README.WRI for Director 3.1 Player for Windows
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We at Macromedia have made every effort to deliver the highest quality product for your use. However, as with all software, you may encounter some problems. This document contains information about problems you may encounter, and workarounds where possible.

Last-minute features added to Director Player for Windows:
The following features were included at the last minute, but not documented in the manual.
* Projectors now use an initialization file (INI file) with the same name as the projector name rather than DPW.INI as the default. If your projectorized movie is called MYMOVIE.EXE, when it is run it will use the settings found in the MYMOVIE.INI file in your WINDOWS directory rather than DPW.INI. The feature was implemented to allow multiple projectorized movies the ability to use different settings for custom features such as font mapping and scale percentage.
* The Gaffer Report now gives errors for the following conditions: QuickTime movies not playing direct to stage, QuickTime movies directly imported rather than linked, sounds recorded outside 11.025 or 22.5 KHz, use of Draw-type PICTs rather than bitmap PICTs.

Hardware Issues
* Certain high-resolution video cards contain a problem within the display driver that can cause Windows to crash. The crash will be a General Protection Fault error in module GDI.EXE at 0017:0356. Within Director Player for Windows, this crash will most frequently occur when selecting a button when the button has a Matte ink effect applied to it. Contact the video manufacturer to see whether an updated driver for Windows exists that corrects this problem.
* Some audio cards only support sounds recorded at the following frequencies: 11.025, 22.05, 44.1 KHz. Sounds recorded at other frequencies will be adjusted up or down in pitch to fit these frequencies. This may mean your sound will play lower or higher on the PC than on the Macintosh. For best results, record sounds at the frequencies given above.

Windows 3.1 Issues
* You should disable any screen savers prior to running Director 3.1 Player for Windows. If a screen saver becomes active while the cursor is on screen, when returning to the movie the cursor will be invisible. Starting and stopping the movie again restores the cursor.

Director Compatibility Issues
* Anti-aliased bitmaps and text are not supported. You should turn off the "Anti-alias bitmaps and text" option in your movie preferences.
* Both intersect and within can have up to a 12-pixel accuracy error. The accuracy of these commands increases with smaller sprites. Very small sprites (under 16x16) will have no error.
* Director 2.0 QuickDraw objects used as a button do not automatically hilite when selected.
* Even though the default value for the centerStage is true in Director on the Macintosh, converted movies will not be centered on screen unless you explicitly set the centerStage to TRUE. We have placed this command into the LINGO.INI file provided with this build. If you are creating movies with a 640x480 stage, you should also test your movies in 800x600 resolution to ensure that they are centered within the screen.
* If a stage is set to a size smaller than the current screen, an icon showing "Director Player" with the name of the current movie will appear at the bottom of the screen. Clicking on this icon will display another copy of the movie in a window behind the currently playing movie. Use the "hide desktop" option when creating a projector so this icon will not be seen.
* Leading spaces are ignored in text castmembers displayed on stage.
* Scripts that are present in the movie but not used can give Lingo syntax errors if they are not written properly or contain errors. This is because Director 3.1 Player for Windows checks all scripts before playing the movie.

* The ALT key and the F10 key on the PC keyboard do not return key codes. These keys are reserved by Windows and are not trapped by Director 3.1 Player for Windows.
* The following sprites do not move smoothly when given the "moveable sprite" property: QuickDraw sprites, stretched bitmaps, film loops.
* The Lingo function "the memorySize" always returns zero.
* The MCI syntax has changed from the previous version of Windows Player to conform with the Windows 3.1 syntax. Check out the code contained in the sample movie **MCI Test** on the Director Gaffer diskette for proper examples of MCI syntax.
* When converting files between a Macintosh and a PC using a network, you cannot load a movie while the Shared Cast movie is being converted by the Gaffer. The network will return a sharing violation. Wait until the Shared Cast movie has been converted before opening any movies on the PC.

QuickTime for Windows/Microsoft Video for Windows (MOV/AVI) Issues
* Movie controllers are not supported for Microsoft Video for Windows AVI files.
* On some systems, when playing more than one QuickTime for Windows MOV file, the first file's sound volume level and sound sample rate will be used by all subsequent MOV files played regardless of their volume level and sample rate settings. If, for example, you have a MOV file containing sounds sampled at 22.05 KHz, all subsequent MOV files will play their sounds at that same frequency. This is not specific to Director 3.1 Player for Windows but rather to some sound cards.
* When a movie containing a QuickTime for Windows (MOV) file in the first frame is loaded, the MOV will play without the movie running. Playing the movie causes the MOV to be rewound and to play properly. This is not a problem in projectors, or in movies that do not contain the MOV in the first frame.

XObject Development Issues
* XObjects (DLLs) are built using the large memory model and linked using the large model libraries. When installing the Microsoft C software on your computer, it defaults to installing the small and medium memory models only. You must modify your installation procedure to install the large memory models as well or you will have problems with the linker when building DLLs.

Video/Display Driver Support
* Certain display drivers may display "static" while changing palettes or moving the mouse. This is because some display drivers do not wait for the vertical retrace before setting palette colors.
* Some video display drivers fail while Director Player for Windows attempts to perform certain graphics operations which should be supported by the display driver. We have added some code at the startup of the player and all projectors which performs diagnostics on the display card and drivers to assure they can perform all needed functions. If any problem is found, the player or projector will refuse to run. This prevents confusion by giving the error up front instead of letting the user find it in some obscure part of a title much later.
  To investigate this further, perform some experiments with your display card and drivers. The easiest and most reliable test is to modify the Windows setup to use the 16-color 640x480 VGA driver. This driver typically will not have any of the problems that some 256 color drivers have and that many 16-bit (thousands of colors) drivers and 24-bit (millions of colors) drivers seem to share. If the problem goes away in 16-color mode, your display driver is probably at fault. Either contact the display driver manufacturer to obtain updated display drivers which support these functions, or try using a different display card.
* We have encountered several crash errors when running with the WinSpeed display drivers. The crash occurs as a General Protection Fault in the display driver.
  These drivers were marketed by Panacea Inc. of Londonderry, NH. They were developed by Binar Graphics. The WinSpeed drivers are no longer marketed by this company. Version 1.03 was the last version sold.

The WinSpeed drivers can have problems drawing large bitmaps. The crash can be reproduced by importing a large (1024x768) bitmap into Windows Paintbrush. There are no workarounds available and no new version is planned to correct any problems encountered. Panacea recommends that the user obtain the most recent software drivers from the video board manufacturer and use those drivers instead of the Winspeed drivers.

Distributing QuickTime for Windows 1.1 With Your Movies
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You will receive a QuickTime for Windows License Kit containing the Apple License Agreement and license information.

Tips & Tricks
The following tips and tricks may be useful:
*	Use DOS-compatible filenames wherever possible, in file names and folder names, on both the Mac and PC.
*	If you're using linked QuickTime movies, make sure the movie's filename ends with a .MOV extension. You will then be able to play the movies using the QuickTime for Windows PLAYER.EXE file included with Director 3.1 Player for Windows.
*	You don't need to include a LINGO.INI file with your movie if you are not opening any of the DLLs listed in the default LINGO.INI (that is, if you are not performing file I/O or working with QuickTime or Microsoft Video movie files). If you do use these DLLs, make sure they are in the same location as your projectorized movie (and the LINGO.INI properly opens the XObject DLLs you're using).
*	Since Windows does not compress 1-bit graphics as it does 4 and 8-bit graphics, you may find that movies using many 1-bit graphics take little disk space on a Macintosh, but when converted will actually grow in size. Once running under Windows, the 1-bit graphics regain their efficiency in performance. If disk space is an issue (like getting a large movie on a single diskette), converting 8-bit graphics to 1-bit graphics will not reduce the disk space. 4- and 8-bit objects use less disk space than 1-bit objects because they are compressed and 1-bit bitmaps are not.
*	If you have created a movie in 4-bit mode using the VGA color palette, then saved the movie again while in 8-bit mode, it will not display the VGA colors properly. Re-save the movie in 4-bit mode and reconvert it to enable it to play properly.
*	Be careful when using the ampersand character (&) in menus and alert boxes. Windows

uses the ampersand character to underline the character following the ampersand. For example, to have the word "Exit" appear in a menu with the letter "x" underlined, the menu item would be written as "E&xit". To display an ampersand character in a menu or alert box, use two ampersands (&&).

* Crashes can occur when linking to invalid filetypes (such as invalid PICT files or QuickTime for Windows movies containing unsupported data references). If you encounter such crashes, they will typically occur as a General Protection Fault in the modules QTIM.DLL or DPWQTW.DLL. We have provided two applications from Apple, PLAYER.EXE for playing QuickTime movies, and VIEWER.EXE for viewing PICT files. Use the PLAYER.EXE or VIEWER.EXE to view your QuickTime for Windows movie or PICT file. If the file crashes in that application with the same type of error message, you probably have an invalid file that needs to be reconverted.

* If your movie seems to be playing much slower under Windows than it does on the Macintosh, check for stretched bitmaps and RGB inks (such as Not Copy, Blend, Add, Subtract, Add Pin, Subtract Pin, Darkest, or Lightest). Use of stretched bitmaps and RGB inks together can make a castmember animate as much as ten times slower than on the Macintosh.

* Check out the Gaffer Report after converting your movies. It will provide you with useful warnings and information about castmembers that may cause problems under Windows.

* When creating large movies, check the movie option "Load cast when needed" rather than the default "after frame one". This substantially speeds up execution of the movie under Windows, especially when working with a swap file.

 On a machine with enough RAM to hold the unpacked movie, this suggestion should make the movie "load" much, much faster, but play noticeably slower. A movie which has large objects animating on every frame would actually play slower because loading is going on between every frame instead of all at once before drawing the first frame.

 However, on a machine with not much RAM and with a fairly large swap file (roughly equal to or larger than the available RAM), this technique would prevent much disk thrashing which will occur when trying to load the whole movie up front into a machine cramped for RAM. In this situation, it would "pound sand" by reading pieces of the file, just to go and write them out again to the swap file.

 The best solution is to use the "load after frame one" option, but set the Windows swap file size to ZERO. Windows is fairly stupid about managing memory, but Director Player for Windows is smarter because it knows which castmembers to purge. If both Windows and Director Player for Windows are trying to manage low memory at the same time, chaos may reign. It's best to just let Director Player for Windows do it if possible.

* Under some situations, cells of the score may retain incorrect attributes in Director. While these incorrect attributes are ignored in Director, they may cause Director Player for Windows to act as if a transition effect is applied to larger areas of the stage than the expected change area. To correct this, bring up the movie in Director, select all cells in the section of the score just prior to the transition and choose Edit, Normal Size. Then resave the movie and reconvert to MMM format.

Out of Memory Errors
* One error which can be generated by Director Player for Windows and by projectors is worded as follows: "This program is out of memory and can't continue. An attempt to load a castmember or to display a sprite has failed."

 Here are some explanations of this error and some ideas to try to resolve the problem.

 The error has two components, both of which must be looked at. One regards the sprite itself and the other has to do with the sprite's castmember.

 Pertaining to sprites, there are several possible meanings for this error:

 1) Something is wrong with a linked bitmap castmember. Director Player for Windows will issue a special error when a linked bitmap cannot be found. However, if you're getting an out-of-memory error, it means the linked bitmap is present but something is wrong with it. Try the following:

   a) If the castmember is a linked PICT, try opening it using the Apple QuickTime for

Windows Picture Viewer (VIEWER.EXE). If this program cannot open the PICT then it is probably a corrupted file. Because Director Player for Windows uses QuickTime to process PICT files, it cannot read files that cannot be read in QuickTime's Picture Viewer.

b) If the castmember is a linked DIB, try opening it with a Windows program which reads DIBs (such as Windows Paintbrush). Again, verify that the image can be read.

c) The video display driver may not be properly supporting certain Windows functions. See the section "Video/Display Driver Issues" above.

Pertaining to castmembers, the out of memory error should be interpreted as follows:

1) Director Player for Windows was trying to load the castmember for some sprite in this frame. However, the computer has run out of physical and virtual memory. An attempt has already been made to unload castmembers to free up memory, and every purgeable castmember has been freed. The only ones remaining in memory are ones which are presently in use (such as sounds still playing), ones which have been modified (by using "Set the picture of cast" to modify bitmaps, or by modifying text), and ones which are needed to render the current frame. It's pretty difficult to get Director Player for Windows to this point because the cast unloading mechanism is pretty good at making enough memory for all but the most enormous movies, even when there's only a megabyte or two available.

If you are getting this out-of-memory error and are suspicious of it because you're sure there's enough memory, then you should look at the above sprite-related problems. Make sure there are no problems with linked castmembers and solve any driver problems by changing your display card or drivers (i.e. try using the 16-color VGA mode and see if the problems persists). If the movie has been authored correctly, the only reason you should get this error is because there truly is a low memory condition.

Linked PICTs

* Linked PICTs have a few limitations, brought about by limitations of QuickTime for Windows. QuickTime for Windows (and Windows, for that matter) uses a different imaging model than Director. Director is capable of building images offscreen, and can prepare an image to be displayed using a given palette before that palette is actually set to the screen. QuickTime for Windows, however, requires that the palette an image is to be mapped into actually be set to the screen.

This means that when Director Player for Windows displays a linked PICT, it will use whatever palette the screen is set to when compositing the frame containing the PICT. That is the palette of the previous frame, since the current frame's palette is not set until after offscreen compositing is done.

So what does this mean?

1) If you specify cast preloading and you use linked PICTs, the linked PICTs will be loaded before the palette of frame 1 has been set. Typically, this is the system palette (or the palette on the last frame of the previous movie). If your image was not intended to be viewed in this palette, it will look horrible.

2) If you specify "load when needed" as the preload option, you can get the correct image, but only if the screen already has the image's palette set. If you have a movie with a palette change to the palette of the linked PICT AND you start drawing the PICT on the same frame, you will not get the correct image. This is because the PICT is remapped to the previous frame's palette, as explained above.

3) To get correct behavior, use the "load when needed" cast preload option, and set the palette of the image AT LEAST ONE FRAME BEFORE bringing a sprite of the linked PICT into existence. This ensures that the linked PICT gets loaded after the screen is already set with the image's palette.