Release Bulletin
PocketBuilder™ 2.0.2

1. Accessing current release bulletin information

A more recent version of this release bulletin might be available on the Web. To check for critical product or document information added after the release of the product CD, use the Sybase® Technical Library Product Manuals Web site.

❖ **Accessing release bulletins at the Technical Library Product Manuals Web site**

1   Go to Product Manuals at http://www.sybase.com/support/manuals/.

2   Follow the links to the appropriate Sybase product.

3   Select the Release Bulletins link.

4   Select the Sybase product version from the Release Bulletins list.

5   From the list of individual documents, select the link to the release bulletin for your platform. You can either download the PDF version or browse the document online.

2. Product summary

Sybase PocketBuilder™ is a smart-client application development tool for Windows CE platforms. It enables developers to build handheld applications in an object-centric, graphical, desktop environment, and then deploy them to a supported device or emulator.

PocketBuilder version 2.0.2 (Build 826) is compatible with the following desktop platform and operating system configurations:

• Microsoft Windows 2000 with Service Pack 2 or later

• Microsoft Windows XP

The principle runtime platform for applications that you develop with PocketBuilder is Windows Mobile 2003 Second Edition (Windows Mobile 2003 SE) on Pocket PC and Smartphone devices. Some support is also provided for other Windows CE 3.x and 4.x devices. Device and emulator support is listed in "Device and emulator support" on page 4.

New features are described in "Changed functionality in this version" on page 6. For a high-level product summary, see *Introduction to PocketBuilder* for PocketBuilder 2.0.

2.1 Version contents

2.1.1 Software used for database connection

PocketBuilder 2.0.2 has been tested with SQL Anywhere Studio® versions 9.0.1 and 9.0.2. The SQL Anywhere Studio setup includes Adaptive Server® Anywhere (ASA), a transaction-based, relational SQL database for the desktop and for Windows CE platforms. It also includes UltraLite®, a relational database expressly designed for small mobile and embedded devices. The PocketBuilder 2.0.2 Database painter requires the UltraLite version that ships with SQL Anywhere Studio 9.0.2. You must use the UltraLite version that ships with SQL Anywhere Studio 9.0 or 9.0.1 with PocketBuilder 2.0.1.

The developer edition of SQL Anywhere Studio 9.0.1 is part of the PocketBuilder 2.0 installation. You can obtain SQL Anywhere Studio 9.0.2 from the EBFs/Maintenance Web page of the Sybase download site at http://www.sybase.com/downloads.

2.1.2 Software used for database synchronization

PocketBuilder is integrated with MobiLink software, which can be used for two-way database synchronization between a mobile remote database and a central consolidated database. You can install MobiLink from the SQL Anywhere Studio 9.0.1 or 9.0.2 installation program.

2.1.3 Generic skins for the Window painter

The PocketBuilder 2.0.2 setup program installs files for generic skins that you can use in the Window painter to frame the windows you create at design time. The *Generic_Phone_Skin.xml* file lets you display windows in a generic Smartphone skin and the *Generic_PPC_Skin.xml* file lets you display windows in a generic Pocket PC skin. The setup program installs these files in the *PocketBuilder Support\IDE_Skins* directory. You can select a skin on the General page of the Options dialog box that you open from the Window painter's Design>Options menu.

2.2 Deployment and debugging support

2.2.1 Device and emulator support

PocketBuilder includes virtual machines (VMs) for deployment to Pocket PC and Smartphone devices and emulators with any of the following operating systems:

• arm for ARM- and XScale-based devices supporting either Microsoft Windows CE 2002 or the Windows Mobile 2003 SE operating system

  Supported devices include HP iPaq, Dell Axim, Toshiba e740, and Symbol PPT-8800.

• sparm for Smartphone 2003

  Supported devices include Audiovox 5600, SPV C500, and Motorola MPx.

• x86 for the Microsoft Pocket PC 2002 and Pocket PC 2003 emulators

• spx86 for Microsoft Smartphone 2003 emulators

You can download the supported emulators from links on the Microsoft Mobile and Embedded Application Developer Center at http://msdn.microsoft.com/mobility/downloads/sdks/default.aspx.

2.2.2 Debugging support

Debugging support for PocketBuilder applications is currently available only for the desktop.

3. Special installation instructions

3.1 Installing on the desktop

The PocketBuilder 2.0.2 setup program is packaged in a zip file that you can obtain from the Sybase Web site and save to your hard drive.

You must install PocketBuilder 2.0.2 on top of an existing installation of PocketBuilder 2.0 or 2.0.1. For information on installing PocketBuilder 2.0, see the *Installation Guide* for PocketBuilder 2.0. Use the following procedure to install PocketBuilder 2.0.2:

❖ **Installing PocketBuilder 2.0.2 on the desktop**

1 Go to the Sybase product download site at http://www.sybase.com/downloads.

2 Click the EBFs/Maintenance link under the list of downloads.

   If you are not logged in to MySybase, a login page will display. The login page includes a Sign Me Up button link to open a MySybase account if you do not already have one. In some cases you are required to click Yes in a Securities Alert dialog box to continue to the download page after you log in. The EBFs/Maintenance download page displays a list of Sybase product families.

3 Click PocketBuilder in the list of Sybase product families.

4 Click PocketBuilder 2.0.2 (826) EBF Release.

5 Select the I Agree check boxes and click Continue on the license agreement page.

6 Click the *PocketBuilder202_826.ZIP* file in the File list.

7 Click Save in the File Download dialog box, then select a directory on your hard drive where you want to save the zip file and click Save.

8 Extract the *PocketBuilder202_826.ZIP* file to a temporary directory.

   The extracted files include the setup program file, *Setup.exe*.

9 Run the *Setup.exe* file.

10 Select Install and click Next.

   The setup program installs (or reinstalls) PocketBuilder 2.0.2.

11 Click Finish.

12 (Optional) Delete all the files you extracted to the temporary directory in Step 8.

3.2 Installing on a device or emulator

If you do not install PocketBuilder directly to a Pocket PC or Smartphone device when you run the setup program, you can manually copy and run CAB files that are installed in the *PocketBuilder 2.0\WinCE* directory, or you can use the Start menu item for installing PocketBuilder to a Windows CE device.

The setup program places the following CAB files in the *PocketBuilder 2.0\WinCE* directory, overwriting earlier versions of the CAB files if necessary:

*   *PocketBuilder.ARM.CAB* for Pocket PC 2002 or 2003 devices

*   *PocketBuilder.X86.CAB* for Pocket PC 2002 or 2003 emulators

*   *SP_PocketBuilder.ARM.CAB* for Smartphone Windows Mobile 2003 devices

*   *SP_PocketBuilder.X86.CAB* for Smartphone Windows Mobile 2003 emulators

*   *BW_PocketBuilder.ARM.CAB* for WinCE 3.x and 4.x, and WinCE .NET devices

*   *BW_PocketBuilder.X86.CAB* for WinCE 3.x and 4.x, and WinCE .NET emulators

To manually install PocketBuilder 2.0.2 to a device or emulator, you must copy the appropriate CAB file to the device or emulator, then run the CAB file.

4. Changed functionality in this version

4.1 Enhanced system functions for file reading and writing

Enhanced system functions

In PocketBuilder 2.0.2, system functions FileReadEx and FileWriteEx supercede the FileRead and FileWrite functions, although support for FileRead and FileWrite is retained for backward compatibility.

FileRead and FileWrite have a 32,765 character limit on the amount of data that can be read or written in a single function call. The FileReadEx and FileWriteEx functions do not have this limitation.

The new functions retain the same arguments as the functions they supercede, but return a long datatype instead of an integer. The first argument for the FileReadEx and FileWriteEx functions is the integer assigned to the file that you open for reading or writing. The second argument is the name of the string or blob variable into which you want to read or write the data.

Dependence on file mode

Whether you use the old or new functions, the mode in which you open a file determines the behavior of the functions used to read and write to a file.

When a file has been opened in line mode, each call to the FileRead or FileReadEx function reads until it encounters a carriage return (CR), line feed (LF), or end-of-file mark (EOF). Each call to FileWrite or FileWriteEx adds a CR and LF at the end of each string it writes. Line mode is not supported when reading from or writing to blobs.

When a file has been opened in stream mode, a call to FileRead reads the whole file (until it encounters an EOF) or 32,765 bytes, whichever is less. FileWrite writes a maximum of 32,765 bytes in a single call and does not add CR and LF characters. A byte size of 32,765 does not cause termination of the FileReadEx or FileWriteEx calls.

FileReadEx examples

This example reads the file *EMP_DATA.TXT* into a string in line mode:

```
integer li_FileNum
long ll_bytes

li_FileNum = FileOpen("C:\HR\EMP_DATA.TXT", &
   LineMode!)
   FileReadEx(li_FileNum, ls_Emp_Input)
END IF
```

This example reads the file *EMP_PIC1.BMP* and stores the data in the blob *Emp_Id_Pic*. The number of bytes read is stored in *ll_bytes*:

```
integer li_fnum
long ll_bytes
blob Emp_Id_Pic

li_fnum = FileOpen("C:\HR\EMP_PIC1.BMP", StreamMode!)
ll_bytes = FileReadEx(li_fnum, Emp_Id_Pic)
```

FileWriteEx examples

This script excerpt opens *EMP_DATA.TXT* and writes the string New Employees on a new line at the end of the file. The variable *li_FileNum* stores the number of the opened file:

```
integer li_FileNum
li_FileNum = FileOpen("C:\HR\EMP_DATA.TXT", &
        LineMode!, Write!, LockWrite!, Append!)
FileWriteEx(li_FileNum, "New Employees")
```

The following example reads a blob from the database and writes it to a file. The SQL SELECT statement assigns the picture data to the blob *Emp_Id_Pic*. Then FileOpen opens a file for writing in stream mode and FileWriteEx writes the blob to the file:

```
integer li_FileNum
blob emp_id_pic
SELECTBLOB salary_hist INTO  : emp_id_pic
    FROM Employee WHERE Employee.Emp_Num = 100
    USING Emp_tran;
li_FileNum = FileOpen("C:\EMPLOYEE\EMP_PICS.BMP", &
    StreamMode!, Write!, Shared!, Replace!)
FileWriteEx(li_FileNum, emp_id_pic)
```

4.2 Afaria support in Enhanced CAB Generation tool

The Enhanced CAB Generation tool now contains a tab page for deploying an application to an Afaria® software channel. You can select the following items on the Afaria tab page.

Table 1: Fields on the Afaria page of the Enhanced CAB Generation tool

Field	Description
Afaria UNC path	Universal Naming Convention (UNC) location where the software for the Afaria channel resides. You should refresh the channel contents after deploying any files.
Deploy CAB	Select this check box to deploy a CAB file.
File Name	Select the CAB file that you want to deploy to an Afaria channel.
Deploy Files	Select this check box to deploy application files not packaged in a CAB file.
File Path	Select the path containing the application files you want to deploy.
File Types to Include	List the file types in the selected file path that you want to copy. By default, files with EXE, PKD, JPG, GIF, and INI extensions are copied to the Afaria channel.

Field	Description
Copy button	Click this button to copy the selected source file or files to the designated Afaria channel. The names and locations of the files that you copy display in the untitled list box below the Copy button.
Clear button	Click this button to clear information from the untitled list box.

4.3 Support for multiple users in UltraLite databases

PocketBuilder 2.0.2 allows you to add or edit multiple users of UltraLite databases. UltraLite permits a maximum of four user IDs per database. For UltraLite database profiles, you can use the pop-up menu for the new Users item in the Objects view of the Database painter to add or edit users, and to delete users.

When you select Add or Edit User from the User item pop-up menu for an UltraLite database, or when you select Delete User, you should already know which user IDs exist in the database. If you select either of these menu items, the Properties view displays. The Properties view has three text boxes (User, New Password, and Confirm New Password) when you select Add or Edit User, and a single text box (UltraLite User to Delete) when you select Delete User.

After you save changes in the Database painter involving user maintenance for an UltraLite database, the Output view displays a message with the type of change you made.

4.4 New code example applications

The PocketBuilder 2.0.2 setup program installs new code example applications in the PocketBuilder *Code Examples\Misc* directory. The new applications are accessible from the *Kiosk_Sample.pkt*, *PictureDrawing.pkt*, *Run At.pkt*, and *SystemTray.pkt* target files. Other code example applications have been enhanced. For more information about these applications, see the *readme.html* file in the *Code Examples* directory.

4.5 Updated certificate file for handheld device

The certificate used to sign the Sybase PocketBuilder DLLs expires every year. The PocketBuilder 2.0.2 setup program installs a modified *PK_AddCerts.xml* file that references Sybase certificates that are valid until June 2006. This replaces the PocketBuilder 2.0.1 file of the same name that references certificates that expired in June 2005. If you do not install the new file on a handheld device and attempt to run a signed application, PocketBuilder returns an error message telling you that the security signature for the PocketBuilder VM cannot be accepted.

You can install the new *PK_AddCerts.xml* file on a connected handheld device using the Device Certificate Management tool on the Tool tab of the New dialog box.

For more information on deploying certificates to a connected device, see the chapter on packaging and distributing an application in the *User's Guide* or the "Support for certificate management on Windows CE devices" topic in the What's New in PocketBuilder 2.0.1 in the online Help.

4.6 Fixed issues in PocketBuilder 2.0.2

The current release of PocketBuilder resolves multiple issues discovered in earlier releases.

For information about fixed change requests (CRs) in this release, see the fix list HTML file contained in the *PK202_826.ZIP* file you download from the PocketBuilder download site at http://downloads.sybase.com. The fix list HTML file is also available from the PocketBuilder download site as a separate file.

5. Known problems

5.1 Emulator issues

5.1.1 Default shutdown of Pocket PC or Smartphone emulators

By default, when you shut down a Pocket PC 2002, Pocket PC 2003, or Smartphone 2003 emulator, the emulator does not save its state. You lose any files you exported to the emulator prior to the shutdown, including the PocketBuilder VM.

To avoid this, you must select Save Emulator State after you click the Emulator>Shut Down menu item. If you shut down the emulator without saving its state, you need to re-export the CAB file with the PocketBuilder VM to the Windows directory on the emulator, then run the CAB file again.

5.1.2 Default memory configuration on the supported Pocket PC emulators

If you run ASA applications on the Pocket PC 2002 emulator, you must change the default memory configuration. You can increase the memory available to the emulator by increasing the Memory value for the following registry key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows CE Tool\
Platform Manager\
{F384D888-F9AA-11D1-BB9E-00A0C9C9CCEE}\
{DE9660AC-85D3-4C63-A6AF-46A3B3B83737}\
{F384D894-F9AA-11D1-BB9E-00A0C9C9CCEE}\
{67C8D913-F0CF-486A-8CF0-CE7D116225E8}
```

There is a similar, but different, setting for the Pocket PC 2003 emulator. Sybase recommends that you increase this value from 16MB to 64MB.

5.2 PocketBuilder issues

5.2.1 Enabling Manual Result Set with a Stored Procedure data source

During the creation of a DataWindow using the Stored Procedure data source, selecting the Manual Result Set option in the Select Stored Procedure wizard page produces a wizard page that is blank except for an unlabeled command button on the top left corner of the page. Click the Cancel button on the blank page instead of Next or Back. Clicking Next or Back on the blank wizard page can cause the wizard to fail or PocketBuilder to crash. [CR 380430]

5.2.2 Selecting functions in Profiling Class View tool

Selecting a function in the Profiling Class View tool when the function script exceeds approximately 1000 characters (Windows 2000) or 1800 characters (Windows XP) can cause PocketBuilder to crash. After you view a function in the Profiling Class View tool, modifying or adding a comment to the same function in the Function painter and attempting to save the modified function can also cause PocketBuilder to crash. [CR 380153 and CR 380154]

5.2.3 Creating a DataWindow with Quick Select data source and a new database

Creating a new DataWindow using the Quick Select data source and a newly created ASA database causes the DataWindow creation wizard to fail. The error message indicates a syntax error or access violation. You can work around this by exiting and restarting PocketBuilder after creating the database. [CR 380151]

5.2.4 Deleting a custom visual object associated with a tab control

If you insert a custom visual object on a tab control and subsequently delete the window containing the tab control, you must restart PocketBuilder before you can successfully delete the custom visual object. If you attempt to delete the custom visual object without restarting PocketBuilder, an error message indicates that the custom visual object or one of its descendants is open in another painter—even if no painters are open at the time. [CR 370801]

5.2.5 DialingDirectory object functions

The UpdateEntry function currently works for a SIM directory only, not for a POOM directory. The AddEntry function is not currently implemented for either a SIM or a POOM directory. [CR 371011]

5.2.6 Smartphone CAB files do not include DLL for ODBC connections

Because Smartphone applications typically use UltraLite, the CAB files you generate from the Project painter for deploying applications to a Smartphone device or emulator do not include the *PKODB20.DLL* file required for ODBC database connections. If you use an ODBC connection to an ASA database in an application, you must manually copy the *PKODB20.DLL* file or use the Enhanced CAB Generation tool to create the CAB file.

If you create the CAB file with the Project painter, you can copy the *PKODB20.DLL* file from the PocketBuilder 2.0\WinCE\sparm directory to the Smartphone device where you deploy your application, or from the PocketBuilder 2.0\WinCE\spx86 directory to a Smartphone emulator. If you use the Enhanced CAB Generation tool, you must select the Include PocketBuilder Support DLLs check box on the PocketBuilder Options tab page.

UltraLite connections do not require the *PKODB20.DLL* file. The *PKUL20.DLL* file required for UltraLite connections is included automatically in the CAB files you generate from the Project painter. [CR 371146]

5.2.7 Calling a deeply recursive function can cause a stack overflow

The Windows CE platform does not have any built-in protection to manage memory during calls to recursive functions (functions that call themselves). Calls to deeply recursive functions can cause the operating system to crash due to stack overflow. [CR 322465]

5.2.8 Writing to a file with the SetProfileString function

You can write to a file with the SetProfileString function, but only if the file name you pass in the first function argument refers to a file that already exists and is a valid Unicode file. A valid Unicode file must have at least one character written to the file.

The following code sample uses regular file functions to create a valid Unicode file by adding a comment to the top of the file:

```
integer li_file
integer li_ret
li_file = FileOpen(gs_FileName,  LineMode!,  Write!, &
    LockWrite!,  Replace!)
li_ret = FileWrite( li_file, "; my comment" )
FileClose(li_file)
```

The ProfileInt and ProfileString functions also require references to valid Unicode files. [CR 328631]

5.2.9 Restarting a debugging session

When you debug an application for the second time in the same PocketBuilder session, certain actions, such as changing a watch variable, can cause PocketBuilder to crash. You can avoid crashes by closing and restarting PocketBuilder before running the debugger a second time. [CR 325369]

6. Product compatibilities

6.1 SQL Anywhere Studio

PocketBuilder 2.0.2 has been tested with Sybase SQL Anywhere Studio 9.0.1; however, you can also use Sybase SQL Anywhere Studio 8.0.2 Build 4229 or later for database and MobiLink integration support. UltraLite support is available only with version 9 or greater.

6.2 ActiveSync software

Microsoft ActiveSync is required for transferring applications to your mobile device. ActiveSync 3.8 is available as a free download on the Microsoft Web site at http://www.microsoft.com/mobile/pocketpc/downloads/default.asp.

7. Documentation updates and clarifications

7.1 PocketBuilder 2.0.2 collection

PocketBuilder documentation is available on the Sybase InfoCenter Web site at http://infocenter.sybase.com/help/index.jsp. The PocketBuilder 2.0.2 collection includes PocketBuilder 2.0.1 versions of the *User's Guide*, the *PowerScript Reference*, and *Objects and Controls* and PocketBuilder 2.0 versions of *Introduction to PocketBuilder*, *Resource Guide*, *Connection Reference*, and *DataWindow Reference*.

7.2 Online Help for PocketBuilder 2.0.2

Online (Windows) Help has been updated for PocketBuilder 2.0.2. It is included in the download ZIP file. The new Help file includes information from the current release bulletin.

The compiled HTML Help file has not been updated from the PocketBuilder 2.0.1 release.

8. Migration information

Migration of a Pocket PowerBuilder 1.x application occurs automatically when you open the application in PocketBuilder 2.0.2. No migration is required for PocketBuilder 2.0 or 2.0.1 applications.

8.1 Conversion of PowerBuilder applications

You can use the Import Pocket to CE wizard to convert an existing PowerBuilder 7, 8, 9, or 10 application to a PocketBuilder 2.0.2 application. For more information, see Appendix B in the PocketBuilder *User's Guide*.

9. Technical support

Each Sybase installation that has purchased a support contract has one or more designated people who are authorized to contact Sybase Technical Support. If you have any questions about this installation or if you need assistance during the installation process, ask the designated person to contact Sybase Technical Support or the Sybase subsidiary in your area.

10. Other sources of information

Use the Sybase Getting Started CD, the SyBooks™ CD, and the Technical Library Product Manuals Web site to learn more about your product.

- The Getting Started CD contains release bulletins and installation guides in PDF format and may also contain other documents or updated information not included on the SyBooks CD. It is included with your software. To read or print documents on the Getting Started CD you need Adobe Acrobat Reader, which is downloadable at no charge from the Adobe Web site, using a link provided on the CD.

- The SyBooks CD contains product manuals and is included with your software. The Eclipse-based SyBooks browser allows you to access technical information about your product in an easy-to-use format.

- The Technical Library Product Manuals Web site is an HTML version of the SyBooks CD that you can access using a standard Web browser. In addition to product manuals, you will find links to the Technical Documents Web site (replacement for the Tech Info Library), the Solved Cases page, and Sybase newsgroups.

    To access the Technical Library Product Manuals Web site, go to Product Manuals at http://www.sybase.com/support/manuals/.

10.1 Sybase certifications on the Web

Technical documentation at the Sybase Web site is updated frequently.

❖ **Finding the latest information on product certifications**

1 Point your Web browser to Technical Documents at http://www.sybase.com/support/techdocs/.

2 Select Products from the navigation bar on the left.

3 Select a product name from the product list and click Go.

4   Select the Certification Report filter, specify a time frame, and click Go.

5   Click a Certification Report title to display the report.

❖   **Creating a personalized view of the Sybase Web site (including support pages)**

Set up a MySybase profile. MySybase is a free service that allows you to create a personalized view of Sybase Web pages.

1   Point your Web browser to Technical Documents at http://www.sybase.com/support/techdocs/.

2   Click MySybase and create a MySybase profile.

10.2 Sybase EBFs and software maintenance

❖   **Finding the latest information on EBFs and software maintenance**

1   Point your Web browser to the Sybase Support Page at http://www.sybase.com/support.

2   Select EBFs/Maintenance. If prompted, enter your MySybase user name and password.

3   Select a product.

4   Specify a time frame and click Go. A list of EBF/Maintenance releases is displayed.

Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as a Technical Support Contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click Edit Roles to add the "Technical Support Contact" role to your MySybase profile.

5   Click the Info icon to display the EBF/Maintenance report, or click the product description to download the software.