

3D svet - Flash, HTML5



Adobe User Group Slovakia
Bratislava
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Obsah

Modelovacie nástroje

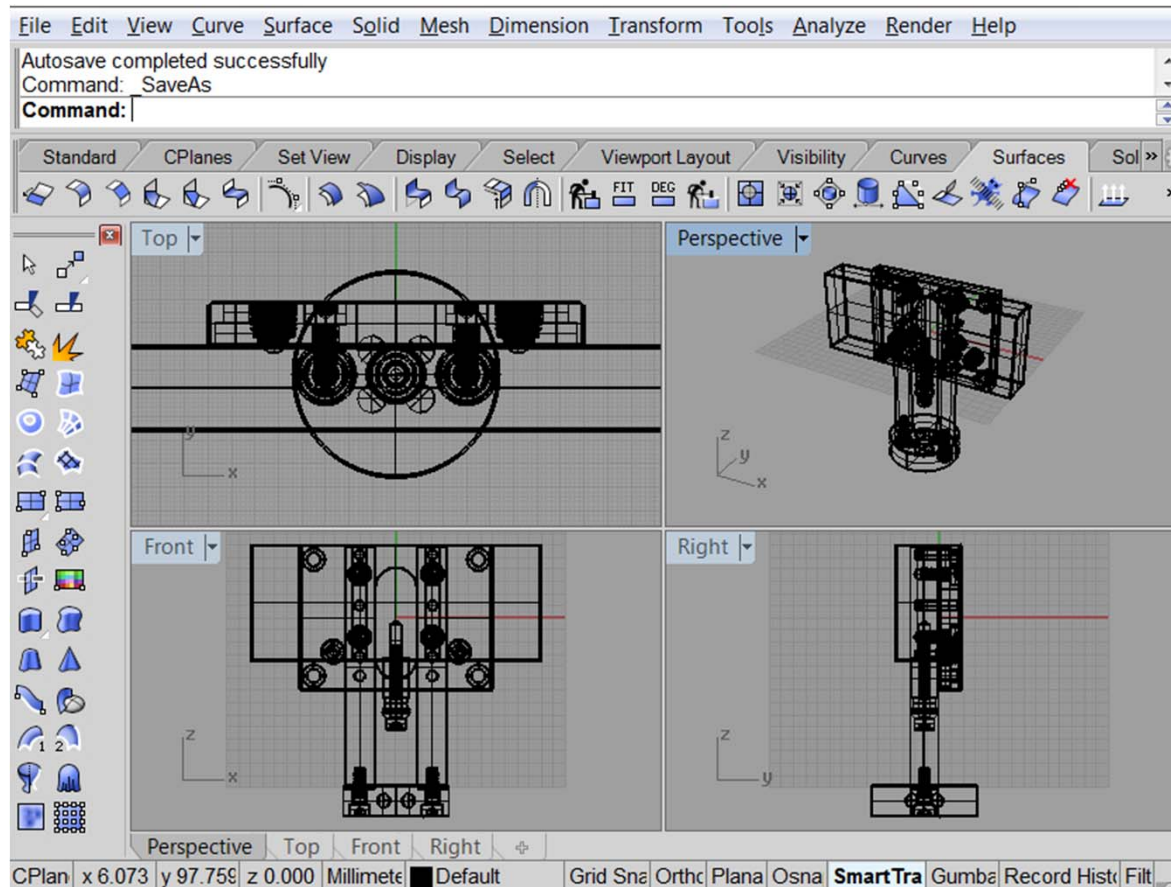
Flash a 3D

Collajader

Android a Alternativa 3D

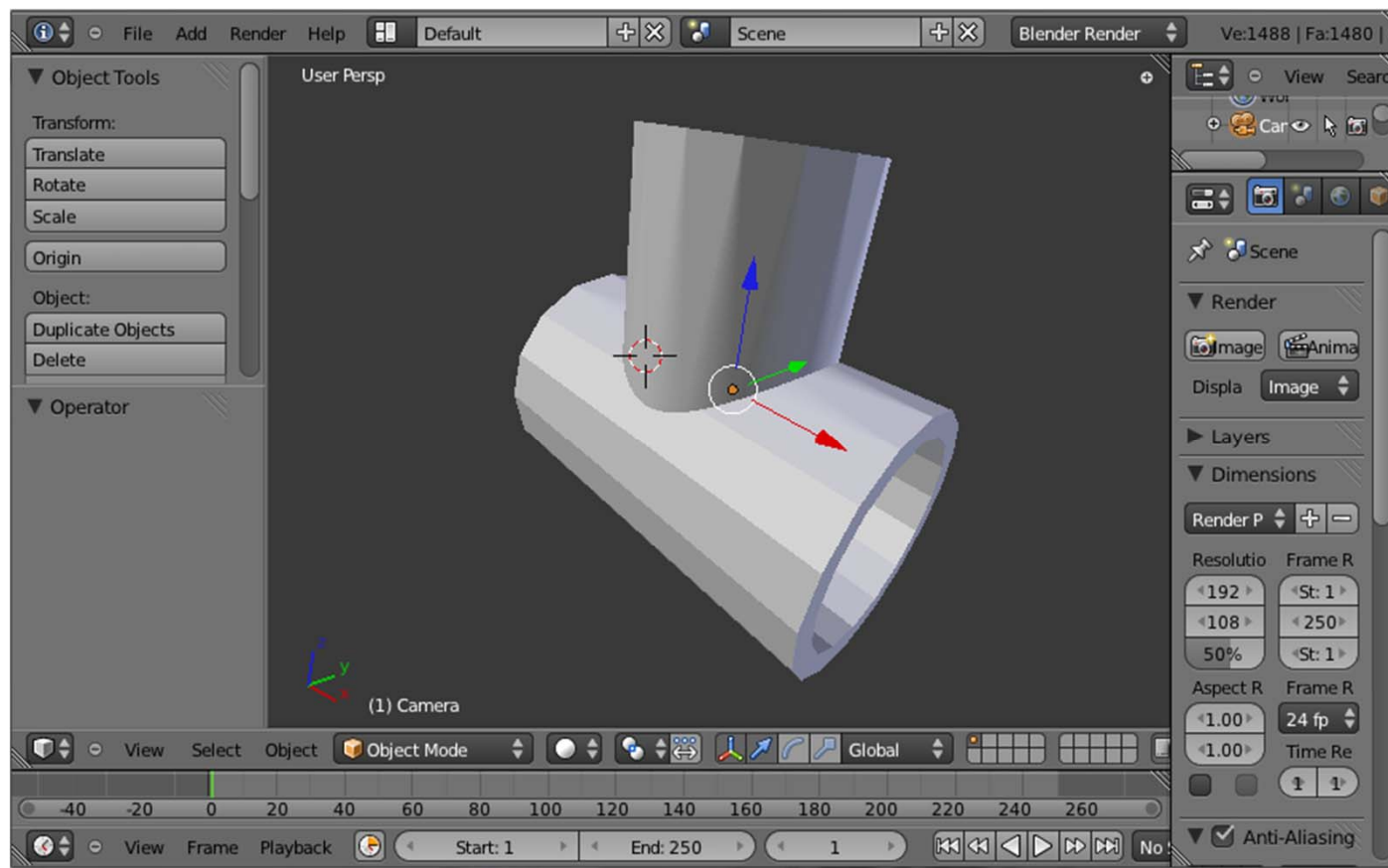
HTML5 – Canvas a WebGL

Rhinoceros



Ovládanie typu Illustrator
Podporuje aj .STEP, .IGES a CAD formáty

Blender



Používať Beta verziu. Open source. Menší počet podporovaných formátov.

Autodesk 3D Studio Max

Silný nástroj.

Alternativa 3D Export plugin.

Flash a 3D

Away3D

Alternativa3D

Papervision (update z 2009)

Sandy3D

Flare3D

Molehill

Flash 11

Podpora akcelerovaného 3D
už „čoskoro“...

Bude podporovaný aj Linux?

Molehill

Iná architektúra

Iné API!

Alternativa 3D v7 != Alternativa 3D v8
12 000 polygónov != 3 000 000 polygónov

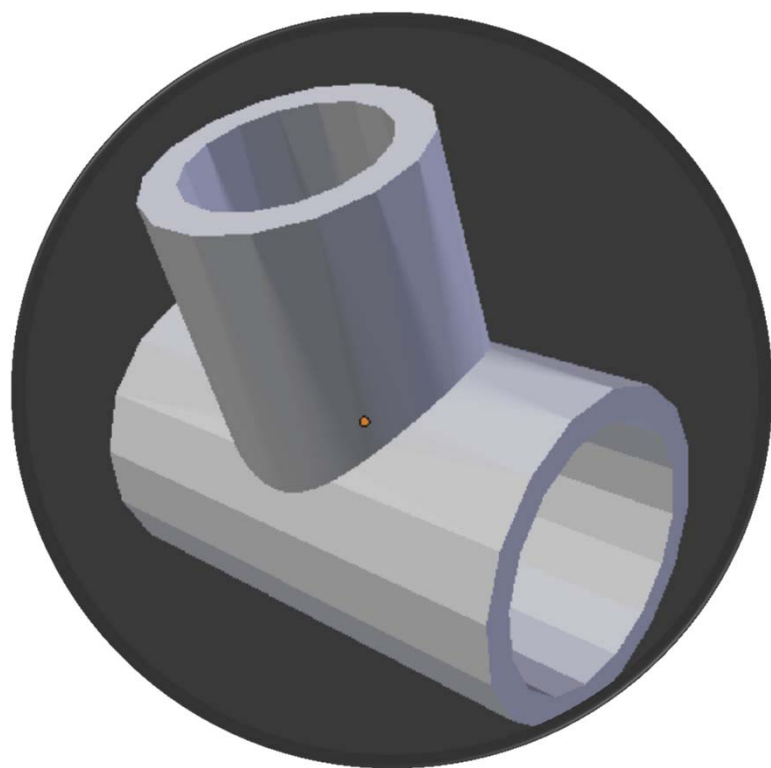
Svet bez Molehillu

Alternativa 3D v7

„Až“ 12 000 polygónov na scéne.

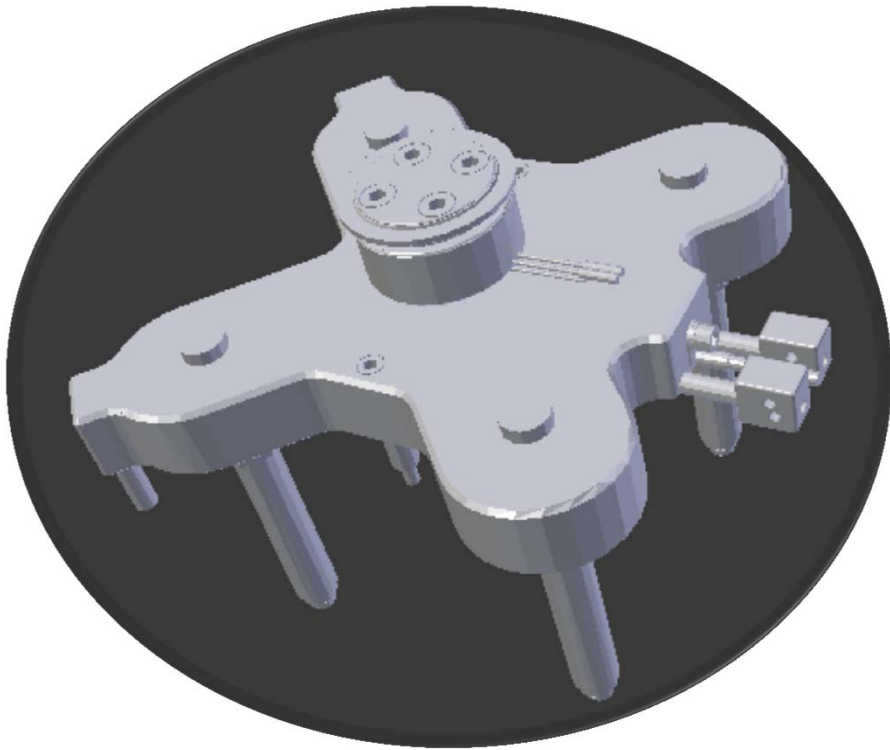
To nie je až tak moc.

Zložitejší 3D objekt



1480 povrchov

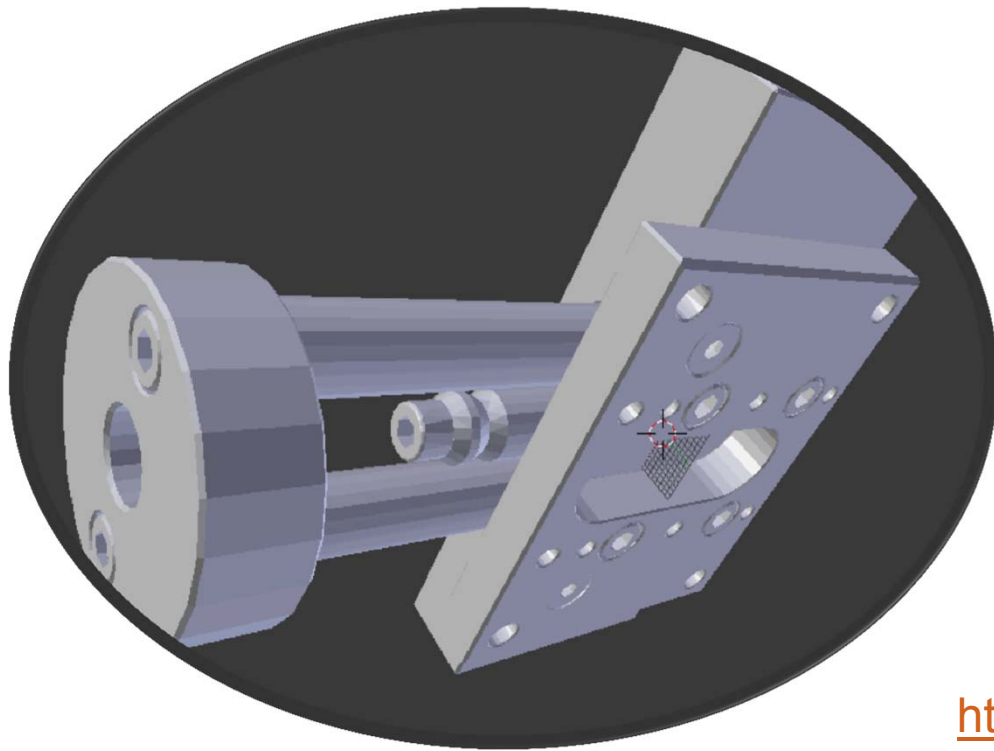
HotRunnerModel.com



13150 povrchov

www.hotrunnermodel.com

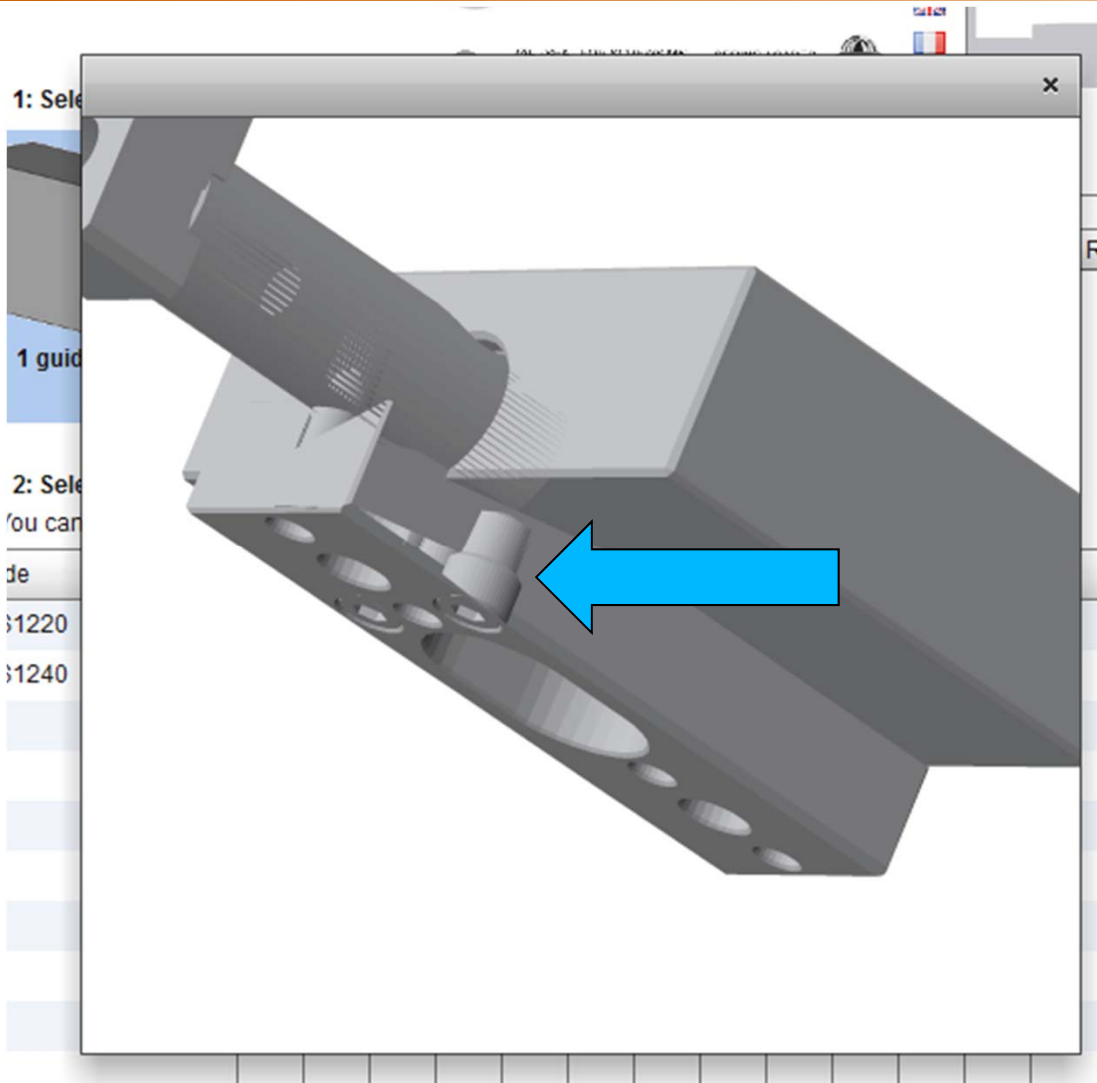
Standard Slide



32364 povrchov

<http://www.jansvoboda.cz/generator-3d-modelu>

Normálový vektor



3D povrch je viditeľný len z jednej strany.

Diery v obraze.

Nutné opraviť normály.

Collajader

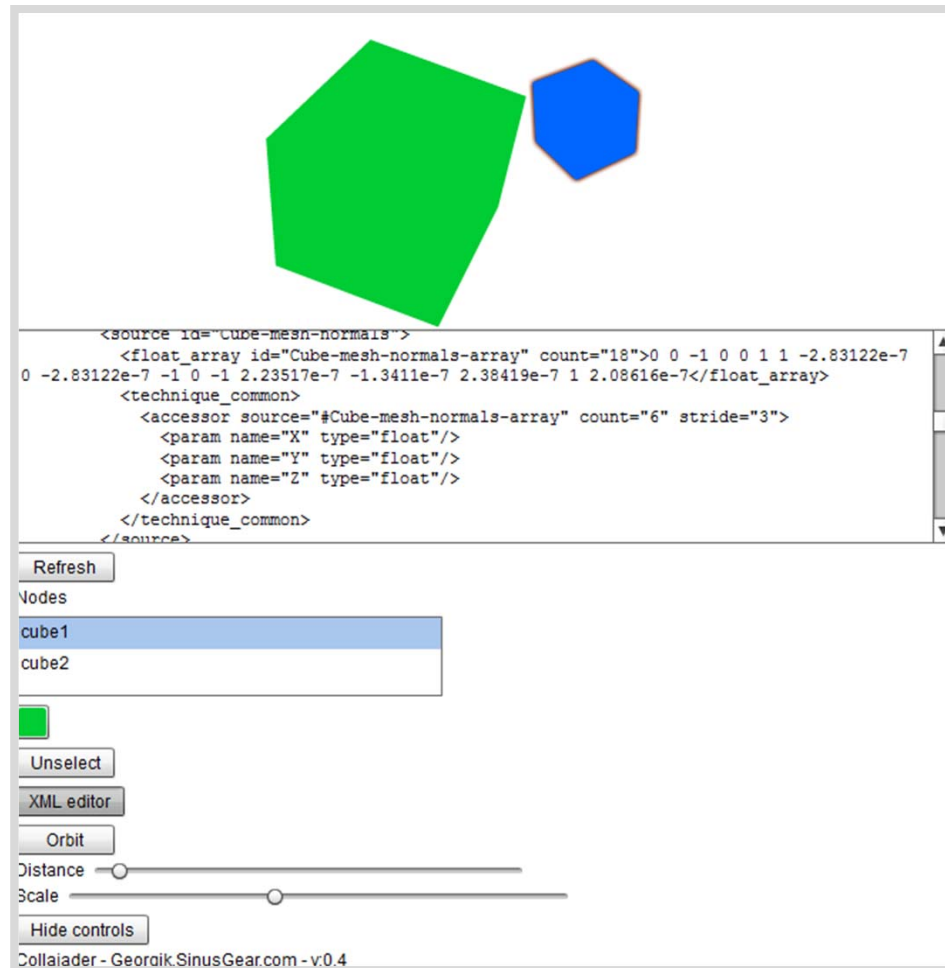
Open source Collada/3D testing tool

Engine – Alternativa 3D v7.x

<http://georgik.sinusgear.com/projects/collajader/>

<https://github.com/georgik/collajader>

Collajader



The screenshot displays the Collajader application interface. At the top, a 3D scene shows two cubes: a larger green one and a smaller blue one. Below the scene is a text area containing XML code for defining a cube's normals. The code is as follows:

```
<source id="Cube-mesh-normals">  
  <float_array id="Cube-mesh-normals-array" count="18">0 0 -1 0 0 1 1 -2.83122e-7  
  0 -2.83122e-7 -1 0 -1 2.23517e-7 -1.3411e-7 2.38419e-7 1 2.08616e-7</float_array>  
  <technique_common>  
    <accessor source="#Cube-mesh-normals-array" count="6" stride="3">  
      <param name="X" type="float"/>  
      <param name="Y" type="float"/>  
      <param name="Z" type="float"/>  
    </accessor>  
  </technique_common>  
</source>
```

Below the XML code is a control panel with the following elements:

- Refresh button
- Nodes list: cube1 (selected), cube2
- Green square icon
- Unselect button
- XML editor button
- Orbit button
- Distance slider
- Scale slider
- Hide controls button

Collajader - Georik.SinusGear.com - v:0.4

Collajader Internals

Prevod Collada XML na scénu.

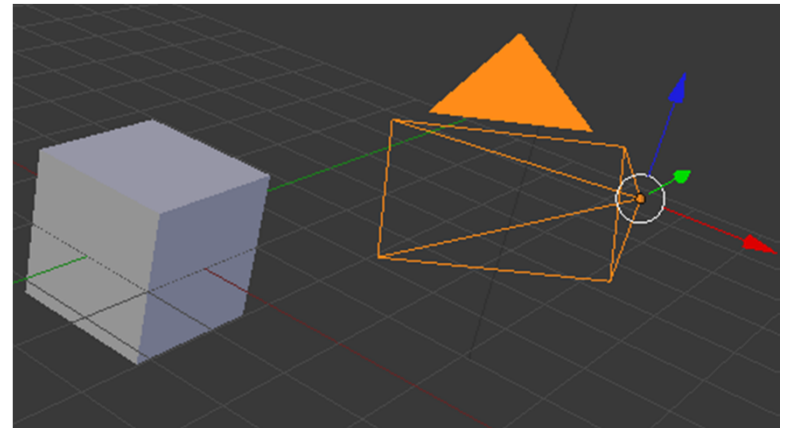
Nastavovanie farby povrchov.

Rotácia objektov a kamery.

Collajader Camera Orbit

Ako spočítať orbitu pre kameru?

Sínus, kosínus, deskriptíva...



Camera Orbit trik

Umiestnime kameru do rohu kocky

Zamerajme kameru na súradnicu 0,0,0

Otáčajme kockou 😊

Alternativa 3D a Android



FB

Tutoriál od Alternativa 3D

- použite:

`mx:Canvas`

`addRawChildren`

☹ Nie je k dispozícii

Alternativa 3D – Android - Spark

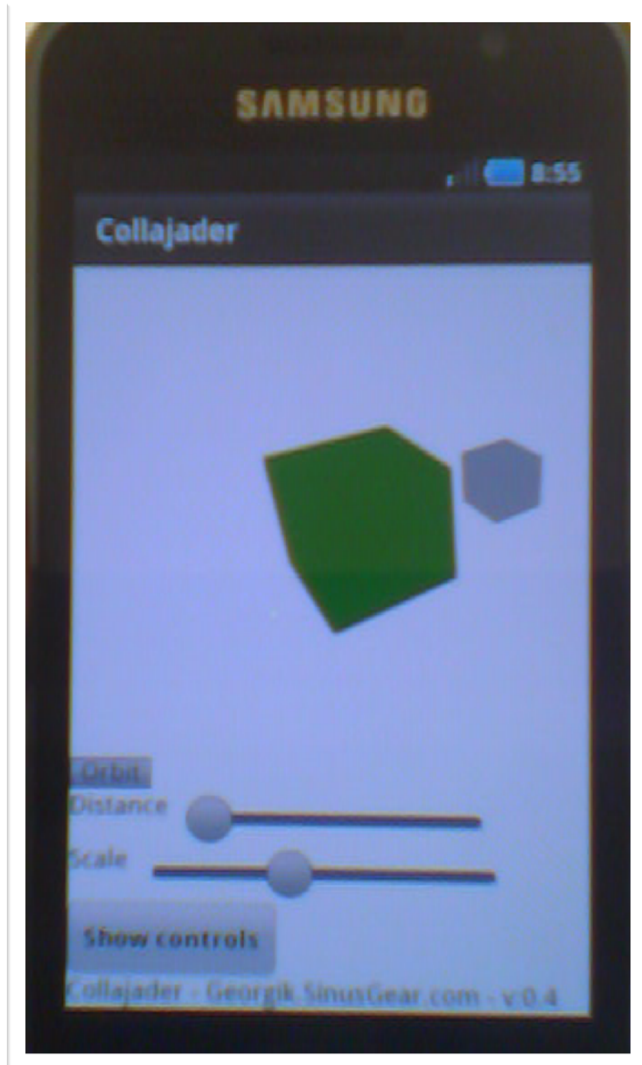
Spark architektúra – Flex 4.5

`mx:Canvas` na `s:SpriteVisualElement`

`rawChildren.addChild` na
`addChild`

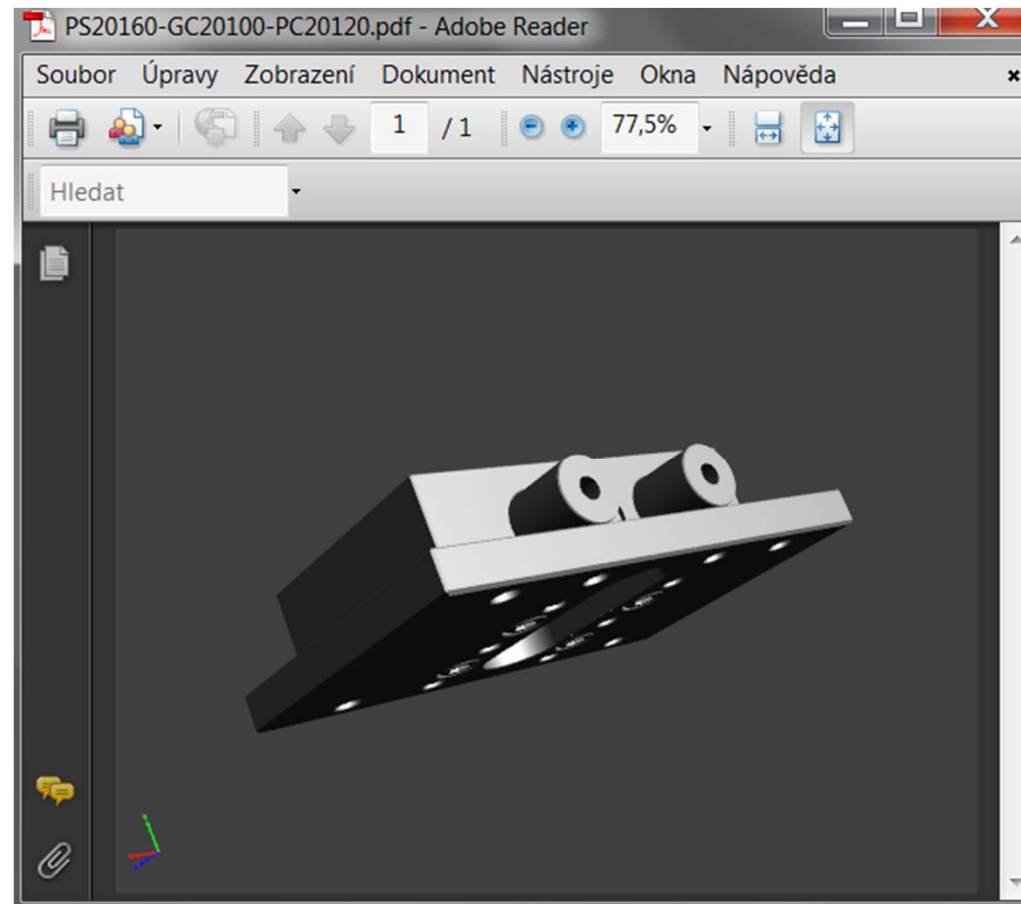


Collajader pre Androida



Mobile verzia:
CollajaderMobile.mxml

3D/Flash/Flex v PDF



<http://georgik.sinusgear.com/2011/02/02/3d-in-pdf/>

HTML5 Canvas – Context 2D

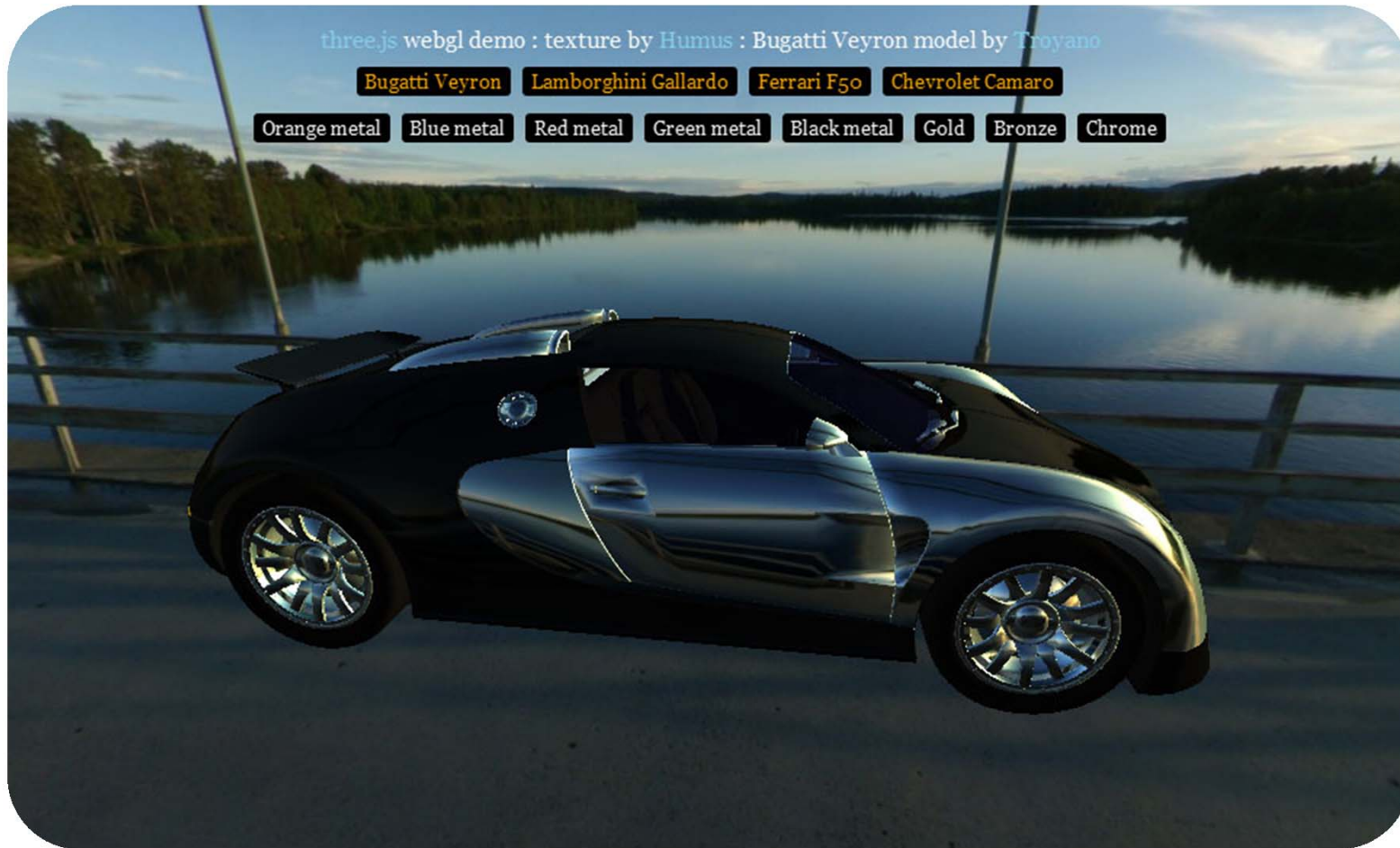
IE9, Firefox,
Safari, Chrome,
Opera



<https://github.com/mrdoob/three.js/>

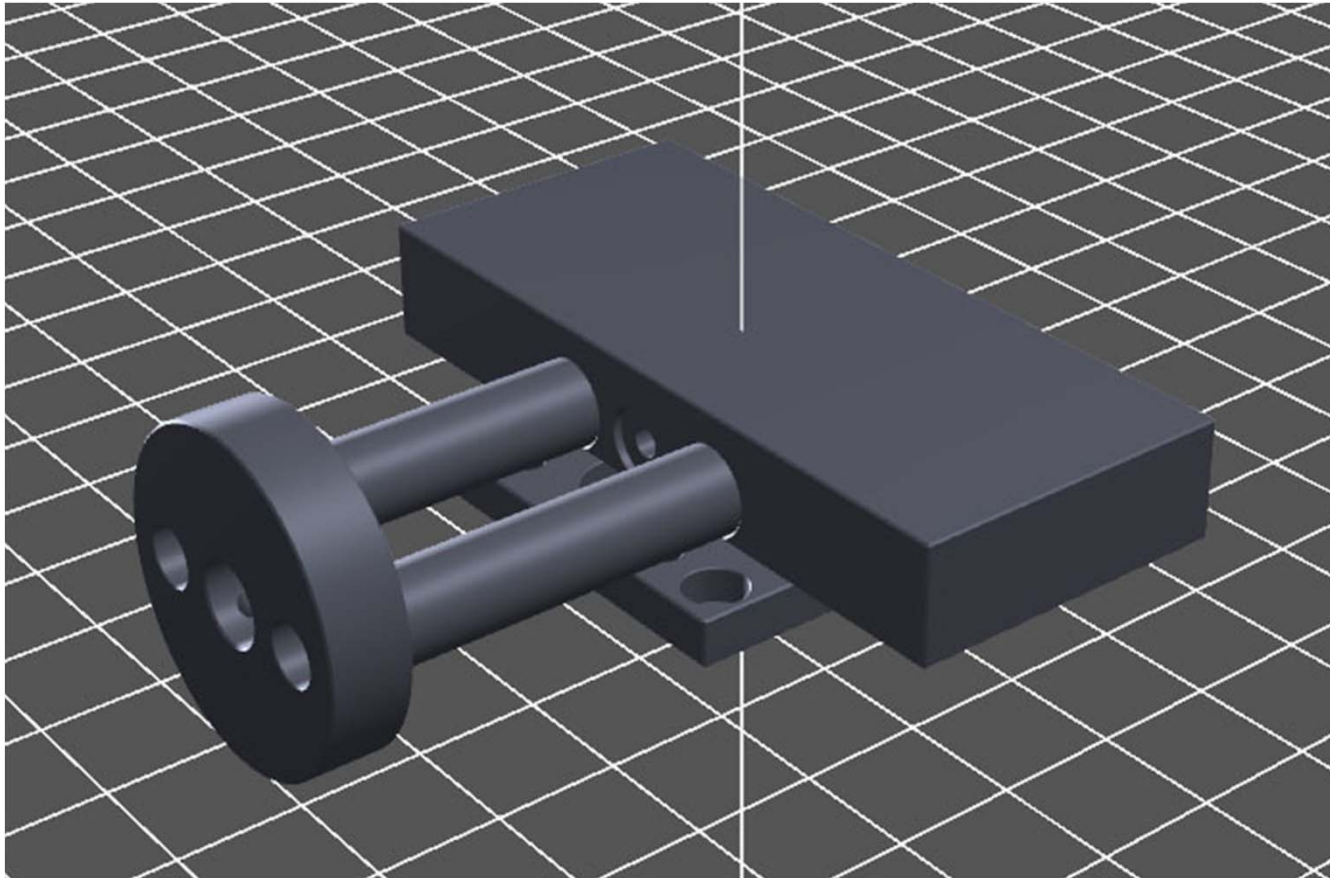
WebGL – Three.js

Chrome,
Firefox



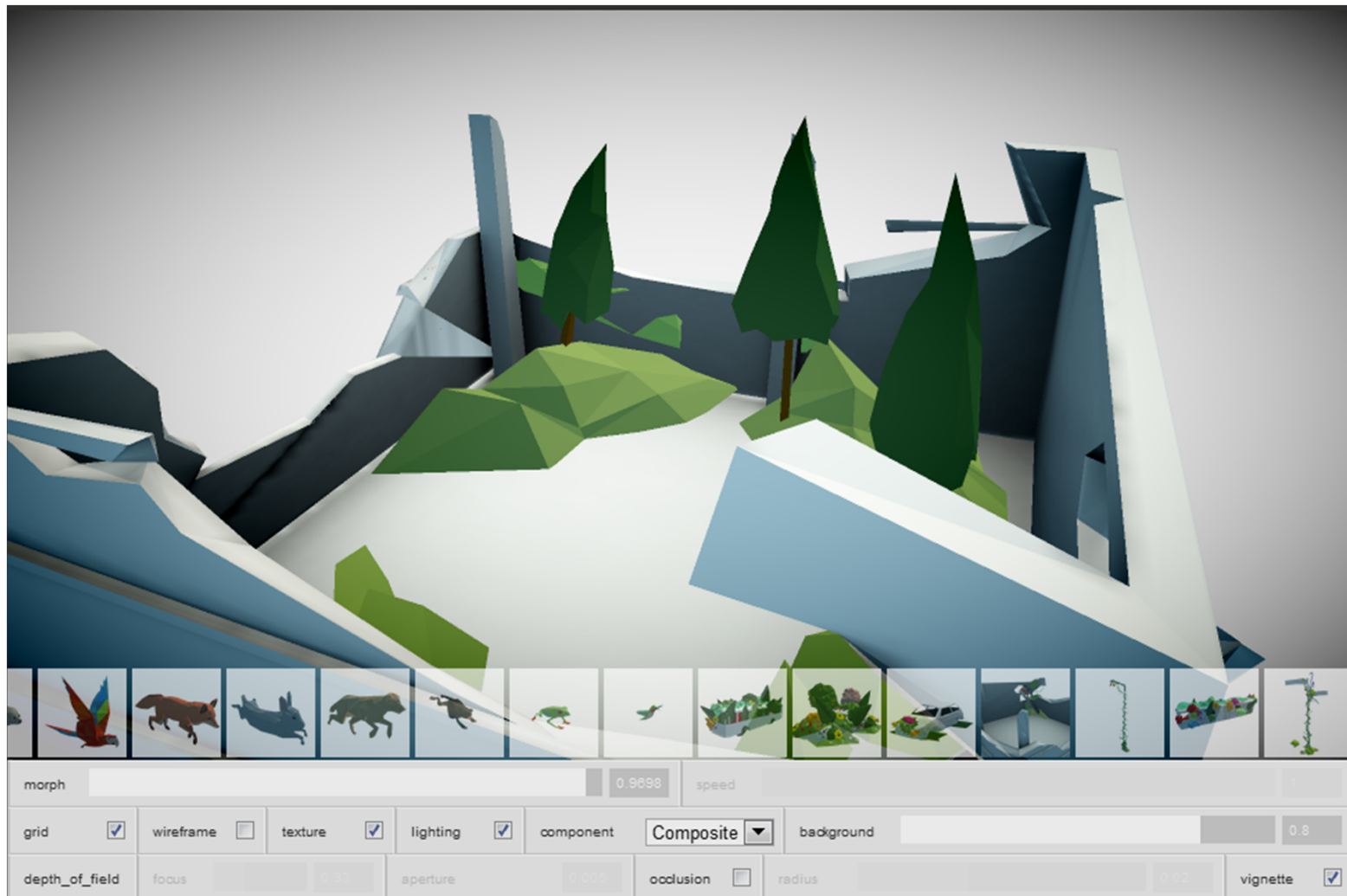
<https://github.com/mrdoob/three.js/>

WebGL - GLGE

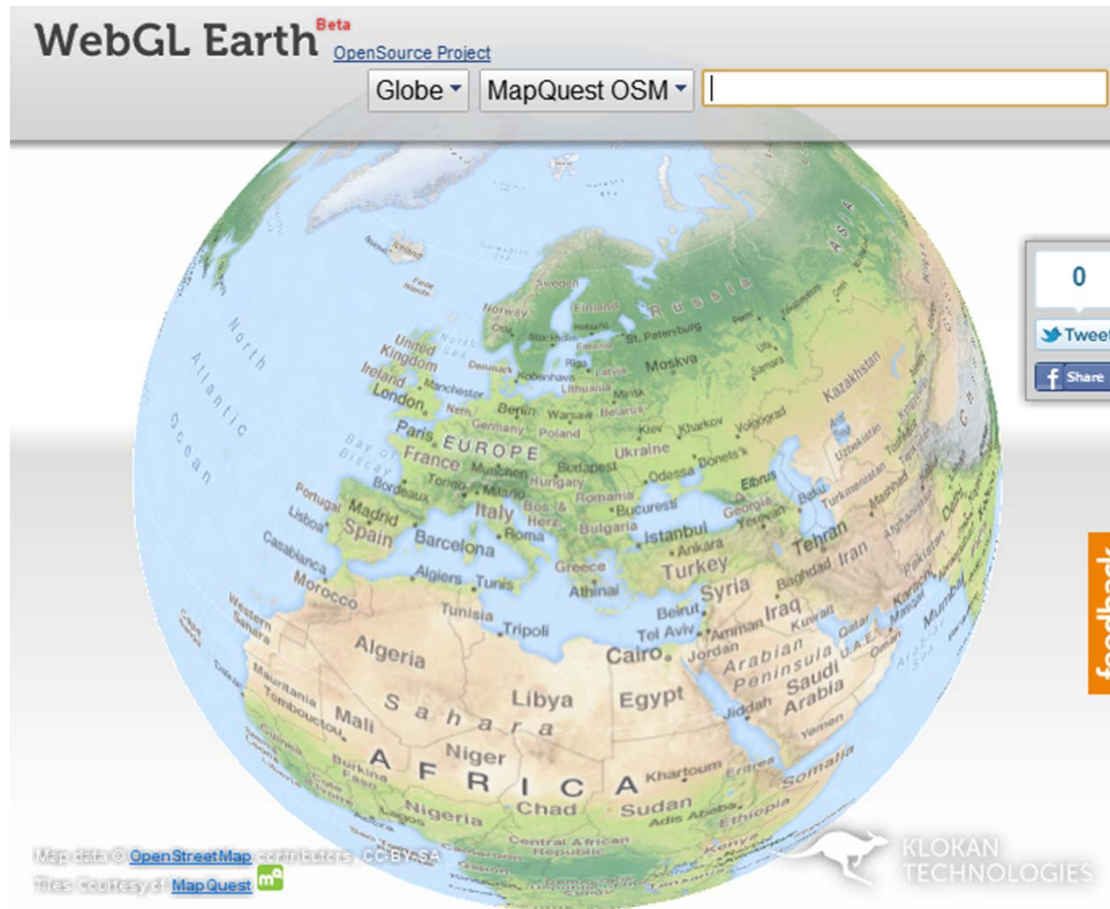


<http://georgik.sinusgear.com/2011/04/04/standard-slide-camera-orbit-in-webgl/>

WebGL – www.ro.me



WebGL Earth



<http://www.webglearth.com>

Otázky?



Konzultácie a implementácie

Rád prednášam a školím RIA technológie.

;-)

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