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Open data

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What is an Open Data?



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- An organization provides some data via Internet which is publicly and openly available for everyone without charge
- Must be licensed without restrictions to modify and redistribute even in commercially
- Must be easily machine readable

Finnish data sources



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Organization	Contents	URL	Requires registration
Helsingin Seudun Liikenne	Public transport timetables and realtime data for Helsinki region	developer.reittiopas.fi	x
Tampereen joukkoliikenne	Public transport timetables and realtime data for Tampere	developer.publictransport.tampere.fi	x
ITS Factory	Innovation, test and development environment for Intelligent Transport Systems	wiki.itsfactory.fi/index.php/ITS_Factory_Developer_Wiki	
Helsinki Region Infoshare	Helsingin region data portal Open data	www.hri.fi	

Foreign data sources



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Organization	Contents	URL	Requires registration
UK government	Government data portal	data.gov.uk	
US government	Government data portal	www.data.gov	

Map APIs

- Google Maps
- Oskari
- Open Street Map



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Google Maps



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- Requires a Google account and an API-key to Maps API
- Easy to use
- License restrictions apply for the free use (max. 25 000 request/day)
- Inclusive documentation and examples
- API access for following platforms: Web, iOS, Android
- Documentation (Web),
<https://developers.google.com/maps/documentation/javascript/basics>

Google Maps, examples (Web) 1/2



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- Simple Marker (http://www.thudesign.com/google/maps/simple_marker.html)

```
<script src="https://maps.googleapis.com/maps/api/js?key=YOUR_API_KEY&sensor=false"></script>
<script>
    function initialize() {
        var myLatLng = new google.maps.LatLng(61.065213, 28.094714);
        var mapOptions = {
            zoom: 16,
            center: myLatLng
        }
        var map = new google.maps.Map(document.getElementById('map-canvas'), mapOptions);

        var marker = new google.maps.Marker({
            position: myLatLng,
            map: map,
            title: 'Yliopisto'
        });
    }

    google.maps.event.addDomListener(window, 'load', initialize);
</script>
```

Google Maps, examples (Web) 2/2



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- Info Window (http://www.thudesign.com/google/maps/info_window.html)

```
<script src="https://maps.googleapis.com/maps/api/js?key=YOUR_API_KEY&sensor=false"></script>
<script>
  function initialize() {
    var myLatLng = new google.maps.LatLng(61.065213, 28.094714);
    var mapOptions = {
      zoom: 16,
      center: myLatLng
    };
    var map = new google.maps.Map(document.getElementById('map-canvas'), mapOptions);
    var contentString = '<div id="content">'+
      '<h1>Yliopisto</h1>'+
      '12:00 5 Yliopisto-Keskusta-Matkakeskus<br/>'+
      '12:15 1 Yliopisto-Keskusta<br/>'+
      '12:30 5 Yliopisto-Keskusta-Matkakeskus<br/>'+
      '12:45 1 Yliopisto-Keskusta<br/>'+
      '</div>';
    var infowindow = new google.maps.InfoWindow({
      content: contentString
    });
    var marker = new google.maps.Marker({
      position: myLatLng,
      map: map,
      title: 'Yliopisto'
    });
    google.maps.event.addListener(marker, 'click', function() {
      infowindow.open(map,marker);
    });
  }
  google.maps.event.addDomListener(window, 'load', initialize);
</script>
```



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