

# **Release Notes For SoftBench 6.80**

**Edition 1**



**Manufacturing Part Number: 5185-4320**

**December 2001**

U.S.A.

© Copyright 2001 Hewlett-Packard Company.

---

## Legal Notices

The information in this document is subject to change without notice.

Hewlett-Packard makes no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be liable for errors contained herein or direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Warranty. A copy of the specific warranty terms applicable to your Hewlett-Packard product and replacement parts can be obtained from your local Sales and Service Office.

Copyright © 2000 Hewlett-Packard Company.

This document contains information which is protected by copyright. All rights are reserved. Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws.

Hewlett-Packard Company  
3000 Hanover Street  
Palo Alto, CA 94304 U.S.A.

Restricted Rights Legend. Use, duplication or disclosure by the U.S. Government Department of Defense is subject to restrictions as set forth in paragraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause in DFARS 252.227-7013.

Rights for non-DOD U.S. Government Departments and Agencies are as set forth in FAR 52.227-19(c)(1,2).

Use of this manual and compact disc(s) supplied for this pack is restricted to this product only. Additional copies of the programs may be made for security and back-up purposes only. Resale of the programs in their present form or with alterations, is expressly prohibited.

Copyright © 1994 X/Open Company Limited.

UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company Limited.

Copyright © 1980, 1984, 1986 Novell, Inc.

Copyright © 1979, 1980, 1983, 1985-1990 Regents of the University of California.  
This software is based in part on the Fourth Berkeley Software Distribution under license from the Regents of the University of California.

Copyright © 1985-1997 Free Software Foundation, Inc.  
Copyright © 1990-1994 Lucid, Inc.

Copyright © 1993-1997 Sun Microsystems, Inc. All Rights Reserved.

Copyright © 1994-1996 Board of Trustees, University of Illinois.

Copyright © 1995-1996 Ben Wing.

Copyright © 1988-1997 GLOBEtrotter Software, Inc.

GLOBEtrotter and FLEXIm are registered trademarks of GLOBEtrotter Software, Inc.



# 1 Release Notes For SoftBench 6.80

## Announcements

SoftBench 6.X is the latest version of HP's premier Integrated Development Environment for C and C++ software developers. This version of SoftBench provides the same tight integration (editing, building, debugging) that has always been available from SoftBench. SoftBench 6.X also offers several innovative features:

- The SoftBench project model helps you group important information together and reduce the overall complexity of your software projects.
- SoftBench 6.30 and later does not require or provide network licensing.
- The SoftBench code analysis tool (CodeAdvisor), the SoftBench Software Developer's Kit (SDK), and the SoftBench Configuration Management tool (SoftBench CM) are now bundled with SoftBench:

C SoftBench includes SoftBench CM.

C++ SoftBench includes SoftBench CM, CodeAdvisor, and the SoftBench SDK.

- Blinklink has been removed from SoftBench. It is no longer bundled with the SoftBench compilers.
- The HP-PAK (Puma) performance analyzer has been removed from SoftBench.
- The WDB-GUI debugger is now bundled with SoftBench.
- Support for HP-UX 11i is included in SoftBench 6.60.01 and later.
- ClearCase is integrated into SoftBench 6.70 and later releases. See "Compatibility Information and Installation Requirements" on page 11 for details.
- The Static Analyzer parser has been upgraded to match Version C.03.30 of the aC++ compiler.
- The Static Analyzer has been enhanced to display Public, Private, and Protected members of all classes in a fileset.

## What's in this Version

SoftBench 6.X is a visual development environment for C and C++ professionals who are developing software for HP-UX.

- **Benefits** — The SoftBench 6.X environment offers a number of ways to develop software more effectively:
  - **Natural Interaction with the Development Environment:** Version 6.X introduces a different use model to SoftBench users - The Project Model. Developers can now organize their work in a way that naturally reflects the underlying structure of their applications.
  - **Increased Productivity through “Complete” Tool Integration:** Complete integration, both in terms of breadth and depth! Building upon the Project Model, version 6.X provides tools for each step of the software development lifecycle - editing, building, debugging, analysis, and management. All tools are integrated by way of SoftBench's sophisticated messaging framework.
  - **Shorter Learning Curve:** The graphical nature of SoftBench makes it easy for new or experienced developers to create value-added software without being concerned about the underlying system.
  - **Extensibility:** You can integrate your favorite development tools into the SoftBench environment, just as the pre-configured tools are, by using the SoftBench Software Developers Kit.
- **Features** — SoftBench 6.X offers the following features:
  - **The Project Tool:** The Project Tool is the focal point of interaction in SoftBench 6.X. The Project Tool replaces the Toolbar and Program Builder found in previous versions of SoftBench. Using the Project Tool, developers organize their source files into logical projects. Other SoftBench tools then operate on projects as self-contained units.
  - **Extended Support for the HP aC++ compiler:** HP's latest compiler, HP aC++, conforms to the latest draft specifications from the ANSI C++ committee. SoftBench 6.X supports the HP aC++ compiler with all SoftBench tools, including the Static Analyzer and CodeAdvisor.
  - **CodeAdvisor:** CodeAdvisor has been enhanced to scan for over 1500 types of potential programming errors. CodeAdvisor is bundled with C++ SoftBench 6.X.

- **SoftBench CM:** SoftBench CM is ideal for managing geographically dispersed development teams. Unlike other configuration management systems, SoftBench CM requires no additional infrastructure and there is no need for a dedicated configuration management administrator. SoftBench CM is bundled with both C and C++ SoftBench.
- **Integrated XEmacs Editor:** SoftBench 6.X uses XEmacs as its default source code editor. XEmacs provides the latest capabilities necessary for effective editing, such as language-sensitive color coding and auto-indenting.
- **Licensing not required:** Embedded license management (FLEXlm) has been removed from SoftBench 6.30 and later. In some cases (internal software audits), SoftBench customers may require a solution for tracking the concurrent usage. There are independent software vendors (ISVs) who provide products that “ride on top of” unlicensed software applications, keeping track of concurrent users and enforcing license limits. As a convenience, a list of several ISVs and their products is provided below. HP in no way endorses or supports any of the products from these ISVs.
  - FLEXwrap from GLOBEtrotter Software - [www.globetrotter.com](http://www.globetrotter.com)
  - SentinelTrack from Rainbow Technologies (SentinelTrack was previously LicenseTrack from Wyatt River Software - Rainbow Technologies purchased Wyatt in March 1998) - [www.rainbow.com](http://www.rainbow.com)
  - KeyServer from Sassafras Software - [www.sassafras.com](http://www.sassafras.com)
- **Recursive Makefile Generation Available:** The Generate Makefile dialog box supports a recursive build or “nightly” build to generate Makefiles for an entire hierarchy of projects.
- **Compatibility of SoftBench 6.X with Previous Versions:** The SoftBench 6.X Project Model is a complete departure from the way previous versions of SoftBench organized and interacted with development activities. Do not mix and match SoftBench 6.X with SoftBench 5.X or older versions.

## Known Problems and Workarounds

This section describes known problems in SoftBench 6.80. For the latest list of problems and workarounds, refer to the URL:

<http://www.devresource.hp.com/softbench/>

Before running SoftBench 6.80, you should be aware of the following problems and workarounds:

### The HP cfront-based C++ compiler has been removed from SoftBench

The HP cfront-based C++ compiler (HP C-Plus-Plus) is no longer bundled with SoftBench. If you already have the HP cfront-based C++ compiler, you can still use it with SoftBench on HP-UX 10.20 or 11.0x.

SoftBench does not support the HP cfront-based C++ compiler on HP-UX 11i.

In order to restore the SoftBench cfront configuration files, do the following:

1. Login as root. (You must have root permissions to perform each “cp”.)
2. `cp -p /opt/softbench/contrib/cfront/packages/sys.Packages.Cfront \`  
`/opt/softbench/config/softbuild/packages`
3. `cp -p /opt/softbench/contrib/cfront/transforms/sys.Transforms.Cfront \`  
`/opt/softbench/config/softbuild/transforms`
4. `cp -p /opt/softbench/contrib/cfront/bin/CC /opt/softbench/bin`
5. `cp -p /opt/softbench/contrib/cfront/compiler_info/CC \`  
`/opt/softbench/config/compiler_info`



- **SoftBench XEmacs and .emacs Files**

Not all .emacs files are compatible with XEmacs. Because of this, SoftBench XEmacs does not automatically load .emacs files. If a .emacs file is detected, SoftBench XEmacs displays a button labeled “Load .emacs”. This button may be hard to see, depending on how colors are defined in your XEmacs environment.

You can modify this behavior by setting the environment variable “SB\_LOAD\_DOT\_EMACS”. If it is set to “TRUE”, the .emacs file will be automatically loaded, and if it is set to “FALSE”, the file is not loaded. Also, if you want to load an alternate file, you can set the variable to the name of the file you want to load. A help window is displayed until this variable is set.

- **euro Compliance**

SoftBench supports the euro symbol. Before using the euro symbol on HP-UX 10.20 or 11.0, you need to install the euro operating system patches. There are no patches required to use the euro symbol with SoftBench on HP-UX 11i.

The following problems were discovered during SoftBench euro testing:

- SoftBench Xemacs Editor handles the euro symbol correctly for all manipulations, but does not display the euro symbol correctly.
- SoftBench Static Analyzer fails to find the euro symbol when it is the only item in a search string. Static Analyzer will find the euro symbol when it is included with other items in a search string.
- SoftBench project names cannot contain the euro symbol because it is interpreted as a non-alphanumeric character.
- The target graph replaces the euro symbol in a target name with a different special symbol.
- Text boxes in SoftBench CM do not display the euro symbol.

- **An A.03.13 and newer aCC option has the potential to break the SoftBench Debugger and DDE on HP-UX 10.20 and 11.0**

The A.03.13 and newer version of the HP aC++ compiler working with an HP linker with a what string date of 981120 or later contains a the feature, the `+objdebug` option. This option instructs the compiler and linker to store debug information in the `*.o` object files instead of adding that information into the executable. This significantly speeds up compile times. However the DDE debugger and SoftDebug cannot locate debug tables stored there. You can use the `+objdebug` option when compiling SoftBench projects. Add the option to "Target: Modify Properties => Customize Build Configuration", (see SoftBench online help for more information). You will not be able to use the integrated SoftBench debugger, SoftDebug. SoftDebug will treat these programs as if they have been stripped and will attempt to debug the program at the assembly level.

A workaround is to use WDB, HP's version of the GDB debugger to debug programs compiled and linked with the `+objdebug` option. See "Compatibility Information" on page 13 for information on how to integrate WDB with SoftBench.

- **Using Static Analyzer Databases from SoftBench 5.X**

If you have a Static Analyzer database that you generated with SoftBench 5.X, you must regenerate the database before you can perform Static Analysis with SoftBench 6.X.

## Internationalization Problems

- **SoftXemacs window "rolls up" when it is started with Japanese SoftBench on HP-UX 10.20 and 11.0.**

On HP-UX 10.20 and HP-UX 11.0, SoftXemacs starts but the window immediately shrinks to a one line window instead of maintaining the original window size. To correct this problem you must set the following X resource **BEFORE** you start SoftBench:

```
xemacs*preeditType:Root
```

To set this resource place it in your X resource file (`$HOME/filename` where *filename* is `.Xresources` or `.Xdefaults`) then use the "xrdb" command.

```
xrdb -merge $HOME/.Xresources
```

---

## Compatibility Information and Installation Requirements

Prerequisites for SoftBench are listed in the Installing SoftBench manual. This section describes additional installation information that is not covered in the manual.

### Required Patches

SoftBench requires a patch on HP-UX 10.20 and HP-UX 11.0X. For the latest patch information, refer to the URL:

<http://devresource.hp.com/softbench>

Refer to `/opt/softbench/README` for instructions on obtaining patches.

Install the following individual patches after you have installed SoftBench:

#### HP-UX 10.20 patches:

- Patches required for Workstations (s700) and Servers (s800) running HP-UX 10.20:
  - PHSS\_23796 s700\_800 10.20 CDE Runtime April 2001 Periodic Patch
  - PHSS\_17225 s700\_800 dld.sl(5) cumulative patch
  - PHSS\_21110 s700\_800 ld(1) and som tools cumulative patch
- Patches required for a SoftBench CM server (that does not have SoftBench installed) running on HP-UX 10.20:
  - PHSS\_23796 s700\_800 10.20 CDE Runtime April 2001 Periodic Patch
  - PHSS\_17225 s700\_800 dld.sl(5) cumulative patch
  - PHSS\_21110 s700\_800 ld(1) and som tools cumulative patch
  - PHSS\_22354 s700\_800 10.X HP aC++ runtime library components (A.01.30)

**HP-UX 11.0X patches:**

- Patches required for Workstations (s700) and Servers (s800) running HP-UX 11.0X:  
PHSS\_23823 s700\_800 11.00 X/Motif2.1 Runtime April 2001 Cumulative Patch  
PHSS\_23797 s700\_800 11.00 CDE Runtime April 2001 Periodic Patch  
PHNE\_22086 s700\_800 11.00 Fix for Streams Pty MP race condition
- Patches required for a SoftBench CM server (that does not have SoftBench installed) running on HP-UX 11.0X:  
PHSS\_23823 s700\_800 11.00 X/Motif2.1 Runtime April 2001 Cumulative Patch  
PHSS\_23797 s700\_800 11.00 CDE Runtime April 2001 Periodic Patch  
PHNE\_22086 s700\_800 11.00 Fix for Streams Pty MP race condition

**HP-UX 11i patches:**

There were no patches required for SoftBench on HP-UX 11i when this document was written.

## Compiler Patch Information

- If you are using any of the following compilers/tools see the appropriate Release Note for patch information.

Compiler:	Release Note Location
aC++	/opt/aCC/newconfig/RelNotes/ACXX.release.notes
C-ANSI-C	/opt/ansic/newconfig/RelNotes/ansic.*
DDE	/opt/langtools/newconfig/RelNotes/DDE

## Compatibility Information

- **ClearCase is integrated with SoftBench**

The integration of SoftBench with ClearCase allows SoftBench users a familiar interface to ClearCase's most important version control and configuration management functions. You can also configure the SoftBench Builder to use `clearmake`, the ClearCase build tool. All other SoftBench tools work within ClearCase environments by using view-extended pathnames. For more information on the SoftBench and ClearCase integration, please refer to Rational's *ClearCase Reference Manual - Release 3.0 and later*, and Rational's *ClearCase User's Manual - Release 3.0 and later*.

Setup for using ClearCase with SoftBench:

1. Verify the ClearCase installation is complete.
2. Verify the installation of SoftBench 6.x is complete.
3. By default, the SoftBench Builder Program (invoked with the Build or Rebuild selection on the Action menu) runs `make(1)`. You can have it run "clearmake" by setting the following X resource in your `.Xdefaults` file (typically, in your home directory):

```
SoftBench*projBuildProgram: clearmake
```

Next, update the X resource database using `xrdb -merge $HOME/.Xdefaults`
4. Make ClearCase your default configuration management system.
  - a. Start SoftBench.
  - b. In the softbench main window choose, Options: Tool Preferences.
  - c. In the Tool Preferences dialog box, select Configuration Ma under "Select a Tool".
  - d. Select ClearCase under "Available Tools", and select [OK].

### Using SoftBench with ClearCase views

SoftBench makes a fundamental assumption that an absolute pathname always identifies the same, unique file. Since absolute pathnames in different views can refer to different files, do not start any SoftBench process from a shell that is set to a view. As you work, use view-extended pathnames to indicate the desired context(s). Before referencing files in a particular view, make sure that the view is started, using Start View. Attempting to start a view that is already started generates a harmless message.

CAUTION: Do not attempt to communicate with SoftBench servers on other hosts using view-extended pathnames. This may cause NFS deadlocks.

### Error Conditions

SoftBench and ClearCase successfully talk with each other only if ClearCase and SoftBench processes have the same value for the `DISPLAY` environment variable. ClearCase tools generate an error message if `CLEAR_MSG_PROTO` is set, but `DISPLAY` is not set or is incorrect. The Notice Forwarder process logs errors, warnings, and other messages in the file `/usr/adm/atria/ti_server_log`.

- **The WDB-GUI is bundled with SoftBench**

SoftBench now provides an integration with WDB 1.1 and later versions. WDB-GUI is bundled with SoftBench. If SoftBench and the WDB-GUI are both installed on your system, a tool preference option will allow you to use the following steps to select WDB as your default debugger:

1. In the Softbench main window choose, Options: Tool Preferences.
2. In the Tool Preferences dialog box, select Debugger under Select a Tool.
3. Select WDB under Available Tools.
4. Select [OK].

WDB is not tightly integrated with SoftBench. When WDB is running within SoftBench, WDB responds to `START`, `STOP`, `ICONIFY`, `NORMALIZE`, `LOAD`, and `SET-BREAKPOINT` requests from the SoftBench tools. It does not honor program settings configured in the SoftBench main window and will not make requests to the other tools.

- **SoftBench 6.X Removes COBOL SoftBench**

COBOL SoftBench is no longer supported. If you install SoftBench 6.X, COBOL SoftBench will be removed from your system.

- **CacheFS Is Not Supported**

SoftBench 6.X does not support CacheFS (provided with the "Networking Enhancements Release for HP-UX 10.20 (April 1998)").

## Installation Problems

- **Installing SoftBench 6.X removed SoftBench 5.X from your system**

To restore SoftBench 5.X:

1. Remove SoftBench 6.X.
2. Reinstall Softbench 5.X.
3. Install any SoftBench 5.X patches.
4. If you removed your Softbench 5.X licenses, you need to reinstall them.
5. Perform the command:

```
mv /opt/softbench/config.5x /opt/softbench/config
```

This command restores any SoftBench customizations you had made to your system. It also prepares your system for a move to a newer version of SoftBench in the future.

- **Possible error when updating from SoftBench 5.25 to SoftBench 6.80**

If you have the SoftBench 5.25 cumulative patch, PHSS\_15632, installed on your system you may get `WARNING` and `ERROR` messages when you update your system to Softbench 6.80. The `WARNING` and `ERROR` messages occur when this patch is automatically removed during the SoftBench 6.80 update installation. The `WARNING` and `ERROR` messages can safely be ignored. The output file, `/var/adm/sw/swagent.log` appears as follows:

```
* Software selections:
SB-SoftBenchCore.SB-GNUBIN-MAN
* File selections:
/opt/softbench/config/buildt/include/f90.rules

* Beginning Modification Phase.
WARNING: Cannot delete the definition for
"/opt/softbench/config/buildt/include/f90.rules" from the
fileset "SB-SoftBenchCore.SB-GNUBIN-MAN".The file does not
exist in this fileset.
ERROR:The selected software was not modified. All of the specified
file modifications are invalid. See the ERROR and/or WARNING
messages above.
```

- **When you install SoftBench, X11MotifDevKit (which is bundled with SoftBench) emits the following message into the `swagent.log` file on HP-UX 10.20 and 11.0.**

The X11MotifDevKit emits the following spurious message into the `swagent.log` when SoftBench is installed. Please ignore this message, it will not affect your installation.

```
* Running "preinstall" script for fileset
"X11MotifDevKit.X11R6-PRG".
rm: /usr/include/X11/extensions directory
```

## Removal Problems

- **Older versions of SoftBench included the HP cfront-based C++ compiler. If you still have this compiler on your system and you remove SoftBench 6.80, you may see an error message. If this situation occurs, SoftBench is removed, but the compiler is not.**

If SoftBench is removed without the compiler, you may see a message in the error log that looks like this:

```
* Summary of Execution Phase:
ERROR:      Skipped (in analysis)
            C-Dev-Tools.C-AUX-MAN,l=/opt/langtools,r=B.11.01.06
ERROR:      Skipped (in analysis)
            C-Dev-Tools.C-AUX,l=/opt/langtools,r=B.11.01.06
ERROR:      2 of 63 filesets had Errors.
```

To remove SoftBench 6.80 and the HP cfront-based C++ compiler without errors:

1. Remove C-Plus-Plus product (Cfront compiler) by entering: `swremove C-Plus-Plus`

---

**WARNING** This forcibly removes the Cfront compilers.

---

2. Remove the SB6.80 bundle. Use `swlist` to determine which SoftBench bundles you have installed. The C++ SoftBench bundles that need to be removed are: B6447EB, B6448EB, B6451EB and B6452EB. Remove the C++ SoftBench bundles you have installed using `swremove`.



---

## Patches and Fixes in this Version

SoftBench 6.80 includes the following fixes:

<b>SR Number</b>	<b>Description</b>
JAGad52434	XEmacs problem inputing Japanese characters (10.20)
JAGad52435	"sbparse" merge with aCC 3.30
JAGad52436	Rational's ClearCase integration with SoftBench Tools (Softvi, SoftDDE and SoftXEmacs)
JAGad89454	SoftCM "fmerge" defect in Japanese locale (11.0)

---

## Software Availability in Native Languages

SoftBench 6.X is available in English and Japanese.

**Table 1-1 Available SoftBench Products**

<b>Product Name</b>	<b>HP 9000 Workstation SD Bundle</b>	<b>HP 9000 Server SD Bundle</b>
C SoftBench	B6449EB	B6445EB
Japanese C SoftBench	B6450EB	B6446EB
C++ SoftBench	B6451EB	B6447EB
Japanese C++ SoftBench	B6452EB	B6448EB

The following manuals are available in both English and Japanese:

- Installing SoftBench
- C and C++ SoftBench User's Guide

The following manual is available only in English:

- SoftBench SDK: CodeAdvisor and Static Programmer's Guide