



THE UNIVERSITY OF BRITISH COLUMBIA

Simple Web Mapping

UBC Forestry PC Administration [Login](#)

PC Name:

Or, pick from a list of PC's to display on the map:

PC Details

Computer Name	2221A
PCID	
Computer_S	AE12345
Manufacturer	ASUS
Model	P8000
CPU	P3
HD	80GB
Memory	2.5GB
OS	XP PRO
Recycled	NO
Loc_Histor	2221A 2007
Invoice_ID	123456
Network_po	200123
Link to Image	http://ggcomp.fores
Floor Number	2
X	49.2605487545618
Y	-123.248372264206

Developed by:

Mark Laudon,
Laudontech.
info@laudontech.com

Jerry Maedel
Faculty of
Forestry, UBC
Jerry.maedel@ubc.ca



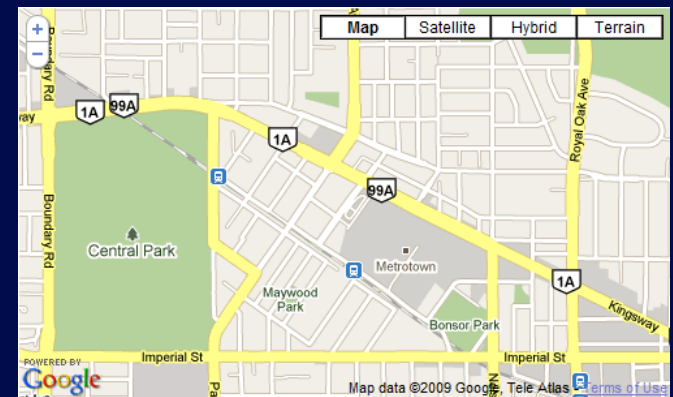
Why it was developed

- Researchers wanted:
 - Open source web mapping tool
 - Simple programming interface
 - Web editing capability
 - Using Google Maps - Application Programming Interface (API)
 - Working on a basic web server



Google Maps V3 – Hilton Bby.

```
<html>
<head>
<meta name="viewport" content="initial-scale=1.0, user-scalable=no" />
<script type="text/javascript"
src="http://maps.google.com/maps/api/js?sensor=false"></script>
<script type="text/javascript">
function initialize() {
var latlng = new google.maps.LatLng(49.228514,-123.003938);
var myOptions = {
zoom: 14,
center: latlng,
mapTypeId: google.maps.MapTypeId.ROADMAP
};
var map = new google.maps.Map(document.getElementById("map_canvas"),
myOptions);
}
</script>
</head>
<body onload="initialize()">
<div id="map_canvas" style="width:500px; height:300px"></div>
</body>
</html>
```





System Requirements

- Web Server
 - We used MS IIS but almost any web server will work
- PHP
 - A free, multi-platform, server side, scripting language
 - Especially suited for Web development and can be embedded into HTML



Google Maps V2 API

- Map embedded in 3rd party web site
 - Uses JavaScript and XML
 - Requires adding Google JavaScript code to your web site page to access objects, methods...

```
<script  
src="http://maps.google.com/maps?file=api&v=2&key=ABQIAA  
AA3s_WNAiKP5H5soJjnVwN7hSTNilBIvC8Frrd7O9QOzmqMhtqxT  
e-231rsYAOkx-It7-IuD-b7iB1A" type="text/javascript">  
</script>
```

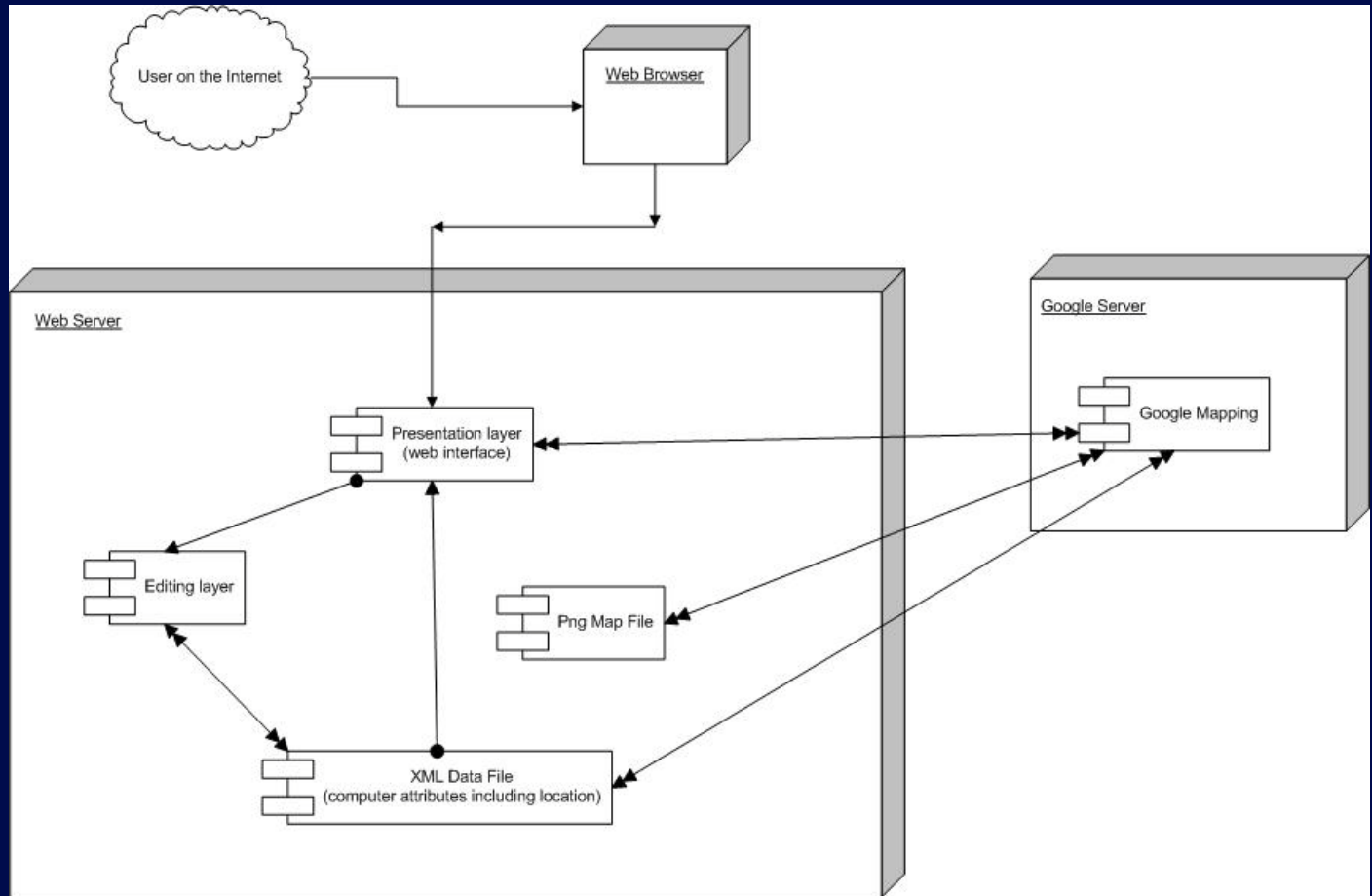


Development Steps

- Choose a project – computer inventory
- Get vector data into Google
 - SHP to PNG using Global Mapper, or GMapCreator, or MapCruncher...
- Setup query capability – Google `map.setCenter`
- Add editing capability – Google `mapCntre.lat`
- Upgrade to MySQL – future development



Logical Diagram





User Interface

The screenshot shows the 'UBC Forestry PC Administration' web interface. At the top left is the UBC logo. The main header area is green and contains a search bar for 'PC Name' with a 'Find' button, and a dropdown menu for selecting a PC to find, also with a 'Find' button. A 'Login' link is in the top right. Below the search area, a message reads 'not found. Please enter another search term.' The interface is divided into two main sections: 'PC Details' on the left and a map on the right. The 'PC Details' section has a table of input fields for various attributes: Computer Name, PCID, Computer_S, Manufacturer, Model, CPU, HD, Memory, OS, Recycled, Loc_Histor, Invoice_ID, Network_po, Link to Image, and Floor Number. The 'X' and 'Y' coordinates are pre-filled with '49.26057' and '-123.247813' respectively. Below the table are three buttons: 'Save Changes', 'Add New PC at Map Center', and 'Delete PC'. The map section shows an aerial view of a campus building with a grid overlay. A blue cube icon is placed on the map. Above the map are four buttons labeled '1st Floor', '2nd Floor', '3rd Floor', and '4th Floor'. The map includes navigation controls (directional arrows, zoom in/out) and a scale bar. At the bottom of the map, it says 'POWERED BY Google' and 'Map Data www.laudotech.com Terms of Use'.



THE UNIVERSITY OF BRITISH COLUMBIA

Query

UBC Forestry PC Administration [Login](#)

PC Name:

Or, pick from a list of PC's to display on the map:

Select a PC to find

not found.

PC Details


Computer Name	<input type="text"/>
PCID	<input type="text"/>
Computer_S	<input type="text"/>
Manufacturer	<input type="text"/>
Model	<input type="text"/>
CPU	<input type="text"/>
HD	<input type="text"/>
Memory	<input type="text"/>
OS	<input type="text"/>
Recycled	<input type="text"/>
Loc_Histor	<input type="text"/>
Invoice_ID	<input type="text"/>
Network_po	<input type="text"/>
Link to Image	<input type="text"/>
Floor Number	<input type="text"/>
X	49.26057
Y	-123.247813

1st Floor 2nd Floor 3rd Floor 4th Floor

Map Data: www.laudon.tech.com [Terms of Use](#)



Query Results

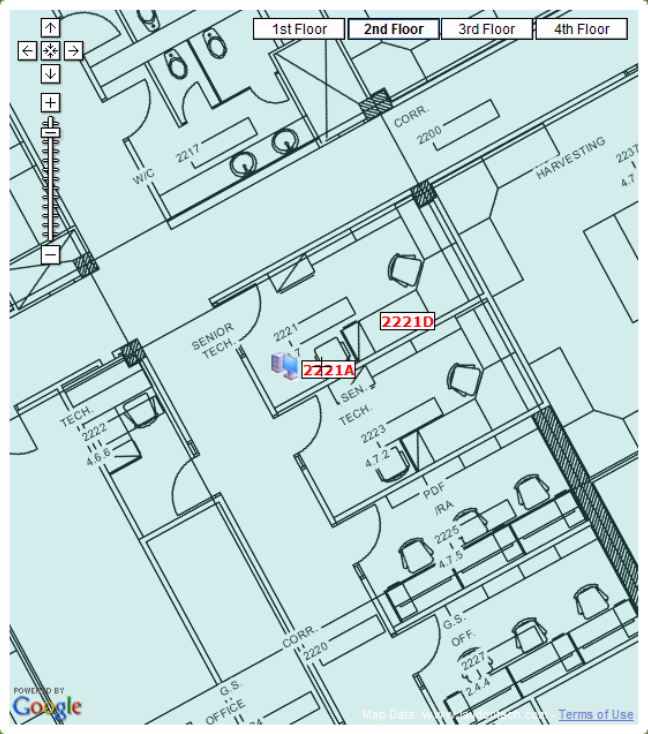
**UBC Forestry PC Administration**[Login](#)

PC Name:

Or, pick from a list of PC's to display on the map:


PC Details

Computer Name	2221A
PCID	
Computer_S	AE12345
Manufacturer	ASUS
Model	P8000
CPU	P3
HD	80GB
Memory	2.5GB
OS	XP PRO
Recycled	NO
Loc_Histor	2221A 2007
Invoice_ID	123456
Network_po	200123
Link to Image	http://ggcomp.fores
Floor Number	2
X	49.2605487545618
Y	-123.248372264206





Editing



UBC Forestry PC Administration

PC Name:

Or, pick from a list of PC's to display on the map:

not found. Please enter another search term.

[Logout](#)

PC Details

Computer Name	<input type="text"/>
PCID	<input type="text"/>
Computer_S	<input type="text"/>
Manufacturer	<input type="text"/>
Model	<input type="text"/>
CPU	<input type="text"/>
HD	<input type="text"/>
Memory	<input type="text"/>
OS	<input type="text"/>
Recycled	<input type="text"/>
Loc_Histor	<input type="text"/>
Invoice_ID	<input type="text"/>
Network_po	<input type="text"/>
Link to Image	<input type="text"/>
Floor Number	<input type="text"/>
X	49.26057
Y	-123.247813

1st Floor 2nd Floor 3rd Floor 4th Floor

2413A

POWERED BY Google

Map data: www.laudontech.com - Terms of Use



Add PC

Administration [Logout](#)

Enter PC Details - Windows Intern...
http://ggcomp.forestry.ubc.ca/ubcpceditor/hc

Enter PC Details

PC Name
PC ID
Computer_S
Manufacturer
Model
CPU
HD
Memory
OS
Recycled
Loc_Histor
Invoice_ID
Network_po
Link to Image
Floor Number
X
Y

Internet | Protected Mode | 100%

Finders of an PC Name
to display on the map:
another search term.

1st Floor 2nd Floor 3rd Floor 4th Floor

INSTR. 3419
PDF/RA 3411
TECH. 3410
729(2)

Map Data: www.laudontech.com - Terms of Use



Conclusion

- What worked
 - We got a secure, editable, almost free web GIS
 - Not bad for 600 lines of code
 - Google used mostly to position objects and display layers
- What may work
 - XML database is unwieldy, needs SQL but out of time
 - You have to be a programmer to maintain
 - Will users adapt it and use for their own needs?
- Code will be available
 - We will distribute a generic code set if contacted via e-mail