreStatus()	SysSemaphoreDelete()
SysSemaphoreSet()	SysSetA5()
SysSetPerformance()	SysTaskCreate()
SysTaskDelete()	SysTaskID()
SysTaskResume()	SysTaskSetTermProc()
SysTaskSuspend()	SysTaskSwitching()
SysTaskTrigger()	SysTaskWait()
SysTaskWaitClr()	SysTaskWake()
SysTimerCreate()	SysTimerDelete()
SysTimerRead()	SysTimerWrite()
SysTranslateKernelErr()	SysUILaunch()
SysUnimplemented()	

Table 114.3Deleted structures

Deleted API	Use instead
`SysAppInfoType`	Nothing. This data structure was only used by functions documented as "system use only," so it should never have been used by applications.
`SysAppPrefsType`	`ARMAppLaunchPrefsType`
`SysExtPrefsType`	Nothing. This data structure was not used by any exported APIs, so it should never have been used by applications.
`SysHSIResponseType`	Nothing. This data structure was not used by any exported APIs, so it should never have been used by applications.
`SysLibTblEntryType`	The Palm OS Protein headers don't declare a comparable structure, but comparable information to what this structure contained can be obtained by calling either or both `SysGetEntryAddresses()` or `SysGetModuleGlobals()`.
`SysMailboxMsgType`	Nothing. This data structure was only used by functions documented as "system use only," so it should never have been used by applications.

Table 114.4Deleted types

Deleted API	Use instead
`SysAppInfoPtr`	Nothing. This was a pointer to a data structure that was only used by functions documented as "system use only," so it should never have been used by applications.
`SysAppPrefsPtr`	`ARMAppLaunchPrefsType *`
`SysLibTblEntryPtr`	See `SysLibTblEntryType` in Table 114.3, above.

Table 114.5Deleted #defines

Deleted API	Use instead
`sysDbgCommLibraryRefNum`	
`sysDbgCommPortID`	
`sysErrDelayWakened`	
`sysErrInvalidID`	
`sysErrMb...`, `sysErrNotAsleep`, `sysErrNotAsleepN`	Nothing - these errors were only used by the pre Palm OS Cobalt kernel.
`sysErrSemInUse`	
`sysEvGroup...`	Nothing. These constants were only used by functions previously documented as "system use only" and therefore should never have been used by applications.
`sysExtPrefsNoOverlayFlag`	
`sysExtPrefsVers`	
`sysFtrNumCharEncodingFlags`	`sysFtrNumCharEncodingFlags68K`, or `TxtGetEncodingFlags(LmGetSystemLocale(NULL));`

Table 114.5Deleted #defines *(continued)*

Deleted API	Use instead
`sysFtrNumCountry`	`sysFtrNumCountry68K`, or `LmGetLocaleSetting(..., lmChoiceLocale, ...)`
`sysFtrNumEncoding`	`sysFtrNumEncoding68K`, or query the locale with one of the `LmGet...Locale()` functions defined in `LocaleMgr.h`.
`sysFtrNumErrorCheckLevel`	
`sysFtrNumGremlinsSupportGlobals`	Nothing; Gremlins isn't supported in Palm OS Cobalt version 6.0.
`sysFtrNumIntlMgr`	Nothing; the Text Manager, which is always present on all Palm OS Cobalt devices, should be used instead of the International Manager.
`sysFtrNumLanguage`	`sysFtrNumLanguage68K`, or `LmGetLocaleSetting(..., lmChoiceLocale, ...)`
`sysFtrNumProcessorARM925T`	One of the other `sysFtrNumProcessor...` constants, or, better, macros such as `sysFtrNumProcessorIsARM()`.
`sysHSISerialInquiryBaud`	
`sysHSISerialInquiryString`	
`sysHSISerialInquiryStringLen`	
`sysHSISerialInquiryTimeout`	
`sysHSISerialInterChrTimeout`	
`sysInvalidRefNum`	
`sysMaxHSIResponseSize`	
`sysNotifyHSIDebugEvent`	

Table 114.5Deleted #defines *(continued)*

Deleted API	Use instead
`sysNotifyHSINoConnectionEvent`	
`sysNotifyHSIPeripheralNotRespondingEvent`	
`sysNotifyHSIPeripheralRespondedEvent`	
`sysNotifyHSIRS232CradleEvent`	
`sysNotifyHSIRS232PeripheralEvent`	
`sysNotifyHSISerialPortInUseEvent`	
`sysNotifyHSIUSBCradleEvent`	
`sysNotifyHSIUSBPeripheralEvent`	
`sysTicksPerSecond`	The `SysTicksPerSecond()` macro is the most straightforward substitution. However, note that Palm OS Cobalt introduces a number of `SysTimeIn...` and `SysTimeTo...` macros that convert between a system time value (a system tick count) and a more natural set of units such as seconds or milliseconds. Applications should be rewritten to employ these macros and deal with time using more natural units.

Table 114.6Deleted application-defined functions

Deleted API	Use instead
`SysLibEntryProcPtr()`	`PilotMain()`
`SysTermProcPtr()`	Nothing; this was used in conjunction with a function previously documented as "system use only" and so shouldn't have been used by any applications.
`SysTimerProcPtr()`	Nothing; this was used in conjunction with a function previously documented as "system use only" and so shouldn't have been used by any applications.

Modified APIs

Table 114.7Modified functions

Modified API	Description of change
`status_t SysAppLaunch (DatabaseID, uint16_t, MemPtr, uint32_t *)`	The database containing the application to be launched is now identified solely by a `DatabaseID`, rather than a separate *`cardNo`* and *`dbID`*. The *`launchFlags`* parameter has been removed. Note that applications should avoid this function; they should use `SysAppLaunchLocal()` or `SysAppLaunchRemote()` instead.
`uint16_t SysBatteryInfo (Boolean, uint16_t *, uint16_t *, uint16_t *, uint32_t *, SysBatteryKind *, Boolean *, uint8_t *)`	A new parameter, *`maxMilliSecsP`*, has been added; this function now can also return the estimated amount of time, in milliseconds, before the device will shut down due to lack of power.
`status_t SysBroadcastActionCode (uint16_t, void *)`	The command block pointer, formerly a `MemPtr`, is now simply declared as a `void *`.

Table 114.7Modified functions *(continued)*

Modified API	Description of change
`Boolean SysCreateDataBaseList (uint32_t, uint32_t, uint16_t *, MemHandle *, Boolean, DmFindType)`	The final parameter has been added: with it you specify the type of database to be searched for: schema, extended, classic, or a combination of the three.
`status_t SysCurAppDatabase (DatabaseID *)`	Because the concept of logical memory cards isn't supported in Palm OS Cobalt, this function simply returns a `DatabaseID` rather than returning a card number and local ID.
`status_t SysGetROMToken (uint32_t, uint8_t **, uint16_t *)`	The *`cardNo`* parameter has been dropped.
`status_t SysSemaphoreCreate (uint32_t, uint32_t, uint32_t, SysHandle *)`	This function, formerly system use only, is now available to developers. See the description of `SysSemaphoreCreate()` in Chapter 36, "SysThread," on page 451 of *Exploring Palm OS: System Management*.
`status_t SysSemaphoreSignal (SysHandle)`	This function, formerly system use only, is now available to developers. See the description of `SysSemaphoreSignal()` in Chapter 36, "SysThread," on page 451 of *Exploring Palm OS: System Management*.
`status_t SysSemaphoreWait (SysHandle, timeoutFlags_t, nsecs_t)`	This function, formerly system use only, is now available to developers. See the description of `SysSemaphoreWait()` in Chapter 36, "SysThread," on page 451 of *Exploring Palm OS: System Management*.

Table 114.7Modified functions *(continued)*

Modified API	Description of change
`void SysSleep (void)`	This system use only function no longer takes any parameters.
`status_t SysUIAppSwitch (DatabaseID, uint16_t, MemPtr, uint32_t)`	The card number and local ID parameters have been dropped in favor of a single `DatabaseID` parameter. As well, the final parameter, *`cmdPBSize`*, has been added so you can specify the size of the parameter block.

Table 114.8Modified structures

Modified API	Description of change
`SysAppLaunchCmdCardType`	The `err` field is now of type `status_t`, and various padding and reserved fields have been added.
`SysAppLaunchCmdHandleSyncCallAppType`	The `replyErr` field is now of type `status_t`, and a second reserved field has been added immediately before `replyErr`.
`SysAppLaunchCmdInitDatabaseType`	Padding bytes have been added.
`SysAppLaunchCmdOpenDBType`	The card number and local ID fields have been dropped in favor of a single `MemHandle` parameter, `dbH`.
`SysAppLaunchCmdPnpsType`	The `error` field is now of type `status_t`, and a reserved field has been added to the end of the structure.
`SysDBListItemType`	The `cardNo` field has been dropped, and a 16-bit padding field has been added.

Table 114.9Modified #defines

Modified API	Description of change
`sysAppLaunchFlagPrivateSet`	Now includes `sysAppLaunchFlagGlobalsAvailable` in addition to `sysAppLaunchFlagSubCall` and `sysAppLaunchFlagDataRelocated`.

Table 114.10Modified enumerated types

Modified API	Description of change
`SysBatteryKind`	Formerly an enum, this is now a typedef that takes one of the values defined by the `SysBatteryKindTag` enum.
`SysBatteryState`	Formerly an enum, this is now a typedef that takes one of the values defined by the `SysBatteryStateTag` enum.

Unchanged APIs

Table 114.11Unchanged functions

`PilotMain()`	`SysCreatePanelList()`
`SysGetOrientation()`	`SysGetOrientationTriggerState()`
`SysGetOSVersionString()`	`SysGetStackInfo()`
`SysHandleEvent()`	`SysLCDBrightness()`
`SysLCDContrast()`	`SysReset()`
`SysSetAutoOffTime()`	`SysSetOrientation()`
`SysSetOrientationTriggerState()`	`SysTaskDelay()`
`SysUIBusy()`	

Table 114.12Unchanged macros

sysFtrNumProcessorIs68K()	sysFtrNumProcessorIsARM()
sysGetROMVerBuild()	sysGetROMVerFix()
sysGetROMVerMajor()	sysGetROMVerMinor()
sysGetROMVerStage()	sysMakeROMVersion()

Table 114.13Unchanged structures

SysAppLaunchCmdFailedAppNotifyType	SysAppLaunchCmdSaveDataType
SysAppLaunchCmdSyncCallApplicationTypeV10	SysAppLaunchCmdSystemResetType

Table 114.14Unchanged #defines

pwrErrBacklight	pwrErrBeam
pwrErrGeneric	pwrErrNone
pwrErrRadio	sysAppLaunchCmdAddRecord
sysAppLaunchCmdAlarmTriggered	sysAppLaunchCmdAntennaUp
sysAppLaunchCmdAttention	sysAppLaunchCmdCardLaunch
sysAppLaunchCmdCountryChange	sysAppLaunchCmdCustomBase
sysAppLaunchCmdDisplayAlarm	sysAppLaunchCmdEventHook
sysAppLaunchCmdExgAskUser	sysAppLaunchCmdExgGetData
sysAppLaunchCmdExgPreview	sysAppLaunchCmdExgReceiveData
sysAppLaunchCmdFailedAppNotify	sysAppLaunchCmdFepPanelAddWord
sysAppLaunchCmdFind[1]	sysAppLaunchCmdGoTo
sysAppLaunchCmdGoToURL	sysAppLaunchCmdHandleSyncCallApp
sysAppLaunchCmdInitDatabase	sysAppLaunchCmdLookup

Table 114.14Unchanged #defines *(continued)*

sysAppLaunchCmdLookupWord	sysAppLaunchCmdMultimediaEvent
sysAppLaunchCmdNormalLaunch	sysAppLaunchCmdNotify
sysAppLaunchCmdOpenDB	sysAppLaunchCmdPanelCalledFromApp
sysAppLaunchCmdReturnFromPanel	sysAppLaunchCmdSaveData
sysAppLaunchCmdSyncCallApplicationV10	sysAppLaunchCmdSyncNotify
sysAppLaunchCmdSyncRequest	sysAppLaunchCmdSyncRequestLocal
sysAppLaunchCmdSyncRequestRemote	sysAppLaunchCmdSystemLock
sysAppLaunchCmdSystemReset[2]	sysAppLaunchCmdTimeChange[3]
sysAppLaunchCmdURLParams	sysAppLaunchFlagDataRelocated
sysAppLaunchFlagNewGlobals	sysAppLaunchFlagNewStack
sysAppLaunchFlagNewThread	sysAppLaunchFlagSubCall
sysAppLaunchFlagUIApp	sysAppLaunchNppiNoUI
sysAppLaunchNppiUI	sysAppLaunchPnpsPreLaunch
sysAppLaunchStartFlagAutoStart	sysAppLaunchStartFlagNoAutoDelete
sysAppLaunchStartFlagNoUISwitch	sysDialLaunchCmdDial
sysDialLaunchCmdHangUp	sysDialLaunchCmdLast
sysErrBufTooSmall	sysErrLibNotFound
sysErrNoFreeLibSlots)	sysErrNoFreeRAM
sysErrNoFreeResource	sysErrNotAllowed
sysErrNotInitialized	sysErrOutOfOwnerIDs
sysErrParamErr	sysErrPrefNotFound
sysErrRomIncompatible	sysErrTimeout
sysFileDescStdIn	sysFtrCreator
sysFtrDefaultBoldFont	sysFtrDefaultFont

Table 114.14Unchanged #defines *(continued)*

sysFtrNumAccessorTrapPresent	sysFtrNumBacklight
sysFtrNumDefaultCompression	sysFtrNumDisplayDepth
sysFtrNumEncryption	sysFtrNumEncryptionMaskDES
sysFtrNumHwrMiscFlags	sysFtrNumHwrMiscFlagsExt
sysFtrNumInputAreaFlags	sysFtrNumNotifyMgrVersion
sysFtrNumOEMCompanyID	sysFtrNumOEMDeviceID
sysFtrNumOEMHALID	sysFtrNumOEMROMVersion
sysFtrNumProcessor328	sysFtrNumProcessor68KIfZero
sysFtrNumProcessorARM710A	sysFtrNumProcessorARM720T
sysFtrNumProcessorARM7TDMI	sysFtrNumProcessorARM920T
sysFtrNumProcessorARM922T	sysFtrNumProcessorARM925
sysFtrNumProcessorARMIfNotZero	sysFtrNumProcessorEZ
sysFtrNumProcessorID	sysFtrNumProcessorMask
sysFtrNumProcessorStrongARM	sysFtrNumProcessorSuperVZ
sysFtrNumProcessorVZ	sysFtrNumProcessorx86
sysFtrNumProcessorXscale	sysFtrNumProductID
sysFtrNumROMVersion	sysFtrNumVendor
sysFtrNumWinVersion	sysNotifyErrBroadcastBusy
sysNotifyErrBroadcastCancelled	sysNotifyErrDuplicateEntry
sysNotifyErrEntryNotFound	sysNotifyErrNoStackSpace
sysNotifyErrQueueEmpty	sysNotifyErrQueueFull
sysOrientationLandscape	sysOrientationPortrait
sysOrientationReverseLandscape	sysOrientationReversePortrait
sysOrientationTriggerDisabled	sysOrientationTriggerEnabled

Table 114.14Unchanged #defines *(continued)*

`sysOrientationUser`	`sysROMStageAlpha`
`sysROMStageBeta`	`sysROMStageDevelopment`
`sysROMStageRelease`	`sysROMTokenSnum`
`sysSvcLaunchCmdGetQuickEditLabel`	`sysSvcLaunchCmdGetServiceID`
`sysSvcLaunchCmdGetServiceInfo`	`sysSvcLaunchCmdGetServiceList`
`sysSvcLaunchCmdLast`	`sysSvcLaunchCmdSetServiceID`

1. Unlike other versions of Palm OS, in Palm OS Cobalt the `sysAppLaunchCmdFind` launch code is only sent to the active application, to 68K applications, and to those applications that have the `ALPF_FLAG_NOTIFY_FIND` attribute set to `true` in their Application Launch Preferences Resource.
2. Unlike other versions of Palm OS, in Palm OS Cobalt the `sysAppLaunchCmdSystemReset` launch code is only sent to 68K applications and to those applications that have the `ALPF_FLAG_NOTIFY_RESET` attribute set to `true` in their Application Launch Preferences Resource.
3. Unlike other versions of Palm OS, in Palm OS Cobalt the `sysAppLaunchCmdTimeChange` launch code is only sent to to 68K applications and to those applications that have the `ALPF_FLAG_NOTIFY_TIME_CHANGE` attribute set to `true` in their Application Launch Preferences Resource.

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SystemPkt.h

The system packet APIs, used in earlier Palm OS releases by the debugger, console, and remote UI modules when communicating (via the Serial Link Manager) with the host computer, are not supported in Palm OS Cobalt.

Note that these APIs were never documented, and thus were not intended for use by third-party developers.

Deleted APIs

Table 115.1Deleted structures

`SysPktBodyType`	`SysPktChecksumType`
`SysPktCommCmdType`	`SysPktCommRspType`
`SysPktFindCmdType`	`SysPktFindRspType`
`SysPktGremlinsCmdType`	`SysPktReadMemCmdType`
`SysPktReadMemRspType`	`SysPktRemoteEvtCmdType`
`SysPktRemoteMsgCmdType`	`SysPktRemoteUIUpdCmdType`
`SysPktRPCParamType`	`SysPktRPCType`
`SysPktWriteMemCmdType`	`SysPktWriteMemRspType`

Table 115.2Deleted types

`SysPktBodyPtr`	`SysPktChecksumPtr`
`SysPktCommCmdPtr`	`SysPktCommRspPtr`
`SysPktFindCmdPtr`	`SysPktFindRspPtr`
`SysPktReadMemCmdPtr`	`SysPktReadMemRspPtr`

Table 115.2Deleted types *(continued)*

SysPktRemoteMsgCmdPtr	SysPktWriteMemCmdPtr
SysPktWriteMemRspPtr	

Table 115.3Deleted #defines

sysPktChecksumCmd	sysPktChecksumRsp
sysPktCommCmd	sysPktCommRsp
sysPktContinueCmd	sysPktDbgBreakToggleCmd
sysPktDbgBreakToggleRsp	sysPktExecFlashCmd
sysPktExecFlashRsp	sysPktFindCmd
sysPktFindRsp	sysPktFlashCmd
sysPktFlashRsp	sysPktGetBreakpointsCmd
sysPktGetBreakpointsRsp	sysPktGetRtnNameCmd
sysPktGetRtnNameRsp	sysPktGetTrapBreaksCmd
sysPktGetTrapBreaksRsp	sysPktGetTrapConditionsCmd
sysPktGetTrapConditionsRsp	sysPktGremlinsCmd
sysPktGremlinsEvent	sysPktGremlinsIdle
sysPktInitialTimeout	sysPktMaxBodyChunks
sysPktMaxBodySize	sysPktMaxMemChunk
sysPktReadMemCmd	sysPktReadMemRsp
sysPktReadRegsCmd	sysPktReadRegsRsp
sysPktRemoteEvtCmd	sysPktRemoteMsgCmd
sysPktRemoteUIUpdCmd	sysPktRPCCmd
sysPktRPCRsp	sysPktSetBreakpointsCmd
sysPktSetBreakpointsRsp	sysPktSetTrapBreaksCmd

Table 115.3Deleted #defines *(continued)*

sysPktSetTrapBreaksRsp	sysPktSetTrapConditionsCmd
sysPktSetTrapConditionsRsp	sysPktSingleStepCmd
sysPktStateCmd	sysPktStateRsp
sysPktWriteMemCmd	sysPktWriteMemRsp
sysPktWriteRegsCmd	sysPktWriteRegsRsp

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SystemResources.h

Constants corresponding to features that are not present in Palm OS Cobalt devices are no longer defined in `SystemResources.h`. Those features that are now ARM-native (such as the PIM applications) have, in many cases, had their corresponding #defines altered to distinguish them from their 68K counterparts.

Deleted APIs

Table 116.1Deleted #defines

Deleted API	Use instead
`sysClipperPQACardNoIndex`	Nothing. The Clipper application is not supported in Palm OS Cobalt.
`sysClipperPQADbIDIndex`	Nothing. The Clipper application is not supported in Palm OS Cobalt.
`sysFileCBaseATDriver`	Nothing. The base AT driver is not used in Palm OS Cobalt.
`sysFileCBtConnectPanelHelper`	`sysFileCBtCncPlugin`
`sysFileCBtTransLib`	`sysFileTBtTransLib`
`sysFileCGenenicActivate`	`sysFileCGenericActivate`
`sysFileCNetTrace`	Nothing. This was the creator type for “Net Trace” stdio application.
`sysFileCPhonePanel`	
`sysFileCPing`	Nothing. This was the creator type for “Ping” stdio application.
`sysFileCStandardGsm`	
`sysFileCTelTaskSerial`	

Table 116.1Deleted #defines *(continued)*

Deleted API	Use instead
`sysFileDRAMFix`	Nothing. This fix is not needed in Palm OS Cobalt.
`sysFileDRAMFixOriginal`	Nothing. This fix is not needed in Palm OS Cobalt.
`sysFileTBaseATDriver`	Nothing. The base AT driver is not used in Palm OS Cobalt.
`sysFileTSimulator`	`sysFileCSimulator`
`sysFileTTelTaskSerial`	
`sysFileTUIAppShell`	`sysFileTBootApp`
`sysFtrIDKeyboardActive`	`sysNotifyAltInputSystemEnabled`
`sysFtrTKeyboard`	
`sysResIDFeatures`	
`sysResIDGrfDefaultMacros`	
`sysResIDGrfDictionary`	
`sysResIDGrfTemplate`	
`sysResIDOverlayFeatures`	
`sysResTAppCode`	`sysResTModuleCode` (or, for 68K code, `sysResTAppCode68K`).
`sysResTAppGData`	`sysResTModuleData` (or, for 68K app data, `sysResTAppGData68K`).
`sysResTAppPrefs`	`sysResIDAppPrefs` (or, for 68K app preferences, `sysResTAppPrefs68K`).
`sysResTBootCode`	`sysFileTBoot`
`sysResTExtensionCode`	`sysFileTExtension`
`sysResTExtensionOEMCode`	

Table 116.1Deleted #defines *(continued)*

Deleted API	Use instead
`sysResTFontMap`	`sysResTTrueTypeFont` (this is a resource that contains True Type fonts).
`sysResTGrfDictionary`	`sysFileCJEDict`
`sysResTGrfTemplate`	
`sysResTLibrary`	`sysFileTLibrary`
`sysResTProductUpdateCode`	`sysFileTProductUpdate`
`sysResTSilkscreen`	Nothing. The concept of a "silkscreen" doesn't exist in Palm OS Cobalt.

Modified APIs

Table 116.2Modified #defines

Modified API	Description of change
`sysFileCAddress`	Changed to `'adrs'`, which identifies the ARM-native version of the Address Book application. The old value of this #define—identifying the 68K version of the Address Book application—is set in the Palm OS Protein headers to be the value of the `sysFileCAddress68K` constant.
`sysFileCCalculator`	Changed to `'cals'`, which identifies the ARM-native version of the Calculator application.
`sysFileCCardInfo`	Changed to `'cins'`, which identifies the ARM-native version of the Card Info application.

Table 116.2Modified #defines *(continued)*

Modified API	Description of change
`sysFileCDatebook`	Changed to `'dats'`, which identifies the ARM-native version of the Date Book application. The old value of this #define—identifying the 68K version of the Date Book application—is set in the Palm OS Protein headers to be the value of the `sysFileCDatebook68K` constant.
`sysFileCDefaultApp`	The default application in Palm OS Cobalt is the Launcher. In Palm OS Garnet and in earlier Palm OS releases, the default application was the Preferences application.
`sysFileCFirstApp`	The "first" application in Palm OS Cobalt is the Launcher. In Palm OS Garnet and in earlier Palm OS releases, the default application was the Setup application.
`sysFileCFormats`	Changed to `'fmat'`, which identifies the ARM-native version of the Formats panel.
`sysFileCGraffitiDemo`	Changed to `'gdes'`, which identifies the ARM-native version of the Graffiti Demo application.
`sysFileCMemo`	Changed to `'mems'`, which identifies the ARM-native version of the Memo Pad application. The old value of this #define—identifying the 68K version of the Memo Pad application—is set in the Palm OS Protein headers to be the value of the `sysFileCMemo68K` constant.
`sysFileCMultimedia`	Changed to `'mmmm'`, which identifies the ARM-native version of the Multimedia APIs.

Table 116.2Modified #defines *(continued)*

Modified API	Description of change
`sysFileCSetup`	Changed to `'sets'`, which identifies the ARM-native version of the Setup application.
`sysFileCSmsMessenger`	Changed to `'smsa'`, which identifies the ARM-native version of the SMS Messenger application.
`sysFileCToDo`	Changed to `'tdos'`, which identifies the ARM-native version of the To Do List application. The old value of this #define—identifying the 68K version of the To Do List application—is set in the Palm OS Protein headers to be the value of the `sysFileCToDo68K` constant.
`sysFileTPhoneDriver`	Changed to `'phdr'`, which identifies the ARM-native phone drivers.
`sysResTButtonDefaults`	Changed to `'abda'`, which identifies the ARM-native resource type for hard- and soft-button default applications.
`sysResTDefaultDB`	Changed to `'adft'`, which identifies the ARM-native resource type of the defaults database. The old value of this #define—identifying the 68K resource type of the defaults database—is set in the Palm OS Protein headers to be the value of the `sysResTDefaultDB68K` constant.
`sysResTFeatures`	Changed to `'afea'`, which identifies the ARM-native resource type of the system features table.

Unchanged APIs

Table 116.3Unchanged #defines

sysActivateFullyActivated	sysActivateNeedGeorgeQuery
sysActivateNeedMortyQuery	sysActivateStatusFeatureIndex
sysFileCActivate	sysFileCAltFirstApp
sysFileCBtExgLib	sysFileCBtLib
sysFileCButtons	sysFileCClipper
sysFileCDateTime	sysFileCDefaultAntennaButtonApp
sysFileCDefaultButton1App	sysFileCDefaultButton2App
sysFileCDefaultButton3App	sysFileCDefaultButton4App
sysFileCDefaultCalcButtonApp	sysFileCDefaultCradleApp
sysFileCDefaultModemApp	sysFileCDial
sysFileCDialPanel	sysFileCDigitizer
sysFileCExpansionMgr	sysFileCExpense
sysFileCExternalConnector	sysFileCFATFS
sysFileCFlashInstaller	sysFileCGeneral
sysFileCGraffiti	sysFileCHwrFlashMgr
sysFileCINetLib	sysFileCIrLib
sysFileCIrSerialWrapper	sysFileCJEDict
sysFileCLanguagePicker	sysFileCLauncher
sysFileCLocalLib	sysFileCLz77Lib
sysFileCMail	sysFileCMailDemo
sysFileCMemory	sysFileCMessaging
sysFileCMfgCalibration	sysFileCMfgExtension
sysFileCMfgFunctional	sysFileCMineHunt

Table 116.3Unchanged #defines *(continued)*

sysFileCModemFlashTool	sysFileCModemPanel
sysFileCNet	sysFileCNetworkPanel
sysFileCNullApp	sysFileCOEMSystem
sysFileCOpenLibInfo	sysFileCOwner
sysFileCPADHtal	sysFileCPalmDevice
sysFileCPdiLib	sysFileCPDIUSBD12
sysFileCPhone	sysFileCPinyinFep
sysFileCPreferences	sysFileCPuzzle15
sysFileCRELHtal	sysFileCRFDiag
sysFileCRmpLib	sysFileCSdSpiCard
sysFileCSecLib	sysFileCSecurity
sysFileCSerialMgr	sysFileCSerialWrapper
sysFileCShortCuts	sysFileCSimulator
sysFileCSlotDriverPnps	sysFileCSmsLib
sysFileCSoundMgr	sysFileCSync
sysFileCSystem	sysFileCSystemPatch
sysFileCTCPHtal	sysFileCTelMgrLib
sysFileCTextServices	sysFileCUart328
sysFileCUart328EZ	sysFileCUart650
sysFileCUserDict	sysFileCVFSMgr
sysFileCVirtIrComm	sysFileCVirtRfComm
sysFileCWebLib	sysFileCWirelessPanel
sysFileCWordLookup	sysFileHotSyncServer
sysFileHotSyncServerUpdate	sysFileTActivationPlugin

Table 116.3Unchanged #defines *(continued)*

sysFileTApplication	sysFileTBigHal
sysFileTBoot	sysFileTExgLib
sysFileTExtension	sysFileTFileStream
sysFileTFileSystem	sysFileTGraffitiMacros
sysFileTHtalLib	sysFileTKernel
sysFileTLearningData	sysFileTLibrary
sysFileTLibraryExtension	sysFileTLocaleModule
sysFileTMidi	sysFileTNetworkPanelPlugin
sysFileTOverlay	sysFileTPanel
sysFileTpqa	sysFileTPreferences
sysFileTProductUpdate	sysFileTSavedPreferences
sysFileTScriptPlugin	sysFileTSlotDriver
sysFileTSmallHal	sysFileTSplash
sysFileTStdIO	sysFileTSystem
sysFileTSystemPatch	sysFileTTemp
sysFileTUartPlugIn	sysFileTUserDictionary
sysFileTVirtPlugin	sysFtrIDOEMSysHideBatteryGauge
sysFtrTOEMSys	sysMaxUserDomainNameLength
sysPortUSBConsole	sysPortUSBDesktop
sysPortUSBPeripheral	sysResIDAntennaButtonParam
sysResIDAppPrefs	sysResIDBitmapConfirm
sysResIDBitmapSplash	sysResIDBootHAL
sysResIDBootHALCodeStart	sysResIDBootInitCode
sysResIDBootReset	sysResIDBootSysCodeMin

Table 116.3Unchanged #defines *(continued)*

sysResIDBootSysCodeStart	sysResIDBootUICodeMin
sysResIDBootUICodeStart	sysResIDButton1Param
sysResIDButton2Param	sysResIDButton3Param
sysResIDButton4Param	sysResIDButtonDefaults
sysResIDCalcButtonParam	sysResIDCompressedDB
sysResIDCradleParam	sysResIDDefaultDB
sysResIDDlkCondFilterTab	sysResIDDlkLocalPC
sysResIDDlkLocalPCAddr	sysResIDDlkLocalPCMask
sysResIDDlkUserInfo	sysResIDErrStrings
sysResIDExtPrefs	sysResIDFlashMgrWorkspace
sysResIDHwrFlashIdent	sysResIDModemMgrPref
sysResIDModemParam	sysResIDOEMDBVersion
sysResIDPrefUIColorTable1	sysResIDPrefUIColorTable2
sysResIDPrefUIColorTable4	sysResIDPrefUIColorTable8
sysResIDPrefUIColorTableBase	sysResIDProdUpdCodeStart
sysResIDSndAlarm	sysResIDSndCardInsert
sysResIDSndCardRemove	sysResIDSndClick
sysResIDSndConfirmation	sysResIDSndError
sysResIDSndInfo	sysResIDSndStartUp
sysResIDSndSyncStart	sysResIDSndSyncStop
sysResIDSndWarning	sysResIDSysPrefCalibration
sysResIDSysPrefFindStr	sysResIDSysPrefMain
sysResIDSysPrefPassword	sysResIDSysPrefPasswordHash
sysResIDSysPrefPasswordHint	sysResTCompressedDB

Table 116.3Unchanged #defines *(continued)*

sysResTErrStrings	sysResTExtPrefs
sysResTFlashMgr	sysResTHwrFlashCode
sysResTHwrFlashIdent	sysResTSound
sysResTSysPref	

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SysUtils.h

Palm OS Cobalt doesn't support resource chains (except for backwards compatibility purposes). Consequently, you now have to identify the resource database to be searched when using either `SysCopyStringResource()` or `SysStringByIndex()`.

Palm OS Cobalt, version 6.0 doesn't support Gremlins. This affects a couple of #defines.

Deleted APIs

Table 117.1Deleted #defines

Deleted API	Use instead
`GremlinIsOn`	Nothing. Gremlins is not supported in this release of Palm OS Cobalt.
`SysGremlins`	`HostControl`. But note that Gremlins is not supported in this release of Palm OS Cobalt.

Modified APIs

Table 117.2Modified functions

Modified API	Description of change
`void SysCopyStringResource (char *, DmOpenRef, DmResourceID)`	Palm OS Cobalt doesn't support resource chains (except for backwards compatibility purposes). Consequently, you now have to identify the resource database to be searched. Accordingly, the second parameter was added (a `DmOpenRef`), and the final parameter was changed from a `UInt16`.
`char *SysStringByIndex (DmOpenRef, DmResourceID, uint16_t, char *, uint16_t)`	Palm OS Cobalt doesn't support resource chains (except for backwards compatibility purposes). Consequently, you now have to identify the resource database to be searched. Accordingly, the first parameter was added (a `DmOpenRef`), and the second parameter was changed from a `UInt16`.

Unchanged APIs

Table 117.3Unchanged functions

`HostControl()`	`SysBinarySearch()`
`SysErrString()`	`SysFormPointerArrayToStrings()`
`SysInsertionSort`	`SysQSort()`
`SysRandom()`	

Table 117.4Unchanged macros

`Abs()`

Table 117.5Unchanged types

`CmpFuncPtr`	`SearchFuncPtr`

Table 117.6Unchanged #defines

`sysRandomMax`

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Table.h

Palm OS Cobalt adds support for additional table item styles.

The Table APIs have been cleaned up, in that the internals of the `TableType` structure, formerly exposed for debugging purposes only, are now private, and declarations of other structures which only supported the `TableType` structure have been removed.

Tables in Palm OS Cobalt behave a bit differently than in previous Palm OS releases:

- When table goes into edit mode, all columns that are edit indicators are highlighted. In version of Palm OS prior to Palm OS Cobalt, only contiguous edit indicators were highlighted. That is, if there are 5 columns and columns 0, 1, 2 and 4 are edit indicators, only columns 0, 1, and 2 were highlighted.
- There is no need for `tallCustomTableItem`. In Palm OS Cobalt the entire row is always highlighted when necessary. In prior Palm OS releases, only the top 11 pixels were highlighted.
- For custom table items, the table code formerly used `winSwap` to reverse the foreground and background colors if the item was to be drawn highlighted. This occurred *after* the custom drawing callback returned. In Palm OS Cobalt, `winSwap` is not supported and there's no way to change a color after the custom draw callback. Therefore, if you use nonstandard colors in your custom drawing callback for a table item, you need to check to see if you are drawing the current selection and update your colors accordingly. If you're just using the normal colors in the drawing callback, you don't need to worry about it.

Deleted APIs

Table 118.1Deleted structures

Deleted API	Use instead
`TableAttrType`	Nothing. This structure was only used in the definition of the `TableType` structure, the internals of which are now private. Developers were warned never to access the contents of either of these structures directly.
`TableColumnAttrType`	Nothing. This structure was only used in the definition of the `TableType` structure, the internals of which are now private. Developers were warned never to access the contents of either of these structures directly.
`TableItemType`	Nothing. This structure was only used in the definition of the `TableType` structure, the internals of which are now private. Developers were warned never to access the contents of either of these structures directly.
`TableRowAttrType`	Nothing. This structure was only used in the definition of the `TableType` structure, the internals of which are now private. Developers were warned never to access the contents of either of these structures directly.

Table 118.2Deleted types

Deleted API	Use instead
`TableItemPtr`	Nothing. In the most recent Palm OS Garnet SDK, this type was defined to a pointer to a `TableItemType`, which was declared but never used by any of the other APIs.

Modified APIs

Table 118.3Modified structures

Modified API	Description of change
`TableType`	The contents of this structure have been made private.

Table 118.4Modified enumerated types

Modified API	Description of change
`tableItemStyles`	Two new table item types have been added: `labelNoColonTableItem` and `popupTriggerNoColonTableItem`.
`TableItemStyleType`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `tableItemStyles` enum.

Unchanged APIs

Table 118.5Unchanged functions

TblDrawTable()	TblEditing()
TblEraseTable()	TblFindRowData()
TblFindRowID()	TblGetBounds()
TblGetColumnSpacing()	TblGetColumnWidth()
TblGetCurrentField()	TblGetItemBounds()
TblGetItemFont()	TblGetItemInt()
TblGetItemPtr()	TblGetLastUsableRow()
TblGetNumberOfColumns()	TblGetNumberOfRows()
TblGetRowData()	TblGetRowHeight()
TblGetRowID()	TblGetSelection()
TblGetTopRow()	TblGrabFocus()
TblHandleEvent()	TblHasScrollBar()
TblInsertRow()	TblMarkRowInvalid()
TblMarkTableInvalid()	TblRedrawTable()
TblReleaseFocus()	TblRemoveRow()
TblRowInvalid()	TblRowMasked()
TblRowSelectable()	TblRowUsable()
TblSelectItem()	TblSetBounds()
TblSetColumnEditIndicator()	TblSetColumnMasked()
TblSetColumnSpacing()	TblSetColumnUsable()
TblSetColumnWidth()	TblSetCustomDrawProcedure()
TblSetItemFont()	TblSetItemInt()
TblSetItemPtr()	TblSetItemStyle()

Table 118.5Unchanged functions *(continued)*

TblSetLoadDataProcedure()	TblSetRowData()
TblSetRowHeight()	TblSetRowID()
TblSetRowMasked()	TblSetRowSelectable()
TblSetRowStaticHeight()	TblSetRowUsable()
TblSetSaveDataProcedure()	TblSetSelection()
TblUnhighlightSelection()	

Table 118.6Unchanged types

TableDrawItemFuncPtr	TableLoadDataFuncPtr
TablePtr	TableSaveDataFuncPtr

Table 118.7Unchanged #defines

tableDefaultColumnSpacing	tableMaxTextItemSize
tableNoteIndicatorHeight	tableNoteIndicatorWidth
tblUnusableRow	

Table 118.8Unchanged application-defined functions

TableDrawItemFuncType()	TableLoadDataFuncType()
TableSaveDataFuncType()	

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TelephonyMgr.h

Deleted APIs

Table 119.1Deleted functions

Deleted API	Use instead
`TelClosePhoneConnection()`	
`TelDtcCallNumber()`	
`TelDtcCloseLine()`	
`TelDtcReceiveData()`	
`TelDtcSendData()`	
`TelEmcCall()`	
`TelEmcCloseLine()`	
`TelEmcGetNumber()`	
`TelEmcGetNumberCount()`	
`TelEmcSelectNumber()`	
`TelEmcSetNumber()`	
`TelGetCallState()`	
`TelGetEvent()`	
`TelGetTelephonyEvent()`	
`TelInfGetInformation()`	
`TelIsPhoneConnected()`	
`TelMatchPhoneDriver()`	

Table 119.1Deleted functions *(continued)*

Deleted API	Use instead
`TelNwkGetNetworkName()`	
`TelNwkGetNetworks()`	
`TelNwkGetNetworkType()`	
`TelNwkGetSearchMode()`	
`TelNwkGetSelectedNetwork()`	
`TelNwkSelectNetwork()`	
`TelNwkSetSearchMode()`	
`TelOpenPhoneConnection()`	
`TelOpenProfile()`	
`TelPhbGetAvailablePhonebooks()`	
`TelPhbGetEntryCount()`	
`TelPhbGetEntryMaxSizes()`	
`TelPhbGetSelectedPhonebook()`	
`TelPhbSelectPhonebook()`	
`TelPowGetBatteryStatus()`	
`TelPowGetPowerLevel()`	
`TelPowSetPhonePower()`	
`TelSendCommandString()`	
`TelSmsGetAvailableStorage()`	
`TelSmsGetMessageCount()`	
`TelSmsGetSelectedStorage()`	
`TelSmsReadReport()`	
`TelSmsReadReports()`	

Table 119.1Deleted functions *(continued)*

Deleted API	Use instead
TelSmsReadSubmittedMessage()	
TelSmsReadSubmittedMessages()	
TelSmsSelectStorage()	
TelSmsSendManualAcknowledge()	
TelSndMute()	TelSndSetMuteStatus()
TelSndPlayKeyTone()	
TelSndStopKeyTone()	
TelSpcCallNumber()	
TelSpcCloseLine()	
TelSpcConference()	
TelSpcGetCallerNumber()	
TelSpcHoldLine()	
TelSpcPlayDTMF()	TelSpcPlayTone()
TelSpcRejectCall()	
TelSpcRetrieveHeldLine()	
TelSpcSelectLine()	
TelSpcSendBurstDTMF()	
TelSpcStartContinuousDTMF()	
TelSpcStopContinuousDTMF()	
TelStyChangeAuthenticationCode()	
TelStyEnterAuthenticationCode()	
TelStyGetAuthenticationState()	
TelUnblockNotifications()	

Table 119.2Deleted macros

Deleted API	Use instead
`TelIsDtcCallNumberSupported()`	
`TelIsDtcCloseLineSupported()`	
`TelIsDtcReceiveDataSupported()`	
`TelIsDtcSendDataSupported()`	
`TelIsDtcServiceAvailable()`	
`TelIsEmcCallSupported()`	
`TelIsEmcCloseLineSupported()`	
`TelIsEmcGetNumberCountSupported()`	
`TelIsEmcGetNumberSupported()`	
`TelIsEmcSelectNumberSupported()`	
`TelIsEmcSetNumberSupported()`	
`TelIsGetCallStateSupported()`	
`TelIsInfGetInformationSupported()`	
`TelIsMatchPhoneDriverSupported()`	
`TelIsNwkGetNetworkNameSupported()`	
`TelIsNwkGetNetworksSupported()`	
`TelIsNwkGetNetworkTypeSupported()`	
`TelIsNwkGetSearchModeSupported()`	

Table 119.2Deleted macros *(continued)*

Deleted API	Use instead
`TelIsNwkGetSelectedNetworkSupported()`	
`TelIsNwkSelectNetworkSupported()`	
`TelIsNwkSetSearchModeSupported()`	
`TelIsPhbGetAvailablePhonebooksSupported()`	
`TelIsPhbGetEntryCountSupported()`	
`TelIsPhbGetEntryMaxSizesSupported()`	
`TelIsPhbGetSelectedPhonebookSupported()`	
`TelIsPhbSelectPhonebookSupported()`	
`TelIsPowGetBatteryStatusSupported()`	
`TelIsPowGetPowerLevelSupported()`	
`TelIsPowSetPhonePowerSupported()`	
`TelIsSendCommandStringSupported()`	
`TelIsSmsGetAvailableStorageSupported()`	
`TelIsSmsGetMessageCountSupported()`	

Table 119.2Deleted macros *(continued)*

Deleted API	Use instead
TelIsSmsGetSelectedStorageSupported()	
TelIsSmsReadReportsSupported()	
TelIsSmsReadReportSupported()	
TelIsSmsReadSubmittedMessagesSupported()	
TelIsSmsReadSubmittedMessageSupported()	
TelIsSmsSelectStorageSupported()	
TelIsSmsSendManualAcknowledgeSupported()	
TelIsSndMuteSupported()	
TelIsSndPlayKeyToneSupported()	
TelIsSndStopKeyToneSupported()	
TelIsSpcCallNumberSupported()	
TelIsSpcCloseLineSupported()	
TelIsSpcConferenceSupported()	
TelIsSpcGetCallerNumberSupported()	
TelIsSpcHoldLineSupported()	
TelIsSpcPlayDTMFSupported()	
TelIsSpcRejectCallSupported()	
TelIsSpcRetrieveHeldLineSupported()	
TelIsSpcSelectLineSupported()	

Table 119.2Deleted macros *(continued)*

Deleted API	Use instead
`TelIsSpcSendBurstDTMFSupported()`	
`TelIsSpcStartContinuousDTMFSupported()`	
`TelIsSpcStopContinuousDTMFSupported()`	
`TelIsStyChangeAuthenticationCodeSupported()`	
`TelIsStyEnterAuthenticationCodeSupported()`	
`TelIsStyGetAuthenticationStateSupported()`	

Table 119.3Deleted #defines

Deleted API	Use instead
`kTelInfPhoneBrand`	
`kTelLocationSeparator`	
`kTelNwkAutomaticSearch`	
`kTelNwkCDMA`	
`kTelNwkGSM`	
`kTelNwkManualSearch`	
`kTelNwkPDC`	
`kTelNwkTDMA`	
`kTelPhbAdaptorPhonebook`	
`kTelPhbFirstOemPhonebook`	
`kTelPhbFixedPhonebook`	

Table 119.3Deleted #defines *(continued)*

Deleted API	Use instead
kTelPhbLastDialedPhonebook	
kTelPhbPhonePhonebook	
kTelPhbSimAndPhonePhonebook	
kTelPhbSimPhonebook	
kTelSmsStorageFirstOem	
kTelStyFirstOemCodeId	
kTelStyPhoneToSimCodeId	
kTelStyPin1CodeId	
kTelStyPin2CodeId	
kTelStyPuk1CodeId	
kTelStyPuk2CodeId	
kTelStyReady	
telErrGenericDrvNotFound	
telErrInvalidAppId	
telErrLibStillInUse	
telErrMsgAllocation	
telErrNoSpecificDrv	
telErrNotInstalled	
telErrPhoneCodeRequired	
telErrPIN2Required	
telErrPINRequired	
telErrPUK2Required	
telErrPUKRequired	

Table 119.3Deleted #defines *(continued)*

Deleted API	Use instead
`telErrSpecificDrvNotFound`	
`telErrTooManyApps`	
`telErrTTaskNotFound`	
`telErrTTaskNotRunning`	
`telLibTrap...`	

Table 119.4Deleted enumerated types

Deleted API	Use instead
Telephony notification IDs enum	

Modified APIs

Table 119.5Modified functions

Modified API	Description of change
`status_t TelCancel (int32_t, uint16_t, uint16_t *)`	
`status_t TelCfgGetPhoneNumber (int32_t, TelCfgPhoneNumberPtr, uint16_t *)`	
`status_t TelCfgGetSmsCenter (int32_t, TelNumberPtr, uint16_t *)`	
`status_t TelCfgSetSmsCenter (int32_t, TelNumberPtr, uint16_t *)`	
`status_t TelClose (int32_t)`	

Table 119.5Modified functions *(continued)*

Modified API	Description of change
`status_t TelIsFunctionSupported (int32_t, uint16_t)`	
`status_t TelIsServiceAvailable (int32_t, uint16_t)`	
`status_t TelNwkGetLocation (int32_t, TelNwkLocationPtr, uint16_t *)`	
`status_t TelNwkGetSignalLevel (int32_t, uint8_t *, uint16_t *)`	
`status_t TelOemCall (int32_t, TelOemCallPtr, uint16_t *)`	
`status_t TelOpen (uint32_t, int32_t *)`	
`status_t TelPhbAddEntry (int32_t, TelPhbEntryPtr, uint16_t *)`	
`status_t TelPhbDeleteEntry (int32_t, uint16_t, uint16_t *)`	
`status_t TelPhbGetEntries (int32_t, TelPhbEntriesPtr, uint16_t *)`	
`status_t TelPhbGetEntry (int32_t, TelPhbEntryPtr, uint16_t *)`	
`status_t TelSmsDeleteMessage (int32_t, uint16_t, uint16_t *)`	
`status_t TelSmsGetDataMaxSize (int32_t, size_t *, uint16_t *)`	

Table 119.5Modified functions *(continued)*

Modified API	Description of change
`status_t TelSmsGetUniquePartId (int32_t, uint16_t *, uint16_t *)`	
`status_t TelSmsReadMessage (int32_t, TelSmsMessagePtr, uint16_t *)`	
`status_t TelSmsReadMessages (int32_t, TelSmsMessagesPtr, uint16_t *)`	
`status_t TelSmsSendMessage (int32_t, TelSmsMessagePtr, uint16_t *)`	
`status_t TelSpcAcceptCall (int32_t, TelSpcCallPtr, uint16_t *)`	

Table 119.6Modified #defines

Modified API	Description of change
`#define kTelInvalidAppId (-1)`	
`#define kTelMgrVersionFix 0`	
`#define kTelMgrVersionMajor 2`	
`#define kTelSmsStorageAdaptor 0x5341`	
`#define kTelSmsStoragePhone 0x4D45`	
`#define kTelSmsStorageSIM 0x534D`	

Table 119.6Modified #defines *(continued)*

Modified API	Description of change
`#define kTelTelephonyEvent telAsyncReplyEvent`	
`#define telErr...`	

Unchanged APIs

Table 119.7Unchanged macros

`TelIsCancelSupported()`	`TelIsCfgGetPhoneNumberSupported()`
`TelIsCfgGetSmsCenterSupported()`	`TelIsCfgServiceAvailable()`
`TelIsCfgSetSmsCenterSupported()`	`TelIsEmcServiceAvailable()`
`TelIsInfServiceAvailable()`	`TelIsNwkGetLocationSupported()`
`TelIsNwkGetSignalLevelSupported()`	`TelIsNwkServiceAvailable()`
`TelIsOemCallSupported()`	`TelIsOemServiceAvailable()`
`TelIsPhbAddEntrySupported()`	`TelIsPhbDeleteEntrySupported()`
`TelIsPhbGetEntriesSupported()`	`TelIsPhbGetEntrySupported()`
`TelIsPhbServiceAvailable()`	`TelIsPowServiceAvailable()`
`TelIsSmsDeleteMessageSupported()`	`TelIsSmsGetDataMaxSizeSupported()`
`TelIsSmsGetUniquePartIdSupported()`	`TelIsSmsReadMessagesSupported()`
`TelIsSmsReadMessageSupported()`	`TelIsSmsSendMessageSupported()`
`TelIsSmsServiceAvailable()`	`TelIsSndServiceAvailable()`

Table 119.7Unchanged macros *(continued)*

TelIsSpcAcceptCallSupported()	TelIsSpcServiceAvailable()
TelIsStyServiceAvailable()	

Table 119.8Unchanged #defines

kTelCallConnected	kTelCallConnecting
kTelCallDisconnecting	kTelCallIdle
kTelCallIncoming	kTelCallIncomingAck
kTelCallNotificationPriority	kTelCallRedial
kTelCallServiceData	kTelCallServiceVoice
kTelCallTypeIncoming	kTelCallTypeOutgoing
kTelDataCallClass	kTelFaxCallClass
kTelInfiniteDelay	kTelInfPhoneModel
kTelInfPhoneRevision	kTelMgrDatabaseCreator
kTelMgrDatabaseType	kTelMgrLibName
kTelMgrVersion	kTelMgrVersionBuild
kTelMgrVersionMinor	kTelPowBatteryFault
kTelPowBatteryNotPowered	kTelPowBatteryPowered
kTelPowNoBattery	kTelSms8BitsEncoding
kTelSmsAPIVersion	kTelSmsBitsASCIIEncoding
kTelSmsCMTMessageType	kTelSmsCPTMessageType
kTelSmsDefaultGSMEncoding	kTelSmsDefaultProtocol
kTelSmsDSRMessageForwarded	kTelSmsDSRMessageReplaced
kTelSmsDSRPermBadDestination	kTelSmsDSRPermDeleteByAdm
kTelSmsDSRPermDeletedByOrigSME	kTelSmsDSRPermInternetworkErro r

Table 119.8Unchanged #defines *(continued)*

kTelSmsDSRPermOther	kTelSmsDSRPermRPError
kTelSmsDSRPermServiceUnavailable	kTelSmsDSRPermSMNotExist
kTelSmsDSRPermUnobtainable	kTelSmsDSRPermValidityExpired
kTelSmsDSRSuccess	kTelSmsDSRTempCongestion
kTelSmsDSRTempOther	kTelSmsDSRTempServiceRejected
kTelSmsDSRTempServiceUnavailable	kTelSmsDSRTempSMEBusy
kTelSmsDSRTempSMEError	kTelSmsEmailProtocol
kTelSmsErmesProtocol	kTelSmsFaxProtocol
kTelSmsIA5Encoding	kTelSmsIS91Encoding
kTelSmsManualAckDeliveryType	kTelSmsMessageAllTypes
kTelSmsMessageTypeDelivered	kTelSmsMessageTypeManualAck
kTelSmsMessageTypeReport	kTelSmsMessageTypeSubmitted
kTelSmsMultiPartExtensionTypeId	kTelSmsNbs2ExtensionTypeId
kTelSmsNbsExtensionTypeId	kTelSmsNotificationPriority
kTelSmsPagingProtocol	kTelSmsPrivacyConfidential
kTelSmsPrivacyNotRestricted	kTelSmsPrivacyRestricted
kTelSmsPrivacySecret	kTelSmsStatusReportDeliveryType
kTelSmsUCS2Encoding	kTelSmsUrgencyEmergency
kTelSmsUrgencyNormal	kTelSmsUrgencyUrgent
kTelSmsVMNMessageType	kTelSmsVoiceProtocol
kTelSmsX400Protocol	kTelSpcCallingLineId
kTelSpeechCallClass	kTelTelephonyNotification

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TelephonyMgrTypes.h

Deleted APIs

Table 120.1Deleted structures

Deleted API	Use instead
TelCfgGetPhoneNumberType	
TelCfgGetSmsCenterType	
TelDtcCallNumberType	
TelDtcReceiveDataType	
TelDtcSendDataType	
TelEmcGetNumberType	
TelEmcSetNumberType	
TelGetCallStateType	
TelInfGetInformationType	
TelNwkGetLocationType	
TelNwkGetNetworkNameType	
TelNwkGetNetworksType	
TelPhbGetAvailablePhonebooksType	
TelPhbGetEntriesType	
TelPhbGetEntryCountType	
TelPhbGetEntryMaxSizesType	

Table 120.1Deleted structures *(continued)*

Deleted API	Use instead
TelSendCommandStringType	
TelSmsDeleteMessageType	
TelSmsDeliveryAdvancedCDMAType	
TelSmsDeliveryAdvancedGSMType	
TelSmsDeliveryAdvancedTDMAType	
TelSmsDeliveryMessageType	
TelSmsGetAvailableStorageType	
TelSmsGetMessageCountType	
TelSmsManualAckType	
TelSmsMultiPartExtensionType	
TelSmsReadMessagesType	
TelSmsReadReportsType	
TelSmsReadSubmittedMessagesTyp e	
TelSmsReportType	
TelSmsSendMessageType	
TelSmsSubmitAdvancedCDMAType	
TelSmsSubmitAdvancedGSMType	
TelSmsSubmittedMessageType	
TelSndPlayKeyToneType	
TelSpcGetCallerNumberType	
TelSpcPlayDTMFType	
TelStyChangeAuthenticationType	

Table 120.2Deleted types

Deleted API	Use instead
`TelAppID`	
`TelSmsSubmitAdvancedTDMAType`	

Table 120.3Deleted #defines

Deleted API	Use instead
`kTelMaxPhoneNumberLen`	

Modified APIs

Table 120.4Modified structures

Modified API	Description of change
`TelEventType`	
`TelNotificationType`	
`TelOemCallType`	
`TelPhbEntryType`	
`TelSmsDateTimeType`	
`TelSmsExtensionType`	
`TelSmsNbsExtensionType`	
`TelSmsSubmitMessageType`	
`TelSmsUserExtensionType`	

Table 120.5Modified #defines

Modified API	Description of change
`#define telErrorClass 0x80002F00`	

Table 120.6Modified enumerated types

Modified API	Description of change
`TelMessages`	
`TelServices`	

121

TelephonyMgrUI.h

Deleted APIs

Table 121.1Deleted #defines

Deleted API	Use instead
kTelAutoSetUpButtonBit	
kTelAutoTryAgainBit	
kTelNoSetUpButtonBit	
kTelNotifyErrorDetailsVersion	
kTelTryAgainBit	

Modified APIs

Table 121.2Modified structures

Modified API	Description of change
TelNotifyErrorDetailsType	

Unchanged APIs

Table 121.3Unchanged #defines

telNotifyEnterCodeEvent	telNotifyErrorEvent

122

TextMgr.h

The APIs declared in this file are largely unchanged, except for a number of parameters and return values that were changed from either `UInt16` or `UInt32` to `size_t`.

Deleted APIs

Table 122.1Deleted functions

Deleted API	Use instead
`TxtCharWidth()`	`FntCharWidth()`

Modified APIs

Table 122.2Modified functions

Modified API	Description of change
`int16_t TxtCaselessCompare (const char *, size_t, size_t *, const char *, size_t, size_t *)`	The parameters that specify lengths—*`s1Len`*, *`s1MatchLen`*, *`s2Len`*, and *`s2MatchLen`*—have changed from `UInt16` to `size_t`.
`uint32_t TxtCharAttr (wchar32_t)`	This function formerly returned a `UInt16`.
`wchar32_t TxtCharBounds (const char *, size_t, size_t *, size_t *)`	The *`inOffset`*, *`outStart`*, and *`outEnd`* parameters changed from `UInt32` to `size_t`.
`size_t TxtCharSize (wchar32_t)`	This function formerly returned a `UInt16`.
`uint32_t TxtCharXAttr (wchar32_t)`	This function formerly returned a `UInt16`.

Table 122.2Modified functions *(continued)*

Modified API	Description of change
`int16_t TxtCompare (const char *, size_t, size_t *, const char *, size_t, size_t *)`	The parameters that specify lengths—*s1Len*, *s1MatchLen*, *s2Len*, and *s2MatchLen*—have changed from `UInt16` to `size_t`.
`status_t TxtConvertEncoding (Boolean, TxtConvertStateType *, const char *, size_t *, CharEncodingType, char *, size_t *, CharEncodingType, const char *, size_t)`	The three parameters that specify buffer lengths—*ioSrcBytes*, *ioDstBytes*, and *substitutionLen*—have changed from `UInt16` to `size_t`. Also note that in Palm OS Garnet the substitution string had to be valid in the destination encoding. In Palm OS Cobalt the substitution string is assumed to be in UTF8 encoding.
`Boolean TxtFindString (const char *, const char *, size_t *, size_t *)`	The *outPos* parameter changed from `UInt32` to `size_t`. The *outLength* parameter changed from `UInt16` to `size_t`.
`wchar32_t TxtGetChar (const char *, size_t)`	The *inOffset* parameter changed from `UInt32` to `size_t`.
`size_t TxtGetNextChar (const char *, size_t, wchar32_t *)`	The *inOffset* parameter changed from `UInt32` to `size_t`. Also, this function now returns a `size_t`; formerly it returned a `UInt16`.
`size_t TxtGetPreviousChar (const char *, size_t, wchar32_t *)`	The *inOffset* parameter changed from `UInt32` to `size_t`. Also, this function now returns a `size_t`; formerly it returned a `UInt16`.
`size_t TxtGetTruncationOffset (const char *, size_t)`	The *inOffset* parameter changed from `UInt32` to `size_t`.
`size_t TxtGetWordWrapOffset (const char *, size_t)`	The *iOffset* parameter changed from `UInt32` to `size_t`.

Table 122.2Modified functions *(continued)*

Modified API	Description of change
`uint16_t TxtReplaceStr (char *, size_t, const char *, uint16_t)`	The *`inMaxLen`* parameter changed from `UInt16` to `size_t`.
`size_t TxtSetNextChar (char *, size_t, wchar32_t)`	The *`inOffset`* parameter changed from `UInt32` to `size_t`.
`status_t TxtTransliterate (const char *, size_t, char *, size_t *, TranslitOpType)`	The *`inSrcLength`* and *`ioDstLength`* parameters have changed from `UInt16` to `size_t`.
`Boolean TxtWordBounds (const char *, size_t, size_t, size_t *, size_t *)`	The *`inLength`*, *`inOffset`*, *`outStart`*, and *`outEnd`* parameters have changed from `UInt32` to `size_t`.

Table 122.3Modified types

Modified API	Description of change
`typedef uint16_t CharEncodingType`	Formerly was a `UInt8`.

Table 122.4Modified #defines

Modified API	Description of change
`#define charEncodingDstBestFitFlag 0x8000`	Formerly had a value of `0x80`.
`#define maxCharBytes 4`	Formerly had a value of 3.

Unchanged APIs

Table 122.5Unchanged functions

TxtByteAttr()	TxtCharEncoding()
TxtCharIsValid()	TxtEncodingName()
TxtMaxEncoding()	TxtNameToEncoding()
TxtParamString()	TxtStrEncoding()

Table 122.6Unchanged macros

sizeOf7BitChar()	TxtCharIsAlNum()
TxtCharIsAlpha()	TxtCharIsCntrl()
TxtCharIsDelim()	TxtCharIsDigit()
TxtCharIsGraph()	TxtCharIsHardKey()
TxtCharIsHex()	TxtCharIsLower()
TxtCharIsPrint()	TxtCharIsPunct()
TxtCharIsSpace()	TxtCharIsUpper()
TxtCharIsVirtual()	TxtNextCharSize()
TxtPreviousCharSize()	

Table 122.7Unchanged structures

TxtConvertStateType

Table 122.8Unchanged types

TranslitOpType

Table 122.9Unchanged #defines

byteAttrFirst	byteAttrHighLow
byteAttrLast	byteAttrMiddle
byteAttrSingle	byteAttrSingleLow
charAttrAlNum	charAttrAlpha
charAttr_BB	charAttr_CN
charAttrCntrl	charAttrDelim
charAttr_DI	charAttrGraph
charAttr_LO	charAttrPrint
charAttr_PU	charAttr_SP
charAttrSpace	charAttr_UP
charAttr_XA	charAttr_XD
charAttr_XS	charEncodingHasDoubleByte
charEncodingHasLigatures	charEncodingOnlySingleByte
charEncodingRightToLeft	kTxtConvertStateSize
textSubstitutionEncoding	translitOpCustomBase
translitOpLowerCase	translitOpPreprocess
translitOpReserved2	translitOpReserved3
translitOpStandardBase	translitOpUpperCase
txtErrConvertOverflow	txtErrConvertUnderflow
txtErrMalformedText	txtErrNoCharMapping
txtErrTranslitOverflow	txtErrTranslitOverrun
txtErrTranslitUnderflow	txtErrUknownTranslitOp
txtErrUnknownEncoding	txtErrUnknownEncodingFallbackCopy

123

TextServicesMgr.h

Deleted APIs

Table 123.1Deleted macros

Deleted API	Use instead
TSM_TRAP()	

Table 123.2Deleted types

Deleted API	Use instead
TsmSelector	

Table 123.3Deleted #defines

Deleted API	Use instead
tsmDrawMode	
tsmFepCommitAction	
tsmFepHandleEvent	
tsmFepMapEvent	
tsmFepOptionsList	
tsmFepReset	
tsmFepTerminate	
tsmGetCurrentFep	
tsmGetCurrentFepCreator	

Table 123.3Deleted #defines *(continued)*

Deleted API	Use instead
tsmGetFepMode	
tsmGetSystemFep	
tsmGetSystemFepCreator	
tsmHandleEvent	
tsmInit	
tsmMaxSelector	
tsmSetCurrentFep	
tsmSetCurrentFepCreator	
tsmSetFepMode	
tsmSetSystemFep	
tsmSetSystemFepCreator	
USE_TSM_TRAPS	

Modified APIs

Table 123.4Modified functions

Modified API	Description of change
TsmFepModeType TsmGetFepMode (void)	
TsmFepModeType TsmSetFepMode (TsmFepModeType)	

Unchanged APIs

Table 123.5Unchanged types

TsmFepModeType

Table 123.6Unchanged #defines

`tsmFepModeCustom`	`tsmFepModeDefault`
`tsmFepModeOff`	`tsmFtrCreator`
`tsmFtrFlagsHasFep`	`tsmFtrNumFlags`

124

TimeMgr.h

The Time Manager APIs are largely unchanged in Palm OS Cobalt.

Modified APIs

Table 124.1Modified functions

Modified API	Description of change
`uint64_t TimGetTicks (void)`	Now returns an unsigned 64-bit integer, rather than an unsigned 16-bit integer.
`status_t TimSetSeconds (uint32_t)`	Now returns an error code if if the specified date and time is outside the range of dates and times that the device can handle.

Unchanged APIs

Table 124.2Unchanged functions

`TimGetSeconds()`	`TimInit()`

Table 124.3Unchanged #defines

`timErrMemory`

125

TraceMgr.h

Deleted APIs

Table 125.1Deleted #defines

Deleted API	Use instead
`TraceClose`	
`TraceInit`	

Unchanged APIs

Table 125.2Unchanged macros

`TraceDefine()`	`TraceOutput()`

Table 125.3Unchanged #defines

`TRACE_OUTPUT_OFF`	`TRACE_OUTPUT_ON`

126

UDAMgr.h

Deleted APIs

Table 126.1Deleted macros

Deleted API	Use instead
UDA_MGR_TRAP()	

Table 126.2Deleted #defines

Deleted API	Use instead
sysUdaControl	
sysUdaExchangeReaderNew	
sysUdaExchangeWriterNew	
sysUdaMemoryReaderNew	

Modified APIs

Table 126.3Modified structures

Modified API	Description of change
UDAFilterType	
UDAObjectType	
UDAReaderType	
UDAWriterType	

Unchanged APIs

Table 126.4Unchanged functions

UDAControl()	UDAExchangeReaderNew()
UDAExchangeWriterNew()	UDAMemoryReaderNew()

Table 126.5Unchanged macros

UDADelete()	UDAEndOfReader()
UDAFilterJoin()	UDAInitiateWrite()
UDAMoreData()	UDARead()
UDAWriterFlush()	UDAWriterJoin()

Table 126.6Unchanged structures

UDAFilterTag	UDAObjectTag
UDAReaderTag	UDAWriterTag

Table 126.7Unchanged types

UDABufferSize

Table 126.8Unchanged #defines

kUDAEndOfReader	kUDAMoreData
kUDAReinitialize	kUDAZeroTerminatedBuffer
udaErrControl	

Table 126.9Unchanged application-defined functions

`UDAControlFunction()`	`UDADeleteFunction()`
`UDAFlushFunction()`	`UDAReadFunction()`
`UDAWriteFunction()`	

127

UIColor.h

The UI Color Table APIs are essentially unchanged in Palm OS Cobalt.

Deleted APIs

Table 127.1Deleted functions

Deleted API	Use instead
`UIColorPopTable()`	Nothing. This function was documented as "System Use Only."
`UIColorPushTable()`	Nothing. This function was documented as "System Use Only."

Table 127.2Deleted enumerated types

Deleted API	Use instead
`UIColorTableEntries`	Formerly an enum this is now a typedef that accepts one of the values defined by the `UIColorTableEntriesTag` enum.

Unchanged APIs

Table 127.3Unchanged functions

`UIColorGetTableEntryIndex()`	`UIColorGetTableEntryRGB()`
`UIColorSetTableEntry()`	

128

UIControls.h

The UI Controls APIs are unchanged in Palm OS Cobalt.

Unchanged APIs

Table 128.1Unchanged functions

`UIBrightnessAdjust()`	`UIContrastAdjust()`
`UIPickColor()`	

Table 128.2Unchanged types

`UIPickColorStartType`

Table 128.3Unchanged #defines

`UIPickColorStartPalette`	`UIPickColorStartRGB`

129

UIResources.h

In order to deal with the fact that Palm OS Cobalt doesn't support a resource search chain, a number of functions now take an additional parameter through which you explicitly identify the resource database that contains a needed resource.

Deleted APIs

Table 129.1Deleted #defines

Deleted API	Use instead
`GenericLaunchErrAlert`	Create an application-specific alert.
`StrippedBaseLaunchErrAlert`	Create an application-specific alert.
`systemNameStrID`	

Modified APIs

Table 129.2Modified functions

Modified API	Description of change
`uint32_t ResLoadConstant (DmOpenRef, DmResourceID)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the constant to be loaded.
`FormType *ResLoadForm (DmOpenRef, DmResourceID)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the form to be loaded.

Table 129.2Modified functions

Modified API	Description of change
`MenuBarType *ResLoadMenu (DmOpenRef, DmResourceID)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the menu to be loaded.
`char *ResLoadString (DmOpenRef, DmResourceID, char *, size_t)`	Now contains an additional parameter through which you explicitly identify the resource database that contains the string to be loaded.

Table 129.3Modified #defines

Modified API	Description of change
`#define kbdRscType 'akbd'`	The value changed to reflect the fact that ARM-native keyboard resources are stored in little-endian format. 68K-style keyboard resources, in big-endian format, are now identified using the `kbdRscTypeBE16` constant.
`#define noteGraffitiCmd sysEditMenuGraffitiCmd`	Previously was `sysEditMenuKeyboardCmd`.
`#define noteViewMaxLength 0xffff`	Previously was 4096.
`#define wrdListRscType 'awrd'`	The value changed to reflect the fact that ARM-native word list resources are stored in little-endian format. 68K-style word list resources, in big-endian format, are now identified using the `wrdListRscTypeBE16` constant.

Unchanged APIs

Table 129.4Unchanged #defines

aboutDialog	aboutErrorStr
ainID	ainRsc
alertRscType	appInfoStringsRsc
appVersionAlternateID	appVersionID
BarBeamBitmap	BarCopyBitmap
BarCutBitmap	BarDeleteBitmap
BarInfoBitmap	BarPasteBitmap
BarSecureBitmap	BarUndoBitmap
binaryGeneralRscType	bitmapRsc
bsBitmapRsc	CategoriesEditDeleteButton
CategoriesEditForm	CategoriesEditList
CategoriesEditNewButton	CategoriesEditOKButton
CategoriesEditRenameButton	categoryAllStrID
categoryAllUsedAlert	categoryEditStrID
CategoryExistsAlert	categoryNewNameDialog
categoryNewNameField	categoryNewNameOKButton
CategoryTooLongAlert	ClipboardLimitAlert
colorTableRsc	ConfirmationCancelAlert
ConfirmationOKAlert	ConfirmationOKCancelAlert
constantRscType	defaultAppIconBitmap
defaultAppSmallIconBitmap	defaultCategoryRscType
DemoUnitAlert	DeviceFullAlert
ErrCancelAlert	ErrOKAlert

Table 129.4Unchanged #defines

ErrOKCancelAlert	exchangeLibraryInterfaceID
fontExtRscType	fontIndexType
fontRscType	formRscType
graffitiReferenceDialog	graffitiReferenceDoneButton
graffitiReferenceDownButton	graffitiReferenceFirstBitmap
graffitiReferenceUpButton	iconType
InfoCancelAlert	InfoOKAlert
InfoOKCancelAlert	launcherBatteryStrID
LowBatteryAlert	LowCradleChargedBatteryAlert
maxCategoryWidthID	menuCommandStrID
MenuRscType	MergeCategoryAlert
MergeCategoryNo	MergeCategoryYes
midiRsc	newNoteFontCmd
newNoteMenuID	newNotePhoneLookupCmd
NewNoteView	NoDataToBeamAlert
NoDataToSendAlert	noteBottomOfPageCmd
noteCopyCmd	noteCutCmd
NoteDeleteButton	NoteDoneButton
NoteDownButton	NoteField
noteFontCmd	NoteFontGroup
noteKeyboardCmd	NoteLargeFontButton
noteMenuID	notePasteCmd
notePhoneLookupCmd	NoteScrollBar
noteSelectAllCmd	noteSeparator

Table 129.4Unchanged #defines

NoteSmallFontButton	noteTopOfPageCmd
noteUndoCmd	NoteUpButton
NoteView	oemVersionID
phoneLookupAddStrID	phoneLookupFormatStrID
phoneLookupTitleStrID	PrivacyWarningAlert
privateRecordInfoAlert	RemoveCategoryAlert
RemoveCategoryNo	RemoveCategoryYes
secEnterPasswordAlert	secEnterPasswordCancel
secEnterPasswordOK	secGotoInvalidRecordAlert
secHideMaskRecordsCancel	secHideMaskRecordsOK
secHideRecordsAlert	secInvalidPasswordAlert
SecLockBitmap	SecLockHeight
SecLockWidth	secMaskRecordsAlert
secShowMaskedPrivatePermanentPassEntryAlert	secShowPrivatePermanentPassEntryAlert
SelectACategoryAlert	strListRscType
strRsc	sysEditMenuAddFepWord
sysEditMenuCopyCmd	sysEditMenuCutCmd
sysEditMenuGraffitiCmd	sysEditMenuID
sysEditMenuKeyboardCmd	sysEditMenuLookupWord
sysEditMenuPasteCmd	sysEditMenuSelectAllCmd
sysEditMenuSeparator	sysEditMenuUndoCmd
sysFatalAlert	sysNetworkProgress01Bitmap
sysNetworkProgress02Bitmap	sysNetworkProgress03Bitmap
sysNetworkProgress04Bitmap	sysNetworkProgress05Bitmap

Table 129.4Unchanged #defines

sysNetworkProgress06Bitmap	systemVersionID
UndoAlert	UndoCancelButton
verRsc	VeryLowBatteryAlert
VeryLowCradleChargedBatteryAlert	WarningCancelAlert
WarningOKAlert	WarningOKCancelAlert

130

VFSMgr.h

The VFS Manager APIs are largely unchanged.

Due to security and architectural requirements imposed by the new runtime model, Palm OS Cobalt doesn't support 68K-style file system plug-ins. Other changes in the file system plug-in architecture necessitated the removal of those functions used to mainpulate file system plug-ins. Because third-party applications were not likely to have been manipulating file system plug-ins, however, the removal of those functions should have little, if any effect on a applications.

Deleted APIs

Table 130.1Deleted functions

Deleted API	Use instead
`VFSInit()`	Nothing. This function was documented as "System Use Only" and should not have been used by applications.
`VFSInstallFSLib()`	Nothing. Applications cannot manipulate file system plug-ins in Palm OS Cobalt, version 6.0.
`VFSRemoveFSLib()`	Nothing. Applications cannot manipulate file system plug-ins in Palm OS Cobalt, version 6.0.

Table 130.2Deleted macros

Deleted API	Use instead
`VFSMGR_TRAP()`	Nothing. The VFS Manager is a standard part of the operating system in Palm OS Cobalt.

Table 130.3Deleted #defines

Deleted API	Use instead
`sysTrapVFSMgr`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`vfsMaxSelector`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`vfsMountClass_Simulator`	One of the other mount classes. Note that in Palm OS Cobalt there are now big-endian variants of the supported mount classes.
`vfsTrap...`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.

Modified APIs

Table 130.4Modified functions

Modified API	Description of change
`status_t VFSExportDatabaseToFile (uint16_t, const char *, DatabaseID)`	The card number parameter has been removed.
`status_t VFSExportDatabaseToFileCustom (uint16_t, const char *, DatabaseID, VFSExportProcPtr, void *)`	The card number parameter has been removed.
`status_t VFSImportDatabaseFromFile (uint16_t, const char *, DatabaseID *)`	The card number parameter has been removed.
`status_t VFSImportDatabaseFromFileCustom (uint16_t, const char *, DatabaseID *, VFSImportProcPtr, void *)`	The card number parameter has been removed.

Table 130.5Modified structures

Modified API	Description of change
`FileInfoType`	A reserved field has been added to this structure.
`VFSAnyMountParamType`	The `reserved` field is now named `size`.
`VFSPOSEMountParamType`	Two reserved fields have been added to this structure.

Table 130.6Modified #defines

Modified API	Description of change
`#define vfsMgrVersionNum ((uint16_t)300)`	Previously this had a value of 200.

Unchanged APIs

Table 130.7Unchanged functions

`VFSCustomControl()`	`VFSDirCreate()`
`VFSDirEntryEnumerate()`	`VFSFileClose()`
`VFSFileCreate()`	`VFSFileDBGetRecord()`
`VFSFileDBGetResource()`	`VFSFileDBInfo()`
`VFSFileDelete()`	`VFSFileEOF()`
`VFSFileGetAttributes()`	`VFSFileGetDate()`
`VFSFileOpen()`	`VFSFileRead()`
`VFSFileReadData()`	`VFSFileRename()`
`VFSFileResize()`	`VFSFileSeek()`
`VFSFileSetAttributes()`	`VFSFileSetDate()`
`VFSFileSize()`	`VFSFileTell()`
`VFSFileWrite()`	`VFSGetDefaultDirectory()`
`VFSRegisterDefaultDirectory()`	`VFSUnregisterDefaultDirectory()`
`VFSVolumeEnumerate()`	`VFSVolumeFormat()`
`VFSVolumeGetLabel()`	`VFSVolumeInfo()`
`VFSVolumeMount()`	`VFSVolumeSetLabel()`
`VFSVolumeSize()`	`VFSVolumeUnmount()`

Table 130.8Unchanged structures

VFSSlotMountParamType	VolumeInfoType

Table 130.9Unchanged types

FileOrigin	FileRef
VFSAnyMountParamPtr	

Table 130.10Unchanged #defines

vfsErrBadData	vfsErrBadName
vfsErrBufferOverflow	vfsErrDirectoryNotFound
vfsErrDirNotEmpty	vfsErrFileAlreadyExists
vfsErrFileBadRef	vfsErrFileEOF
vfsErrFileGeneric	vfsErrFileNotFound
vfsErrFilePermissionDenied	vfsErrFileStillOpen
vfsErrIsADirectory	vfsErrNameShortened
vfsErrNoFileSystem	vfsErrNotADirectory
vfsErrUnimplemented	vfsErrVolumeBadRef
vfsErrVolumeFull	vfsErrVolumeStillMounted
vfsFileAttrAll	vfsFileAttrArchive
vfsFileAttrDirectory	vfsFileAttrHidden
vfsFileAttrLink	vfsFileAttrReadOnly
vfsFileAttrSystem	vfsFileAttrVolumeLabel
vfsFileDateAccessed	vfsFileDateCreated
vfsFileDateModified	vfsFilesystemType_AFS
vfsFilesystemType_EXT2	vfsFilesystemType_FAT

Table 130.10Unchanged #defines *(continued)*

vfsFilesystemType_FFS	vfsFilesystemType_HFS
vfsFilesystemType_HFSPlus	vfsFilesystemType_HPFS
vfsFilesystemType_MFS	vfsFilesystemType_NFS
vfsFilesystemType_Novell	vfsFilesystemType_NTFS
vfsFilesystemType_VFAT	vfsFtrIDDefaultFS
vfsFtrIDVersion	vfsHandledStartPrc
vfsHandledUIAppSwitch	vfsInvalidFileRef
vfsInvalidVolRef	vfsIteratorStart
vfsIteratorStop	vfsModeAll
vfsModeCreate	vfsModeExclusive
vfsModeLeaveOpen	vfsModeRead
vfsModeReadWrite	vfsModeTruncate
vfsModeVFSLayerOnly	vfsModeWrite
vfsMountClass_POSE	vfsMountClass_SlotDriver
vfsMountFlagsReserved1	vfsMountFlagsReserved2
vfsMountFlagsReserved3	vfsMountFlagsReserved4
vfsMountFlagsReserved5	vfsMountFlagsUseThisFileSystem
vfsOriginBeginning	vfsOriginCurrent
vfsOriginEnd	vfsVolumeAttrHidden
vfsVolumeAttrReadOnly	vfsVolumeAttrSlotBased

Table 130.11Unchanged application-defined functions

VFSExportProcPtr()	VFSImportProcPtr()

131

Window.h

The Window Manager APIs themselves have changed little in Palm OS Cobalt, beyond some cleanup of APIs that were never intended for use by applications. The Palm OS windowing system has undergone a major redesign, however, and there are many new APIs to support the new design. See *Exploring Palm OS: User Interface* for a complete description of the Palm OS Cobalt windowing system.

NOTE: Early in the porting process you may want to `#include WindowCompatibility.h` (after the `#include` for `PalmOS.h`). This header file defines a number of APIs and macros that allow applications calling certain deleted functions and functions with modified prototypes to compile and run. This compatibility header should not be counted on long-term, however, so later in the porting process you should remove the `#include` and fix any problems that result.

Deleted APIs

Table 131.1Deleted functions

Deleted API	Use instead
`WinAddWindow()`	Nothing. This function was documented as "System Use Only."
`WinDisableWindow()`	Nothing. This function was documented as "System Use Only."
`WinDrawWindowFrame()`	Nothing. This function was documented as "System Use Only."
`WinEnableWindow()`	Nothing. This function was documented as "System Use Only."

Table 131.1Deleted functions *(continued)*

Deleted API	Use instead
`WinGetFirstWindow()`	There is nothing comparable to this function in the Palm OS Cobalt APIs.
`WinInitializeWindow()`	Nothing. This function was documented as "System Use Only."
`WinMoveWindowAddr()`	Nothing. This function was documented as "System Use Only."
`WinRemoveWindow()`	Nothing. This function was documented as "System Use Only."
`WinRestoreBits()`	
`WinSaveBits()`	
`WinScreenInit()`	Nothing. This function was documented as "System Use Only."
`WinSetConstraintsSize()`	`WinCreateWindowWithConstraints()`

Table 131.2Deleted macros

Deleted API	Use instead
`PINS_TRAP()`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`WinGetWindowHandle()`	Nothing. Windows are always referred to by their handle in Palm OS Cobalt.
`WinGetWindowPointer()`	Nothing. Windows are always referred to by their handle in Palm OS Cobalt.

Table 131.3Deleted structures

Deleted API	Use instead
`DrawStateFlagsType`	`WinGetScalingMode()`, `WinSetScalingMode()`. This is an internal structure in Palm OS Cobalt that is no longer exported.
`DrawStateType`	`WinPushDrawState()`, `WinPopDrawState()`, `WinSetDrawMode()`, `WinGetPatternType()`, `WinSetPatternType()`, `WinSetUnderlineMode()`, `FntSetFont()`,`WinGetPattern()`, `WinSetPattern()`, `WinSetForeColor()`, `WinSetBackColor()`, `WinSetTextColor()`, `WinSetForeColorRGB()`, `WinSetBackColorRGB()`, `WinSetTextColorRGB()`, `WinGetScalingMode()`, `WinSetScalingMode()`
`GraphicStateType`	Nothing. This structure should not have been used by applications.
`WindowFlagsType`	Various Window Manager functions. In Palm OS Cobalt this structure is not exposed to application developers.

Table 131.4Deleted types

Deleted API	Use instead
`WinPtr`	`WinHandle`. Windows are always referred to by their handle in Palm OS Cobalt.

Table 131.5Deleted #defines

Deleted API	Use instead
`pinFrm..., pinPIN..., pinStat..., pinSys..., pinWinSetConstraintsSize`	See "Patching Shared Libraries" on page 74 of *Exploring Palm OS: System Management* for information on function entry points.
`winDefaultDepthFlag`	Nothing. This flag was not documented and should not have been used by applications.
`winPaletteInit`	Nothing. This was always defined to be an internal-use-only operation.

Modified APIs

Table 131.6Modified functions

Modified API	Description of change
`status_t EvtGetPenNative (WinHandle, Coord *, Coord *, Boolean *)`	Now declared in `Event.h`, this function has been updated to return a status indication. In Palm OS Cobalt this function always returns `errNone`.

Table 131.7Modified structures

Modified API	Description of change
`WindowType`	The internals of this structure are now completely private.

Table 131.8Modified #defines

Modified API	Description of change
`#define kWinVersion 10`	Was 5.

Table 131.9Modified enumerated types

Modified API	Description of change
`PatternType`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `PatternTag` enum.
`UnderlineModeType`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `UnderlineModeTag` enum.
`WinDirectionType`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `WinDirectionTag` enum.
`WindowFormatType`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `WindowFormatTag` enum.
`WinDrawOperation`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `WinDrawOperationTag` enum. Note that some of the drawing operations are deprecated in Palm OS Cobalt; see "WinDrawOperation" on page 699 of *Exploring Palm OS: User Interface*, paying particular attention to the Compatibility section.
`WinLockInitType`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `WinLockInitTag` enum.
`WinScreenAttrType`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `WinScreenAttrTag` enum.
`WinScreenModeOperation`	Formerly an enum, this is now a typedef that accepts one of the values defined by the `WinScreenModeOperationTag` enum.

Unchanged APIs

Table 131.10Unchanged functions

WinClipRectangle()	WinCopyRectangle()
WinCreateBitmapWindow()	WinCreateOffscreenWindow()
WinCreateWindow()	WinDeleteWindow()
WinDisplayToWindowPt()	WinDrawBitmap()
WinDrawChar()	WinDrawChars()
WinDrawGrayLine()	WinDrawGrayRectangleFrame()
WinDrawInvertedChars()	WinDrawLine()
WinDrawPixel()	WinDrawRectangle()
WinDrawRectangleFrame()	WinDrawTruncChars()
WinEraseChars()	WinEraseLine()
WinErasePixel()	WinEraseRectangle()
WinEraseRectangleFrame()	WinEraseWindow()
WinFillLine()	WinFillRectangle()
WinGetActiveWindow()	WinGetBitmap()
WinGetBounds()	WinGetClip()
WinGetCoordinateSystem()	WinGetDisplayExtent()
WinGetDisplayWindow()	WinGetDrawWindow()
WinGetDrawWindowBounds()	WinGetFramesRectangle()
WinGetPattern()	WinGetPatternType()
WinGetPixel()	WinGetPixelRGB()
WinGetScalingMode()	WinGetSupportedDensity()
WinGetWindowExtent()	WinGetWindowFrameRect()
WinIndexToRGB()	WinInvertChars()

Table 131.10Unchanged functions *(continued)*

WinInvertLine()	WinInvertPixel()
WinInvertRectangle()	WinInvertRectangleFrame()
WinModal()	WinPaintBitmap()
WinPaintChar()	WinPaintChars()
WinPaintLine()	WinPaintLines()
WinPaintPixel()	WinPaintPixels()
WinPaintRectangle()	WinPaintRectangleFrame()
WinPaintRoundedRectangleFrame()	WinPaintTiledBitmap()
WinPalette()	WinPopDrawState()
WinPushDrawState()	WinResetClip()
WinRGBToIndex()	WinScaleCoord()
WinScalePoint()	WinScaleRectangle()
WinScreenGetAttribute()	WinScreenLock()
WinScreenMode()	WinScreenUnlock()
WinScrollRectangle()	WinSetActiveWindow()
WinSetBackColor()	WinSetBackColorRGB()
WinSetBounds()	WinSetClip()
WinSetColors()	WinSetCoordinateSystem()
WinSetDrawMode()	WinSetDrawWindow()
WinSetForeColor()	WinSetForeColorRGB()
WinSetPattern()	WinSetPatternType()
WinSetScalingMode()	WinSetTextColor()
WinSetTextColorRGB()	WinSetUnderlineMode()
WinUnscaleCoord()	WinUnscalePoint()

Table 131.10 Unchanged functions *(continued)*

WinUnscaleRectangle()	WinValidateHandle()
WinWindowToDisplayPt()	

Table 131.11 Unchanged macros

ECWinValidateHandle()	WinGetWindowBounds()
WinSetWindowBounds()	

Table 131.12 Unchanged structures

FrameBitsType	WinLineType

Table 131.13 Unchanged types

CustomPatternType	FrameType
IndexedColorType	WinHandle

Table 131.14 Unchanged #defines

boldRoundFrame	dialogFrame
DrawStateStackSize	grayHLinePattern
grayHLinePatternOdd	kBitmapScalingOff
kCoordinatesDouble	kCoordinatesNative
kCoordinatesOneAndAHalf	kCoordinatesQuadruple
kCoordinatesStandard	kCoordinatesTriple
kTextPaddingOff	kTextScalingOff
menuFrame	noFrame
noPattern	popupFrame
rectangleFrame	roundFrame

Table 131.14Unchanged #defines *(continued)*

simple3DFrame	simpleFrame
winErrPalette	winPaletteGet
winPaletteSet	winPaletteSetToDefault
WinUseTableIndexes	