

碩論與發表過的論文



**Travel Time Estimation and Prediction
for Highways Using Current Flow
Status and Historical Traffic Data
Based on the Internet of Vehicles**

Advisor:

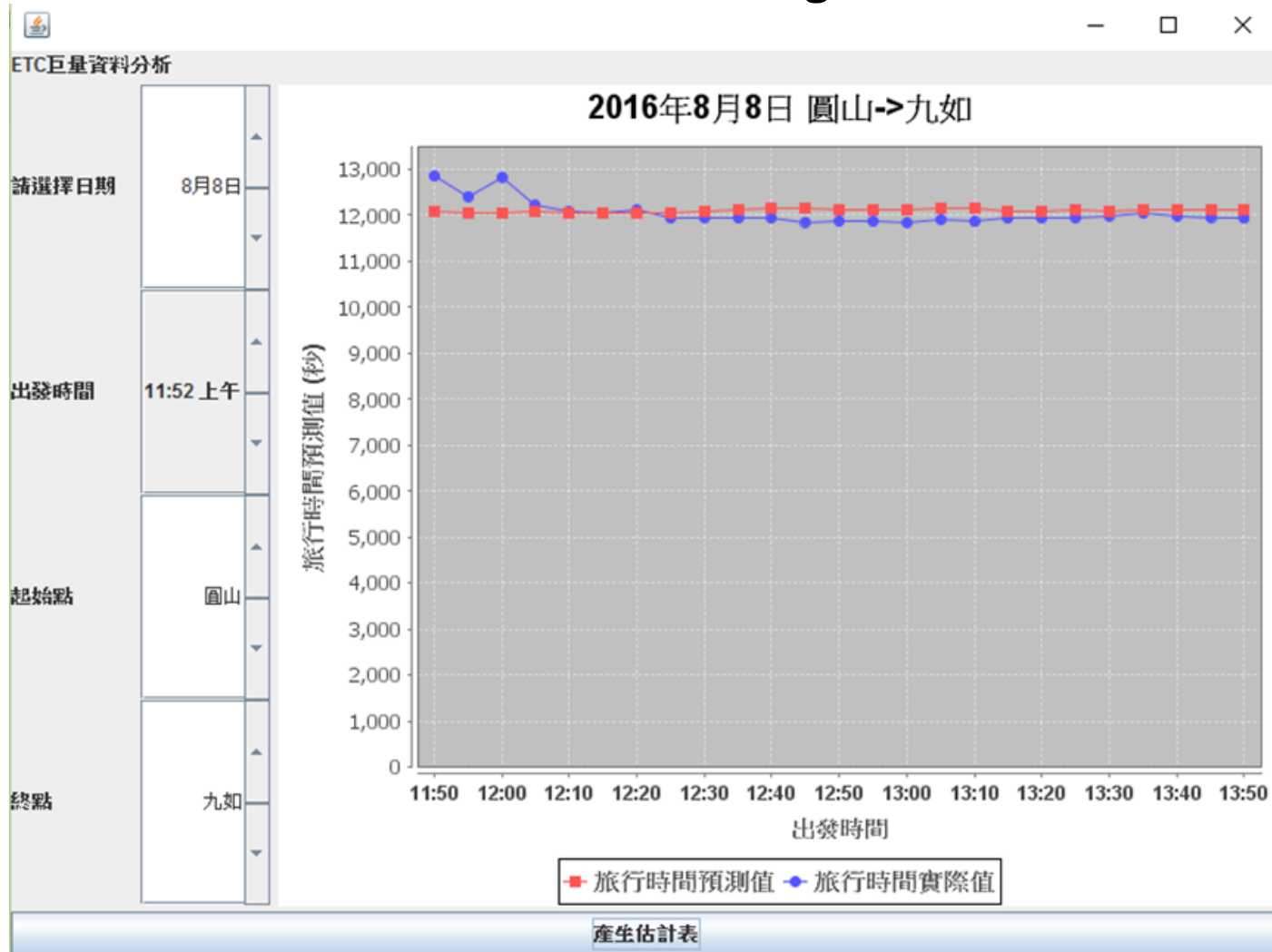
Prof. Lien-Wu Chen

Student:

Da-En Chen

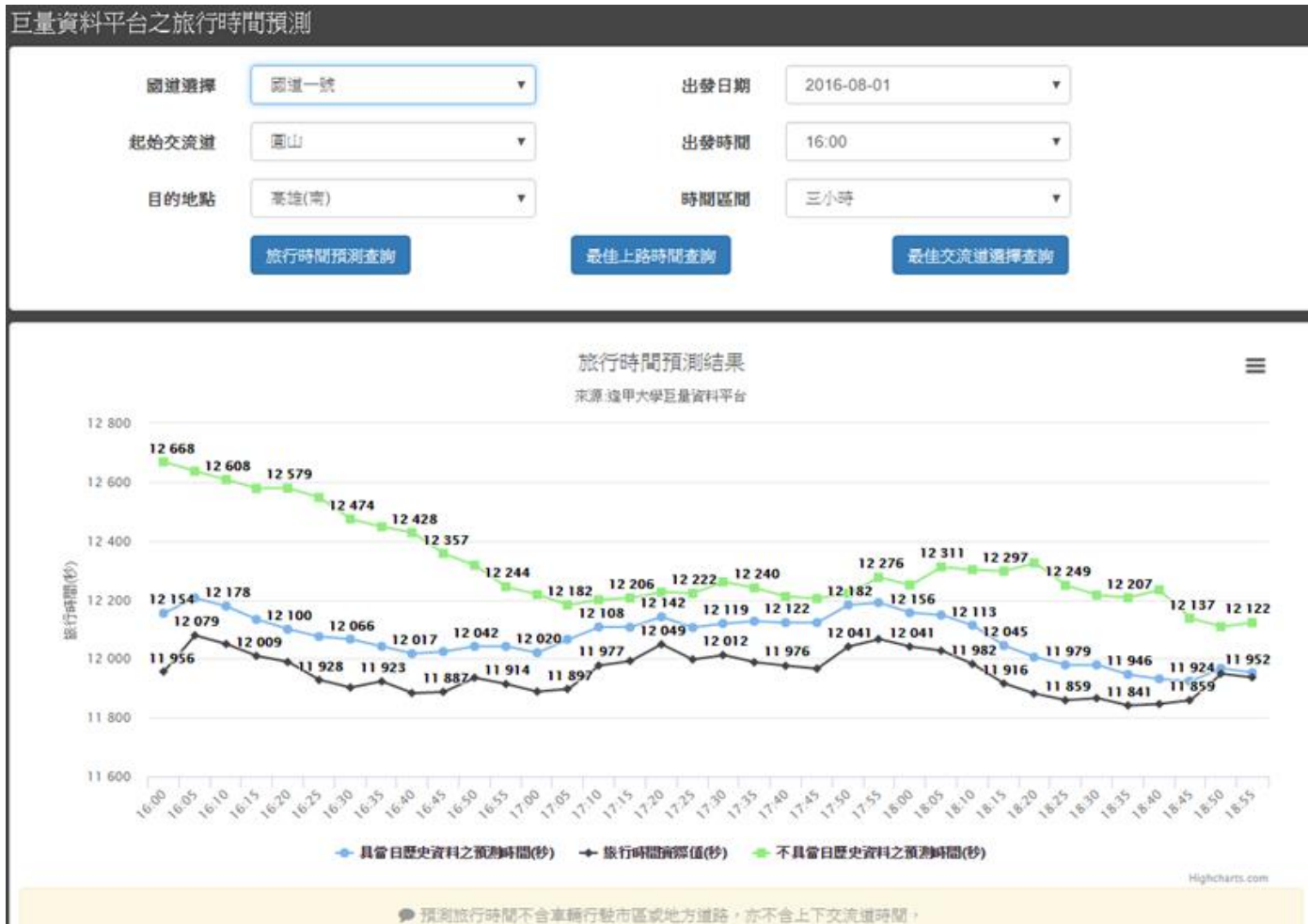
System Implementation

Offline Travel Time Prediction Using Java JFreeChart API



System Implementation

Online Travel Time Prediction Visualization Using Highchart API



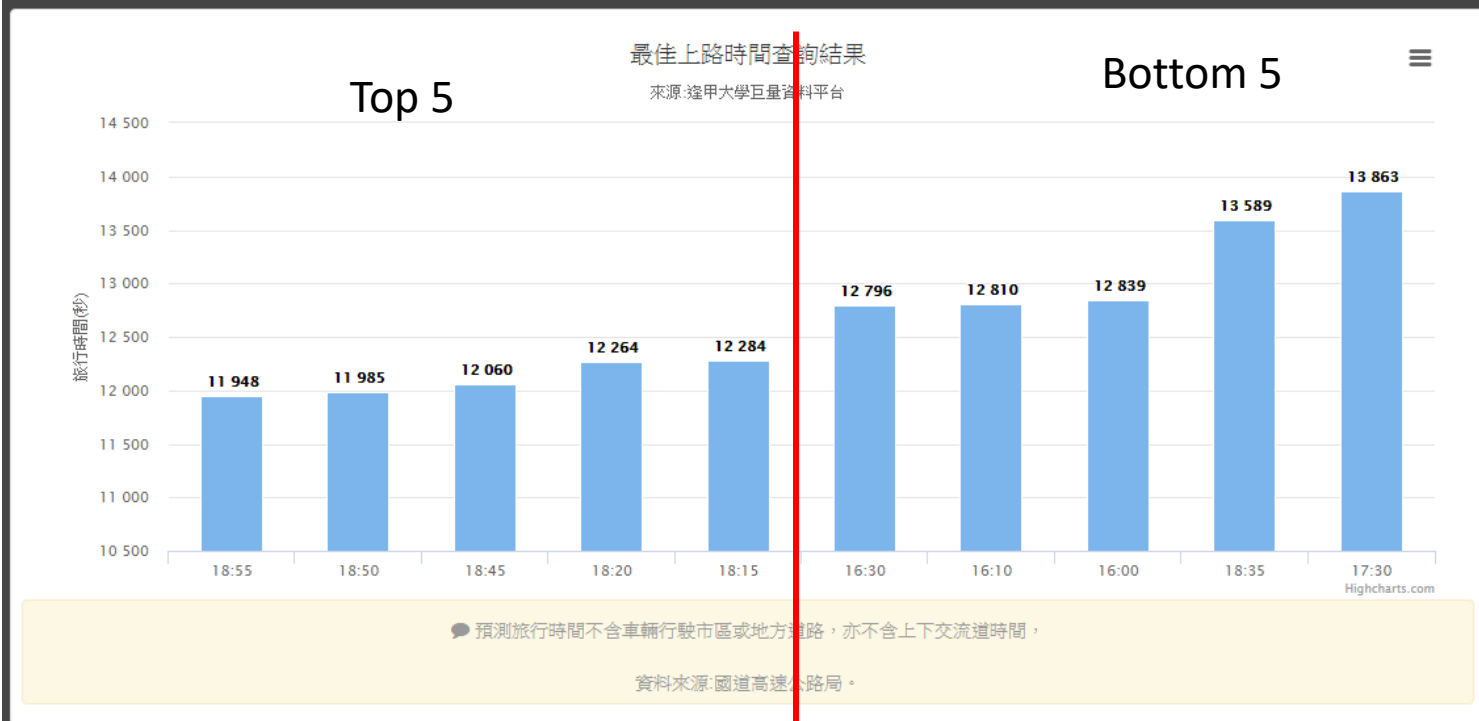
System Implementation

Travel Time Prediction Application

巨量資料平台之旅行時間預測

出發選擇	台中火車站	出發日期	2016-08-02
起始交流道	圓山	出發時間	16:00
目的地點	高雄(南)	時間區間	三小時

[旅行時間預測查詢](#) [最佳上路時間查詢](#) [最佳交流道選擇查詢](#)





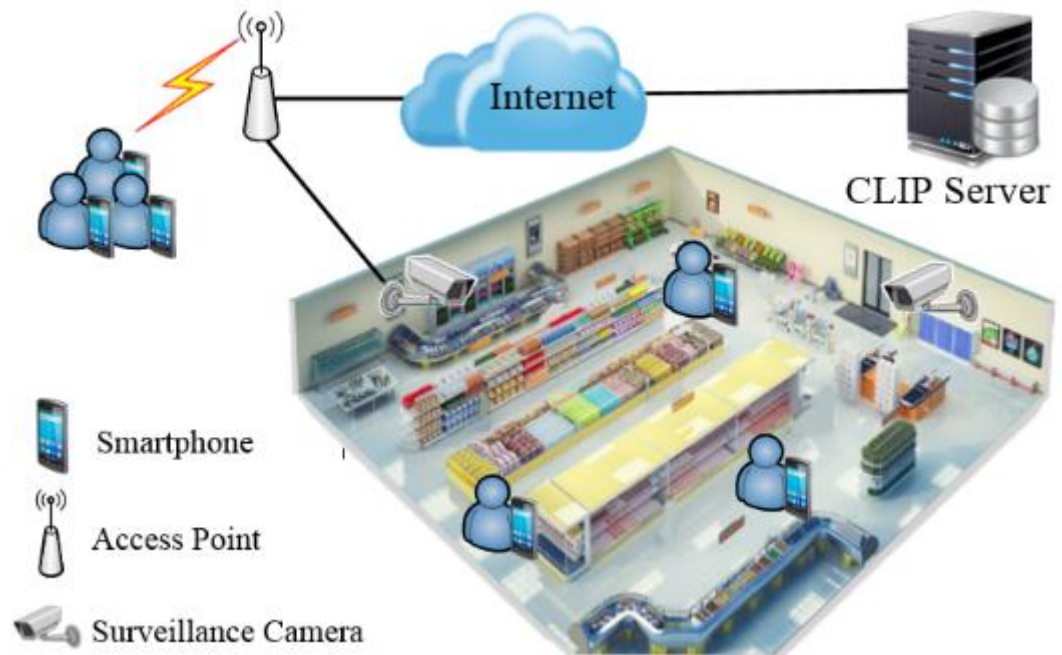
VIPS: A Video-Based Indoor Positioning System with Centimeter-Grade Accuracy for the Internet of Things

Advisor : Prof. Lien-Wu Chen

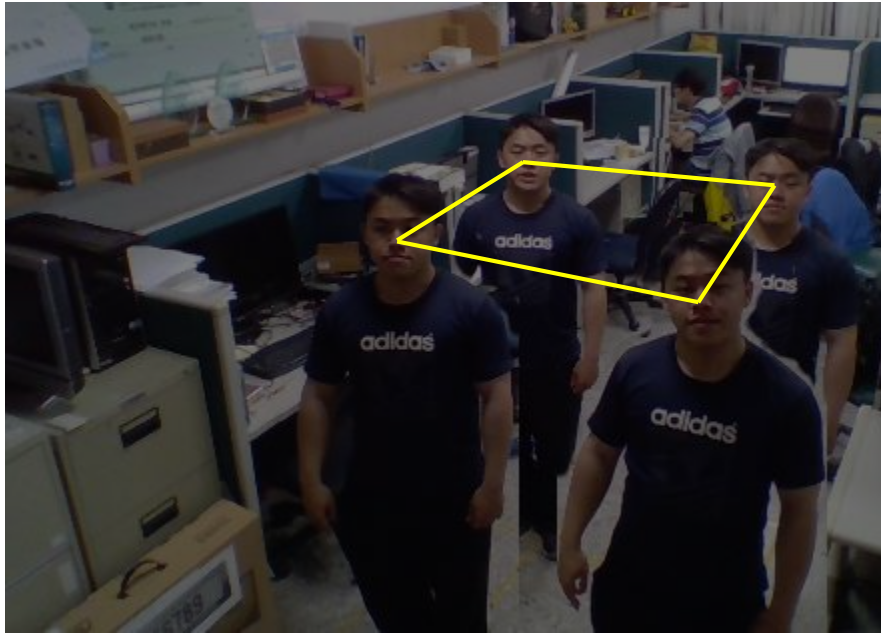
Student : Da-En Chen

System Model

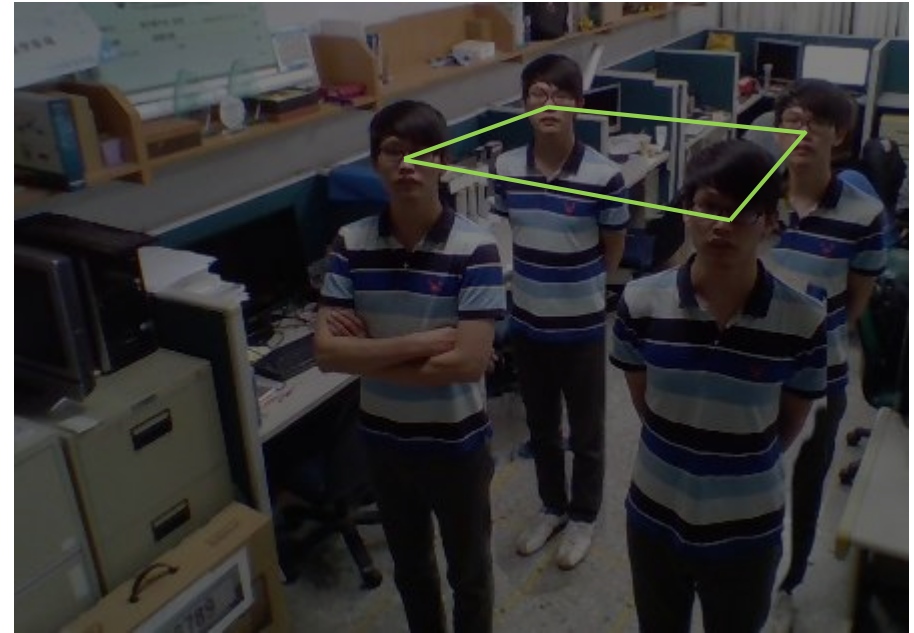
- **Surveillance Camera**
 - Capture the image of individual faces
- **CLIP Server**
 - Recognize the face of individual, calculate his/her position, and broadcast to individuals
- **Smartphone**
 - Obtain the identifier, position, and facing direction



Scheme : Height-Dependent Geometric



Height 161.7cm

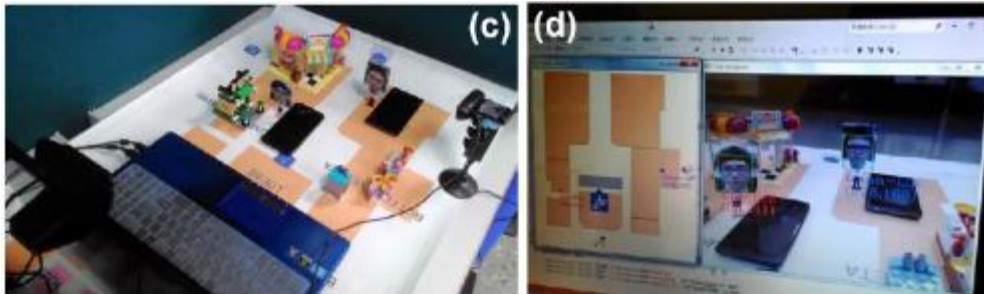


Height 180cm

System Implementation

- **Field Trial**

- The IPU is installed at a corner
- Recognizing the face and mapping its center pixel to the indoor location



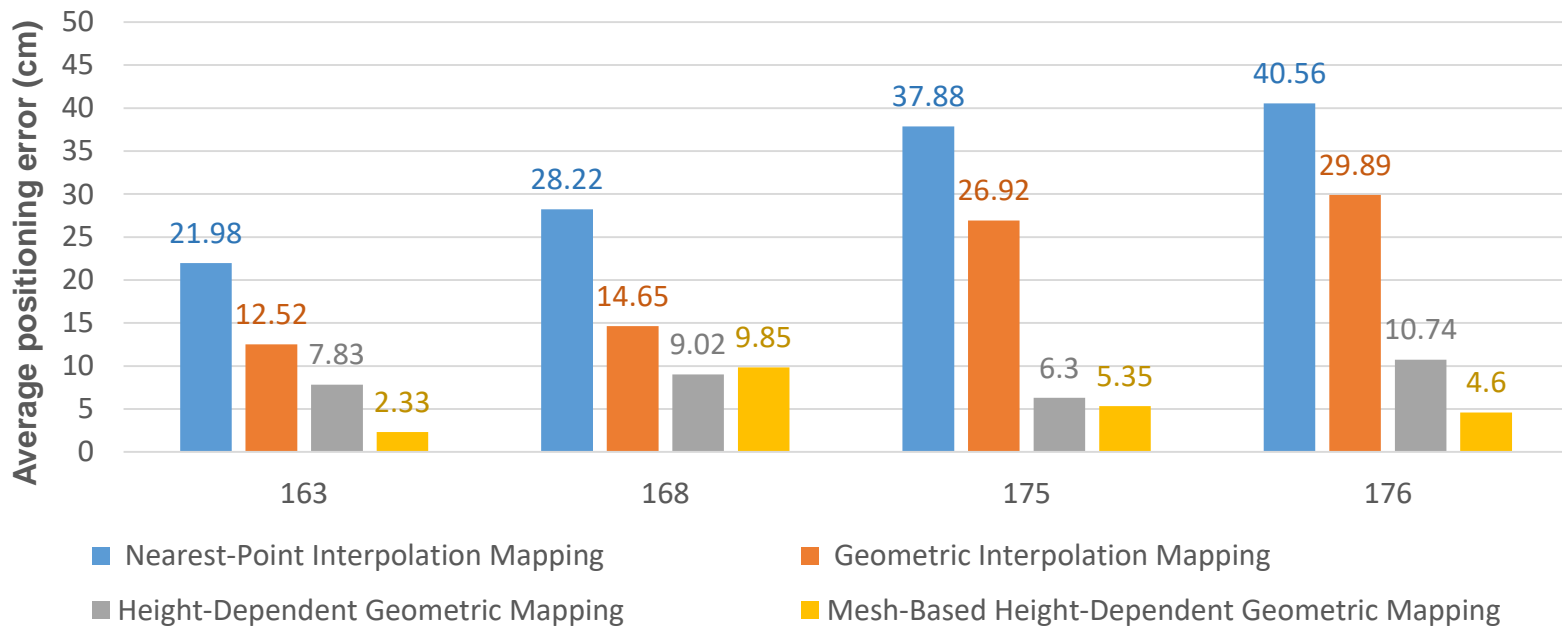
- **Desktop Demo**

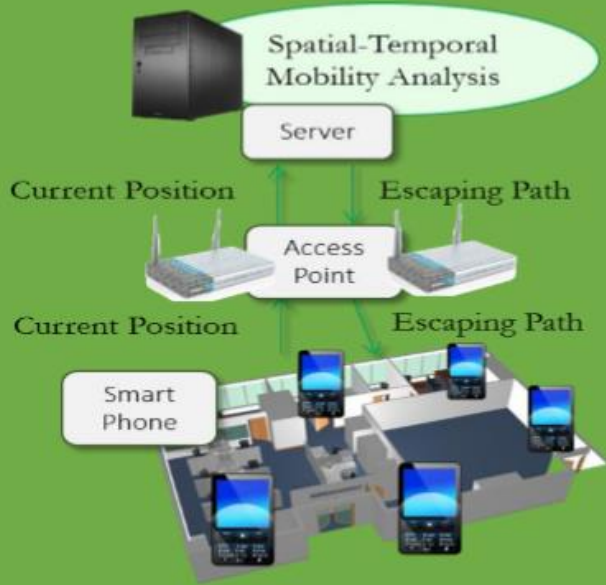
- Using smartphones with dolls to simulate individual moving in a shopping mall
- Checking the received positions and the recognized positions

Experimentation

Average positioning error of Wireless Network Laboratory (cm)

Height	Nearest-Point Interpolation	Geometric Interpolation	Height-Dependent Geometric	Mesh-Based Height-Dependent Geometric
163	21.98	12.52	7.83	2.33
168	28.22	14.65	9.02	9.85
175	37.88	26.92	6.30	5.35
176	40.56	29.89	10.74	4.60





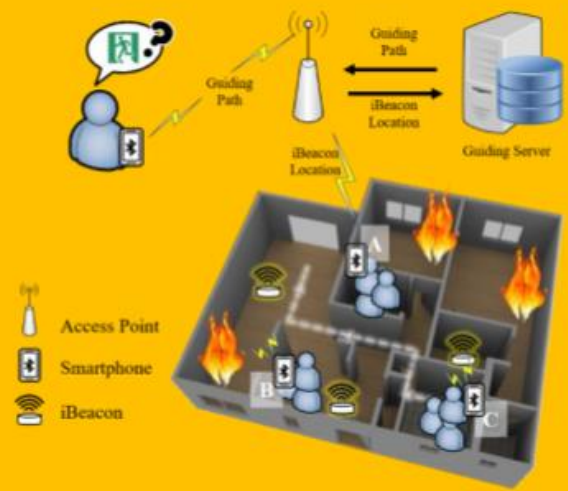
Individual Path Planning



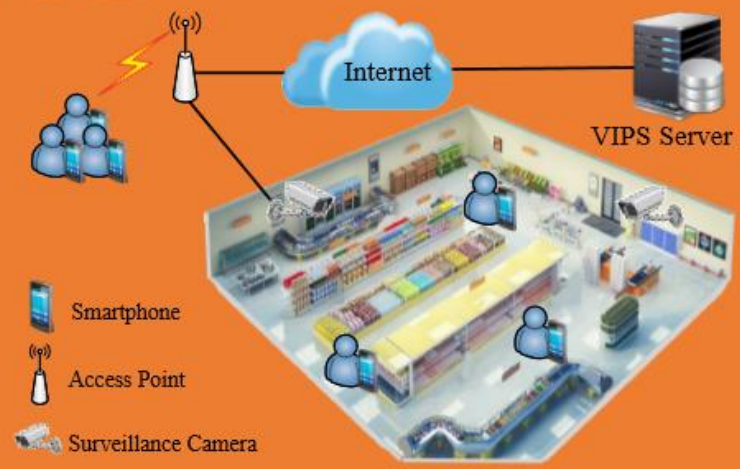
Rapid Navigation and guidance

Video-Based Indoor Positioning System

V.I.P.S



Group Emergency Evacuation



Microlocation-Based Geofencing



行動華語文教學系統 - 組合式發音

Mobile Chinese Learning System – combined pronunciation

指導教學: 黃志銘 教授

學生: 余竟銓 陳大恩

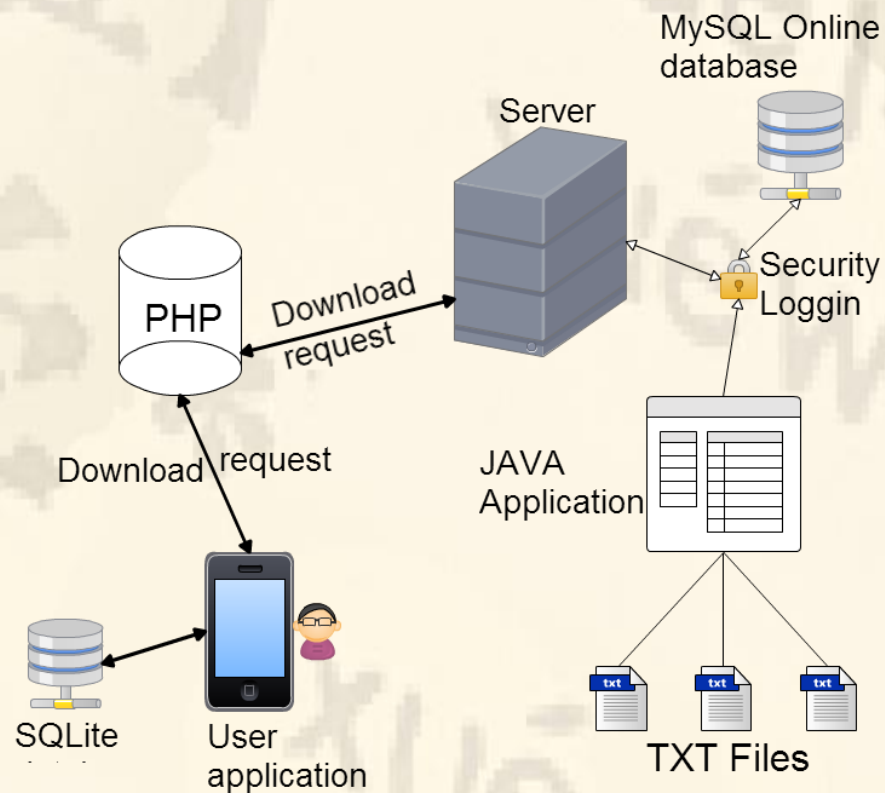


系統特色

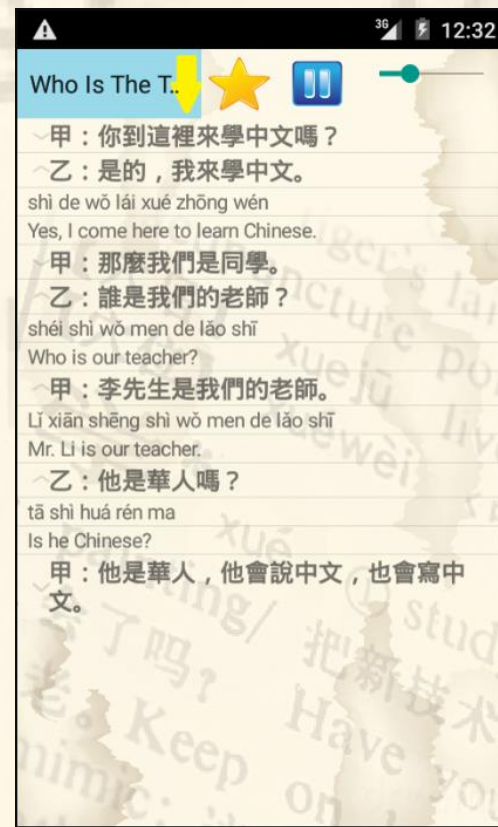
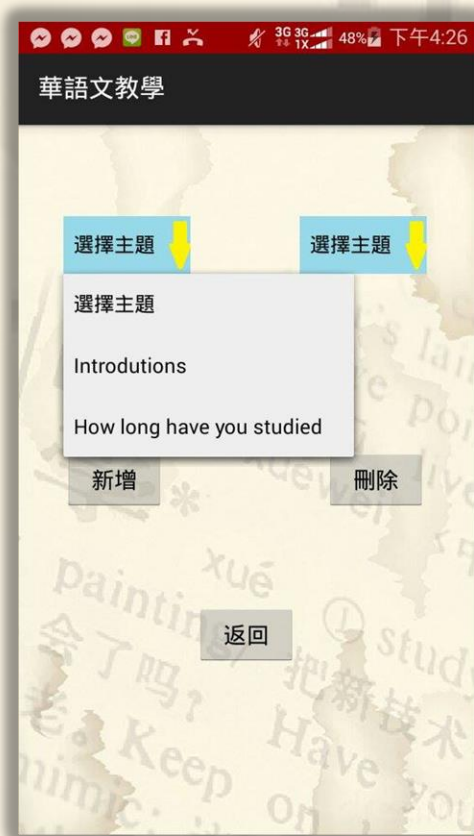
- 組合式發音
 - 使用者可以**無需連結網路**自主性使用組合式發音功能來學習中文。
- 自適性
 - 使用者可以**依據個人程度**調整發音速度，並且動態顯示朗讀段落。
- 教材擴充性
 - 系統提供**自製化格式**，讓使用者可以自由地導入書面教材，使之數位化，且容量增加幅度極小。
- 朗讀靈活性
 - 不只**單字和詞句**，**任何導入的文章**都能發音。

系統架構

- Framework



系統展示



最佳論文獎 (Best Paper Award)

