Chapter 1: Welcome

This manual will help you through the installation process of eComStation 1.1 onto your system. Please refer to it if you have questions or problems during your install. Especially important are the sections on LVM and the Boot Options Menu. Make certain you understand how LVM functions before you make changes to your harddisk.

This manual contains the following sections:

Chapter 2: Installation
Describes how to install eComStation 1.1 using either the Easy or Advanced installation method.
Chapter 3: What's Next?
Will talk about adding support for several hardware items and will touch shortly on the installation of additional applications.
Chapter 4: Getting Connected
Explains briefly how to get connected to the Internet and your Local Network. Also contains a tips on networking within a Windows Environment.
Chapter 5: Getting Involved
Describes some ways you can help to support the development and evolution of eComStation
Appendix A: License Agreement
Appendix B: Trademarks
Contains Trademark notices and Acknowledgements
Appendix C: LVM
Describes in detail the usage of the LVM program
Appendix D: Boot Options Menu
Explains the options available at the Boot Options Menu when you start from eComStation CD#1
Appendix E: Troubleshooting
Lists some frequently asked questions and answers. Consult this section if you have problems!
Appendix F: Getting Support
Points you to the available documentation on the several CD's.
Appendix G: Coexisting with other OSes.
Contains some tips on setting up eComStation alongside other Operating Systems.

Chapter 2: Installing eComStation 1.1

This chapter will describe in some detail the several installation options you have and guide you step by step through the installation process of eComStation 1.1.

Before you begin

Before you start your installation of eComStation 1.1 make sure you have the registration key readily available on either floppy, harddisk or paper. You should have received the registration key by email, if you did not you can request it via the customer area of `http://www.ecomstation.com/` (after login). Also, you might want to check `http://www.ecomstation.com/support/` for last minute information and tips on the install process.

Hardware requirements

In order to succesfully install eComStation 1.1 please take in consideration these minimun and recommended minimum system requirements:

	Minimum	Recommended
CPU	Intel Pentium 133 MHz or equivalent (including Intel Celeron, PIII, P4 and AMD K6, Athlon and Duron processors)	Any modern CPU will do, but the higher the speed the more responsive your system will be. Intel P4 HT processors are supported, but eCS will not be able to detect it as a dual cpu setup in all cases.
Memory	48 MB (absolute minimum required for installation from CD)	A practical minimum amount of memory is 64 MB but your system will operate considerably better when more than 64 MB memory is installed. In short: install as much memory as you can in your system. 4 GB is the maximum supported amount.

	Minimum	Recommended
Video	PCI VGA video card with at least 512 kB memory.	AGP video board supported by Scitech Display Doctor. See *www.ecomstation.com* for a full list of supported adapters.
Drivespace	500 MB	When selecting more options in the installer, more drivespace is required. A practical working size is 1 GB.
Mouse	Any PS/2, serial or USB mouse	A PS/2 mouse is recommended for best performance.
CD drive	IDE or SCSI CD-ROM drive	an IDE or SCSI CD rom or DVD player with boot capability supported in the BIOS to ease the installation process.

Getting started
Your eComStation 1.1 Entry package consists of two CD's:

CD#1   contains the eComStation 1.1 base product and installer.
CD#2   contains a host of applications and drivers to enhance your eComStation experience.

Additionally, you can order the *eComStation 1.1 Application Pack*, which will be referred to as CD#3.

CD#3   contains commercial applications.

Prepare your system
If you are planning to install eComStation 1.1 on your system and you want to upgrade your existing OS/2 Warp 4, OS/2 MCP1, OS/2 MCP2, eComStation Preview or eComStation 1.0 installation, please refer to `migrate.txt` on CD#2 in order to prepare your system for installation. *Always make sure you have a tested backup of your working system!*
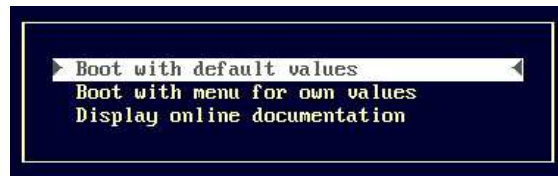
Start your installation

To start the installation process, the computer needs to boot from the installation CD. Insert CD #1 and hit the reset button or turn off your computer and turn it on again. Some computers only scan the CD-ROM for a CD to boot from when they perform a "cold boot". If your system boots succesfully from CD #1 you will be prompted with an option menu:

The default option is to continue to boot from harddisk.

```
 ▶ Boot from hard disk           ◀
   Boot from eComStation CD-ROM

   Press "Esc" to cancel automatic
   hard disk boot in 7 seconds.
```

When you select to boot from the CD another menu appears which enables you to select between the normal CD boot or the Boot Options Menu:

(see *Appendix D: Boot Options Menu* for details)

```
 ▶ Boot with default values         ◀
   Boot with menu for own values
   Display online documentation
```

On most systems with IDE hard drives and CD-ROMs, it suffices to select the first option, **Boot with default values.**

If you have a SCSI connected hard drive or CD-ROM, or other specific requirements, you should select **Boot with menu for own values**. Please refer to *Appendix D* for details on this menu option.

Features you select in the boot options menu will not only be used during the boot process but will also be added to the installation configuration on your harddisk.

The option to **Display online documentation** will present you with instructions (also available in *Appendix D*) and a list of supported hardware.

If you do not see one of these option screens to boot, please refer to the installation troubleshooting section in Appendix E

Creating boot diskettes from CD#1

If you are unable to boot from the installation CD, it is possible to create boot diskettes to start your computer. These diskettes can be used to run the installation.

1. Run `makedisk.bat` on a DOS based machine on which you have CD-ROM access. Or run `makedisk.cmd` on an OS/2 based machine on which you have CD-ROM access. This allows you to create a set of boot diskettes with several options:

To install eComStation from CD-ROM you can create installation diskettes (3.5 inch HD floppy diskettes, 2.0 megabytes unformatted) that may be modified to work with non-standard hardware configurations.

*Note: There are **two** versions of the boot diskettes plus **two** versions of a boot update diskette to supplement the CD-ROM.*

If you want to create a set of installation diskettes that will use the "Boot Options Menu", hit '1' in the menu presented to you.

If you want to create a set of installation diskettes that can be modified by the user, hit '2' in the menu on the next screen.

If you want to create a prepared diskette with a test kernel to update the memory disk during **CD boot**, hit '3' in the menu on the next screen.

If you want to create a prepared diskette to update or copy files to the memory disk during **CD boot**, hit '4' in the menu on the next screen.

Adding driver support via floppydisk:

You can also boot from CD rom and supply additional drivers on floppy disk. How to do this is documented in *Appendix D: Boot Options Menu.*

Installation Program

Once the CD bootprocess has been completed, you should be presented with the installer:

You can select the installer language (currently only English), keyboard layout and font size of the installer screens.

Font size can be changed at any time during install by pressing the key combination "CTRL +" or "CTRL -"

Once properly set you can click next to proceed to the License Agreement screen. After careful reading the license agreement you should check the Agree box and press next to proceed to the screen where you can select the type of installation.

The following options are available:
- Easy installation
- Advanced installation
- Management console

Easy installation

This option should be selected by most users, as it offers certain options, especially network configurations, preconfigured to ease the burden on the user. For example, your workstation is automatically configured for a Dynamic IP network. If yours is a Static IP environment and your Network Administrator has assigned your workstation a specific IP number, then you should use the *Advanced Installation*.
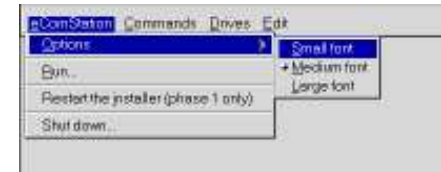
Advanced Installation

Advanced Installation offers you more control over which software components get installed and allows you to set up the network configuration.
Choose this option if you want or need to:
- configure your network to use static IP addressing,
- disable eComStation specific enhancements to the user interface,
- deselect certain software components.

Management console

The management console will exit the installation program and offer you some options to maintain your harddrive, run applications and start a command prompt. This can be a convenient way to access your

harddrive in certain situations. Also it will enable you to use the advanced Logical Volume Manager text mode interface for special requirements. Please refer to *Appendix C: LVM* for more information on LVM.
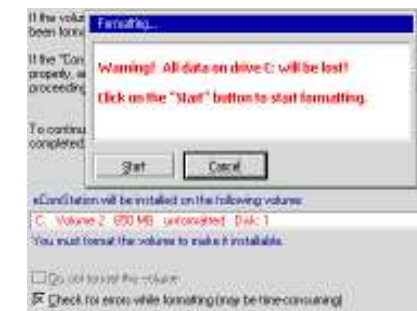
Installation Volume

Once you have selected either Easy or Advanced install, you will have to select the installation volume. When the installer does not find any suitable volume on your harddrive, you will first have to define these with either MiniLVM or LVM. See *Appendix C: LVM* for more details.
Pressing the New volume button will invoke the Mini Logical Volume Manager which will guide you through the process of creating an installable volume. It has extensive online help, which explains the various menu options.

If the installer does find a suitable volume you will be prompted with a screen similar to the one shown above.

At this time you can decide if you want to format the existing volume or not. If this is a new harddisk, it is recommended to perform a format with errorchecking enabled (this is also the default selection). Doing so will ensure that the entire volume is

correctly initialized, however the process can take a long time (up to *several hours* on large volumes that are many gigabytes in size!)

If you are installing onto an existing volume and you choose to **not format** it, you will automatically **upgrade** the existing installation.

> **Note:** *To properly prepare your existing installation please refer to* `migrate.txt` *on CD#2.*

Enter Registration Code

After the correct volume has been selected you will need to enter your registration code to be able to continue with the installation process. This registration code has been emailed to the email address you entered at the time of purchase.

You can request the registration key to be sent to you again by logging on to the `http://www.ecomstation.com`/ website, and selecting the appropriate option from the Customer Menu.

By saving the email text to either harddrive or floppy disk you can easily import the key into the registration screen. Alternatively you can type the key in manually, although this is not advised.

Locale and timezone settings

After succesful registration you will be prompted with a screen to verify your locale and timezone settings. You can also change your codepage settings in this screen.

Hardware and peripherals configuration

eComStation 1.1 will try to detect installed hardware in your system and preconfigure the settings in the hardware page accordingly. You can still alter or update the selections that thie installer has made.

The following hardware subsections can be configured:

Display Driver
Select between Scitech Display Doctor (with an extensive list of supported hardware accelerated 2D video card drivers) or Generic Support. Generic Support should only be selected if you know that your graphics card is having problems with the Scitech drivers; in most cases you can leave this setting to the default of Scitech)

Storage
Enables you to choose which IDE driver your system will use, as well as to review the autodetected SCSI host adapter. Most SCSI adapters should be recognized properly.

Standard Devices
Enables you to select the proper mouse driver as well as choosing between the enhanced serial port driver or the basic IBM driver. The last option allows you to disable APM support. You can re-enable it at a later time when necesarry - please refer to Appendix E.

USB Support
Allows you to specify which USB host controller will be enabled. USB controllers should be properly autodetected, so in general you should leave them at the preselected setting. Additionally you can specify any extra USB devices you want to support by checking the appropriate checkboxes for CD, floppy disk drive, or modem

Notebook & PCMCIA Support
If you are installing on a laptop computer, you should take special care to verify this section. There are a lot of preconfigured IBM ThinkPad models listed, as well as a large number of PCMCIA chipsets with brands that are known to use these chipsets. The hardware autodetection in eComStation 1.1 will not detect them, so you should select the appropriate one manually.

The PCMCIA services section allows you to define which PCMCIA devices should be supported.

Kernel Options
Allow you to specify special options for the operating system kernel. It is not advised to change the preselected default settings.

Select Components (Advanced Install)
The Select Components screen (only available if you have selected *Advanced Install*) allows you to determine in detail which system components will be installed to your harddrive. The Additional Features section will allow you to install eComStation 1.1 without the specific enhancements, thus creating a more or less default OS/2 Warp desktop. To do this, you should deselect the *Usability Enhancements.*You can disable the *Enhanced help viewer* and *Desktop productivity tools* as well, if you don't wish to have them installed.

Configure Network
Network configuration will allow you to select which network protocols will be installed (if you choose to install network support at all) and to which adapter these protocols should be 'bound'.

In the *Network adapters and protocols* (only available during Advanced Install) you can determine in detail what settings your network card should have. Most users should find the default values will suffice.

If no network card was detected by the hardware-autodetection, the screen will be blank and you should press the `"Add`

`adapter"` button first to select your network adapter. If the list does not contain a driver for your adapter, you can select `other adapter` to point to a directory on harddisk or to a floppydisk which does contain the drivers for your NIC. If these are found, they will be copied onto the installationdrive and you can proceed with the configuration.
TCP/IP settings (Advanced Install - when TCP/IP protocol is selected) allows you to configure your IP address to use either DHCP or a static IP address.
LAN settings (when appropriate) requires you to enter your Workstation ID and the LAN domain name.

> **Note:** *Make sure that the domain name is the same as your other eComStation / Windows machines if you want to share files and printers between all machines. Windows uses the term "Workgroup Name" to name the domain.*

Accept Configuration
When you are satisfied with the configuration options you have made (you can go back and change them by pressing the `'previous'` button) you should confirm the configuration and press `'next'` to start the actual installation.

This process can take up to an hour depending on the speed of your system and CD-ROM drive and will reboot the system a couple of times. You can leave the system unattended, as it does not require any more intervention from you.

If for some reason you want to abort the installation you can press the stop button at any time. This will offer you the option to start the maintenance console, or abort the installation which will take you to the first page of the installer. *All your previous selections will be lost*

Finishing installation
The installer will now finish the installation by copying files to your harddrive. This process will take a while and the system will reboot during the process. If you experience any problem, please refer to *Appendix E: Troubleshooting.*

After a number of reboots your system should be ready and present you with a desktop similar to the screenshot on the next page. You will find a system eCSGuide which will help you to configure your system:

- screen resolution and refresh rate
- change your network userid (if networking is selected)
- configure the DHCP timeout value (if necesarry)
- change the look and feel of the eComStation desktop
- configure the clock of your system
- allow you to install a local printer

(You can always restart this system eCSGuide by selecting `Local System -> Install/Remove -> eComStation Setup` from your desktop).

The desktop of eComStation 1.1 right after installation:

Besides the eCSGuide, you will also notice a help screen in the screenshot above, this is the help that will be shown the first time you boot the system.

Tip: *You can invoke context sensitive help throughout the system at any time by pressing the* `F1` *key on your keyboard, for almost every system object specific help will be displayed.*

Ready!
This concludes the basic installation of eComStation. Please read on in Chapter 3 about using the eCSGuides to install additional applications, supported hardware and other hints and tips!

Chapter 3: What's Next?

After finishing the initial installation, described in *Chapter 2*, you are advised to insert CD#2 in your CD-ROM player to install additional features and software.

Note: *Before using CD#2 for the first time please reboot your system!*

An extensive menu of eCSGuides will be displayed when you start the installer with **install.cmd** from the root of CD#2. A check will be performed to make sure you are running the installer on eComStation 1.1 and not an older (possibly incompatible) version. Again, please make sure you did a system restart, after the basic installation described in Chapter 2. This will make sure your base multimedia system is properly set up.

CD#2 contains additional software applications and drivers for several hardware devices like ISDN adapters and multimedia devices.

Video

If you had selected to install legacy VGA during installation, you may want to upgrade to a more advanced video driver, which is provided by the means of "Scitech Display Doctor" (SDD). This driver supports almost every modern video chipset on the market today and offers excellent performance by enabling the 2D hardware acceleration of these chipsets.
SDD is installed onto your system already, if you selected Scitech Display Doctor during the eComStation installation from CD#1.
To add it later to your system manually, you can run the video.cmd script from the root of CD#2 which will install SDD on your computer.

Printer

To install a locally connected printer in eComStation, you can use the Printer Installation Guide, available in the Printers folder within the eComStation folder on your desktop. Alternatively you can use a Printer Template from the templates folder and drag and drop it to the Printers folder. When you want to install a Network Printer, you will have to install it via the template drag and drop method, since the Printer Guide only supports local printers. The shipping drivers contain support for over 1000 printer models and are up to date to 2003. Additional drivers will be available via the website `http://www.ecomstation.com/`

Multimedia

Base multimedia support is automatically installed at the end of the base installation of eComStation 1.1.

You can install additional features and drivers via the Multimedia Menu of CD#2. (invoke it with **install.cmd**)

The following can be installed through the Multimedia Menu:
- OpenGL 1.1 (software 3D engine)
- ELSA hardware MPEG playback support
- Hauppauge TV card support (PCI/ISA)
- Cinema/2 (TV viewer application)
- LBMix (audio mixer)

Audiodrivers for the following brands:
- Advanced Gravis (ISA)
- Analog Devices (AC97)
- Cmedia (PCI)
- Creative Labs/Ensoniq (PCI/ISA)
- Crystal (PCI/ISA/AC97)
- ESS (ISA)
- Realtek/Avance Logic (PCI/ISA/AC97)
- Sigmatel (AC97)
- Yamaha (PCI)
- USB audio support

Additionally you can reset, remove and reinstall your multimedia configuration with the menu of CD#2. Please refer to the instructions given onscreen.

Additional software

You can install several applications available on CD#2. A short list:

Full function applications:
- Acrobat Reader 3 (view PDF documents)
- Desktop On Call (control your desktop remotely over the internet)
- PostgreSQL (advanced relational database)
- Stellar Frontier (arcade game from Stardock)
- WarpIN installer (essential to install many eCS or OS/2 applications)
- eCSCoNet (dialer for Internet Access - *see Chapter 4*)
- Mobile File System (IBM MFS - synchronize directories between notebook and desktop computer)
- Netware Client for eCS (IBM - add support to access a Netware network)
- OpenWatcom C/C++/FORTAN compiler (*see Chapter 5*)
- IBM Toolkit 4.52 (enables you to develop new applications for eComStation)
- Java 1.3.1 (runtime and developer toolkit from IBM)
- FaxWorks (send and receive faxes)
- IBM Works (simple but functional office suite)
- VoiceType (control your desktop with your voice!)

Trial applications
- Cool FM (radio tuner with support for most hardware radioboards)
- Flash 5 (trial version of Macromedia Flash 5 player for OS/2)
- Graham Utilities (suite of disk and system utilities)
- Maul Publisher (desktop publishing application)
- Norman Virus Control (antivirus software, includes free 3 month update subscription)
- PM Downloader (application to download hassle-free from the Internet)
- RSJ CD writer (will write CD and DVD data discs)

eComStation Maintenance Tool

The eComStation Maintenance Tool is intended to update an
eCS installation with IBM Convenience Package updates
(known as fixpacks), apply customized updates furnished by
Serenity Systems, Inc, installed selected features, or backout updates
that have been applied. It is also capable of applying and removing
updates from IBM and Serenity Systems that are not applied using the
IBM service process. If you have the eCS Pro (SMP) version, the
eComStation Maintenance Tool also supports the addition and removal
of SMP support.

You can install the maintenance tool by invoking the eCSGuides from
CD#2 (**install.cmd**) and selecting the *eComStation Software* menu.

eComStation 1.1 Application Pack

When you purchased the *eComStation 1.1 Application Pack* you will
also find CD#3 in your eComStation package.

This CD-ROM contains the following software/features:

- Lotus SmartSuite 1.7.1 (full office suite)
- HobLink X11 (enables you to run X11 applications on the
  eComStation desktop)
- Sti scanner drivers and Applause Image utility

You will require a separate registration key to be able to install these
applications. You should have received the key from your vendor, but
can also request it by registering on the website:
http://www.ecomstation.com/

You can install the applications by starting **install.cmd** from the root of
CD#3.

Chapter 4: Getting Connected

Internet

The Internet is a huge network of computers, itself incorporating many
thousands of individual subnetworks known as intranets (LAN's). The
Internet is the largest network of computers in the world and it's
importance as a medium to communicate and interact with other users
has become very clear in recent years.

eComStation is a very capable Internet client system for many services
available on the Internet, such as (e)mail, webbrowsing, IRC ('chatting'),
ftp (downloading files), telnet (remote console access) and much, much
more. eComStation by default installs Netscape Communicator for
webbrowsing and some other tasks (mail, news, ftp). More clients are
available, either as installed application or as seperate download. (for
an overview please have a look at the 'Internet' folder on your
eComStation desktop).

Before you are able to access the Internet, you will have to configure
how your connection will be made. The list below gives an overview of
the possibilities available in eComStation.

- Modem (analogue/ISDN)
- Cable
- ADSL/DSL
- LAN

General Information Required
Before you start to configure your Internet Access, make sure you have
the following information at hand:

- Your ISP dial in telephone number (in case of modem/ISDN)
- The username/password required to login to your ISP
- Your ISP nameserver IP address (most of the time there are two IP
  addresses, Primary DNS and Secondary DNS)
- In case of a LAN connection the IP address of the gateway PC
- Additionally you may want to configure a Proxy Server (within your
  browser)

eCSCoNet

eCSCoNet is an OEM version of a program called ISDNPM and is both a dial-in client and server program for analogue and digital data connections.

eCSCoNet supports the following interfaces:

- Analogue modems: up to four serial interfaces (COMx) at a time.
- ISDN: up to eight CAPI interfaces (both version 1.1 and 2.0).
- (A)DSL: one xDSL connection using its implementation of the PPP over Ethernet network protocol.
- (A)DSL one connection using its implementation of the Point to Point Tunneling Protocol (PPTP).

A short list of interesting features:

- Dial On Demand (eCSCoNet will dial in to the Internet if you request a document which is not locally available).
- NAT (Network Address Translation) supports up to 253 PC's on your LAN to share one internet connection.
- Supports dial-in, dial-back and can be used as a remote access server
- Built-in firewall with extensive rulesets.

Installing eCSCoNet

You can install eCSCoNet after the basic installation of eComStation has finished by starting the *Internet/Networking eCSGuide* from CD#2 (run `install.cmd`).

Click the Install button to start the installation. After installation completes, a folder "Internet Assistant for eComStation" and a folder "eCSCoNet v1.00" will have been created in your Internet folder.

Configuring your Internet connection

Double Click the "Configure eCSCoNet with Internet Assistant!" icon in the eCSCoNet v1.00 folder to start configuring your Internet connection. You will be guided step by step to configure your dialer (eCSCoNet or IBM Dial In program) and your installed webbrowser as well.

Internet Assistant can configure all connections eCSCoNet offers:

Analogue Modem

To configure an analogue modem, most default settings can be used, the notable exception is the port-speed. Please set this to 57.600 baud. Setting it higher will not have a positive effect, but a lower setting will seriously slow down your connection.

ISDN card

Internet Assistant will detect and configure a properly installed ISDN card. This requires you to setup your ISDN driver before starting the Internet Assistant. To install your ISDN card, please use the ISDN eCSGuide ....

All included drivers are licensed for distribution with eComStation. There may be drivers suitable for your ISDN adapter, which are not included on CD. Please contact your hardware vendor if you are unable to find a correct driver.

PPPoE DSL connection

Selecting this option in Internet Assistant will ask you on which network adapter your DSL modem is connected. Select the proper one and check the eCSCoNet checkbox in the next screen.

PPtP DSL connection (KPN MxStream)

Currently connections to DSL modems using PPTP cannot be configured for eCSCoNet directly. In order to use such DSL modems:
1. configure a *serial* dummy connection with the correct parameters from your provider (userid, password etc.)
2. finish installing with Internet Assistant
3. find the script `cfgenable` from the eCSCoNet package (`x:\programs\ecsconet\bin\cfgenable.cmd`) to migrate that connection to use PPTP.

4. call the script as follows: **cfgenable pptp 'connectionname'**
   where connectionname is the name you entered in the first page of
   Internet Assitant.

> *Note: there is extensive documentation available on eCSCoNet and*
> *advanced configuration options. Please see the Online Help icon in*
> *the eCSCoNet folder.*

LAN

Using your Local Area Network to access the Internet is possible when
the TCP/IP protocol is installed and configured as described in Chapter
2. You do *not require Internet Assistant* for this type of connection.
The main thing you need to know is whether your LAN uses DHCP to
assign IP addresses to workstations, or that it uses static IP addresses.
Consult your network administrator if in doubt. You can setup your IP
configuration in detail by opening the *Internet -> TCP/IP -> TCP/IP*
Configuration (local) from your desktop.

Cable Internet Connections

Direct Internet Access is by far the easiest to use and setup in
eComStation. All that is required is that you install and configure the
TCP/IP stack as described in *Chapter 2.* You can setup your IP
configuration in detail by opening the *Internet -> TCP/IP -> TCP/IP*
Configuration (local) from your desktop.

> *Note: some Cable Internet Service Providers use a serial modem to*
> *connect you to the Internet and use a special login-'phone'-number*
> *you can use. If this is the case with your provider, use Internet Dial Up*
> *from* Internet -> Dial Up Tools *or* eCSCoNet *as described above,*
> *instead.*

Local Networking

eComStation has the ability to communicate in almost any network
setup available. However, there are some caveats which will be
discussed briefly in the following sections.

> *Note: If you do not use your eComStation workstation in a network*
> *setup, you can skip the following section.*

In the present eComStation architecture, the networking is referred to
as Multi-Protocol Transport Services. The support is provided by drivers
called requester's. The requester's are specified in the config.sys file
and loaded at boot. Network communication is provided to and from the
requester's and protocol's using NDIS (Network Driver Interface
Specification). eComStation ships with the following requesters: IBM
LAN, 3270 Emulation, Netware (via ThirdParty eCSGuide) and IBM
TCP/IP. A very extensive online book "MPTS Configuration Guide" has
been placed in the Online Information folder in the Help Center of your
desktop.

When properly configured, eComStation is able to communicate /
network with:
- Windows 95/98/Me
- Windows NT/2000/XP
- Linux (Samba)
- Netware
- and more

Networking Interoperability: Windows

You will need to install *File and Printer Sharing* to interoperate with a
Microsoft Network. The eComStation client is very easy to setup to
interoperate with a Microsoft Network if you know the tricks involved.
The "File and Print Client Guide" is placed in the Online Information
folder of the Help Center when you installed *File and Printer Sharing*. It
contains a brief section on interoperability with Microsoft Networks.
The three protocols generally needed to interoperate with Microsoft
Networks are TCP/IP, NetBios, and NetBios over TCP/IP. The NetBios
protocol can only be used on a local ethernet network because it
contains no routing information. The advantage is that the NetBIOS
LAN can never be approached from the internet. (A subnet can be
approached from the internet and is most often a NT TCPBEUI or
Novell network).
NetBios over TCP/IP (TCPBEUI) can see past a router and this protocol
is generally used by newer versions of Windows. Since Microsoft
installs by default TCPBEUI for File and Printer Sharing for so-called
Microsoft Networks, the most convenient way for eComStation to
communicate with Windows machines in a network is to use the *Netbios*
over TCP/IP protocol.

In order to properly configure your network with Windows, you should pay attention to several issues :

Connecting to Windows NT, 2000 or XP

An eComStation client can take advantage of Microsoft Network in one of two ways. The eComStation client can logon to the NT domain or logon locally. However, browsing is severely limited on a Microsoft Network if the servers have been configured with the default settings (more on this in a later section). Either method will achieve the desired results of using the resources on a Windows NT/2000 server domain. One precaution, *your local eCS logon must exactly match the logon ID on the NT/2000 domaincontroller*. In addition, NT/2000 server allows lower case in passwords whereas eComStation is case-insensitive for passwords.
In a segmented network architecture where the eComStation client is separated from the NT/2000 server via a router, domain authentication is impossible with the default configuration of the eCS client. In order for the eCS client to be authenticated by the NT/2000 domain controller the IP-address will have to be added to the RFCBCST.LST file. This is because NetBIOS via TCP/IP cannot acknowledge the complete TCP/IP (inter) network as NetBIOS locally does. It works with distinct Point-to-Point communications. So only the NETBIOS SERVERS in RFCBCST.LST are initially notified of the appearance of a new machine on the network.

Other NT/2000/XP resources can be added to the RFCNAMES.LST file. This list can be compared with the host file of the DNS and has its analogue in Windows in winnt\system32\drivers\etc\lmhosts .

These files may be updated by editing the Netbios over TCPIP protocol in MPTS or editing the files directly with a text editor.

If you are using a **one segment network**, that is all machines are within the same networkrange, you only need to add the highest IP-address of the networkrange you are part of (e.g. 192.168.0.255) to the broadcastlist (RFCBCST.LST file) and the IP-addresses of the Windows clients to the Nameslist (RFCNAMES.LST).

After the RFC files have been modified, the *RFCADDR* command can be run from an OS/2 window which will update the system and prevents the client from having to be restarted.

Connecting to a network with WINS available

WINS (Windows Internet Name Service) is a combination of a Domain Name Server and a NetBios Name Server. eComStation clients can take full advantage of the NT/2000 WINS NetBios Name Server. Editing the Broadcastlist and Nameslist files would be no longer necessary. The only thing you have to do is to manually edit the protocol.ini file and add the WINS IP-addresses (NBNSADDR and NBNSBACKADDR) into the TCPBEUI section. If you are using DHCP you can request these IP-addresses and view them from the DHCP monitor program.
Also the node type should be set to "H-Node" when operating in a segmented network (leave it to the default B-Node for a one segment network).

Change the following section of your protocol.ini (you can change these values also via MPTS -> Edit Protocol)

```
[TCPBEUI_nif]
DriverName=tcpbeui$
Bindings=PCNTND_nif
NODETYPE="H-Node"
NBNSADDR="XXX.XXX.XXX.XXX"
NBNSBACKADDR="XXX.XXX.XXX.XXX"
OS2TRACEMASK=0x0
SESSIONS=130
```

Network Performance

To enhance the performance of an eComStation workstation in a Windows NT/2000/XP Network you can change the default settings of *MAXIN* and *MAXOUT* from 1 to 3 in eComStation, either by using MPTS or directly in \IBMCOM\PROTOCOL.INI

Windows Network Browsing

To enable your eComStation client to browse your Windows Network resources, you need to take into account the fact that eComStation clients cannot see the resources of Microsoft TCPBEUI Servers in their File and Print Client Resource Browser, when the Windows servers have their LAN Manager parameter lmannounce set to off. Unfortunately, this is Microsoft's default. This parameter defines the response to LAN Manager 2.x browser broadcasts. The default

response is to ignore these broadcasts. However, the "`net view`" command can show resources when the resource is specified as follows: "`net view \\resource`". If the command "`net view`" is used, nothing will show except your workstation or other OS/2 Servers/Workstations on your network. Even putting the servername in the broadcast list does not change this.
The Window's servers and workstations will have to have their default settings changed as outlined below to enable browsing from OS/2 and eComStation.

Windows for Work Groups:
The parameter "`lmannounce=yes`" will have to be added in the `[network]` section of the `system.ini` file.

Windows 95/98/ME:
The parameter "`LMAnnounce`" is in located in Network settings under File and Print sharing properties.

Windows NT 4.0 Server:
In Network settings, Services, Server, select the *Make Browser Broadcasts to LAN Manager 2.x clients* at the bottom of the dialog page.

Windows NT/2000/XP Workstation:
Users will have to manually modify the `Lmannounce` entry in the registry. The entry is as follows:

`\HKEY_LOCAL_MACHINES\System\CurrentControlSet\Ser...`
`...vices\LanmanServer\Parameters`

This setting will have to be changed from the default of 0 to 1. The *regedt32.exe* program will have to be used for the above procedure. It is located in \WINNT\SYSTEM32. Alternatively you can use Start -> Run -> Regedit -> Edit -> Find "Lmannounce". Doubleclick on the highlighted "Lmannounce" and change the DWORD 0 to 1. This would result in:

`\HKEY_LOCAL_MACHINES\System\CurrentControlSet\Ser...`
`...vices\LanmanServer\Parameters\Lmannounce (1)`

Note: Windows needs to be restarted before the LM Announce setting takes effect.

Chapter 5: Developing for eComStation

Included with eComStation are the basic tools needed to develop new programs. On the CD#1 you will find the Toolkits for Java (both the Java 1.1.8 and Java 1.3.1 versions) and the OS/2 Developers Toolkit (version 4.52) is available on CD#2. Also included with the system is the powerful REXX language, which can be used to make text mode applications, or with some extensions can also be used to develop PM applications (see below). If you want to get started on development it is advisable to install the toolkits, which will give you extensive information on all aspects of programming for eComStation. If you are not interested in native application development, but only Java development, installation of the Java Toolkit would suffice.

Open Watcom 1.0 C/C++/FORTRAN

By kind permission of Scitech Software, Inc. (`www.scitechsoft.com`) included in this release of eComStation is Open Watcom 1.0.
Open Watcom C/C++/FORTRAN is a suite of advanced, easy to use cross platform compilers and development tools. Supported platforms include DOS, Windows, OS/2 and Netware. Included is an Integrated Development Environment, graphical debugger, profiler and a class browser.
Open Watcom 1.0 is developed as a joint effort between SciTech Software Inc, Sybase, and the Open Source development community. To learn more about the OpenWatcom project, download new releases or make a donation to support the effort, please visit `www.openwatcom.org`. You can install the compiler by using the installer in the *developer eCSGuide* of CD#2 (use `install.cmd` to invoke the main guide)

The *developer eCSGuide* also enables you to install the **IBM Developer Toolkit 4.52** and contains information by Daniela Engert on writing device drivers.

Other tools available:

Besides the included tools, there are several other developer tools available for eComStation:

EMX GCC

EMX GCC, the GNU Compiler Collection, including the EMX runtime libraries that implement part of the standard UNIX functionality will soon be commercially released by Innotek, for more information please see: `http://www.innotek.de/`

`Pascal Compilers:`
- Virtual Pascal, a free highly Borland Pascal/Delphi compatible compiler with a Borland Pascal like development environment
- EMX GNU Pascal, part of the GNU Compiler Collection mentioned above.
- Free Pascal: A free, Turbo Pascal 7 compatible compiler

`BASIC Interpreters:`
- QBasic, DOS version is included with eComStation. QBasic is an BASIC interpreter only, you can't compile to a executable
- Liberty Basic, a commercial BASIC for Windows and OS/2, which can also produce standalone programs

`REXX extensions:`
- VX-REXX: REXX extensions to develop PM applications with REXX
- DrDialog, RAD development tool for REXX which allows you to develop PM applications, available on the IBM Developers' Toolbox.

Next to these there are several commercial development tools like VisualAge for Java, VisualAge C++, Simplicity for Java, VisPro REXX, etc, and there certainly are more free-, and shareware products out there which we did not include in this list. A good place to start looking for more free-, and shareware products is the `/pub/os2/dev` directory of the Hobbes archive.

`Links:`
eComStation Developer Portal: `http://dev.ecomstation.com/`
OpenWatcom: `http://www.openwatcom.org/`
EDM/2 programmers magazine: `http://www.edm2.com/`
Netlabs: `http://www.netlabs.org/`
Hobbes ftp archive: `http://hobbes.nmsu.edu/`
Virtual Pascal: `http://www.vpascal.com/`
Free Pascal: `http://www.freepascal.org/`
Liberty BASIC: `http://world.std.com/~carlg/basic.html`
IBM Developers' Toolbox: `http://www.developer.ibm.com/devcon/`

Appendix A: License Agreement

eComStation End User License Agreement

READ THE TERMS AND CONDITIONS OF THIS LICENSE AGREEMENT CAREFULLY BEFORE INSTALLING AND USING THIS COMPUTER SOFTWARE AND THE ACCOMPANYING USER DOCUMENTATION (THE "PROGRAM"). THE PROGRAM IS COPYRIGHTED AND LICENSED (NOT SOLD). BY INSTALLING THE PACKAGE CONTAINING THE PROGRAM, YOU ARE ACCEPTING AND AGREEING TO THE TERMS OF THIS LICENSE AGREEMENT. IF YOU ARE NOT WILLING TO BE BOUND BY THE TERMS OF THIS LICENSE AGREEMENT, YOU SHOULD PROMPTLY RETURN THE PACKAGE TO THE PLACE OF PURPUASE TO ARRANGE FOR A REFUND OF YOUR PURCHASE. THIS LICENSE AGREEMENT REPRESENTS THE ENTIRE AGREEMENT CONCERNING THE PROGRAM BETWEEN YOU AND SERENITY SYSTEMS INTERNATIONAL, AND IT SUPERSEDES ANY PRIOR PROPOSAL, REPRESENTATION, OR UNDERSTANDING BETWEEN THE PARTIES.

NOTE: IF YOU ARE USING A PREVIEW COPY OF THIS SOFTWARE, YOU ARE REQUIRED TO INSTALL THE GENERALLY RELEASED PRODUCT. AT THAT TIME, NO FURTHER USE OF THE PREVIEW SOFTWARE IS AUTHORIZED.

License Grant:
Licensor hereby grants to you, and you accept, a nonexclusive license to use the Program and the computer programs contained therein in machine readable, object code form only (collectively referred to as the "Software", see Information About Your Software, later on this document), and the accompanying User Documentation, only as authorized in this License Agreement. A license of eComStation is required for each computer owned, leased, or otherwise controlled by you and on which you will operate eComStation. Or in the event of the inoperability of that computer, on a backup computer selected by you. Neither concurrent use on two or more computers nor use in a local area network or other network is permitted without separate authorization and the payment of other license fees.

You may transfer all your license rights under this agreement. You must transfer all media, documentation, and a copy of this agreement. All components of eComStation must be transferred as a unit and cannot be broken up or transferred separately. Such a transfer terminates your rights to use the program.

A program is considered in use when it resides in memory or is otherwise stored in the machine. A program stored on a network server, solely for the purpose of being distributed to other machines is not considered to be in use. But your use may not exceed the total number of users authorized.

Upon loading the Software into your computer, you may retain the Program Media for backup purposes. In addition, you may make one copy of the Software on a second set of media for the purpose of backup in the event the Program media is damaged or destroyed. You may make one copy of the User's Manual for backup purposes. Any such copies of the Software or the User's Manual shall include Licensor's copyright and other proprietary notices. Except as authorized under this paragraph, no copies of the Program or any portions thereof may be made by you or any person under your authority or control.

Licensor's Rights:
You acknowledge and agree that the Software and the User's Manual are proprietary products of Licensor protected under U.S. copyright law and other countries as appropriate. You further acknowledge and agree that all rights, title, and interest in and to the Program, including associated intellectual property rights, are and shall remain with Licensor. This License Agreement does not convey to you an interest in or to the Program, but only a limited right of use revocable in accordance with the terms of this License Agreement.

License Fees:
The license fees paid by you are paid in consideration of the licenses granted under this License Agreement. Payments must be made to Serenity Systems International, or designated distributors and resellers from whom you acquired eComStation. You agree to notify Serenity Systems, or its distributors or resellers, and pay any applicable charges if you change the number of users.

Term:
This License Agreement is effective upon your installation and use of this package and shall continue until terminated. You may terminate this License Agreement at any time by returning the Program and all copies thereof, save one copy which may be kept for your archive, and extracts therefrom to Licensor. Licensor may terminate this License Agreement upon the breach by you of any term hereof. Upon such termination by Licensor, you agree to return to Licensor the Program and all copies and portions thereof.

Limited Warranty:
Licensor warrants, for your benefit alone, for a period of 90 days from the date of commencement of this License Agreement (referred to as the "Warranty Period") that the Program media in which the Software is contained are free from defects in material and workmanship. Licensor further warrants, for your benefit alone, that during the Warranty Period the Program shall operate substantially in accordance with the functional specifications in the User's Manual. Serenity Systems does not warrant uninterrupted or error-free operation of eComStation.

If during the Warranty Period, a defect in the Program appears, you may return the Program to your distributor for either replacement or, if so elected by distributor, refund of amounts paid by you under this License Agreement. You agree that the foregoing constitutes your sole and exclusive remedy for breach by Licensor of any warranties made under this Agreement.
EXCEPT FOR THE WARRANTIES SET FORTH ABOVE, THE PROGRAM, AND THE SOFTWARE CONTAINED THEREIN, ARE LICENSED "AS IS", AND LICENSOR DISCLAIMS ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Limitation of Liability:
Licensor's cumulative liability to you or any other party for any loss or damages resulting from any claims, demands, or actions arising out of or relating to this Agreement shall not exceed the license fee paid to Licensor for the use of the Program. In no event shall Licensor be liable for any indirect, incidental, consequential, special, or exemplary damages or lost profits, even if Licensor has been advised of the possibility of such damages. THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, MAY BE CONTROLLED BY LOCAL REGULATION, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Trademark:

eComStation, eComServer, WiseMachine, WiseManager, WiseServer, and WiseClient are trademarks of Licensor.
No right, license, or interest to such trademark is granted hereunder, and you agree that no such right, license, or interest shall be asserted by you with respect to such trademark.

Governing Law:
This License Agreement shall be construed and governed in accordance with the laws of the applicable jurisdiction.

Costs of Litigation:
If any action is brought by either party to this License Agreement against the other party regarding the subject matter hereof, the prevailing party shall be entitled to recover, in addition to any other relief granted, reasonable attorney fees and expenses of litigation, as appropriate under applicable jurisdiction.

Severability:
Should any term of this License Agreement be declared void or unenforceable by any court of competent jurisdiction, such declaration shall have no effect on the remaining terms hereof.

No Waiver:
The failure of either party to enforce any rights granted hereunder or to take action against the other party in the event of any breach hereunder shall not be deemed a waiver by that party as to subsequent enforcement of rights or subsequent actions in the event of future breaches.

Information About Your Software:

eComStation includes a license to use the following products with eComStation:

- IBM OS/2 Warp V4, IBM Product Number 31L0480M
- *Note: eComStation upgrade product users are required to supply their own valid license for OS/2 V4*
- IBM OS/2 Warp Convenience Pak, IBM Product Number AS6Y5NA
- IBM Desktop on Call for OS/2, IBM Product Number AS6YBNA
- IBM SMP feature when purchased as an option, IBM Product Number AS6Y9NA
- eWP - an OEM version of XWorkPlace
- eCSCoNet - an OEM version of ISDNPM
- NTFS for eComStation - a read only OEM version of NTFS

Third Party Work:
eComStation contains driver(s) and application(s) belonging to a Third Party, hereinafter referred to as Third Party Work (TPW). TPW is licensed to Serenity Systems International for distribution with eComStation from the following companies and or persons (hereinafter referred to as the licensor):

- 3Com Corporation
- Abbotsburry Software Ltd.
- Artem GmbH
- AVM GmbH for International Communications Technology
- Analog Devices
- Creative Technology Ltd.
- Cirrus Logic Inc.
- Christian Langanke (Internet Assistant).
- DAWICONTROL Computersysteme GmbH
- Eicon Networks Corporation
- Elsa AG
- HST High Soft Tech Gesellschaft fur Telekommunikation mbH
- Mainconcept
- Realtek
- Teles AG TCS

In accordance with the agreements with HST, and Eicon, we must inform you that:
The HST and Eicon ISDN drivers you receive with eComStation may not be installed on systems without a valid eComStation license.

In accordance with the agreement with Creative Technology Ltd., we must inform you that:
The supplied SB 16 and SB AWE 32/64 may only be used with Creative products.

All copyrights, patents, trademarks belong to the respective licensor(s) of the TPW. The TPW is provided on an "AS IS" basis. No warranty of any kind is offered, and no claim of suitability for use on any system should be assumed.

None of the drivers that come with eComStation can be redistributed, and may not be uploaded to FTP servers.

Appendix B: Trademarks

The following terms, are trademarks of SSI or the TouchVoice Corporation in the United States, or other countries, or both:

- Managed Client
- eComStatio\n
- eCS
- WiseManager
- WiseServer
- WiseClient
- WiseMachine
- WiseTalker
- Drag-n-Drop Deployment

The following terms, are registered trademarks of International Business Machines Corporation in the United States, or other countries, or both:

- IBM
- LAN Distance
- OS/2
- WebSphere
- WIN-OS/2
- Micro Channel
- ServeRAID

The following terms are trademarks of other companies:

- Approach, Freelance Graphics, Lotus, Lotus Notes, Lotus Organizer, Lotus SmartSuite, and WordPro are trademarks of Lotus Development Corporation in the United States, other countries, or both.
- Tivoli is a trademark of Tivoli Systems Inc. in the United States, other countries, or both.
- Java and all Java-based trademarks and logos are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft, Windows, Windows NT, Windows XP and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

Acknowledgements

Parts of this document are based on the kind contributions of the following people:

Paul Jarvinen	*(Artwork)*
Oliver Rick	*(Boot Options Menu)*
Alexander Taylor	*(MiniLVM)*
Robert Thomas	*(Windows Network - roknrob@flash.net)*
Gerrit Schoenmaker	*(Windows Network, co-existing with other OS)*
Sjoerd Visser	*(Windows Network)*

eComStation includes a number of software packages from a number of individuals, and companies.   We are very grateful of their contributions. Check `http://www.ecomstation.com/` for a complete list of contributors.

Abbotsbury Software has been so kind to license their Hauppage drivers so these could be included with eComStation. These drivers allow the use of Hauppage TV boards to function under eComStation.
For any commercial request regarding these drivers please contact:

Abbotsbury Software Ltd.

West Yard Barn	tel:	(+44)-(0)1305-871543
West Street	fax:	(+44)-(0)1305-871688
Abbotsbury	web:	`http://www.abbotsbury.com`
Dorset DT3 4JT	email:	`os2tv@abbotsbury.com`
United Kingdom		

MainConcept GmbH has been so so kind to license their OS/2 AVI codecs for inclusion with eComStation.

For more info on MainConcept, please have a look on the following webaddress: `http://www.mainconcept.de`

Scitech Software, Inc. has kindly allowed us to redistribute their binary OS/2 installer of OpenWatcom C/C++/FOTRAN.

Please visit Scitech at: `http://www.scitechsoft.com/`

Appendix C: LVM

The role of LVM (Logical Volume Manager) is to present a simple logical view of underlying physical storage space, ie. harddrive(s). LVM manages individual physical disks - or to be more precise, the individual partitions present on them. LVM hides the numbers, size and location of physical partitions from users. Instead it presents the concept of logical volume. A logical volume may correspond to a physical partition (but that obviously almost defeats the purpose of LVM) but it doesn't have to. One volume may be composed of several partitions located on multiple physical disks. Not only that, the volumes can even be extended (not shrunk - people usually want more space, not less). They can even be extended while the OS is running and the filesystem is being accessed! Of course, most home and SOHO users don't have the hardware required for this.

LVM can be used in several ways:

- You can invoke the text-mode interface by typing '**LVM**' in an command window.
- There is an graphical version which can be called by typing '**LVMGUI**' in a command window. This version is a Java application and you need to have Java installed to be able to run it.
- Lastly, the installer of eComStation 1.1 provides **MiniLVM** which is a GUI to the most important features of LVM. We recommend you use this tool to setup your harddisk for installation of eComStation 1.1

Creating an installable volume

In order to install eComStation, you need to have at least one empty, visible compatibility volume available on your hard disk.

If you do not already have a suitable volume ready to install eComStation, you will need to create one.

Creating a volume is very straightforward using MiniLVM. If you need advanced features you may want to use one of the other LVM tools as mentioned in the beginning of this appendix.

Tip: An excellent step by step guide for using *text mode LVM* is available in the online help during installation, please consult it if you

need to perform harddisk or partition management. You can also view this document directly from the root of CD#1: `lvmhelp.inf`

MiniLVM
The MiniLVM interface is self-explanatory and features an online help system.

MiniLVM will guide you through the necesarry steps to prepare your harddisk for installation.

General Considerations
Make sure you have your harddisk layout the way you want it, before you install eComStation. The use of partitioning tools, like PartitionMagic of PowerQuest, FIPS, or others should be prevented if at all possible *after you have installed eComStation.*

If you have more than one operating system installed, you are **required to use the IBM bootmanager***, install via (Mini)LVM, to switch between those systems. IBM bootmanager is LVM aware, most other bootmanagers are not.*

Multiple operating systems on your computer
You can use multiple operating systems alongside eComStation, however you need to take into account the following remarks:

Note: the IBM MCP installer uses a tool to automatically "tag" all available partitions with a LVM "fingerprint". A compatibility volume is simply a partition which has been tagged in this way. The fingerprint is used by LVM to store extra information specific to volume management. This tool is called Volume Conversion Utility (VCU) and is known to cause trouble on some configurations. That is why the eComStation installer **does not invoke** *this tool automatically. This requires that you create the volumes yourself with LVM or MiniLVM.*

Operating systems which do not "understand" logical volumes will simply continue to treat compatibility volumes as partitions in the traditional sense.

However, if non-LVM-aware software which performs partition-level disk management is used, then this "fingerprint" may be inadvertently erased. Such programs include the "FDISK" utilities from most other operating systems, and also software such as Partition Magic from PowerQuest. For this reason, it is strongly recommended that you do not use such software on your system after installing eComStation.

If you must do so, then please read the following information carefully first:

If your system does not contain any special "LVM volumes" (JFS volumes mostly), then the use of such programs will probably not cause permanent data loss. In all probability, however, eComStation will not be able to boot from the affected disk drive until the LVM "fingerprints" are recreated. To do this, it will be necessary to boot the system off the eComStation CD-ROM or recovery diskettes, run LVM, and manually convert the partitions back into volumes. Once this is done, your volumes should be fully restored and functional, with no loss of data.

Note: We cannot, however, guarantee that no data will be lost. Partition management is an inherently risky business. Always back up any and all existing data on the computer, before working with disk partitions: whether through LVM, FDISK, Partition Magic, or any other means.

The situation alters, however, if the system contains any "LVM volumes". Unlike compatibility volumes (which are fundamentally normal partitions), LVM volumes depend on a special data format which other partition management software (like FDISK or Partition Magic) does not recognize. In such a case, the volume information could be corrupted beyond recovery, resulting in the loss of all data stored on the LVM volume.

Therefore, if you believe you will have cause to use third-party partition management software on your system, avoid using LVM (JFS) volumes. (As noted, you are discouraged from using such software at all.)

Always prepare a tested backup of all data on the system, before working with partitions or volumes.

Appendix D: Boot Options Menu

The eComStation **boot options menu** screens allow you to configure the hardware support in order to successfully boot from CD-ROM or floppy diskettes. Most computers with standard hardware will not require any changes in the screens and will boot normally. If you need support for SCSI or USB hardware, a selection of the appropriate drivers for the used host bus adapters resp. host controllers is required. If you have trouble getting the CD-ROM or floppy diskettes to boot, then you can use the options on the various screens to either configure eComStation so that it will be able to boot or to help you or support personnel to find out what the cause for the failure is.

The options are limited to configuration settings required to boot and install eComStation onto hard disk drives. The selections are passed to the installation program where you can refine the selections and add support for additional hardware.

Keys help screen

On this screen the keys for usage of the menu and the version of the menu including language (-xx) of the package are displayed. Additionally a note about this appendix for further reference is shown at the bottom of the page. In the large box you can see the help for the

keys to navigate through the screens or pages and how to adjust the options to the configuration of your computer.

You can rotate through the pages by hitting the "Page Up" and "Page Down" keys, where "Page Down" will move you to the next page positioning the cursor at the first option, and "Page Up" will return you to the previous page setting the cursor at the last option of the respective page.

The next option is selectable by hitting the "Tab" key, while hitting the "Tab" key together with "Shift" moves back to the previous option. When the next or previous option is located on the next/previous page, that page is displayed automatically without hitting the "Page Up" or "Page Down" key. The current active option is highlighted by a blinking character.

There are different ways to change an option. Options that can be activated are shown by an empty character when deactivated or by a checkmark when activated (shown with a '#' character in this ASCII file). You can toggle between these two states by hitting the "Space" bar.

Options with a vertical double arrow offer multiple predefined values. By hitting the "Up" or "Down" arrow keys you can rotate forward or backward through the offered values. Alternatively you can hit an alphanumeric key to directly jump to the first value that begins with the pressed letter or number if present. Pressing the same alphanumeric key multiple times will rotate forward through all values that begin with the pressed key.

The fields enclosed in sqare brackets with a block cursor are editable options that can be modified by typing at the blinking cursor. The values can be edited with the usual keys like "Backspace", "Insert", "Delete", "Left" or "Right" arrow.

When you are finished with the configuration, you can leave the menu by pressing the "F10" function key. If you want eComStation to display the drivers and executables loaded during the boot process then hit the "Alt" key together with the "F2" function key to leave the menu. Additionally eComStation will pause at non-base device drivers and executables to ask you whether you want
to load the file or not or stop pausing when you press the "Alt" key together with "F4". This is useful to look for a possible problem that

might occur during boot. Fundamentally, you should not suppress the loading of a file. After you pressed a key to exit the menu you are prompted with a confirmation message. Press "Enter" to save the changes you have made in the menu and boot
with them. Press "Esc" to return to the menu.

If you want to reset the options values to the default (detected) ones, press "F11". At the confirmation box press "Enter" to reset the values or "Esc" to return to the menu.

Miscellaneous screen

This screen offers a mixture of various options.
In the first block you can select the locale information for the operating system. The country option sets the default country/region dependent information, which can be refined in detail after the installation through the "Locale" object. Since the keyboard layout you use might be different from the country you are located in, or from the the language version of the operating system you use, the layout is selectable as well. With the code page option you can determine the primary character encoding eComStation uses, and an alternate code page that you can toggle between after the operating system has been started.

The next option selects what program to start after booting from the installation CD-ROM or floppy diskettes. The graphical installation

program can be started or a command line interface for maintenance tasks or problem determination.

Reserving a drive letter offers you a possibility to control the assignment of the drive letters for your CD/DVD drives. The operating system will assign drive letters to **all** drives that are **partitioned** media like hard disks or certain removable drives first. The letter of the last one of these media is the first valid letter for a working drive letter reservation. The CD/DVD drives will be assigned the next letters after the reserved one in the order the drives are detected by your PC.

Changing the drive letter to be reserved automatically adjusts the value of the next option where you can select the drive the eComStation installation CD-ROM has been inserted. If the CD-ROM is not located in the first CD/DVD drive, you must change this letter to match the appropriate drive. Usually, this would be the second drive, so just move the drive letter one further by pressing either the "Up" arrow key or hitting the letter key ('T' for the example above). The range of the values is limited by the selected reserved drive letter and the fixed letter of the memory boot drive ('Z').

If you do not know about the letters assigned to your drives, leave the menu after the selection of your storage controllers in the next screen by hitting "Alt" together with "F1". In the following screen hit "F2" and run the program "ecsdrinf" on the command line. It will give you an overview of the drive letters, labels, and file systems. The drive letter next to the label "**ECS_CDRUN**" is the one of the drive where the eComStation installation CD-ROM has been inserted.

The drive letter of the memory boot drive should only be changed if you already have a drive/logical volume that has the default of 'Z' assigned. If you select a drive letter identical to the one of the CD/DVD drive that has the eComStation CD-ROM inserted, a warning message is displayed and leaving the menu is prevented until you select a different drive letter.

If you have quite a low amount of memory in your system, the installation might need to swap memory onto a writeable drive that needs to be formatted with one of the following filesystems: FAT12, FAT16, HPFS, or JFS. To enable swapping check the option by pressing the "Space" bar, and then select the target drive for the swapfile. Then the swapfile will be written to the root of the selected

drive. You can delete the file "swapper.dat" after the installation has been completed. If you select a drive letter identical to the one of the CD/DVD drive that has the eComStation CD-ROM inserted, a warning message is displayed and leaving the menu is prevented until you select a different drive letter.

The following two options are useful for problem determination. The first one pauses the boot process after the system detected an error and asks you to continue the process. That way you can write down the error message and pass it to the support channel. Furthermore this option suppresses the automatic reboot of your computer in case it has been initiated automatically. The second option will activate the verbose mode of the various drivers loaded during boot. Since there might be a lot of output displayed, it is recommended to leave the menu by pressing "Alt" together with "F4" instead of "F10" (see section "Information screen").

At the bottom of the screen an option to reserve hardware resources of your PC is offered to avoid the resources being allocated by the wrong device driver. This should only happen in very rare cases, mostly related to old ISA hardware or PCMCIA (PC Card) adapters. To enable resource reservation check the option by pressing the "Space" bar, and then enter the resources in the field below.

Valid parameters:
- **/IO:x,y** or **/P:x,y**
  to reserve I/O ports, where 'x' is the base port number in hexadecimal, followed by 'y' the length (number of ports) in hexadecimal, both separated by a comma. Example: /IO:340,4
- **/MEM:x,y**
  to reserve memory, where 'x' is the base memory address in hexadecimal, with the assumption that the address is nnnn:0, followed by 'y' the length (address number) in hexadecimal, both separated by a comma. Reserveable addresses are C000:0 to DFFF:. Example: /MEM:CA00,1000
- **/DMA:x**
  to reserve a DMA channel, where 'x' is the number in decimal. Example: /DMA:2
- **/IRQ:x**
  to reserve an interrupt request, where 'x' is the number in decimal. Example: /IRQ:10
- **/EXC**

- **/MUL**
- **/SHA**

  to set a resource reserved with the first four parameters as exclusive,
   multiplexed, or shared. The parameter must follow immediately after
  the resource it should affect. The three attributes exclude each other,
  so only one at a time can be specified for a resource. The default for
  all resources is "exclusive"

Storage screen

Here you can configure what drivers should be loaded to support the
hostadapters installed in your PC. You can select up to three different


```
                    eComStation BOOT OPTIONS: Storage
<- Miscellaneous - Page Up                          Page Down - USB ->

 1. Controller:  [Extended ATA(PI)/(E)IDE (DaniS506, DaniATAPI)        ]
    Parameters:  [                                                     ]
    *For the danis506 driver, you might need: /FORCEGBM /A:0 /!BM /A:1 /!BM
 2. Controller:  [None                                                ]‡
    Parameters:  [                                                     ]

 3. Controller:  [None                                                ]‡
    Parameters:  [                                                     ]

    Name of other driver from diskette without extension:      [      ]

 [ ] Use generic INT 13h driver instead of adapter device drivers (IBMINT13)

 Optical drives: [Standard CD-ROM/CD-RW/DVD Device Manager     (IBMCDROM)]‡
```

hostadapters whose drivers will be loaded in the order listed on the
screen.
If you boot from CD-ROM, the driver for the hostadapter that has the
CD/DVD drive with the eComStation installation CD-ROM attached
must be loaded first.
Selecting one driver more than once is allowed in the screen, but not
needed anyway, so only the first one will be loaded.
The value "Extended ATA(PI)/(E)IDE (DaniS506, DaniATAPI)" is
preselected as the first controller by default. If your SCSI hostadapters
were detected, they will be listed as second resp. third controller.

Both ATA(PI)/(E)IDE drivers are **not** compatible to any of the software
RAID setups offered by some so called ATA/IDE RAID controllers like
HPT, Promise FastTrack, AMI! However, the chips are supported in
non-RAID mode (see BIOS setup of these controllers).

If you have one or two SCSI adapters installed in your PC, the boot
process tries to detect and list them as second and third controllers.

The file **bootmenu.txt** on **CD#1** contains an extensive list of supported
controllers (both IDE and SCSI)

To use another driver, not supplied in the bootmenu, you can supply
one on a floppydisk. How to do this, is described at the end of this
appendix. You can supply any adapter device driver supporting
eComStation and OS/2 Warp 3 or higher

When you select "*Use other driver from diskette*" a red arrow "=>" will
appear to the left of the field where you have to enter the name of the
driver without extension (.ADD), for example "AIC7770". Leaving the
menu is prevented until you have entered either the driver name or
have deselected the value to load a driver from diskette. Please refer to
the end of this appendix on how to supply the driver.

The field below each of the controller options can be edited to add
parameters to the drivers. Usually, this is not required in order to boot
correctly. For example you can force the driver to be verbose by typing
"/V" (without double quotes) into the field. The driver will display his
detection results on the screen then.

Selecting the generic INT 13h driver will reset the values of all three
controller options to "None", since they are mutually exclusive. Use this
option only as a fallback in case your hostadapter is not supported.
However, certain restrictions apply, and the usage of this driver is not
recommended.

If you experience problems when the boot process accesses your
CD/DVD drive, you may try the extended CD/DVD driver to replace the
standard driver. For older hardware, you can try the older standard
driver which does not support DVD drives.

USB screen

```
               eComStation BOOT OPTIONS: USB
<- Storage - Page Up                    Page Down - Keys help ->

Support [0]‡ USB Universal Host Controllers (UHCI: Intel, VIA)

Support [0]‡ USB Open Host Controllers (OHCI: ALi, AMD, OPTi, SiS)

Support [0]‡ USB Enhanced Host Controllers (EHCI: Intel, NEC)

[ ] Support USB mice/trackballs

[ ] Support USB keyboards

[ ] Support USB mass storage devices:
    [0]‡ floppy disk drives attached
    [0]‡ CD-ROM/-R(W) drives attached
```

If the menu detects the presence of USB host controllers, it preselects up to 4 controllers for each detected type of controller plus support for USB keyboards and pointing devices. You can modify the number from zero to four (maximum number of supported **controllers** not ports) by rotating through the options with the "Up" and "Down" arrow keys or by pressing a number key. In order to successfully run attached USB devices, the USB controllers must have hardware resources assigned (IRQ, please consult the manual of your mainboard's BIOS resp. the one of your discrete controller board).

The following lists the USB host controllers supported (others might work, but have not been tested):

The file **bootmenu.txt** on **CD#1** contains a list of supported UHCI, OHCI and EHCI (USB 2.0) controllers.

The next three options control USB devices that might be needed for installation like pointing devices, a keyboard or external storage devices. The menu will prevent activation (by hitting the "Space" bar) of these options until at least one USB host controller is selected.

Supply additional or updated drivers

The Boot Options Menu offers the possibility to start the installation with additional or updated drivers, provided on a floppy disk.

The driver files must be supplied in the root of a floppy diskette either *labeled* **BOOT_UPDATE** or *having a file named* **BOOT_UPD.TXT** in one of the first two floppy diskette drives (letters 'A' or 'B'). The boot process will copy **all** files from this diskette to the memory disk and will **overwrite** any files of the same name already present there. So you should supply only the files you want to add or to update.

If you see some lines showing registers with hexadecimal values followed by the line "disk read error", at least one file contains an error most likely because the diskette is defective. Please copy the files to an error-free diskette again and retry.

If you boot from installation diskettes you **must** copy the driver files onto the diskette labeled "eCS Diskette 2" (the one that only contains the files "ecsdisk3.pf" and "BOOT_UPD.TXT").

If you have created the diskettes without the menu or the diskettes for the IBM installation procedure, then you must copy *base device driver* files (loaded with a **BASEDEV=<driver>** statement in the CONFIG.SYS file) onto "IBM/NoMenu **Diskette 1**", and copy the *usual device driver* files (loaded with a **DEVICE=<driver>** statement in the CONFIG.SYS file) onto "IBM/NoMenu **Diskette 2**".
Edit the CONFIG.SYS file (located on "IBM/NoMenu Diskette 1") to add new drivers or driver parameters.

SCSI Support

Many SCSI controllers will work normally with default settings. However, there are some types of SCSI controllers that can create problems. Most notably, these devices tend to either be Adaptec, LSI, or Tekram controllers. If you have a SCSI controller in your computer and are having trouble getting the system to boot, find out what kind of controller you have and select the appropriate driver for your controller. The file **bootmenu.txt** on CD #1 contains an extensive list of supported adapters with possible driver switches.

Appendix E: Troubleshooting

This chapter discusses some common problems you may encounter during the installation of eComStation. More information and tips can be found in the **FAQ.TXT** document in the root of eComStation 1.1 CD#2.

For a more extensive list of problems and solutions, please see the support forum at: `http://www.ecomstation.com/support/` and the newsserver at: `news://news.ecomstation.com/`

PRE INSTALLATION

Q: Can I install eCS in a system that's already running Windows XYZ, or XYZ Linux, or XYZ operating system?
A: As long as you have free space for eCS to create a bootable volume, there is no problem. However be forewarned that eCS uses a partition tool called Logical Volume Manager (LVM) which is quite different from the typical FDISK program in other operating systems. Be sure to read the file LVMHELP.INF by issuing the command:
      `VIEW ?:\LVMHELP.INF`
from a command window (where ? is the drive letter of the CD-ROM).

Q: Can I install on top of eCS 1.0? Will I be able to continue using the bonus applications from eComStation 1.0 ?
A: Yes, see the file **migrate.txt** on CD#2 for instructions. To install the Bonus Applications, insert eComStation 1.1 CD #2 and start **install.cmd** then select the option "eComStation 1.0 CD #3" (last menu option).

Q: Do I *have* to install the eCS networking sub-system? I only have one machine.
A: Even if you are not connected to another machine, it's highly recommended that you instruct the eCS installer to install networking support. This will make it easy to enable networking support in the future. In addition, if you need to access the Internet through a modem, you will need networking support. If you don't have a network card (called the NIC) at this point, you can specify "IBM NULL MAC Driver (NULLNDIS.NIF)" when prompted to select a network adapter.

INSTALLATION

Q: The system will not boot from the bootable CD.
A1:   Verify that your motherboard and/or disk controller BIOS support booting from CD and that you selected the right boot order.

A2:   Watch the cd-rom ready light and the BIOS cd boot messages. Did the cd-rom become ready after the BIOS checked for a CD? If the cd-rom is taking too long to become ready, check if there is setting in the motherboard or disk controller BIOS to delay or wait longer for the cd-rom to become ready. In some cases a newer BIOS may provide this feature. Sometimes you can delay the boot process by pressing the `Pause` key.

Q: I get an "unable to reserve drive R" error message when booting from the eCS CD
A: By default, the eCS installer attempts to reserve drive letters R,S, and Z. If these drive letters are in-use, you need to reboot from the eCS CD, select "Boot from eComStation CD-ROM", then select "Boot with menu for own values" and then wait for the BOOT OPTIONS screen to come up. Hit a page down and TAB down to the "Reserve the following drive letter:" field, and change the default value to an unused value. The value of "eComStation CD-ROM located in drive" will get bumped automatically each time you change the value of the "Reserve the following drive letter:". When done, hit F10, and then Enter to continue.

Q: During phase 2, the installer seems to be hung when installing the peer service. I don't see any disk activity. Should I reboot and try again?
A: The peer installer does a number of checks. On some machines, this process can take quite some time (particularly if you are running under Virtual PC on a slow machine). Keep in mind that the entire installation process can take up to an hour to complete for some older machines. Don't intervene unless the installation time has been something rather unreasonable.

Q: My machine locked up during installation, or I otherwise interrupted the install process. How can I restart the installation?
A: You can restart the installer at any time in a specific phase of the installationprocess. This is recommended for advanced users only, please refer to section **Adv_1** of FAQ.TXT on CD#2.

Q: I would like to invoke some commandline commands from the CD booted eComStation installer.
A: You can invoke a command prompt by selecting 'Maintenance Console' in the installer.

Q: My system hangs or freezes when during startup, before I get the Presentation Manager (Graphical User Interface)
A: If the boot process hangs during boot you can disable hardware detection. Press `Alt+F1` before the logo appears and select `disable Hardware detection`.

Q: The installer reports no recognizable filesystems and no freespace.
A: Currently FAT32, NTFS, EXT2 and other filesystems will not be recognized by the eCS. Please use other disk tools to create space for eCS bootmanager and boot partition, then let MiniLVM create the eCS partitions and BootManager during installation. *Please see* Appendix C: LVM *for more instructions.*

INSTALLATION - SCSI

Q: I have an Adaptec SCSI Adapter and SCSI CD-ROM and I couldn't get it to boot the eCS bootable CD.
A: Check the following to settings:
1. In the Adaptec BIOS, for the cdrom device set disconnect "NO"
2. Also some cdroms will not work properly in sync mode, try turning off initiate sync negotiation in the BIOS.

Q: When booting from the CD I get the following message:
```
eCS in unable to operate your hard disk or diskette
drive. The system is stopped.
```
A: Is your cd-rom connected to a SCSI disk controller?
eCS supports more SCSI disk controllers than most other OSes. Due to the large number of drivers there is a high possibility for a conflict between drivers. If you have a SCSI controller you have to use the boot options menu and specify which SCSI driver you wish eCS to use. See the file `bootmenu.txt` on CD#1 for more information.

> *bootmenu.txt on CD#1 contains a full list of support SCSI adapters, included drivers and driver switches. Please refer to that file for more information.*

GENERAL USE - HARDWARE

Q: My computer beeps, and the harddisk is spinning up and down all the time, what is going on?
A: Probably you have a problem with reading from harddisk. If eCS detects problems with reading from harddisk it tries to recover by resetting the diskcontroller. A common reason for read problems is a computer that is not properly grounded. Please check the electric grounding of your PC or harddrive. See also **P1_3** in FAQ.TXT on CD#2.

Q: I am having trouble booting past APM.SYS
A: Workaround: REM out APM support in your config.sys (3 lines):

```
DEVICE=?:\OS2\BOOT\APM.SYS
```

```
DEVICE=?:\OS2\MDOS\VAPM.SYS
RUN=?:\OS2\APMDAEMN.EXE
```

Q: When I reboot via Ctrl-Alt-Del, I get a trap screen. At the top of the screen it says:
```
An exception occured in module:SIO2K
```
or:
```
An exception occured in module:UART
```
A: Please refer to **Post_3** of FAQ.TXT on CD#2 for a solution.

Q: How do I install my sound driver after installation?
A: You can install audio drivers from CD#2 by starting **install.cmd** from the root of this CD.
In most cases, the sound driver manufacturer would have provided you with either a zip file or a CD containing the necessary files - and the instruction typically would tell you to go to the System Setup -> Installation folder and execute the program "Multimedia Application Install". If that's what the instruction says - *DON'T DO THAT.*
Instead, open a command window, attach to the directory containing the sound driver files, then issue the command: `MINSTALL`
You should find your sound driver listed in the screen that follows. From that point on, you can continue with the installation.

Q: What USB network hardware is supported in eComStation?
A: eComStation has support for USB Ethernet apapters, which are based on the Kawasaki KL5KUSB101 chipset. You can install this driver via the `Adapters and Protocols` tool (MPTS) you can find in the `System Setup -> Network` folder.

The following USB ethernet network cards have been tested:
- 3COM USB Network Interface
- D-Link Corp. USB Ethernet Adapter (DSB-650)
- ADS Technologies Inc. USB Ethernet Adapter (USB-10BT)

Q: What are the USB drivers in my config.sys?
A:
```
BASEDEV=USBMSD.ADD
```
   (Mass storage driver for ZIP drives, external disk drive and other devices that confirm to the USB mass storage standard)
```
BASEDEV=USBCDROM.ADD
```
   (Support for HP USB Cdwriter 8200 and Sony Spredds CDRW)
```
device=x:\os2\boot\usbkbd.sys
device=x:\os2\boot\usbmouse.sys
```
   (Support for USB keyboards and mice).

```
device=x:\os2\boot\usbcom.sys
```
    (Support for USB Rockwell based modems)

Q: What other USB hardware is supported?
A: If you require more information on eComStation or OS/2 and USB please refer to the excellent website `http://www.os2world.com/usb/`

GENERAL USE - APPLICATIONS

Q: While the IBM Browser is nice, I heard that there is a new version 1.3 of Mozilla that has some real nice features, why aren't you installing that instead?
A: The Mozilla 1.3 package is included with eCS 1.1. You can install it by starting **install.cmd** from CD#2 and select the Web Browser menu from the eCSGuide. Please follow the given onscreen instructions.

Q: I installed some IBM BonusPak applications via install.cmd of CD#2, where are they gone?
A: The BonusPak applications can be found in the `Programs -> Installed software` folder on your desktop

Q1: I installed my network for use with Windows (TCPBEUI) but I cannot get my eCS computer to connect to other machines in the network. What is wrong?
Q2: After I used MPTS.EXE, during startup of my machine I now see an error message which refers to `IFS:?\IBMLAN\NETPROG\NETWKSTA.200`
A: Sometimes, the use of MPTS causes inconsistancies in the PROTOCOL.INI and IBMLAN.INI configuration files. You can automatically fix this problem by running the "Update IBMLAN inifiles" in the *Network/Internet guide* from CD#2 (invoke with **install.cmd**)

> *Please refer to **FAQ.TXT** on **CD#2** for more instructions and solutions to possible problems. Also, at `http://www.ecomstation.com/support/` you will be able to find an online version of the FAQ which might be more up to date.*

APPENDIX F: Getting support

If you run into problems with eComStation there are several places to get support. First of all a lot of documentation is included with the product. Most of it are text files which you can read with an editor like `tedit.exe` or `e.exe`. The .inf files can be viewed with `view.exe` and the .pdf files with `acroread.exe`.
On the CD's you can find the following documents:

General Documents - CD#1
`readme.1st`
    General info on eComStation 1.1 - Last minute installation notes and a quick troubleshooter for CD boot
`readme.ibm`
    Documentation from Merlin Convenience Pack from IBM
`readme2.txt`
    Addenda to readme.ibm
`license.txt`
    The full license as included in Appendix A.
`bootmenu.txt`
    Information on the use of the bootmenu presented to you when booted from CD. Contains an extensive list of supported hardware (IDE, SCSI, USB controllers) - extended version of Appendix D.
`lvmhelp.INF`
    LVM documentation from Serenity Systems - includes tutorial approach for setting up your system

> *Next to these documents you can find the helpfiles in .inf format for eComStation in the following directory: `\OS2\BOOK`*

Recovery and System Tools - CD#2
`\bontrial\trial\grahutil\graham20.inf`
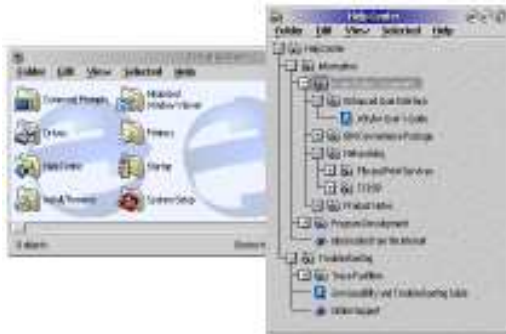   Documentation for the Graham Utilities - Filesystem and Recovery tools.

> *Please note that the Graham Utilities can be run directly from CD to provide maintenance possibilities for your system*

`\bontrial\ecs\ecsmt\ecsmt200.txt`
    Documentation for the *eComStation Maintenance Tool 2.00* - it can be installed by the eComStation Software Menu from CD#2. This tool can be used to install system updates from `www.ecomstation.com` onto your computer.

On the installed system

Once your system is installed, you will find all support documents conveniently ordered in the help center folder. You can open this folder from `Local System -> Help Center`

Information on the internet
If the readme's do not help, you can always try to consult the support forums on the internet, to help you forums have been created at the following sites:

- `http://www.ecomstation.com/support/`
- `http://www.ecomstation.nl/`

Other websites of interest are:

- `http://www.os2ezine.com/`
- `http://www.os2voice.org/`
- `http://www.warpdoctor.org/`

Alternatively you could have a look at the OS/2 newsgroups or mailing lists and the OS/2 and eComStation usergroups.

support by email is provided on a best-effort basis and there is no guarantee for timely response:
- `mmsupport@ecomstation.com` for multimedia related issues
- `ecsconet@ecomstation.com` for eCSCoNet related issues
- `support@ecomstation.com` for generic support questions

Please submit your **bugreports** to the bugtracker, which you can access after you have logged in to the main eComStation website. Before submitting a report, please make sure your bug is not yet listed, so to minimize time spent on handling of duplicates.

Appendix G: Coexisting with other operating systems

eComStation is quite capable of coexisting with other operating systems on your computer. This can be convenient in some situations, where you may want to use certain applications which are not able to run on eComStation.
There are some details you should pay attention to, which are listed below. If you want to exchange data between operating systems, make sure you have a volume which is read/writeable by these systems. Most of the time special drivers will be required to make this possible, e.g. you will need the OS/2 FAT32 driver to allow eComStation to read and write FAT32 partitions.

General Considerations

Make sure you have your harddisk layout the way you want it, before you install eComStation. The use of partitioning tools such as PartitionMagic by PowerQuest, should be prevented if at all possible after you have installed eComStation.
If you still want to change your harddisk layout, please consult *Appendix C; LVM*.
You always have to keep in mind that changing a partition that already has a logical volume that was assigned to LVM usually causes LVM not to recognize that specific partition anymore.
To restore your logical volumes it should be sufficient in most cases to run LVM and assign the original drive letters for the changed partitions. On occasions it may be necessary to create a new logical volume for that particular partition.

Windows NT/2000/XP
As far as we know at the moment there are no specific problems that have arisen by installing Windows XP alongside eComStation on your harddisk.

If you are going to install Windows 2000 on your computer, please install Windows 2000 and then apply service pack 3 first. If you already have Windows 2000 on your system and want to install eComStation, also install service pack 3. If you do not do this, every time Windows 2000 starts up, it will destroy the eCS boot manager. This is a bug in Windows 2000. If your boot manager is destroyed you can restore it by

booting eComStation into the maintenance console from CD#1 and run LVM, where you can reinstall the bootmanager.

Windows NT 4.0, Windows 2000 or XP will list HPFS partitions as being available in 'My Computer'. If you double click on that drive letter it will say it can not read that partition and sometimes you will be prompted with an option to format it. Of course you should not accept this offer, since it will render your HPFS volume useless. *For your own safety it is strongly adviced to use the option to mark the HPFS partitions as not having a drive letter.*

Windows 95, 98 or Millenium Edition

If you have installed eCS and you are going to install a DOS-based operating system like Windows 95, 98 or Windows ME you have to realize that these systems will install on the very first primary partition of your harddisk only. So, it might be necessary to resize/move your eCS partition with the aid of a partition manager to allocate free space for the creation of a primary partition at the beginning of your harddisk. Consider the remarks about changing LVM volumes in the "General Considerations" section.
Always be very careful with this kind of operation which can cause your eCS system fail to boot. In either case you have to assign a new bootable LVM volume and run the "sysinstx" command for the particular eCS partition.
During the installation procedure of Windows you will probably receive a warning about a 'bootmanager being disabled' or that you will 'no longer be able to start OS/2'. Ignore these warnings. When the installation has finished you can enable the bootmanager again by booting eCS from the installation CD#1 and run LVM to set the partition as active (the bootmanager partition is usually about 4 to 7 MB in size).

VFAT partitions require the use of a *VFAT* driver, these are available on
`http://hobbes.nmsu.edu/`
another option to access *VFAT* partitions is by using NetDrive:
`http://www.blueprintsoftwareworks.com/netdrive/`

Linux

eComStation can be installed without problems alongside a Linux installation on the same system. Please use the LVM Bootmanager instead of lilo.
To read/write *HPFS* volumes you will need to obtain a module for Linux.

Please note that the OpenJFS is not compatible with eComStation JFS and as such it is not advised to access your JFS volume from Linux. This may change in the future.

FAT32 support
If you have FAT32 partitions on your hard drive you can enable support under eComStation by using the driver available on CD#2 in the directory `\FAT32SUP\`. Please read the document ecs11inst.txt!
The filesystem for FAT 32 is unsupported and supplied only for your convience. You are *not* required to install `partfilt.flt` or replace `os2dasd.dmd`. If you have rebooted your computer and the driver is loaded you will get read and write access to a FAT32 volume when that drive has a drive letter assigned under LVM.

Cover design by "Meneer van Rooijen"
Artwork by Paul Jarvinen

Printed in the Netherlands
PDF Rev 1.1.0