Welcome to ComponentSoftware RCS

ComponentSoftware RCS is a powerful and robust document revision control solution.   Based on the widely used GNU RCS, it is fully integrated with Windows 95 and Windows NT 4.0.   ComponentSoftware RCS supports multi-user and multi-platform environments, making it the ideal solution for sites that share common files on UNIX and Windows platforms.

Why Use an RCS?

ComponentSoftware RCS is Better than the Best

How ComponentSoftware RCS Helps You

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Why Use an RCS?

A Revision Control System (RCS) helps you manage multiple revisions of files by keeping a complete history of the changes performed to the files.   This allows you to see how and when a file was changed, or to quickly return to a previous revision of a file.   This can be crucial for files that are edited frequently such as programs, word-processor documents, and HTML documents.

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ComponentSoftware RCS is Better than the Best

ComponentSoftware RCS is based on revision 5.7 of GNU RCS.   GNU RCS was developed by the GNU project and is currently used by thousands of users, mainly in the UNIX environment.   ComponentSoftware RCS is implemented as a Dynamic Link Library (DLL) that is distributed under the GNU GENERAL PUBLIC LICENSE. GNU RCS has an old-fashion command-line user interface, but ComponentSoftware RCS has a modern user-friendly graphical user interface that is fully integrated with the Windows 95 and Windows NT 4.0 Explorer and shell.   This combination of tested power and ease-of-use brings full RCS mastery to your fingertips.

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How ComponentSoftware RCS Helps You

ComponentSoftware RCS allows you to:

- *Retrieve any revision by any criteria anytime*.   Each revision is marked with a unique revision number, revision date, author name, optional symbolic name, and descriptive comment.

- *Conveniently see what was changed between any two revisions.*   You can study the evolution of a function throughout its lifetime.

- *Never lose any work because you can always backtrack.*   This is critical when there is a deadline and the last revision worked better.

- *Work with binary files.*   You can maintain revisions of binary files such as MS-Word documents, pictures, drawings, etc..

- *Save disk space.*   Since only the differences between revisions are saved, the archive file size is kept to the minimum size.

In a multi-user environment, ComponentSoftware RCS additionally allows you to:

- *Know who does what and when.*   This simplifies communication between users, and smoothes out the whole development process.

- *Avoid two users modifying the same file at the same time.*   ComponentSoftware RCS maintains a "lock" for each file.

ComponentSoftware RCS was designed to handle UNIX machines and Windows machines using the same RCS archive repository.   In a multi-platform environment, ComponentSoftware RCS additionally allows:

- *Users on UNIX and Windows machines to share common files.* This option increases reusability and stability of products that target both UNIX and Windows platforms.

- *Transparently convert text files UNIX-to-DOS and DOS-to-UNIX.* ComponentSoftware RCS takes care of the line-break sequence that is different for UNIX and Windows/DOS files.

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Quick-Start Tutorial

This brief tutorial shows you how to perform the basic tasks you need to use ComponentSoftware RCS.   We recommend you follow this tutorial through from start to finish.   The tutorial takes about 10 minutes.

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Basic Concepts

The ComponentSoftware RCS Repository keeps track of the various revisions of your files.   Each file you want to keep track of must be added to the Repository.   Whenever a file receives a significant revision, it should be added again to the Repository so that anytime in the future you can go back to that revision of the file.   Adding a file again to the repository is called *checking-in* a file.

When you want to edit a file, you should take the latest revision of the file out of the Repository.   This way you can make sure you have the file in its correct form.   This is called *checking-out* the file.

Set Yourself Up

Before we begin, prepare a sample file:

- Create a new file named TEST.TXT.
- Open Notepad and type a few lines.
- Save the file.

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Add a File to the ComponentSoftware RCS Repository

To have ComponentSoftware RCS keep track of your file, you must add the file to the Repository.   Add TEST.TXT to the Repository:

- View TEST.TXT in Windows Explorer.
- Click on the file with the right mouse button to open the context menu, and choose **Add to RCS**.

The current revision of TEST.TXT is added to the Repository.
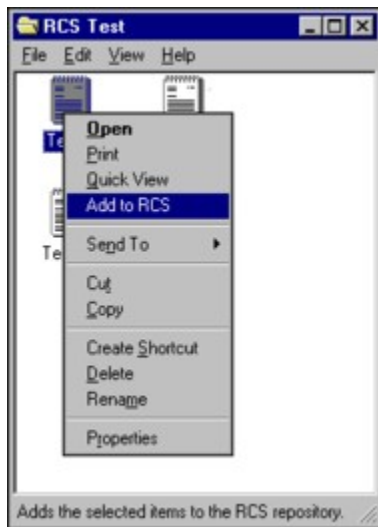
View the Changes to a File

You can check whether a file has been changed since it was last added to the ComponentSoftware RCS Repository. If the file has been changed, you can see the changes.   Check whether TEST.TXT has changed since you last added it to the Repository:

- View TEST.TXT in Windows Explorer.
- Click on the file with the right mouse button to open the context menu, and choose **RCS Status**.


The following message appears:
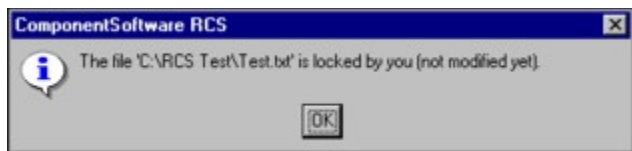
The message indicates that TEST.TXT has not been changed since you last added it to the repository.

Change TEST.TXT and then check again whether TEST.TXT has changed since you last added it to the Repository:

- Using Notepad, add a few lines to TEST.TXT.
- Invoke **RCS Status** again.

A list of the differences between the last version you added to the Repository and the current file appears.
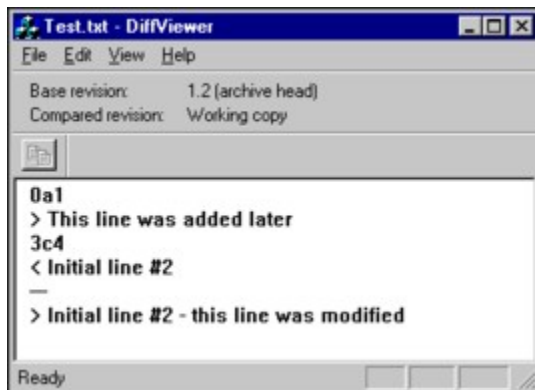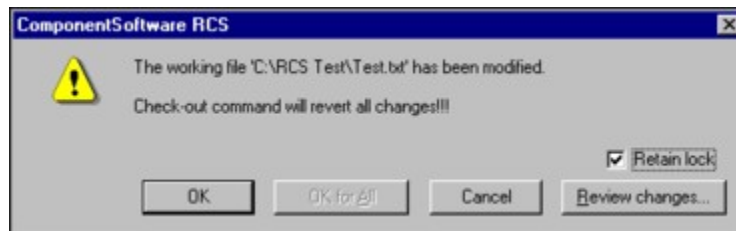
Check-out the Latest Revision of a File

At any time, you can undo all changes you have made since you last added a file to the Repository.   This is called *checking-out* a file, and effectively returns the file to how it was when it was last added to the repository.   Check-out TEST.TXT:

- View TEST.TXT in Windows Explorer.
- Click on the file with the right mouse button to open the context menu, and choose Check-out.
- Select OK.
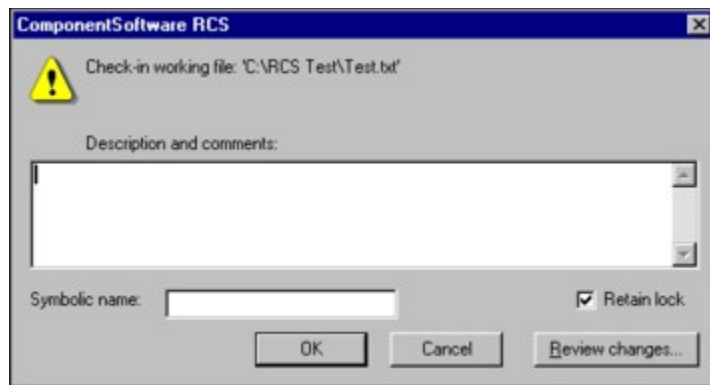
TEST.TXT returns to its original revision.

When the Check-out dialog box is open, you can see what was changed since the last revision by pressing **Review Changes**.   If you are in a multi-user environment, when you check-in or check-out a file, nobody else can check-in or check-out the same file.   If you want other users to be able to check-in or check-out the file, uncheck the **Retain Lock** option.

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Check-In a New Revision

As mentioned above, whenever a file has been significantly edited, it should be reentered into the Repository, or *checked-in*. Edit TEST.TXT and check it in:

- Use Notepad to edit TEST.TXT.
- View TEST.TXT in Windows Explorer.
- Click on the file with the right mouse button to open the context menu, and choose Check-in.
- Fill in the Description and comments. Use a symbolic name to emphasize major revisions. Symbolic names cannot include spaces.
- Press OK.

When the Check-in dialog box is open, you can see what was changed since the last revision by pressing **Review Changes**. If you are in a multi-user environment, when you check-in or check-out a file, nobody else can check-in or check-out the same file. If you want other users to be able to check-in or check-out the file, uncheck the **Retain Lock** option.

> *Tip:* *When checking in a new revision, press Review Changes and copy and paste sections into the Description and Comments field. This will help you keep track of the changes in that version.*

View the Revision History of a File

At any point, you can view a list of the revisions of a file.   You can then compare the revisions to one another, and revert to an earlier revision.   View the revisions of TEST.TXT:

- View TEST.TXT in Windows Explorer.
- Click on the file with the right mouse button to open the context menu, and choose **Revision History**.

The various revisions of TEST.TXT are displayed.   You can sort the list as you wish by clicking on the desired column header.   Click again on the same column header to reverse the sort order.
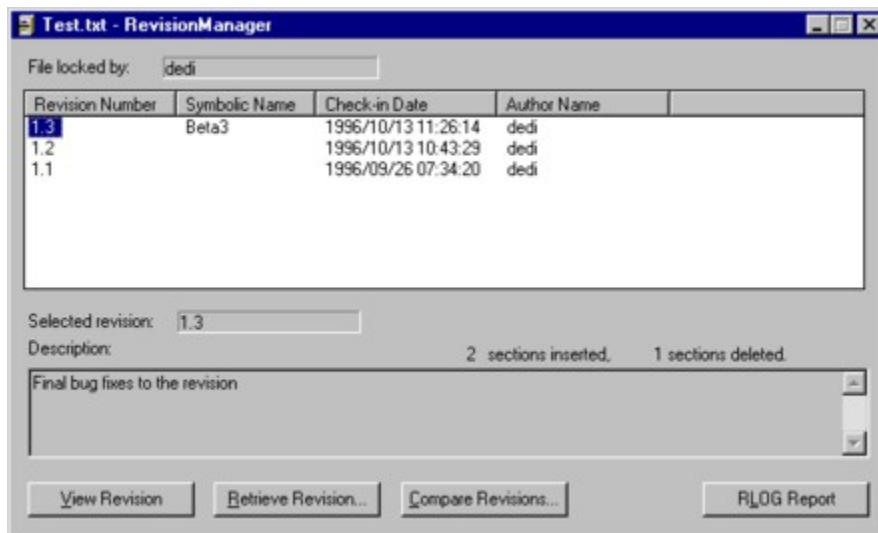

This dialog box gives you many options:

- Select any revision on the list to view the revision's description and comments.
- Press **View Revision** to view the selected revision.
- Press **Retrieve Revision** to save the selected revision to disk.
- Press **Compare Revisions** to view the changes done between the selected revision to any other revision.
- Press **RLOG Report** to view a detailed change report for the file.
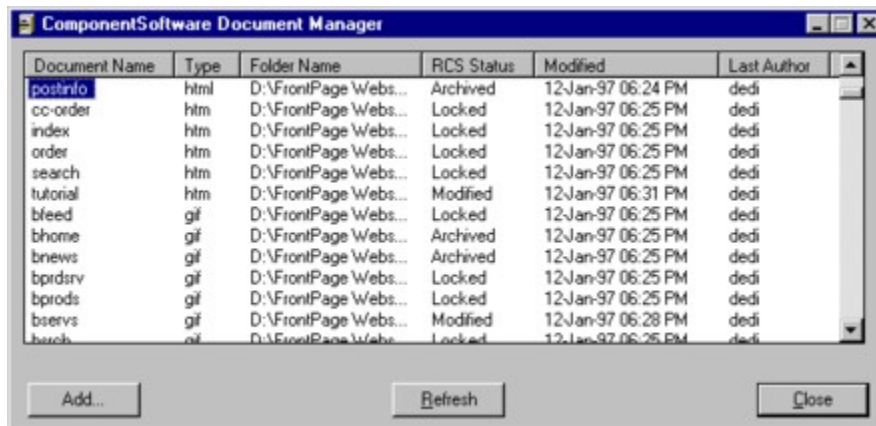
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View the Global Picture

ComponentSoftware RCS adds a special icon to your desktop called the *Document Archive*.
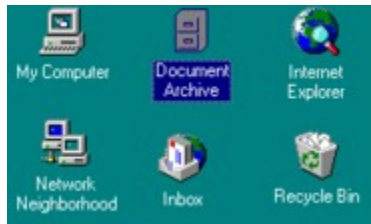
At any point, you may activate the *Document Manager* by double-click on the *Document Archive* icon.

You can see the major properties of your document:
- Document name, type and Folder
- Document archive status.
- The last time the document has been checked-in or modified
- The last author of the document.

You can sort the list as you wish by clicking on the desired column header.   Click again on the same column header to reverse the sort order. You may click on a document with the right mouse button to open the context menu and apply any RCS command.

The Document Status property gives you the exact state of the document:
- *Archived* – The document is archived. Nobody may change it.
- *Locked* – You may change the document. In a multi-user environment, nobody else may change it.
- *Modified* – You have changed the document. It is recommended to check-in the document whenever it receives a significant revision.
- *Blocked By…* – In a multi-user environment, a partner had locked the document. Nobody else may change it till the lock is released.
- *Updated* – The document has been updated in the archive. You should check-out the document in order to get the current version.
- *Deleted* – The document exists in the archive but not in your working directory. You should check-out the document in order to get the current version.

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Efficiency Tips

Invoking the Context Menu

The context menu can be invoked in several ways:

- Click on the file with the right mouse button.
- Select the file, and then open the **File** menu.
- If you have a Windows 95 keyboard, select the file and then press the key near the right Ctrl key.

Multiple Files

Sometimes, it is convenient to perform an operation on several files at once. For instance, if you have edited several files that relate to the same product release, they can all be checked-in at one time. This gives all the files the same check-in information.

To perform a multiple file operation:

- Select all the related files.
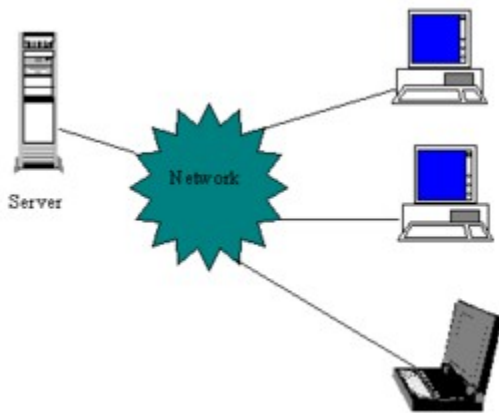- Invoke the context menu and choose the desired option.

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Thank You

Now you have the basic skills necessary to take advantage of   the power of ComponentSoftware RCS.   Thank you for participating in this tutorial.

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Multi-user Environment Setup

Multi-user environment consists of three components:

- The RCS repository server
- The workstations
- The network

The RCS Repository Server

The RCS Workstation

The Network

The RCS Repository Server

The requirements from the RCS repository server are:
- All workstation must have read and write access to the server's drive.
- The server must support long file names.

Popular servers that meet these requirements are:
- Windows 95 or Windows NT shared (i.e., "exported") folder
- Windows NT Advanced Server
- NetWare Novell (*Note: long file names support must be installed*.)
- SMB server on a UNIX machine (such as public-domain SAMBA)

Notes:
- *You may use the same machine as both server and workstation.*
- *You may refer the shared drive as a normal drive letter (F:, for example) or as an UNC path (\\SERVER1\RCS-TREE\, for example). The second method is simpler and guaranties unique identification of the shared drive.*

The RCS Workstation

The RCS Workstation

Any machine running Windows 95 or Windows NT 4.0 can be used as an RCS workstation.

The following example illustrates a typical environment:

The RCS administrator creates and checks-in the following document tree:

> C:\Project1\…
>
>> C:\Project1\Src
>>
>> C:\Project1\Doc
>>
>> C:\Project1\FAQ
>
> C:\Project2\…
>
>> C:\Project2\Src
>>
>> C:\Project2\WWW

From now on, a workstation may retrieve a local copy (called *the working copy*) of the current version. A workstation may retrieve either Project1 or Project2 (or both). A workstation may retrieve a read-only working copy or a read and write working copy (called *a locked version*).

To retrieve a working copy follow these four steps:

1. Install ComponentSoftware RCS on the workstation (choose "Workstation" installation on the first screen).
2. Invoke the Document manager (by clicking the "Document Archive" icon on the Desktop).
3. Sort the documents by folder.
4. Select the required documents and activate the check-out command.

Notes:
- *The working folders must have the same name on all workstations.*
- *If desired, the working folders may reside on a server drive that is private to each workstation. As an example: the working folder may be G:\Project1 while G: is mapped to \\SERVER\User1 on one workstation and mapped to \\SERVER\User2 on another workstation.*

The Network

The Network

You may select the network that best meets your needs:

- **Local Area Network (LAN)** – Teams that are located in the same building should use a LAN to access the RCS repository.
- **Corporate network** – Coworkers that are located on several sites of the same organization should use the corporate network (LAN/WAN) to access the RCS repository.
- **Dial-up lines (RAS)** – Mobile workers can use dial-up lines to access the RCS repository server.
- **The Internet** – Coworkers located anywhere in the country or around the globe can use the Internet to access the RCS repository. While the workstations may have local dial-up connection to the Internet, the server must have a permanent connection to the Internet. (Virtual hosting service and connect-on-demand are cost-effective solutions.) The server must be able to export the shared RCS repository tree to the Internet (password protected, of course). This feature is build-in on NT servers and may be easily installed on UNIX servers using a public-domain product named SAMBA (SMB over TCP/IP).

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