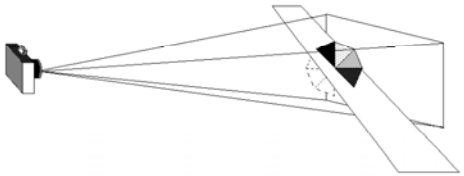
OpenGL

Dodatak - A

Dodatne Clipping ravni



void **glClipPlane**(GLenum *plane*, const GLdouble **equation*);

plane – GL_CLIP_PLANE*i* , *equarion* = {A, B, C, D}

Jednačina ravni: A**x**+B**y**+C**z**+D = 0,

odsečci na osama (x, y, z, respektivno): a = -D/A, b = -D/B, c = -D/C

Sve tačke se **eye** koordinatama (xe, ye, ze, we) koje zadovoljavaju nejednakost:

(A B C D) M^{-1} (xe ye ze we)^T >= 0 leže u vidljivom poluprostoru, gde je M tekuća modelview matrica u trenutku kada je pozvana funkcija **glClipPlane()**.

glEnable(GL_CLIP_PLANE*i*); **glDisable(GL_CLIP_PLANE*i*);**

Primer clip-ravni

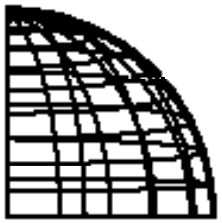
```
GLdouble eqn[4] = {0.0, 1.0, 0.0, 0.0};    /* y < 0 */
GLdouble eqn2[4] = {1.0, 0.0, 0.0, 0.0};   /* x < 0 */

glClear(GL_COLOR_BUFFER_BIT);

glColor3f (1.0, 1.0, 1.0);
glPushMatrix();
glTranslatef (0.0, 0.0, -5.0);

glClipPlane (GL_CLIP_PLANE0, eqn);
glEnable (GL_CLIP_PLANE0);
glClipPlane (GL_CLIP_PLANE1, eqn2);
glEnable (GL_CLIP_PLANE1);

glRotatef (90.0, 1.0, 0.0, 0.0);
auxWireSphere(1.0);
glPopMatrix();
glFlush();
```



GLUT pre-built models sub-API

- GLUTAPI void APIENTRY glutWireSphere(GLdouble radius, GLint slices, GLint stacks);
- GLUTAPI void APIENTRY glutSolidSphere(GLdouble radius, GLint slices, GLint stacks);
- GLUTAPI void APIENTRY glutWireCone(GLdouble base, GLdouble height, GLint slices, GLint stacks);
- GLUTAPI void APIENTRY glutSolidCone(GLdouble base, GLdouble height, GLint slices, GLint stacks);
- GLUTAPI void APIENTRY glutWireCube(GLdouble size);
- GLUTAPI void APIENTRY glutSolidCube(GLdouble size);
- GLUTAPI void APIENTRY glutWireTorus(GLdouble innerRadius, GLdouble outerRadius, GLint sides, GLint rings);
- GLUTAPI void APIENTRY glutSolidTorus(GLdouble innerRadius, GLdouble outerRadius, GLint sides, GLint rings);
- GLUTAPI void APIENTRY glutWireDodecahedron(void);
- GLUTAPI void APIENTRY glutSolidDodecahedron(void);
- GLUTAPI void APIENTRY glutWireTeapot(GLdouble size);
- GLUTAPI void APIENTRY glutSolidTeapot(GLdouble size);
- GLUTAPI void APIENTRY glutWireOctahedron(void);
- GLUTAPI void APIENTRY glutSolidOctahedron(void);
- GLUTAPI void APIENTRY glutWireTetrahedron(void);
- GLUTAPI void APIENTRY glutSolidTetrahedron(void);
- GLUTAPI void APIENTRY glutWireIcosahedron(void);
- GLUTAPI void APIENTRY glutSolidIcosahedron(void);