

Google
Developer
Day 2009



Introduction to the Google Earth APIs

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The Google Earth API

The Google Earth API allows you to embed a 3D version of Earth into a web page and programmatically control it.

History of Google Maps and Earth

- October 2004 Google Acquired Keyhole
- February 2005 Google Released Google Maps
- June 2005 Google Released Google Earth
- June 2005 Google Released Google Maps API
- May 2008 Google Released Google Earth Browser Plug-in
- November 2008 Google Released Mac Version
- May 2009 Google Released better Maps/Earth integration

Demo

- Earth in a browser

Loading Browser Plug-in

```
<script src="http://www.google.com/jsapi?key=abcdef"></script>
<script>
google.load("earth", "1");
var ge = null;
function init() {
google.earth.createInstance("map3d", initCallback, failureCallback);
}
function initCallback(object) {
ge = object;
ge.getWindow().setVisibility(true);
}
</script>
```

How It Works



```
google.load('earth', '1');
```

What can you do

- Load Earth
- Control View Point
- Move placemarks, 3D models, overlays
- Load KML
- Integrate with other JavaScript APIs

Supported platforms

- Windows
 - Firefox, IE, Chrome
- Mac
 - Firefox, Safari

Demo

- [Monster Milktruck](#)

Creating a Placemark

```
// Placemark
var placemark = ge.createPlacemark('');
placemark.setName('You are at Google');

// Placemark/Point
var point = ge.createPoint('');
var lookAt = ge.getView().copyAsLookAt(ge.
ALTITUDE_RELATIVE_TO_GROUND);
point.setLatitude(lookAt.getLatitude());
point.setLongitude(lookAt.getLongitude());
placemark.setGeometry(point);

// add the placemark to Earth
ge.getFeatures().appendChild(placemark);
```

Options Demo

- Options

Loading KML #1

```
// NetworkLink
var networkLink = ge.createNetworkLink('');
networkLink.setDescription('NetworkLink open to fetched
content');
networkLink.setName('Open NetworkLink');
networkLink.setFlyToView(true);

// NetworkLink/Link
var link = ge.createLink('');
link.setHref('http://kml-samples.googlecode.
com/svn/trunk/kml/NetworkLink/placemark.kml');
networkLink.setLink(link);

// add the network link to earth
ge.getFeatures().appendChild(networkLink);
```

Loading KML #2

```
function addKmlFromUrl(kmlUrl) {  
  google.earth.fetchKml(ge, kmlUrl, kmlFinishedLoading);  
}
```

Loading KML #3

```
function addKmlFromString(kmlString) {
    var kmlObject = ge.parseKml(kmlString);

    ge.getFeatures().appendChild(kmlObject);
}

...

addKmlFromString(
    '<?xml version="1.0" encoding="UTF-8"?>' +
    '<kml xmlns="http://www.opengis.net/kml/2.2">' +
    '  <Placemark>' +
    '    <name>Test Placemark</name>' +
    '    <Point>' +
    '      <coordinates>' +
    '        -122,37' +
    '      </coordinates>' +
    '    </Point>' +
    '  </Placemark>' +
    '</kml>'); }
```

When to use different strategies

- Use [NetworkLink](#) when you want to load a KML file dynamically
- Use [FetchKml](#) when you want to load a KML into your DOM
- Use [ParseKml](#) when you want to generate KML dynamically

Plug-in Gadget

- [Install gadget on your webpage](#)

Demo

- [Ships In Action](#)

Advantages of Plug-in over Stand Alone

- Scriptable Experience
- Control over layers displayed
- Operates within your webpage
- Combination with other JavaScript libraries

Limitations of Plug-in

- HTML is scrubbed from KML
- No programmatic control of time slider, tours

Resources for Earth Plug-in Development

- [Documentation](#)
- [Utility Library](#)
- [Developer Forum](#)
- [KML Documentation](#)

Demos

- [Ships In Action](#)
- [Driving Simulator](#)

Increased Maps/Earth Integration

- One line of code integration
- Now GGeoXml, and all KML supported
- Better transition between Earth and Maps

Demo

- [Maps/Earth](#)
- [GGeoXml](#)

Tours

- [Demo](#)
- [Tour Gadget](#)

Learn More

code.google.com/apis/earth

code.google.com/apis/kml

groups.google.com/group/google-earth-browser-plugin/topics

Questions

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