

Towards a location-aware desktop



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Microblogs: @bergie
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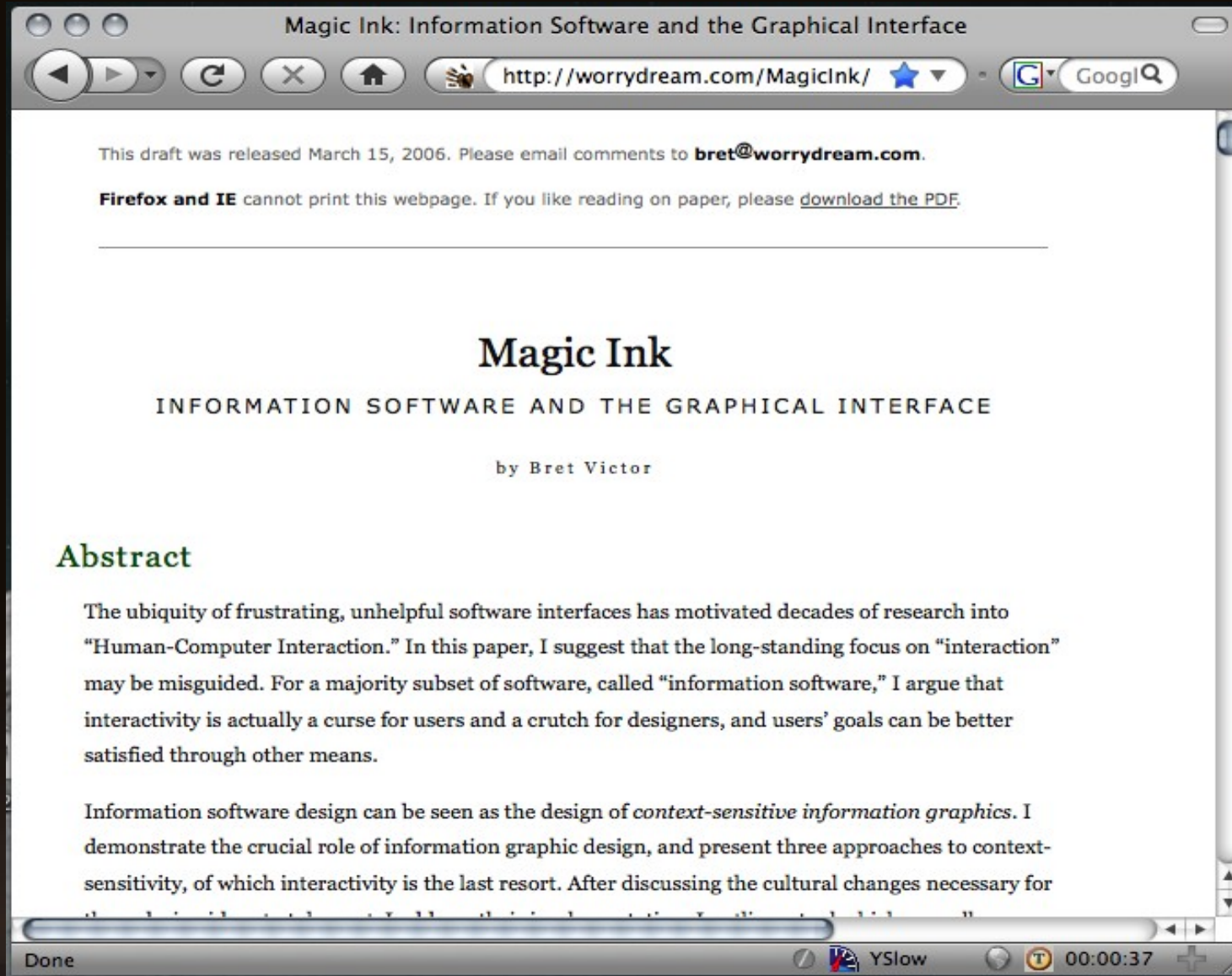


Location matters

Your computer knows who you are,
what time it is, who you know and
what you're doing.

But it doesn't know where it is.

Magic Ink



<http://worrydream.com/MagicInk>

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Open mobile devices



Mobile device manufacturers are pushing location awareness

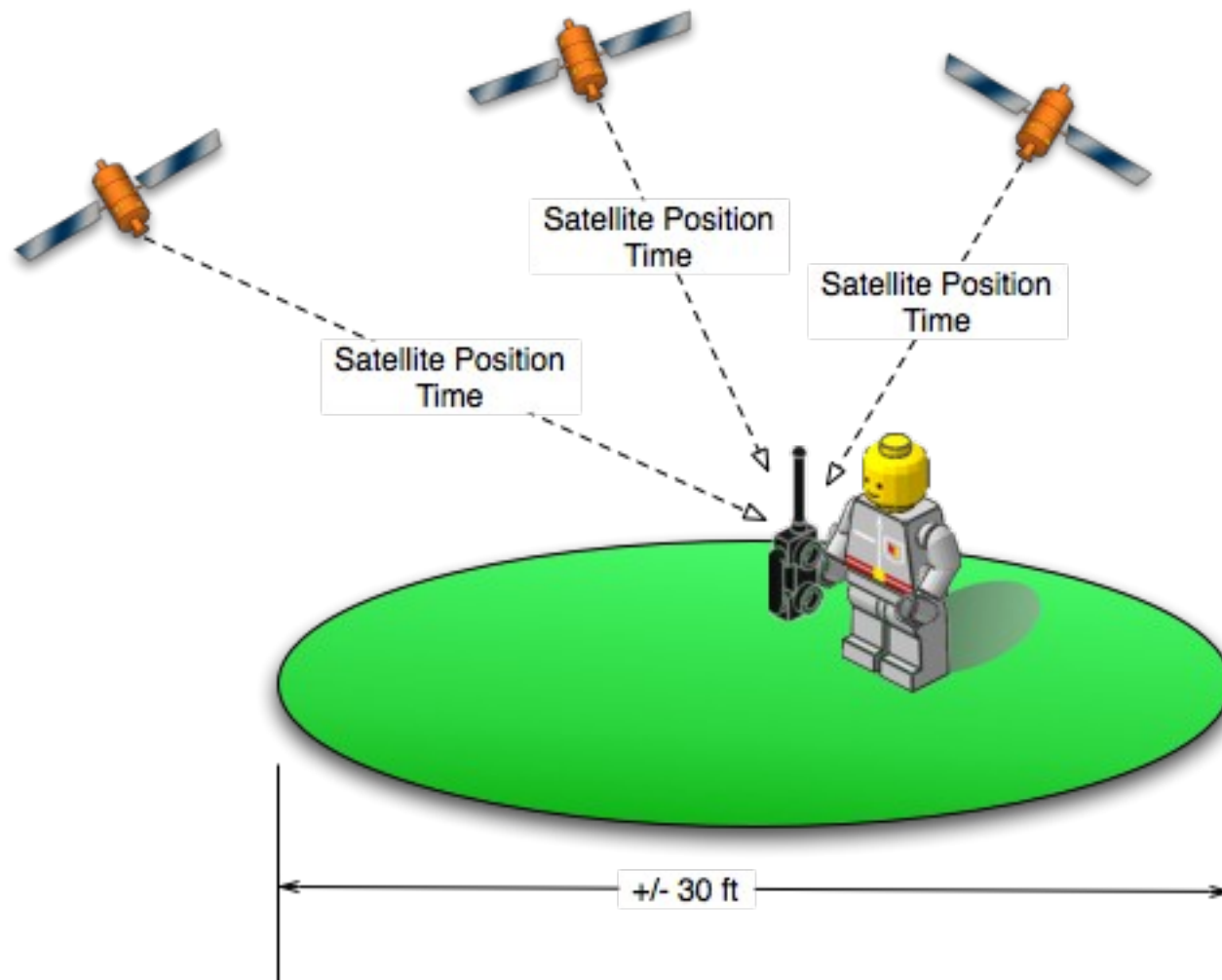


iPhone,
Android,
Symbian,
...

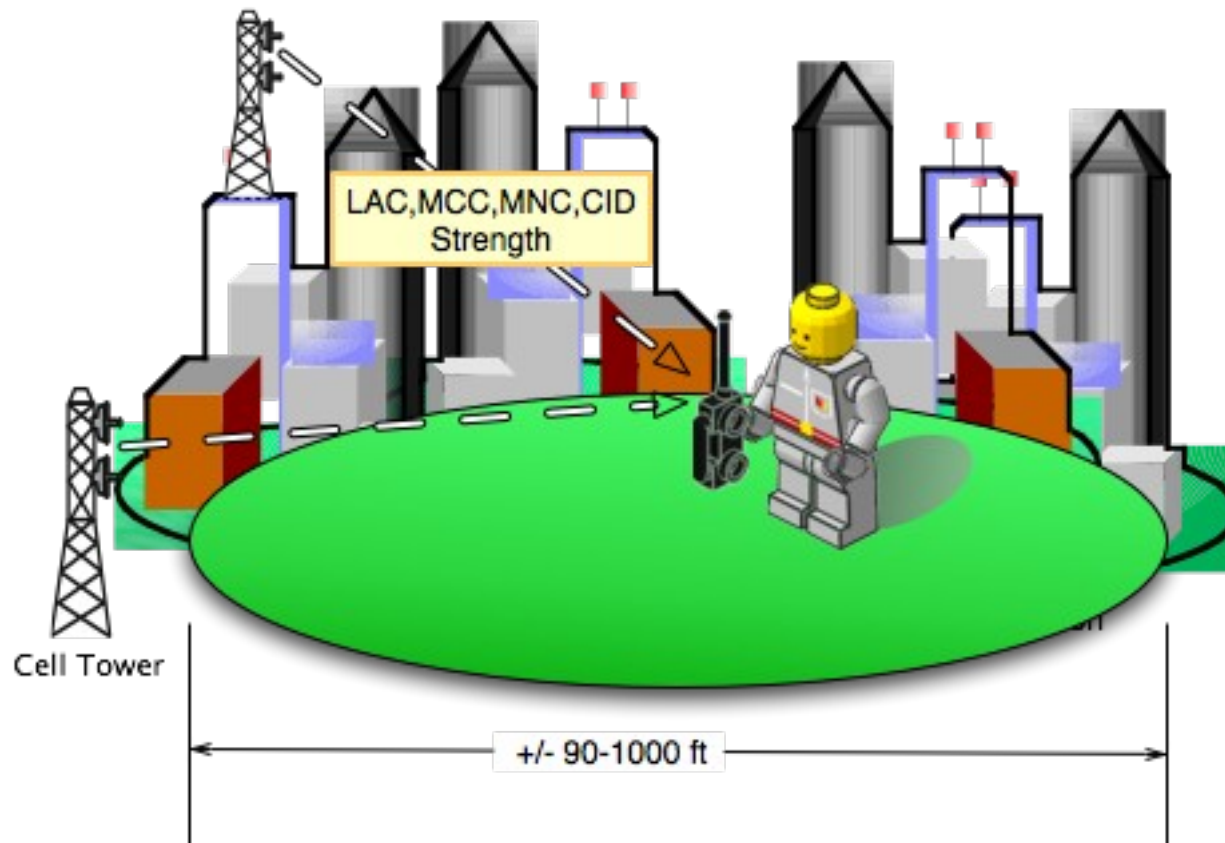
Location comes in many flavors

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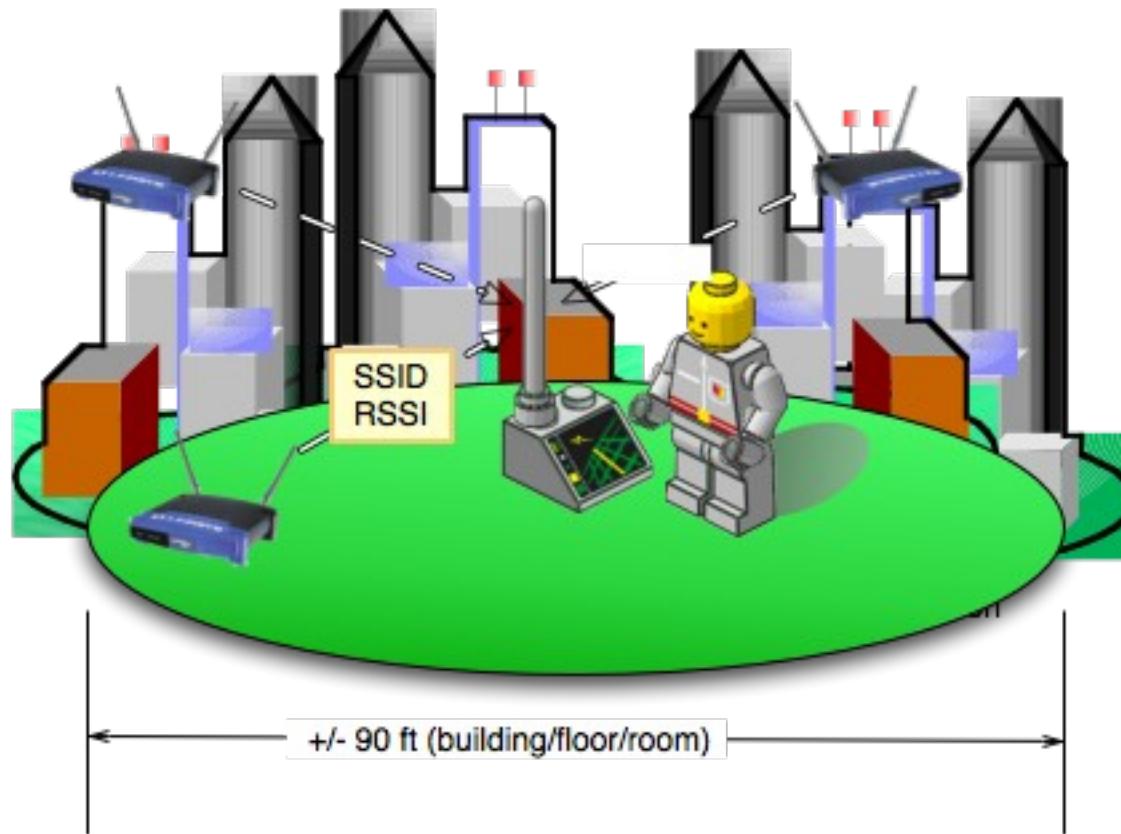
GPS



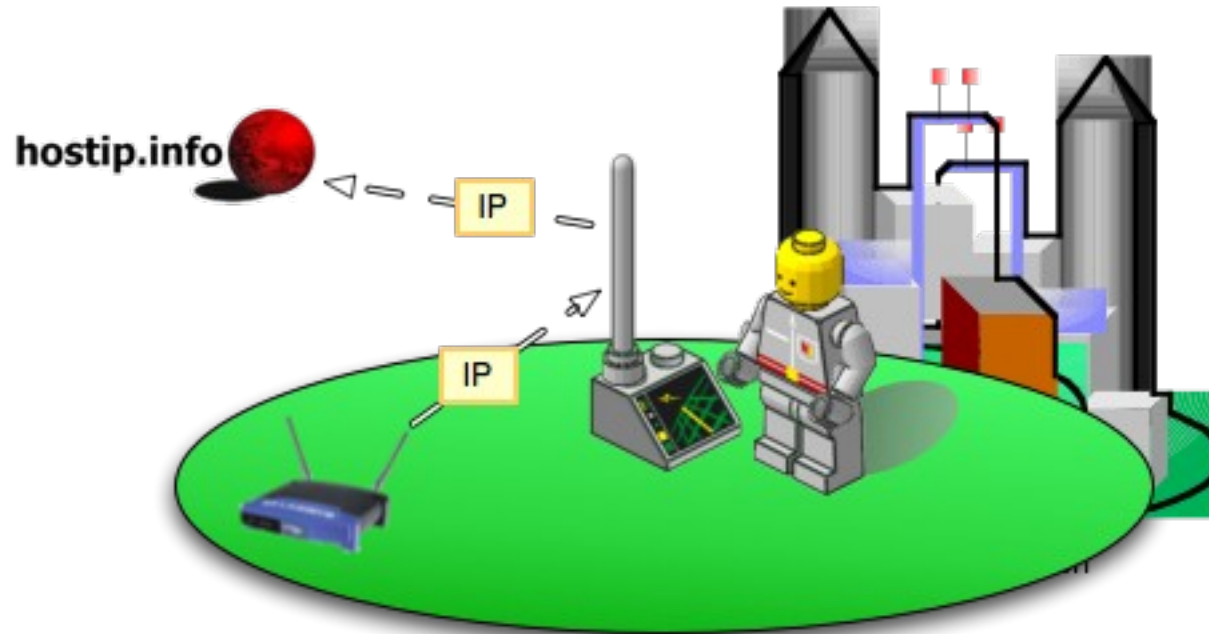
GSM



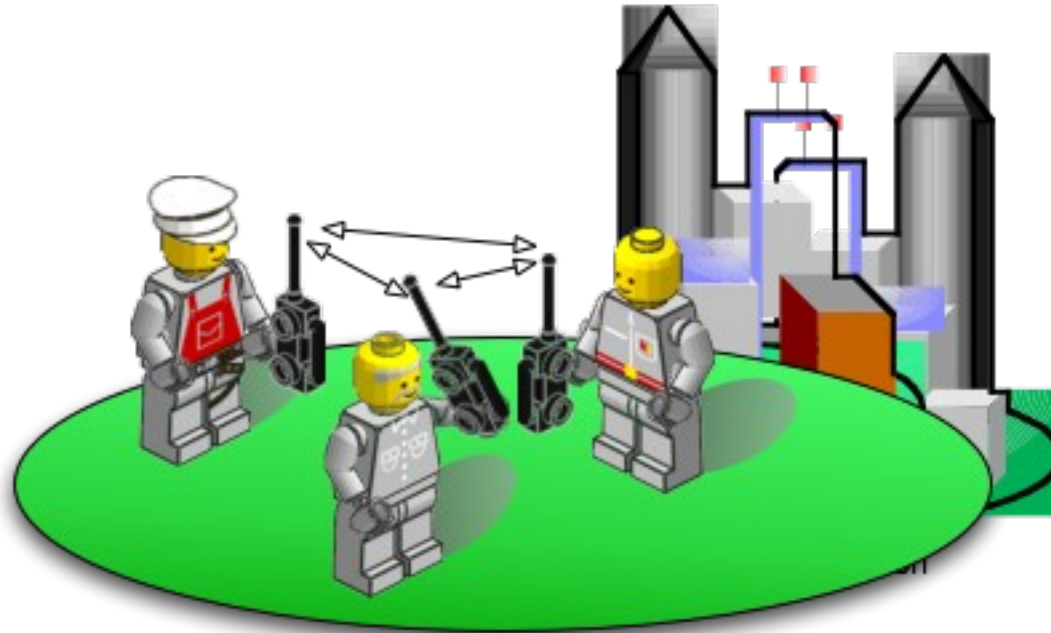
WiFi



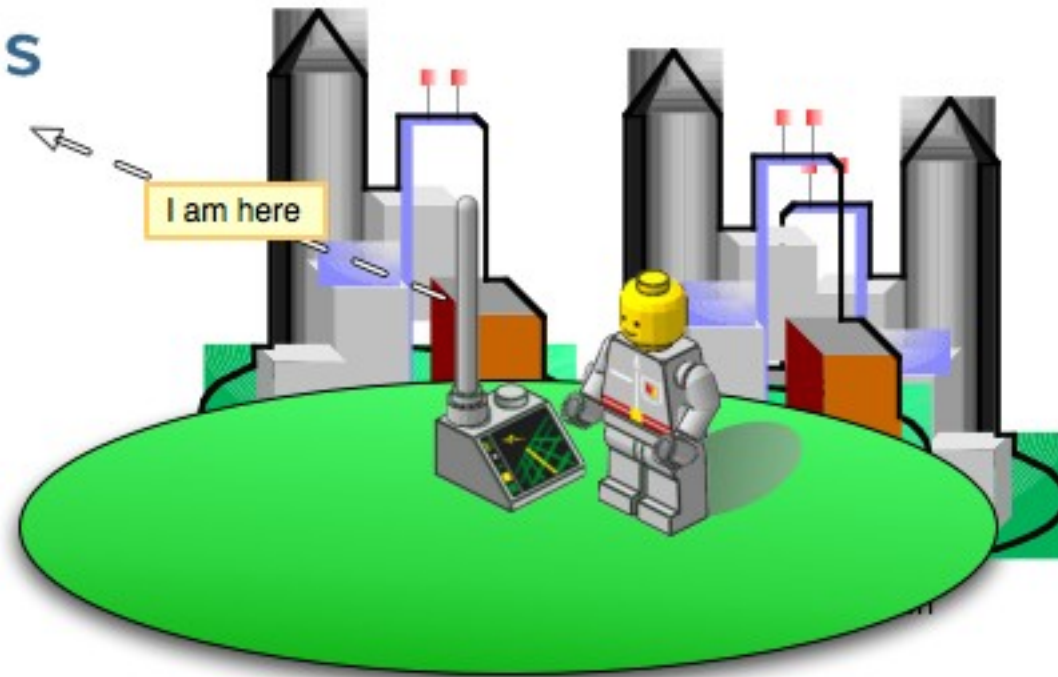
IP address



Proximity



User tracking



...and that is not all

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61.49431
23.78018

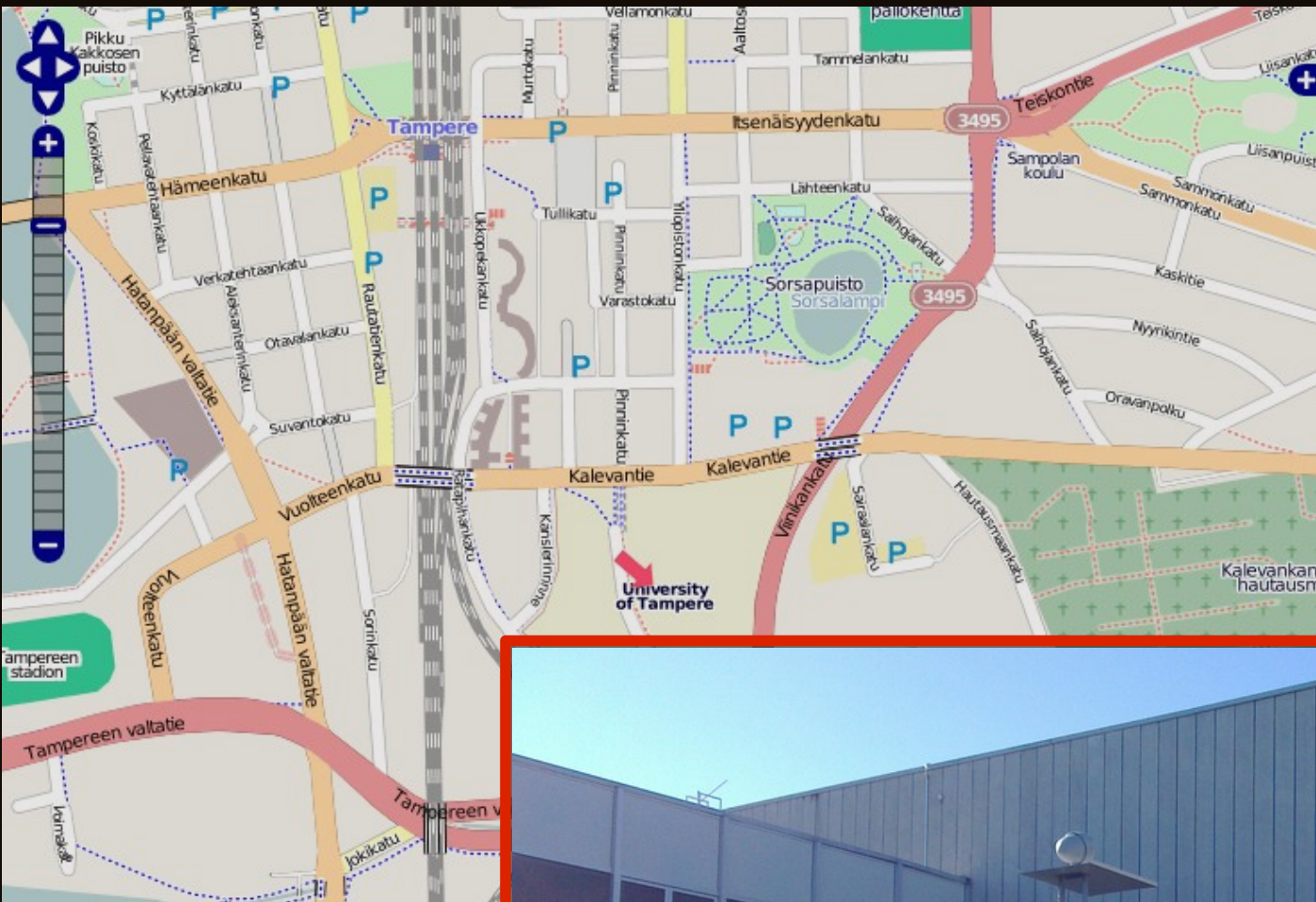
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61° 29' 39.5154" N
23° 46' 48.648" E

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Kalevantie 4 Tampere, Finland

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GeoClue

A D-BUS service that applications can use to become geo-aware. Makes reading and writing geographical information as simple and easy as time or date.

GeoClue

as simple and easy as time or date.

...regardless of whether you deal with
coordinates or civic location

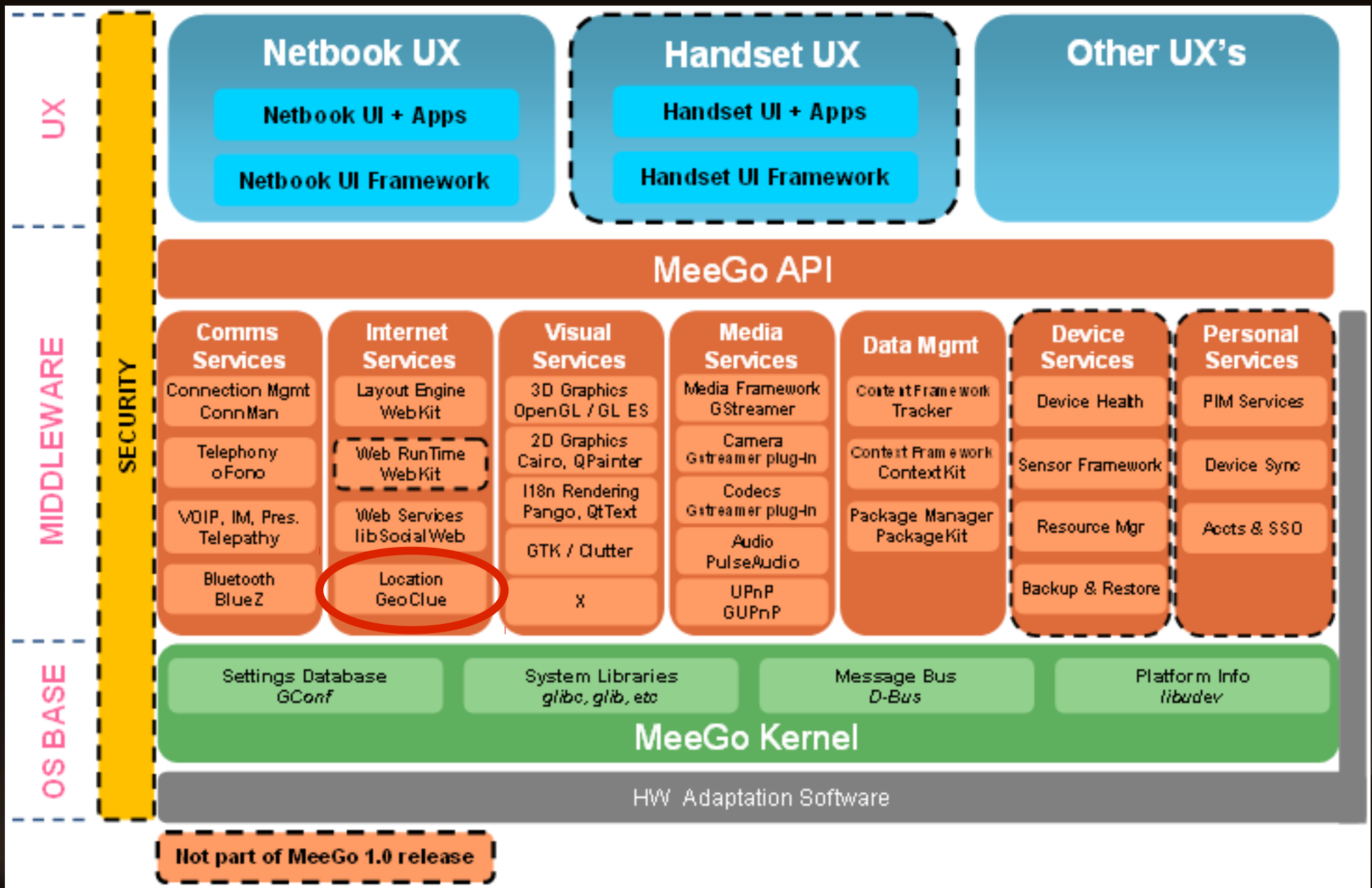
GeoClue in nutshell

- Geoclue is API definitions - but also implementations
- Interfaces for "current location"
 - Position
 - Address
 - Velocity
- Interfaces for conversion
 - Geocode (address to position)
 - ReverseGeocode (position to address)


import antigravity

```
1 import Geoclue
2 geoclue = Geoclue.DiscoverLocation()
3 geoclue.init()
4 geoclue.set_position_provider("hostip")
5 print geoclue.get_location_info()
6 #. {'latitude': dbus.Double(61.5),
7 #.. 'altitude': dbus.Double(0.0),
8 #.. 'longitude': dbus.Double(23.75),
9 #.. 'position_timestamp': dbus.Int32(1278161763)}
```

(you'll want to *apt-get install python-geoclue* first)



...and on the desktop distributions too!



>> [Ubuntu](#) >> [Packages](#) >> Package Search Results

Search in specific suite: [[dapper](#)] [[dapper-updates](#)] [[dapper-backports](#)] [[hardy](#)] [[hardy-updates](#)] [[hardy-backports](#)] [[intrepid](#)] [[intrepid-updates](#)] [[intrepid-backports](#)] [[karmic-updates](#)] [[karmic-backports](#)] [[lucid](#)]

Search in [all suites](#)

Limit search to a specific architecture: [[i386](#)] [[amd64](#)] [[powerpc](#)]

[Some](#) results have not been displayed due to the search parameters.

You have searched for packages that names contain *geoclue* in suite(s) *lucid*, all sections, and all architectures. Found **13** matching

Exact hits

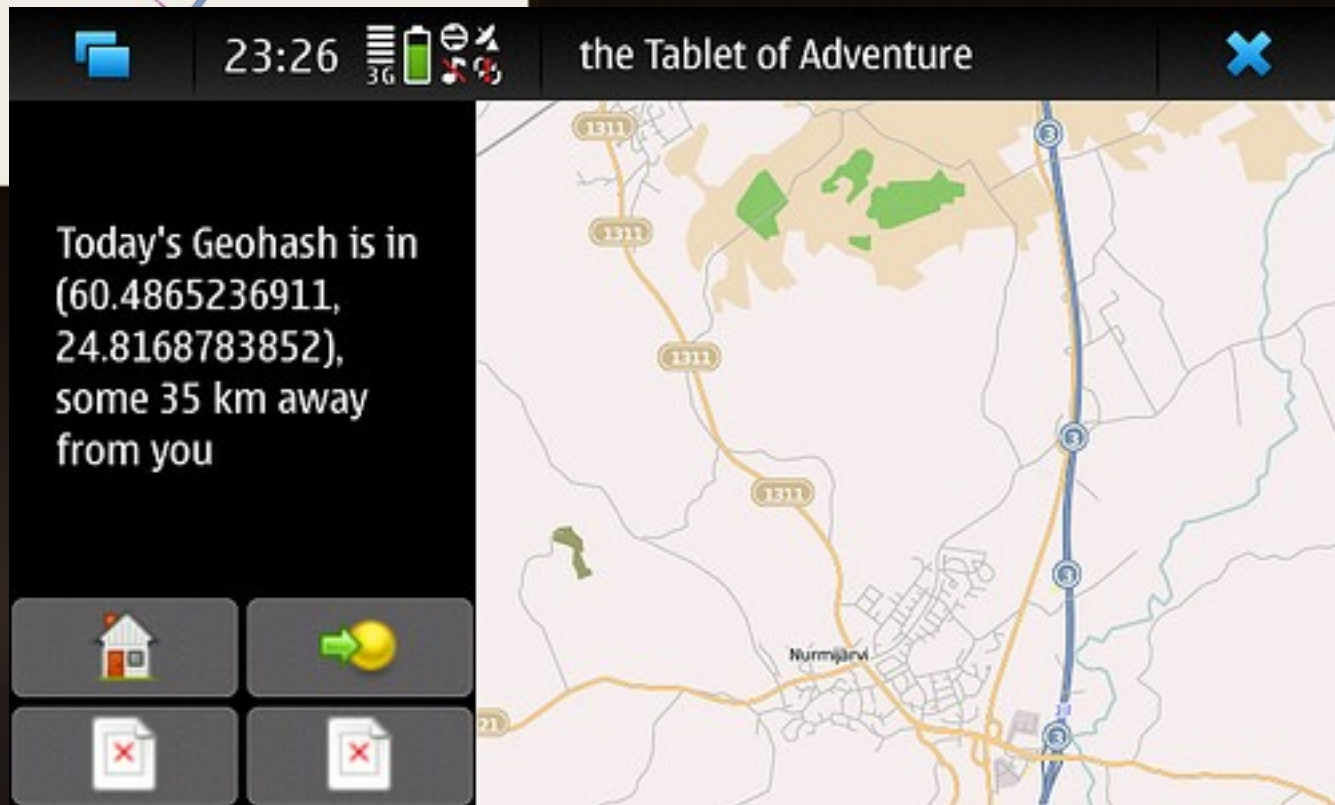
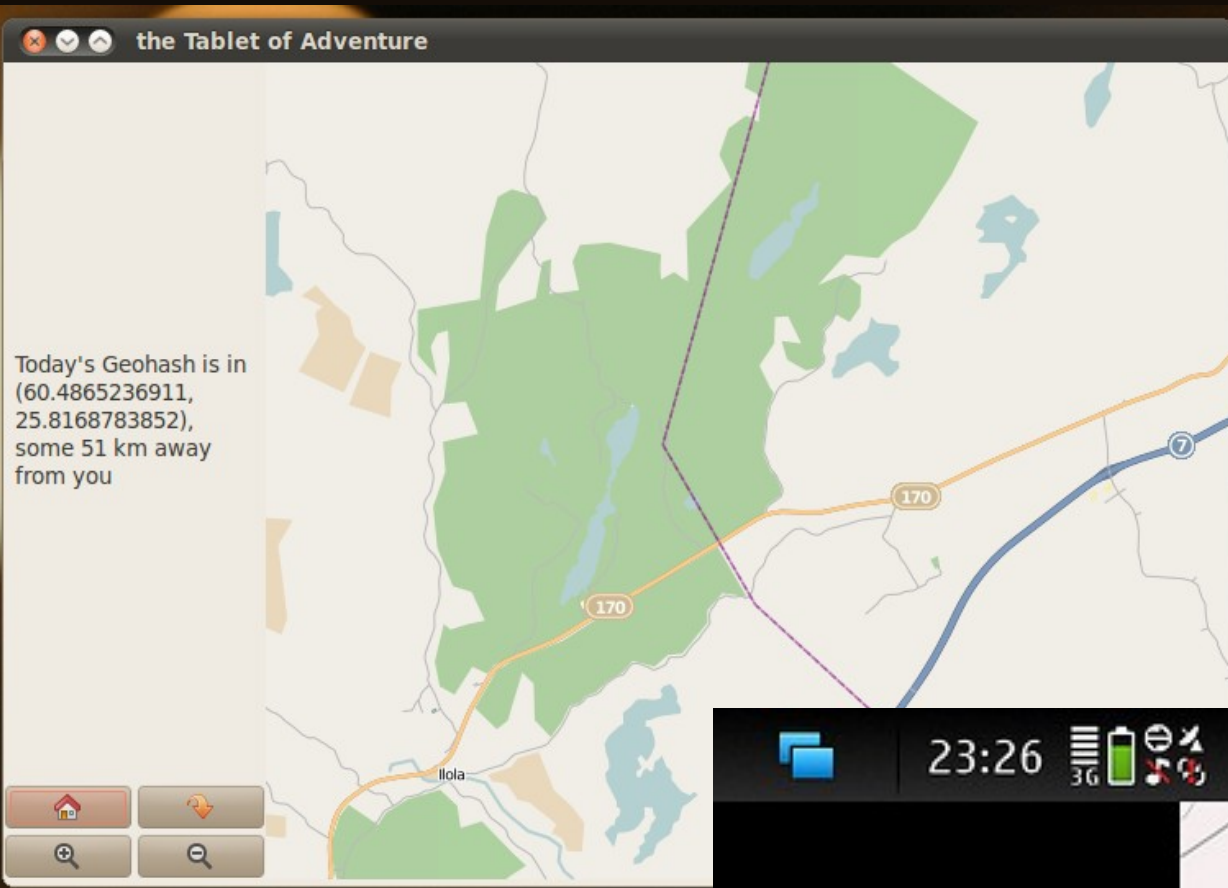
Package geoclue

- **lucid** (utils): Geographic information framework [**universe**]
0.11.1+git20091217-3: amd64 i386

Other hits

Package geoclue-examples

- **lucid** (utils): GeoClue example clients [**universe**]
0.11.1+git20091217-3: amd64 i386



Using location on the Web

How many times have you had to
enter your location to a public
transport route planner?

W3C geolocation API

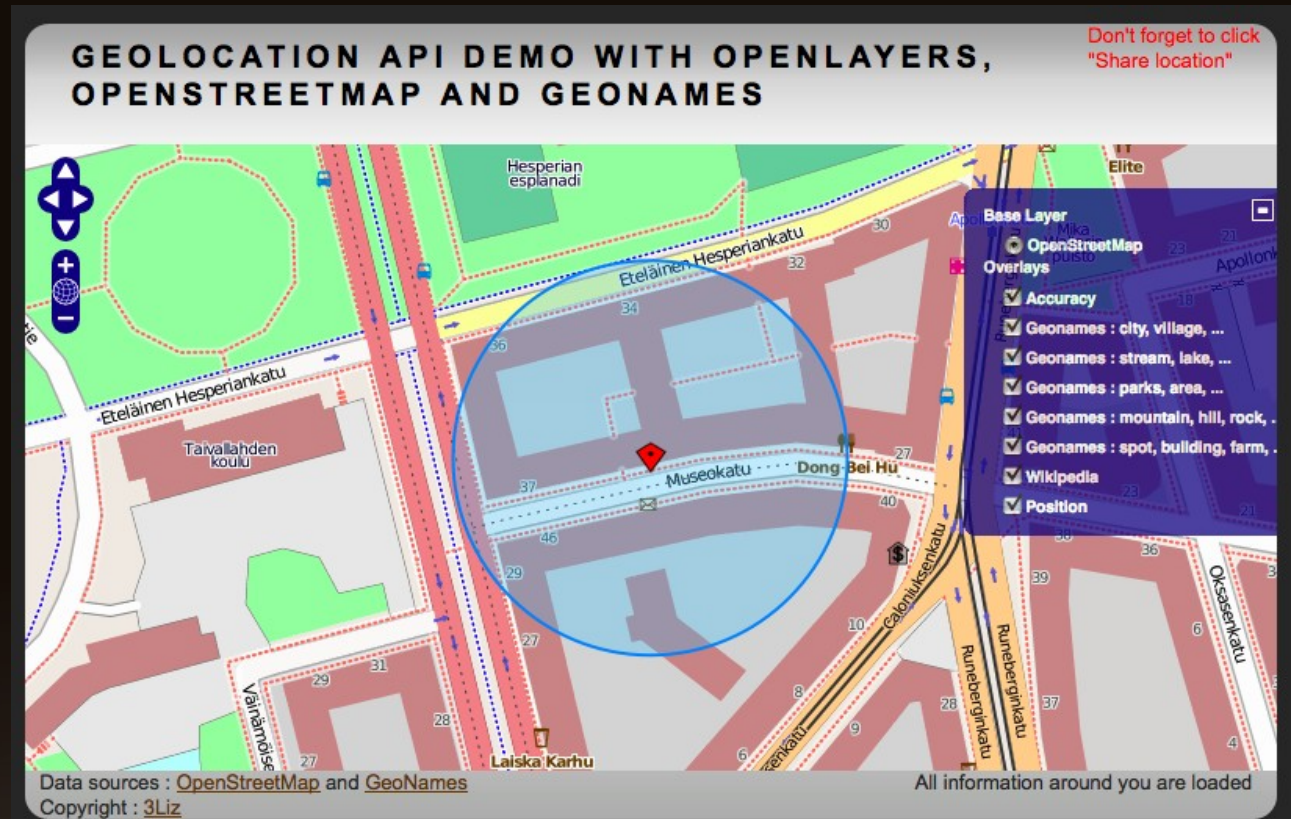
```
function showMap(position) {  
    // Show a map centered at (position.coords.latitude,  
    // position.coords.longitude).  
}  
  
// One-shot position request.  
navigator.geolocation.getCurrentPosition(showMap);
```

Easy JavaScript call to get user's location,
accuracy depends on implementation

<http://dev.w3.org/geo/api/spec-source.html>

W3C geolocation API

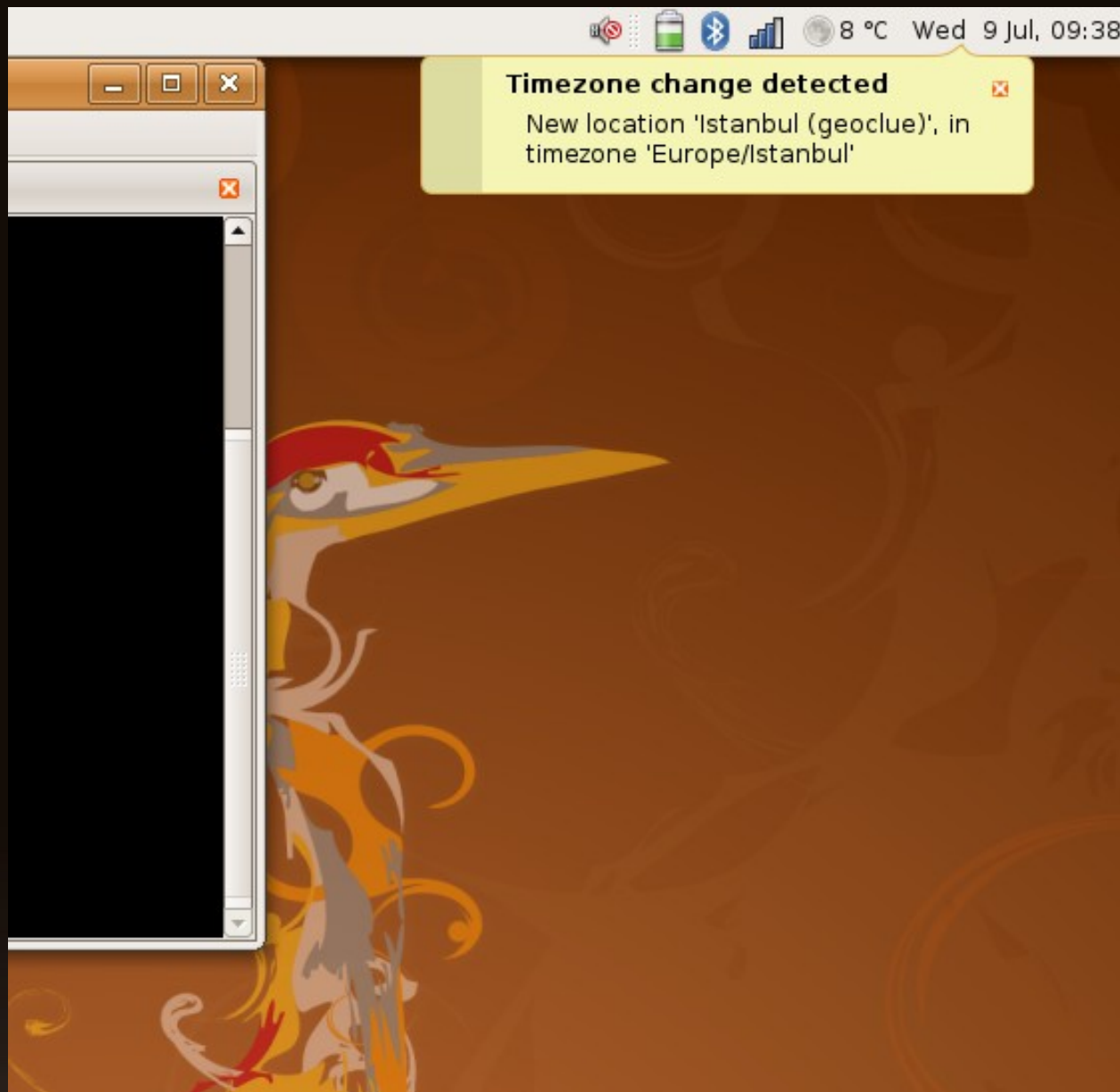
- Firefox 3.5
- iPhone
- Android
- Chrome
- Maemo 5



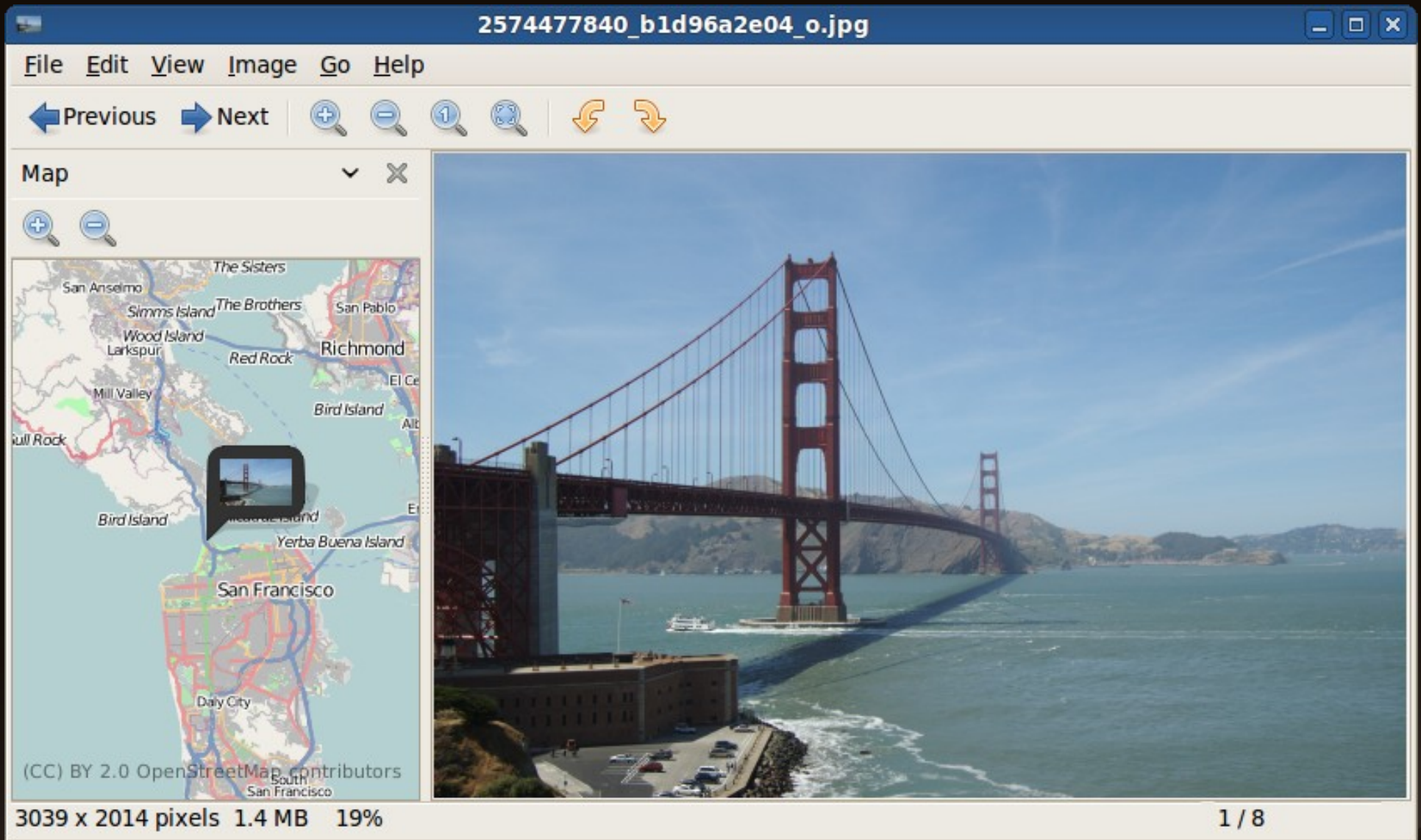
- Does Konqueror do this?

Examples on the desktop

applications using GeoClue and location



Timezone and weather



EOG Map plugin: where was this picture taken?

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Photos

Map

Previous Next Open GPX File Zoom In Zoom Out Fit Tracks

Photo IPTC Metadata

Creator (By-Line):
Creator Title (By-Line Title):
City: Siegelbach
Province: Rhineland-Palatinate
Country Name: Germany
Country Code: DE
Writer:

Get Iptc Data

GPS Data

Latitude: 49.465683300
Longitude: 7.680668300
GPS Time: 6/27/2009 1:37 PM
Photo Time: 6/27/2009 9:37 AM
 Clue Photo to Track

Time Adjustment
Allows to specify the difference between GPS Time and Camera Time

Hours: 4
Min: 0
Sec: 0

Cancel Save

F-Spot plugin: where were these pictures taken?

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Telepathy: Where are my friends?

Information available across the desktop through dbus

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OpenStreetMap-based vector navigation

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Could Get Hot New Stuff recommend things relevant to location?

Some things to take from here

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Some things to take from here

Location can make your app
smarter

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Some things to take from here

Location > Google Maps

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Some things to take from here

Location is not difficult

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Some things to take from here

You can make your own map
visualizations with
OpenStreetMaps



If you develop mobile Linux
applications,
GeoClue is there for you

<http://geoclue.freedesktop.org/>

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