

# System Support Addendum

**PRODUCT NAME: DECwindows Interoperability Compliance Matrix**

**SSA 01.25.02**

## PREFACE

This document describes the DECwindows Interoperability Compliance Matrix and the associated general requirements and known restrictions. This document includes the following sections:

- DECwindows Interoperability Compliance Matrix
- General interoperability restrictions
- Known restrictions that are specific to DECwindows components or that have specific recommended workarounds
- Information that should accompany interoperability problem reports in order to expedite the problem isolation/resolution process

## Conventions

The following conventions are used in this document:

mouse	The term mouse is used to refer to any pointing device, such as a mouse, a puck, or a stylus.
MB1,MB2, MB3	MB1 indicates the left mouse button, MB2 indicates the middle mouse button, and MB3 indicates the right mouse button. (The buttons can be redefined by the user.)
Ctrl/x	A sequence such as Ctrl/x indicates that you must hold down the key labeled Ctrl while you press another key or a pointing device button.
UPPERCASE TEXT	Uppercase letters indicate that you must enter a command (for example, enter OPEN/READ), or they indicate the name of a routine, the name of a file, the name of a file protection code, or the abbreviation for a system privilege.

numbers Unless otherwise noted, all numbers in the text are assumed to be decimal. Nondecimal radices-binary, octal, or hexadecimal are explicitly indicated.

## DESCRIPTION

DECwindows applications can be accessed across the network by workstations that have provided implementations that are consistent with the MIT X11 R3 specifications. Similarly, DECwindows workstations can access remote X applications that follow the same guidelines.

To determine the set of systems and applications for which Digital Equipment Corporation has verified correct distributed operation, consult the DECwindows Interoperability Compliance Matrix contained in this document. This matrix applies to all Digital provided transport types, including DECnet and TCP/IP.

To determine whether a separately orderable DECwindows or X application runs on or can communicate with a DECwindows system, consult the application's product description.

## HARDWARE REQUIREMENTS

*For VMS and ULTRIX DECwindows Interoperability:*

There are no special hardware requirements related to DECwindows interoperability between the VMS and ULTRIX platforms.

*For PC DECwindows and VMS or ULTRIX Interoperability:*

Interoperability between DECwindows applications on either VMS and the PC DECwindows Display Facility (X Server) or ULTRIX and the PC DECwindows Display Facility (X Server) will be affected by the hardware requirements of the DECwindows applications. Those applications written expecting the display facility to have an

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LK201 keyboard, a three-button mouse, or a screen resolution of 1024x864 will experience interoperability problems.

The following PC hardware will provide either an optimal or nearly optimal environment for DECwindows applications, thus eliminating or reducing interoperability problems or limitations.

- *Mouse* - Configure the PC with a three-button mouse. Any application which requires MB2 or MB3 will function correctly.
- *Keyboard* - Configure the PC with an LK250 keyboard and configure the PC DECwindows Display Facility to use the LK250 keyboard mapping file which emulates the Digital LK201 keyboard.
- *Screen* - Configure the PC with a Paradise Enhanced VGA card and monitor. This will provide an 800 x 600 screen resolution which is suitable for most DECwindows applications.

### SOFTWARE REQUIREMENTS

The following systems are required in some combination for support of DECwindows Interoperability as defined by the DECwindows Interoperability Compliance Matrix:

*For VMS and ULTRIX DECwindows Interoperability:*

- VMS Operating System V5.3 (SPD 25.01.33) or V5.4 (SPD 25.01.xx)
- ULTRIX Operating System V3.1 (SPD 26.40.15) or V4.0 (SPD 26.40.xx)
- ULTRIX Worksystem Software V2.2 (SPD 28.22.11) or V4.0 (SPD 28.22.xx)

There are no other special software requirements for VMS and ULTRIX DECwindows Interoperability.

*For PC DECwindows:*

- VMS Operating System V5.3
- ULTRIX Operating System V3.1, ULTRIX Worksystem Software V2.2
- DECnet PCSA Client for DOS V3.0 - PC DECwindows Display Facility V2.0 (SPD 55.07.08) and VMS Services for PCs V3.0 (SPD 30.50.06)

The following PC software will provide either an optimal

or nearly optimal environment for DECwindows applications, thus eliminating or reducing interoperability problems or limitations.

For PC DECwindows interoperability with VMS or ULTRIX DECwindows, use the VMS DECwindows window manager (running under VMS) shipped with DECnet PCSA Client for DOS V3.0, PCX\$WINMGR.EXE to control DECwindows applications for a more optimal user environment. This window manager allows a user to move windows off the top of the screen making occluded portions visible. This additional capability will eliminate many potential interoperability limitations that may exist for DECwindows applications being served in a PC environment.

### DECwindows Interoperability Compliance Matrix

The DECwindows Interoperability Compliance Matrix contains the current known interoperability status that exists between DECwindows platforms and components. Subsequent sections in this document describe the interoperability restrictions and their recommended workarounds.

The DECwindows Interoperability Compliance Matrix is shown in Table I at the end of this document. This matrix applies to all Digital-provided transport types, including DECnet and TCP/IP.

### Known General Restrictions

This section discusses known general interoperability restrictions for the VMS, ULTRIX and MS-DOS DECwindows platforms. These restrictions are common to all platforms and may also apply to user-written applications.

#### *VMS Versions 5.1, 5.2, 5.3 and 5.4 Interoperability*

The following restriction applies to VMS Version 5.1 and Version 5.2 when interoperating with Version 5.3 or Version 5.4. This restriction is described in the VMS Version 5.3 Release Notes or Version 5.4 Release Notes:

- If you run an application linked against an earlier Toolkit version and an application linked against the current Toolkit version, you will not be able to cut from one and paste to the other. No error message appears. Applications formerly shared a common clipboard, but applications linked against the current Toolkit share a separate and independent clipboard and steps have been taken to ensure that no similar clipboard incompatibility will exist among future releases.

*Fonts, XUI, UIL, Session and Window Managers*

There are known restrictions with server fonts and various DECwindows clients. Client applications may not handle missing fonts well. Users should ensure that the Digital supplied fonts are installed and available to the applications on the server system.

The selection, file selection and help widgets may appear too large for PC screens. Small fonts should be used in order to enhance interoperability with PC platforms.

Remote execution of the Session Manager is not supported.

*Window Size and Placement*

Certain applications exhibit a restriction related to placement and sizing of windows on PC screens. Windows may require repositioning and re-sizing in order to fit properly on the PC screen.

Certain pull-down and pop-up menus may be partially occluded if near the edge of the screen.

Use of the file selection widget may cause part of the file selection box to be off the screen on small screen PCs. This is due to the dynamic size of the lengths of the resulting file specifications. Usually, the buttons can be operated using the <RETURN> and <SHIFT><RETURN> operators.

*LK201 and LK250 Keyboard Support*

Certain applications support only the LK201 and LK250 key symbols (KEYSYMS). Keyboards that are compatible with the LK201 and LK250 key symbols should function properly. Most PC alphabetic and numeric keys are compatible with the LK201 and LK250; special function keys may not be supported.

*Mouse Support*

Certain applications expect a mouse device that supports at least two mouse buttons.

**Known Applications Restrictions**

This section describes known interoperability restrictions for the VMS, ULTRIX and MS-DOS DECwindows platforms. This section identifies known restrictions that apply to applications or to components such as the Window Manager and Session Manager.

This section contains two parts:

- VMS DECwindows Applications and Components
- ULTRIX DECwindows Applications and Components

**Note:** The restrictions noted in this section are the direct result of testing of the applications/components. These restrictions represent specific problems that were not summarized under General Restrictions, or that have specific recommended workarounds.

Not all applications/components were tested for interoperability. Applications/components that are listed as having no known restrictions may still exhibit restrictions.

**VMS Version 5.3 and Version 5.4 Applications/Components**

Table II lists the applications/components contained in the VMS DECwindows Version 2.0 distribution kit. This table is a quick reference for determining if specific restrictions were discovered during interoperability testing. The restriction(s) column contains brief text regarding the noted issues. Refer to Table II VMS Restrictions Matrix at the end of this document.

**VMS Calendar Restriction**

The known Calendar restriction is as follows:

• *Problem:*

Calendar's Customize Day View and Customize Alarms dialog boxes appear to be too large to fit on the screen when the display has low resolution. Depending on the position of the view from which these dialog boxes were invoked, the push buttons at the bottom of the dialog boxes may be off the screen.

• *Recommended workaround:*

If the PC DECwindows Window Manager for VMS is used, grab the dialog boxes by their sides to reposition them.

Other Calendar views that appear to be too large to fit can be re-sized using the standard Window Manager mechanism. You can save the new sizes of Calendar's views by using the Customize Save Settings menu item.

**VMS DECterm Restrictions**

The known DECterm restrictions are as follows:

• *Problem:*

The DECterm window does not come up on the PC screen sized or centered properly. It must be manually centered and re-sized.

• *Recommended workaround:*

To make the window fit on the screen, use the condensed font in an 80 column by 24 row window. To do this, select the Window dialog box from the Customize menu, select "Condensed font (132 columns)" and then select OK. To save the change, select "Save Current Settings" in the Customize menu.

DECterm will automatically move the window so that it is on the screen.

• *Problem:*

When the <X] Backspace toggle button is enabled, pressing the <X] key produces no response on the PC system.

• *Recommended workaround:*

PC users should select the <X] Delete setting of this toggle button.

- *Problem:*

The "Comma Key Sends ,<" option does not work on the PC. Pressing the comma (,) key generates a comma, but pressing Shift/, generates the number nine (9).

- *Recommended workaround:*

PC users should select the "Comma Key Sends ,," setting of this toggle button.

- *Problem:*

The "Tilde Key Sends ESC" option under the Customize Keyboard dialog box does not work on the PC server. When this option is enabled, pressing the tilde (~) key generates no response. (It should act as an escape key.)

- *Recommended workaround:*

PC users should select the "Tilde Key Sends '~" setting of this toggle button.

- *Problem:*

DECterm does not support the function, editing, and keypad keys on non-LK201 keyboards. This is a problem for PC X servers because they do not generate all the key symbols (KEYSYM)s the LK201 supports. Some functionality under DECterm is not accessible. For example, EDT cannot run in screen mode from DECterm with a non-LK201 keyboard.

- *Recommended workaround:*

Users with keyboards that do not include some of the LK201 keys will not easily be able to run programs that depend on those keys. However, there are often functional equivalents for the keys. For example, EDT has a line editing mode in which commands can be entered in alphanumeric form rather than with function keys.

If a program does require function keys to be used, the user can manually enter the escape sequences for the keys. For example, the keypad 7 key is the three character sequence <ESC>Ow, where <ESC> is an escape, which can be entered as control-3 or control-]. The escape sequences sent for each key are listed in the *DECterm Text Programming Manual*.

Use the LK250 keyboard on PCs.

### VMS Mail Restrictions

The known Mail restriction is as follows:

- *Problem:*

On PC screens, the Acknowledge button in the Full info.... dialog box may not be visible.

- *Recommended workaround:*

The dialog box can be dismissed by clicking on it to give it input focus and pressing Return.

### VMS Notepad Restrictions

The known Notepad restrictions are as follows:

- *Problem:*

The initial screen of Notepad is too large for the PC screen.

- *Recommended workaround:*

Edit the file SYS\$LOGIN:DECW\$XDEFAULTS.DAT, and add the line

```
notepad.geometry: 350x350+4+120
```

Please note that for VMS, the use of Xdefaults resources applies to Versions 5.3 and 5.4 only. These resources should be removed before upgrading to future versions of the VMS Operating System.

- *Problem:*

Certain dialog boxes do not fit on the screen. Particularly, the Font... dialog box does not fit.

- *Recommended workaround:*

Use the PC DECwindows Window Manager.

- *Problem:*

Certain keyboard accelerators are not accessible on a PC. For example, the Find key is unavailable.

- *Recommended workaround:*

Use the LK250 keyboard for PCs.

### VMS Calculator Restrictions

The known Calculator restriction is as follows:

- *Problem:*

The keypad /, \*, + and = keys do not work on the PC keyboard.

- *Recommended workaround:*

You can use the main keyboard keys or the mouse to enter these operators.

### VMS CDA Viewer Restrictions

The known CDA Viewer restrictions are as follows:

- *Problem:*

The CDA Viewer's file-selection box may appear too large to fit on a PC display.

This is a generic restriction of any application running to a PC display using the DECwindows XUI Toolkit's file-selection widget. It is more apparent in the CDA Viewer because the CDA Viewer's file selection box also contains an extra child.

The problem occurs because the file-selection box's file list box grows as large as the largest file name that matches the filter, including the full directory specification. Therefore, if the filter is "\*.ddif", and the viewer is started from a directory (for example, SYSSYSDEVICE:[TEST.CDA]) with files that match the filter, then the file selection box's file list box grows as large as SYSSYSDEVICE:[TEST.CDA]MY-LARGEST-FILE-NAME.DDIF. There is no way for an application to restrict the file selection box's behavior.

• *Recommended Workarounds:*

1. By-pass use of the file-selection's filter box. This can be accomplished by starting the viewer from a directory with no files that match the default filter (\*.ddif). The open box will be large enough to fit on the screen.

Then, open all subsequent files strictly typing in the "Open File" text entry box (avoid typing in the file-filter box). The box will always be small enough to fit on the screen. This forces typing in full file names, and disallows double clicking in the (empty) list box.

2. Try to start up and use the viewer from a short directory name with short file names.
3. Using the file-selection box still allows selection of a file and a format, although the "OK" and "Cancel" buttons may not be visible. A file can still be selected by double clicking in the list box, although there would be no way to enter "Cancel".
4. An additional possible workaround is to specify a smaller font for file selection boxes in the user's Xdefaults file. For example, the following line results in the file selection widget using the o10-point menu font, rather than the default 12-point font:

```
*DwtFileSelection*font:
-*-MENU-MEDIUM-R-Normal-*-100-*-*P-*-ISO8859-1
```

5. Using FileView, pre-select the file and then select CDA Viewer from the Applications menu of FileView.

**VMS XUI Toolkit Restrictions**

The known XUI Toolkit restrictions are as follows:

• *Problem:*

The selection, file selection, and help widgets may appear too large on the PC screen.

• *Recommended Workaround:*

The recommended workaround is for applications/components to use a smaller font.

**VMS Version 5.3 and Version 5.4 Applications/Components**

• *Problem:*

When using pop-up and pull-down menus near the edge of the screen, certain applications/components are partially off screen and cannot be properly used.

• *Recommended Workaround:*

Move the parent window more to the center of the screen so the pull-down or pop-up menu does not appear near the edge of the screen.

• *Problem:*

Using the the file filter (file selection widget) causes the file selection box to grow as large as the length of the longest file. This may cause the file selection box to be partially off-screen on startup.

• *Recommended Workaround:*

By-pass use of the file selection's filter box. If startup of the viewer is from a directory with no files that match the default filter, the open box should be small enough to fit on the screen. You can select files by typing in the "Open File" text entry box (avoid using the file filter box). This requires typing in full file names and disallows double clicking in the (empty) list box.

**UWS Applications/Components**

Refer to Table III ULTRIX Worksystem Software Matrix at the end of this document.

Table III lists the applications/components contained in the UWS distribution kit. This table is a quick reference in determining if specific restrictions were discovered during interoperability testing. The restriction(s) column contains brief text regarding noted issues.

**UWS Calendar Restriction**

The known Calendar restriction is as follows:

• *Problem:*

Calendar's Customize Day View and Customize Alarms dialog boxes appear to be too large to fit on the screen when the display is low resolution. Depending on the position of the view from which these dialog boxes were invoked, the push buttons at the bottom of the dialog boxes may be off the screen.

• *Recommended workaround:*

The Return key may be used, in most cases, even though the push buttons are off the screen. One known exception to this workaround is the Entry/Edit...." dialog box

Other Calendar views that appear to be too large to fit can be re-sized using the standard Window Manager mechanism. New sizes of Calendar's views can be saved by using the Customize Save Settings menu item.

### UWS DECterm Restrictions

The known DECterm restrictions are as follows:

- *Problem:*

The DECterm window does not come up on the PC screen sized or centered properly. You must manually center and re-size it.

- *Recommended workaround:*

To make the window fit on the screen, use the condensed font in an 80 column by 24 row window. Select the Window dialog box from the Customize menu, select "Condensed font (132 columns)" and then select OK. To save the change, select "Save Current Settings" in the Customize menu.

You can either move the windows manually after they are created, or create DECterm windows with the DECterm command, using the `-geometry` switch. For example, you can select 0 initial DECterm windows, and edit `~/X11Startup` to create an initial DECterm window at (0,0) with the following command:

```
dxterm -geometry 0x0+0+0 -ls &
```

DECterm will create the window at (0,0); the width and height will not be 0 because DECterm calculates the initial size based on the number of rows and columns. The `-ls` switch means that DECterm will create a login shell.

- *Problem:*

When the `<X]` Backspace toggle button is enabled, pressing the `<X]` key produces no response on the PC system.

- *Recommended workaround:*

PC users should select the `<X]` Delete setting of this toggle button.

- *Problem:*

The "Comma Key Sends ,<" option doesn't work on the PC. Pressing the [,] key generates a comma, but pressing Shift[,], generates the number nine (9).

- *Recommended workaround:*

PC users should select the "Comma Key Sends ,," setting of this toggle button.

- *Problem:*

The "Tilde Key Sends ESC" option under the Customize Keyboard dialog box does not work on the PC server. When this option is enabled, pressing the tilde (~) key generates no response. (It should act as an escape key.)

- *Recommended workaround:*

PC users should select the "Tilde Key Sends ^~" setting of this toggle button.

- *Problem:*

DECterm does not support the function, editing, and keypad keys on non-LK201 keyboards. This is a problem for PC X servers because they do not generate all the key symbols (KEYSYM) the LK201 supports. Some functionality under DECterm is not accessible.

- *Recommended workaround:*

Users with keyboards that do not include some of the LK201 keys will not easily be able to run programs that depend on those keys. However, there are often functional equivalents for the keys.

If a program does require function keys to be used, you can manually enter the escape sequences for the keys. For example, the keypad 7 key is the three character sequence `<ESC>Ow`, where `<ESC>` is an escape, which can be entered as control-3 or control-[. The escape sequences sent for each key are listed in the DECterm Text Programming Manual.

Use the LK250 keyboard on PCs.

### UWS Notepad Restrictions

The known Notepad restrictions are as follows:

- *Problem:*

The initial screen of Notepad is too large for the PC screen.

- *Recommended workaround:*

Invoke Notepad using a geometry string, as follows:

```
dxnotepad -geometry 350x350+4+120 &
```

You can make this change permanent by adding the geometry specification to the `.Xdefaults` resources file. Add the following line to the `.Xdefaults` file located in your home directory.

```
notepad.geometry: 350x350+4+120
```

- *Problem:*

Certain dialog boxes do not fit on the screen. Particularly, the Font... dialog box does not fit.

- *Recommended workaround:*

This feature may not be usable on a PC.

- *Problem:*

Certain keyboard accelerators are not accessible on a PC. For example, the Find key is unavailable.

- *Recommended workaround:*

Use the LK250 Keyboard for PCs.

### UWS CDA Viewer Restrictions

The known CDA Viewer restrictions are as follows:

- *Problem:*

The CDA Viewer's file-selection box may appear too large to fit on a PC display. This is a generic restriction of any application running to a PC display using the DECwindows XUI Toolkit's file-selection widget. It is more apparent in the CDA Viewer because the CDA Viewer's file selection box also contains an extra child.

The problem occurs because the file-selection box's file list box grows as large as the largest file name that matches the filter, including the full directory specification. There is no way for an application to restrict the file selection box's behavior.

*Recommended Workarounds:*

1. By-pass use of the file-selection's filter box. This can be accomplished by starting the viewer from a directory with no files that match the default filter (\*.ddif). The open box will be large enough to fit on the screen.

Then, open all subsequent files strictly typing in the "Open File" text entry box (avoid typing in the file-filter box). The box will always be small enough to fit on the screen. This forces typing in full file names, and disallows double clicking in the (empty) list box.

2. Try to start up and use the viewer from a short directory name with short file names.
3. Using the file-selection box still allows selection of a file and a format, although the "OK" and "Cancel" buttons may not be visible. A file can still be selected by double clicking in the list box, although there would be no way to enter "Cancel".
4. An additional possible workaround is to specify a smaller font for file selection boxes in the user's Xdefaults file. For example, the following line results in the file selection widget using the 10-point menu font, rather than the default 12-point font:

```
*DwtFileSelection*font:
-*-MENU-MEDIUM-R-Normal-*-100-*-P-*-ISO8859-1
```

5. Using the User Executive, pre-select the file and then select CDA Viewer from the Applications menu of User Executive.

**UWS Calculator Restriction**

The known Calculator restriction is as follows:

*Problem:*

The keypad /, \*, + and = keys do not work on the PC keyboard.

*Recommended workaround:*

You can use the main keyboard keys or the mouse to enter these operators.

**UWS XUI Toolkit Restrictions**

The known XUI Toolkit restrictions are as follows:

*Problem:*

When using pop-up and pull-down menus near the edge of the screen, certain applications/components are partially off screen and cannot be properly used.

*Recommended Workaround:*

Move the parent window more to the center of the screen, so the pull-down or pop-up menu does not appear near the edge of the screen.

*Problem:*

Certain server platforms leave a pixel width of window edge when scanning over the command bar options (for example, File, Edit, Create-Send, etc. when using Mail). This causes the window display quality to be distorted.

*Recommended Workaround:*

None

*Problem:*

When attempting to use any applications/components from an ULTRIX/RISC client to a black and white PC, attempts are made to match the colors requested in the .Xdefaults file to either black or white. This causes windows and their associated content to appear as black-on-black. This renders the window unuseable.

*Recommended Workaround:*

Deleting the .Xdefaults file and any that the client finds on the path on the ULTRIX/RISC system will resolve this problem.

**Reporting Interoperability Restrictions**

This section outlines the necessary information that should be reported with each DECwindows restriction. There are two major considerations when reporting a restriction as an interoperability problem:

- Does the application exhibit the restriction in a homogeneous environment?
- What is the configuration of the client/server pair?

These considerations are discussed in the sections that follow.

*Does the Problem Occur in a Homogeneous Environment?*

If possible, the application should be run in its native environment (for example, on a standalone workstation using a "local" connection to the server). This should be done to determine if the restriction is related to the application program, or to the interoperability of DECwindows.

*What is the Configuration of the Client/Server Pair?*

Prior to reporting an interoperability restriction, determine the hardware and software configuration characteristics of the client/server pair. This information will be used by Digital in duplication and isolation of the restriction and will assist in determining the resolution.

*Client Considerations*

An example of information that is of value when reporting a client interoperability restriction is as follows:

- Operating system and version
- Which application is exhibiting the restriction
- Was the system tuned in any way (for example, were system logicals changed)
- Were font files moved or renamed, and so forth
- What is the available memory
- What was the transport (DECnet, TCP/IP, and so forth)

*Server Considerations*

The following configuration information of the server is particularly important:

- Operating System and version
- Available Memory
- Keyboard and mouse information
- Screen (EGA, VGA, Color/mono, and so forth)

**Note:** Include the word "interoperability" as part of the description of the problem encountered.

**Table I  
DECwindows Interoperability Compliance Matrix**

<b>Clients</b>	<b>VMS V5.3</b>	<b>VMS V5.4</b>	<b>UWS V2.2</b>	<b>UWS V4.0</b>	<b>UWS/RISC</b>	<b>UWS V4.0</b>	<b>PC DECwindows V2.0</b>
<b>VMS V5.3</b>	Y	Y	Y	Y	Y	Y	Y
VMS V5.4	Y	Y	Y	Y	Y	Y	N
UWS V2.2	Y	Y	Y	Y	Y	Y	Y
UWS V4.0	Y	Y	Y	Y	Y	Y	N
UWS/RISC V2.2	Y	Y	Y	Y	Y	Y	Y
UWS/RISC V4.0	Y	Y	Y	Y	Y	Y	N

Table I uses the following symbols to indicate interoperability:

- Y - YES - Indicates that interoperability between these components has been validated.
- N - NO - Indicates that interoperability between these components has not been validated.
- C - Conditional - Indicates that interoperability between these components has been validated and is subject to the restrictions described in this document.

**Table II  
VMS Restrictions Matrix**

<b>Application/Component</b>	<b>Version</b>	<b>Server</b>	<b>Restriction(s)</b>
Calendar	V2.0	PC	Requires PC Windows Manager
Clock	V2.0		
Cardfiler	V2.0		
DECterm	V2.0	PC	Requires LK201/LK250 KEYSYMs
Mail	V2.0	PC	Requires user workaround
Notepad FileView	V2.0 V2.0	PC	Requires user workaround
Bookreader	V2.0		
Calculator	V2.0	PC	+,-,*,/
Paint	V2.0		
CDA Viewer	V2.0	PC	File Selection Box
Xlib	V2.0		
X Protocol	V2.0		
XUI Toolkit	V2.0	PC	Pop-up/Pull-down Menus
Session Manager	V2.0	PC/UWS	Not Supported
Window Manager	V2.0		

**Table III  
UWS Restrictions Matrix**

<b>Application/ Component</b>	<b>Version</b>	<b>Server</b>	<b>Restriction(s)</b>
Calendar	V2.0	PC	Dialogue Boxes Off Screen
Clock	V2.2		
Cardfiler	V2.2		
DECterm	V2.2	All	Requires LK201/LK250
Mail	V2.2		
Notepad	V2.2	PC	Requires User workaround
User Executive	V2.2		
CDA Viewer	V2.2	PC	File Selection Box
Calculator	V2.2	PC	+,-,*/
Paint	V2.2		
Xlib	V2.2		
X Protocol	V2.2		
XUI Toolkit	V2.2	PC	Pop-up/Pull-down menus
Session Manager	V2.2		
Window Manager	V2.2		

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