



**INTERSOLV**

**PVCS**

**The Standard for Software Configuration  
Management on the LAN**



Hello. My name is Courtney. I'm your guide for this demonstration of INTERSOLV's **PVCS for Software Configuration Management**.

Please use your **left mouse button** to move forward and your **right mouse button** to move backward.

**PVCS for Software Configuration Management on the LAN**

# Is this happening to you?

**We have to coordinate  
development across 3 operating  
systems at 6 physical sites!**



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**We're late because we can't share our work.**



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**We're late because we can't share our work.**

**Someone overwrote the fix I worked on for the last two weeks!**



# Is this happening to you?

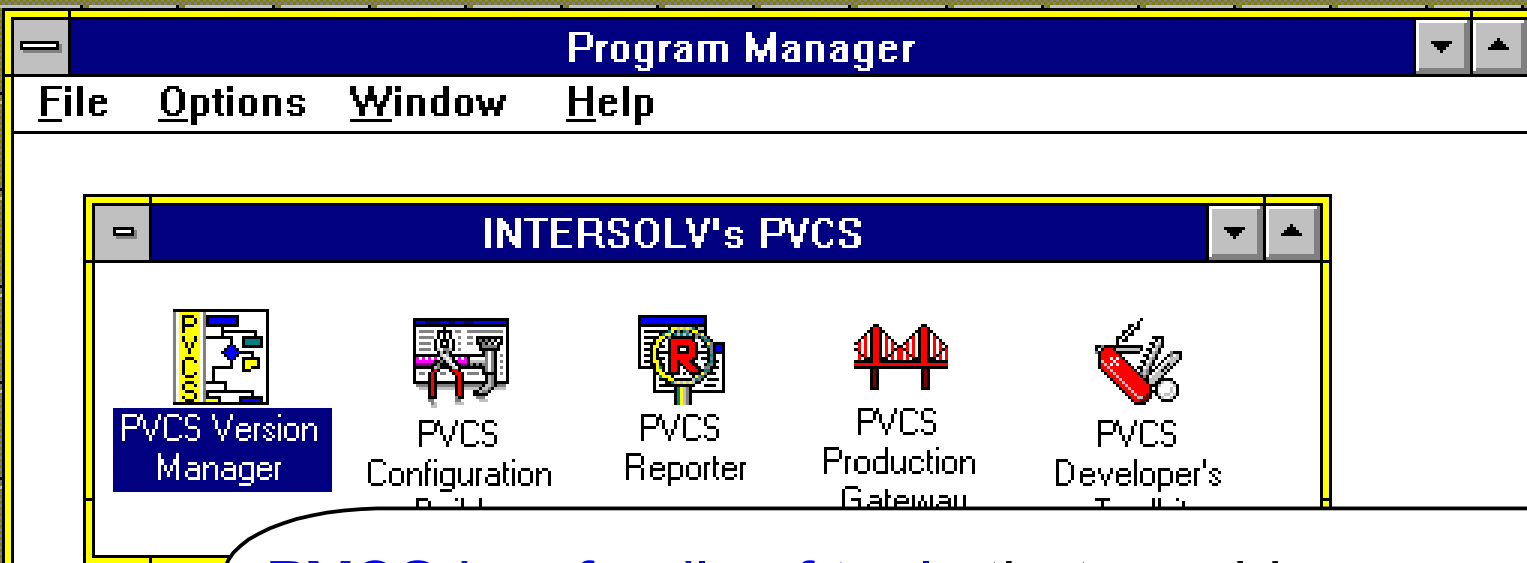
**We have to coordinate development across 3 operating systems at 6 physical sites!**

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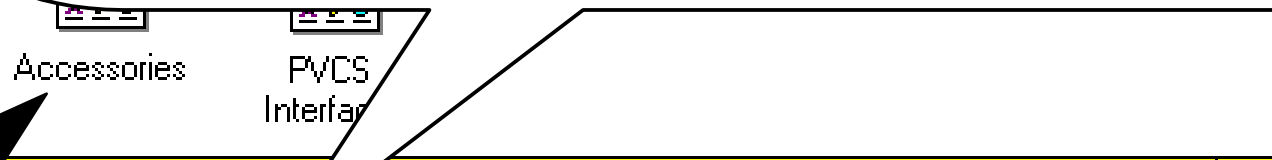
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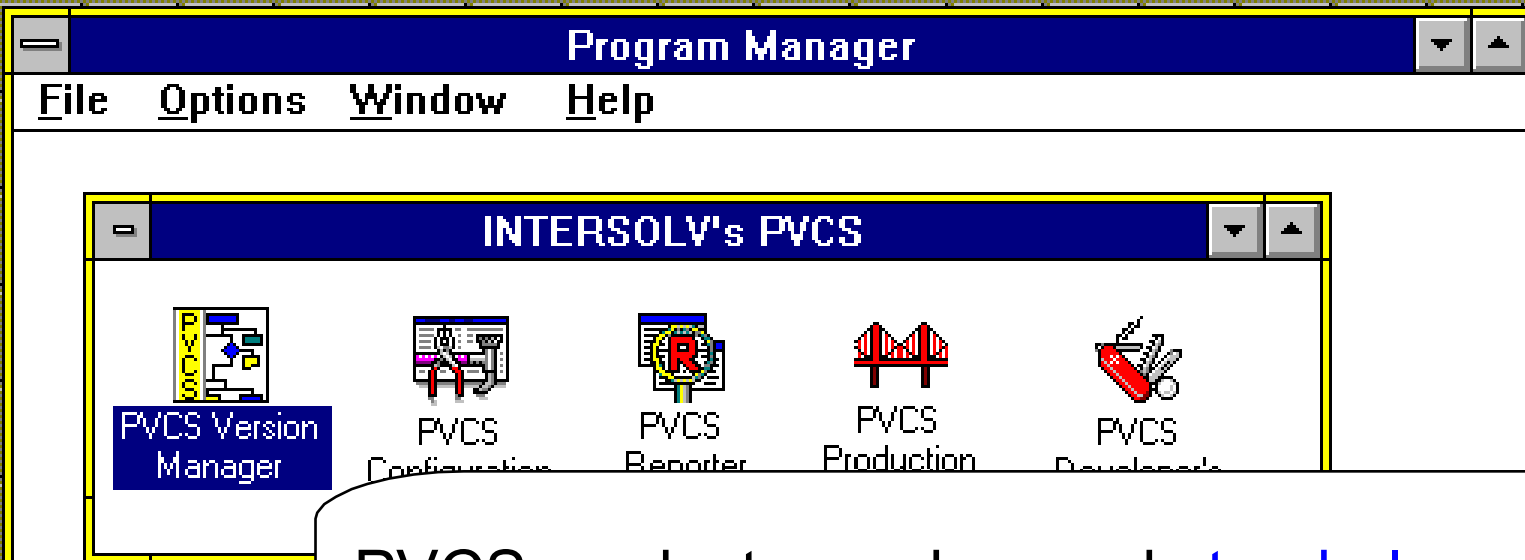
**Get me a report!**





**PVCS** is a family of tools that provides an integrated Software Configuration Management (SCM) solution to control the chaos in your development environment.



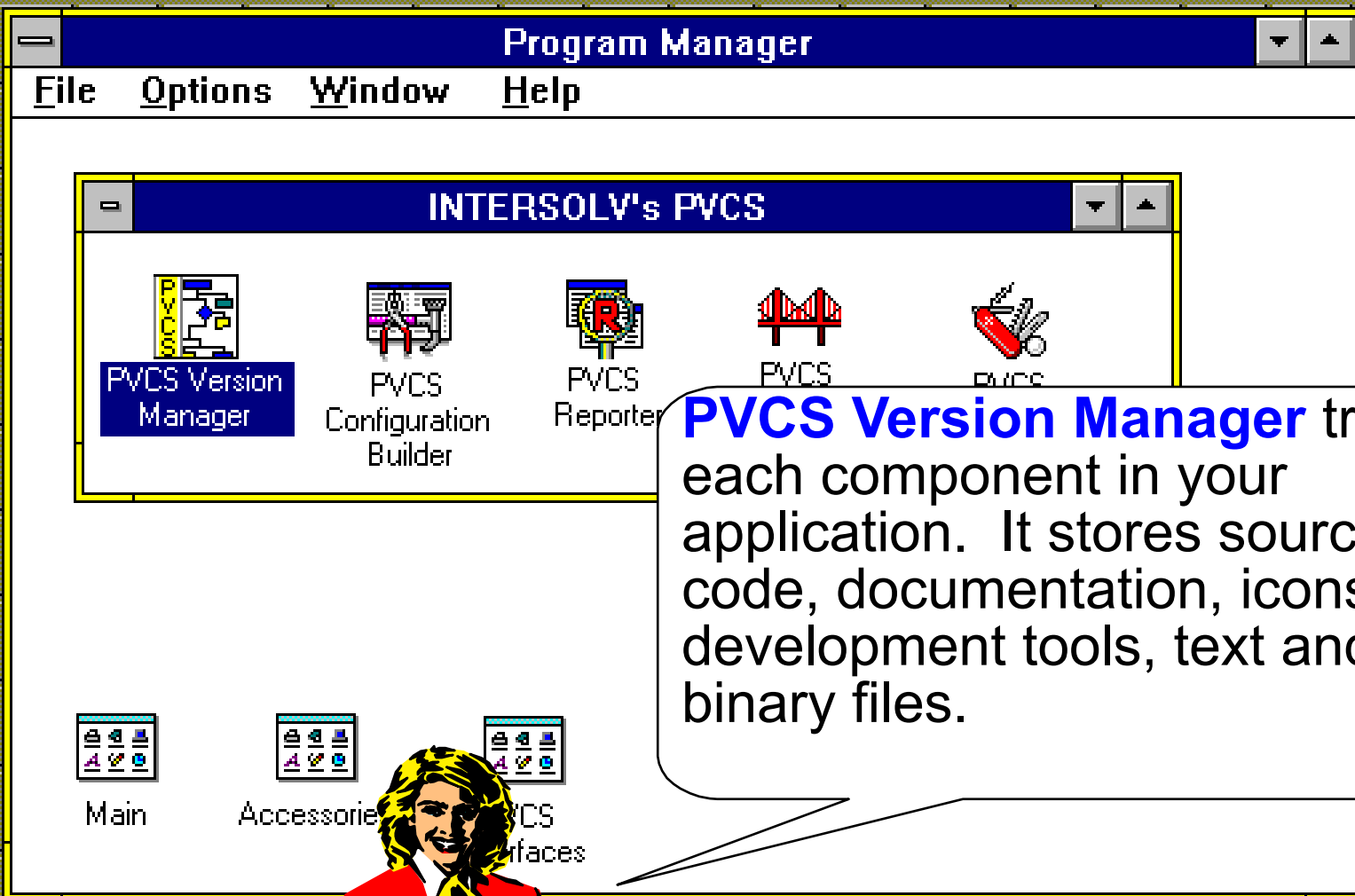


PVCS products can be used **stand-alone or snapped together** for a complete SCM environment. They are available across a wide variety of operating systems, including Windows, DOS, OS/2, NT, and UNIX.

**PVCS leverages your investment in current and future technologies.**

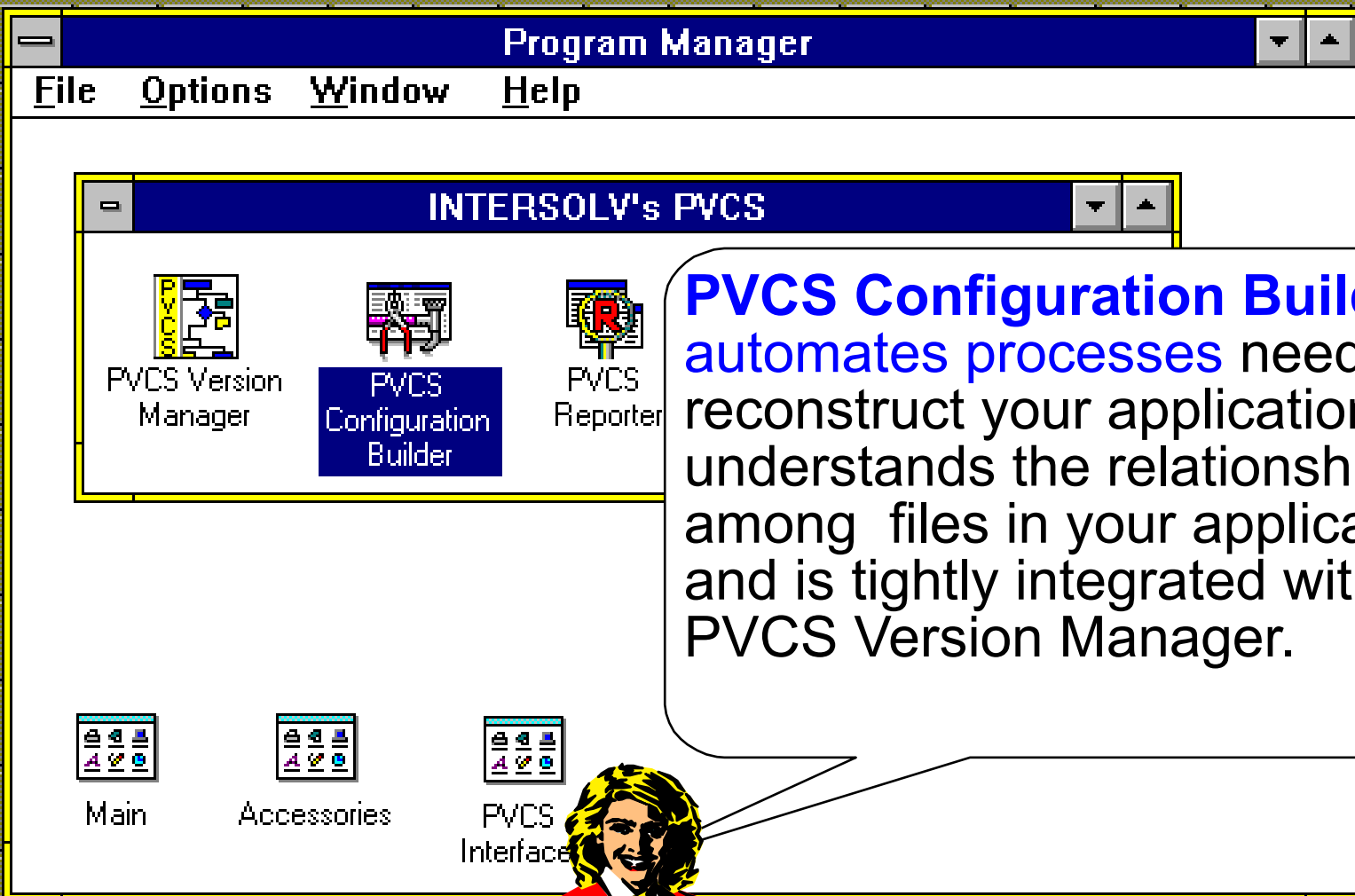






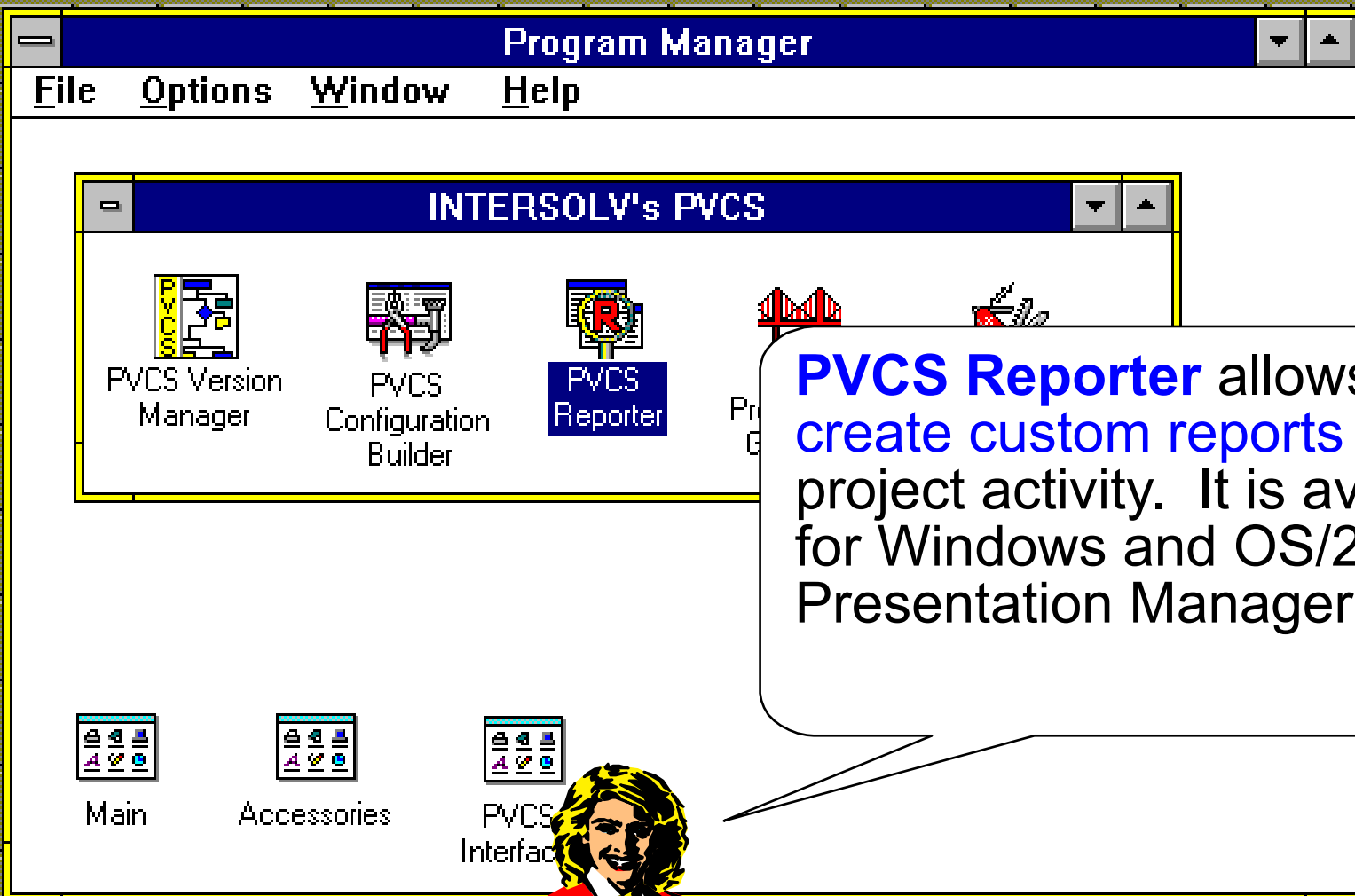
**PVCS Version Manager** tracks each component in your application. It stores source code, documentation, icons, development tools, text and binary files.





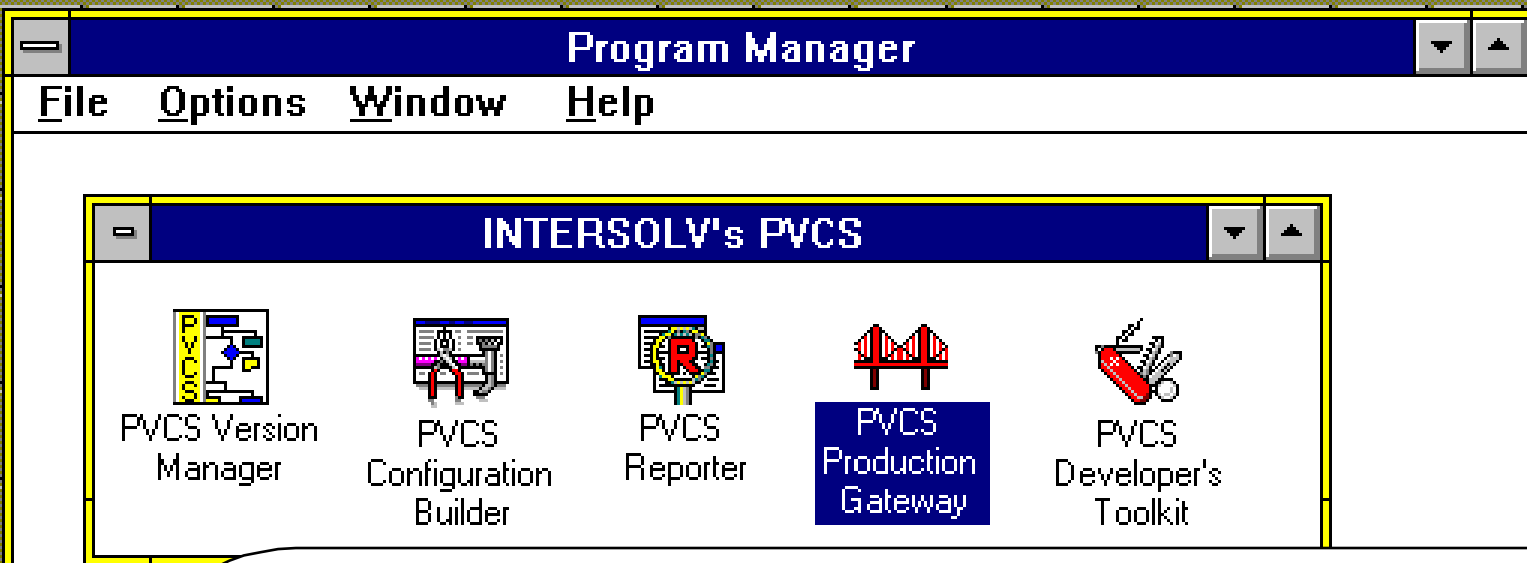
**PVCS Configuration Builder** automates processes needed to reconstruct your application. It understands the relationships among files in your application, and is tightly integrated with PVCS Version Manager.





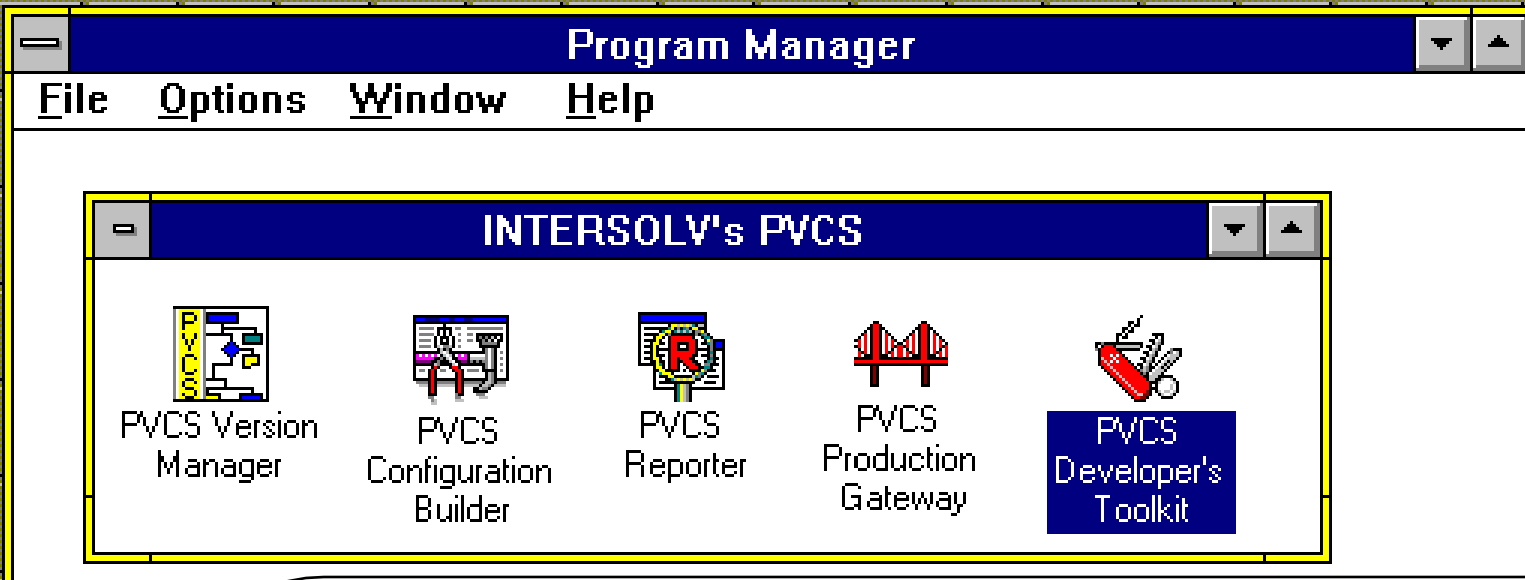
**PVCS Reporter** allows you to create custom reports of project activity. It is available for Windows and OS/2 Presentation Manager.





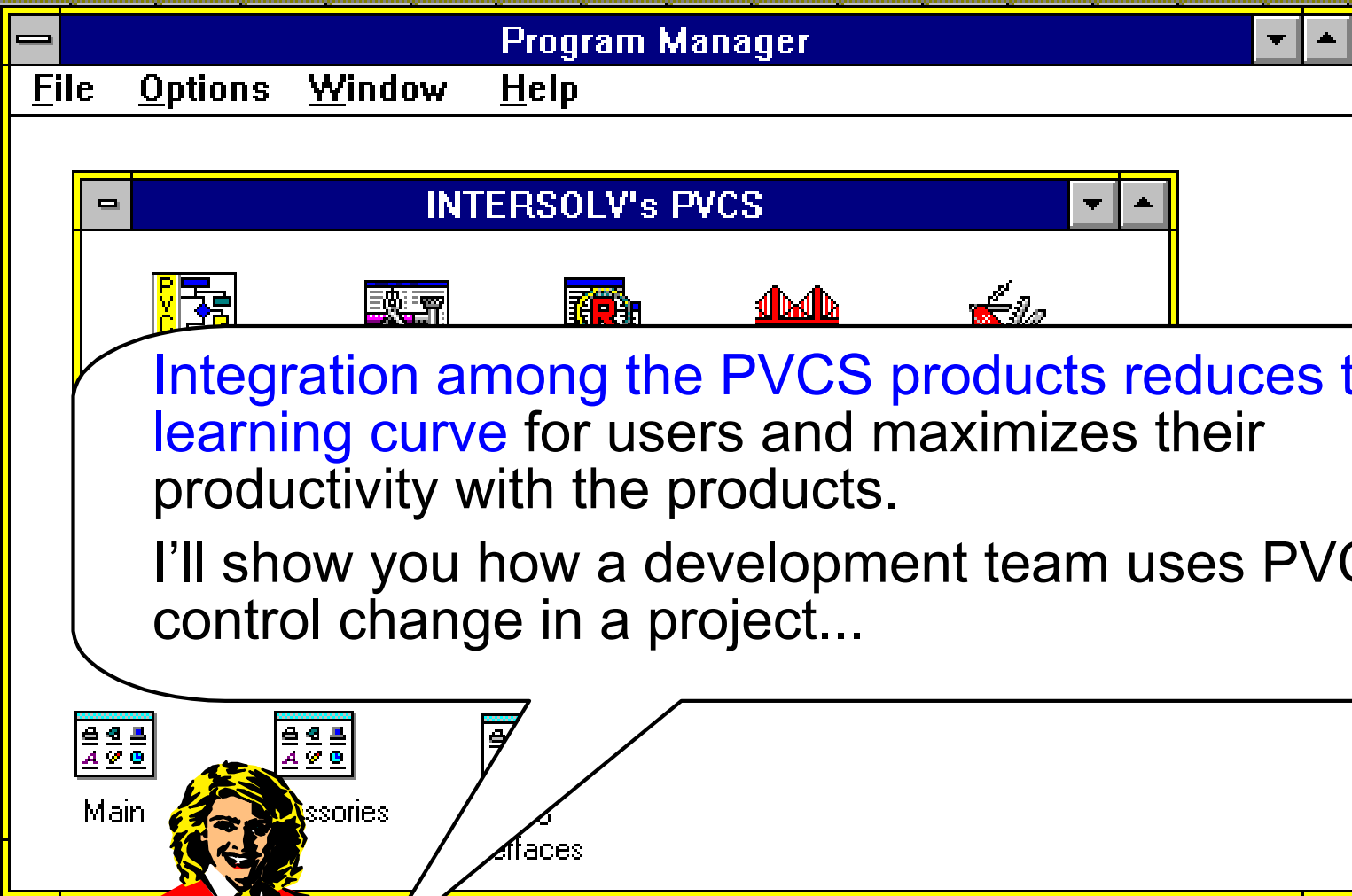
**PVCS Production Gateway** coordinates information among remote sites. In both LAN-to-LAN and LAN-to-MVS configurations, PVCS Production Gateway ensures that shared components are synchronized.





**PVCS Developer's Toolkit** provides an **Application Programming Interface (API)** to the PVCS Version Manager and PVCS Configuration Builder functions. With the Toolkit, you can snap PVCS into any custom application or vendor-supplied tool.

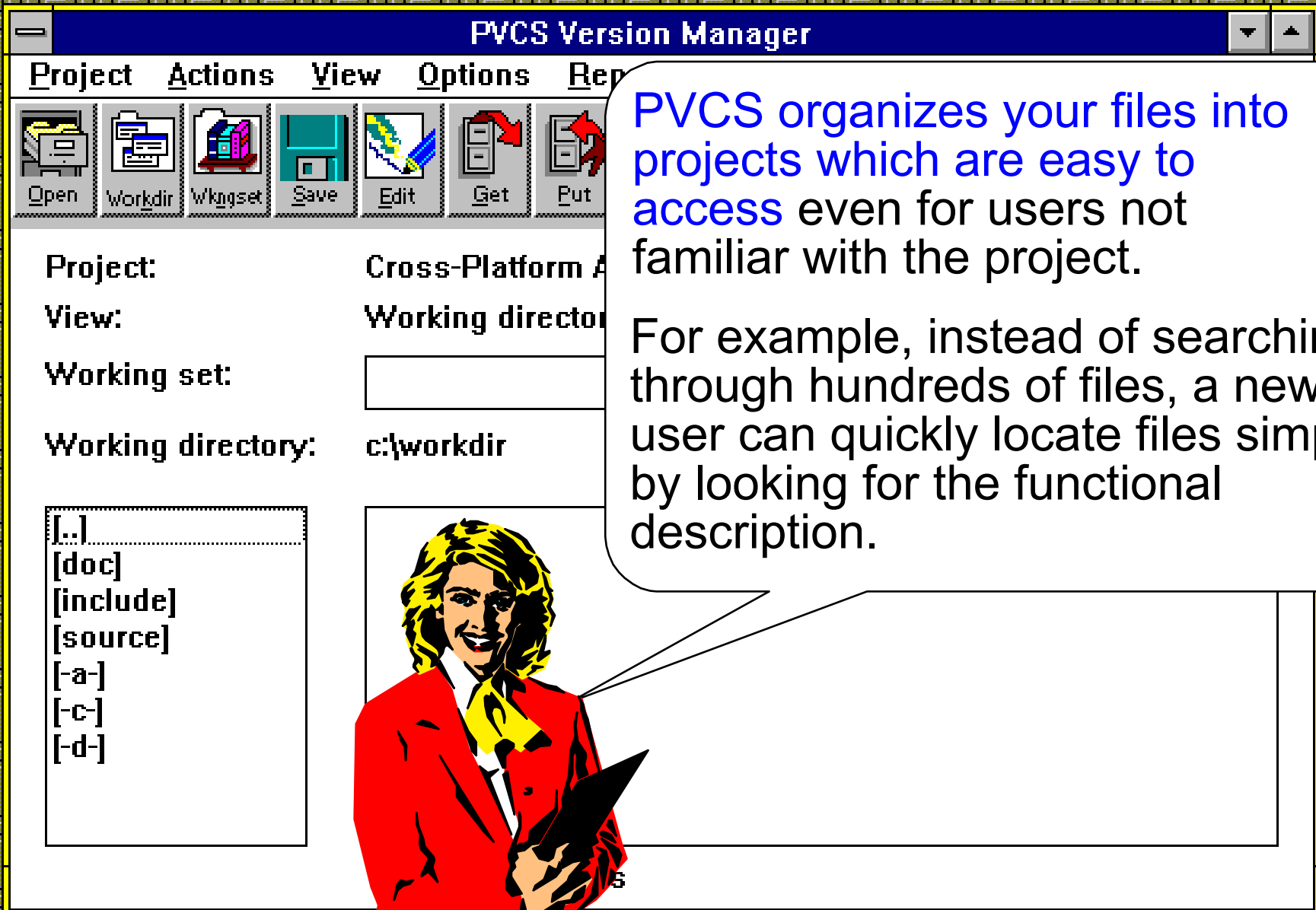




Integration among the PVCS products reduces the learning curve for users and maximizes their productivity with the products.

I'll show you how a development team uses PVCS to control change in a project...

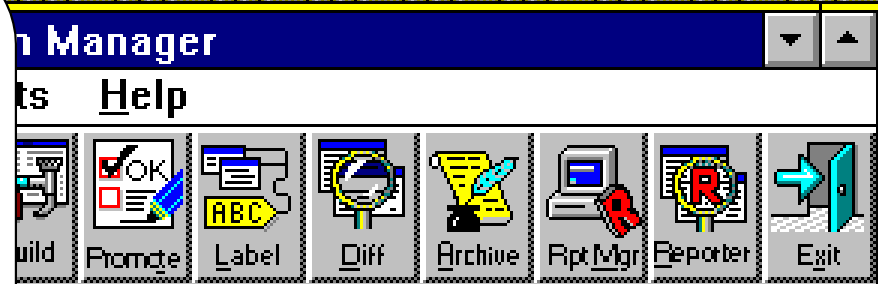




PVCS organizes your files into projects which are easy to access even for users not familiar with the project.

For example, instead of searching through hundreds of files, a new user can quickly locate files simply by looking for the functional description.

You can see that our project spans multiple operating systems. **PVCS** uniquely enables code reuse over many platforms.



Project

Working

Working directory:

Windows File I/O Routines

UNIX File I/O Routines

OS/2 File I/O Routines

NT File I/O Routines

Checking Account Routines

<Project Files>[c:\workfile\source\FUNCTION.c]

<Project Files>[c:\workfile\source\PROGRAM.c]

<Project Files>[c:\workfile\source\PROGRAM2.c]

Select all files





### Get

Filename(s):

#### Revision information

Version or revision:

Promotion group:  

Last revision on/before date      Date:

If newer than date

If newer than workfile

#### Options

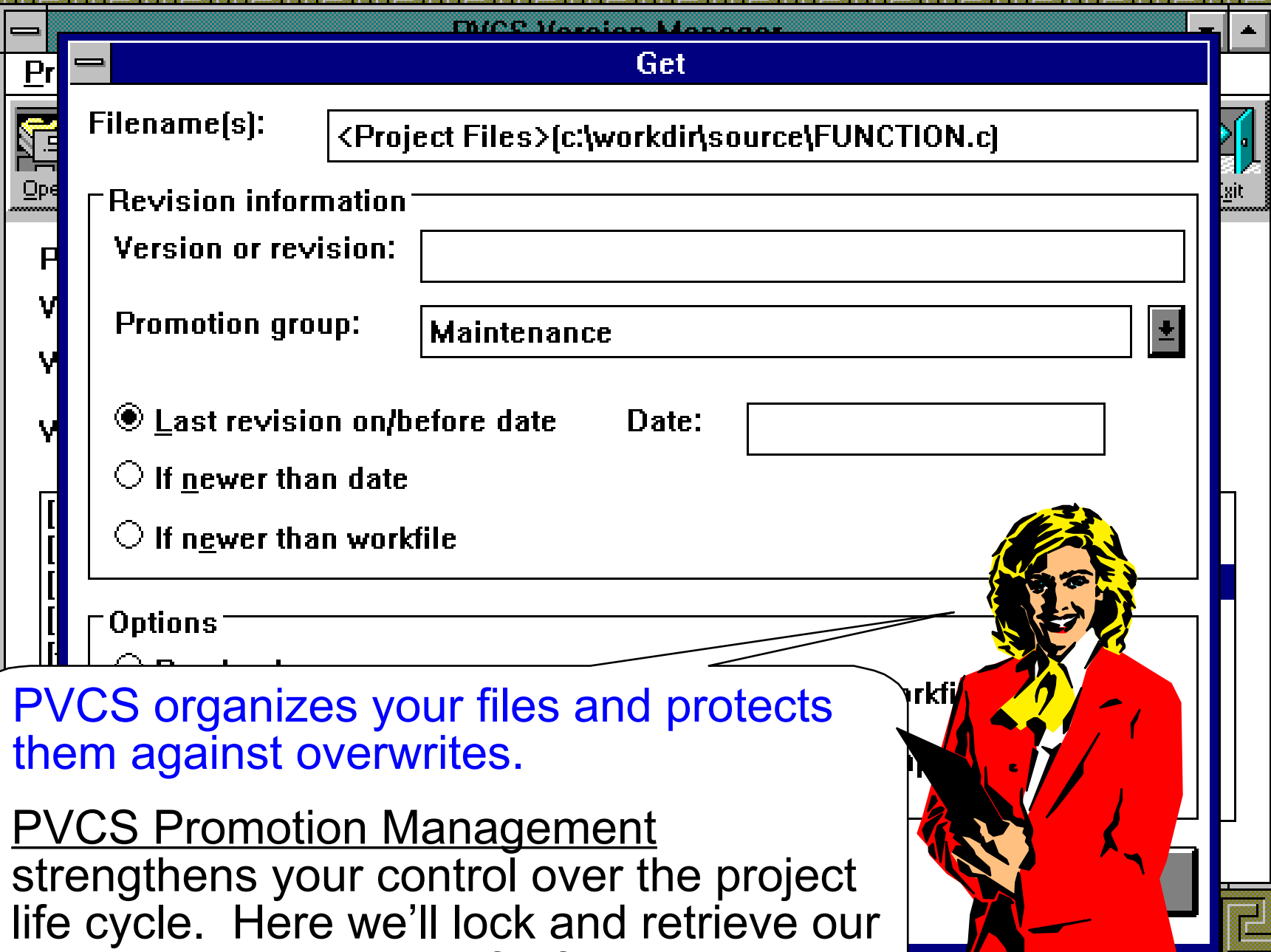
Read only

Writable

Writable with lock

Overwrite workfile

Set timestamp



PVCS organizes your files and protects them against overwrites.

PVCS Promotion Management strengthens your control over the project life cycle. Here we'll lock and retrieve our maintenance version of a file.

**PVCS Version Manager**

**Project Actions View Options Reports Help**

Open Workdir Wkgsset Save Edit Get Put Build Promote Label Diff Archive Rpt Mgr Reporter Exit

**Editor**

Editor program:

Parameters:

**Get before edit**

**Put after edit**

[C-]  
[-d-]

**Select all**

PVCS automatically uses the editor of your choice when modifying files.



PVCS Version Manager

Put

Filename(s): <Project Files>(c:\workdir\source\FUNCTION.c)

Revision information

New version:

New revision:

Promotion group:

Maintenance

Change text:

Fixed stray pointer in Input data structure

Options

- Delete workfile
- Make floating label
- Force if unchanged
- Keep locked
- Reassign label
- Force branch

OK

Cancel

Help

PVCS records who made the change and when the change was made -- as well as the change itself.

The file is now ready for other team members to use our modification.

Filename(s)

Revision

New version:

New revision:

Promotion group:

Maintenance

Change

Fixed stray pointer in Input data structure

Options



Make floating label



Force if unchanged



Reassign label



Force branch

Cancel

Help



PVCS Version Manager

Assign Label

Filename(s): FUNCTION.c), <Project Files>(c:\workdir\include\HEADER.h)

Version label: Fix for Change Set ID #53421

Options

Assign version label to revision

Rename version to:

Delete version label

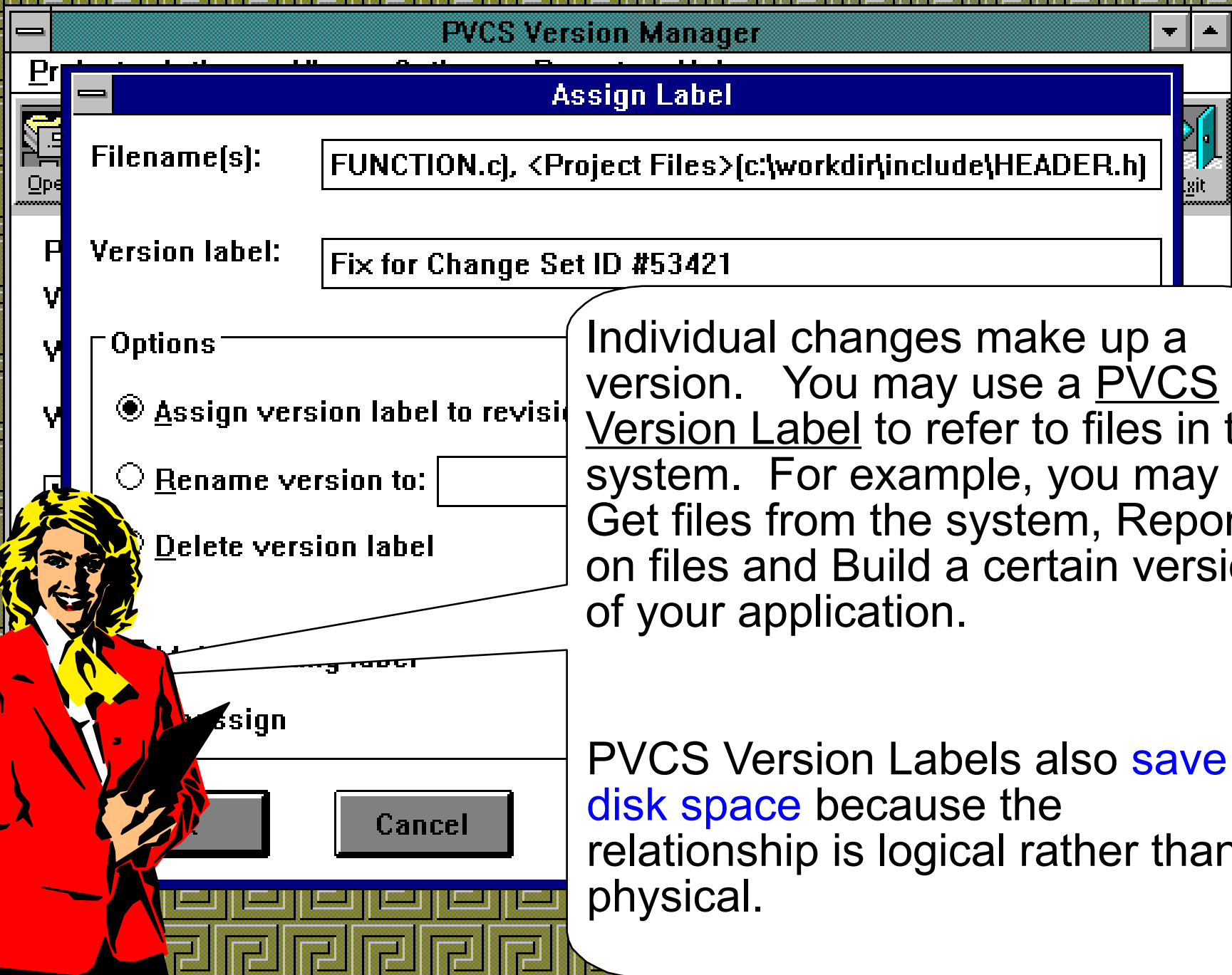
Make floating label

Reassign

OK

Cancel

Help



Individual changes make up a version. You may use a PVCS Version Label to refer to files in the system. For example, you may Get files from the system, Report on files and Build a certain version of your application.

PVCS Version Labels also **save disk space** because the relationship is logical rather than physical.

PVCS Version Manager

Project Actions View Options Reports Help

Build

Build script: build.bld

Target(s): atm.exe

Macro definitions: -v Fix for Change Set ID #53421

Display Options

- Display debug output
- Display summary
- Execute quietly

Process Options

- Build all targets
- Ignore non-zero exit codes
- Keep working despite errors
- Simulate execution
- Touch targets

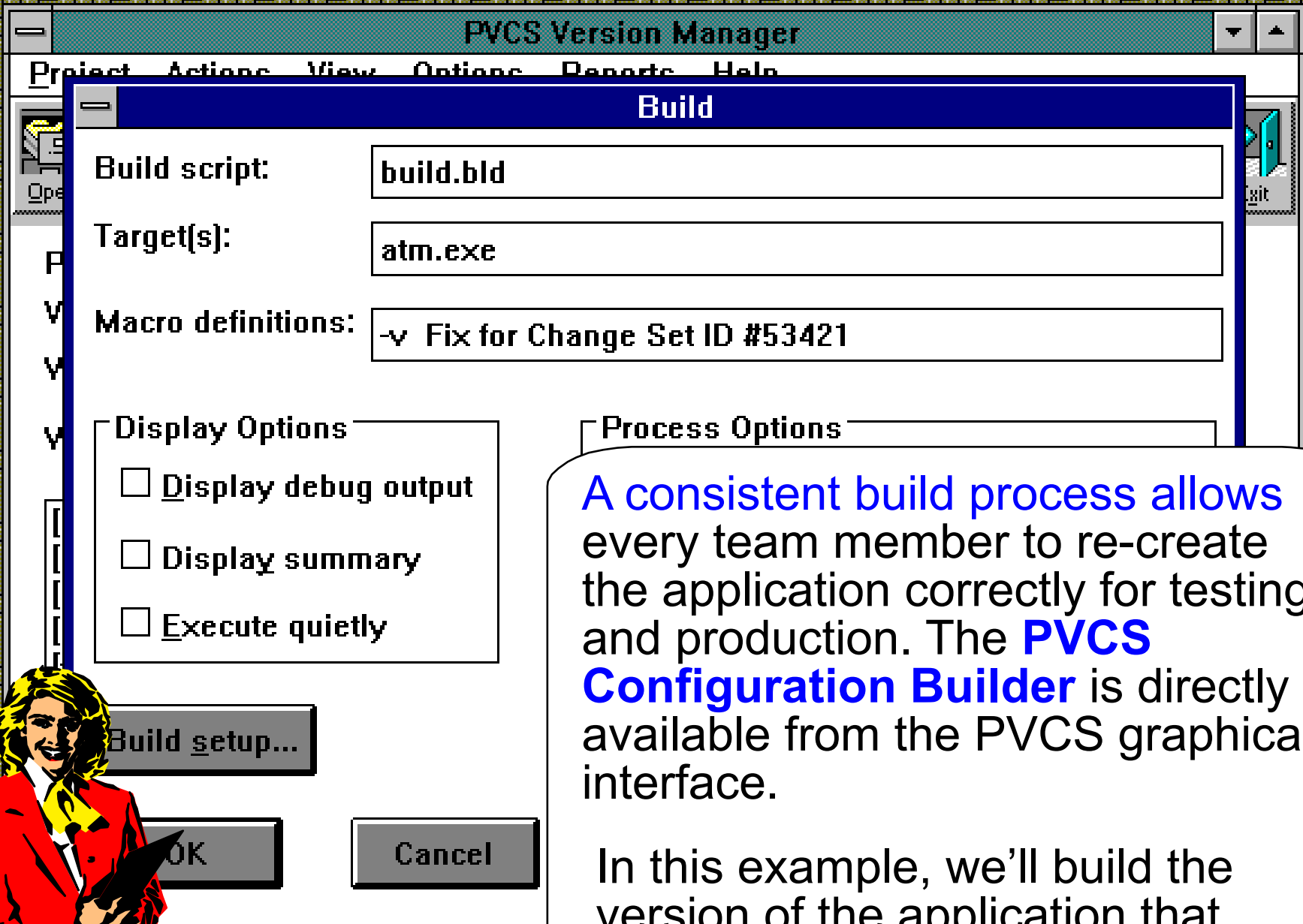
Build setup...

OK

Cancel

Help





A consistent build process allows every team member to re-create the application correctly for testing and production. The **PVCS Configuration Builder** is directly available from the PVCS graphical interface.

In this example, we'll build the version of the application that contains our modification.

## PVCS Version Manager

Project Actions View Options Reports Help

### Archive Report – c:\pvcs\demo\project\archives(c:\workdir\include\HEADER.h)

```
C:\pvcs\demo\cproject\archives\program.c_v - Fix for Change Set ID #53421
C:\pvcs\demo\cproject\archives\program2.c_v - maintenance : 1.7
C:\pvcs\demo\cproject\archives\program2.c_v - pre-beta : 1.9
C:\pvcs\demo\cproject\archives\program2.c_v - base_file : 1.0
C:\pvcs\demo\cproject\archives\program2.c_v - Fix for Change Set ID #5342
C:\pvcs\demo\cproject\archives\function.c_v - base_file : 1.0
C:\pvcs\demo\cproject\archives\function.c_v - Fix for Change Set ID #5342
C:\pvcs\demo\cproject\archives\header.h_v - base file : 1.0
C:\pvcs\demo\cproject\archives\header.h_v - Fix for Change Set ID #53421
```

PVCS Reporting enables you to determine which files have changed and why they've changed. You can also identify current changes being made to the system.



PVCS Version Manager

Project Actions View Options Reports Help

PVCS Reporter - REVISION.QEF (ARCHIVES.TBL, REVISION.TBL)

File Edit Sort Select Search Layout Window Help

	Archive	Workfile	Ar	Define Column...	Author	RevisionN
1	FUNCTION.C_V	FUNCTION.C	KE	Move Column	KEITH	Basic code
2				Remove Column	KEITH	This is the
3	HEADER.H_V	HEADER.H	KE	Totals...	BETH	Added a co
4					KEITH	Added a tit
5						
6	PRO					
7	PRO					

**PVCS Reporter** provides custom reporting facilities for PVCS project activity. You may report across several PVCS projects simultaneously.

Options...	scott	Added a he
1.4	scott	Added prin
1.3	KEITH	Changed te
1.2	KEITH	Modified th
1.1	KEITH	Added title
1.0	KEITH	TH



# Connection to Remote Development



As you saw, you can access PVCS Version Manager, PVCS Configuration Manager, and PVCS Reporter from within the graphical interface. This provides an integrated SCM environment for your developers. You can also access these tools from the command line, various development environments or the PVCS Developer's Toolkit.

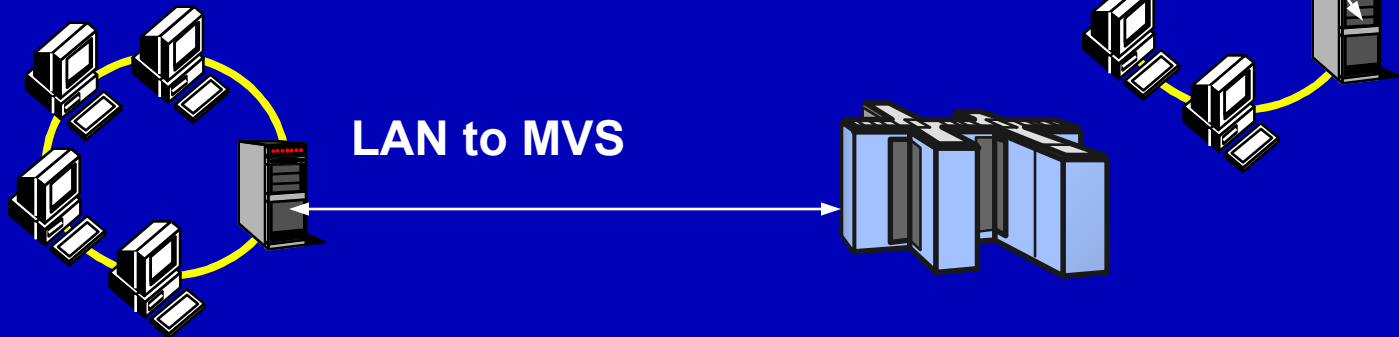
But what about the PVCS Production Gateway? It has been running all the time in the background. Let's learn a little more about it...

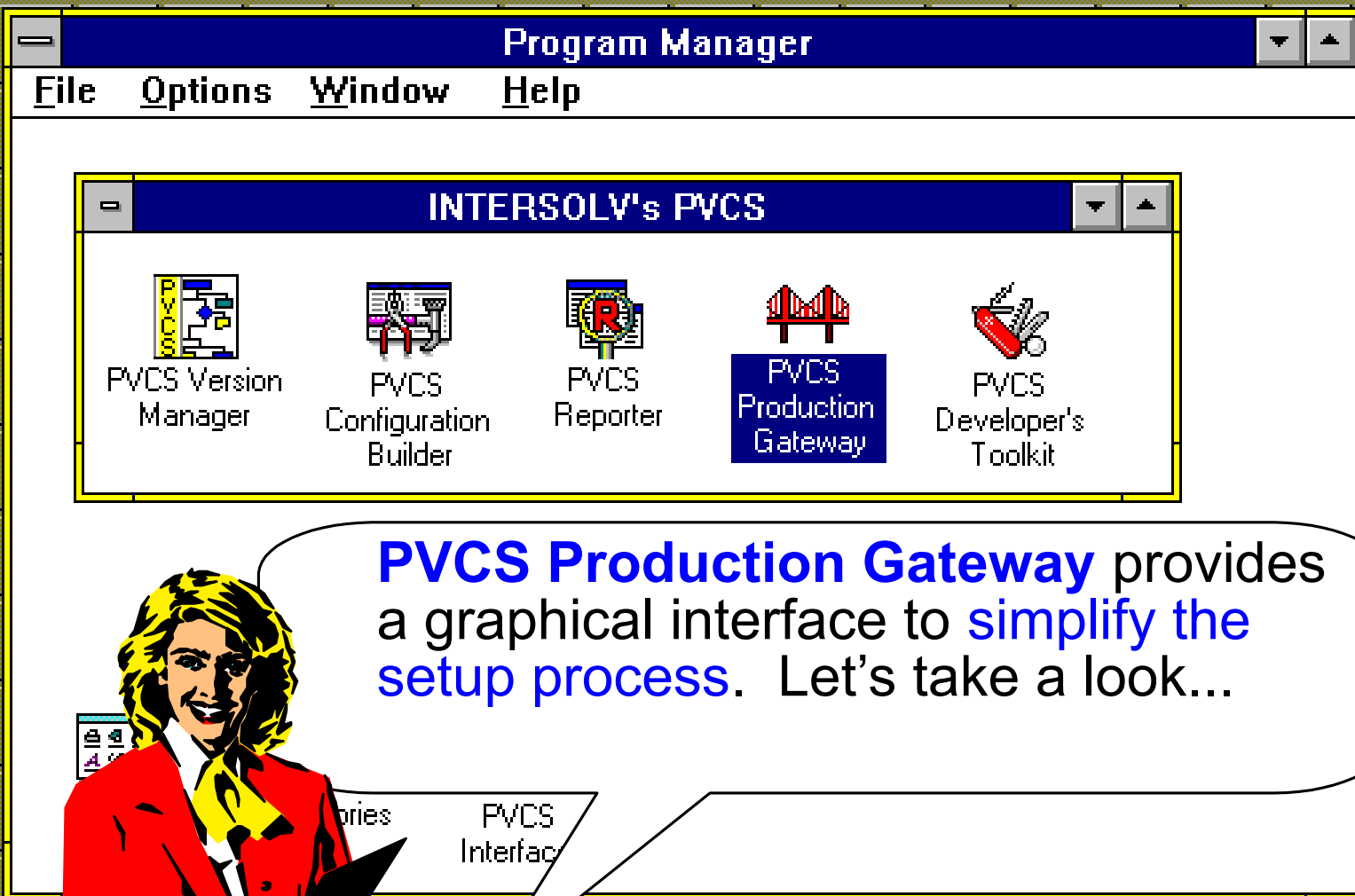
# Connection to Remote Development

PVCS Production Gateway manages the coordination with remote development, so your developers don't have to.

A single point of access reduces hardware, software and personnel costs.

PVCS Production Gateway leverages your work across LANs and between LANs and the mainframe.

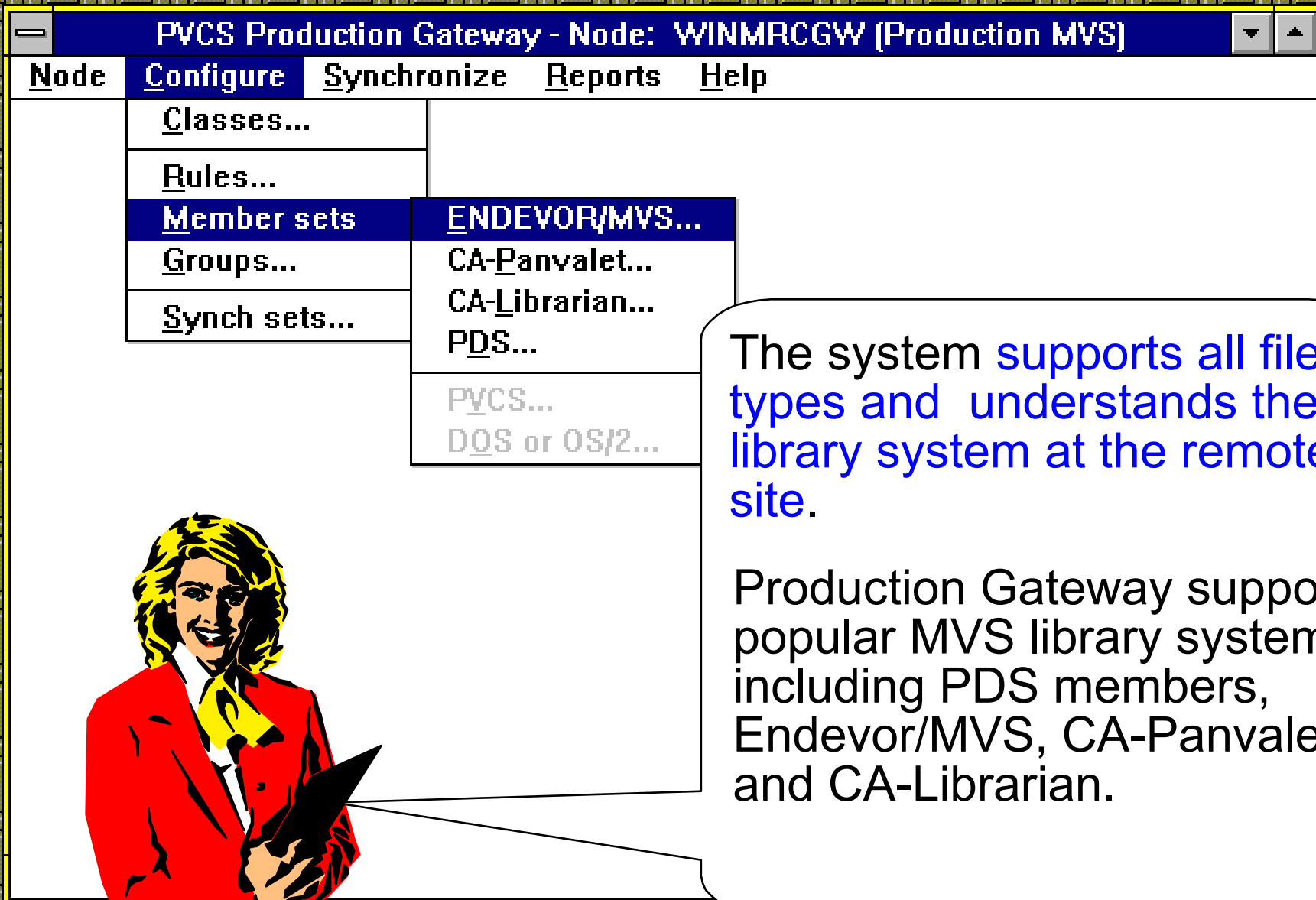




**PVCS Production Gateway** provides a graphical interface to **simplify the setup process**. Let's take a look...



ories  
PVCS  
Interfac



— PVCS Production Gateway - Node: WINMRCGW (Production MVS) [v] [^]

<u>N</u> ode	<u>C</u> onfigure	<u>S</u> ynchronize	<u>R</u> eports	<u>H</u> elp
	<u>C</u> lasses...			
	<u>R</u> ules...			
	<u>M</u> ember sets	<u>E</u> NDEVOR/MVS...		
	<u>G</u> roups...	CA-P <u>a</u> nvalet...		
	<u>S</u> ynch sets...	CA-L <u>l</u> ibrarian...		
		<u>P</u> DS...		
		<u>P</u> VCS...		
		<u>D</u> OS or <u>O</u> S/2...		

The system supports all file types and understands the library system at the remote site.

Production Gateway supports popular MVS library systems including PDS members, Endeavor/MVS, CA-Panvalet, and CA-Librarian.

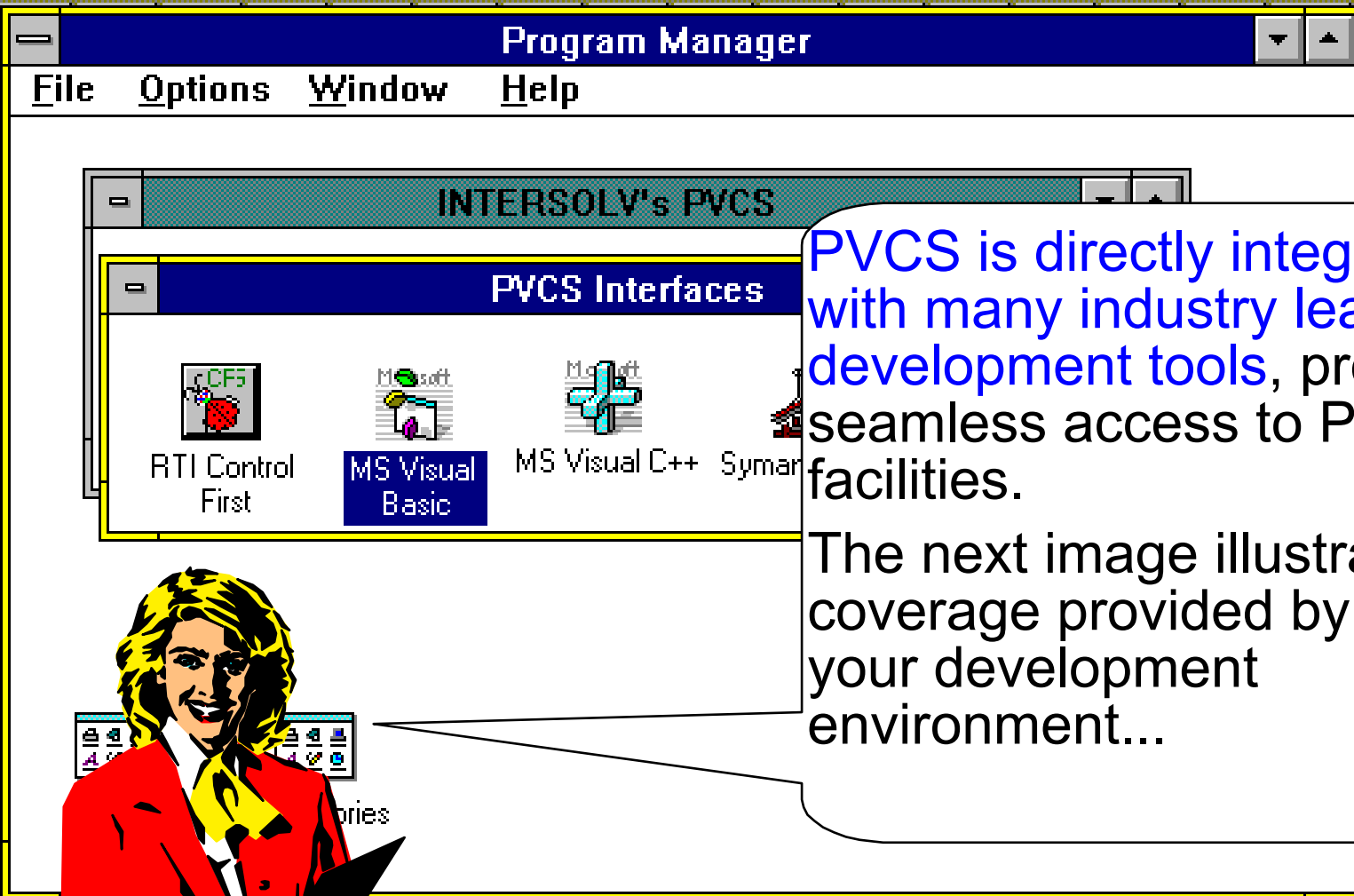
Automatic synchronization allows you to tailor the Production Gateway schedule to your project needs.

Synch set GA 2.0 source

<b>Days</b> <input type="checkbox"/> Sunday <input checked="" type="checkbox"/> Monday <input type="checkbox"/> Tuesday <input checked="" type="checkbox"/> Wednesday <input type="checkbox"/> Thursday <input checked="" type="checkbox"/> Friday <input type="checkbox"/> Saturday	<b>Daily window</b> From 09:00 <input checked="" type="radio"/> AM <input type="radio"/> PM To 05:00 <input type="radio"/> AM <input checked="" type="radio"/> PM	<b>Update</b>  <b>Close</b>
<b>Time</b> 30 Hours minutes	<b>Help</b>	







PVCS is directly integrated with many industry leading development tools, providing seamless access to PVCS facilities.

The next image illustrates the coverage provided by PVCS in your development environment...

# PVCS SCM Coverage

## Broadest Reach and Range

### Operating Systems

Windows  
MS/DOS  
Windows NT  
OS/2  
HP UX  
SunSoft  
IBM AIX  
SunOS  
Solaris  
SCO UNIX  
System V/386  
Connection to MVS  
and more...

### Development Environments

Microsoft PWB  
Micro Focus COBOL  
Borland IDE  
Powersoft PB  
HP Softbench  
IBM SDE/600  
INTERSOLV APS  
INTERSOLV Excelerator  
INTERSOLV MWB  
Digitaltalk Team/V  
Symantec IDE  
MS Visual C++  
MS Visual Basic  
and more...

### Object Types

C Code  
COBOL Code  
4GL Code  
Text  
Graphical Objects  
Binary Files  
Executables  
Arbitrary Files  
Copybooks  
Spreadsheets  
and more...

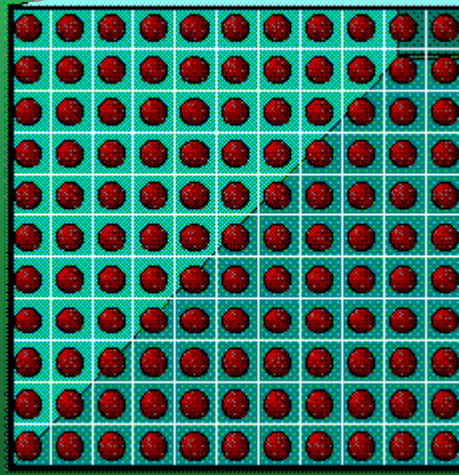
**Standardize Within and Across Projects**

# PVCS SCM Coverage

## Broadest Reach and Range

### Operating Systems

Windows  
MS/DOS  
Windows NT  
OS/2  
HP UX  
SunSoft  
IBM AIX  
SunOS  
Solaris  
SCO UNIX  
System V/386  
Conversion to MVS  
and more...



Integration among platforms and tools is a key factor to success on the LAN.

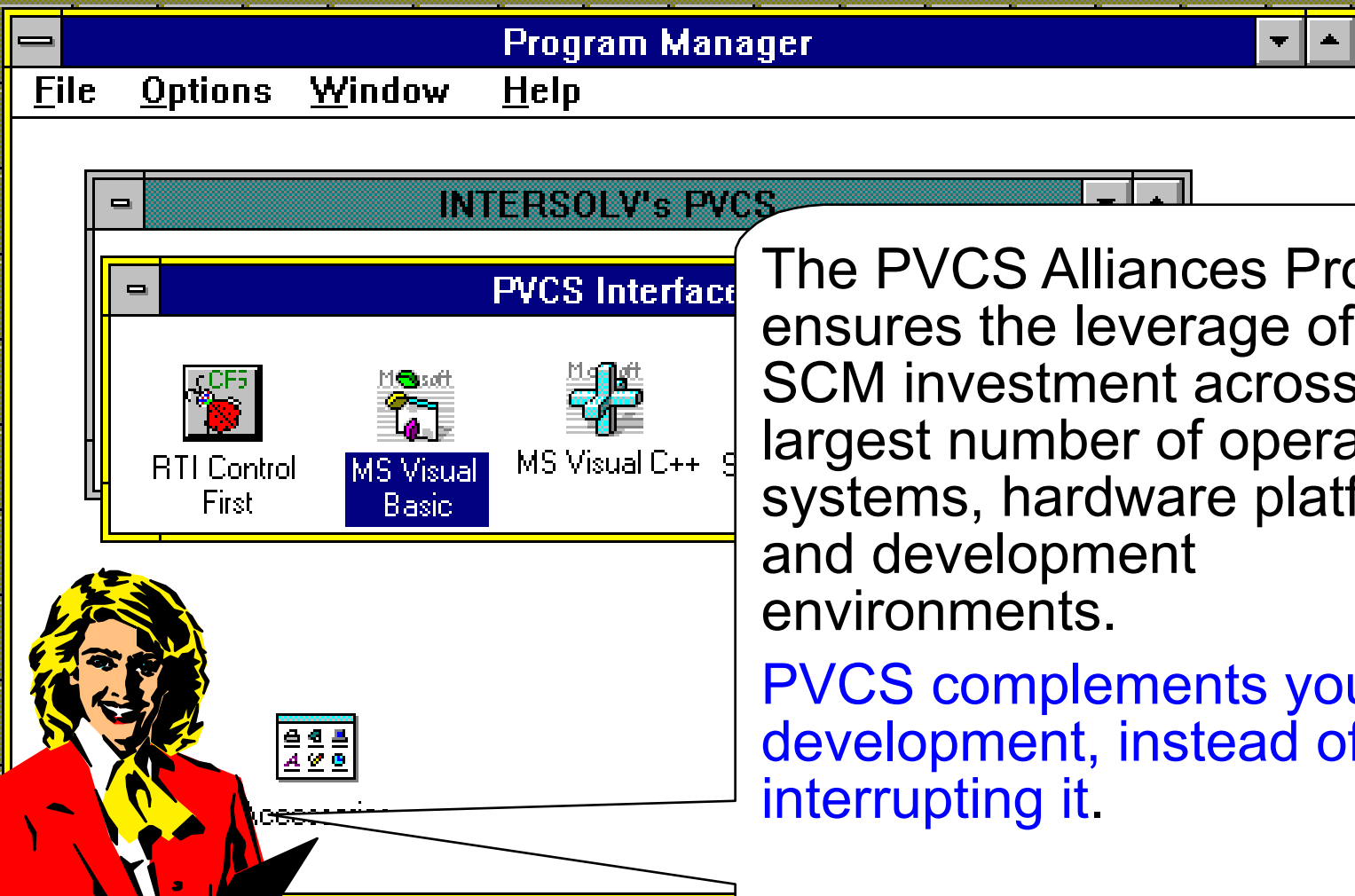
INTERSOLV continuously updates this list with additional vendors, operating systems and development tools.

### Data Types

C Code  
COBOL Code  
4GL Code  
Test  
Graphical Objects  
Binary Files  
Executable  
Arbitrary Files  
Copybooks  
Spreadsheets  
and more...



## Standardize Within and Across Projects



The PVCS Alliances Program ensures the leverage of your SCM investment across the largest number of operating systems, hardware platforms and development environments.

PVCS complements your development, instead of interrupting it.

**We just beat our Competition  
with a new system !**



**We just beat our Competition  
with a new system !**

**Our remote development sites  
are sharing resources !**



**We just beat our Competition  
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**Our project schedules  
are under control !**



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**Our maintenance team  
merges fixes into our  
production systems  
without problems !**





**We just beat our Competition  
with a new system !**

**Our remote development sites  
are sharing resources!**

**Our project schedules  
are under control !**

**Our maintenance team  
merges fixes into our  
production systems  
without problems !**


**Our auditors approved  
our quality procedures !**



# PVCS - The Market Leader for Software Configuration Management

 Used by over 150,000 developers at 11,000 sites worldwide

 A family of SCM tools

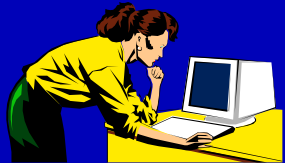
 Supporting Windows, OS/2, DOS, NT and a variety of UNIX operating systems



**Simple to Implement/Effective Immediately**

# INTERSOLV Development Suite

New Development



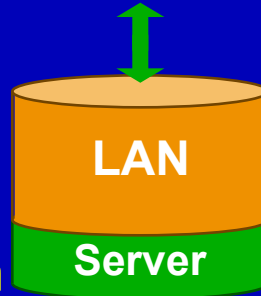
Rapid Prototyping  
Design driven

Existing Systems



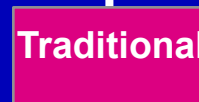
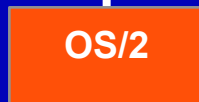
Maintain  
Extend  
Redesign

Software Configuration  
Management



Production

Targets



Broad Production Coverage

# INTERSOLV Development Suite

## New Development

PVCS is one of many tools in the **INTERSOLV Development Suite**. For more information, please contact your local INTERSOLV representative or give us a call:

**1-800-777-8858 (North America) 44 727 812812 (United Kingdom).**

And please tell them Courtney sent you!

## Existing Systems

Maintain  
Extens  
Redes

Windows

OS/2

OS 400

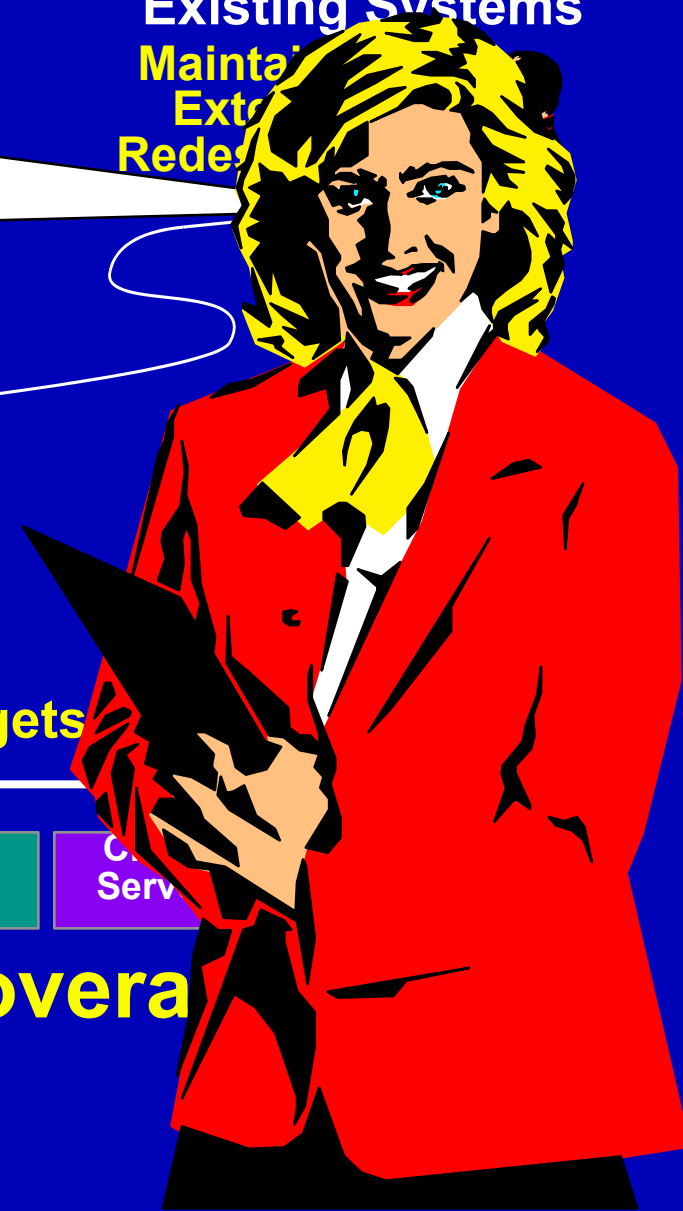
UNIX

MVS

C Serv

Targets

## Broad Production Coverage





**INTERSOLV**

**Your Edge in Software  
Development**