

## Update Notice:

# X11R5 DG/UX™ X Window System for AViiON Systems

## DG/UX 5.4 Release 2.01

March 1993

Part Number 078-600088-00

Model P001A

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## 1. Introduction

This update notice describes Revision 2.01 for the DG/UX™ Window System 5.4 release and its installation. This will be referred to as R2.01 throughout this document.

This update notice supplements or supplants information found in the DG/UX™ Window System Revision 5.4.2 Release Notice.

Between releases, Data General may issue updates to the product. An update is essentially a partial release. This mechanism reduces the time needed to fix problems by providing a level of correction short of releasing the complete product. Each update of a product supersedes the previous update.

Additional copies of this update notice can be printed. Use the file /usr/opt/X11/release/x11\_5.4R2.01.un. In the event of differences between the printed copy of this notice and the online lineprinter version, the printed copy takes precedence.

## 2. Product Description

The DG/UX™ X Windows System is a combination of the X Window System™ Release 5 and Motif™ Version 1.2.1. The X Window System consists of an X server, a set of X clients, programming libraries, and on-line documentation. The X server manages a raster display and related input devices. X clients are applications which communicate with the X server to perform terminal emulation, window management, and other necessary functions. The subroutine libraries allow programmers to implement applications of their own.

Motif consists of the mwm window manager, a User Interface Language (uil) compiler, and subroutine libraries. Motif is a derivative product to the Open Software Foundation, Inc.'s OSF/Motif™.

## 3. Environment

### 3.1 Hardware

The DG/UX X Window System is based on a client/server model. This model allows the DG/UX X Window System to be run in two distinct environments, depending on whether both the client and server run on the same machine, or on different machines that are connected by a Local Area Network (LAN) using TCP/IP. In the first environment, where the client and the server are running on the same machine, they communicate using Unix sockets or shared memory. In this situation the minimum configuration for an AViiON workstation is a keyboard, mouse, raster display, disk and tape or fileserver.

In the second environment, the server and clients execute on different machines connected by a Local Area Network (LAN). The machine running the server must have, at a minimum, the standard AViiON workstation configuration. The machine running the client can be any CPU connected to the AViiON workstation by LAN.

### 3.2 Software

In both operating environments, revision 5.4.2 of the DG/UX operating system, along with the R2.01 update, is a prerequisite. Consult the DG/UX release and update notices to determine its environmental requirements.

DG/UX X Window System Release R2.01 fully interoperates with previous releases of the DG/UX X Window System product.

## 4. Enhancements and Changes

### 4.1 Enhancements

1. In the DG/UX 5.4 R2.01 X Window System all input is handled by the Xserver. This differs from previous releases, where input was handled by a separate input daemon (/usr/opt/X11/bin/grfxd). The input daemon is no longer needed to run the Xserver, and in turn can be deleted. Note that this will not be deleted automatically.
2. There are two options for enabling additional input devices via the X Input Extension:

```
-device <device-spec>
-devicefile filename
```

The filename must be an ASCII file with one <device-spec> per line. A <device-spec> will look like one of the following:

```
geoball,dev=tty01,baud=9600
tablet,dev=/dev/tty00,type=pointer
```

A <device-spec> is a device handler name followed by one or more of the following (all separated by spaces, tabs and/or commas):

**dev=<dev-path>**

This specifies the special device file to be opened.  
The "/dev/" prefix on <dev-path> is optional.

**baud=<baud>**

This specifies the baud rate of the device. This may be ignored by some handlers (e.g., the keyboard).

**name=<dev-name>**

This is the name of the device as used in the X11 Input Extension. This name is bound to an atom and is used to identify extension devices. If it is not specified it will default to the same as the handler name, except all upper case.

**type=<type>**

This specifies whether the device is to be the core pointer, core keyboard or an extension device. The valid values for <type> are "pointer", "keyboard", "extensiondevice" or "other" (the last two have the same meaning). The <type> can also be abbreviated to the first letter. The default is "extensiondevice".

There are two example device handlers provided (in source code form) with the server. They are "tablet" and "geoball". The tablet handler supports the Wacom SD-320 in Bit Pad II emulation mode. The geoball handler supports the Geoball by CIS Graphics, Inc. Additional handlers can be written and linked into the server using these two handlers as examples.

### 3. Mterm includes the following enhancements:

- Support for setting the VT100 model id has been added. See the command line option '-vt100mid' or the resource 'Mterm.vt100ModelId'.
- The break duration is now set by the commandline option '-bd' and the resource 'Mterm.breakDuration'. The argument is in tenths of a second.
- Mterm can now strip the newline characters during a paste. This allows for better pasting into CEO and other products that automatically handle line wrap. To paste without newline characters using the keyboard press <Alt><Ctrl><Ins>. To paste without newline characters using the mouse press <Ctrl><Button2>.

### 4. xdgmail includes the following enhancements:

- Xdgmail now handles all MIME content types. There is a resource for each major type that allows the user to specify a command to pipe a message of that type to. Commands can also be specified from within xdgmail by clicking on the "Pipe To Command" button in the Content Dialog. The user can choose instead to save the message to a file or view it unformatted (i.e. as is). See the resource file, man page, or on-line help for more information.

- Support has been added for internationalization of xdgmail, subject to the limitations of the text widget in Motif 1.2.1. All error messages can be displayed in a language other than English by translating the helpfile. Translating the resource file will display button labels, menu buttons, etc. in a language other than English.
- A question mark field has been added to each message summary. If a question mark precedes the message number in a summary, the user should read that message carefully. This is a warning that the mailbox has been corrupted and the selected message probably contains 2 or more messages. In some cases, the message is shorter than expected so the user will see a truncated message instead of an extra message.
- In the View menu, a "Message Number" button has been added. When it is pressed, a dialog box pops up for the user to enter a particular message number. The message corresponding to the entered number is then displayed.
- In the View menu, the "Selected in a Window" button has been replaced by a "Mode" selector. With this item, the user can toggle the view location for all selected messages between the xdgmail view area and a separate window. Activating the "Selected" button in the View menu will cause any selected message(s) to be displayed wherever indicated by the current "Mode" setting.
- A resource, viewInWindow, has been added to allow the user to preset the view display area. If set to false (the default), all selected messages will be displayed in the xdgmail view area; otherwise they will appear in a separate window.

## 4.2 Changes

1. The way in which the X server handles toggling keys has been modified to correct an LED synchronization problem.

When an event arrives from the keyboard, it is first determined whether the key should toggle. The key is considered a toggling key if one of these conditions is true:

- The modifier mask for the key has the LockMask bit turned on.

- The key has one of the following KeySyms associated with it:

**XK\_Caps\_Lock**  
**XK\_Shift\_Lock**  
**XK\_Num\_Lock**  
**XK\_Scroll\_Lock**  
**XK\_Kana\_Lock**

- It is a Kanji keyboard in "Kana key is modifier" mode and the key has the XK\_Mode\_switch KeySym associated with it.

If it is determined that the key should toggle:

- Key up events are discarded.
- If the key has an LED, then a KeyPress event is generated if the LED has just changed to on, and a KeyRelease if it just changed to off.
- Otherwise, if the last event for this key was KeyPress, then a KeyRelease event is generated. If the last event was KeyRelease then a KeyPress is generated.

The major change in the X server's behavior is that the lighted keys (Caps Lock, Num Lock, Scroll Lock and Kana Lock) will toggle if and only if they have a "locking" KeySym or the LockMask bit is turned on in the modifier mask. As a result, the LED on the key can no longer get out of sync with the logical state of the key as it could have in previous X servers.

2. In the past you used the -x XINPUT command line option on the X server to turn on the input extension. The input extension is now present by default, therefore no options are needed to activate it, but options are needed to turn on additional devices.

3. Version 1.2.1 of Motif, an update to version 1.2, is included in this update. Motif 1.2.1 contains only bug fixes and no new functionality.
4. Mterm includes the following changes:
  - The resource file started some comment lines with '!'. This was incorrect. All comment lines now start with '! '.
  - The compose key sequence for a hard space has been changed to <PAUSE><.><.>.
  - The resource file references to the Alt key modifier have been changed to the Mod1 key modifier. This works better with non-US keyboards.
  - A problem with the window not being properly refreshed if another window partially covered the mterm window has been fixed.

## 5. Notes and Warnings

### 5.1 Notes

1. In mterm, the optionsmode menu selection will give undesirable results if you select it and switch to vt100 or vt52 mode after you have started a child other than a shell. In particular doing a change mode to vt100 or vt52 mode after a telnet, vi, or rlogin session has been started will give undesirable results. Mterm must change the line characteristics when switching from one mode to another. If a child process has been started that resets the characteristics, incompatibilities occur. It is generally safe to switch to a DG mode at any time. It is generally safe to switch to VT mode if you have not started a child process other than your shell. It is recommended that you put mterm in the mode of the target system before you start any child process necessary to connect you to the remote system. You may find it helpful to use the DG/UX reset command after changing modes.

### 5.2 Warnings

1. The help switch on the bdfosnf command erroneously refers to the -u switch as the -s option. (It states "and # for -s is 1,2, or 4.")
2. uucp has changed the way it builds the lock file for async usage. This change has not been supported by mterm. Async lines used by UUCP will only be recognized as being in use by other programs building lock files the same way. UUCP builds lock files using the following template: /usr/spool/locks/LK.xxx.yyy.zzz (see the cu(1c) man page). mterm uses locks of the form: /usr/spool/locks/LCK..ttyXX.
3. There is a conflict between xdgmail and mnemonics/accelerators. If you use a menu button mnemonic that is the same as an accelerator or another operation, you will get both selections. For example, if you press "h" while in the menu bar, the help window AND the search dialog box will pop up. This problem will be corrected in a later release of xdgmail.
4. If the end of a mailbox gets truncated for any reason, a currently running xdgmail may exit with a segmentation fault. The user will be unable to restart xdgmail until 1 or more empty lines have been added to the end of the mailbox.
5. If the LANG variable is not set properly, mwm will not allow 8bit characters to appear in the window title. Set the LANG environment variable to en\_US and all will work fine. The current setting of C is 7bit, while en\_US is 8bit and will allow mwm to display international characters in window titles. Please note, however, that this is only necessary if 8bit characters are desired in the window title.
6. When running Motif applications on an x-terminal, the option "Retain X Settings" must be turned OFF for these apps to run properly.
7. Motif appears to not handle pop-up menus correctly under certain conditions. When running an application that supports pop-up menus, you might 'lose' the keyboard by bringing up the popup menu and then pressing escape. Switching focus to another window, and then back to the original window will return focus.



8. If you use a `ToggleButton` in a menu, the `indicatorSize` resource defaults to something very small, instead of what it used to in DGUX 4.32 and what it still does if you use a `ToggleButton` anywhere else. The obvious workaround is to set the `indicatorSize` resource, but this messes up the geometry management of the menu - all the items get spaced out by the same amount you increase the value, even though the indicators are not even as large as the text label. So you can have a tiny indicator or a bloated menu, or a compromise between the two.
9. Mwm fails to pass on keys to applications when an mwm key binding exists. When an mwm key binding exists in your `.mwmrc` file for a key in a context other than the context you're in (for example, a binding for root exists, but you're in a window), mwm fails to pass the key event on to the application in that context.

If the following is in the `.mwmrc` file:

```

Keys MyKeyBindings
{
  <Key>Scroll_Lock root f.nop
}

```

Mwm should only consume the `Scroll_Lock` key events when the context is root with this definition.

However, when the cursor is in another context, like a window, mwm also consumes the key and does not pass it on to the application as it is supposed to. The application does see the `FocusOut` and `FocusIn` events when the key is pressed, indicating that mwm has intercepted the key event, but the key event itself is never passed on to the application.

Mwm used to pass on such keys in previous revisions (DG/UX 5.4 worked correctly), but with DG/UX 5.4.1 and later revisions, it no longer does so. You can work around the problem now by using a key binding for a key that is not in use.

10. "OptionMenu" is now a default label for an option menu. Formerly, the default (i.e. not setting `XmNlabelString`, or setting it to `NULL`) was to get no label. Now the default is for motif to put "OptionMenu" as the label.
11. Indicators disappear when `XmNlabelType` is `XmPixmap`. When `XmNlabelType` is set to `XmPixmap` at the creation of a `ToggleButton`, but the actual pixmap is added later using `SetValues`, the indicator button disappears. This is not a problem if some pixmap is given at creation time. It is also not a problem if one creates the `ToggleButton` with `XmNlabelType` set to the default, sets the pixmap and then sets `XmNlabelType` to `XmPixmap`.
12. Motif in some instances does not handle pop-up menus correctly. When running an application that supports pop-up menus, you can 'lose' the keyboard by bringing up the popup menu and then pressing escape. Switching focus to another window, and then back to the original window will return focus.
13. Mwm now requires at least one key binding to be present in a "Keys" definition in the `.mwmrc` file. Under DG/UX 5.4, empty "Keys" definitions were legal and worked as expected.

```

Keys MyKeyBindings
{
  !
  ! Mwm defaults deleted
  !
}

```

Along with an X resource of "`Mwm*keyBindings: MyKeyBindings`", this had the desired effect of eliminating all mwm key bindings. However, under DG/UX 5.4.1 and later revisions, when the same definitions are used,

mwm reports this error:

mwm: Key bindings MyKeyBindings not found, using builtin key bindings

If one key definition is added to the "Keys" entry the message is eliminated. So, .mwmrc now looks like this:

```

Keys MyKeyBindings
{
    !
    ! Mwm defaults deleted
    !

    <Key>F1 root f.nop
}

```

This problem will be fixed in a later release of DG/UX.

14. OptionMenu help does not behave as expected under certain conditions. In DG/UX 5.4.1, if you clicked on an OptionMenu widget, it didn't matter how long you held the button down. When the mouse button went down, the options were displayed; when the mouse button came up, the display collapsed, but the widget remained selected. Then you could get help by pressing F1.

Now in DG/UX 5.4R2.01, if you click quickly on the widget, the options are displayed and stay displayed until you click somewhere again. If you click slowly, you get the old behavior. However, even though the widget appears to be selected, pressing F1 does nothing. But if you click on the widget \*and hold the mouse button down\*, then with the mouse button down, press F1, you get help.

15. mwm displays error messages in certain instances.

When DG/UX 5.4.1 xsysadm is run and displayed to a DG/UX 5.4R2.01 system, the following message is displayed:

```

mwm: mwm cannot convert property COMPOUND_TEXT as
clientTitle/iconTitle : XmbTextPropertyToTextList
returns: -3.

```

everytime a confirmation or warning dialog box pops up. This only occurs when the following is placed in .sysadmrc.

```

set TitleSuffix = " 'hostname' "

```

16. XmList widget displays incorrect selections When the top item in a list widget is selected, a new item is added to the top of the list widget, and the keyboard is used to select the newly added item, the previously selected item is still incorrectly highlighted.
17. XmText module does not always redraw screen after deletion.

To reproduce:

1. Create a scrolled XmText widget containing enough text to force the widget to scroll.
2. Use the mouse to highlight text from the middle of the scrolled region to the end of text.
3. Scroll the window back to the top of the text.

4. Press the delete key.

The highlighted text will be unhighlighted, but not erased. Run xrefresh. The previously highlighted text will disappear.

18. The client xpref is being shipped for the last time in this release. Xpref will not be supported after DG/UX 5.4 Release 2.01.

## 6. Documentation

### 6.1 Manuals

The following documents ship with the X Window System released with the DG/UX™ operating system:

Publication	Part Number
X Window System Update Notice	078-600088
X Window System User's Guide, OSF/Motif Edition	069-100229-03
X Documentation 20 Percent Off Order Form	069-100392-02

### 6.2 Documentation-changes files

There are no documentation-changes files associated with this release.

## 7. Software Distribution

### 7.1 Media

See the DG/UX update notice for this information.

### 7.2 Files

For a complete list of files present in the DG/UX Window System Package, see the following files under /usr/opt/X11/release after the system is loaded (associated package in brackets):

```
X11_5.4R2.01.fl [X11]
X11.man_5.4.R2.01.fl [X11.man]
X11.sde_5.4R2.01.fl [X11.sde]
```

## 8. Installation Instructions

You must load release R2.01 of the DG/UX X Window System over a system loaded with release 5.4.2 of the DG/UX X Window System. You may load DG/UX X Window System 5.4.2 and R2.01 in the same system installation session.

All the installation instructions outlined in this section must be performed with the system at run level 1. Use the command /etc/shutdown to shut the system down to single user mode. Then use the init command to bring the system back up to level 1. Consult the manual, "Managing the DG/UX™ System" for information on how to change run levels. Failure to perform this step will cause the installation process to go incorrectly.

To load the R2.01 X Window System update, load the tape into the tape drive and enter the menu "software->package->load" via sysadm. From the X11 packages listed, select only those that were loaded when 5.4.2 was originally installed (consult the DG/UX™ X Window System 5.4.2 Release Notice for details on the X Window System packages). Once loaded, there is no additional setup required. Note, however, that since the new X server handles all input, there is no longer a need for the input daemon (/usr/opt/X11/grfxd). Therefore, this file can be deleted. Note this file will not be deleted automatically.

### 8.1 Starting up the DG/UX™ X Window System

Once the installation steps for your system are complete, the X Window System can be brought up following the same steps outlined in the DG/UX™ X Window System 5.4.2 Release Notice. Consult this document for further details.

## **9. Preparing a Software Trouble Report (STR)**

If you believe you have found an error in the X Window System or its documentation, or if you have a suggestion for enhancing or improving the product, use a Data General Software Trouble Report (STR) to communicate this to DG. Consult the DG/UX<sup>TM</sup> 5.4.2 X Window System Release Notice for details on filing an STR. Note, however, that when filing an STR, the DG/UX<sup>TM</sup> revision reported must be 5.4R2.01.

End of Update Notice