GL to OSL

Examples of GL code can be found here

www.glslsandbox.com

GL:		OSL:
This.x	=	This[0]
This.y	=	This[1]
This.z	=	This[2]
mat2(a,b,c,d)	=	matrix(a,b,0,0,c,d,0,0,0,0,0,0,0,0,0,0)
mat3(a,b,c,d,e,f,g,h,i)	=	matrix(a,b,c,0,d,e,f,0,g,h,i,0,0,0,0,0,)
vec2(a,b)	=	vector(a,b,0)
vec3(a,b,c)	=	vector(a,b,c)
atan	=	atan2

CHANNELS

GL:

```
float mlength(vec2 uv) {
uv = abs(uv);
    return uv.x + uv.y;
}
```

OSL:

```
float mlength(vector uv) {
uv = abs(uv);
    return uv[0] + uv[1];
}
```

MATRIX

GL:

```
mat2 rotate(float a) {
float c = cos(a),
      s = sin(a);
   return mat2(c, -s, s, c);
}
```

OSL

```
matrix Rotate ( float a){
float c = cos(a),
      s = sin(a);
   return matrix(c,-s,0,0,  s, c,0,0,  0,0,0,0,  0,0,0,0);
}
```

RANDOM FLOAT

GL:

```
float random (in vec2 _st)
{
   return fract(sin(dot(_st.xy, vec2(12.9898,78.233)))*43758.5453123);
}
```

OSL:

```
float fract ( float x ) {
   return x – floor (x);
}

float Random (vector _st)
{
   return fract(sin(dot(_st, vector(12.9898,78.233,0)))*43758.5453123);
}
```