

International Symposium on Historical  
Research of Plank Roads and applications of  
3S Tech. (16 – 18 May)

# Reconstructing Historical Sites: A web-based PPGIS Approach

Alan Kwok Lun Cheung (張國倫)

Paulina Pui Yuen Wong (王沛欣)

School of Geography, Geology and Environmental Science  
University of Auckland New Zealand

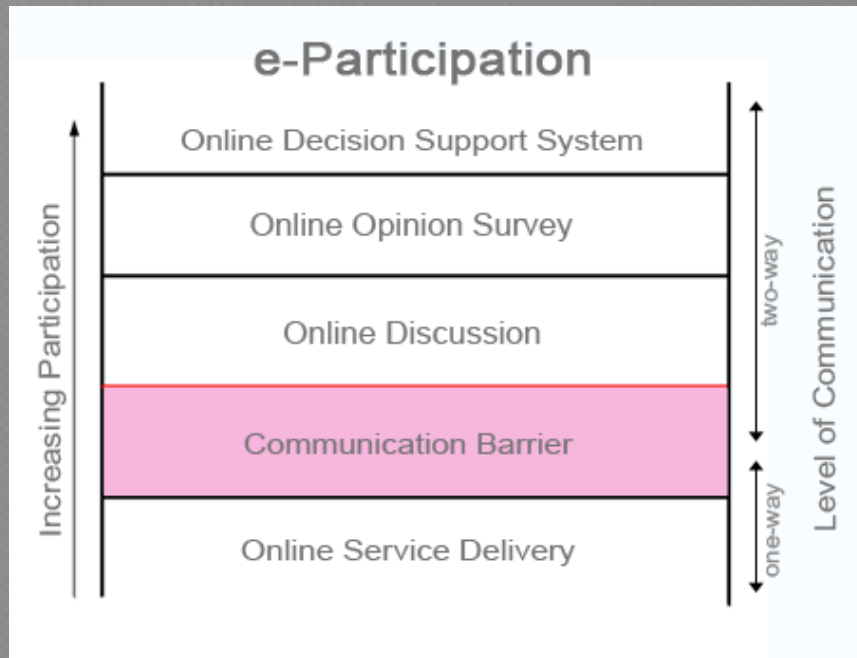


# What is PPGIS? 公眾參與地理信息系統

- Public Participation GIS
  - Data Collection, Data Sharing 作為收集,分享數據的平台
  - Public Commenting 公眾對數據作出評論的平台
  - Assist Decision Making 從數據協助決策
- Differences between GIS and PPGIS
  - Analytical Functions 只提供基本的空間分析功能
  - Interface 介面比GIS簡單



# Role of PPGIS in Historical Studies



e-Ladder based on Arnstein's research on accessibility in 1969

作為公眾參與系統，必須要有雙向性的運作模式

- Enhance sharing of various information beyond the communication barrier



# Role of PPGIS in Historical Studies

- Provide a means of storing and sharing multimedia data 作為儲存和分享歷史研究數據
- Gather different opinions on a single spatial object 分享對同一空間不同的詮釋方法
- Assist decision making via visualization of collected data 利用GIS將信息視像化，進而協助決策





# Example

- PPGIS using ArcIMS.....



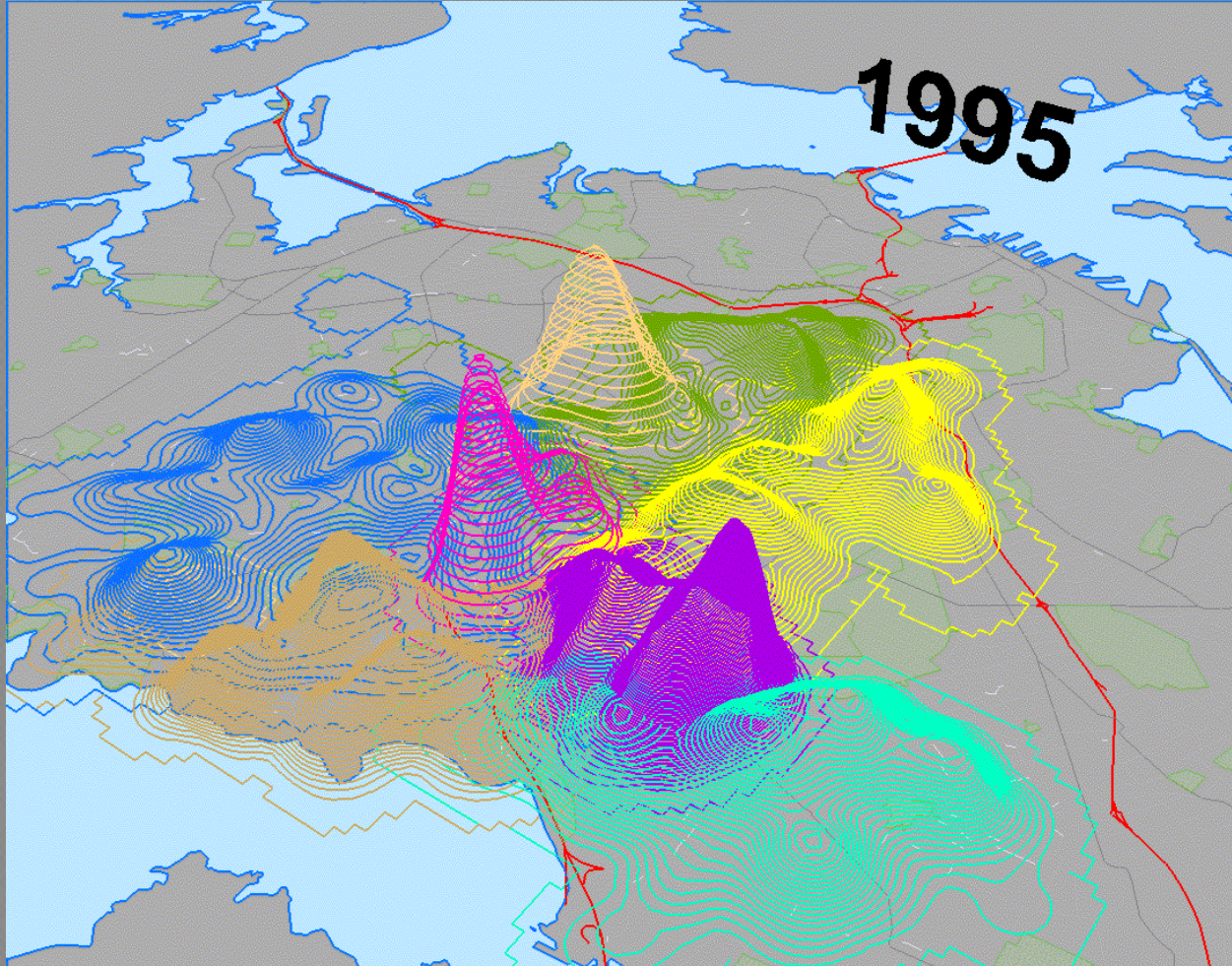
# Visualization 數據視像化

## The Public Perception of Auckland Suburbs





# Alternative Visualizations 不同的數據視像化

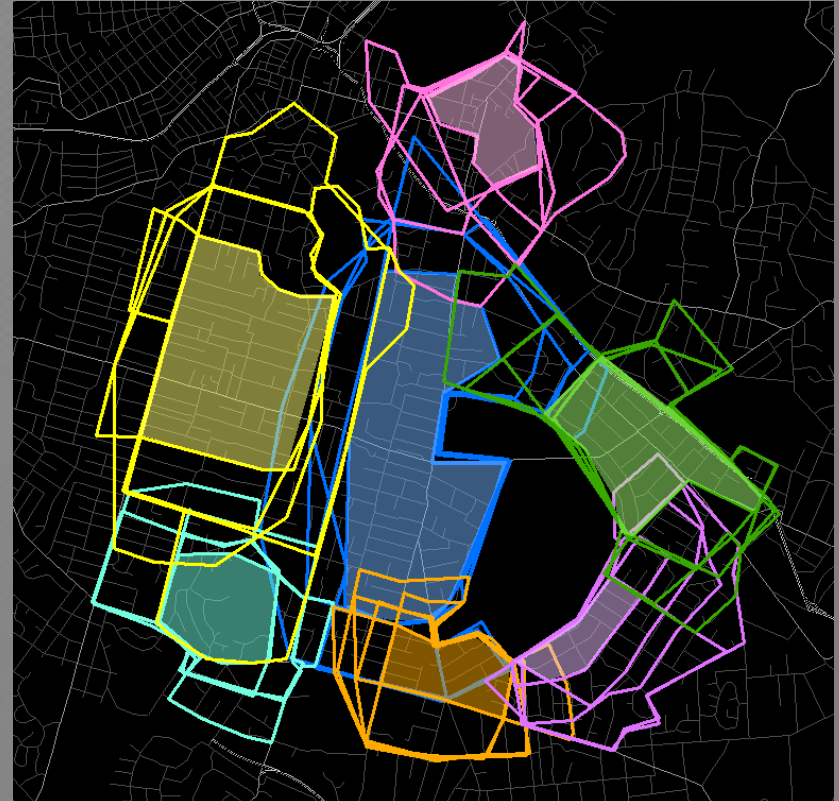




# Further Alternative Visualization



Kernelling



Super-Valuation





# Issues

- Interoperability
  - Data Interoperability 數據通行性
    - GML (XML) as a solution? 不同的GIS系統使用不同的數據格式
  - Software Interoperability 軟件的通行性
    - Thin Client vs. Thick Client



# Further Issues

- Data Quality 數據品質問題
  - Appropriateness
  - Date of Capture
  - Source
  - Resolution
  - Etc
- Censoring 數據管理問題





# Outlook



- System under development using Open Sourced UMN Mapserver as the backend and KaMap as the frontend
- 施工中 · · · 利用開源軟件開發PPGIS系統



# Prototype System

Interactive Map Beta 3 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://icm.sges.auckland.ac.nz/kanew/?map=gmap&cps=2668290,6481741,5000&layers=\\_base\\_](http://icm.sges.auckland.ac.nz/kanew/?map=gmap&cps=2668290,6481741,5000&layers=_base_)

Interactive Map

KEY MAP LEGEND QUERY SEARCH

ADD COMMENT

Map Info

Keymap

Coords

x: 2666780.9688004993  
y: 6482087.083006308

Site No. 1

Type: monument  
Date: 21.02.07  
Author: Paulina Wong

Alfred Nathan House Commerce B Thomas Building  
General Library Biology Musto  
Maidment Theatre Old Choral Hall  
Recreation Centre Engineering  
Science Centre Engineering  
Conference Centre  
Owen Glen Building

Auckland Central

© The University of Auckland 2007  
www.auckland.ac.nz

kilometers  
0 0.05 0.10 0.15

Local intranet







Thank You!

