su2rad.rb

Google SketchUp

as

Radiance modelling platform

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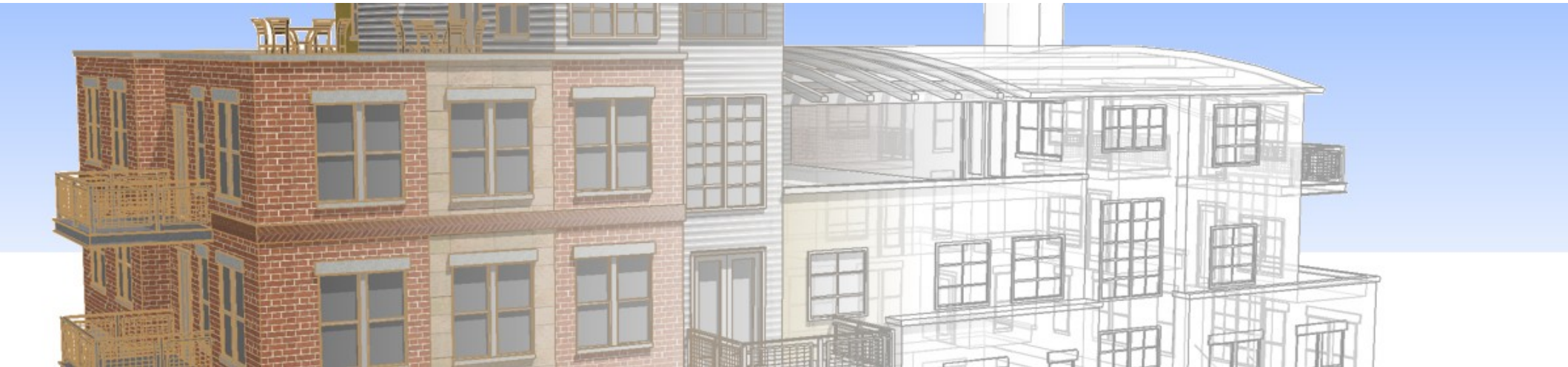


What is SketchUp?

- **“digital 3D sketchpad”**
- **easy to learn and to use**
- **popular with architects**
- **powerful**
- **visual *'sketchy'* style**
- **Windows and OS X**
- ***'Redbook come to live'***
- **… and free**

See *Youtube* and *sketchup.google.com* for more

SketchUp for Radiance

- **sunlight simulation built-in**
- **appropriately accurate**
- **real *poly*gons**
- ***component instances*** and ***groups***
- **DWG/DXF import**

  exporters only in Pro version

  native *.skp support growing

- **Ruby API / C++ SDK**

SketchUp Ruby API

- **access to geometry and materials**
- **access to location settings**
  - ➔ sky description
- **dialog for user interaction**
- **element attributes**
  - stores arbitrary data in the model
- **annotation/on-screen-display**
- **more at:**

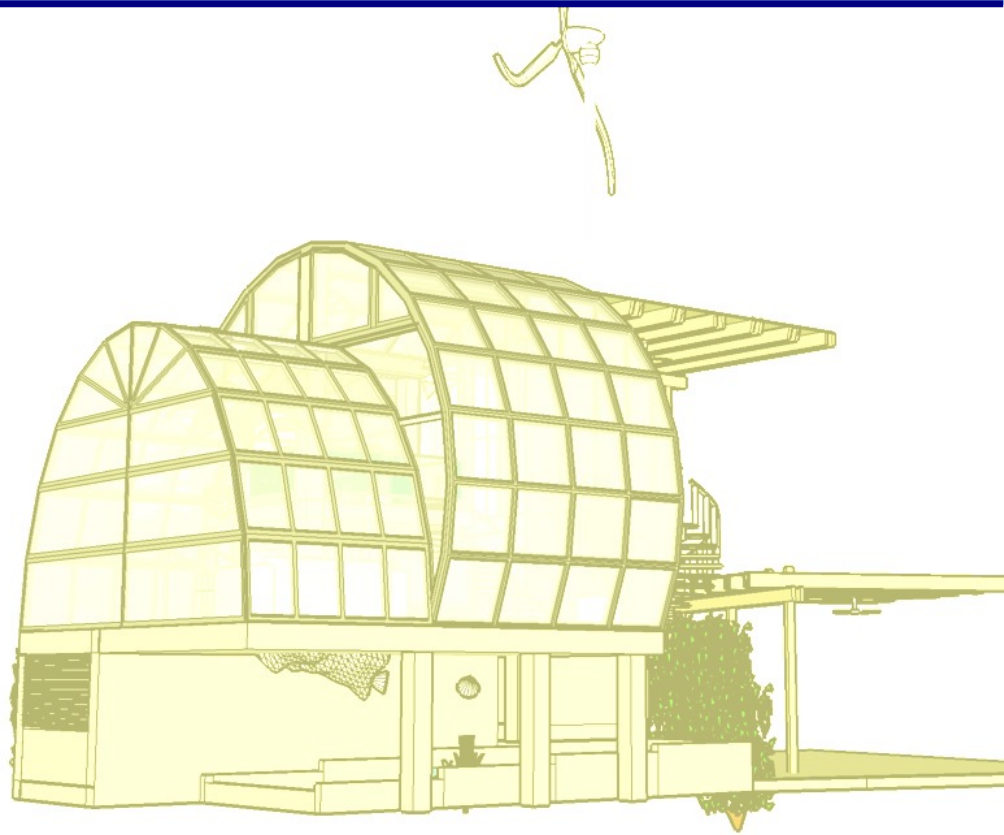
http://code.google.com/apis/sketchup/

http://www.youtube.com/watch?v=QGvwLQQxuZs

interface: web-dialog

- **free layout and design**
- **HTML and JavaScript**

  for better or for worse
- **web2 '*mashups*'**
  - google map, geonames
  - library server (HTTP)

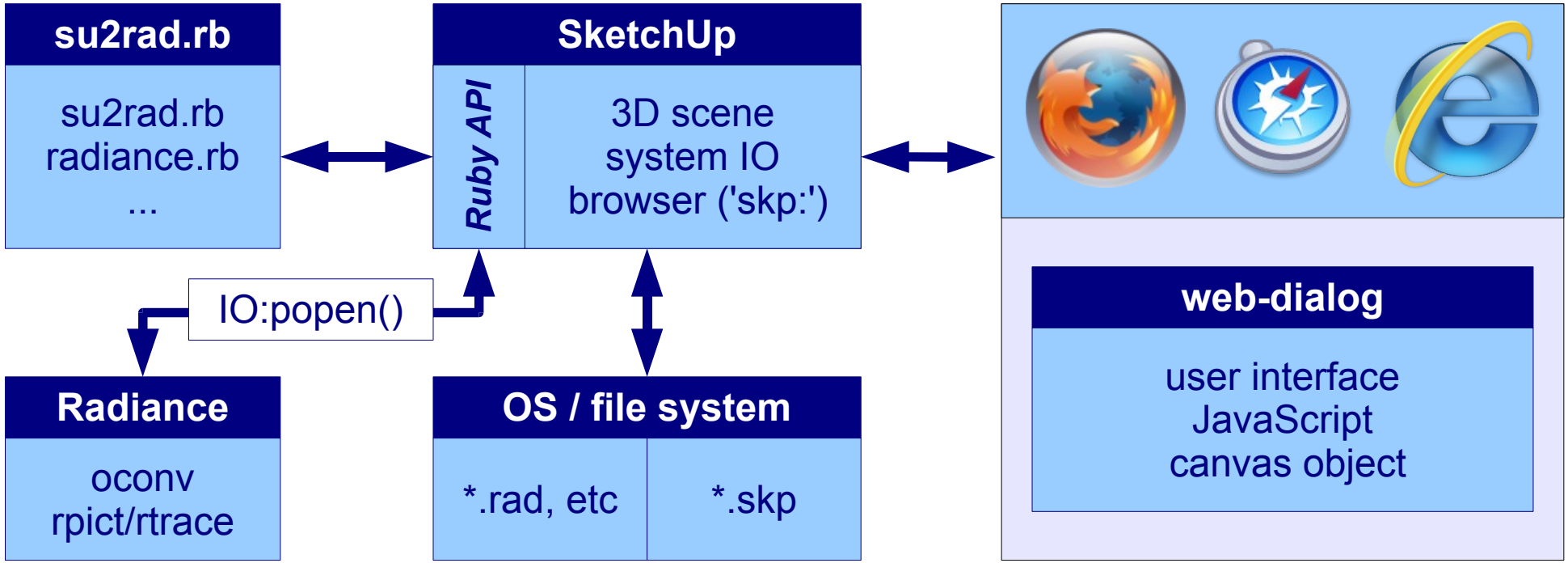


- **more examples:**

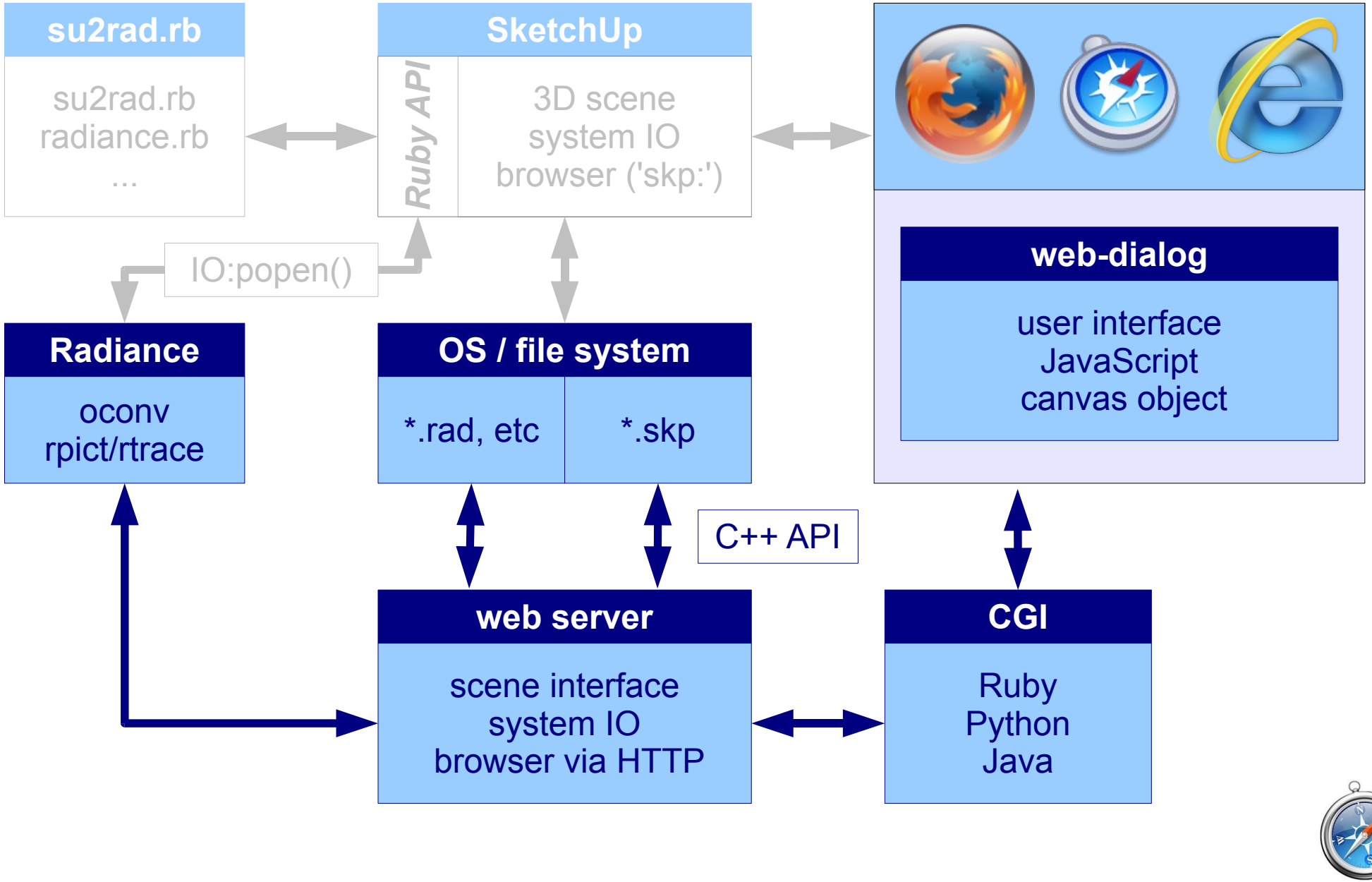
  http://www.youtube.com/watch?v=FALvwBN5-hc

➔`UI.inputbox` for quick and simple(!) panels

su2rad.rb - components



web-dialog - UI for web services



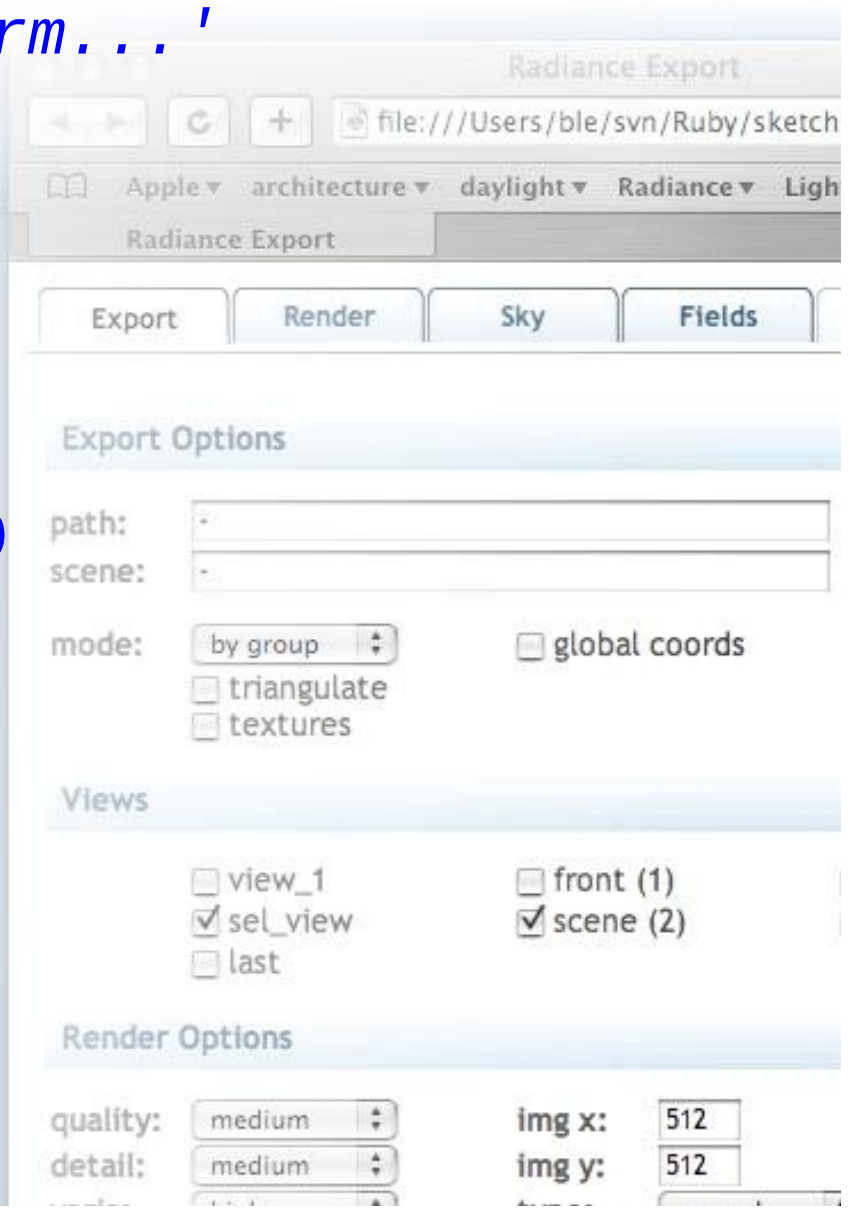
export options

- ***by group***

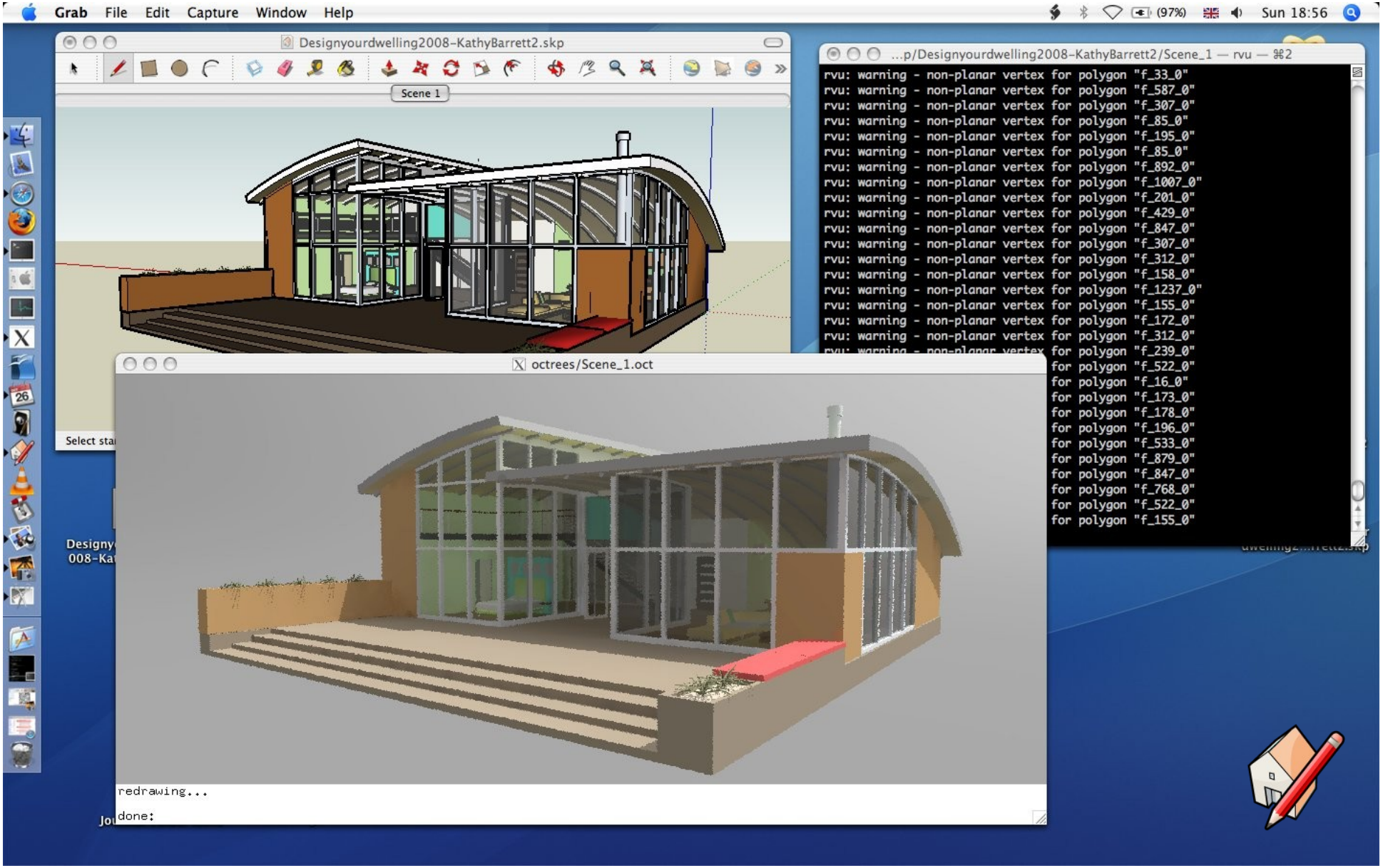
  reuse of components with *'!xform...'*
- ***by material***

  small number of files
- ***by layer***

  for geometry imported from CAD
- **global coordinates**
- **triangulate**
- **textures (experimental)**



Let's see it live ...



known issues - and solutions

- **frontface *and* backface material**

  scripts to highlight/resolve conflicts

- **long export times**

  … due to HUGE models!

- **texture conversion**

  depends on Ruby `'IO:popen()'` process calls

- **date time for sky needs time offset**

  computer's GMT offset stored in preferences

- **texture mapping**

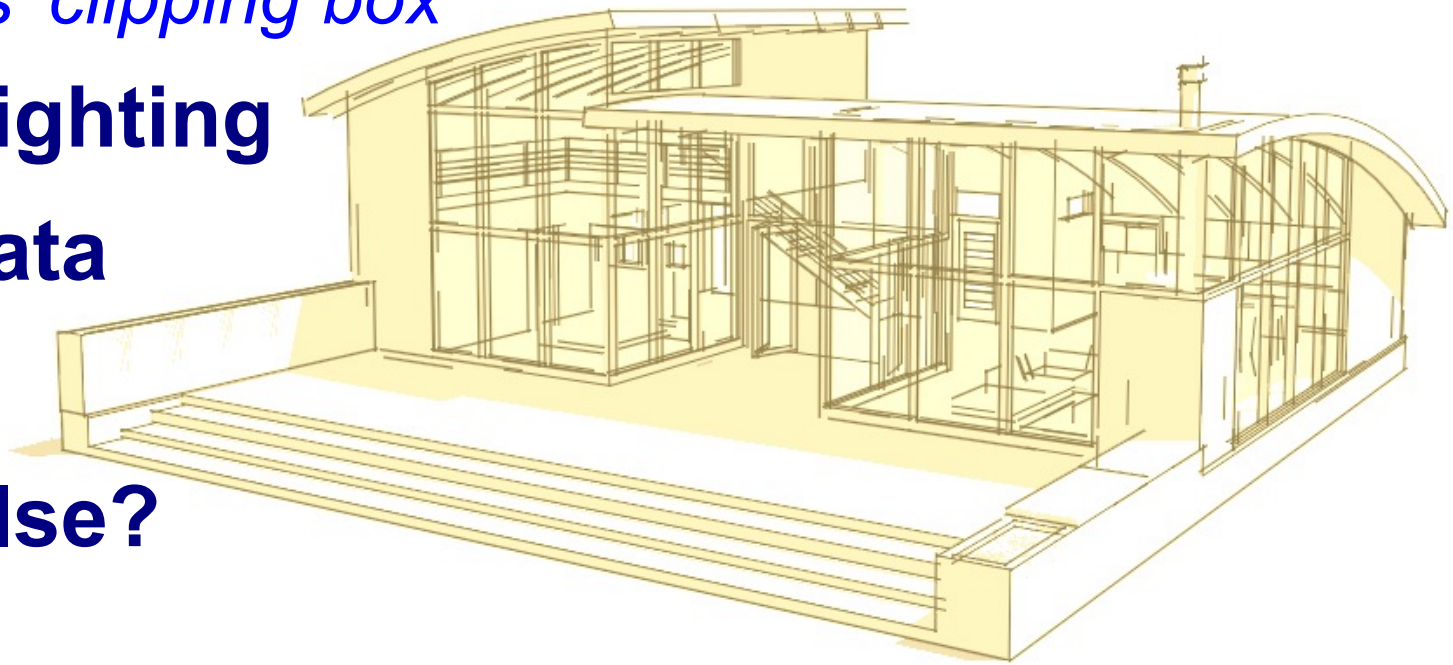
  working on it ...

missing and coming

- **material support**
- **numeric field calculation**

  rtrace, *'stencil method'*
- **support for section planes**

  export as *'clipping box'*
- **artificial lighting**
- **climate data**



- **… what else?**

last slide

where to get it:

http://code.google.com/p/su2rad

and how:

package bundles (irregular)
svn checkout (cutting edge)

documentation:

http://sites.google.com/site/tbleicher/su2rad

in any case:

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