Genera 8.1 ECO #1 Notes

Genera 8.1 ECO #1 Introduction and Highlights

Genera 8.1 ECO#1 includes improvements to Genera 8.1 and fixes many bugs dis-covered in 8.1. For MacIvory customers, it provides interoperability with Macintosh System Software 7.0, while maintaining compatibility with Macintosh System Soft-ware 6.0.7 and later.

Installing Genera 8.1 ECO #1

Genera 8.1 ECO #1 Distribution Media

Genera 8.1.1 CD-ROM Distribution Media

All sites who requested CD-ROM distribution media receive the following:

- Symbolics Genera 8.1.1, all Platforms; 1 CD-ROM, ISO9660 Format, P.N. 995795
  This CD contains everything that was on the Genera 8.1 CD-ROM, plus updates for Genera 8.1.1. The updated 8.1.1 software includes new MacIvory Macintosh software, new UX UNIX software, and 8.1.1 distribution worlds and patches for all machine types. For the added benefit of CD-ROM customers who use CD-ROM as a SYS host, the SYS hierarchy on the Genera 8.1.1 CD-ROM contains updated system sources for Genera 8.1.1.

CD-ROM sites with MacIvory machines also receive:

- Symbolics MacIvory Installer, version 4.1, Genera 8.1.1; one diskette, Macintosh Format, P.N. 995800

- Symbolics MacIvory System, version 4.1, Genera 8.1.1; one diskette, Macintosh Format, P.N. 995801

- Symbolics MacIvory FEP, version 4.1, Genera 8.1.1; one diskette, Macintosh For-mat, P.N. 995802

- Symbolics MacIvory Applications, version 4.1, Genera 8.1.1; one diskette, Macin-tosh Format, P.N. 995803

- Symbolics MacIvory Development, version 4.1, Genera 8.1.1; one diskette, Macin-tosh Format, P.N. 995804

CD-ROM sites with Symbolics UX machines also receive:

- Symbolics UX UNIX Software for SunOS 4.1.1, Genera 8.1.1, one QIC-11 tape, `extract_unbundled` Format, P.N. 995799

Genera 8.1.1 Tape Distribution Media

Sites with Symbolics XL Family machines receive:

- Genera 8.1.1 Worlds for MacIvory/XL, Patches for all Platforms; 1 QIC-100 tape, IFS Format, P.N. 995796 This tape contains the Genera 8.1.1 incremental world, netboot core, and updated MacIvory Delivery world. It also contains a distribution tape image of Genera 8.1.1 patches for loadable systems and layered products.

Sites with Symbolics MacIvory machines receive:

- Genera 8.1.1 Worlds for MacIvory/XL, Patches for all Platforms; 1 QIC-100 tape, IFS Format, P.N. 995796 This tape contains the Genera 8.1.1 incremental world, netboot core, and updated MacIvory Delivery world. It also contains a distribution tape image of Genera 8.1.1 patches for loadable systems and layered products.

- Symbolics MacIvory Installer, version 4.1, Genera 8.1.1; one diskette, Macintosh Format, P.N. 995800

- Symbolics MacIvory System, version 4.1, Genera 8.1.1; one diskette, Macintosh Format, P.N. 995801

- Symbolics MacIvory FEP, version 4.1, Genera 8.1.1; one diskette, Macintosh Format, P.N. 995802

- Symbolics MacIvory Applications, version 4.1, Genera 8.1.1; one diskette, Macintosh Format, P.N. 995803

- Symbolics MacIvory Development, version 4.1, Genera 8.1.1; one diskette, Macintosh Format, P.N. 995804

Sites with Symbolics UX Family machines receive:

- Genera 8.1.1 Worlds for UX, Patches for all Platforms; 1 QIC-11 tape, IFS Format, P.N. 995798 This tape contains the Genera 8.1.1 incremental world, network incremental world, netboot core, and updated UX Delivery world. It also contains a distribution tape image of Genera 8.1.1 patches for loadable systems and layered products.

- Symbolics UX UNIX Software for SunOS 4.1.1, Genera 8.1.1, one QIC-11 tape, extract_unbundled Format, P.N. 995799

Sites with Symbolics 3600 Family machines receive:

- Genera 8.1.1 Worlds for 3600 Family, Patches for all Platforms; 1 QIC-11 tape, IFS Format, P.N. 995797 This tape contains the Genera 8.1.1 incremental world, netboot core, and a distribution tape image of Genera 8.1.1 patches for loadable systems and layered products.

Disk Space Requirements for Genera 8.1.1

World sizes:

Ivory worlds (in Ivory FEP filesystem blocks):

Genera-8-1-1-from-Genera-8-1.ilod.1	6998
Network-from-Genera-8-1-1.ilod.1	11680
Genera-8-1-1-MacIvory-Delivery.ilod.1	17772
Genera-8-1-1-UX-Delivery.ilod.1	18630
Netboot-Core-from-Genera-8-1-1.load.1	254

3600 Family worlds (in 3600 FEP filesystem blocks):

Genera-8-1-1-from-Genera-8-1.load	6128
Netboot-Core-from-Genera-8-1-1.load.1	159

Patch Tape image sizes:

Ivory (in Ivory FEP filesystem blocks):

GENERA-8-1-1-PATCH-DIST.TAPE.1	2035

3600 Family (in 3600 FEP filesystem blocks):

GENERA-8-1-1-PATCH-DIST.TAPE.1	2261

Patch distribution size:

Restoring all of the patches distributed in the Genera 8.1.1 patch tape image requires approximately 1500 LMFS records (equivalent to about 6000 FEP blocks, or about 30,000 KBytes for UNIX). Sites with limited disk space may, of course, choose not to restore all of this data.

Guidelines for Restoring Symbolics Distribution Tapes

Symbolics recommends the following guidelines for restoring Symbolics distribution tapes:

1. If possible, restore distribution tapes on a machine with a local tape drive.

2. When restoring distribution tapes from a remote tape drive, it is always preferable to use TCP for remote tape service.

To use TCP RTAPE:

Make sure that IP-TCP is running on both the machine with the tape drive and the machine on which you will be typing "Restore Distribution". As of Genera 8.1, IP-TCP is distributed with the Genera Sources on Genera 8.1 Source Tape #2. See the section "Loading IP/TCP on a Symbolics computer: *All sites*".

Add the service TAPE TCP RTAPE to the namespace object of the host with the tape drive. See the section "New Service: TAPE TCP RTAPE".

Genera 8.1.1 Installation Instructions

These installation instructions assume that you are already running Genera 8.1.

Upgrading From Genera 8.1 to Genera 8.1.1 From CD-ROM

Before installing Genera 8.1.1 from CD-ROM, you should be familiar with the CD-ROM sections of the Genera 8.1 System Installation Guide. Specifically, you should be familiar with the sections "Genera 8.1 Software Installation Instructions for Installing From CD-ROM" and "Using a CD-ROM as a SYS Host" .

1.   On each MacIvory at your site, install the 8.1.1 MacIvory Macintosh software. The 8.1.1 MacIvory Macintosh software is compatible with both MacOS 6.0.7, MacOS 6.0.8, and MacOS 7.0, and is also compatible with both Genera 8.1 and Genera 8.1.1

On MacIvories which have a CD-ROM drive connected to them, you may install the MacIvory Macintosh software from the Genera 8.1.1 CD-ROM. Note that you cannot install the MacIvory Macintosh Software over the network from a CD-ROM drive on a remote MacIvory. CD-ROM installation is the same as floppy disk installation, except that you are using a CD-ROM drive instead of a floppy.

CAVEAT: To install onto a MacIvory, the CD-ROM has to be on the local MacIvory machine.

a.   Insert the CD-ROM.

b.   Double click on the CD-ROM icon to open it.

c.   Open the folder named MacIvory.

d.   Double click on the Installer icon.

e.   Continue as for floppy disks.

If there is no CD-ROM drive connected to your MacIvory, install the 8.1.1 MacIvory Macintosh software from diskettes.

a.   At a Lisp Listener, log out and halt the machine.

b.   Choose Shutdown from the Ivory menu.

c.   When the alert box appears, click on "OK" to shut down Ivory.

d.   Choose Quit from the File menu.

e.   If you have a MacIvory System folder on your hard disk, drag it to the trash and empty the trash.

f.   If you have copies of Genera on your desktop, either remove them or put them back into the MacIvory Applications folder.

Then, perform the following steps:

a.   Insert the MacIvory Installer floppy.

b.   Double click on the floppy icon to open the MacIvory Installer.

c.   Double click on the Installer icon in the MacIvory Installer.

d.   Check the "Easy Install" Dialog box that pops up to make sure it is going to install the things you want. It should offer to install

   • MacIvory software for System 6 or System 7

   • MacIvory Applications and Fonts

   • Symbolics Keyboard for System 6 or System 7 (if you use the Symbolics keyboard)

   • MacIvory Development files (if you use MacIvory Development)

   If the list of software is wrong, click on Customize.

   If the disk it is going to install on is wrong, click on Switch Disk until the right disk appears (the *right* disk is the one from which you ordinarily boot).

e.   Click on Install. The installer will ask for floppies as needed, and only asks for any given floppy once. If you are notified that any files on your hard disk are more recent than the files on the Genera 8.3 diskettes, click on Continue to install the 8.3 version of those files

f.   The installer restarts the Macintosh when it is finished.

2. On each UX at your site, install the 8.1.1 UX UNIX software **from tape**. The 8.1.1 UX UNIX software is compatible with SunOS 4.1.1, and is also compatible with both Genera 8.1 and Genera 8.1.1.

   Because of the way SunOS handles the ISO9660 filesystem, you cannot install the Genera 8.1.1 UX UNIX software from CD-ROM. All UX sites must install the 8.1.1 UX UNIX software from tape. The appropriate tape is included in all Genera 8.1.1 UX upgrade packages.

   On each UX, type

       # extract_unbundled

   Then follow the instructions below, in "Upgrading the Symbolics UX UNIX Software".

Upgrading the Symbolics UX UNIX Software

Upgrading the Symbolics UX UNIX Software for a new release of Genera is subtly different from installing a new UX system. For more information on UX installation, use the online documentation for the *Genera 8.1 Software Installation Guide*.

If the Sun CD-ROM is not connected to the machine on which the UX UNIX software is to be installed, the CD-ROM must be mounted onto the UX machine's filesystem. On the machine with the CD-ROM drive, make sure that the directory the CD-ROM is mounted onto is exported (see the SunOS Reference Manual entry on exportfs). On the machine on which the UX UNIX software is to be installed, mount the CD-ROM onto the filesystem:

    % su
    # mkdir /cdrom
    # mount OtherSun:/cdrom /cdrom

In order to upgrade the Symbolics UX UNIX Software, follow the installation procedure described in Installing and Configuring the Symbolics UX UNIX Software, but answer No to the questions in"Phase 4 (FEP Partition File Configuration) of Symbolics UX Installer Program" and some of the questions in "Phase 5 (UNIX Startup Configuration) of Symbolics UX Installer Program".

More specifically, the usual "Phase 5 (UNIX Startup Configuration) of Symbolics UX Installer Program" answers for an upgrade will be as follows:

    Do you wish to install the UX400S/UX1200S kernel?

Yes. *Upgrading the UX UNIX software requires building a new UNIX kernel which will include the new release of the UX device drivers. This question controls whether the new kernel will be installed (the*

kernel is actually built in Phase 3).

```
Do you wish to create the UX400S/UX1200S configuration file(s)?
```

No. *The UX configuration files only need to be updated in order to add or remove network interfaces of FEP partition files, or to change the directory where IFEP PROM files are stored, or when a new UX board is being installed. Upgrading the UX UNIX software doesn't usually involve any of these situations.*

```
Do you wish to create/update the UX400S/UX1200S device files in /dev?
```

Yes. *The UX device files should be updated whenever a new UNIX kernel is built, in order that they specify the correct major device number for the UX device driver.*

```
Do you wish /etc/rc.local to start UX400S/UX1200S life support?
```

No. */etc/rc.local only needs to be updated when a new UX board is added to the system.*

```
Do you wish to reboot UNIX after installation?
```

Yes. *UNIX should be rebooted whenever a new kernel is installed.*

A sample upgrade dialogue would look something like the following.

```
% su
Password:
```

```
# cd /cdrom/sun
# extract_cdrom
```

```
The following product will be installed:
 Symbolics UX400S/UX1200S UNIX Software for SunOS 4.1.2, Genera 8.3
```

```
 Copyright (c) 1993 Symbolics, Inc.  All rights reserved.
 Portions of font library Copyright (c) 1984 Bitstream, Inc.
 All Rights Reserved.
```

```
 TRADEMARK NOTICE
```

```
 Symbolics, Ivory, Symbolics UX400S, and Symbolics UX1200S are trademarks
 and Genera is a registered trademark of Symbolics, Inc.
```

```
 UNIX(R) is a registered trademark of AT&T.  X Window System is a
```

    trademark of the Massachusetts Institute of Technology. Open Windows,
    Sun, Sun-3, Sun-4, and SunOS are trademarks, and Sun Microsystems is
    a registered trademark of Sun Microsystems, Inc.

 Use the Genera Show Legal Notice command to see important legal notices.

Do you want to continue [y|n]? **y**

Do you wish to restore UX-family sun3 life support? **y**

Do you wish to restore UX-family life support sources? **y**

Do you wish to restore the Genera fonts? **y**

extract_cdro:m Restoring files
x ./sun3/etc/test-ivory, 139264 bytes, 272 tape blocks
x ./ifep/solstice-device.prom, 130717 bytes, 256 tape blocks
x ./src/Makefile, 58127 bytes, 114 tape blocks
x ./src/autoboot.c, 4193 bytes, 9 tape blocks
[many other files here ...]

extract_cdrom: Running installation tool

Do you wish to install the UX400S/UX1200S software (default Yes)?
The ivory-life program has to be run by root, the super-user.
Do you wish ivory-life to be installed setuid to root (default Yes)?
Certain services provided by the ivory-servicesd program require that it run as root.
Do you wish ivory-servicesd to be installed setuid to root (default Yes)?
Several of the UX400S/UX1200S life-support programs want to be able to read /dev/kmem.
Do you wish these programs to be installed setgid to kmem (default Yes)?
Where should application programs go (default /usr/bin)?
Where should maintenance and installation programs go (default /usr/etc)?
Where should include files go (default /usr/include/ivory)?
Where should libraries go (default /usr/lib)?
Do you wish to install sources to the UX400S/UX1200S software (default Yes)?
Where should sources go (default /usr/share/symbolics/src)?
Where should IFEP proms go (default /usr/share/symbolics/ifep)?

Do you wish to install the Genera fonts for the Sun Open Windows X server (default Yes)?
Where do the Open Windows programs live (default /usr/openwin)?
Where should the Open Windows Genera fonts go (default /usr/openwin/lib/genera-fonts)?

WARNING: directory /usr/openwin/lib/genera-fonts is not in the search
path defined by environment variable FONTPATH. Make sure to update
FONTPATH to to include /usr/openwin/lib/genera-fonts.

```
Do you wish to install the Genera fonts for the MIT X server (default No)?

Do you wish to build a UNIX kernel with support for the UX400S/UX1200S (default Yes)?
How many UX400S boards should this kernel support (default 1)? 0
How many UX1200S boards should this kernel support (default 1)?
Where is your kernel build directory (default /usr/share/sys)?
What kernel architecture does this machine use (default sun3)?
What kernel usually runs on this machine (default GENERIC)?

Do you wish to create FEP partition file(s) (default Yes)? no

Do you wish to install the UX400S/UX1200S kernel (default Yes)? yes
Do you wish to create the UX400S/UX1200S configuration file(s) (default Yes)? no
Do you wish to create/update the UX400S/UX1200S device files in /dev (default Yes)? yes
Do you wish /etc/rc.local to start UX400S/UX1200S life support (default Yes)? no
Do you wish to reboot UNIX after installation (default Yes)? yes

About to begin UX400S/UX1200S software installation, this will probably take a while.
Okay (default Yes)?
```

3. For one of each machine type at your site, restore the Genera 8.1.1 worlds from the appropriate FEP tape image on the Genera 8.1.1 CD-ROM.

Type

        Select Activity FEP-Tape

In the FEP-Tape activity, type

        Read Image File *a FEP tape image*

Provide one of the following FEP tape image pathnames:

CDROM*n*:>DISTRIBUTION>OTHER_IVORY_WORLDS.TAPE;1
                    (8.1.1 worlds for MacIvory, XL, and UX)
CDROM*n*:>DISTRIBUTION>3600_WORLDS.TAPE;1
                    (8.1.1 worlds for 36XX Family machines)

FEP-Tape will query you about restoring each file in the tape image. Type Y to the query to restore the file, and supply a FEP pathname (or use the default FEP pathname which is offered) for each file you wish to restore. Restoration of some files is optional. Type N to the query if you wish to skip any of those files.

The contents of each tape image are listed below:

OTHER_IVORY_WORLDS.TAPE;1

Netboot-core-from-Genera-8-1-1.ilod.1
> Required if you use netbooting at your site.

Genera-8-1-1-from-Genera-8-1.ilod.1
> Required for all sites with an XL, MacIvory, or UX.

Network-from-Genera-8-1-1.ilod.1
> Required for all sites with a UX, optional for other Ivory sites.

Genera-8-1-1-MacIvory-Delivery.ilod.1
> Optional for all sites except MacIvory Delivery-Only sites.

Genera-8-1-1-UX-Delivery.ilod.1
> Optional for UX sites.

3600_WORLDS.TAPE;1

Netboot-core-from-Genera-8-1-1.load.1
> Required if you use netbooting at your site.

Genera-8-1-1-from-Genera-8-1.load.1
> Required for all sites with a 3600 Family machine.

Genera-8-1.load   Skip restoring this world, you should already have it on your disk.

Note: Do not boot a Genera 8.1.1 world yet, because the next few instructions assume that you are still running a site-configured Genera 8.1 world.

4. If you run multiple Genera releases at your site (such as Genera 8.0 and Genera 8.1), update your SYS.TRANSLATIONS file to include Genera 8.1.1. Sites which run only Genera 8.1 may skip this step.

Sample translations for running multiple releases, including Genera 8.1.1:

```
;;; -*- Mode: LISP; Syntax: Common-lisp; Package: USER -*-
(multiple-value-bind (major-version minor-version)
   (sct:get-release-version)
 (select major-version
   ;; Translations for Genera 8.0.1, 8.1, and 8.1.1
   (8 (selector minor-version equalp
       (("0.1")
         (fs:set-logical-pathname-host "SYS" :translations
```

```
                    '(("sys:**;*.*.*" "ACME-SMBX:>rel-8-0>sys>**>*.*.*"))))
              (("1" "1.1")
               (fs:set-logical-pathname-host "SYS" :translations
                    '(("sys:**;*.*.*" "ACME-SMBX:>rel-8-1>sys>**>*.*.*"))))
              (otherwise (error "~A ~A unknown release or system version.~2T
                                 Edit SYS:SITE;SYS.TRANSLATIONS to add this system."
                                major-version minor-version))))
          (otherwise (error "~A ~A unknown release or system version.~2T
                             Edit SYS:SITE;SYS.TRANSLATIONS to add this system."
                            major-version minor-version))))
```

If you have other translations files at your site which are conditionalized for multiple releases, you should also update them at this time. For example, if you run Symbolics Color, you should update your GRAPHICS.TRANSLATIONS and IMAGES.TRANSLATIONS files.

Now Save and Load your updated translations file(s).

5. In a site-configured Genera 8.1 world, restore the contents of the Genera 8.1.1 patch tape image onto your file server's disk. Sites which use CD-ROM as a SYS host should skip this step, and see the section "Using the Genera 8.1.1 CD-ROM as a SYS Host".

   If you run Symbolics Color at your site, load your GRAPHICS.TRANSLATIONS file. Type

        Load File SYS:SITE;GRAPHICS.TRANSLATIONS

   (If you do not have a GRAPHICS.TRANSLATIONS file, you cannot restore the Symbolics Color patches.)

   Type

        Restore Distribution :Use Disk Yes :Menu Yes

   In the Restore Distribution activity, click on the pathname in the "Pathname for dummy tape file:" field. Supply the pathname of the patch tape image on the Genera 8.1.1 CD-ROM:

        CDROM*n*:>DISTRIBUTION>GENERA_8_1_1_PATCH_DIST.TAPE;1

   Click on [Initialize Restoration]. This will display the contents of the distribution tape image.

   Use the mouse to deselect any systems which you do not want to restore. The patch tape image contains patches to the following systems. It is only necessary to restore patches for the loadable systems and layered products you use at your site. Loadable systems affected by the Genera 8.1.1 patches are noted below:

   DOCUMENTATION (Online Genera documentation)

X-SERVER-FIX (Symbolics X Server or X Remote Screen)
CLIM (Common Lisp Interface Manager)
CLIM-TUTORIALS (CLIM examples)
CONVERSION-TOOLS (Zetalisp to Common Lisp; Flavors to CLOS)
IP-TCP
NFS-CLIENT (NFS Server or NFS Client)
STATICE-RUNTIME (Statice Runtime or the Statice layered product)
MACIVORY-SUPPORT (only if you load it in 36XX or UX Delivery worlds)
ZWEI (only if you load it in MacIvory or UX Delivery worlds)
SERIAL (only if you load it in MacIvory or UX Delivery worlds)
NSAGE (only if you load it in MacIvory or UX Delivery worlds)
PHOTON-MICROCODE (Symbolics Color--Framethrower systems only)
FRAMETHROWER (Symbolics Color--Framethrower systems only)
FRAMETHROWER-DIAGNOSTICS (Symbolics Color--Framethrower systems only)
FIELD-MOUSE (Symbolics Color)
FT-UTILITIES (Symbolics Color--Framethrower systems only)
SGD-GENERA-8-1-REDEFINITIONS (Symbolics Color)
IVORY-COLOR-SUPPORT (Symbolics Color)
GENERA-EXTENSIONS (Symbolics Color)
COLOR (Symbolics Color)
COLOR-DEMO (Symbolics Color)
IMAGES (Symbolics Color)
GRAPHICS-TOOLKIT (Symbolics Color)
COLOR-EDITOR (Symbolics Color)

Sites that do not have Symbolics Color must deselect all of the Symbolics Color systems. When you are satisfied with the list of selected systems, click on [Perform Restoration]. This will restore the selected systems from the distribution tape image to your file server's disk.

6. Make a site-configured Genera 8.1.1 world for each machine type at your site (1 for XL/MacIvory, 1 for UX, and 1 for 36XX). On UX family machines, all site-specific worlds must be built on the 8.1.1 Network incremental world. On one of each machine machine type which has 8.1.1 world(s) on its disk:

    a. Update the boot.boot file to load a Genera 8.1.1 distribution world.

    b. Boot a Genera 8.1.1 distribution world.

    c. Set the site, using the Set Site CP command.

    d. Save a site-configured world, using the Save World CP command.

    e. Update the boot.boot file to load the Genera 8.1.1 site-configured world.

    f. Boot the Genera 8.1.1 site-configured world.

7. Build customized 8.1.1 user and server worlds for your site.

a. Boot a site-configured Genera 8.1.1 world.

b. Use the Load System CP command to load the systems you use at your site. Load System will automatically load any 8.1.1 patches to Symbolics loadable systems and layered products.

   Note: In order to load the Genera 8.1.1 CLIM patches, you must load the CLX system before you load CLIM. (CLX is a component system of X Remote Screen, which is distributed on Genera 8.1 Source Tape #2.) This is a temporary requirement which will be lifted in a future release. Before loading CLIM, use the Show Herald CP command to check if CLX is loaded.

   ```
   Show Herald :Detailed Yes
   ```
   If CLX is not loaded, type

   ```
   Load System CLX
   ```
   Then

   ```
   Load System CLIM
   ```

c. Use the Save World CP command to save world(s) containing those systems, and update your boot.boot file(s) to load the customized worlds.

8. Copy 8.1.1 user and server worlds to the other machines at your site.

   Use the Copy World CP command to copy Ivory worlds to other Ivory machines, and 36XX worlds to other 36XX machines.

9. Back up your worlds to tape. See the section "Backing Up Worlds to Tape".

Using the Genera 8.1.1 CD-ROM as a SYS Host

The SYS hierarchy of the Genera 8.1.1 CD-ROM contains the 8.1.1 versions of all system sources, examples, fonts, documentation and loadable systems, This includes updated system sources for 8.1.1, which are not available on any other media. In addition, the CD contains sources and binaries for the layered products Symbolics C, Fortran, and Pascal.

Genera 8.1.1 fixes several bugs which made it difficult to use CD-ROM as a SYS host in Genera 8.1. Using CD-ROM as the SYS host for Genera systems saves considerable disk space, and also saves time during Genera installations. We encourage your feedback on this new feature.

In order to use a CD-ROM as a SYS host, the CD-ROM drive must be connected to one of:

• an NXP1000
• an XL Family machine running Genera 8.1.1 or later
• a MacIvory running Genera 8.1.1 or later

- a Sun-4

Note: Genera 8.1 is not sufficient for a Symbolics machine to serve as a CD-ROM SYS host.

The procedure for setting up your site to use a CD-ROM SYS host is as follows:

1. Copy everything from the >SYS>SITE> directory on the CD-ROM to the SYS:SITE; directory for your site. The SYS:SITE; directory for a site is specified in the Site namespace object.

   ```
   Copy File HOST|CDROMn:>SYS>SITE>*.*;* SYS:SITE;*.*.*
   ```

   Note: If your CD-ROM drive is on a Sun, this step must be executed in a Genera 8.3 world as follows:

   ```
   Copy File sun-host:/cdrom/sys.sct/site/* sys:site;*.*.*
   ```

2. Edit your SYS:SITE;SYS.TRANSLATIONS file to translate logical pathnames to physical pathnames of files on the CD-ROM. After making the necessary changes, save and load the new sys.translations file, or build it into your site-configured Genera 8.3 worlds. Once the updated translations are loaded, you should be able to access files on CD-ROM as easily as you would access files on a LMFS.

   In the following examples, *HOST* is the name of the NXP, XL, or MacIvory CD-ROM host, and n in CDROMn is the SCSI address of the CD-ROM drive.

   If all machines at your site are running Genera 8.3, and if your CD-ROM drive is connected to an NXP, XL, or MacIvory, use the following example translations as a guide:

   ```
   ;;; -*- Mode: LISP; Syntax: Common-lisp; Package: USER -*-
   (fs:set-logical-pathname-host "SYS" :translations
     '(("sys:**;*.*.*" "HOST|CDROMn:>SYS>**>*.*;*")))
   ```

   If your CD-ROM drive is connected to a Sun, use the following example translations as a guide:

   ```
   ;;; -*- Mode: LISP; Syntax: Common-lisp; Package: USER -*-
   (fs:set-logical-pathname-host "SYS" :translations
     '(("sys:**;*.*.*" "sun-host:/cdrom/sys.sct/**/*")))
   ```

   If some machines at your site are running a release older than Genera 8.3, use the following example translations as a guide:

   ```
   ;;; -*- Mode: LISP; Syntax: Common-lisp; Package: USER -*-
   (multiple-value-bind (major-version minor-version)
       (sct:get-release-version)
   ```

```
(select major-version
  ;; Translations for Genera 8.1, 8.1.1
  (8 (selector minor-version equalp
       (("1.1")
        (fs:set-logical-pathname-host "SYS" :translations
          '(("sys:**;*.*.*" "ACME-SMBX:>rel-8-1>sys>**>*.*.*")))))
       (("2 NXP")
        (fs:set-logical-pathname-host "SYS" :translations
            '(("sys:**;*.*.*" "HOST|CDROMn:>sys>**>*.*;*"))))
       ((3)
        (fs:set-logical-pathname-host "SYS" :translations
            '(("sys:**;*.*.*" "HOST|CDROMn:>sys>**>*.*;*"))))
       (otherwise (error "~A ~A unknown release or system version.~2T
                          Edit SYS:SITE;SYS.TRANSLATIONS to add this system."
                     major-version minor-version))))
  (otherwise (error "~A ~A unknown release or system version.~2T
                     Edit SYS:SITE;SYS.TRANSLATIONS to add this system."
               major-version minor-version))))
```

If you wish to use the CD-ROM as the sys host for only specific parts of the Genera 8.3 documentation, sources, examples, fonts, and non-loaded systems, use the following example translations as a guide (This example assumes that all Symbolics machines at your site are running Genera 8.3):

```
;;; -*- Mode: LISP; Syntax: Common-lisp; Package: USER -*-
(fs:set-logical-pathname-host "SYS" :translations
  ;; Access documenatation and fonts from the CD
  '(("sys:doc;**;*.*.*" "HOST|CDROMn:>SYS>DOC>**>*.*;*")
    ("sys:fonts;**;*.*.*" "HOST|CDROMn:>SYS>FONTS>**>*.*;*")
    ;; Access everything else from a LMFS on a file server
    ("sys:**;*.*.*" "SMBX:>rel-8-3>sys>**>*.*.*")))
```

Known limitations and problems with using a CD-ROM SYS host

1. The ISO9660 filesystem does not understand unusual characters such as +, $, and & in pathnames. There are a few pathnames in the Genera distribution which contain such characters. If you run into one, simply take the retry option to specify another pathname, and respecify the same pathname, but drop the offending character. For example,

   ```
   SYS:EMBEDDING;MACIVORY;TOOLBOX;LISP+C-SCT-SUPPORT.BIN appears as
   SYS:EMBEDDING;MACIVORY;TOOLBOX;LISPC-SCT-SUPPORT.BIN
   ```

   in the CD-ROM filesystem.

2. The ISO9660 filesystem limits the length of file and directory names to 31 characters, including periods and file types. File names longer than this are truncated. There are many truncated pathnames in the Genera distribution,

however only three files produced ambiguous pathnames when truncated. On the Genera CD-ROM, we renamed these three files to avoid truncation problems:

```
SYS:EXAMPLES;CONSTRAINT-FRAME-LANGUAGE-1.LISP
SYS:EXAMPLES;CONSTRAINT-FRAME-LANGUAGE-2.LISP
SYS:EXAMPLES;CONSTRAINT-FRAME-LANGUAGE-3.LISP
```

are named

```
SYS:EXAMPLES;CONSTRAINT_FRAME_LANGUAGE_.LISP
SYS:EXAMPLES;CONSTRAINT_FRAME_LANGUAG_2.LISP
SYS:EXAMPLES;CONSTRAINT_FRAME_LANGUAG_3.LISP
```

Note that the ISO9660 translations rules automatically do the correct thing for all other truncated pathnames on the CD-ROM. For example, Genera automatically translates

SYS:METERING;INTERFACE;STATISTICAL-CALL-TREE-METERING-RUN.IBIN

to the correct CD-ROM pathname:

```
CDROMn:>sys>metering>interfaces>statistical_call_tree_mete.ibin
```

3. When using a CD-ROM as a SYS host, you must reset access paths whenever you change CD disks.

Upgrading From Genera 8.1 to Genera 8.1.1 From Tape

Special note for Symbolics UX users: SunOS 4.1.1 has a remote tape bug which prevents remote access to the Sun tape drive. On a UX, attempts to access a Sun tape drive from Genera will fail, even if the drive is on the local Sun, due to this bug in SunOS. In Genera, the symptom of this bug is the error `Error: RMT error 5: I/O error`. A fix is available from Sun support, Patch-ID 100280-01.

1. On each MacIvory at your site, install the 8.1.1 MacIvory Macintosh software from diskettes. The 8.1.1 MacIvory Macintosh software is compatible with both MacOS 6.0.7, MacOS 6.0.8, and MacOS 7.0, and is also compatible with both Genera 8.1 and Genera 8.1.1

Installing the MacIvory Diskettes

a. At a Lisp Listener, log out and halt the machine.

b. Choose Shutdown from the Ivory menu.

c. When the alert box appears, click on "OK" to shut down Ivory.

d.   Choose Quit from the File menu.

e.   If you have a MacIvory System folder on your hard disk, drag it to the trash and empty the trash.

f.   If you have copies of Genera on your desktop, either remove them or put them back into the MacIvory Applications folder.

Then, perform the following steps:

a.   Insert the MacIvory Installer floppy.

b.   Double click on the floppy icon to open the MacIvory Installer.

c.   Double click on the Installer icon in the MacIvory Installer.

d.   Check the "Easy Install" Dialog box that pops up to make sure it is going to install the things you want. It should offer to install

   • MacIvory software for System 6 or System 7

   • MacIvory Applications and Fonts

   • Symbolics Keyboard for System 6 or System 7 (if you use the Symbolics keyboard)

   • MacIvory Development files (if you use MacIvory Development)

   If the list of software is wrong, click on Customize.

   If the disk it is going to install on is wrong, click on Switch Disk until the right disk appears (the *right* disk is the one from which you ordinarily boot).

e.   Click on Install. The installer will ask for floppies as needed, and only asks for any given floppy once. If you are notified that any files on your hard disk are more recent than the files on the Genera 8.3 diskettes, click on Continue to install the 8.3 version of those files

f.   The installer restarts the Macintosh when it is finished.

2.   On each UX at your site, install the 8.1.1 UX UNIX software from tape. The 8.1.1 UX UNIX software is compatible with SunOS 4.1.1, and is also compatible with both Genera 8.1 and Genera 8.1.1.

Upgrading the Symbolics UX UNIX Software

Upgrading the Symbolics UX UNIX Software for a new release of Genera is subtly different from installing a new UX system. For more information on UX installation, use the online documentation for the *Genera 8.1 Software Installation Guide*.

If the Sun CD-ROM is not connected to the machine on which the UX UNIX software is to be installed, the CD-ROM must be mounted onto the UX machine's filesystem. On the machine with the CD-ROM drive, make sure that the directory the CD-ROM is mounted onto is exported (see the SunOS Reference Manual entry on `exportfs`). On the machine on which the UX UNIX software is to be installed, mount the CD-ROM onto the filesystem:

```
% su
# mkdir /cdrom
# mount OtherSun:/cdrom /cdrom
```

In order to upgrade the Symbolics UX UNIX Software, follow the installation procedure described in Installing and Configuring the Symbolics UX UNIX Software, but answer No to the questions in"Phase 4 (FEP Partition File Configuration) of Symbolics UX Installer Program" and some of the questions in "Phase 5 (UNIX Startup Configuration) of Symbolics UX Installer Program".

More specifically, the usual "Phase 5 (UNIX Startup Configuration) of Symbolics UX Installer Program" answers for an upgrade will be as follows:

```
Do you wish to install the UX400S/UX1200S kernel?
```

Yes. *Upgrading the UX UNIX software requires building a new UNIX kernel which will include the new release of the UX device drivers. This question controls whether the new kernel will be installed (the kernel is actually built in Phase 3).*

```
Do you wish to create the UX400S/UX1200S configuration file(s)?
```

No. *The UX configuration files only need to be updated in order to add or remove network interfaces of FEP partition files, or to change the directory where IFEP PROM files are stored, or when a new UX board is being installed. Upgrading the UX UNIX software doesn't usually involve any of these situations.*

```
Do you wish to create/update the UX400S/UX1200S device files in /dev?
```

Yes. *The UX device files should be updated whenever a new UNIX kernel is built, in order that they specify the correct major device number for the UX device driver.*

```
Do you wish /etc/rc.local to start UX400S/UX1200S life support?
```

No. `/etc/rc.local` *only needs to be updated when a new UX board is added to the system.*

```
    Do you wish to reboot UNIX after installation?
```

Yes. *UNIX should be rebooted whenever a new kernel is installed.*

A sample upgrade dialogue would look something like the following.

```
% su
Password:
```

 # cd /cdrom/sun
 # extract_cdrom

```
The following product will be installed:
 Symbolics UX400S/UX1200S UNIX Software for SunOS 4.1.2, Genera 8.3

 Copyright (c) 1993 Symbolics, Inc.  All rights reserved.
 Portions of font library Copyright (c) 1984 Bitstream, Inc.
 All Rights Reserved.


 TRADEMARK NOTICE

 Symbolics, Ivory, Symbolics UX400S, and Symbolics UX1200S are trademarks
 and Genera is a registered trademark of Symbolics, Inc.

 UNIX(R) is a registered trademark of AT&T.  X Window System is a
 trademark of the Massachusetts Institute of Technology. Open Windows,
 Sun, Sun-3, Sun-4, and SunOS are trademarks, and Sun Microsystems is
 a registered trademark of Sun Microsystems, Inc.

 Use the Genera Show Legal Notice command to see important legal notices.

Do you want to continue [y|n]? y

Do you wish to restore UX-family sun3 life support? y

Do you wish to restore UX-family life support sources? y

Do you wish to restore the Genera fonts? y

extract_cdro:m Restoring files
x ./sun3/etc/test-ivory, 139264 bytes, 272 tape blocks
x ./ifep/solstice-device.prom, 130717 bytes, 256 tape blocks
```

```
x ./src/Makefile, 58127 bytes, 114 tape blocks
x ./src/autoboot.c, 4193 bytes, 9 tape blocks
```
[many other files here ...]

```
extract_cdrom: Running installation tool

Do you wish to install the UX400S/UX1200S software (default Yes)?
The ivory-life program has to be run by root, the super-user.
Do you wish ivory-life to be installed setuid to root (default Yes)?
Certain services provided by the ivory-servicesd program require that it run as root.
Do you wish ivory-servicesd to be installed setuid to root (default Yes)?
Several of the UX400S/UX1200S life-support programs want to be able to read /dev/kmem.
Do you wish these programs to be installed setgid to kmem (default Yes)?
Where should application programs go (default /usr/bin)?
Where should maintenance and installation programs go (default /usr/etc)?
Where should include files go (default /usr/include/ivory)?
Where should libraries go (default /usr/lib)?
Do you wish to install sources to the UX400S/UX1200S software (default Yes)?
Where should sources go (default /usr/share/symbolics/src)?
Where should IFEP proms go (default /usr/share/symbolics/ifep)?

Do you wish to install the Genera fonts for the Sun Open Windows X server (default Yes)?
Where do the Open Windows programs live (default /usr/openwin)?
Where should the Open Windows Genera fonts go (default /usr/openwin/lib/genera-fonts)?

WARNING: directory /usr/openwin/lib/genera-fonts is not in the search
path defined by environment variable FONTPATH.  Make sure to update
FONTPATH to to include /usr/openwin/lib/genera-fonts.


Do you wish to install the Genera fonts for the MIT X server (default No)?

Do you wish to build a UNIX kernel with support for the UX400S/UX1200S (default Yes)?
How many UX400S boards should this kernel support (default 1)? 0
How many UX1200S boards should this kernel support (default 1)?
Where is your kernel build directory (default /usr/share/sys)?
What kernel architecture does this machine use (default sun3)?
What kernel usually runs on this machine (default GENERIC)?

Do you wish to create FEP partition file(s) (default Yes)? no

Do you wish to install the UX400S/UX1200S kernel (default Yes)? yes
Do you wish to create the UX400S/UX1200S configuration file(s) (default Yes)? no
Do you wish to create/update the UX400S/UX1200S device files in /dev (default Yes)? yes
Do you wish /etc/rc.local to start UX400S/UX1200S life support (default Yes)? no
Do you wish to reboot UNIX after installation (default Yes)? yes
```

```
About to begin UX400S/UX1200S software installation, this will probably take a while.
Okay (default Yes)?
```

3. For one of each machine type at your site, restore the Genera 8.1.1 worlds from the appropriate Genera 8.1.1 world tape(s). Although the Genera 8.1.1 Patch Tape image is included on all the Genera 8.1.1 world tapes, it is only necessary to restore this tape image once per site.

   Special note for Symbolics UX users: SunOS 4.1.1 has a remote tape bug which prevents remote access to the Sun tape drive. On a UX, attempts to access a Sun tape drive from Genera will fail, even if the drive is on the local Sun, due to this bug in SunOS. In Genera, the symptom of this bug is the error "Error: RMT error 5: I/O error". A fix is available from Sun support, Patch-ID 100280-01.

   For each machine type, place the appropriate Genera 8.1.1 world tape in a tape drive, and type

   ```
   Select Activity FEP-Tape
   ```
   In the FEP-Tape activity, type

   ```
   Read Tape your-tape-spec
   ```
   FEP-Tape will query you about restoring each file on the tape. Type Y to the query to restore the file, and supply a FEP pathname (or use the default FEP pathname which is offered) for each file you wish to restore. The Genera-8-1-1-Patch-Dist tape image should be restored to a FEP filesystem, just like the world files. Restoration of some files is optional. Type N to the query if you wish to skip any of those files. The contents of each tape are listed below:

   Genera 8.1.1 Worlds for MacIvory/XL, Patches for all Platforms

   Netboot-core-from-Genera-8-1-1.ilod.1
   > Required if you use netbooting at your site.
   Genera-8-1-1-from-Genera-8-1.ilod.1
   > Required for all sites with an XL, MacIvory, or UX.
   Genera-8-1-1-MacIvory-Delivery.ilod.1
   > Optional for all sites except MacIvory Delivery-Only sites.
   Genera-8-1-1-Patch-Dist.tape.1
   > The distribution tape image of the 8.1.1 patches, required for all sites. (It is only necessary to restore this file once per site.)

   Genera 8.1.1 Worlds for UX, Patches for all Platforms

   Netboot-core-from-Genera-8-1-1.ilod.1
   > Required if you use netbooting at your site.

Genera-8-1-1-from-Genera-8-1.ilod.1
>Required for all sites with an XL, MacIvory, or UX.

Network-from-Genera-8-1-1.ilod.1
>Required for all sites with a UX.

Genera-8-1-1-UX-Delivery.ilod.1
>Optional for UX sites.

Genera-8-1-1-Patch-Dist.tape.1
>The distribution tape image of the 8.1.1 patches, required for all sites. (It is only necessary to restore this file once per site.)

Genera 8.1.1 Worlds for 3600 Family, Patches for all Platforms

Netboot-core-from-Genera-8-1-1.load.1
>Required if you use netbooting at your site.

Genera-8-1-1-from-Genera-8-1.load.1
>Required for all sites with a 3600 Family machine.

Genera-8-1-1-Patch-Dist.tape.1
>The distribution tape image of the 8.1.1 patches, required for all sites. (It is only necessary to restore this file once per site.)

Note: Do not boot a Genera 8.1.1 world yet, because the next few instructions assume that you are still running a site-configured Genera 8.1 world.

4. If you run multiple Genera releases at your site (such as Genera 8.0 and Genera 8.1), update your SYS.TRANSLATIONS file to include Genera 8.1.1. Sites which run only Genera 8.1 may skip this step.

Sample translations for running multiple releases, including Genera 8.1.1:

```
;;; -*- Mode: LISP; Syntax: Common-lisp; Package: USER -*-
(multiple-value-bind (major-version minor-version)
   (sct:get-release-version)
  (select major-version
    ;; Translations for Genera 8.0.1, 8.1, and 8.1.1
    (8 (selector minor-version equalp
         (("0.1")
          (fs:set-logical-pathname-host "SYS" :translations
            '(("sys:**;*.*.*" "ACME-SMBX:>rel-8-0>sys>**>*.*.*"))))
         (("1" "1.1")
          (fs:set-logical-pathname-host "SYS" :translations
```

```
                    '(("sys:**;*.*.*" "ACME-SMBX:>rel-8-1>sys>**>*.*.*"))))
            (otherwise (error "~A ~A unknown release or system version.~2T
                                  Edit SYS:SITE;SYS.TRANSLATIONS to add this system."
                        major-version minor-version))))
        (otherwise (error "~A ~A unknown release or system version.~2T
                              Edit SYS:SITE;SYS.TRANSLATIONS to add this system."
                    major-version minor-version))))
```

If you have other translations files at your site which are conditionalized for multiple releases, you should also update them at this time. For example, if you run Symbolics Color, you should update your GRAPHICS.TRANSLATIONS and IMAGES.TRANSLATIONS files.

Now Save and Load your updated translations file(s).

5. In a site-configured Genera 8.1 world, restore the contents of the Genera 8.1.1 patch tape image onto your file server's disk.

    If you run Symbolics Color at your site, load your GRAPHICS.TRANSLATIONS file. Type

    ```
    Load File SYS:SITE;GRAPHICS.TRANSLATIONS
    ```

    If you do not have a GRAPHICS.TRANSLATIONS file, you cannot restore the Symbolics Color patches.

    Type

    ```
    Restore Distribution :Use Disk Yes :Menu Yes
    ```

    In the Restore Distribution activity, click on the pathname in the `Pathname for dummy tape file:` field. Supply a FEP pathname that contains the Genera 8.1.1 Patch Tape image which you restored from the Genera 8.1.1 world tape.

    Click on [Initialize Restoration]. This will display the contents of the distribution tape image.

    Use the mouse to deselect any systems which you do not want to restore. The patch tape image contains patches to the following systems. It is only necessary to restore patches for the loadable systems and layered products you use at your site. Loadable systems affected by the Genera 8.1.1 patches are noted below:

    DOCUMENTATION (Online Genera documentation)
    X-SERVER-FIX (Symbolics X Server or X Remote Screen)
    CLIM (Common Lisp Interface Manager)
    CLIM-TUTORIALS (CLIM examples)
    CONVERSION-TOOLS (Zetalisp to Common Lisp; Flavors to CLOS)
    IP-TCP
    NFS-CLIENT (NFS Server or NFS Client)

STATICE-RUNTIME (Statice Runtime or the Statice layered product)
MACIVORY-SUPPORT (only if you load it in 36XX or UX Delivery worlds)
ZWEI (only if you load it in MacIvory or UX Delivery worlds)
SERIAL (only if you load it in MacIvory or UX Delivery worlds)
NSAGE (only if you load it in MacIvory or UX Delivery worlds)
PHOTON-MICROCODE (Symbolics Color--Framethrower systems only)
FRAMETHROWER (Symbolics Color--Framethrower systems only)
FRAMETHROWER-DIAGNOSTICS (Symbolics Color--Framethrower systems only)
FIELD-MOUSE (Symbolics Color)
FT-UTILITIES (Symbolics Color--Framethrower systems only)
SGD-GENERA-8-1-REDEFINITIONS (Symbolics Color)
IVORY-COLOR-SUPPORT (Symbolics Color)
GENERA-EXTENSIONS (Symbolics Color)
COLOR (Symbolics Color)
COLOR-DEMO (Symbolics Color)
IMAGES (Symbolics Color)
GRAPHICS-TOOLKIT (Symbolics Color)
COLOR-EDITOR (Symbolics Color)

Sites that do not have Symbolics Color must deselect all of the Symbolics Color systems. When you are satisfied with the list of selected systems, click on [Perform Restoration]. This will restore the selected systems from the distribution tape image to your file server's disk.

6. Make a site-configured Genera 8.1.1 world for each machine type at your site (1 for XL/MacIvory, 1 for UX, and 1 for 36XX). On UX family machines, all site-specific worlds must be built on the 8.1.1 Network incremental world. On one of each machine machine type which has 8.1.1 world(s) on its disk:

   a. Update the boot.boot file to load a Genera 8.1.1 distribution world.

   b. Boot a Genera 8.1.1 distribution world.

   c. Set the site, using the Set Site CP command.

   d. Save a site-configured world, using the Save World CP command.

   e. Update the boot.boot file to load the Genera 8.1.1 site-configured world.

   f. Boot the Genera 8.1.1 site-configured world.

7. Build customized 8.1.1 user and server worlds for your site.

   a. Boot a site-configured Genera 8.1.1 world.

   b. Use the Load System CP command to load the systems you use at your site. Load System will automatically load any 8.1.1 patches to Symbolics loadable systems and layered products.

Note: In order to load the Genera 8.1.1 CLIM patches, you must load the CLX system before you load CLIM. (CLX is a component system of X Remote Screen, which is distributed on Genera 8.1 Source Tape #2.) This is a temporary requirement which will be lifted in a future release. Before loading CLIM, use the Show Herald CP command to check if CLX is loaded.

```
Show Herald :Detailed Yes
```

If CLX is not loaded, type

```
Load System CLX
```

Then

```
Load System CLIM
```

c. Use the Save World CP command to save world(s) containing those systems, and update your boot.boot file(s) to load the customized worlds.

8. Copy 8.1.1 user and server worlds to the other machines at your site.

Use the Copy World CP command to copy Ivory worlds to other Ivory machines, and 36XX worlds to other 36XX machines.

9. Back up your worlds to tape. See the section "Backing Up Worlds to Tape".

ECOs to Zwei

• The :Edit Function debugger command, usually invoked by c-E, and the :Edit Definition command, now work even if the editor is busy. A long-standing bug prevented them from working when the editor was busy (for example, in a breakpoint.)

• The bug which caused Save File Buffers (m-X) in Zwei, the Save File Buffers CP command, and **zwei:save-all-files** to fail when you request to save a buffer using a different pathname has been fixed.

• The bug in Zmail which caused the ABORT key not to stop the typeout produced by the Show Mail (m-X) and Show File (m-X) Zmail commands has been fixed.

ECOs for the Mailer

• The bug in the domain server which would cause the server to blowup while trying to process answers from other servers which refer to domains that previously had been determined not to exist has been fixed. This bug would cause the Mailer running on the same machine to shutdown.

ECOs for MacIvory

- The bug which caused FUNCTION-Q on a MacIvory with a color monitor to leave you in the debugger has been fixed.

- To prevent "font conflicts" when using Macintosh System Software 7.0, any Apple foreign language system, or third-party fonts, the MacIvory Installer script now installs the Macintosh fonts used by MacIvory into the System file. If you use a third-party font manager utility (for example, SuitCase ^{tm} II), you can choose not to install MacIvory's fonts into the System file provided that you follow the guidelines in your font manager's documentation to avoid font conflicts. See the section "Installing Genera 8.1 ECO #1" for further details on this alternative installation process.

- MacIvory can now be used in a Macintosh with more than one Ethernet interface. The MacIvory control panel has been modified to provide a mechanism to select which of the available Ethernet interfaces will be used by the MacIvory. Consequently, it is now possible to use native Macintosh applications which use TCP/IP (for example, MacX from Apple) simultaneously with MacIvory by telling the native applications to use one Ethernet interface and telling MacIvory to use the other interface.

- The method used to set the Ethernet address for use with DNA (DECnet) on a MacIvory has been changed. You must now enter the DECnet address in the MacIvory control panel instead of the Ethernet address.

- The **Ethernet Grabbed** checkbox in the MacIvory control panel has been replaced by a button named either **Enable Network** or **Disable Network** depending on the current state of MacIvory's networking interface. This change brings the control panel into line with the Ivory menu available in the Genera application.

ECOs for the Symbolics UX Family

- The script for installing from CD-ROM has been changed so that it does not require exactly "extract_cdrom" as the filename, but permits any trailing characters (such as a single period). This allows CD-ROM installation to work under SunOS 4.1.1 because Sun changed their interpretation of ISO9660 to always print a '.' after a file name that does not have any type.

- Since Genera 8.0.1, the installer has automatically included certain lines in the UNIX kernel configuration file, relating to Sun-provided kernel services relied upon by the UX life-support. Unfortunately, if you ran the installer twice (say, once for 8.0.1 and then again for 8.1), the second time around the installer took out the lines it inserted the first time around. This has been fixed.

ECOs to Utilities

- The bug that caused loading MACRO-CALLS.BIN on a 3600-family machine as part of building a **who-calls** database to blowup if the MacIvory-Development system had been previously loaded has been fixed.

- A bug in the Netboot server that allowed you to occasionally netboot a world that you should not netboot (for example, a netboot core) has been fixed. The Ivory Netboot server has also been made more robust so that it can tell if an Ivory machine can netboot (that is, is running Genera 8.1 or later).

- A bug in the 3600 FEP that caused a status printout when the machine halted with a wired-ferror, making the wired-ferror unreadable, has been fixed.

ECOs for Networks and Filesystems

- In Genera 8.0, parsing of links by NFS caused spurious non-existent directory errors. NFS links are now parsed relative to the host attempting to open the file (the *original host*), not the host on which the links reside. This restores correct behavior.

- A number of bugs that made using the CD-ROM as a SYS host have been fixed so that the CD-ROM is much easier to use in that fashion.

ECOs to the FEP and Booting

The Disk Restore FEP command works differently on Ivory machines from 3600 family machines. The differences have not been previously documented, so the documentation for Disk Restore on Ivory is given here:

Using the Disk Restore FEP Command on Ivory-Based Machines

On Ivory-based machines, the cartridge tape from which you are loading files must have been written using the FEP-Tape Activity. Disk Restore for Ivory machines takes two arguments, *unit* and *network-address* followed by optional keywords:

unit	{*integer*} The disk unit to restore.
network-address	{*string*} The primary network address to use in the `Hello.boot` file.
keywords	:Create Boot, :Create Paging Files, :Creation Date, :Query, :Fep Version, :Format, :Paging Space, :Report, :Source, :Standalone Site, :World File

:Create Boot Files   {Yes, No} Whether to create `Hello.boot` and `Boot.boot` files.

:Create Paging Files

> {Yes, No} Whether to create the standard paging files (and declare them in the Hello.boot file).

:Creation Date {*yyyy-mm-dd hh:mm:ss*} The current date and time.

:Query {Everything, Files, Confirm, No} Whether to ask about every step, each file to be restored, just confirm before starting, or not ask at all.

:Fep Version {*integer*} (a version number) The version of the FEP to restore.

:Format {Yes, No} Whether to format and create an initial FEP file system on the disk first.

:Paging Space {*integer*} Number of blocks to allocate for paging files.

:Report {Yes, No} Whether to describe progress.

:Source {*pathname*} Source device or directory to copy flods and world from.

:Standalone Site {Yes, No} Whether to include standalone site commands in `Hello.boot`.

:World File {*pathname*} The pathname of the Lisp world to restore.

The defaults are correct for a complete restore of a Disk from Tape. They can be overridden for other purposes, for example, restoring from Disk to Disk, creating paging files. A simple way to pick and choose is simply to use:

```
Disk Restore N network|address :Query Everything
```

And answer y or n to each query.

Notes and Clarifications to Genera 8.1 Software Installation Guide

(The Version of the *Genera 8.1 Software Installation Guide* distributed on-line with Genera 8.1 was not completely up-to-date as of the release. The completed *Genera 8.1 Software Installation Guide* is included with Genera 8.1.1 as an ECO to Documentation.)

Errata - Genera 8.1 Software Installation Guide

(This section contains corrections to the *Genera 8.1 Software Installation Guide*. It supersedes the on-line section of the same name included in the ECO to Documentation.)

All page numbers are from the *Genera 8.1 Software Installation Guide.*

In the section "Genera 8.1 Installation Steps for MacIvory Machines":

- Page 59, "Installing 6.0.7 and 32-bit QuickDraw:" #1 refers to the floppy disk named *Macintosh CD Setup*. Note that this disk is NOT provided with your Genera 8.1 MacIvory Upgrade. This disk is supplied by Apple with its CD-ROM drive.

- Page 70, "Installing the MacIvory Diskettes": You may wish to disable SAM during this part of the installation, since several alerts will normally appear if virus protection is active. If you elect to leave SAM enabled during MacIvory diskette installation, click on [Allow] if SAM cautions you about the installer making changes to the Macintosh System Folder.

- Page 72, #2b. "Installing a Symbolics Keyboard and Three-button Mouse on a MacIvory". Says, "Insert the Symbolics Keyboard floppy disk..." It should say, "Insert the MacIvory Installer floppy disk..."

In the section "Common UX Installation Situations":

- Page 151: "Upgrading the Symbolics UX UNIX Software" The sample output shows the line "Is the Genera Distribution World Tape mounted (default Yes)?" This line does not appear in the actual output in this case.

In the section "Initial CD-ROM Installation of Genera 8.1 on an XL":

- Page 168, #5, says that XL disk restore will automatically update your `hello.boot` and `boot.boot` files. It should really say that it does not automatically update your `hello.boot` and `boot.boot` files, but it creates new `hello.boot` and `boot.boot` files if you do not have any. In any case, it creates the file `I325.boot`. See the section "Contents of Hello.Boot Files and Boot.Boot Files".

- Page 169, #6: "Type `Hello` to scan the new flods" should say: Type `Hello I325`. Then type the rest of the commands in your old `hello.boot` file by hand. Then type

  ```
  Load World
  Start
  ```

- Page 169, #8: "Read Image File `CDROMn>DISTRIBUTION>OTHER_IVORY_WORLDS.TAPE`" is missing a colon (:). It should say "Read Image File `CDROMn:>DISTRIBUTION>OTHER_IVORY_WORLDS.TAPE`"

In the section "Initial CD-ROM Installation of Genera 8.1 on a MacIvory":

- Page 171, #3, says "In any case, it creates the file `hello.I325`." This should say "it creates the file `I325.boot`".

- Page 171, #4: After Quitting from the Ivory Breath of Life program, you must Restart the Macintosh. Then double click on the Genera icon to boot Genera.

- Page 172, #6: "`Read Image File CDROMn>DISTRIBUTION>OTHER_IVORY_WORLDS.TAPE`" is missing a colon (:). It should say "`Read Image File CDROMn:>DISTRIBUTION>OTHER_IVORY_WORLDS.TAPE`"

In the section "Initial CD-ROM Installation of Genera 8.1 From a CD-ROM on a Sun":

- Page 175, #2: "Remote CD-ROM Installation Procedure for 3600, MacIvory, and XL":#2 In order to connect to the Sun CD-ROM host, your Symbolics machine must be running the 8.0 version of either IP-TCP or NFS.

- Page 176, #3: "Run phases 1, 2, and 3 of the UX installer program, skipping phases 4 and 5" should say "Run phases 1, 2, and 3 of the UX installer program, skipping phase 4 and parts of phase 5". See the section "Upgrading Genera on a Symbolics UX System".

    In order to install the UX UNIX software from CD-ROM, the CD-ROM drive must be connected to a Sun on the local network. If your CD-ROM drive is connected to an XL or a MacIvory, you will have to install the UX UNIX software from tape. Please contact Symbolics Software Support if you need the "Symbolics UX UNIX Software for SunOS 4.1.1, Genera 8.1.1" tape.

In the section "CD-ROM Installation of Genera 8.1 on Subsequent Machines":

- Page 179, #6: "Run phases 1, 2, and 3 of the UX installer program, skipping phases 4 and 5" should say "Run phases 1, 2, and 3 of the UX installer program, skipping phase 4 and parts of phase 5. See the section "Upgrading Genera on a Symbolics UX System".

    In order to install the UX UNIX software from CD-ROM, the CD-ROM drive must be connected to a Sun on the local network. If your CD-ROM drive is connected to an XL or a MacIvory, you will have to install the UX UNIX software from tape. Please contact Symbolics Software Support if you need the "Symbolics UX UNIX Software for SunOS 4.1, Genera 8.1" tape.

In the section "Using a CD-ROM as a SYS Host":

- Page 193, #1, Section "Using a CD-ROM as a SYS Host": If you plan to use the Genera 8.1.1 CD-ROM as a SYS host for Symbolics C, Fortran, and/or Pascal, you must rename two truncated files after copying CDROM*n*:>SYS>SITE>**>*.*.* TO SYS:SITE;**;*.*.*.

        Rename File SYS:SITE;CONTEXT-FREE-GRAMMAR-PAC.SYSTEM.NEWEST
         (to) SYS:SITE;CONTEXT-FREE-GRAMMAR-PACKAGE.SYSTEM.*
        Rename File SYS:SITE;COMPILER-TOOLS-DEVELOPME.SYSTEM.NEWEST
         (to) SYS:SITE;COMPILER-TOOLS-DEVELOPMENT.SYSTEM.*

- Page 194: Some of the translation examples for using a CD-ROM as a SYS host specify *.*.* where they should specify *.*;*. The translations in error are

      ("sys:**;*.*.*" "HOST|CDROMn:>SYS>**>*.*;*")
      ("sys:doc;*.*.*" "HOST|CDROMn:>SYS>DOC>**>*.*;*")
      ("sys:fonts;*.*.*" "HOST|CDROMn:>SYS>FONTS>**>*.*;*")

- Page 194, #2: "The ISO filesystem limits the length of file and directory names to 30 characters, including periods and file types." Should read "...31 characters...". While there are many truncated pathnames on the CD, only the 3 files listed truncated to ambiguous filenames and needed to be renamed.

Notes and Additions to the Genera 8.1 Installation Guide for Genera 8.1 ECO #1

In the section "Genera 8.1 Installation Steps for MacIvory Machines":

- Page 59, "Prerequisites for Installing New Macintosh Software": **Please Note**: The Genera 8.1.1 CD-ROM contains only Symbolics MacIvory Macintosh software. It does not contain Apple's MacOS and HyperCard software. If you do not have appropriate Macintosh software (System 6.0.7, System 6.0.8, or System 7.0), contact your Apple dealer for an upgrade.

- Page 59, "Prerequisites for Installing New Macintosh Software": Upgrade kits for Apple System 6.0.7 and HyperCard 2.0 were only available from Symbolics with Genera 8.1. As of Genera 8.1.1, if you do not have appropriate Macintosh software (System 6.0.7, System 6.0.8, or System 7.0), contact your Apple dealer for an upgrade.

In the section "Initial CD-ROM Installation of Genera 8.1 on an XL":

- Page 169, #8: On the Genera 8.1.1 CD-ROM, the OTHER_IVORY_WORLDS.TAPE image contains updated worlds for Genera 8.1 ECO #1:

  Netboot-core-from-Genera-8-1-1.ilod.1
              Required if you use netbooting at your site.

  Genera-8-1-1-from-Genera-8-1.ilod.1
              Genera 8.1 ECO #1 incremental world. Required for all sites with an XL, MacIvory, or UX.

  Network-from-Genera-8-1-1.ilod.1
              Required for all sites with a UX, optional for other Ivory sites.

  Genera-8-1-1-MacIvory-Delivery.ilod.1
              Optional for all sites except MacIvory Delivery-Only sites.

Genera-8-1-1-UX-Delivery.ilod.1
> Optional for UX sites.

Page 172, "Initial CD-ROM Installation of Genera 8.1 on a MacIvory": #6, On the Genera 8.1.1 CD-ROM, the OTHER_IVORY_WORLDS.TAPE image contains updated worlds for Genera 8.1 ECO #1:

In the section "Initial CD-ROM Installation of Genera 8.1 on a MacIvory":

- Page 172, #6: On the Genera 8.1.1 CD-ROM, the OTHER_IVORY_WORLDS.TAPE image contains updated worlds for Genera 8.1 ECO #1:

Netboot-core-from-Genera-8-1-1.ilod.1
> Required if you use netbooting at your site.

Genera-8-1-1-from-Genera-8-1.ilod.1
> Genera 8.1 ECO #1 incremental world.
> Required for all sites with an XL, MacIvory, or UX.

Network-from-Genera-8-1-1.ilod.1
> Required for all sites with a UX, optional for other Ivory sites.

Genera-8-1-1-MacIvory-Delivery.ilod.1
> Optional for all sites except MacIvory Delivery-Only sites.

Genera-8-1-1-UX-Delivery.ilod.1
> Optional for UX sites.

In the section "Initial CD-ROM Installation of Genera 8.1 from a CD-ROM on a Sun":

- Page 175, #2, "Remote CD-ROM Installation Procedure for 3600, MacIvory, and XL": The Genera 8.1.1 CD-ROM contains updated worlds. The new instructions for step #2 are as follows. We recommend restoring the Network IDS to all Ivory machines. This world contains TCP and NFS, which will enable you to access the Sun CD-ROM drive from all Ivory machines running the 8.1.1 Network IDS.

  On an XL:

```
Copy File cdrom-host:/cdrom/worlds/netboot_core_genera_8_1_1.ilod
 (to) FEPn:>Netboot-Core-from-Genera-8-1-1.ilod
Copy File cdrom-host:/cdrom/worlds/genera_8_1.ilod
 (to) FEPn:>Genera-8-1.ilod
Copy File cdrom-host:/cdrom/worlds/genera_8_1_1_fm_genera_8_1.ilod
 (to) FEPn:>Genera-8-1-1-from-Genera-8-1.ilod
Copy File cdrom-host:/cdrom/worlds/network_from_genera_8_1_1.ilod
```

```
    (to) FEPn:>Network-from-Genera-8-1-1.ilod
```
On a MacIvory:
```
Copy File cdrom-host:/cdrom/worlds/netboot_core_genera_8_1_1.ilod
 (to) FEPn:>Netboot-Core-from-Genera-8-1-1.ilod
Copy File cdrom-host:/cdrom/worlds/genera_8_1.ilod
 (to) FEPn:>Genera-8-1.ilod
Copy File cdrom-host:/cdrom/worlds/genera_8_1_1_fm_genera_8_1.ilod
 (to) FEPn:>Genera-8-1-1-from-Genera-8-1.ilod
Copy File cdrom-host:/cdrom/worlds/network_from_genera_8_1_1.ilod
 (to) FEPn:>Network-from-Genera-8-1-1.ilod
Optionally,
Copy File cdrom-host:/cdrom/worlds/genera_8_1_1_mac_delivery.ilod
 (to) FEPn:>Genera-8-1-1-MacIvory-Delivery.ilod
```
On a 3600:
```
Copy File cdrom-host:/cdrom/worlds/netboot_core_genera_8_1_1.load
 (to) FEPn:>Netboot-Core-from-Genera-8-1-1.load
Copy File cdrom-host:/cdrom/worlds/genera_8_1.load
 (to) FEPn:>Genera-8-1.load
Copy File cdrom-host:/cdrom/worlds/genera_8_1_1_fm_genera_8_1.load
 (to) FEPn:>Genera-8-1-1-from-Genera-8-1.load
```

If the only Symbolics machines at your site are 3600-Family machines, you must also copy the distribution images from CD-ROM to a file system that is accessible over the CHAOS network, such as a FEP filesystem.

```
Copy File cdrom-host:/cdrom/distribution/genera_8_1_source_dist_1.tape (to)
    FEPn:>genera-8-1-source-dist-1.tape
Copy File cdrom-host:/cdrom/distribution/genera_8_1_source_dist_2.tape (to)
    FEPn:>genera-8-1-source-dist-2.tape
```

Later, when you restore the distribution images to a LMFS (Page 179, #8), you will need to restore the sources from this CHAOS-accessible file system. This is because you cannot access a Sun CD-ROM drive from a 3600 running Genera 8.1 until the 8.1 version of either IP-TCP or NFS-Client is restored to a LMFS and loaded on your 3600-Family machine. The necessary versions of IP-TCP and NFS-Client are in the distribution image named genera_8_1_source_dist_2.tape.

• Page 176, #2, "Remote CD-ROM Installation Procedure for UX": The Genera 8.1.1 CD-ROM contains updated worlds. The new instructions for step #2 are as follows.

```
Copy File cdrom-host:/cdrom/worlds/netboot_core_genera_8_1_1.ilod
 (to) FEPn:>Netboot-Core-from-Genera-8-1-1.ilod
Copy File cdrom-host:/cdrom/worlds/genera_8_1.ilod
 (to) FEPn:>Genera-8-1.ilod
Copy File cdrom-host:/cdrom/worlds/genera_8_1_1_fm_genera_8_1.ilod
 (to) FEPn:>Genera-8-1-1-from-Genera-8-1.ilod
Copy File cdrom-host:/cdrom/worlds/network_from_genera_8_1_1.ilod
 (to) FEPn:>Network-from-Genera-8-1-1.ilod
```

Optionally,

```
Copy File cdrom-host:/cdrom/worlds/genera_8_1_1_ux_delivery.ilod
 (to) FEPn:>Genera-8-1-1-UX-Delivery.ilod
```

In the section "CD-ROM Installation of Genera 8.1 on Subsequent Machines":

- Page 178, #4, "CD-ROM Installation of Genera 8.1 on Subsequent Machines":
  The Genera 8.1.1 CD-ROM contains updated worlds for ECO #1:

  XL worlds:
  ```
  netboot_core_genera_8_1_1.ilod
  genera_8_1.ilod
  genera_8_1_1_fm_genera_8_1.ilod
  network_from_genera_8_1_1.ilod
  ```
  MacIvory worlds:
  ```
  netboot_core_genera_8_1_1.ilod
  genera_8_1.ilod
  genera_8_1_1_fm_genera_8_1.ilod
  network_from_genera_8_1_1.ilod
  ```
  Optionally,
  ```
  genera_8_1_1_mac_delivery.ilod
  ```
  UX worlds:
  ```
  netboot_core_genera_8_1_1.ilod
  genera_8_1.ilod
  genera_8_1_1_fm_genera_8_1.ilod
  network_from_genera_8_1_1.ilod
  ```
  Optionally,
  ```
  genera_8_1_1_ux_delivery.ilod
  ```
  3600 worlds:
  ```
  netboot_core_genera_8_1_1.load
  genera_8_1.load
  genera_8_1_1_fm_genera_8_1.load
  ```

- Page 179, #8, "CD-ROM Installation of Genera 8.1 on Subsequent Machines":
  The Genera 8.1.1 CD-ROM contains an additional distribution tape image with
  ECO patches to Symbolics loadable systems. The additional distribution image is
  named:

If the CD-ROM drive is connected to a MacIvory or an XL:

```
HOST|CDROMn:>DISTRIBUTION>GENERA_8_1_1_PATCH_DIST.TAPE
```

If the CD-ROM drive is connected to a Sun:

```
host:/cdrom/distribution/genera_8_1_1_patch_dist.tape
```

In the section "Using a CD-ROM as a SYS Host":

Page 194, #2, Section "Using a CD-ROM as a SYS Host": If you use CD-ROM as a SYS host, and if you run multiple Genera releases at your site (such as Genera 8.0 and Genera 8.1), update your SYS.TRANSLATIONS file to include Genera 8.1.1. Sites which run only Genera 8.1 may skip this step. Sample translations for running multiple releases, including Genera 8.1.1:

```
;;; -*- Mode: LISP; Syntax: Common-lisp; Package: USER -*-
(multiple-value-bind (major-version minor-version)
   (sct:get-release-version)
 (select major-version
   ;; Translations for Genera 8.0.1, 8.1, and 8.1.1
   (8 (selector minor-version equalp
        (("0.1")
         (fs:set-logical-pathname-host "SYS" :translations
           '(("sys:**;*.*.*" "ACME-SMBX:>rel-8-0>sys>**>*.*.*"))))
        (("1" "1.1")
         (fs:set-logical-pathname-host "SYS" :translations
               '(("sys:site;**;*.*.*" "ACME-SMBX:>sys>site>**>*.*.*")
                 ("sys:**;*.*.*" "HOST|CDROMn:>sys>**>*.*;*"))))
        (otherwise (error "~A ~A unknown release or system version.~2T
                           Edit SYS:SITE;SYS.TRANSLATIONS to add this system."
                      major-version minor-version))))
   (otherwise (error "~A ~A unknown release or system version.~2T
                      Edit SYS:SITE;SYS.TRANSLATIONS to add this system."
                 major-version minor-version)))))
```

Clarification on Contents of Boot Files and Their Updating

In Genera 8.1, when you used the FEP-tape to restore worlds on an Ivory machine, we recommended that you not accept the offer to update your boot files. This was because the tools Disk Restore used to update boot files had not been updated to correctly update the new format of boot files. This has been fixed. You can now allow the machine to update your boot files for you.

Contents of Hello.Boot Files and Boot.Boot Files

This section briefly describes the philosophy of which FEP commands belong in the `Hello.boot` file and which belong in the `Boot.boot` file on both 3600-family and Ivory-based machines.

Hello.boot File

This file should contain anything that holds constant for this machine, regardless of the world you are running. For example, this includes your flod files, your paging files, your network address, and so on.

First, this file must scan all the flods from which you want to use commands. This includes the lisp, loaders, info, and debug flods.

Next, the file should include the Initialize Hardware Tables command, so that any errors it encounters will be seen early in the booting process. (This command is completely optional in Ivory-based machines. It is automatically invoked by the Ivory FEP when needed, but errors it signals may be less clear when automatically invoked.)

Then, the `Hello.boot` file should declare any paging files you always want to use; this saves you having to manually Add Paging Files, or to say the same in your boot file. Do not declare any "spare" paging you want to save for an emergency, because Load World automatically uses all declared paging files, and thus the spare paging file would not be available in case of an emergency. It is harmless to declare paging files that do not exist (for example, one you might delete every now and then to make room for Copy World); nonexistent ones give a warning, but are not used.

Ivory machines only:

Starting with Genera 8.1, the `hello.boot` file for an Ivory machine should contain two lines:

```
Hello Innn
Hello Local (or hostname)
```

Each of these corresponds to a boot file. The *nnn* refers to the IFEP number, which is 328 for Genera 8.3.

Hello I*nnn* Boot File

The I*nnn*.boot file (where *nnn* is the IFep version number, which is 328 for Genera 8.3) should contain the commands to scan the flod files and initialize things.

```
Scan I328-lisp.flod
Scan I328-loaders.flod
Scan I328-info.flod
Scan I328-debug.flod
Initialize Hardware Tables
```

Hello Local Boot File

The `local.boot` file should contain those commands that set up this specific machine, declaring paging files, setting the network address, and any other boot options.

```
Declare Paging Files FEP0:>Paging-1.page
Declare More Paging Files FEP0:>Paging-2.page,Paging-3.page
Set Boot Options :Network Address Chaos|52525 :IDS Enable
```

Boot options are required for standalone sites. They are optional for other sites, but they do save manually invoking them or having them duplicated or inconsistent in boot files (if you have multiple boot files). See the section "Set Boot Options FEP Command".

The boot options replace other FEP commands. For compatibility, some of the boot options have corresponding commands. Note that some of these commands (such as Enable/Disable IDS on 3600-family machines), if present, must appear in the `Boot.boot` file, since they must follow Load World. (In the Ivory-based FEP, these commands warn if you try to use them at the wrong time, while in the 3600-family FEP they silently perform no operation if used at the wrong time). We recommend using the Set Boot Options command instead of the corresponding commands, so you can set all the boot options in one spot.

Normally, you set your network address with Set Boot Options, but you could use the Set Network Address command instead. Whichever way you choose to set the network address, it should be done in the `Local.boot` file, and should not be duplicated in your `Boot.boot` files.

3600 and Ivory Machines

Note that, in previous releases, you had to set the network address after loading the world, but this restriction no longer holds on either architecture.

Here is a sample `Hello.boot` file for a 3600-family machine:

Sample 3600-Family Machine Hello.Boot File

```
Scan v127-info.flod
Scan V127-loaders.flod
Scan v127-lisp.flod
Scan v127-debug.flod
Initialize Hardware Tables
Declare Paging-Files FEP0:>Paging-1.page
Declare More Paging-Files FEP0:>Paging-2.page,Paging-3.page
Set Chaos-Address 52525
```

(For a sample `Hello.boot` file for an Ivory-based machine, see the section "Sample Ivory-Based Machine Hello.Boot File".)

Boot.boot Files

These files should contain any setting that pertains only to the particular world (and microcode, on a 3600-family machine) this file loads and starts. (Note that this excludes the address of the machine.) There is a slim possibility that you

might want to have some explicit paging file commands here (for example, a boot file to boot with just one paging file explicitly added for when you want to do world copying).

Sample 3600-Family Boot.Boot Files

Here is the sequence of commands for a Symbolics 3600-family machine that is cold booting a world from the local disk:

```
Clear Machine
Load Microcode FEP0:>3640-fpa-mic.mic.430
Load World FEP0:>genera-8-3.load
Enable IDS
Start
```

Here is the sequence of commands for a Symbolics 3600-family machine that is cold booting a world from a remote disk (netbooting):

```
Clear Machine
Load Microcode FEP0:>3640-fpa-mic.mic.430
Netboot inc-site-genera-8-3
Enable IDS
Start
```

The information in the rest of this section applies to Ivory-based machines only.

`Boot.boot` files for Ivory-based machines should contain only the following:

```
Load World
Start
```

Note that you can set your default world to boot in boot options. If you choose to load the default world, there is no need to give an explicit pathname argument to Load World.

It is unnecessary to do a Clear Machine before the Load World since this command does nothing on Ivory-based machines. On 3600 family machines, it serves a purpose. To avoid confusion and make boot files easier to understand and maintain, if Clear Machine is left in the boot file of an Ivory machine, it is ignored.

It is possible, although not recommended, to give the Enable/Disable IDS command here, but the recommended way is to do all that in your `Hello.boot` file, via Set Boot Options :IDS [Enable/Disable]. You should also use the Set Network Address commands in your `Hello.boot` file. (Note that if someone copies a boot file with an address in it to another machine, confusion will result.)

Note also that Disable IDS saves only an inconsequential amount of memory and overhead, so there is usually no advantage in doing it.

Here is the recommended sequence of commands for a Symbolics Ivory-based machine that is cold booting a world from the local disk:

```
Load World
Start
```

This loads the most recent world on your local disk, which is usually the one you want to boot.

For a netbooted machine, the recommended sequence is:

```
Netboot inc-site-genera-8-3
Start
```