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The SketchUp 3D API: Working with 3D Geospatial Data

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5/20/2010

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- Users implicitly understand 3D from... the real world!
- Very effective in communicating geospatial information

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Source: http://en.wikipedia.org/wiki/File:Elephant_tower.jpg by Jarcje / CC-SA

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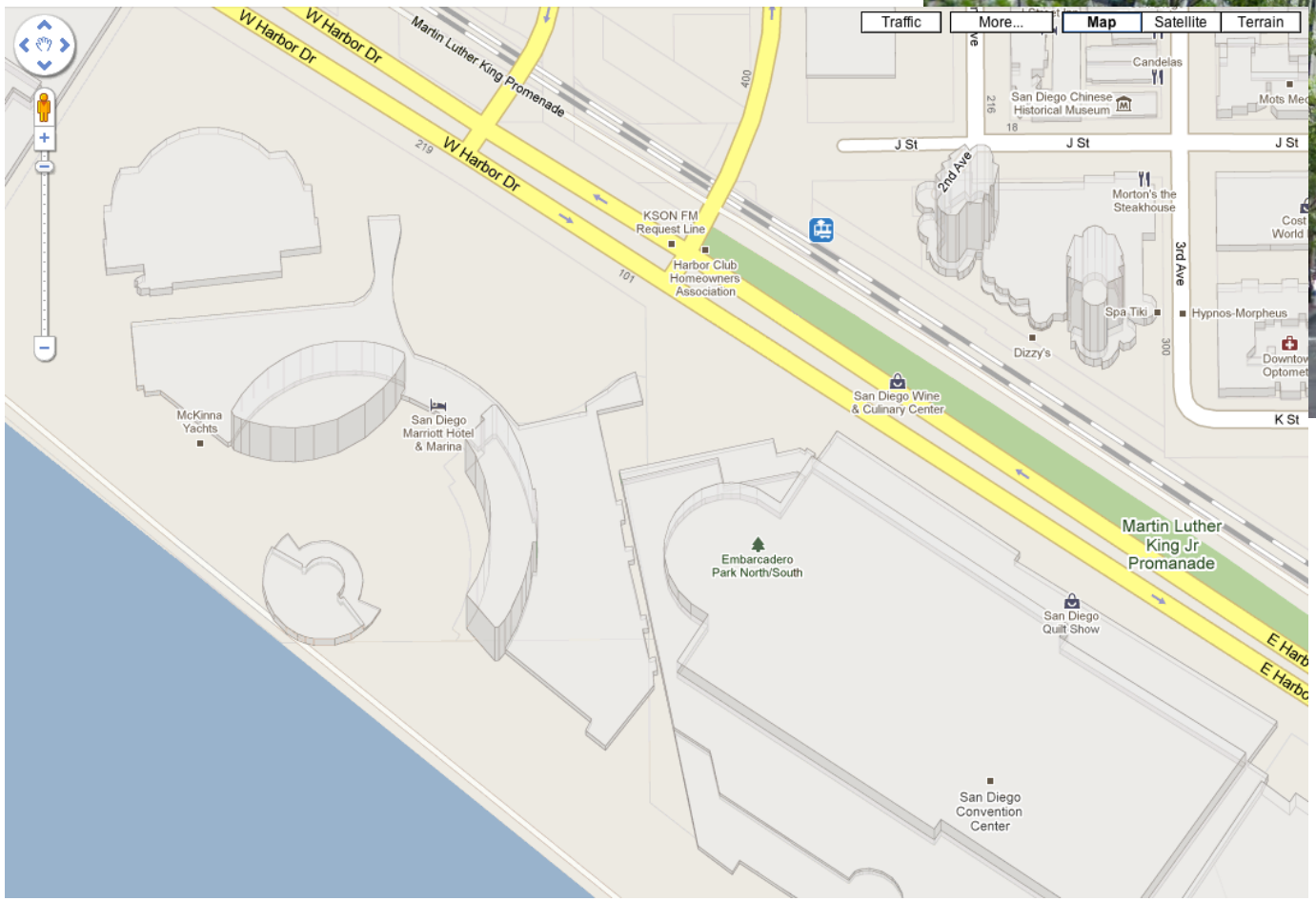
The world is 3D!

- Google geo products aim to utilize the effectiveness of 3D



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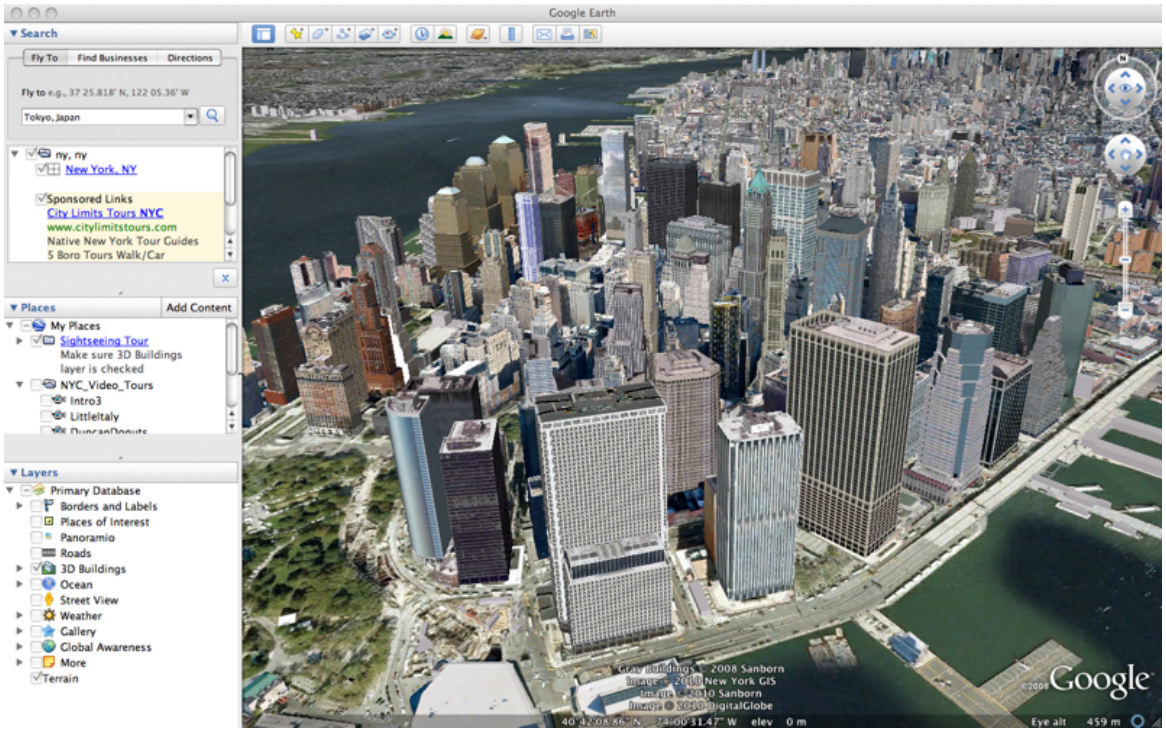
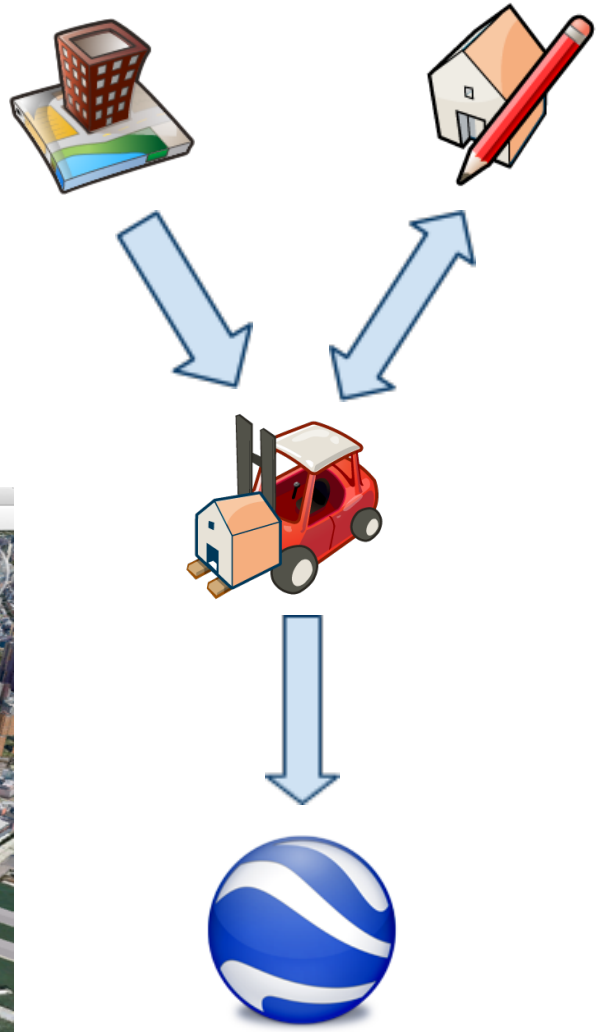
Geo 3D Pipeline

- Building Maker - *create 3D*
- SketchUp - *refine 3D*
- 3D warehouse - *store 3D*
- Earth - *present 3D*





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Geo 3D Pipeline

- Building Maker
  sketchup.google.com/3dwarehouse/buildingmaker
- SketchUp
  sketchup.google.com
- 3D warehouse
  sketchup.google.com/3dwarehouse
- Earth
  earth.google.com

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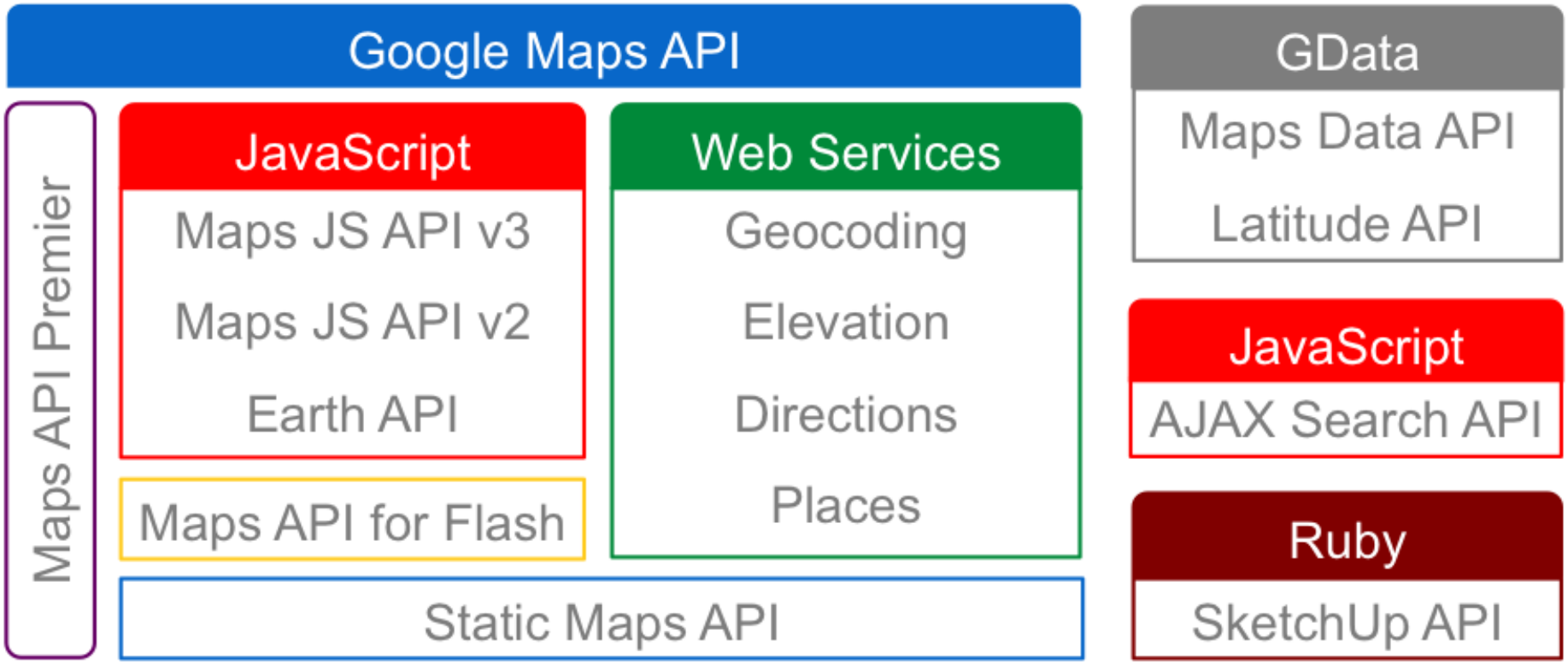
Demo time

Google Geo APIs



SketchUp API Terminology

Model – *the 3d scene*
Entities – *all elements within the Model*
Point – *vertex*
Edge – *line segment between vertices*
Face – *polygon enclosed within Edges*
Loop – *a chain of Edges, typically enclosing a Face*

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SketchUp API Terminology cont...

Component – *collection of Entities*

ComponentDefinition – *"golden" representation of Component*
ComponentInstance – *references to the original Component definition*
DefinitionList – *collection of Component definitions*
AttributeDictionary – *key/value pairs which store custom data attributed to the Model*
WebDialog – *web browser GUI element*

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Google Developer Qualification

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Gadgets

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App Engine

JS Maps API

KML

3D

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