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# Acorn Access+

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## Introduction

Access+ not only allows you to share hard discs, CD-ROMs and printers, like Access, it also allows you to share and save data securely.

Your Acorn Access+ pack should contain

- a network card for your computer
- a floppy disc with a new version of !Printers and some utilities which you may need to install
- a Guarantee Card
- network card fitting instructions
- a Registration Card
- a Release Note
- these instructions.

A detailed packing list for the particular pack supplied is provided in the network card fitting instructions. If any items are missing or damaged, contact your supplier immediately.

## Updating !System and !Scrap

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if the network contains existing resources such as a Level 4 Fileserver, ensure that every station has a station number set. (See the AUN Level 4 Network Manager's Guide for details).

These instructions assume you have read your computer's *Welcome Guide*, and that computers that wish to use the network have been fitted with Acorn Access+ network cards, correctly connected to a working Ethernet network socket.

The software supplied on the floppy disc has been compressed. When you open its root directory (place the disc in the drive and click on the floppy drive icon on the icon bar) you will see an archive folder and a copy of !Sparkplug on the disc. Double-click on the archive folder to open it, and then use it in same way as an ordinary disc.

## Updating !System and !Scrap

### `installing your new copy of !Scrap (not Risc PC)`

On the Acorn Access disc supplied (inside the archive directory) you will find a copy of the application !Scrap. !Scrap is used by other applications, such as !Printers, to store temporary data. This is a new version, compatible with all previous versions, but now capable of being shared over an Acorn Access network.

Delete your old copies of !Scrap, and then copy the new version to the root directory of any hard disc that may need it. For example, a disc where applications are stored for other discless machines is a good candidate, and so may be any other hard drive used intensively by other applications, such as one that is on a machine with a shared printer. If floppy discs with additional copies of !Scrap are used, ensure that these copies are not activated by double-clicking on them.

### `Updating your copy of !System (not Risc PC)`

The new copy of !Printers supplied on the disc not only supports the sharing of printers on the network, but also has improved colour characteristics. This copy of !Printers needs a new copy of the

ColourTrans module from the !System application. It is therefore recommended that you keep a copy of !System on every hard disc, but especially on any disc that may be used to load !Printers. As with !Scrap, this should be in the root directory, and if the disc is to be shared 'Protected', then ensure that its access rights are set to 'Public' of course.

If you already have a copy of !System on a machine, you can update it from the copy supplied on the Acorn Access disc using the supplied application !SysMerge. This ensures that only old copies of modules are overwritten by new ones.

To use !SysMerge, simply double-click on its icon, and then drag the master !System, on the hard disc, into the window entitled 'Master application' and the new version on the Acorn Access disc into the New application window. SysMerge will then update the master !System application.

## Risc PC computers

Risc PC computers do not need the new !System and !Scrap files supplied, but where a Risc PC is acting as a server on a network for other earlier machines, these files should be made available to them.

It is recommended that files to be shared on the Risc PC should all be placed in a Public directory, including the new !System and !Scrap. This directory can be made available to the network by adding a line to the Risc PC's !Boot file such as

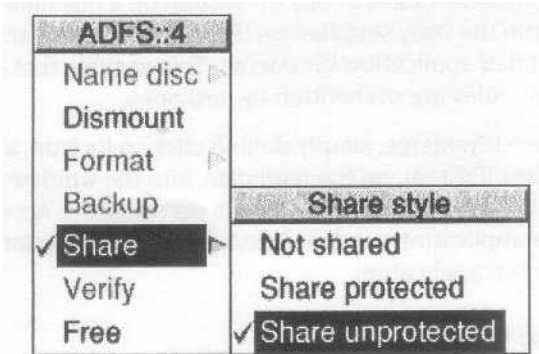
```
*Share ADFS::<discname>.$Public Resource -protected
```

which would share the Public directory as Resource in a protected way (see Sharing other drives on page 5).

The !Boot file can be found in !Boot.Choices.Boot.Tasks.

## To share a hard disc on an Acorn Access+ network

- 1 Switch on the computer with the hard disc
- 2 Press Menu over the hard disc icon on the icon bar; choose Share unprotected from the Share menu. The disc will be made accessible to the network unprotected (see Protecting a shared disc below).



Note: If your disc has the same name as another on the network, you will be asked to change it (first choose Not shared, and follow the instructions in Name disc in the chapter Discs, networks and filing systems in the RISC OS User Guide if you need assistance on how to do this).

Remember to update your Desktop Boot file if you change names.

### Protecting a shared disc

If you want to stop others reading, or even changing or deleting files on the shared disc (which they can otherwise do), choose Share protected from the Share sub-menu. If you do this, only files and directories you specifically grant public access to (using the Filer Access menu) can be read and written to by others.

## Gateways

Note that you cannot normally share discs across gateways, although you can share CD-ROMs and directories using the structured share method (see Creating a 'structured' sharing method on page 10).

## Sharing other drives

You may share any filing system or indeed any directory with Acorn Access+, but not all filer interfaces have the Share option included. To share any other filing system, you will need to either enter a Command (type F12, followed by the command) or enter the command as a part of your Boot file. The syntax of the command is:

```
*Share <Pathname>[<Discname>]t-protected[[-noicon]][-cdrom]
```

For example, most SCSI filers now support the Share option, but if one did not, the command

```
*Share SCSI::4.$ .Apps MyApps -protected
```

would share the directory *SCSI : 4. \$ .Apps* as Acorn Access disc 'MyApps', in a protected mode.

Note that there is the option not to show the icon on the icon bar (reserved for certain applications).

You may stop sharing by using the command

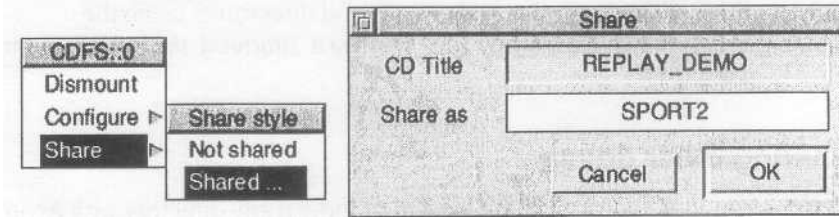
```
*Unshare [<Discname>]
```

If you do not specify the share name, it will be shared with the disc or directory name.

## Sharing a CD-ROM

Any number of CD-ROMs may be shared in much the same way as hard discs using Access, but with CD-ROMs you can also change the name they are known by on the network. (If you do not have the latest version of CDFSFiIer loaded on your machine, booting !AccessCD will ensure that this module is loaded.)

If you want to, you can change the network name of the CD-ROM using the CDFS icon bar menu:



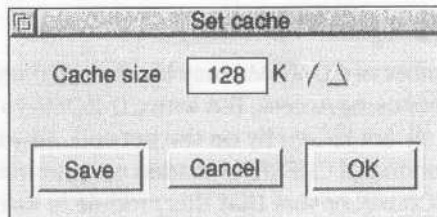
Type in the new name in the Share as box and click on OK.

### Optimising performance

To obtain the best performance from your CD-ROM, and to be able to retain details of the share status between computer resets, the computer must have seen the application !AccessCD. This stores details of the shares, and also activates a cache module, which increases performance. Place this application, supplied on the floppy disc, in the root directory of your hard disc, or ensure that your !Boot file has a line like **Filer-Boot ADFS::4.\$.!AccessCD** in it.

### Configuring !AccessCD

You can alter the size of the cache from the default 128K by double-clicking on the application icon and adjusting Cache size. The optimum size for your cache will be determined by the available memory (RAM) of your computer, network usage and CD-ROMs being accessed:



## Replay and multimedia

It is quite possible to share a CD-ROM over the network for browsing through encyclopaedic data, or text and images. However, the network itself is not capable of supporting many copies of Replay movies due to the finite bandwidth of Ethernet. The access time from most CD-ROM drives will also limit the number of simultaneous users to one or two when running this type of application.

## AccessCDS - Serving CD-ROMs over the network

if you have obtained the CD-ROM server software (available at extra cost), then you can dedicate a computer to act as a server for CD-ROMs on your network. This version of the software is not unlike AccessCD, but it contains a more sophisticated cache memory, which uses a part of the computer's hard disc to store recently-requested bits of the CD-ROMs you may be sharing over the network.

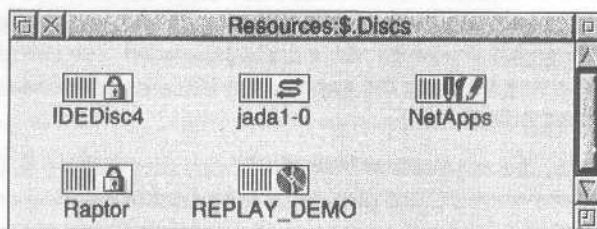
Full details of AccessCDS are provided in the Access CDShare pack.

## To access a shared disc

On the computer from which you wish to access shared discs or CD-ROMs, you will see the Discs icon on the lefthand side of the icon bar when Access+ is running:



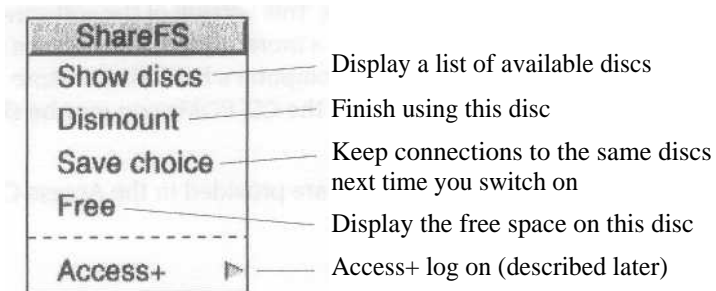
Click on this icon, and the discs you can access will be displayed:



Discs with a lock on them are protected - you can only read and write to files and directories where public access has specifically been given. The ones with a CD-ROM symbol represent CD-ROMs of course, and those with an 'Apps' type symbol inside are discs shared by the Level 4 Fileserver Application Accelerator. To access one (or more) of these discs, double-click on its icon; the discs icon will be replaced on your icon bar by the icon for that disc. Click on it to open a directory display for the disc, and use it just like you would your own hard disc or CD-ROM.

### Options

Click Menu on a shared disc icon on the icon bar to display the ShareFS menu:

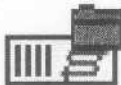


Saving your choice will ensure that your selection will be remembered when your machine is restarted.

## Sharing private data

You may wish to share data in such a way that it does not appear automatically in the Discs window, but only becomes available to those who know its name and a password. You can share data in this way by using the application !Access+ which is supplied on the floppy disc.

Drag the application from the floppy disc archive to your chosen place on your hard disc. Start it by double-clicking on its icon. The Access+ icon will appear on the righthand side of the icon bar.



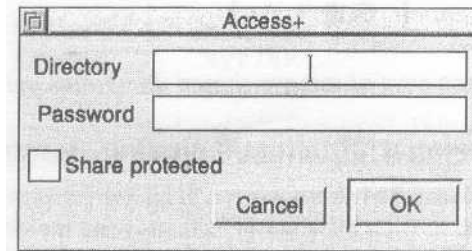


If you want to share a disc, or part of a disc, with chosen users, there are two ways in which you can do it:

- Dragging a directory into the Access+ dialogue box
- Creating a 'structured' sharing method.

### Dragging a directory into the Access+ dialogue box

The simplest method is by clicking on the Access+ icon to open a dialogue box:

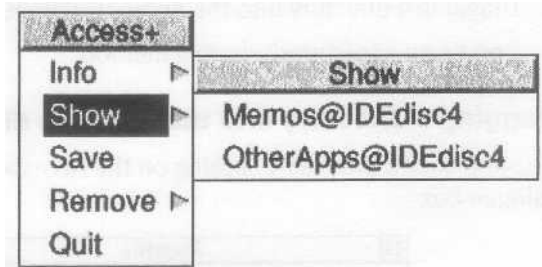


You may drag any directory into this box, from any filing system - it will then automatically fill in the directory pathname for you. You must then type in a password that others must enter if they want to access this directory. This password may be zero to *six* characters long.

To share a whole disc, open the root of the disc, choose Select all and drop the selection into the dialogue box.

You also have the option to share the directory protected.

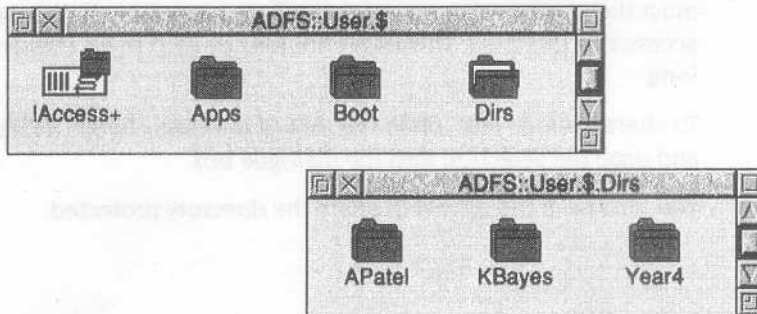
You can see what resources you are sharing from the !Access+ icon bar menu:



You can save or remove shared directories using this menu, too.

### Creating a 'structured' sharing method

The structured sharing method allows a group of users to be able to log on to their own 'world', which could include private data, common read-only applications and general read-write resources such as !Scrap. This method comes supplied in a ready-to-use structure, along with the !Access+ application, on the disc:



- Apps is a read-only directory for applications
- Boot contains !Scrap and !Shareboot (for !ArmBoot type purposes).
- !n the Dirs directory you can create directories for private data for users to log on to.

The network manager can set up this share structure on the server machine as follows:

- 1 Place the directory containing !Access+, Dirs, Apps and Boot at the chosen point on the hard disc, adding a line to the desktop Boot file to run !Access+, such as

```
Filer_ Run ADFS::User.$ .Access+, !Access+
```

Make sure that the Boot and Apps directories, and their contents, have public read access set.

- 2 Create a text (Edit) file containing all the user names in the Dirs directory along with the password each will have to use to log on to their 'world'. The following format must be used:

```
U      KBayes      abc123
P      APatel     xyz789
U      year4      why234
```

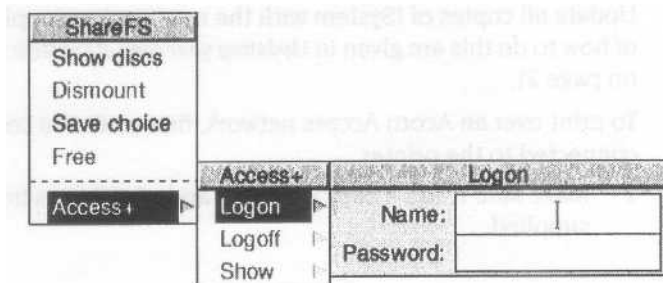
U signifies Unprotected and P is Protected. This will share the directory KBayes inside Dirs with a password of abc123. It is an unprotected mount (U) in this case. You may omit the password if you do not require this level of security. This text file can be removed by the network manager and used for reference (if someone forgets the name or password) to ensure security.

- 3 Save this file onto the Access+ icon bar icon.

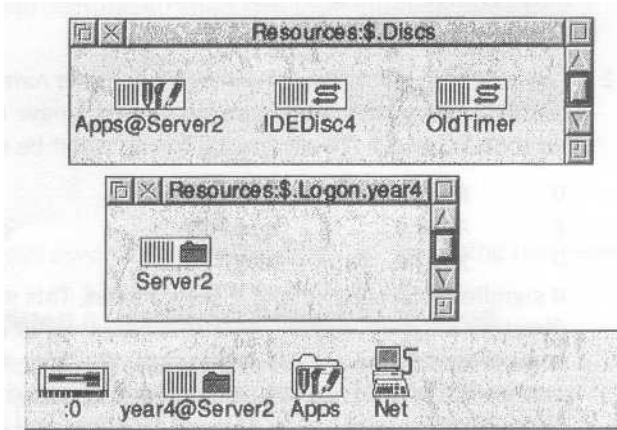
The user, when she logs on (see below) will see her own directory |year4@Server2, for example), as well as the Apps directory containing commonly-used applications available to all users listed.

## Accessing private data

To access private data, users 'log on' at their computer, using the Access icon bar menu to enter their name and password.



They do not log on to a server machine in the traditional sense, but onto the network as a whole, as any computers that have data for a particular user will place their private disc into the window that opens up when the user logs on:



In the illustration above, the user has logged on with a name `year4`. Her private directory is `year4@Server2`. The Apps directory available to `year4` is displayed in the Discs window, together with two other discs which are being shared unprotected on the network.

## Printing over an Acorn Access network

A printer connected to a computer on an Acorn Access network can be shared by other users on the network. The computer connected to the printer should have a hard disc with at least 5 MB of free space at all times.

Update all copies of !System with the new version supplied (details of how to do this are given in Updating your copy of !System (not Risc PC) on page 2).

To print over an Acorn Access network, first go to the computer connected to the printer...

- 1 Make sure it has a copy of !Scrap and of !Printers from the disc supplied

- 2 Load the new version of !Printers and set it up the same way as you did on the old version
- 3 Choose Printer control... from the !Printers icon bar menu
- 4 Select the printer to be shared, press Menu and choose the option Shared
- 5 Select Save choices from the icon bar menu. It is useful to set up a Boot file to run !Scrap, !System and !Printers when the computer is switched on.

Then on any other networked computer wishing to print...

- 1 make sure the computer has seen a copy of !Scrap and the updated !System, then load the new version of !Printers (these may all be on your local hard disc, if you have one, on a floppy disc, or on a shared hard disc)
- 2 click menu over !Printers on the icon bar and choose Printer control... a list of available printers (Connection remote) will be displayed
- 3 Select one of these printers and choose Active from the Printer control menu
- 4 It will then appear on the icon bar.

A greyed-out printer with a question mark through it indicates that the printer is not available. Is it switched on?

You can now print using the remote printer.

Choose Save choices to remember this printer set up in.

### **Printing with 16 million colours**

You will see that the option to use 16 million colours is now available for colour printers. Some applications, such as Draw, support this, but others (such as Paint) may not. It is suggested that 256 colours are chosen by default, but you may wish to experiment with the 16 million colours option with applications that can support it.

## **Printing on a 'server' computer**

While a computer is rendering a picture (i.e. processing the display before sending it to the printer) an hourglass appears. At this stage, the computer is completely busy, and any requests from other machines to read or write to its shared disc will be ignored. The time taken to render is generally fairly short, but if a great deal of printing is to be performed by one computer, it might be preferable to ensure that this computer is not the same one which contains a frequently-used shared disc.

During the time that a 'server' machine is busy, and not communicating with other machines, the hourglass on other machines that are trying to communicate with it will turn red, and start counting down, until communication is re-established.

Note that there is a limit of about 35 print jobs that can be pending at any one time from any client, and up to 77 clients at a shared printer. Any attempt to have more than this will result in an error being returned to the client.

Re-starting !Printers at the server machine will result in any outstanding print jobs being flushed.

You may quit the !Printers application and still continue to print on all machines except one that is sharing its printer over the network. This saves some memory space, and is a useful technique to use where space is very limited.

## **Speed of printing**

When printing to a dot-matrix or inkjet printer, use the lowest reasonable resolution (dots per inch) to get the desired result, as a client machine will take a long time to render a high-resolution page.

Note that the whole document or image is required before the printer will actually start, which will increase the time before printing is complete - especially if very high resolutions are selected from a relatively less powerful machine, such as an A3000.

## !Printers: Saving choices

The copy of !Printers supplied supports multiple clients saving their own choices back into the application. This is achieved using a directory inside the application called Remote. When several clients have loaded and saved choices back to the application, you will see directories named, for example, ID2abcd123 inside the Remote directory, which contain the settings for each client. You can establish which belongs to which machine by going to the command line and typing `help inet`. The machine will then display Internet information including the address used, e.g. `[net$LocalAddr : 2abcd123`. Make sure that the Remote directory inside !Printers does not lose public write access.

## Optimising performance

### Use of !NetUtils

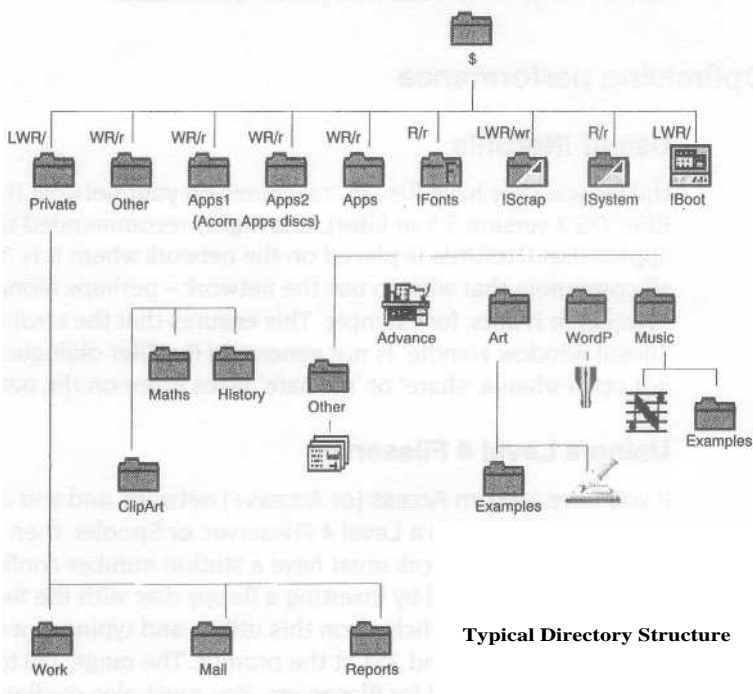
Unless you only have Risc PC machines on your network (running RISC OS 3 version 3.5 or later), it is highly recommended that the application !NetUtils is placed on the network where it is 'seen' by all computers that wish to use the network - perhaps alongside !System or !Fonts, for example. This ensures that the error message 'Illegal Window Handle' is not generated if a Filer dialogue box is not open when a 'share' or 'unshare' takes place on the network.

### Using a Level 4 Fileserver

If you have a Acorn Access (or Access+) network, and you also wish to communicate with a Level 4 Fileserver, or Spooler, then every machine on the network must have a station number configured. This may be achieved by inserting a floppy disc with the SetStation utility on it, double-clicking on this utility, and typing in a unique number between 2 and 254 at the prompt. The range 250 to 254 is traditionally reserved for file servers. You must also configure the software to use Level 4 protocols. To do this, press F12 at each machine, and type **Configure Bootnet on** at the \* prompt. Reboot each machine before attempting to log on to the fileserver.

## Directory structure

if you wish to share a disc that will be used by other machines to load applications and fonts and also be used to hold their !System and !Scrap, then it is important that a sensible directory structure is adopted on the disc that is to be shared. The following illustration is given for a disc that is to be shared in Protected mode, or for the public directory of a Risc PC, although the !Boot and Private directories would not be relevant in such a case. Note that directory 'Private' cannot be opened over the network, and !Scrap has both public read and write access:



## Remote Booting

Client computers can be set up to boot from a remote server and load the user's environment as required.

This can be set up as follows:



- 1 Configure the client machine to boot from the ShareFS file system. This is done by pressing F12 on each client machine and typing:

**\*Configure Boot**

**\*Configure FileSystem Share**

When switched on, the computer will now search to boot from a file with the name of !Shareboot in the root of the first-saved mount. The next step is to create such a file.

- 2 The first-saved mount is the leftmost disc of those displayed on your icon bar when you choose Save choice from the ShareFS icon bar menu. To select the disc you want to be the first-saved mount, Dismount any shared discs using the ShareFS icon bar menu, then click on the Discs icon to display the available discs. Double-click on the disc you want to be the first-saved mount, followed by any other discs you want to be loaded automatically. Choose Save choice, and the discs will be saved in the required order.
- 3 Now set up the environment you want for your computer when you first switch it on (files and applications loaded, directory displays open and so on). (It is useful to reset your computer first, to clean out any space-consuming modules which may be loaded.)

Go to the Task manager (the green acorn on the icon bar) menu and choose Desktop boot/Save boot file:. Change the name of the boot file to !Shareboot, then save it in the root directory of the first-saved mount you set up in the previous step.

- 4 Make sure that the !Shareboot file you have created has public read access, if the disc is shared protected.

## Soft resets

If you wish to reset your machine, always ensure a 'hard reset' is performed, never a 'soft reset'. A hard reset is performed by switching the machine off and then on, pressing Control-Reset, or Control-Break. Do not use Shift-Break or Reset, as this does not

reset the network software completely, and leaves the machine in an undefined state. Do not use the \*RMFaster WindowManager command, as this will remove the 'Discs' !con from the Icon Bar.

### **Use with TCP/IP**

Note that the Internet module supplied with Access+ is compatible with the Acorn TCP/IP Protocol Suite, so Access+ can be used with TCP/IP



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