



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Creator Date April 1, 2019		Description IOR Material Work		2	
Format A3		Version 001		3	
Drawn by [dj]		Reviewed by Argos.Vu		4	
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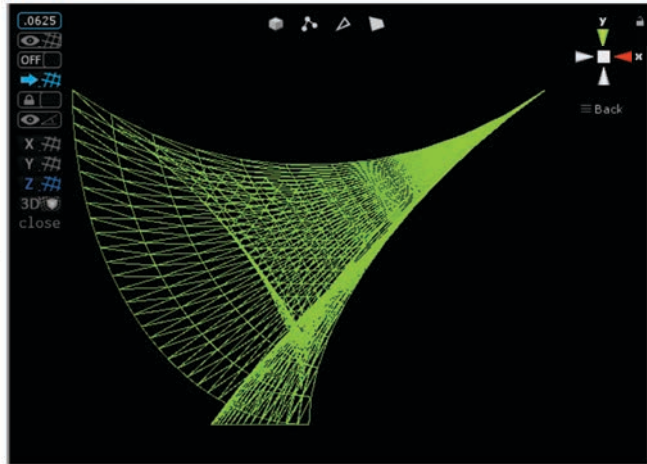
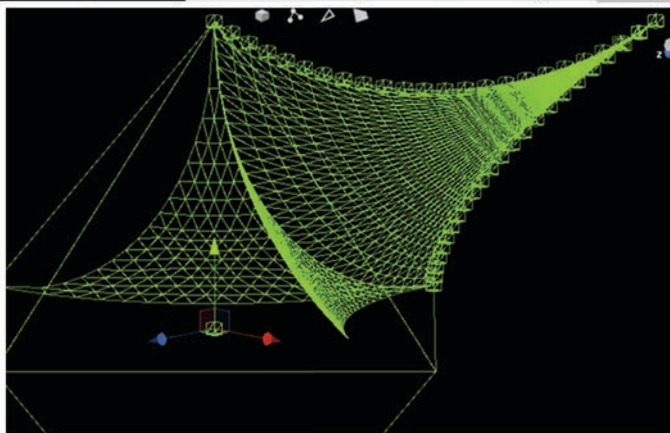
VERGE3D TRIAL - USE IN PRODUCTION PRO

Author Name Terrence Howard		Description Wave Conjugations IOR Material Work Realtime 3D Rendering	H
Creation Date April 1, 2019			W
Format A3		Version 001	G
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				Page 2	
				Page 1	

```

x1: 200;
y1: 100;
z1: 100;
axisDirectional: @.R;
luminance: 1;
inclination: 0.49, // elevation / inclination
azimuth: 0.25, // facing front,
sun: 1 true
};

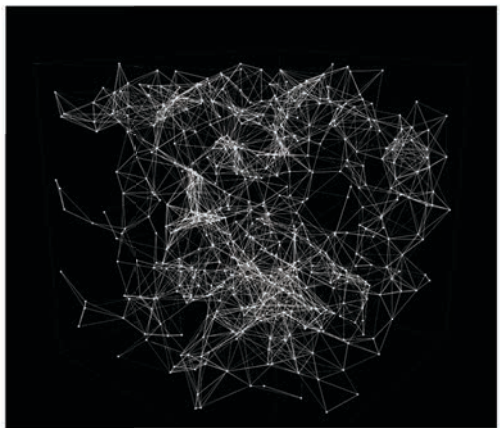
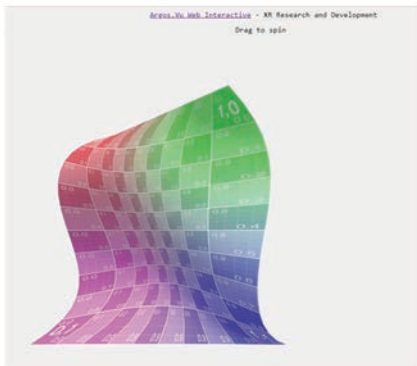
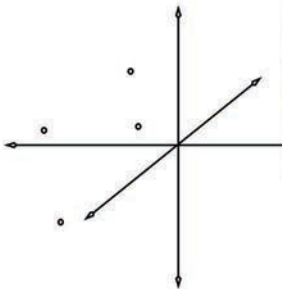
var distance = 400000;

function guiChanged() {
    mcControlPoints =
    [
        new v3d.Vector4(- effectController.x1, - effectController.y1, effectController.z1, 1),
        new v3d.Vector4( effectController.x1, - effectController.y1, - effectController.z1, 1),
        new v3d.Vector4(- effectController.x1, effectController.y1, effectController.z1, 1),
        new v3d.Vector4( effectController.x1, effectController.y1, - effectController.z1, 1)
    ];

    new v3d.Vector4(0, - effectController.y1, 0, 1);
    new v3d.Vector4(0, - effectController.y1, - effectController.z1, 5);
    new v3d.Vector4(0, effectController.y1, effectController.z1, 5);
    new v3d.Vector4(0, effectController.y1, 0, 1)
    ];

    new v3d.Vector4(effectController.x1, - effectController.y1, - effectController.z1, 1);
    new v3d.Vector4(effectController.x1, - effectController.y1, effectController.z1, 1);
    new v3d.Vector4(effectController.x1, effectController.y1, - effectController.z1, 1);
    new v3d.Vector4(effectController.x1, effectController.y1, effectController.z1, 1)
    ];
}

```




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```

private Vector3 Sphere_Surf(Vector3 vP0, Vector3 sector_Focus)
{
    Vector3 e1 = vP0.normalized;

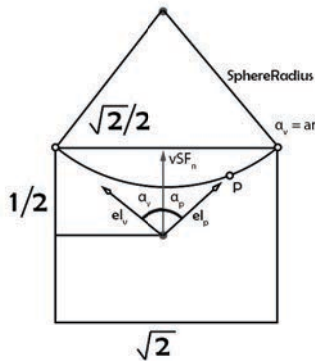
    Vector3 OminC = -sector_Focus;
    float rsqr = sphere_Radius * sphere_Radius;

    float dotLOminC = Vector3.Dot(e1, OminC);
    float Omag = OminC.magnitude;

    float d = -dotLOminC - Mathf.Sqrt(dotLOminC * dotLOminC - Omag * Omag - sphere_Radius * sphere_Radius);

    return e1 * d;
}

```



$$\alpha_v = \arctan(\sqrt{2}) = 35.2643896$$

Dialate

$$\text{adj} * \text{Dot}(e_v, vSF_v) - \text{Cos}(35.2643896)$$

```

Vector3 targOrg = vS;
Vector3 targCent = vTetra_Tip;
float targRad = Mathf.Sqrt(6);

t1 = 0;
if (t1 < tF)
{
    targOrg = Vector3.Lerp(vS, vT, t1);
    targCent = Vector3.Lerp(vS, vTetra_Tip, t1);
    targRad = Mathf.Lerp(1, Mathf.Sqrt(6), t1);
}

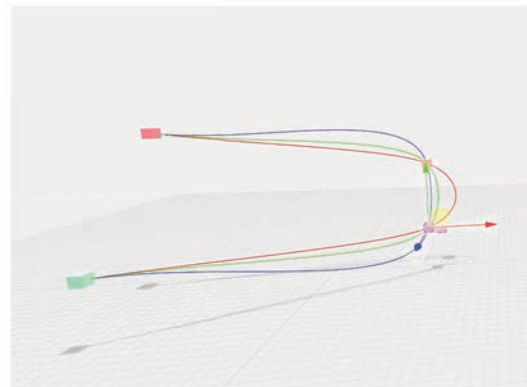
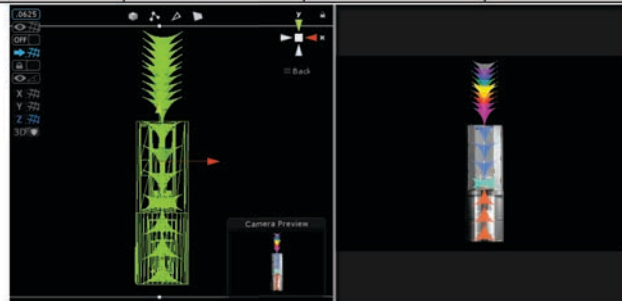
float radius = 1; // (targOrg - targCent).magnitude / Mathf.Sqrt(2); //Mathf.Sqrt(6);
Vector3 l = (vP0 - targOrg).normalized;
Vector3 OminC = targOrg - targCent;
float rsqr = radius * radius;

float dotLOminC = Vector3.Dot(l, OminC);
float Omag = OminC.magnitude;

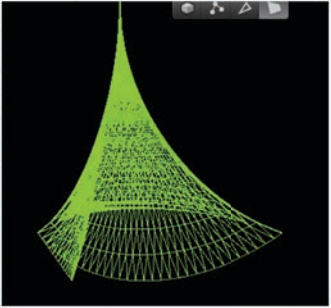
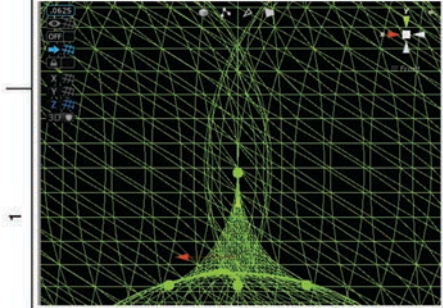
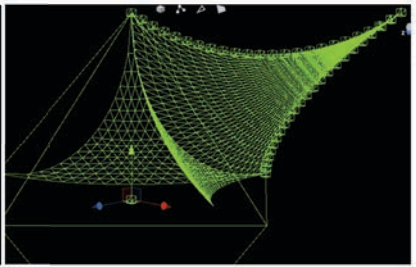
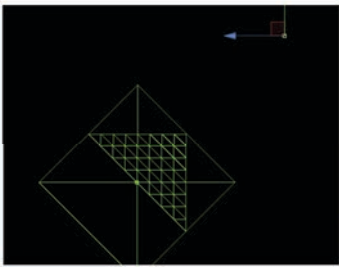
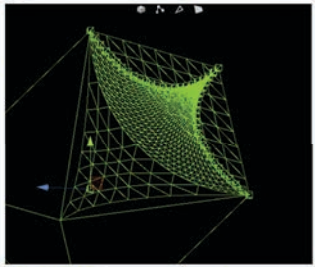
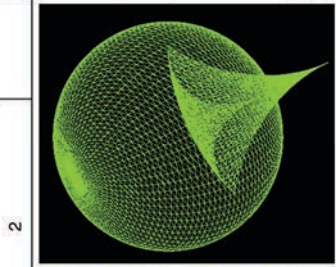
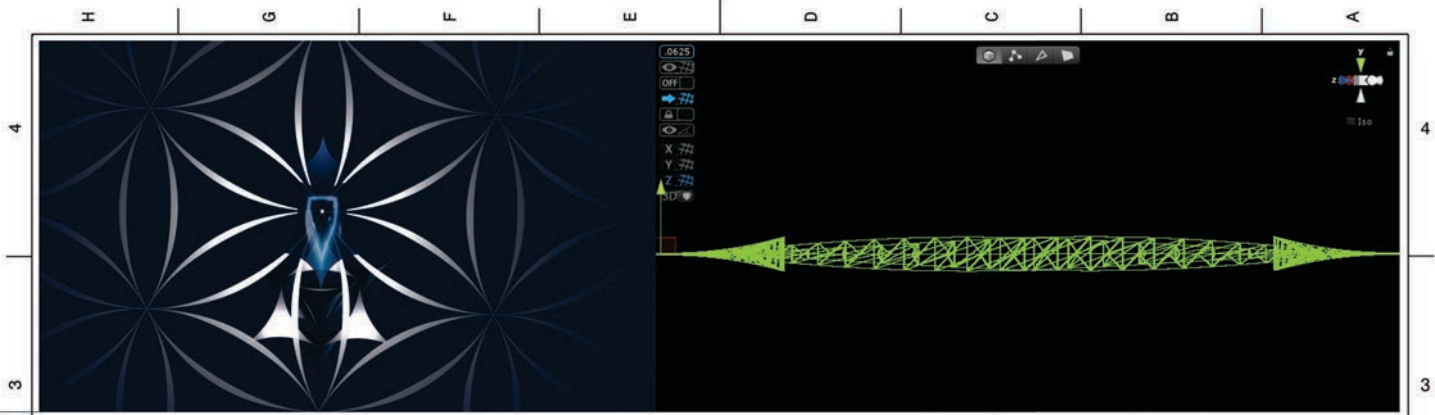
float d = -dotLOminC - Mathf.Sqrt(dotLOminC * dotLOminC - Omag * Omag + radius * radius);

return origin + l * d;

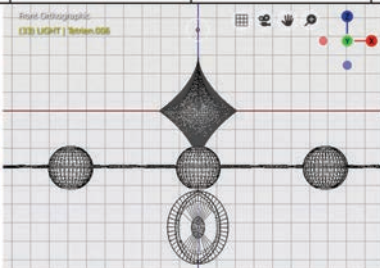
```



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Creation Date April 1, 2019		IOR Material Work		H
Filename As	Rendered by Argos.Vu	Realtime 3D Rendering		G
Thumbnail /dl	Version 001	Phase 7		F
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				D
				C
				B
				A



Transform

Location:

X: 0.20139

Y: 0.10736

Z: 0.19955

Rotation:

X: -35.3°

Y: -54.7°

Z: 90°

XYZ Euler

Scale:

X: 0.000

Y: 0.000

Z: 0.000

Dimensions:

X: 0.000

Y: 0.000

```
//Large Arcs
int ringSegments = (int)(torusSegments * 120 / 360F);
and_RINGS.Add(HeshDraft.Torus_Arc(120, circ_locs[1], tubeRadius, segments, outerRadius, torusSegments, ringSegments,
and_RINGS.Add(HeshDraft.Torus_Arc(180, circ_locs[2], tubeRadius, segments, outerRadius, torusSegments, ringSegments,

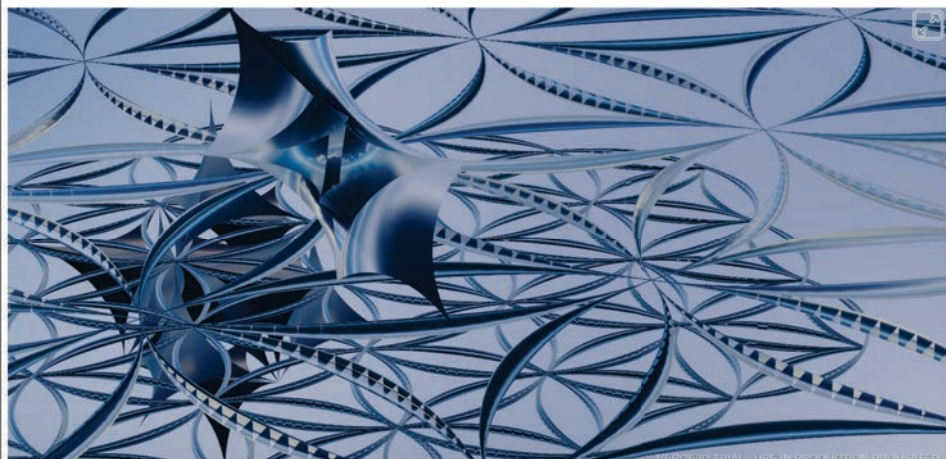
and_RINGS.Add(HeshDraft.Torus_Arc(240, circ_locs[3], tubeRadius, segments, outerRadius, torusSegments, ringSegments,
and_RINGS.Add(HeshDraft.Torus_Arc(300, circ_locs[4], tubeRadius, segments, outerRadius, torusSegments, ringSegments,

and_RINGS.Add(HeshDraft.Torus_Arc(0, circ_locs[5], tubeRadius, segments, outerRadius, torusSegments, ringSegments,
and_RINGS.Add(HeshDraft.Torus_Arc(60, circ_locs[6], tubeRadius, segments, outerRadius, torusSegments, ringSegments,

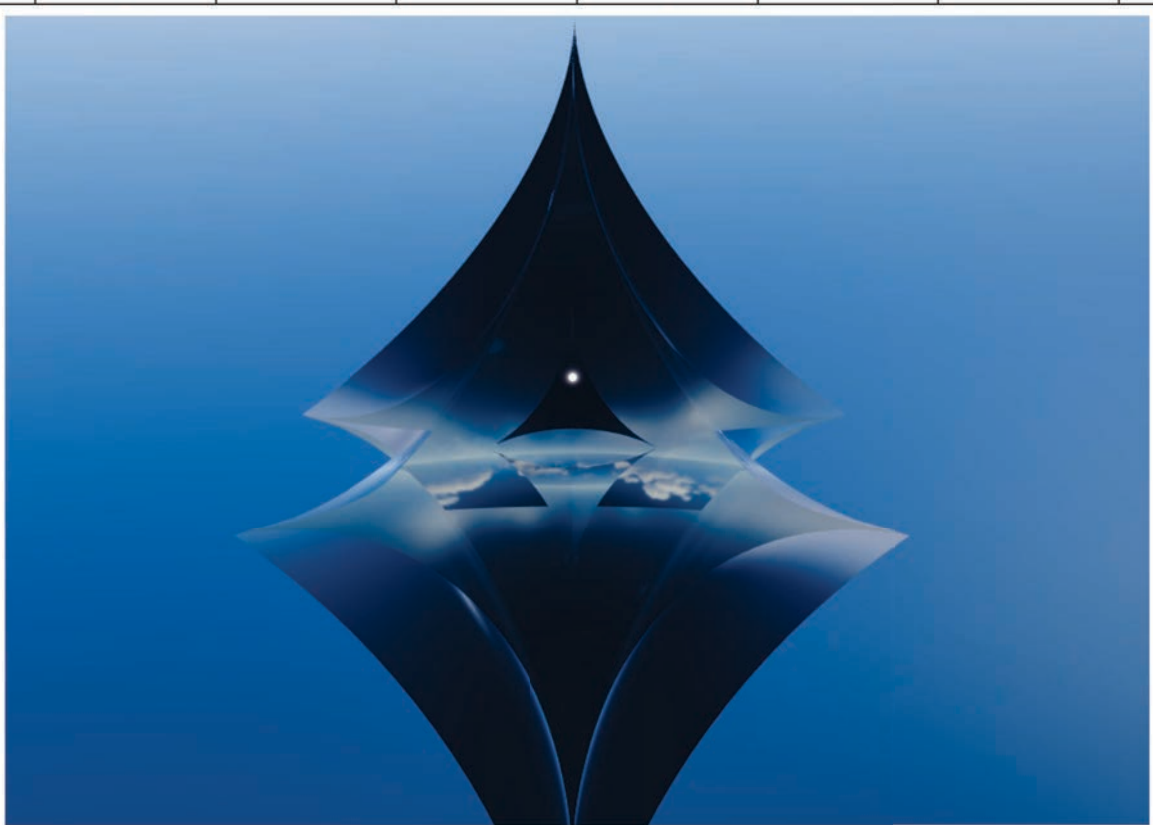
//Scallops
ringSegments = (int)(torusSegments * 60 / 360F);
and_RINGS.Add(HeshDraft.Torus_Arc(180, circ_locs[13], tubeRadius, segments, outerRadius, torusSegments, ringSegments,
and_RINGS.Add(HeshDraft.Torus_Arc(240, circ_locs[14], tubeRadius, segments, outerRadius, torusSegments, ringSegments,


and_RINGS.Add(HeshDraft.Torus_Arc(300, circ_locs[15], tubeRadius, segments, outerRadius, torusSegments, ringSegments,
and_RINGS.Add(HeshDraft.Torus_Arc(0, circ_locs[16], tubeRadius, segments, outerRadius, torusSegments, ringSegments,

and_RINGS.Add(HeshDraft.Torus_Arc(60, circ_locs[17], tubeRadius, segments, outerRadius, torusSegments, ringSegments,
and_RINGS.Add(HeshDraft.Torus_Arc(120, circ_locs[18], tubeRadius, segments, outerRadius, torusSegments, ringSegments,
```



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