AGL Reference Update

Graphics & Imaging > OpenGL

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Contents

Introduction to AGL Reference Update

This document summarizes the symbols that have been added to the AGL framework. The full reference documentation notes in what version a symbol was introduced, but sometimes it's useful to see only the new symbols for a given release.

If you are not familiar with this framework you should refer to the complete framework reference documentation.

Organization of This Document

Symbols are grouped by class or protocol for Objective-C and by header file for C. For each symbol there is a link to complete documentation, if available, and a brief description, if available.

See Also

For reference documentation on this framework, see *AGL Reference*.

10.5 Symbol Changes

This article lists the symbols added to `AGL.framework` in Mac OS X v10.5.

C Symbols

All of the header files with new symbols are listed alphabetically, with their new symbols described.

agl.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

`aglCreatePixelFormat`	Creates a pixel format with the provided attributes.
`aglDisplaysOfPixelFormat`	Returns the graphics devices supported by a pixel format object.
`aglGetHIViewRef`	Retrieves the HIView object associated with an AGL context.
`aglGetWindowRef`	Retrieves the window associated with an AGL context.
`aglQueryRendererInfoForCGDirectDisplayIDs`	Creates and returns a renderer information object that contains properties and values for all renderers driving the specified displays.
`aglSetHIViewRef`	Sets an AGL context to the specified HIView object.
`aglSetWindowRef`	Sets an AGL context to the specified window.

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

`AGL_ALLOW_OFFLINE_RENDERERS`	

AGL_DISPLAY_MASK	
AGL_INVALID_FUNCTION	
AGL_VERSION_3_0	
DEPRECATED_FOR_MAC_OS_X_VERSION_10_5_AND_LATER	

aglMacro.h

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glActiveVaryingEXT	
glBeginTransformFeedbackEXT	
glBindBufferBaseEXT	
glBindBufferOffsetEXT	
glBindBufferRangeEXT	
glBindFragDataLocationEXT	
glBindFramebufferEXT	
glBindRenderbufferEXT	
glBlendEquationSeparate	
glBlitFramebufferEXT	
glBufferParameteriAPPLE	
glCheckFramebufferStatusEXT	
glDeleteFramebuffersEXT	
glDeleteRenderbuffersEXT	
glEndTransformFeedbackEXT	
glFlushMappedBufferRangeAPPLE	
glFramebufferRenderbufferEXT	
glFramebufferTexture1DEXT	
glFramebufferTexture2DEXT	

glFramebufferTexture3DEXT	
glFramebufferTextureEXT	
glFramebufferTextureFaceEXT	
glFramebufferTextureLayerEXT	
glGenerateMipmapEXT	
glGenFramebuffersEXT	
glGenRenderbuffersEXT	
glGetActiveVaryingEXT	
glGetBooleanIndexedvEXT	
glGetFragDataLocationEXT	
glGetFramebufferAttachmentParameterivEXT	
glGetIntegerIndexedvEXT	
glGetObjectParameterivAPPLE	
glGetRenderbufferParameterivEXT	
glGetTransformFeedbackVaryingEXT	
glGetUniformBufferOffsetEXT	
glGetUniformBufferSizeEXT	
glGetUniformuivEXT	
glGetVaryingLocationEXT	
glGetVertexAttribIivEXT	
glGetVertexAttribIuivEXT	
glIsFramebufferEXT	
glIsRenderbufferEXT	
glObjectPurgeableAPPLE	
glObjectUnpurgeableAPPLE	
glProgramEnvParameters4fvEXT	
glProgramLocalParameters4fvEXT	
glProgramParameteriEXT	

glRenderbufferStorageEXT	
glRenderbufferStorageMultisampleEXT	
glTransformFeedbackVaryingsEXT	
glUniform1uiEXT	
glUniform1uivEXT	
glUniform2uiEXT	
glUniform2uivEXT	
glUniform3uiEXT	
glUniform3uivEXT	
glUniform4uiEXT	
glUniform4uivEXT	
glUniformBufferEXT	
glUniformMatrix2x3fv	
glUniformMatrix2x4fv	
glUniformMatrix3x2fv	
glUniformMatrix3x4fv	
glUniformMatrix4x2fv	
glUniformMatrix4x3fv	
glVertexAttribI1iEXT	
glVertexAttribI1ivEXT	
glVertexAttribI1uiEXT	
glVertexAttribI1uivEXT	
glVertexAttribI2iEXT	
glVertexAttribI2ivEXT	
glVertexAttribI2uiEXT	
glVertexAttribI2uivEXT	
glVertexAttribI3iEXT	
glVertexAttribI3ivEXT	

glVertexAttribI3uiEXT	
glVertexAttribI3uivEXT	
glVertexAttribI4bvEXT	
glVertexAttribI4iEXT	
glVertexAttribI4ivEXT	
glVertexAttribI4svEXT	
glVertexAttribI4ubvEXT	
glVertexAttribI4uiEXT	
glVertexAttribI4uivEXT	
glVertexAttribI4usvEXT	
glVertexAttribIPointerEXT	

aglRenderers.h

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

AGL_RENDERER_ATI_RADEON_X1000_ID	An ATI Radeon 9700 display device.
AGL_RENDERER_INTEL_900_ID	An Intel GMA 900 display device.

gl.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glUniformMatrix2x3fv	
glUniformMatrix2x4fv	
glUniformMatrix3x2fv	
glUniformMatrix3x4fv	

glUniformMatrix4x2fv	
glUniformMatrix4x3fv	

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glUniformMatrix2x3fvProcPtr	
glUniformMatrix2x4fvProcPtr	
glUniformMatrix3x2fvProcPtr	
glUniformMatrix3x4fvProcPtr	
glUniformMatrix4x2fvProcPtr	
glUniformMatrix4x3fvProcPtr	

10.4 Symbol Changes

This article lists the symbols added to `AGL.framework` in Mac OS X v10.4.

C Symbols

All of the header files with new symbols are listed alphabetically, with their new symbols described.

agl.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

`aglGetCGLContext`	Gets the CGL rendering context associated with an AGL rendering context.
`aglGetCGLPixelFormat`	Gets the CGL pixel format object associated with an AGL pixel format.

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

`AGL_ENABLE_SURFACE_BACKING_SIZE`	Enable or disable the surface backing-size override.
`AGL_SURFACE_BACKING_SIZE`	The associated value specifies the width and height of surface backing size.
`AGL_SURFACE_VOLATILE`	Flags the surface as a candidate for deletion.
`AVAILABLE_MAC_OS_X_VERSION_10_4_AND_LATER`	

aglMacro.h

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

AGL_MACRO_CONTEXT_RENDERER	
AGL_MACRO_DECLARE_CONTEXT	
AGL_MACRO_DECLARE_RENDERER	
AGL_MACRO_DECLARE_VARIABLES	
AGL_MACRO_RENDERER	
glAttachShader	
glBindAttribLocation	
glCompileShader	
glCreateProgram	
glCreateShader	
glDeleteProgram	
glDeleteShader	
glDetachShader	
glDisableVertexAttribArray	
glDrawBuffers	
glDrawBuffersARB	
glEnableVertexAttribArray	
glGetActiveAttrib	
glGetActiveUniform	
glGetAttachedShaders	
glGetAttribLocation	
glGetProgramInfoLog	
glGetProgramiv	
glGetShaderInfoLog	

glGetShaderiv	
glGetShaderSource	
glGetUniformfv	
glGetUniformiv	
glGetUniformLocation	
glGetVertexAttribdv	
glGetVertexAttribfv	
glGetVertexAttribiv	
glGetVertexAttribPointerv	
glIsProgram	
glIsShader	
glLinkProgram	
glMultiDrawElementArrayAPPLE	
glMultiDrawRangeElementArrayAPPLE	
glPointParameteri	
glPointParameteriv	
glShaderSource	
glStencilFuncSeparate	
glStencilMaskSeparate	
glStencilOpSeparate	
glUniform1f	
glUniform1fv	
glUniform1i	
glUniform1iv	
glUniform2f	
glUniform2fv	
glUniform2i	
glUniform2iv	

glUniform3f	
glUniform3fv	
glUniform3i	
glUniform3iv	
glUniform4f	
glUniform4fv	
glUniform4i	
glUniform4iv	
glUniformMatrix2fv	
glUniformMatrix3fv	
glUniformMatrix4fv	
glUseProgram	
glValidateProgram	
glVertexAttrib1d	
glVertexAttrib1dv	
glVertexAttrib1f	
glVertexAttrib1fv	
glVertexAttrib1s	
glVertexAttrib1sv	
glVertexAttrib2d	
glVertexAttrib2dv	
glVertexAttrib2f	
glVertexAttrib2fv	
glVertexAttrib2s	
glVertexAttrib2sv	
glVertexAttrib3d	
glVertexAttrib3dv	
glVertexAttrib3f	

glVertexAttrib3fv	
glVertexAttrib3s	
glVertexAttrib3sv	
glVertexAttrib4bv	
glVertexAttrib4d	
glVertexAttrib4dv	
glVertexAttrib4f	
glVertexAttrib4fv	
glVertexAttrib4iv	
glVertexAttrib4Nbv	
glVertexAttrib4Niv	
glVertexAttrib4Nsv	
glVertexAttrib4Nub	
glVertexAttrib4Nubv	
glVertexAttrib4Nuiv	
glVertexAttrib4Nusv	
glVertexAttrib4s	
glVertexAttrib4sv	
glVertexAttrib4ubv	
glVertexAttrib4uiv	
glVertexAttrib4usv	
glVertexAttribPointer	

gl.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glAttachShader	

glBindAttribLocation	
glBlendEquationSeparate	
glCompileShader	
glCreateProgram	
glCreateShader	
glDeleteProgram	
glDeleteShader	
glDetachShader	
glDisableVertexAttribArray	
glDrawBuffers	
glEnableVertexAttribArray	
glGetActiveAttrib	
glGetActiveUniform	
glGetAttachedShaders	
glGetAttribLocation	
glGetProgramInfoLog	
glGetProgramiv	
glGetShaderInfoLog	
glGetShaderiv	
glGetShaderSource	
glGetUniformfv	
glGetUniformiv	
glGetUniformLocation	
glGetVertexAttribdv	
glGetVertexAttribfv	
glGetVertexAttribiv	
glGetVertexAttribPointerv	
glIsProgram	

glIsShader	
glLinkProgram	
glPointParameteri	
glPointParameteriv	
glShaderSource	
glStencilFuncSeparate	
glStencilMaskSeparate	
glStencilOpSeparate	
glUniform1f	
glUniform1fv	
glUniform1i	
glUniform1iv	
glUniform2f	
glUniform2fv	
glUniform2i	
glUniform2iv	
glUniform3f	
glUniform3fv	
glUniform3i	
glUniform3iv	
glUniform4f	
glUniform4fv	
glUniform4i	
glUniform4iv	
glUniformMatrix2fv	
glUniformMatrix3fv	
glUniformMatrix4fv	
glUseProgram	

glValidateProgram	
glVertexAttrib1d	
glVertexAttrib1dv	
glVertexAttrib1f	
glVertexAttrib1fv	
glVertexAttrib1s	
glVertexAttrib1sv	
glVertexAttrib2d	
glVertexAttrib2dv	
glVertexAttrib2f	
glVertexAttrib2fv	
glVertexAttrib2s	
glVertexAttrib2sv	
glVertexAttrib3d	
glVertexAttrib3dv	
glVertexAttrib3f	
glVertexAttrib3fv	
glVertexAttrib3s	
glVertexAttrib3sv	
glVertexAttrib4bv	
glVertexAttrib4d	
glVertexAttrib4dv	
glVertexAttrib4f	
glVertexAttrib4fv	
glVertexAttrib4iv	
glVertexAttrib4Nbv	
glVertexAttrib4Niv	
glVertexAttrib4Nsv	

glVertexAttrib4Nub	
glVertexAttrib4Nubv	
glVertexAttrib4Nuiv	
glVertexAttrib4Nusv	
glVertexAttrib4s	
glVertexAttrib4sv	
glVertexAttrib4ubv	
glVertexAttrib4uiv	
glVertexAttrib4usv	
glVertexAttribPointer	

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glAttachShaderProcPtr	
glBindAttribLocationProcPtr	
glBlendEquationSeparateProcPtr	
GLchar	
glCompileShaderProcPtr	
glCreateProgramProcPtr	
glCreateShaderProcPtr	
glDeleteProgramProcPtr	
glDeleteShaderProcPtr	
glDetachShaderProcPtr	
glDisableVertexAttribArrayProcPtr	
glDrawBuffersProcPtr	
glEnableVertexAttribArrayProcPtr	
glGetActiveAttribProcPtr	
glGetActiveUniformProcPtr	

glGetAttachedShadersProcPtr	
glGetAttribLocationProcPtr	
glGetProgramInfoLogProcPtr	
glGetProgramivProcPtr	
glGetShaderInfoLogProcPtr	
glGetShaderivProcPtr	
glGetShaderSourceProcPtr	
glGetUniformfvProcPtr	
glGetUniformivProcPtr	
glGetUniformLocationProcPtr	
glGetVertexAttribdvProcPtr	
glGetVertexAttribfvProcPtr	
glGetVertexAttribivProcPtr	
glGetVertexAttribPointervProcPtr	
glIsProgramProcPtr	
glIsShaderProcPtr	
glLinkProgramProcPtr	
glPointParameteriProcPtr	
glPointParameterivProcPtr	
glShaderSourceProcPtr	
glStencilFuncSeparateProcPtr	
glStencilMaskSeparateProcPtr	
glStencilOpSeparateProcPtr	
glUniform1fProcPtr	
glUniform1fvProcPtr	
glUniform1iProcPtr	
glUniform1ivProcPtr	
glUniform2fProcPtr	

glUniform2fvProcPtr	
glUniform2iProcPtr	
glUniform2ivProcPtr	
glUniform3fProcPtr	
glUniform3fvProcPtr	
glUniform3iProcPtr	
glUniform3ivProcPtr	
glUniform4fProcPtr	
glUniform4fvProcPtr	
glUniform4iProcPtr	
glUniform4ivProcPtr	
glUniformMatrix2fvProcPtr	
glUniformMatrix3fvProcPtr	
glUniformMatrix4fvProcPtr	
glUseProgramProcPtr	
glValidateProgramProcPtr	
glVertexAttrib1dProcPtr	
glVertexAttrib1dvProcPtr	
glVertexAttrib1fProcPtr	
glVertexAttrib1fvProcPtr	
glVertexAttrib1sProcPtr	
glVertexAttrib1svProcPtr	
glVertexAttrib2dProcPtr	
glVertexAttrib2dvProcPtr	
glVertexAttrib2fProcPtr	
glVertexAttrib2fvProcPtr	
glVertexAttrib2sProcPtr	
glVertexAttrib2svProcPtr	

glVertexAttrib3dProcPtr	
glVertexAttrib3dvProcPtr	
glVertexAttrib3fProcPtr	
glVertexAttrib3fvProcPtr	
glVertexAttrib3sProcPtr	
glVertexAttrib3svProcPtr	
glVertexAttrib4bvProcPtr	
glVertexAttrib4dProcPtr	
glVertexAttrib4dvProcPtr	
glVertexAttrib4fProcPtr	
glVertexAttrib4fvProcPtr	
glVertexAttrib4ivProcPtr	
glVertexAttrib4NbvProcPtr	
glVertexAttrib4NivProcPtr	
glVertexAttrib4NsvProcPtr	
glVertexAttrib4NubProcPtr	
glVertexAttrib4NubvProcPtr	
glVertexAttrib4NuivProcPtr	
glVertexAttrib4NusvProcPtr	
glVertexAttrib4sProcPtr	
glVertexAttrib4svProcPtr	
glVertexAttrib4ubvProcPtr	
glVertexAttrib4uivProcPtr	
glVertexAttrib4usvProcPtr	
glVertexAttribPointerProcPtr	

10.3 Symbol Changes

This article lists the symbols added to `AGL.framework` in Mac OS X v10.3.

C Symbols

All of the header files with new symbols are listed alphabetically, with their new symbols described.

agl.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

`aglCreatePBuffer`	Creates a pixel buffer of the specified size, compatible with the specified texture target.
`aglDescribePBuffer`	Retrieves information that describes the specified pixel buffer object.
`aglDestroyPBuffer`	Releases the resources associated with a pixel buffer object.
`aglGetPBuffer`	Retrieves a pixel buffer and its parameters for a specified rendering context.
`aglSetPBuffer`	Attaches a pixel buffer object to a rendering context.
`aglTexImagePBuffer`	Binds the contents of a pixel buffer to a data source for a texture object.

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

`AGL_BAD_CONNECTION`	Unable to connect to the window server.

AGL_COLOR_FLOAT	This constant is a Boolean attribute. If it is present in the attributes array, color buffers store floating-point pixels. Do not supply a value with this constant because its presence in the array implies true.
AGL_MULTISAMPLE	This constant is a Boolean attribute. If it is present in the attributes array, specifies a hint to the driver to prefer multisampling. Do not supply a value with this constant because its presence in the array implies true.
AGL_PBUFFER	This constant is a Boolean attribute. If it is present in the attributes array, specifies that the renderer can render to a pixel buffer. You can pass this constant to the function aglDescribeRenderer.
AGL_REMOTE_PBUFFER	This constant is a Boolean attribute. If it is present in the attributes array, specifies that the renderer can render offline to a pixel buffer.
AGL_RENDERER_COUNT	The associated value is the number of renderers.
AGL_RGBAFLOAT128_BIT	Specifies a format that has 128 bits per pixel with an ARGB channel layout, IEEE floating point values.
AGL_RGBAFLOAT256_BIT	Specifies a format that has 256 bits per pixel with an ARGB channel layout, IEEE double values.
AGL_RGBAFLOAT64_BIT	Specifies a format that has 64 bits per pixel with an ARGB channel layout, half-floating point values. (A half-float is a 16-bit floating-point value.)
AGL_RGBFLOAT128_BIT	Specifies a format that has 128 bits per pixel with an RGB channel layout, IEEE floating point values.
AGL_RGBFLOAT256_BIT	Specifies a format that has 256 bits per pixel with an RGB channel layout, IEEE double values.
AGL_RGBFLOAT64_BIT	Specifies a format that has 64 bits per pixel with an RGB channel layout, half-floating point values. (A half-float is a 16-bit floating-point value.)
AGL_SAMPLE_ALPHA	This constant is a Boolean attribute. If it is present in the attributes array, request alpha filtering when multisampling. Do not supply a value with this constant because its presence in the array implies true.
AGL_SUPERSAMPLE	This constant is a Boolean attribute. If it is present in the attributes array, specifies a hint to the driver to prefer supersampling. Do not supply a value with this constant because its presence in the array implies true.

AGLPbuffer	Represents a pointer to an opaque pixel buffer object.
AVAILABLE_MAC_OS_X_VERSION_10_2_AND_LATER	
AVAILABLE_MAC_OS_X_VERSION_10_3_AND_LATER	

aglMacro.h

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glAttachObjectARB	
glBeginQuery	
glBeginQueryARB	
glBindAttribLocationARB	
glBindBuffer	
glBindBufferARB	
glBlendEquationSeparateEXT	
glBufferData	
glBufferDataARB	
glBufferSubData	
glBufferSubDataARB	
glCompileShaderARB	
glCreateProgramObjectARB	
glCreateShaderObjectARB	
glDeleteBuffers	
glDeleteBuffersARB	
glDeleteObjectARB	
glDeleteQueries	
glDeleteQueriesARB	

glDepthBoundsEXT	
glDetachObjectARB	
glDisableVertexAttribAPPLE	
glEnableVertexAttribAPPLE	
glEndQuery	
glEndQueryARB	
glFinishRenderAPPLE	
glFlushRenderAPPLE	
glGenBuffers	
glGenBuffersARB	
glGenQueries	
glGenQueriesARB	
glGetActiveAttribARB	
glGetActiveUniformARB	
glGetAttachedObjectsARB	
glGetAttribLocationARB	
glGetBufferParameteriv	
glGetBufferParameterivARB	
glGetBufferPointerv	
glGetBufferPointervARB	
glGetBufferSubData	
glGetBufferSubDataARB	
glGetHandleARB	
glGetInfoLogARB	
glGetObjectParameterfvARB	
glGetObjectParameterivARB	
glGetQueryiv	
glGetQueryivARB	

glGetQueryObjectiv	
glGetQueryObjectivARB	
glGetQueryObjectuiv	
glGetQueryObjectuivARB	
glGetShaderSourceARB	
glGetUniformfvARB	
glGetUniformivARB	
glGetUniformLocationARB	
glIsBuffer	
glIsBufferARB	
glIsQuery	
glIsQueryARB	
glIsVertexAttribEnabledAPPLE	
glLinkProgramARB	
glMapBuffer	
glMapBufferARB	
glMapVertexAttrib1dAPPLE	
glMapVertexAttrib1fAPPLE	
glMapVertexAttrib2dAPPLE	
glMapVertexAttrib2fAPPLE	
glShaderSourceARB	
glStencilFuncSeparateATI	
glStencilOpSeparateATI	
glSwapAPPLE	
glUniform1fARB	
glUniform1fvARB	
glUniform1iARB	
glUniform1ivARB	

glUniform2fARB	
glUniform2fvARB	
glUniform2iARB	
glUniform2ivARB	
glUniform3fARB	
glUniform3fvARB	
glUniform3iARB	
glUniform3ivARB	
glUniform4fARB	
glUniform4fvARB	
glUniform4iARB	
glUniform4ivARB	
glUniformMatrix2fvARB	
glUniformMatrix3fvARB	
glUniformMatrix4fvARB	
glUnmapBuffer	
glUnmapBufferARB	
glUseProgramObjectARB	
glValidateProgramARB	

aglRenderers.h

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

AGL_RENDERER_ATI_RADEON_9700_ID	An ATI Radeon 9700 display device.
AGL_RENDERER_GENERIC_FLOAT_ID	A floating-point software renderer that is optimized for vector-based processors, is programmable, and supports shading.

AGL_RENDERER_NVIDIA_GEFORCE_FX_ID	An NVIDIA GeForce FX, GeForce 6, or GeForce 7 display device.
AGL_RENDERER_VT_BLADE_XP2_ID	A Village Tronic display device.

gl.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glBeginQuery	
glBindBuffer	
glBufferData	
glBufferSubData	
glDeleteBuffers	
glDeleteQueries	
glEndQuery	
glGenBuffers	
glGenQueries	
glGetBufferParameteriv	
glGetBufferPointerv	
glGetBufferSubData	
glGetQueryiv	
glGetQueryObjectiv	
glGetQueryObjectuiv	
glIsBuffer	
glIsQuery	
glMapBuffer	
glUnmapBuffer	

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glAccumProcPtr	
glActiveTextureProcPtr	
glAlphaFuncProcPtr	
glAreTexturesResidentProcPtr	
glArrayElementProcPtr	
glBeginProcPtr	
glBeginQueryProcPtr	
glBindBufferProcPtr	
glBindTextureProcPtr	
glBitmapProcPtr	
glBlendColorProcPtr	
glBlendEquationProcPtr	
glBlendFuncProcPtr	
glBlendFuncSeparateProcPtr	
glBufferDataProcPtr	
glBufferSubDataProcPtr	
glCallListProcPtr	
glCallListsProcPtr	
glClearAccumProcPtr	
glClearColorProcPtr	
glClearDepthProcPtr	
glClearIndexProcPtr	
glClearProcPtr	
glClearStencilProcPtr	
glClientActiveTextureProcPtr	
glClipPlaneProcPtr	

glColor3bProcPtr	
glColor3bvProcPtr	
glColor3dProcPtr	
glColor3dvProcPtr	
glColor3fProcPtr	
glColor3fvProcPtr	
glColor3iProcPtr	
glColor3ivProcPtr	
glColor3sProcPtr	
glColor3svProcPtr	
glColor3ubProcPtr	
glColor3ubvProcPtr	
glColor3uiProcPtr	
glColor3uivProcPtr	
glColor3usProcPtr	
glColor3usvProcPtr	
glColor4bProcPtr	
glColor4bvProcPtr	
glColor4dProcPtr	
glColor4dvProcPtr	
glColor4fProcPtr	
glColor4fvProcPtr	
glColor4iProcPtr	
glColor4ivProcPtr	
glColor4sProcPtr	
glColor4svProcPtr	
glColor4ubProcPtr	
glColor4ubvProcPtr	

glColor4uiProcPtr	
glColor4uivProcPtr	
glColor4usProcPtr	
glColor4usvProcPtr	
glColorMaskProcPtr	
glColorMaterialProcPtr	
glColorPointerProcPtr	
glColorSubTableProcPtr	
glColorTableParameterfvProcPtr	
glColorTableParameterivProcPtr	
glColorTableProcPtr	
glCompressedTexImage1DProcPtr	
glCompressedTexImage2DProcPtr	
glCompressedTexImage3DProcPtr	
glCompressedTexSubImage1DProcPtr	
glCompressedTexSubImage2DProcPtr	
glCompressedTexSubImage3DProcPtr	
glConvolutionFilter1DProcPtr	
glConvolutionFilter2DProcPtr	
glConvolutionParameterfProcPtr	
glConvolutionParameterfvProcPtr	
glConvolutionParameteriProcPtr	
glConvolutionParameterivProcPtr	
glCopyColorSubTableProcPtr	
glCopyColorTableProcPtr	
glCopyConvolutionFilter1DProcPtr	
glCopyConvolutionFilter2DProcPtr	
glCopyPixelsProcPtr	

glCopyTexImage1DProcPtr	
glCopyTexImage2DProcPtr	
glCopyTexSubImage1DProcPtr	
glCopyTexSubImage2DProcPtr	
glCopyTexSubImage3DProcPtr	
glCullFaceProcPtr	
glDeleteBuffersProcPtr	
glDeleteListsProcPtr	
glDeleteQueriesProcPtr	
glDeleteTexturesProcPtr	
glDepthFuncProcPtr	
glDepthMaskProcPtr	
glDepthRangeProcPtr	
glDisableClientStateProcPtr	
glDisableProcPtr	
glDrawArraysProcPtr	
glDrawBufferProcPtr	
glDrawElementsProcPtr	
glDrawPixelsProcPtr	
glDrawRangeElementsProcPtr	
glEdgeFlagPointerProcPtr	
glEdgeFlagProcPtr	
glEdgeFlagvProcPtr	
glEnableClientStateProcPtr	
glEnableProcPtr	
glEndListProcPtr	
glEndProcPtr	
glEndQueryProcPtr	

glEvalCoord1dProcPtr	
glEvalCoord1dvProcPtr	
glEvalCoord1fProcPtr	
glEvalCoord1fvProcPtr	
glEvalCoord2dProcPtr	
glEvalCoord2dvProcPtr	
glEvalCoord2fProcPtr	
glEvalCoord2fvProcPtr	
glEvalMesh1ProcPtr	
glEvalMesh2ProcPtr	
glEvalPoint1ProcPtr	
glEvalPoint2ProcPtr	
glFeedbackBufferProcPtr	
glFinishProcPtr	
glFlushProcPtr	
glFogCoorddProcPtr	
glFogCoorddvProcPtr	
glFogCoordfProcPtr	
glFogCoordfvProcPtr	
glFogCoordPointerProcPtr	
glFogfProcPtr	
glFogfvProcPtr	
glFogiProcPtr	
glFogivProcPtr	
glFrontFaceProcPtr	
glFrustumProcPtr	
glGenBuffersProcPtr	
glGenListsProcPtr	

glGenQueriesProcPtr	
glGenTexturesProcPtr	
glGetBooleanvProcPtr	
glGetBufferParameterivProcPtr	
glGetBufferPointervProcPtr	
glGetBufferSubDataProcPtr	
glGetClipPlaneProcPtr	
glGetColorTableParameterfvProcPtr	
glGetColorTableParameterivProcPtr	
glGetColorTableProcPtr	
glGetCompressedTexImageProcPtr	
glGetConvolutionFilterProcPtr	
glGetConvolutionParameterfvProcPtr	
glGetConvolutionParameterivProcPtr	
glGetDoublevProcPtr	
glGetErrorProcPtr	
glGetFloatvProcPtr	
glGetHistogramParameterfvProcPtr	
glGetHistogramParameterivProcPtr	
glGetHistogramProcPtr	
glGetIntegervProcPtr	
glGetLightfvProcPtr	
glGetLightivProcPtr	
glGetMapdvProcPtr	
glGetMapfvProcPtr	
glGetMapivProcPtr	
glGetMaterialfvProcPtr	
glGetMaterialivProcPtr	

glGetMinmaxParameterfvProcPtr	
glGetMinmaxParameterivProcPtr	
glGetMinmaxProcPtr	
glGetPixelMapfvProcPtr	
glGetPixelMapuivProcPtr	
glGetPixelMapusvProcPtr	
glGetPointervProcPtr	
glGetPolygonStippleProcPtr	
glGetQueryivProcPtr	
glGetQueryObjectivProcPtr	
glGetQueryObjectuivProcPtr	
glGetSeparableFilterProcPtr	
glGetStringProcPtr	
glGetTexEnvfvProcPtr	
glGetTexEnvivProcPtr	
glGetTexGendvProcPtr	
glGetTexGenfvProcPtr	
glGetTexGenivProcPtr	
glGetTexImageProcPtr	
glGetTexLevelParameterfvProcPtr	
glGetTexLevelParameterivProcPtr	
glGetTexParameterfvProcPtr	
glGetTexParameterivProcPtr	
glHintProcPtr	
glHistogramProcPtr	
glIndexdProcPtr	
glIndexdvProcPtr	
glIndexfProcPtr	

glIndexfvProcPtr	
glIndexiProcPtr	
glIndexivProcPtr	
glIndexMaskProcPtr	
glIndexPointerProcPtr	
glIndexsProcPtr	
glIndexsvProcPtr	
glIndexubProcPtr	
glIndexubvProcPtr	
glInitNamesProcPtr	
glInterleavedArraysProcPtr	
GLintptr	
glIsBufferProcPtr	
glIsEnabledProcPtr	
glIsListProcPtr	
glIsQueryProcPtr	
glIsTextureProcPtr	
glLightfProcPtr	
glLightfvProcPtr	
glLightiProcPtr	
glLightivProcPtr	
glLightModelfProcPtr	
glLightModelfvProcPtr	
glLightModeliProcPtr	
glLightModelivProcPtr	
glLineStippleProcPtr	
glLineWidthProcPtr	
glListBaseProcPtr	

glLoadIdentityProcPtr	
glLoadMatrixdProcPtr	
glLoadMatrixfProcPtr	
glLoadNameProcPtr	
glLoadTransposeMatrixdProcPtr	
glLoadTransposeMatrixfProcPtr	
glLogicOpProcPtr	
glMap1dProcPtr	
glMap1fProcPtr	
glMap2dProcPtr	
glMap2fProcPtr	
glMapBufferProcPtr	
glMapGrid1dProcPtr	
glMapGrid1fProcPtr	
glMapGrid2dProcPtr	
glMapGrid2fProcPtr	
glMaterialfProcPtr	
glMaterialfvProcPtr	
glMaterialiProcPtr	
glMaterialivProcPtr	
glMatrixModeProcPtr	
glMinmaxProcPtr	
glMultiDrawArraysProcPtr	
glMultiDrawElementsProcPtr	
glMultiTexCoord1dProcPtr	
glMultiTexCoord1dvProcPtr	
glMultiTexCoord1fProcPtr	
glMultiTexCoord1fvProcPtr	

glMultiTexCoord1iProcPtr	
glMultiTexCoord1ivProcPtr	
glMultiTexCoord1sProcPtr	
glMultiTexCoord1svProcPtr	
glMultiTexCoord2dProcPtr	
glMultiTexCoord2dvProcPtr	
glMultiTexCoord2fProcPtr	
glMultiTexCoord2fvProcPtr	
glMultiTexCoord2iProcPtr	
glMultiTexCoord2ivProcPtr	
glMultiTexCoord2sProcPtr	
glMultiTexCoord2svProcPtr	
glMultiTexCoord3dProcPtr	
glMultiTexCoord3dvProcPtr	
glMultiTexCoord3fProcPtr	
glMultiTexCoord3fvProcPtr	
glMultiTexCoord3iProcPtr	
glMultiTexCoord3ivProcPtr	
glMultiTexCoord3sProcPtr	
glMultiTexCoord3svProcPtr	
glMultiTexCoord4dProcPtr	
glMultiTexCoord4dvProcPtr	
glMultiTexCoord4fProcPtr	
glMultiTexCoord4fvProcPtr	
glMultiTexCoord4iProcPtr	
glMultiTexCoord4ivProcPtr	
glMultiTexCoord4sProcPtr	
glMultiTexCoord4svProcPtr	

glMultMatrixdProcPtr	
glMultMatrixfProcPtr	
glMultTransposeMatrixdProcPtr	
glMultTransposeMatrixfProcPtr	
glNewListProcPtr	
glNormal3bProcPtr	
glNormal3bvProcPtr	
glNormal3dProcPtr	
glNormal3dvProcPtr	
glNormal3fProcPtr	
glNormal3fvProcPtr	
glNormal3iProcPtr	
glNormal3ivProcPtr	
glNormal3sProcPtr	
glNormal3svProcPtr	
glNormalPointerProcPtr	
glOrthoProcPtr	
glPassThroughProcPtr	
glPixelMapfvProcPtr	
glPixelMapuivProcPtr	
glPixelMapusvProcPtr	
glPixelStorefProcPtr	
glPixelStoreiProcPtr	
glPixelTransferfProcPtr	
glPixelTransferiProcPtr	
glPixelZoomProcPtr	
glPointParameterfProcPtr	
glPointParameterfvProcPtr	

glPointSizeProcPtr	
glPolygonModeProcPtr	
glPolygonOffsetProcPtr	
glPolygonStippleProcPtr	
glPopAttribProcPtr	
glPopClientAttribProcPtr	
glPopMatrixProcPtr	
glPopNameProcPtr	
glPrioritizeTexturesProcPtr	
glPushAttribProcPtr	
glPushClientAttribProcPtr	
glPushMatrixProcPtr	
glPushNameProcPtr	
glRasterPos2dProcPtr	
glRasterPos2dvProcPtr	
glRasterPos2fProcPtr	
glRasterPos2fvProcPtr	
glRasterPos2iProcPtr	
glRasterPos2ivProcPtr	
glRasterPos2sProcPtr	
glRasterPos2svProcPtr	
glRasterPos3dProcPtr	
glRasterPos3dvProcPtr	
glRasterPos3fProcPtr	
glRasterPos3fvProcPtr	
glRasterPos3iProcPtr	
glRasterPos3ivProcPtr	
glRasterPos3sProcPtr	

glRasterPos3svProcPtr	
glRasterPos4dProcPtr	
glRasterPos4dvProcPtr	
glRasterPos4fProcPtr	
glRasterPos4fvProcPtr	
glRasterPos4iProcPtr	
glRasterPos4ivProcPtr	
glRasterPos4sProcPtr	
glRasterPos4svProcPtr	
glReadBufferProcPtr	
glReadPixelsProcPtr	
glRectdProcPtr	
glRectdvProcPtr	
glRectfProcPtr	
glRectfvProcPtr	
glRectiProcPtr	
glRectivProcPtr	
glRectsProcPtr	
glRectsvProcPtr	
glRenderModeProcPtr	
glResetHistogramProcPtr	
glResetMinmaxProcPtr	
glRotatedProcPtr	
glRotatefProcPtr	
glSampleCoverageProcPtr	
glSamplePassProcPtr	
glScaledProcPtr	
glScalefProcPtr	

glScissorProcPtr	
glSecondaryColor3bProcPtr	
glSecondaryColor3bvProcPtr	
glSecondaryColor3dProcPtr	
glSecondaryColor3dvProcPtr	
glSecondaryColor3fProcPtr	
glSecondaryColor3fvProcPtr	
glSecondaryColor3iProcPtr	
glSecondaryColor3ivProcPtr	
glSecondaryColor3sProcPtr	
glSecondaryColor3svProcPtr	
glSecondaryColor3ubProcPtr	
glSecondaryColor3ubvProcPtr	
glSecondaryColor3uiProcPtr	
glSecondaryColor3uivProcPtr	
glSecondaryColor3usProcPtr	
glSecondaryColor3usvProcPtr	
glSecondaryColorPointerProcPtr	
glSelectBufferProcPtr	
glSeparableFilter2DProcPtr	
glShadeModelProcPtr	
GLsizeiptr	
glStencilFuncProcPtr	
glStencilMaskProcPtr	
glStencilOpProcPtr	
glTexCoord1dProcPtr	
glTexCoord1dvProcPtr	
glTexCoord1fProcPtr	

glTexCoord1fvProcPtr	
glTexCoord1iProcPtr	
glTexCoord1ivProcPtr	
glTexCoord1sProcPtr	
glTexCoord1svProcPtr	
glTexCoord2dProcPtr	
glTexCoord2dvProcPtr	
glTexCoord2fProcPtr	
glTexCoord2fvProcPtr	
glTexCoord2iProcPtr	
glTexCoord2ivProcPtr	
glTexCoord2sProcPtr	
glTexCoord2svProcPtr	
glTexCoord3dProcPtr	
glTexCoord3dvProcPtr	
glTexCoord3fProcPtr	
glTexCoord3fvProcPtr	
glTexCoord3iProcPtr	
glTexCoord3ivProcPtr	
glTexCoord3sProcPtr	
glTexCoord3svProcPtr	
glTexCoord4dProcPtr	
glTexCoord4dvProcPtr	
glTexCoord4fProcPtr	
glTexCoord4fvProcPtr	
glTexCoord4iProcPtr	
glTexCoord4ivProcPtr	
glTexCoord4sProcPtr	

glTexCoord4svProcPtr	
glTexCoordPointerProcPtr	
glTexEnvfProcPtr	
glTexEnvfvProcPtr	
glTexEnviProcPtr	
glTexEnvivProcPtr	
glTexGendProcPtr	
glTexGendvProcPtr	
glTexGenfProcPtr	
glTexGenfvProcPtr	
glTexGeniProcPtr	
glTexGenivProcPtr	
glTexImage1DProcPtr	
glTexImage2DProcPtr	
glTexImage3DProcPtr	
glTexParameterfProcPtr	
glTexParameterfvProcPtr	
glTexParameteriProcPtr	
glTexParameterivProcPtr	
glTexSubImage1DProcPtr	
glTexSubImage2DProcPtr	
glTexSubImage3DProcPtr	
glTranslatedProcPtr	
glTranslatefProcPtr	
glUnmapBufferProcPtr	
glVertex2dProcPtr	
glVertex2dvProcPtr	
glVertex2fProcPtr	

glVertex2fvProcPtr	
glVertex2iProcPtr	
glVertex2ivProcPtr	
glVertex2sProcPtr	
glVertex2svProcPtr	
glVertex3dProcPtr	
glVertex3dvProcPtr	
glVertex3fProcPtr	
glVertex3fvProcPtr	
glVertex3iProcPtr	
glVertex3ivProcPtr	
glVertex3sProcPtr	
glVertex3svProcPtr	
glVertex4dProcPtr	
glVertex4dvProcPtr	
glVertex4fProcPtr	
glVertex4fvProcPtr	
glVertex4iProcPtr	
glVertex4ivProcPtr	
glVertex4sProcPtr	
glVertex4svProcPtr	
glVertexPointerProcPtr	
glViewportProcPtr	
glWindowPos2dProcPtr	
glWindowPos2dvProcPtr	
glWindowPos2fProcPtr	
glWindowPos2fvProcPtr	
glWindowPos2iProcPtr	

glWindowPos2ivProcPtr	
glWindowPos2sProcPtr	
glWindowPos2svProcPtr	
glWindowPos3dProcPtr	
glWindowPos3dvProcPtr	
glWindowPos3fProcPtr	
glWindowPos3fvProcPtr	
glWindowPos3iProcPtr	
glWindowPos3ivProcPtr	
glWindowPos3sProcPtr	
glWindowPos3svProcPtr	

10.2 Symbol Changes

This article lists the symbols added to `AGL.framework` in Mac OS X v10.2.

C Symbols

All of the header files with new symbols are listed alphabetically, with their new symbols described.

agl.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

`aglSurfaceTexture`	Allows texturing from a drawable object that has an attached rendering context, using the surface contents as the source data for the texture.

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

`AGL_AUX_DEPTH_STENCIL`	The associated value is the independent depth and/or the stencil buffers for the auxiliary buffer.
`AGL_CLIP_REGION`	Enables or sets the drawable clipping region. The associated value is a rgnHandle data type that defines the clipping region.
`AGL_CONTEXT_DISPLAY_ID`	The associated value is a list of the display IDs of all displays touched by the rendering context, up to a maximum of 32 displays.
`AGL_CONTEXT_SURFACE_ID`	The associated value is the ID of the drawable surface for the rendering context. You can't set this value because the system sets it. However, you can retrieve the value using the function aglGetInteger.
`AGL_FS_CAPTURE_SINGLE`	Enables the capture of a single display for full-screen rendering. This option is disabled by default.
`AGL_SAMPLE_BUFFERS_ARB`	The associated value is the number of multisample buffers.

AGL_SAMPLES_ARB	The associated value is the number of samples per multisample buffer.
AGL_SURFACE_OPACITY	The associated value specifies the opacity of the OpenGL surface. A value of 1 means the surface is opaque (the default); 0 means completely transparent.
AGL_SURFACE_ORDER	The associated value is the position of the OpenGL surface relative to the window. A value of 1 means that the position is above the window; a value of –1 specifies a position that is below the window.
AGL_SWAP_LIMIT	Enable or disable the swap asynchronous limit.

aglMacro.h

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

AGL_MACRO_CONTEXT	
glActiveStencilFaceEXT	
glBindProgramARB	
glBindVertexArrayAPPLE	
glBlendColor	
glBlendEquation	
glBlendEquationSeparateATI	
glBlendFuncSeparate	
glBlendFuncSeparateEXT	
glColorSubTable	
glColorSubTableEXT	
glColorTable	
glColorTableEXT	
glColorTableParameterfv	
glColorTableParameteriv	
glCombinerInputNV	
glCombinerOutputNV	

glCombinerParameterfNV	
glCombinerParameterfvNV	
glCombinerParameteriNV	
glCombinerParameterivNV	
glCombinerStageParameterfvNV	
glConvolutionFilter1D	
glConvolutionFilter2D	
glConvolutionParameterf	
glConvolutionParameterfv	
glConvolutionParameteri	
glConvolutionParameteriv	
glCopyColorSubTable	
glCopyColorTable	
glCopyConvolutionFilter1D	
glCopyConvolutionFilter2D	
glCopyTexSubImage3D	
glDeleteFencesAPPLE	
glDeleteProgramsARB	
glDeleteVertexArraysAPPLE	
glDisableVertexAttribARB	
glDisableVertexAttribArrayARB	
glDrawElementArrayAPPLE	
glDrawRangeElementArrayAPPLE	
glDrawRangeElementsEXT	
glElementPointerAPPLE	
glEnableVertexAttribARB	
glEnableVertexAttribArrayARB	
glFinalCombinerInputNV	

glFinishFenceAPPLE	
glFinishObjectAPPLE	
glFlushVertexArrayRangeAPPLE	
glFogCoordd	
glFogCoorddEXT	
glFogCoorddv	
glFogCoorddvEXT	
glFogCoordf	
glFogCoordfEXT	
glFogCoordfv	
glFogCoordfvEXT	
glFogCoordPointer	
glFogCoordPointerEXT	
glGenFencesAPPLE	
glGenProgramsARB	
glGenVertexArraysAPPLE	
glGetColorTable	
glGetColorTableEXT	
glGetColorTableParameterfv	
glGetColorTableParameterfvEXT	
glGetColorTableParameteriv	
glGetColorTableParameterivEXT	
glGetCombinerInputParameterfvNV	
glGetCombinerInputParameterivNV	
glGetCombinerOutputParameterfvNV	
glGetCombinerOutputParameterivNV	
glGetCombinerStageParameterfvNV	
glGetConvolutionFilter	

glGetConvolutionParameterfv	
glGetConvolutionParameteriv	
glGetFinalCombinerInputParameterfvNV	
glGetHistogram	
glGetHistogramParameterfv	
glGetHistogramParameteriv	
glGetMinmax	
glGetMinmaxParameterfv	
glGetMinmaxParameteriv	
glGetProgramEnvParameterdvARB	
glGetProgramEnvParameterfvARB	
glGetProgramivARB	
glGetProgramLocalParameterdvARB	
glGetProgramLocalParameterfvARB	
glGetProgramStringARB	
glGetSeparableFilter	
glGetTexParameterPointervAPPLE	
glGetVertexAttribdvARB	
glGetVertexAttribfvARB	
glGetVertexAttribivARB	
glGetVertexAttribPointervARB	
glHistogram	
glIsFenceAPPLE	
glIsProgramARB	
glIsVertexArrayAPPLE	
glIsVertexAttribEnabledARB	
glMapVertexAttrib1dARB	
glMapVertexAttrib1fARB	

glMapVertexAttrib2dARB	
glMapVertexAttrib2fARB	
glMinmax	
glMultiDrawArrays	
glMultiDrawArraysEXT	
glMultiDrawElements	
glMultiDrawElementsEXT	
glPNTrianglesfATI	
glPNTrianglesfATIX	
glPNTrianglesiATI	
glPNTrianglesiATIX	
glPointParameterf	
glPointParameterfARB	
glPointParameterfv	
glPointParameterfvARB	
glPointParameteriNV	
glPointParameterivNV	
glProgramEnvParameter4dARB	
glProgramEnvParameter4dvARB	
glProgramEnvParameter4fARB	
glProgramEnvParameter4fvARB	
glProgramLocalParameter4dARB	
glProgramLocalParameter4dvARB	
glProgramLocalParameter4fARB	
glProgramLocalParameter4fvARB	
glProgramStringARB	
glResetHistogram	
glResetMinmax	

glSecondaryColor3b	
glSecondaryColor3bEXT	
glSecondaryColor3bv	
glSecondaryColor3bvEXT	
glSecondaryColor3d	
glSecondaryColor3dEXT	
glSecondaryColor3dv	
glSecondaryColor3dvEXT	
glSecondaryColor3f	
glSecondaryColor3fEXT	
glSecondaryColor3fv	
glSecondaryColor3fvEXT	
glSecondaryColor3i	
glSecondaryColor3iEXT	
glSecondaryColor3iv	
glSecondaryColor3ivEXT	
glSecondaryColor3s	
glSecondaryColor3sEXT	
glSecondaryColor3sv	
glSecondaryColor3svEXT	
glSecondaryColor3ub	
glSecondaryColor3ubEXT	
glSecondaryColor3ubv	
glSecondaryColor3ubvEXT	
glSecondaryColor3ui	
glSecondaryColor3uiEXT	
glSecondaryColor3uiv	
glSecondaryColor3uivEXT	

glSecondaryColor3us	
glSecondaryColor3usEXT	
glSecondaryColor3usv	
glSecondaryColor3usvEXT	
glSecondaryColorPointer	
glSecondaryColorPointerEXT	
glSeparableFilter2D	
glSetFenceAPPLE	
glTestFenceAPPLE	
glTestObjectAPPLE	
glTexImage3D	
glTexSubImage3D	
glTextureRangeAPPLE	
glVertexArrayParameteriAPPLE	
glVertexArrayRangeAPPLE	
glVertexAttrib1dARB	
glVertexAttrib1dvARB	
glVertexAttrib1fARB	
glVertexAttrib1fvARB	
glVertexAttrib1sARB	
glVertexAttrib1svARB	
glVertexAttrib2dARB	
glVertexAttrib2dvARB	
glVertexAttrib2fARB	
glVertexAttrib2fvARB	
glVertexAttrib2sARB	
glVertexAttrib2svARB	
glVertexAttrib3dARB	

glVertexAttrib3dvARB	
glVertexAttrib3fARB	
glVertexAttrib3fvARB	
glVertexAttrib3sARB	
glVertexAttrib3svARB	
glVertexAttrib4bvARB	
glVertexAttrib4dARB	
glVertexAttrib4dvARB	
glVertexAttrib4fARB	
glVertexAttrib4fvARB	
glVertexAttrib4ivARB	
glVertexAttrib4NbvARB	
glVertexAttrib4NivARB	
glVertexAttrib4NsvARB	
glVertexAttrib4NubARB	
glVertexAttrib4NubvARB	
glVertexAttrib4NuivARB	
glVertexAttrib4NusvARB	
glVertexAttrib4sARB	
glVertexAttrib4svARB	
glVertexAttrib4ubvARB	
glVertexAttrib4uivARB	
glVertexAttrib4usvARB	
glVertexAttribPointerARB	
glVertexBlendARB	
glWeightbvARB	
glWeightdvARB	
glWeightfvARB	

glWeightivARB	
glWeightPointerARB	
glWeightsvARB	
glWeightubvARB	
glWeightuivARB	
glWeightusvARB	
glWindowPos2d	
glWindowPos2dARB	
glWindowPos2dv	
glWindowPos2dvARB	
glWindowPos2f	
glWindowPos2fARB	
glWindowPos2fv	
glWindowPos2fvARB	
glWindowPos2i	
glWindowPos2iARB	
glWindowPos2iv	
glWindowPos2ivARB	
glWindowPos2s	
glWindowPos2sARB	
glWindowPos2sv	
glWindowPos2svARB	
glWindowPos3d	
glWindowPos3dARB	
glWindowPos3dv	
glWindowPos3dvARB	
glWindowPos3f	
glWindowPos3fARB	

glWindowPos3fv	
glWindowPos3fvARB	
glWindowPos3i	
glWindowPos3iARB	
glWindowPos3iv	
glWindowPos3ivARB	
glWindowPos3s	
glWindowPos3sARB	
glWindowPos3sv	
glWindowPos3svARB	

aglRenderers.h

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

AGL_RENDERER_APPLE_SW_ID	The Apple software renderer.
AGL_RENDERER_ATI_RADEON_8500_ID	An ATI Radeon 8500 display device.
AGL_RENDERER_ATI_RADEON_ID	An ATI Radeon display device.
AGL_RENDERER_ATI_RAGE_128_ID	An ATI Rage 128 display device.
AGL_RENDERER_ATI_RAGE_PRO_ID	An ATI Rage Pro display device.
AGL_RENDERER_MESA_3DFX_ID	A Mesa 3DFX display device.
AGL_RENDERER_NVIDIA_GEFORCE_2MX_ID	An NVIDIA GeForce 2MX display device or an NVIDIA GeForce 4MX.
AGL_RENDERER_NVIDIA_GEFORCE_3_ID	An NVIDIA GeForce 3 display device or an NVIDIA GeForce 4 Ti.

gl.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glBlendFuncSeparate	
glFogCoordd	
glFogCoorddv	
glFogCoordf	
glFogCoordfv	
glFogCoordPointer	
glMultiDrawArrays	
glMultiDrawElements	
glPointParameterf	
glPointParameterfv	
glSecondaryColor3b	
glSecondaryColor3bv	
glSecondaryColor3d	
glSecondaryColor3dv	
glSecondaryColor3f	
glSecondaryColor3fv	
glSecondaryColor3i	
glSecondaryColor3iv	
glSecondaryColor3s	
glSecondaryColor3sv	
glSecondaryColor3ub	
glSecondaryColor3ubv	
glSecondaryColor3ui	
glSecondaryColor3uiv	

glSecondaryColor3us	
glSecondaryColor3usv	
glSecondaryColorPointer	
glWindowPos2d	
glWindowPos2dv	
glWindowPos2f	
glWindowPos2fv	
glWindowPos2i	
glWindowPos2iv	
glWindowPos2s	
glWindowPos2sv	
glWindowPos3d	
glWindowPos3dv	
glWindowPos3f	
glWindowPos3fv	
glWindowPos3i	
glWindowPos3iv	
glWindowPos3s	
glWindowPos3sv	

10.1 Symbol Changes

This article lists the symbols added to `AGL.framework` in Mac OS X v10.1.

C Symbols

All of the header files with new symbols are listed alphabetically, with their new symbols described.

agl.h

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

`AGL_ORDER_CONTEXT_TO_FRONT`	Specifies to order the current rendering context in front of all the other contexts.

aglMacro.h

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

`glActiveTexture`	
`glClientActiveTexture`	
`glCompressedTexImage1D`	
`glCompressedTexImage1DARB`	
`glCompressedTexImage2D`	
`glCompressedTexImage2DARB`	
`glCompressedTexImage3D`	
`glCompressedTexImage3DARB`	

glCompressedTexSubImage1D	
glCompressedTexSubImage1DARB	
glCompressedTexSubImage2D	
glCompressedTexSubImage2DARB	
glCompressedTexSubImage3D	
glCompressedTexSubImage3DARB	
glDrawRangeElements	
glGetCompressedTexImage	
glGetCompressedTexImageARB	
glLoadTransposeMatrixd	
glLoadTransposeMatrixdARB	
glLoadTransposeMatrixf	
glLoadTransposeMatrixfARB	
glMultiTexCoord1d	
glMultiTexCoord1dv	
glMultiTexCoord1f	
glMultiTexCoord1fv	
glMultiTexCoord1i	
glMultiTexCoord1iv	
glMultiTexCoord1s	
glMultiTexCoord1sv	
glMultiTexCoord2d	
glMultiTexCoord2dv	
glMultiTexCoord2f	
glMultiTexCoord2fv	
glMultiTexCoord2i	
glMultiTexCoord2iv	
glMultiTexCoord2s	

glMultiTexCoord2sv	
glMultiTexCoord3d	
glMultiTexCoord3dv	
glMultiTexCoord3f	
glMultiTexCoord3fv	
glMultiTexCoord3i	
glMultiTexCoord3iv	
glMultiTexCoord3s	
glMultiTexCoord3sv	
glMultiTexCoord4d	
glMultiTexCoord4dv	
glMultiTexCoord4f	
glMultiTexCoord4fv	
glMultiTexCoord4i	
glMultiTexCoord4iv	
glMultiTexCoord4s	
glMultiTexCoord4sv	
glMultTransposeMatrixd	
glMultTransposeMatrixdARB	
glMultTransposeMatrixf	
glMultTransposeMatrixfARB	
glSampleCoverage	
glSampleCoverageARB	
glSamplePass	
glSamplePassARB	

gl.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glActiveTexture	
glBlendColor	
glBlendEquation	
glClientActiveTexture	
glColorSubTable	
glColorTable	
glColorTableParameterfv	
glColorTableParameteriv	
glCompressedTexImage1D	
glCompressedTexImage2D	
glCompressedTexImage3D	
glCompressedTexSubImage1D	
glCompressedTexSubImage2D	
glCompressedTexSubImage3D	
glConvolutionFilter1D	
glConvolutionFilter2D	
glConvolutionParameterf	
glConvolutionParameterfv	
glConvolutionParameteri	
glConvolutionParameteriv	
glCopyColorSubTable	
glCopyColorTable	
glCopyConvolutionFilter1D	
glCopyConvolutionFilter2D	

glCopyTexSubImage3D	
glDrawRangeElements	
glGetColorTable	
glGetColorTableParameterfv	
glGetColorTableParameteriv	
glGetCompressedTexImage	
glGetConvolutionFilter	
glGetConvolutionParameterfv	
glGetConvolutionParameteriv	
glGetHistogram	
glGetHistogramParameterfv	
glGetHistogramParameteriv	
glGetMinmax	
glGetMinmaxParameterfv	
glGetMinmaxParameteriv	
glGetSeparableFilter	
glHistogram	
glLoadTransposeMatrixd	
glLoadTransposeMatrixf	
glMinmax	
glMultiTexCoord1d	
glMultiTexCoord1dv	
glMultiTexCoord1f	
glMultiTexCoord1fv	
glMultiTexCoord1i	
glMultiTexCoord1iv	
glMultiTexCoord1s	
glMultiTexCoord1sv	

glMultiTexCoord2d	
glMultiTexCoord2dv	
glMultiTexCoord2f	
glMultiTexCoord2fv	
glMultiTexCoord2i	
glMultiTexCoord2iv	
glMultiTexCoord2s	
glMultiTexCoord2sv	
glMultiTexCoord3d	
glMultiTexCoord3dv	
glMultiTexCoord3f	
glMultiTexCoord3fv	
glMultiTexCoord3i	
glMultiTexCoord3iv	
glMultiTexCoord3s	
glMultiTexCoord3sv	
glMultiTexCoord4d	
glMultiTexCoord4dv	
glMultiTexCoord4f	
glMultiTexCoord4fv	
glMultiTexCoord4i	
glMultiTexCoord4iv	
glMultiTexCoord4s	
glMultiTexCoord4sv	
glMultTransposeMatrixd	
glMultTransposeMatrixf	
glResetHistogram	
glResetMinmax	

glSampleCoverage	
glSamplePass	
glSeparableFilter2D	
glTexImage3D	
glTexSubImage3D	

glm.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

glmCalloc	
glmCopy	
glmDCBAlloc	
glmDCBFree	
glmFree	
glmGetError	
glmGetInteger	
glmMalloc	
glmPageFreeAll	
glmRealloc	
glmSetDouble	
glmSetFunc	
glmSetInteger	
glmSetMode	
glmSetUByte	
glmSetUInt	
glmSetUShort	
glmVecAlloc	

glmVecFree	
glmZero	

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

GLM_APPLICATION_HEAP_MODE	
GLM_COPY_FUNC_PTR	
GLM_CURRENT_MEMORY	
GLM_INVALID_ENUM	
GLM_INVALID_OPERATION	
GLM_INVALID_VALUE	
GLM_MAXIMUM_MEMORY	
GLM_MULTIPROCESSOR_MODE	
GLM_NO_ERROR	
GLM_NUMBER_PAGES	
GLM_OUT_OF_MEMORY	
GLM_OVERRIDE_MODE	
GLM_PAGE_ALLOCATION_FUNC_PTR	
GLM_PAGE_FREE_FUNC_PTR	
GLM_PAGE_SIZE	
GLM_SET_DOUBLE_FUNC_PTR	
GLM_SET_UBYTE_FUNC_PTR	
GLM_SET_UINT_FUNC_PTR	
GLM_SET_USHORT_FUNC_PTR	
GLM_SYSTEM_HEAP_MODE	
GLM_VERSION_2_0	
GLM_ZERO_FUNC_PTR	
GLMCopyFunc	

GLMPageAllocFunc	
GLMPageFreeFunc	
GLMSetDoubleFunc	
GLMSetUByteFunc	
GLMSetUIntFunc	
GLMSetUShortFunc	
GLMZeroFunc	

glu.h

Functions

All of the new functions in this header file are listed alphabetically, with links to documentation and abstracts, if available.

gluBuild1DMipmapLevels	
gluBuild2DMipmapLevels	
gluBuild3DMipmapLevels	
gluBuild3DMipmaps	
gluCheckExtension	
gluNurbsCallbackData	
gluUnProject4	

Data Types & Constants

All of the new data types and constants in this header file are listed alphabetically, with links to documentation and abstracts, if available.

GLUnurbs	
GLUquadric	
GLUtesselator	

Document Revision History

This table describes the changes to *AGL Reference Update*.

Date	Notes
2007-07-18	Updated with the symbols added to the AGL framework in Mac OS X v10.5.
2005-06-04	Updated for Mac OS X v10.4.
2005-04-29	New document that summarizes the symbols added to the AGL framework in Mac OS X v10.4.