Math&Com Graphics Lab

Computer Graphics Programming

OpenGL Setting

What is **OpenGL**?

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- C C++
- C (run-time library)
- Microsoft Visual studio 6.0
 gl)
- glut

(aux,

visual C++

OpenGL Setup

C:\..

Microsoft visual studio 6.0 \Microsoft Visual studio\VC98\INCLUDE\GL

gl.h, glaux.h, glu.h

glut

http://www.opengl.org/resources/libraries/glut/glut_downloads.html

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glut

Microsoft visual studio

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GLUT-3.7

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GLUT Setup

http://www.opengl.org/resources/libraries/glut/glut_downloads.html GLUT for Microsoft Windows 95 & NT users

Contents 3



Decompression

glut37.zip, glut37data.zip

(D:\glut-3.7

, glut-3.7 가)

glutdlls37beta.zip

*.lib	→ D:\glut-3.7\lib\glut

- glut.h
- → VC98\Include\GL

glut.dll

- \rightarrow C:\WINNT\system32
- glut32.dll
- → C:\WINNT\system32

Microsoft visual studio

, GLUT-3.7

Setup (1) :

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Setup (2) :

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Setup (6) :

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Setup (7) :

Library



Setup (8)

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Example

- The display window and line segment
 - An Example OpenGL Program

Making Project (1)

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- [File] new

 - Project name

New	?×
Files Projects Workspaces Other Documents]
Win32 Console Application	Project name:
Win32 Dynamic-Link Library	chapter2
, j	Lo <u>c</u> ation:
	F:#coding#chapter2
	• Create new workspace
	C Add to current workspace
	Dependency of:
	Opengl
	Platforms:
	In S2
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Making Project (2)

An empty project



- Finish

Making Project (3)

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Making Project (4)

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Making Project (5)

```
#include <gl/glut.h> // (or others, depending on the system in use)
void init (void)
{
    glClearColor (1.0, 1.0, 1.0, 0.0); // Set display-window color to white.
    glMatrixMode (GL_PROJECTION); // Set projection parameters.
    gluOrtho2D (0.0, 200.0, 0.0, 150.0);
}
void lineSegment (void)
{
    glClear (GL_COLOR_BUFFER_BIT); // Clear display window.
    glColor3f(1.0, 0.0, 0.0); // Set line segment color to red.
    glBegin (GL_LINES);
           glVertex2i (180, 15); // Specify line-segment geometry.
           glVertex2i (10, 145);
           glEnd();
           glFlush (); // Process all OpenGL routines as quickly as possible.
```

Making Project (6)

```
void main (int argc, char** argv)
{
    glutInit (&argc, argv); // Initialize GLUT.
    glutInitDisplayMode (GLUT_SINGLE | GLUT_RGB); // Set display mode.
    glutInitWindowPosition (50, 100); // Set top-left display-window position.
    glutInitWindowSize (400, 300); // Set display-window width and height.
    glutCreateWindow ("An Example OpenGL Program"); // Create display window.
    init(); // Execute initialization procedure.
    glutDisplayFunc (lineSegment); // Send graphics to display window.
    glutMainLoop(); // Display everything and wait.
```

Making Project (7)



Making Project (8)

Ctrl + F7



Making Project (9)

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Build

F7



Making Project (10)

Execute

Ctrl + F5



Making Project (9)

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