Magic Lantern (/p/wz-mle/) ^{Beta}

Build Cross-platform Applications

Brought to you by: wizzerworks (/u/wizzerworks/)

SDK_Build_Environment_using_Microsoft_Visual_Studio ✎ Edit (edit) 📅 (history) ✉ (#) 🔊 (feed) 🔍 (../search)

SDK Build Environment using Microsoft Visual Studio

This page discusses how to build the Magic Lantern SDK for Microsoft Win32 platforms using Visual Studio. Instructions for building the Magic Lantern SDK for Microsoft platforms using MSBuild can be found at SDK Build Environment using Microsoft MSBuild (/p/wz-mle/mlewiki/SDK_Build_Environment_using_MSBuild/).

- SDK Build Environment using Microsoft Visual Studio (#sdk-build-environment-using-microsoft-visual-studio)
    - Dependencies (#dependencies)
    - Assumptions (#assumptions)
    - Environment Variables (#environment-variables)
        - MLE_HOME Environment Variable (#mle_home-environment-variable)
        - MLE_ROOT Environment Variable (#mle_root-environment-variable)
        - MLE_WORKPRINTS Environment Variable (#mle_workprints-environment-variable)
        - MLEDEV_CORE Environment Variable (#mledev_core-environment-variable)
        - MLEDEV_DWP Environment Variable (#mledev_dwp-environment-variable)
        - MLEDEV_DPP Environment Variable (#mledev_dpp-environment-variable)
        - TCL_HOME Environment Variable (#tcl_home-environment-variable)
        - COINDIR Environment Variable (#coindir-environment-variable)
        - FREEIMAGEDIR Environment Variable (#freeimagedir-environment-variable)
        - BRENDER_PATH Environment Variable (#brender_path-environment-variable)
        - PATH Environment Variable (#path-environment-variable)

    - Details (#details)
        - Build the Core util Library for Tools (#build-the-core-util-library-for-tools)
        - Build the Core math Libraries (#build-the-core-math-libraries)
        - Build the Digital Workprint Libraries (#build-the-digital-workprint-libraries)
        - Build the Digital Playprint Libraries (#build-the-digital-playprint-libraries)
        - Build the Digital Playprint Runtime Library for Tools (#build-the-digital-playprint-runtime-library-for-tools)
        - Build the Mastering Library and Tools (#build-the-mastering-library-and-tools)
        - Build the Magic Lantern Runtime Engine Libraries (#build-the-magic-lantern-runtime-engine-libraries)
        - Build the Magic Lantern Authoring Toolkit (ATK) (#build-the-magic-lantern-authoring-toolkit-atk)
        - Build the Magic Lantern SDK Properties Distribution (#build-the-magic-lantern-sdk-properties-distribution)
        - Rehearsal Player Dependency Workaround (#rehearsal-player-dependency-workaround)
        - Build the Magic Lantern SDK Roles (#build-the-magic-lantern-sdk-roles)
        - Build the Magic Lantern SDK Sets (#build-the-magic-lantern-sdk-sets)
        - Build the Magic Lantern SDK Behavior Packages (#build-the-magic-lantern-sdk-behavior-packages)
        - Build the Magic Lantern SDK Actors (#build-the-magic-lantern-sdk-actors)
        - Build the Magic Lantern SDK MediaRefs (#build-the-magic-lantern-sdk-mediarefs)
        - Build the Magic Lantern SDK Stages (#build-the-magic-lantern-sdk-stages)
        - Build the Magic Lantern Rehearsal Player (#build-the-magic-lantern-rehearsal-player)

Dependencies

This section identifies dependencies for building the Magic Lantern SDK.

1. Version 5.8.8 of **ActivePerl** from *ActiveState* is installed. This build environment has been tested with binary build 820.
    - Instructions assume that the installation directory is *M:\Perl*.
    - The most recent version can be found at http://www.activestate.com/activeperl/downloads (http://www.activestate.com/activeperl/downloads) .

2. Version 8.6.4.1 of **ActiveTcl** from *ActiveState* is installed. This build environment has been tested with binary build 298624.
    - Instructions assume that the installation directory is *M:\Tcl*.
    - Tcl is required by the mastering process to create a Digital Playprint.
    - The most recent version can be found at http://www.activestate.com/activetcl/downloads (http://www.activestate.com/activetcl/downloads) .

3. **Microsoft Visual Studio 2010** is installed with *Service Pack 1* applied. Note that **Microsoft Visual Studio C++ v6.0** and **Microsoft Visual Studio C++ 2005** are no longer being supported.
4. Version 2.4.4 of **Coin 3D** is built and installed.
    - Instructions assume that the installation directory is *M:\Coin3D*.
    - Coin3D is an implementation of the SGI Inventor framework. It is required by the Magic Lantern Rehearsal Player. Note that the Rehearsal Player will be bound to the GNU General Public License if built with Coin3D. Alternative options are currently being investigated.

- The most recent version can be found at http://www.coin3d.org/lib/downloads (http://www.coin3d.org/lib/downloads) .
- To build the source, use *Coin3D\Coin-2.4.4\build\msvc6\coin2.dsw*.

5. Version 1.3.0 of **SoWin** is built and installed.
   - Instructions assume that the installation directory is *M:\Coin3D*.
   - The most recent version can be found at http://www.coin3d.org/lib/downloads (http://www.coin3d.org/lib/downloads) .
   - To build the source , use *Coin3D\SoWin-1.3.0\build\msvc6\sowin1.dsw*.

6. Version 3.1.5.0 of **FreeImage**
   - Instructions assume that the installation directory is *M:\FreeImage*.
   - The most recent version can be found at http://freeimage.sourceforge.net/download.html (http://freeimage.sourceforge.net/download.html) .

Assumptions

These instructions assume the following

- The dependencies above are installed under a Windows drive labeled *"M"* (e.g. M:). You can use the Microsoft Command, **subst**, to point "M:" to a file directory that will be the root of the Magic Lantern build environment. For example, *"subst M: F:/"* will cause M: to reference the F drive. Or, *"subst M: C:\Users\msm"* will cause M: to reference the "Users\msm" directory on the C drive.
- The Magic Lantern software has been downloaded into the *"M:\projects\MagicLantern"* directory and the **MLE_HOME** environment variable is set to *"M:\projects\MagicLantern"*.
- You already know how to use Microsoft Visual Studio 2010 (Microsoft Visual Studio C++ v6.0 and 2005 are not longer supported).

Environment Variables

MLE_HOME Environment Variable

Set the variable **MLE_HOME** to reference the home of the Magic Lantern source. This document assumes that it is set to *"M:\projects\MagicLantern"*.

MLE_ROOT Environment Variable

Set the variable **MLE_ROOT** to reference the root directory where the Magic Lantern components will be installed. This document assumes that it is set to *"M:/projects/MagicLantern"*.

Note that this variable uses the UNIX-style path delimiter ('/').

MLE_WORKPRINTS Environment Variable

Set the variable **MLE_WORKPRINTS** to the root directory where Magic Lantern Digital Workprints can be located. This document assumes that it is set to *//M/projects/MagicLantern*.

The Magic Lantern Studio assumes that the Digital Workprints will be located under the *$MLE_WORKPRINTS/workprints* directory.

Note that this variable uses a canonical path style for the drive (i.e. //M/).

MLEDEV_CORE Environment Variable

Set the **MLEDEV_CORE** variable to the development directory where the Core library source is. This value will most likely be *$MLE_HOME\Core*.

MLEDEV_DWP Environment Variable

Set the **MLEDEV_DWP** variable to the development directory where the Digital Workprint library source is. This value will most likely be *$MLE_HOME\DigitalWorkprint*.

MLEDEV_DPP Environment Variable

Set the **MLEDEV_DPP** variable to the development directory where the Digital Playprint library source is. This value will most likely be *$MLE_HOME\DigitalPlayprint*.

TCL_HOME Environment Variable

Set the **TCL_HOME** variable to the installation directory for *ActiveTcl*. For these instructions, use *M:\Tcl*.

COINDIR Environment Variable

Set the **COINDIR** variable to the installation directory for *Coin3D*. For these instructions, use *M:\Coin3D*.

FREEIMAGEDIR Environment Variable

Set the **FREEIMAGEDIR** variable to the installation directory for *FreeImage*. For these instructions, use *M:\FreeImage\Dist*.

BRENDER_PATH Environment Variable

Set the **BRENDER_PATH** variable to the installation directory for *BRender*. For these instructions, use *M:\BRENDER\V1_2_1\DAT*.

PATH Environment Variable

Make sure the following paths are part of the **PATH** environment variable.

- *M:\projects\MagicLantern\bin*
- *M:\projects\MagicLantern\bin\rehearsal*
- *M:\Coin3d\bin*
- *M:\Perl\bin*
- *M:\Tcl\bin*

Details

To build the Magic Lantern components using Microsoft Visual Studio 2005, use the following instructions. Note that the Microsoft Visual Studio C++ v6.0 instructions may no longer work, but are provided here for historical perspective.

Note that the build artifacts for the 32-bit platform are installed in the "bin" and "lib" directories under $MLE_HOME. 64-bit builds are staged in the "bin64" and "lib64" directories under $MLE_HOME. The tables below only specify the 32-bit build results.

Build the Core *util* Library for Tools

These instructions build the Core util libraries for the Magic Lantern Studio tools.

- Visual Studio 2010 Solution : *"$MLE_HOME\Core\util\win32\build\msvc10\mleutil.sln"*
- Visual Studio 2005 Solution : *"$MLE_HOME\Core\util\win32\build\msvc8\mleutil.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Core\util\win32\build\msvc6\MleUtil.dsw"* (**Obsolete**)

The library components that are built include

Library	Directory Location	Component
util.lib	*"$MLE_HOME\lib\tools"*	Magic Lantern Studio (Release)
utild.lib	*"$MLE_HOME\lib\tools"*	Magic Lantern Studio (Debug)

Build the Core *math* Libraries

These instructions build the Core math libraries for the Magic Lantern Studio tools, the Magic Lantern SDK for the BRender target, and the Magic Lantern Rehearsal Player.

- Visual Studio 2010 Solution: *"$MLE_HOME\Core\math\win32\build\msvc10\mlmath.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\Core\math\win32\build\msvc8\mlmath.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Core\math\win32\build\msvc6\mlmath.dsw"* (**Obsolete**)

The library components that are built for the Magic Lantern SDK (BRender Target Platform) include

Library	Directory Location	Component
mlmath.lib	*"$MLE_HOME\lib\runtime\stdcall"*	Magic Lantern SDK (Floating-point Release)
mlmathd.lib	*"$MLE_HOME\lib\runtime\stdcall"*	Magic Lantern SDK (Floating-point Debug)
mlfmath.lib	*"$MLE_HOME\lib\runtime\stdcall"*	Magic Lantern SDK (Fixed-point Release)
mlfmathd.lib	*"$MLE_HOME\lib\runtime\stdcall"*	Magic Lantern SDK (Fixed-point Debug)

The library components that are built for the Magic Lantern Studio include

Library	Directory Location	Component
mlmath.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern Studio (Floating-point Release)
mlmath.lib	*"$MLE_HOME\lib\tools"*	Magic Lantern Studio (Floating-point Release)
mlmathd.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern Studio (Floating-point Debug)
mlmathd.lib	*"$MLE_HOME\lib\tools"*	Magic Lantern Studio (Floating-point Debug)

The library components that are built for the Magic Lantern Rehearsal Player include

Library	Directory Location	Component
mlmath.dll	*"$MLE_HOME\bin\rehearsal"*	Magic Lantern Studio (Floating-point Release DLL)
mlmath.lib	*"$MLE_HOME\lib\rehearsal"*	Magic Lantern Studio (Floating-point Release DLL Symbols)

Library	Directory Location	Component
mlmathd.dll	*"$MLE_HOME\bin\rehearsal"*	Magic Lantern Studio (Floating-point Debug DLL)
mlmathd.lib	*"$MLE_HOME\lib\rehearsal"*	Magic Lantern Studio (Floating-point Debug DLL Symbols)

Build the Digital Workprint Libraries

These instructions build the Digital Workprint libraries for the Magic Lantern Studio tools and Rehearsal Player.

- Visual Studio 2010 Solution: *"$MLE_HOME\DigitalWorkprint\lib\win32\build\msvc10\DWPAccess.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\DigitalWorkprint\lib\win32\build\msvc8\DWPAccess.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\DigitalWorkprint\lib\win32\build\msvc6\DWPAccess.dsw"* (**Obsolete**)

The library components that are built (using **DWP** project) for the Magic Lantern Studio include

Library	Directory Location	Component
DWPBase.lib	*"$MLE_HOME\lib\tools"*	DWP Base library, Magic Lantern Studio (Release)
DWPBased.lib	*"$MLE_HOME\lib\tools"*	DWP Base library, Magic Lantern Studio (Debug)
DWPType.lib	*"$MLE_HOME\lib\tools"*	DWP Type library, Magic Lantern Studio (Release)
DWPTyped.lib	*"$MLE_HOME\lib\tools"*	DWP Type library, Magic Lantern Studio (Debug)
DWPModel.lib	*"$MLE_HOME\lib\tools"*	DWP Model library, Magic Lantern Studio (Release)
DWPModeld.lib	*"$MLE_HOME\lib\tools"*	DWP Model library, Magic Lantern Studio (Debug)
DWP.lib	*"$MLE_HOME\lib\tools"*	DWP SDK library, Magic Lantern Studio (Release) In VC6 build, this library contains the DWPBase.lib, DWPType.lib, DWPModel.lib Release libraries
DWPd.lib	*"$MLE_HOME\lib\tools"*	DWP SDK library, Magic Lantern Studio (Debug) In VC6 build, this library contains the DWPBased.lib, DWPTyped.lib, DWPModeld.lib Debug libraries

The library components that are built (using **DwpDso** project) for the Magic Lantern Rehearsal Player include

Library	Directory Location	Component
DWP.dll	*"$MLE_HOME\bin\rehearsal"*	DWP SDK library, Magic Lantern Studio (Release DLL)
DWP.lib	*"$MLE_HOME\lib\rehearsal"*	DWP SDK library, Magic Lantern Studio (Release DLL Symbols)
DWPd.dll	*"$MLE_HOME\bin\rehearsal*	DWP SDK library, Magic Lantern Studio (Debug DLL)
DWPd.lib	*"$MLE_HOME\lib\rehearsal"*	DWP SDK library, Magic Lantern Studio (Debug DLL Symbols)

The executable components that are built (using **DwpChecker** project) for the Magic Lantern SDK include

Executable	Directory Location	Component
DWPChecker.exe	*"$MLE_HOME\bin"*	DWP Validation tool, Magic Lantern Studio (Release)

Build the Digital Playprint Libraries

These instructions build the Digital Playprint libraries for the Magic Lantern Studio tools.

- Visual Studio 2010 Solution: *"$MLE_HOME\DigitalPlayprint\lib\win32\build\msvc10\DPPAccess.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\DigitalPlayprint\lib\win32\build\msvc8\DPPAccess.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\DigitalPlayprint\lib\win32\build\msvc6\DPPAccess.dsw"* (**Obsolete**)

The library components that are built (using **DPP** project) for the Magic Lantern Studio include

Library	Directory Location	Component
DPPBase.lib	*"$MLE_HOME\lib\tools"*	DPP Base library, Magic Lantern Studio (Release)
DPPBased.lib	*"$MLE_HOME\lib\tools"*	DPP Base library, Magic Lantern Studio (Debug)
DPPType.lib	*"$MLE_HOME\lib\tools"*	DPP Type library, Magic Lantern Studio (Release)
DPPTyped.lib	*"$MLE_HOME\lib\tools"*	DPP Type library, Magic Lantern Studio (Debug)
DPPModel.lib	*"$MLE_HOME\lib\tools"*	DPP Model library, Magic Lantern Studio (Release)
DPPModeld.lib	*"$MLE_HOME\lib\tools"*	DPP Model library, Magic Lantern Studio (Debug)
DPP.lib	*"$MLE_HOME\lib\tools"*	DPP SDK library, Magic Lantern Studio (Release) In VC6 build, this library contains the DPPBase.lib, DPPType.lib, DPPModel.lib Release libraries

Library	Directory Location	Component
DPPd.lib	*"$MLE_HOME\lib\tools"*	DPP SDK library, Magic Lantern Studio (Debug) In VC6 build, this library contains the DPPBased.lib, DPPTyped.lib, DPPModeld.lib Debug libraries

Build the Digital Playprint Runtime Library for Tools

These instructions explain how to build the Digital Playprint runtime component employed by the Magic Lantern Studio mastering tools.

- Visual Studio 2010 Solution: *"$MLE_HOME\DigitalPlayprint\runtime\win32\build\msv10\DPPRuntime.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\DigitalPlayprint\runtime\win32\build\msv8\DPPRuntime.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\DigitalPlayprint\runtime\win32\build\msv6\DPPRuntime.dsw"* (**Obsolete**)

The library components that are built (using **playprint** and **runtime** projects) include

Library	Directory Location	Component
playprint.lib	*"$MLE_HOME\lib\tools"*	Magic Lantern Studio (Release)
playprint.lib	*"$MLE_HOME\lib\runtime\stdcall"*	Magic Lantern SDK (BRender Release)
playprint.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern SDK (Other Release)
playprintd.lib	*"$MLE_HOME\lib\tools"*	Magic Lantern Studio (Debug)
playprintd.lib	*"$MLE_HOME\lib\runtime\stdcall"*	Magic Lantern SDK (BRender Debug)
playprintd.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern SDK (Other Debug)

Build the Mastering Library and Tools

These instructions explain how to build the Digital Playprint library employed by the Magic Lantern Studio mastering tools. It also explains how to build the mastering tools.

- Visual Studio 2010 Solution: *$MLE_HOME\DigitalPlayprint\master\win32\build\msvc10\DPPMaster.sln*
- Visual Studio 2005 Solution: *$MLE_HOME\DigitalPlayprint\master\win32\build\msvc8\DPPMaster.sln* (**Obsolete**)
- Visual Studio v6.0 Workspace: *$MLE_HOME\DigitalPlayprint\master\win32\build\msvc6\DPPMaster.dsw* (**Obsolete**)

The library components that are built include

Library	Directory Location	Component
DPPGen.lib	*"$MLE_HOME\lib\tools"*	Magic Lantern Studio Mastering Library (Release)
DPPGend.lib	*"$MLE_HOME\lib\tools"*	Magic Lantern Studio Mastering Library (Debug)

The executable tools that are built include

Exectuable	Directory Location	Component
gentables.exe	*"$MLE_HOME\bin"*	Generates the tables (source code) for the title (Release)
gengroup.exe	*"$MLE_HOME\bin"*	Generates the Group chunks for the DPP (Release)
genscene.exe	*"$MLE_HOME\bin"*	Generates the Scene chunks for the DPP (Release)
genmedia.exe	*"$MLE_HOME\bin"*	Generates the MediaRef chunks for the DPP (Release)
gendppscript.exe	*"$MLE_HOME\bin"*	Generates a TCL script for laying out the DPP (Release)
gendpp.exe	*"$MLE_HOME\bin"*	Generates a DPP using the TCL script (Release)
genmakefile.exe	*"$MLE_HOME\bin"*	Generates a Makefile for the title (Release)
dumpgroup.exe	*"$MLE_HOME\bin"*	Dump the contents of a Group chunk (Release)
dumpmedia.exe	*"$MLE_HOME\bin"*	Dump the contents of a MediaRef chunk (Release)
dumpscene.exe	*"$MLE_HOME\bin"*	Dump the contenst of a Scene chunk (Release)
dumpdpp.exe	*"$MLE_HOME\bin"*	Dump the contents of a Digital Playprint (Release)

Build the Magic Lantern Runtime Engine Libraries

These instructions build the Magic Lantern SDK Runtime Engine libraries for the Win32 platform.

- Visual Studio 2010 Solution: *"$MLE_HOME\Core\mlert\win32\build\msvc10\MleRT.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\Core\mlert\win32\build\msvc8\MleRT.sln"* (**Obsolete**)

- Visual Studio v6.0 Workspace: *"$MLE_HOME\Core\mlert\win32\build\msvc6\MleRT.dsw"* (**Obsolete**)

The library components that are built include

Library	Directory Location	Component
mlert.lib	*"$MLE_HOME\lib\runtime\stdcall"*	Magic Lantern Runtime Engine (Release)
mlert.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern Runtime Engine (Release)
mlertd.lib	*"$MLE_HOME\lib\runtime\stdcall"*	Magic Lantern Runtime Engine (Debug)
mlertd.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern Runtime Engine (Debug)

The library components that are built for the Rehearsal Player include

Library	Directory Location	Component
mlert.dll	*"$MLE_HOME\bin\rehearsal"*	Magic Lantern Runtime Engine (Release DLL)
mlert.lib	*"$MLE_HOME\lib\rehearsal"*	Magic Lantern Runtime Engine (Release DLL Symbols)
mlertd.dll	*"$MLE_HOME\bin\rehearsal"*	Magic Lantern Runtime Engine (Debug DLL)
mlertd.lib	*"$MLE_HOME\lib\rehearsal"*	Magic Lantern Runtime Engine (Debug DLL Symbols)

Build the Magic Lantern Authoring Toolkit (ATK)

These instructions build the Magic Lantern Studio Authoring Toolkit for the Inventor platform.

- Visual Studio 2010 Solution: *"$MLE_HOME\ATK\win32\build\msvc10\ATK.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\ATK\win32\build\msvc8\ATK.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\ATK\win32\build\msvc6\ATK.dsw"* (**Obsolete**)

The library components that are built include

Library	Directory Location	Component
mleatk.lib	*"$MLE_HOME\lib\rehearsal"*	Magic Lantern Studio ATK (Release)
mleatkd.lib	*"$MLE_HOME\lib\rehearsal"*	Magic Lantern Studio ATK (Debug)

Build the Magic Lantern SDK Properties Distribution

These instructions discuss how to build the Properties and Digital Workprints for Magic Lantern SDK.

1. Open a shell that is compatible with the Wizzer Works development environment (e.g. Cygwin bash).
2. cd *$MLE_HOME\Parts\props\win32*
3. make install

OR

1. cd *$MLE_HOME\build\win32*
2. msbuild build.msvc10.proj /t:BuildProperties32

This distributes the props header files to *"$MLE_HOME\include\mle"* and the props workprint files to *"$MLE_HOME\include\workprints"*.

Rehearsal Player Dependency Workaround

NOTE: There are some dependency issues with building the Roles, Sets and Stages for the Rehearsal Player platform. This affects steps X, XI and XIV below. Essentially, there is a circular dependency chain:

- Mle2dRole[d].dll "depends on" Mle2dSet[d].lib
- Mle2dSet[d].dll "depends on" MleIvStage[d].lib and Mle2dRole[d].lib
- Mle3dSet[d].dll "depends on" MleIvStage[d].lib
- MleIvStage[d].dll "depends on" Mle2dRole[d].lib and Mle2dSet[d].lib and Mle3dSet[d].lib

To break this dependency chain, we need to generate the .lib files independently of when the .dll files are built.

Manual Steps

1. Build the MleIvStage object files first. This will generate the .obj files but fail to create the MleIvStage[d].dll and MleIvStage[d].lib files. See section Build the Magic Lantern SDK Stages (#BuildTheMagicLanternSDKStages) below for the Microsoft workspace location.
2. In a shell window, *cd "$MLE_HOME\Parts\stages\rehearsal\build\msvc10\Win32\Debug*.

3. Run **"lib.exe /out:MleIvStaged.lib /def *.obj"**. This will generate the MleIvStaged.lib file. Copy the library to *$MLE_HOME\lib\rehearsal*.
4. cd *"$MLE_HOME\Parts\stages\rehearsal\build\msvc10\Win32\Release*.
5. Run **"lib.exe /out:MleIvStage.lib /def *.obj"**. This will generate the MleIvStage.lib file. Copy the library to *$MLE_HOME\lib\rehearsal*.
6. Build the Mle2dRole object files. This will generate the .obj files but fail to create the Mle2dRole[d].dll and Mle2dRole[d].lib files. See section Build the Magic Lantern SDK Roles (#BuildTheMagicLanternSDKRoles) below for the Microsoft workspace location.
7. In a shell window, cd *"$MLE_HOME\Parts\roles\win32\build\msvc10\Win32\Mle2dRoleDebug"*.
8. Run **"lib.exe /out:Mle2dRoled.lib /def *.obj"**. This will generate the Mle2dRoled.lib file. Copy the library to *$MLE_HOME\lib\rehearsal*.
9. cd *"$MLE_HOME\Parts\roles\win32\build\msvc10\Win32\Mle2dRoleRelease*.
10. Run **"lib.exe /out:Mle2dRole.lib /def *.obj"**. This will generate the Mle2dRole.lib file. Copy the library to *$MLE_HOME\lib\rehearsal*.
11. Build the Sets. See section Build the Magic Lantern SDK Sets (#BuildTheMagicLanternSDKSets) below for the Microsoft workspace location.

OR

Using MSBuild

1. cd *$MLE_HOME\build\win32*
2. msbuild build.msvc10.proj /t:_processStage
3. msbuild build.msvc10.proj /t:_processRoles
4. msbuild build.msvc10.proj /t:BuildRehearsalSets32

Build the Magic Lantern SDK Roles

These instructions build the Magic Lantern Roles for the Inventor (Rehearsal) and BRender platforms.

- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\roles\brender\build\msvc10\brender.sln"*
- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\roles\inventor\build\msvc10\inventor.sln"*
- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\roles\win32\build\msvc10\MleRoles.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\roles\brender\build\msvc8\brender.sln"* (**Obsolete**)
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\roles\inventor\build\msvc8\inventor.sln"* (**Obsolete**)
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\roles\win32\build\msvc8\MleRoles.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\roles\brender\build\msvc6\brender.dsw"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\roles\inventor\build\msvc6\inventor.dsw"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\roles\win32\build\msvc6\MleRoles.dsw"* (**Obsolete**)

The library components that are built for the BRender platform include

Library	Directory Location	Component
brroles.lib	*"$MLE_HOME\lib\brender"*	Magic Lantern Studio SDK (BRender Release)
brrolesd.lib	*"$MLE_HOME\lib\brender"*	Magic Lantern Studio SDK (BRender Debug)

The roles that are built for the Magic Lantern Rehearsal Player include

Library	Directory Location	Component
ivroles.lib	*"$MLE_HOME\lib\rehearsal"*	Magic Lantern Studio SDK(Inventor Release)
ivrolesd.lib	*"$MLE_HOME\lib\rehearsal"*	Magic Lantern Studio SDK (Inventor Debug)
Mle2dRole.dll	*"$MLE_HOME\bin\rehearsal"*	Role for 2-dimensional rendering (Release DLL)
Mle2dRole.lib	*"$MLE_HOME\lib\rehearsal"*	Role for 2-dimensional rendering (Release DLL Symbols)
Mle2dRoled.dll	*"$MLE_HOME\bin\rehearsal"*	Role for 2-dimensional rendering (Debug DLL)
Mle2dRoled.lib	*"$MLE_HOME\lib\rehearsal"*	Role for 2-dimensional rendering (Debug DLL Symbols)
Mle2dImageRole.dll	*"$MLE_HOME\bin\rehearsal"*	Role for 2-dimensional image (Release DLL)
Mle2dImageRole.lib	*"$MLE_HOME\lib\rehearsal"*	Role for 2-dimensional image (Release DLL Symbols)
Mle2dImageRoled.dll	*"$MLE_HOME\bin\rehearsal"*	Role for 2-dimensional image(Debug DLL)
Mle2dImageRoled.lib	*"$MLE_HOME\lib\rehearsal"*	Role for 2-dimensional image(Debug DLL Symbols)
Mle3dRole.dll	*"$MLE_HOME\bin\rehearsal"*	Role for 3-dimensional rendering (Release DLL)
Mle3dRole.lib	*"$MLE_HOME\lib\rehearsal"*	Role for 3-dimensional rendering (Release DLL Symbols)
Mle3dRoled.dll	*"$MLE_HOME\bin\rehearsal"*	Role for 3-dimensional rendering (Debug DLL)
Mle3dRoled.lib	*"$MLE_HOME\lib\rehearsal"*	Role for 3-dimensional rendering (Debug DLL Symbols)

Build the Magic Lantern SDK Sets

These instructions build the Magic Lantern Sets for the Inventor (Rehearsal) and BRender platforms.

- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\sets\brender\build\msvc10\MleSets.sln"*
- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\sets\win32\build\msvc10\MleSets.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\sets\brender\build\msvc8\MleSets.sln"* (**Obsolete**)
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\sets\win32\build\msvc8\MleSets.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\sets\brender\build\msvc6\MleSets.dsw"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\sets\win32\build\msvc6\MleSets.dsw"* (**Obsolete**)

The library components that are built for the BRender platform include

Library	Directory Location	Component
brsets.lib	*"$MLE_HOME\lib\brender"*	Magic Lantern Studio SDK (BRender Release)
brsetsd.lib	*"$MLE_HOME\lib\brender"*	Magic Lantern Studio SDK (BRender Debug)

The sets that are built for the Magic Lantern Rehearsal Player include

Library	Directory Location	Component
Mle2dSet.dll	*"$MLE_HOME\bin\rehearsal"*	Set for 2-dimensional rendering (Release Dll)
Mle2dSet.lib	*"$MLE_HOME\lib\rehearsal"*	Set for 2-dimensional rendering (Release DLL Symbols)
Mle2dSetd.dll	*"$MLE_HOME\bin\rehearsal"*	Set for 2-dimensional rendering (Debug DLL)
Mle2dSetd.lib	*"$MLE_HOME\lib\rehearsal"*	Set for 2-dimensional rendering (Debug DLL Symbols)
Mle3dSet.dll	*"$MLE_HOME\bin\rehearsal"*	Set for 3-dimensional rendering (Release DLL)
Mle3dSet.lib	*"$MLE_HOME\lib\rehearsal"*	Set for 3-dimensional rendering (Release DLL Symbols)
Mle3dSetd.dll	*"$MLE_HOME\bin\rehearsal"*	Set for 3-dimensional rendering (Debug DLL)
Mle3dSetd.lib	*"$MLE_HOME\lib\rehearsal"*	Set for 3-dimensional rendering (Debug DLL Symbols)

Build the Magic Lantern SDK Behavior Packages

These instructions build the Magic Lantern Behavior Packages for the BRender platform.

- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\packages\win32\build\msvc10\MlePackages.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\packages\win32\build\msvc8\MlePackages.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\packages\win32\build\msvc6\MlePackages.dsw"* (**Obsolete**)

The library components that are built include

Library	Directory Location	Component
pkgs.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern Studio SDK (Floating-point Release)
pkgsd.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern Studio SDK (Floating-point Debug)
fpkgs.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern Studio SDK(Fixed-point Release)
fpkgsd.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern Studio SDK (Fixed-point Debug)

Build the Magic Lantern SDK Actors

These instructions build the Magic Lantern Actors for the Inventor and BRender platforms.

- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\actors\brender\build\msvc10\MleActors.sln"*
- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\actors\rehearsal\build\msvc10\MleActors.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\actors\brender\build\msvc8\MleActors.sln"* (**Obsolete**)
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\actors\rehearsal\build\msvc8\MleActors.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\actors\brender\build\msvc6\MleActors.dsw"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\actors\rehearsal\build\msvc6\MleActors.dsw"* (**Obsolete**)

The library components that are built include

Library	Directory Location	Component
actors.lib	*"$MLE_HOME\lib\runtime\stdcall"*	Magic Lantern Studio SDK (Release)
actors.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern Studio SDK (Release)
actorsd.lib	*"$MLE_HOME\lib\runtime\stdcall"*	Magic Lantern Studio SDK (Debug)
actorsd.lib	*"$MLE_HOME\lib\runtime\cdecl"*	Magic Lantern Studio SDK (Debug)

The actors that are built for the Magic Lantern Rehearsal Player include

Library	Directory Location	Component
MleEscapeActor.dll	*"$MLE_HOME\bin\rehearsal"*	Escape Key Actor (Release DLL)
MleEscapeActor.lib	*"$MLE_HOME\lib\rehearsal"*	Escape Key Actor (Release DLL Symbols)
MleEscapeActord.dll	*"$MLE_HOME\bin\rehearsal"*	Escape Key Actor (Debug DLL)
MleEscapeActord.lib	*"$MLE_HOME\lib\rehearsal"*	Escape Key Actor (Debug DLL Symbols)
Mle3dCameraActor.dll	*"$MLE_HOME\bin\rehearsal"*	3D Camera Actor (Release DLL)
Mle3dCameraActor.lib	*"$MLE_HOME\lib\rehearsal"*	3D Camera Actor (Release DLL Symbols)
Mle3dCameraActord.dll	*"$MLE_HOME\bin\rehearsal"*	3D Camera Actor (Debug DLL)
Mle3dCameraActord.lib	*"$MLE_HOME\lib\rehearsal"*	3D Camera Actor (Debug DLL Symbols)
Mle2dImageActor.dll	*"$MLE_HOME\bin\rehearsal"*	Image Actor (Release DLL)
Mle2dImageActor.lib	*"$MLE_HOME\lib\rehearsal"*	Image Actor (Release DLL Symbols)
Mle2dImageActord.dll	*"$MLE_HOME\bin\rehearsal"*	Image Actor (Debug DLL)
Mle2dImageActord.lib	*"$MLE_HOME\lib\rehearsal"*	Image Actor (Debug DLL Symbols)

Build the Magic Lantern SDK MediaRefs

These instructions build the Magic Lantern Media References for the Inventor (Rehearsal) and BRender platforms.

- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\mediaref\brender\build\msvc10\MleMediaRefs.sln"*
- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\mediaref\rehearsal\build\msvc10\MleMediaRefs.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\mediaref\brender\build\msvc8\MleMediaRefs.sln"* (**Obsolete**)
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\mediaref\rehearsal\build\msvc8\MleMediaRefs.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\mediaref\brender\build\msvc6\MleMediaRefs.dsw"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\mediaref\rehearsal\build\msvc6\MleMediaRefs.dsw"* (**Obsolete**)

The library components that are built for the BRender platform include

Library	Directory Location	Component
brmrefs.lib	*"$MLE_HOME\lib\brender"*	Magic Lantern Studio SDK (BRender Release)
brmrefsd.lib	*"$MLE_HOME\lib\brender"*	Magic Lantern Studio SDK (BRender Debug)

The media references that are built for the Magic Lantern Rehearsal Player include

Library	Directory Location	Component
Mle2dImageMediaRef.dll	*"$MLE_HOME\bin\rehearsal"*	2D Image MediaRef (Release DLL)
Mle2dImageMediaRef.lib	*"$MLE_HOME\lib\rehearsal"*	2D Image MediaRef (Release DLL Symbols)
Mle2dImageMediaRefd.dll	*"$MLE_HOME\bin\rehearsal"*	2D Image MediaRef (Debug DLL)
Mle2dImageMediaRefd.lib	*"$MLE_HOME\lib\rehearsal"*	2D Image MediaRef (Debug DLL Symbols)
Mle3dColorMapMediaRef.dll	*"$MLE_HOME\bin\rehearsal"*	3D Color Map MediaRef (Release DLL)
Mle3dColorMapMediaRef.lib	*"$MLE_HOME\lib\rehearsal"*	3D Color Map MediaRef (Release DLL Symbols)
Mle3dColorMapMediaRefd.dll	*"$MLE_HOME\bin\rehearsal"*	3D Color Map MediaRef (Debug DLL)
Mle3dColorMapMediaRefd.lib	*"$MLE_HOME\lib\rehearsal"*	3D Color Map MediaRef (Debug DLL Symbols)
Mle3dModelMediaRef.dll	*"$MLE_HOME\bin\rehearsal"*	3D Model MediaRef (Release DLL)
Mle3dModelMediaRef.lib	*"$MLE_HOME\lib\rehearsal"*	3D Model MediaRef (Release DLL Symbols)
Mle3dModelMediaRefd.dll	*"$MLE_HOME\bin\rehearsal"*	3D Model MediaRef (Debug DLL)
Mle3dModelMediaRefd.lib	*"$MLE_HOME\lib\rehearsal"*	3D Model MediaRef (Debug DLL Symbols)
Mle3dTextureMapMediaRef.dll	*"$MLE_HOME\bin\rehearsal"*	3D Texture Map MediaRef (Release DLL)
Mle3dTextureMapMediaRef.lib	*"$MLE_HOME\lib\rehearsal"*	3D Texture Map MediaRef (Release DLL Symbols)
Mle3dTextureMapMediaRefd.dll	*"$MLE_HOME\bin\rehearsal"*	3D Texture Map MediaRef (Debug DLL)
Mle3dTextureMapMediaRefd.lib	*"$MLE_HOME\lib\rehearsal"*	3D Texture Map MediaRef (Debug DLL Symbols)

Build the Magic Lantern SDK Stages

These instructions build the Magic Lantern Stages for the Inventor and BRender platforms.

- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\stages\brender\build\msvc10\MleStages.sln"*
- Visual Studio 2010 Solution: *"$MLE_HOME\Parts\stages\rehearsal\build\msvc10\MleStages.sln"*
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\stages\brender\build\msvc8\MleStages.sln"* (**Obsolete**)
- Visual Studio 2005 Solution: *"$MLE_HOME\Parts\stages\rehearsal\build\msvc8\MleStages.sln"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\stages\brender\build\msvc6\MleStages.dsw"* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Parts\stages\rehearsal\build\msvc6\MleStages.dsw"* (**Obsoslete**)

The library components that are built for the BRender platform include

Library	Directory Location	Component
pcstage.lib	*"$MLE_HOME\lib\brender"*	A common stage library for the Win32 platform (BRender Release)
pcstaged.lib	*"$MLE_HOME\lib\brender"*	A common stage library for the Win32 platform (BRender Debug)
brstage.lib	*"$MLE_HOME\lib\brender"*	Magic Lantern Studio SDK (BRender Release)
brstaged.lib	*"$MLE_HOME\lib\brender"*	Magic Lantern Studio SDK (Brender Debug)

The stages that are built for the Magic Lantern Rehearsal Player include

Library	Directory Location	Component
MleIvStage.dll	*"$MLE_HOME\bin\rehearsal"*	Inventor Stage (Release DLL)
MleIvStage.lib	*"$MLE_HOME\lib\rehearsal"*	Inventor Stage (Release DLL Symbols)
MleIvStaged.dll	*"$MLE_HOME\bin\rehearsal"*	Inventor Stage (Debug DLL)
MleIvStaged.lib	*"$MLE_HOME\lib\rehearsal"*	Inventor Stage (Debug DLL Symbols)

Build the Magic Lantern Rehearsal Player

These instructions are used to build the Magic Lantern Rehearsal Player.

- Visual Studio 2010 Solution: *"$MLE_HOME\Players\rehearsal\build\msvc10\MlePlayers.sln*
- Visual Studio 2005 Solution: *"$MLE_HOME\Players\rehearsal\build\msvc8\MlePlayers.sln* (**Obsolete**)
- Visual Studio v6.0 Workspace: *"$MLE_HOME\Players\rehearsal\build\msvc6\MlePlayers.dsw* (**Obsolete**)

The executable components that are built for the Magic Lantern SDK include

Executable	Directory Location	Component
player.exe	*"$MLE_HOME\bin\rehearsal"*	Magic Lantern Rehearsal Player (Release)

Note: Make sure that *$MLE_HOME\bin\rehearsal* is in your environment **PATH**.

Related

Developer Wiki: Developer_Documentation (/p/wz-mle/mlewiki/Developer_Documentation/)
Developer Wiki: SDK_Build_Environment_using_MSBuild (/p/wz-mle/mlewiki/SDK_Build_Environment_using_MSBuild/)
Developer Wiki: SDK_Build_Environment_using_Microsoft_Visual_Studio_v6.0 (/p/wz-mle/mlewiki/SDK_Build_Environment_using_Microsoft_Visual_Studio_v6.0/)

Discussion

B ( )   I ( )   H ( ) | </> ( )   66 ( )   ≣ ( )   ≣ ( )   ⊞ ( )   — ( ) | % ( )   🖼 ( )   ❓ ( )   ✕ ( )   👁 ( )

Mark
Millard
(/u/wizzery

lines: 0   words: 0   0:0

Post   Cancel (#)   Add attachments (#)