SGG 4653
Advance Database System

Database Integration: Desktop & Web
Customization for GIS
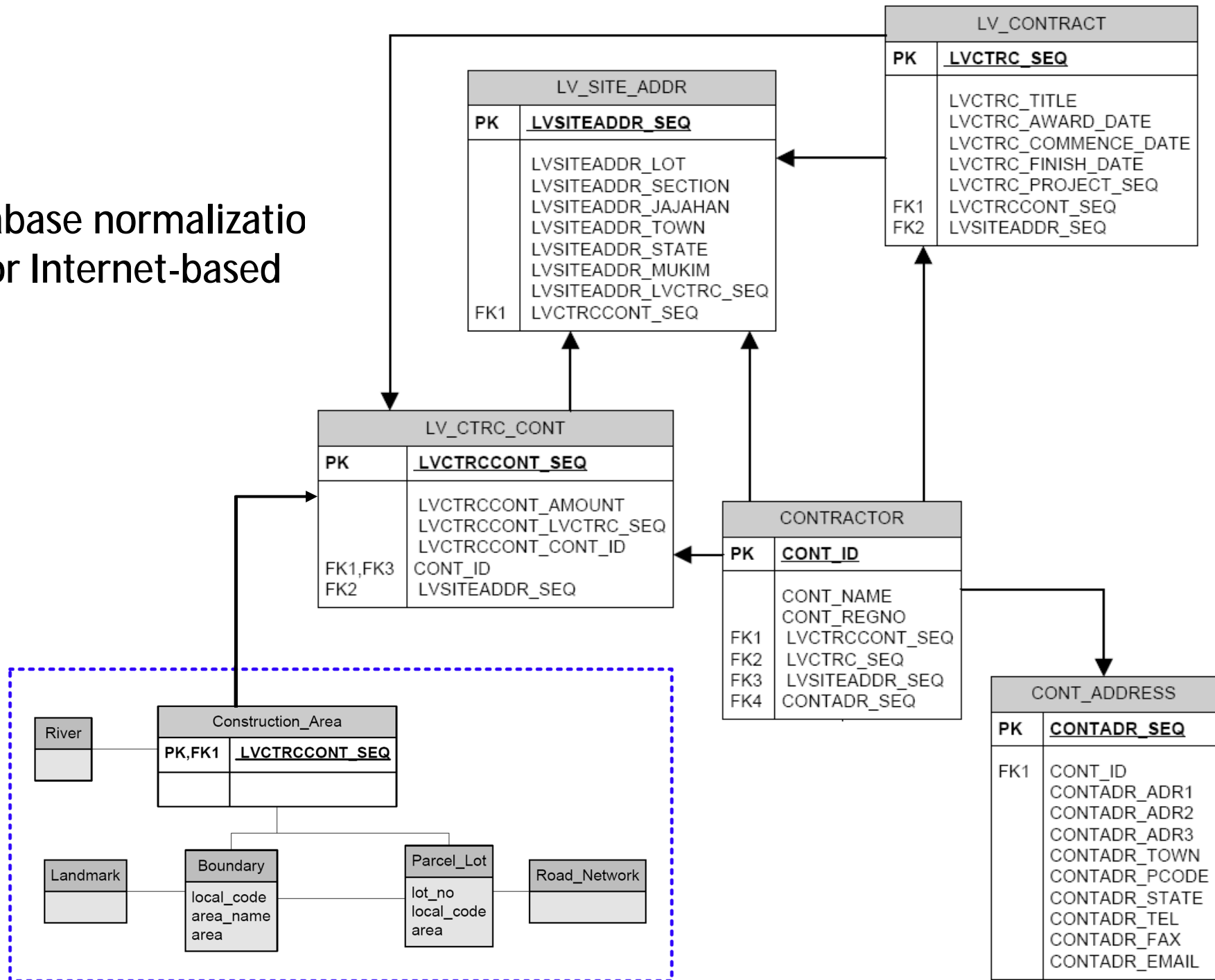
Introduction

§ GIS application customization

§ System design and analysis for GIS application
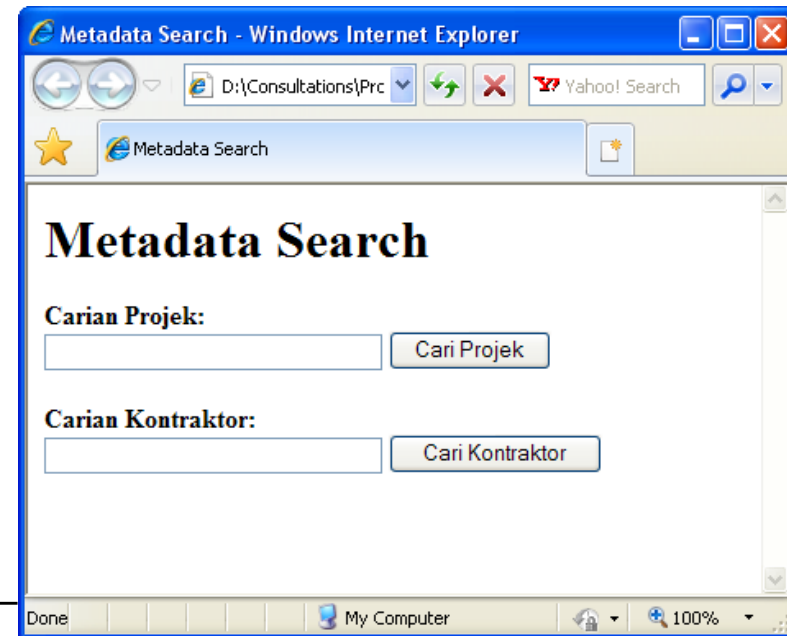
§ Database normalization

§ SQL (query) optimization

Internet based Customization

§ Common developer tool used: PHP, MySQL, XML.

§ Open source packages.

§ System design and analysis for Internet GIS application.

§ Database normalization for Internet-based.

§ SQL (query) optimization for Internet-based

Database normalizatio
for Internet-based

LV_CONTRACT

PK	**LVCTRC_SEQ**
	LVCTRC_TITLE
	LVCTRC_AWARD_DATE
	LVCTRC_COMMENCE_DATE
	LVCTRC_FINISH_DATE
	LVCTRC_PROJECT_SEQ
FK1	LVCTRCCONT_SEQ
FK2	LVSITEADDR_SEQ

PHP + MySQL

```php
<?

include "connection.inc";


$str_query = "select lvctrc_seq, lvctrc_title from lv_contract where LVCTRC_TITLE LIKE '%$searchproject%' ";


$q = mysql_query($str_query, $conn);
?>
```

Connection.inc

```php
<?php

$conn = mysql_connect("localhost", "root", "12345678") or die(mysql_error());
mysql_select_db("cidb") or die(mysql_error());


?>
```

PHP + MySQL

```php
<?
include 'connection.inc';

$sql = "select lv_contract.LVCTRC_SEQ,
               lv_contract.LVCTRC_TITLE,
               lv_contract.LVCTRC_OWNSITE_DATE,
               lv_contract.LVCTRC_FINISH_DATE,
               contractor.CONT_NAME,
               contractor.CONT_REGNO,
               lv_ctrc_cont.lvctrccont_amount

from lv_contract, lv_ctrc_cont, contractor

where lv_contract.LVCTRC_SEQ = lv_ctrc_cont.LVCTRCCONT_SEQ
and lv_ctrc_cont.LVCTRCCONT_CONT_ID = contractor.CONT_ID
and lv_contract.LVctrc_seq = '$detail' ";

$result = mysql_query($sql,$conn) or die(mysql_error());

while($row = mysql_fetch_row($result))
{
   $n1    = $row[0];
   $n2    = $row[1];
   $n3    = $row[2];
   $n4    = $row[3];
   $n5    = $row[4];
   $n6    = $row[5];
   $n7    = $row[6];
}
?>
```

LV_CONTRACT

PK	**LVCTRC_SEQ** ←
	LVCTRC_TITLE ←
	LVCTRC_AWARD_DATE
	LVCTRC_COMMENCE_DATE
	LVCTRC_FINISH_DATE ←
	LVCTRC_PROJECT_SEQ
FK1	LVCTRCCONT_SEQ
FK2	LVSITEADDR_SEQ

CONTRACTOR

PK	**CONT_ID** ←
	CONT_NAME ←
	CONT_REGNO ←
FK1	LVCTRCCONT_SEQ
FK2	LVCTRC_SEQ
FK3	LVSITEADDR_SEQ
FK4	CONTADR_SEQ

LV_CTRC_CONT

PK	**LVCTRCCONT_SEQ** ←
	LVCTRCCONT_AMOUNT ←
	LVCTRCCONT_LVCTRC_SEQ
	LVCTRCCONT_CONT_ID ←
FK1,FK3	CONT_ID
FK2	LVSITEADDR_SEQ

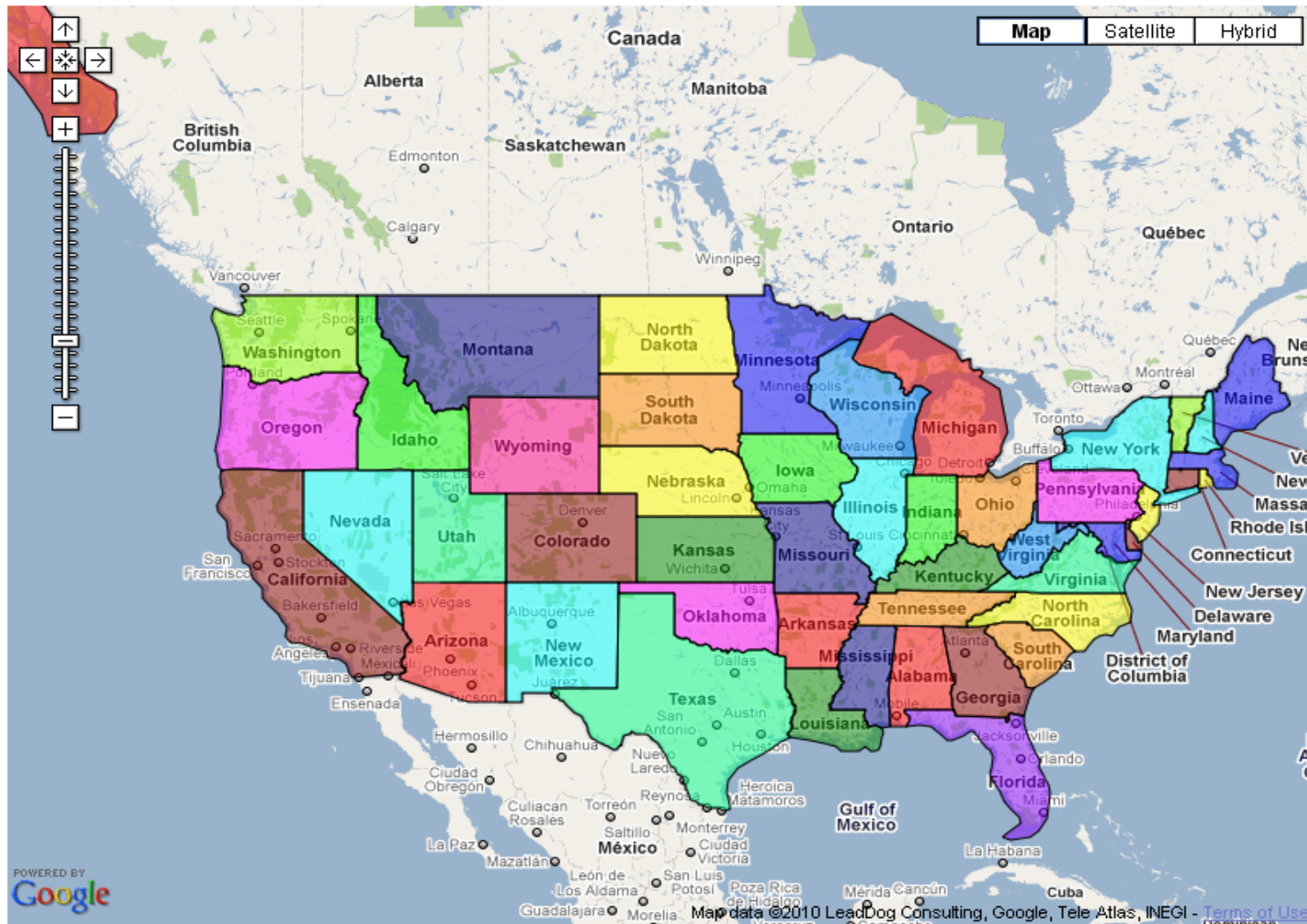# Internet based Application
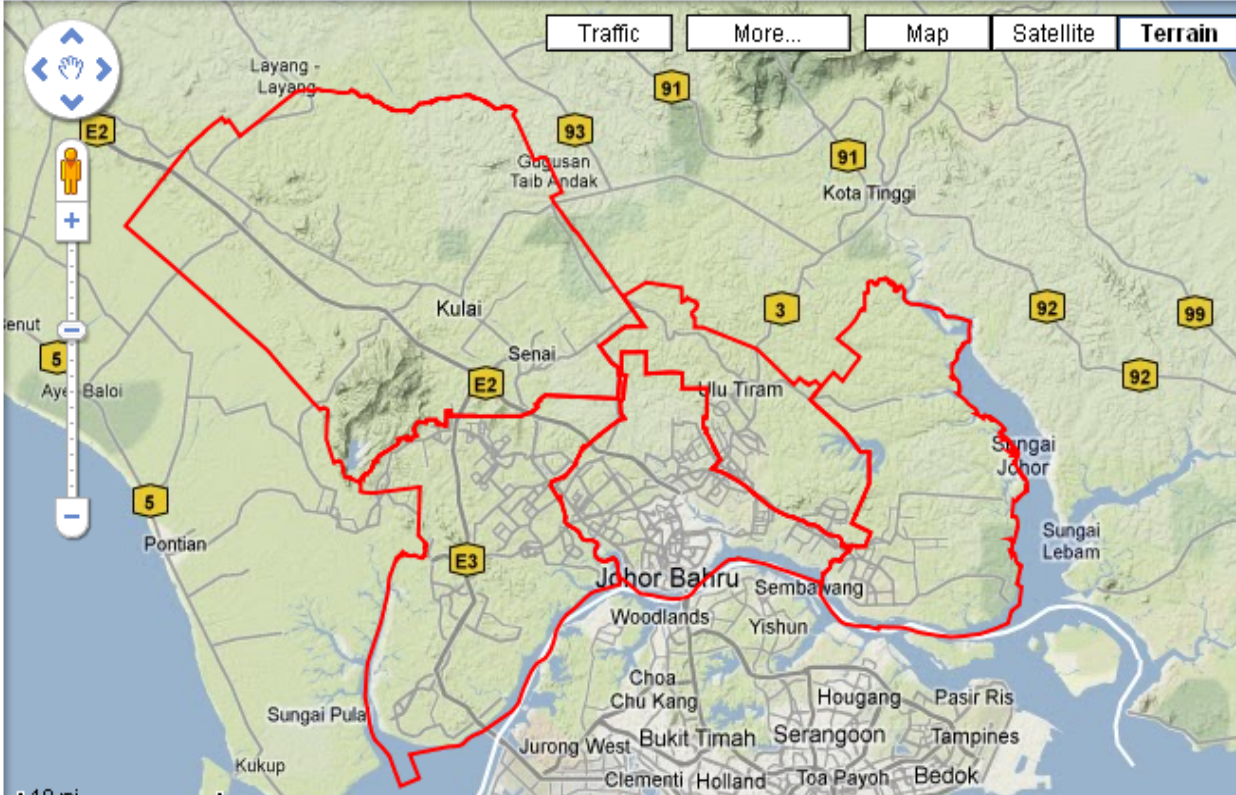
Internet based Application

Point mapping.

Internet based Application
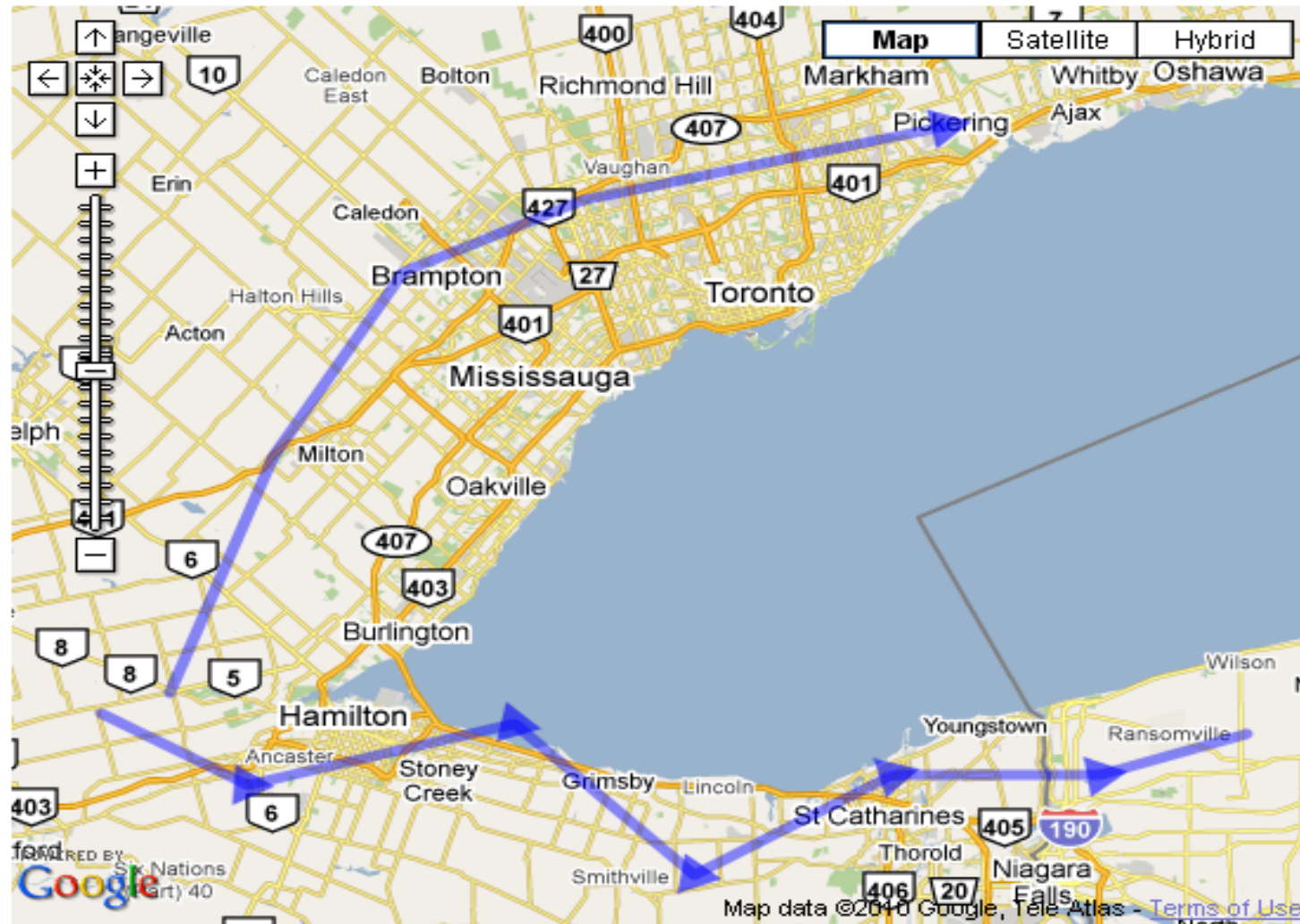
Line mapping.

Internet based Application

Polygon mapping.

Internet based Application

Online GPS waypoint editor.

Internet based Application

UTM campus map.