

An aerial photograph of a city street grid, showing a dense network of roads and buildings. A river is visible in the upper left corner. The image is faded and serves as a background for the text.

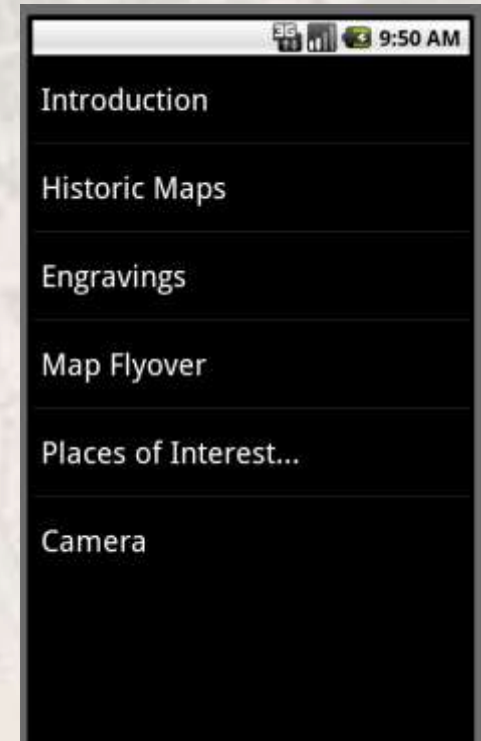
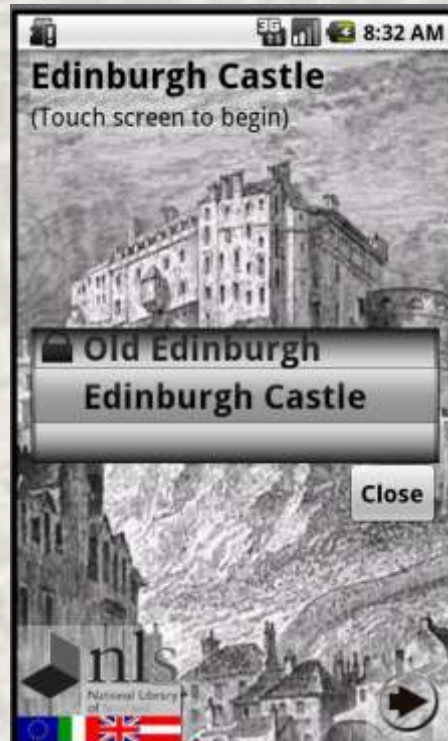
Msc Dissertation HGuide Application

By John Reid



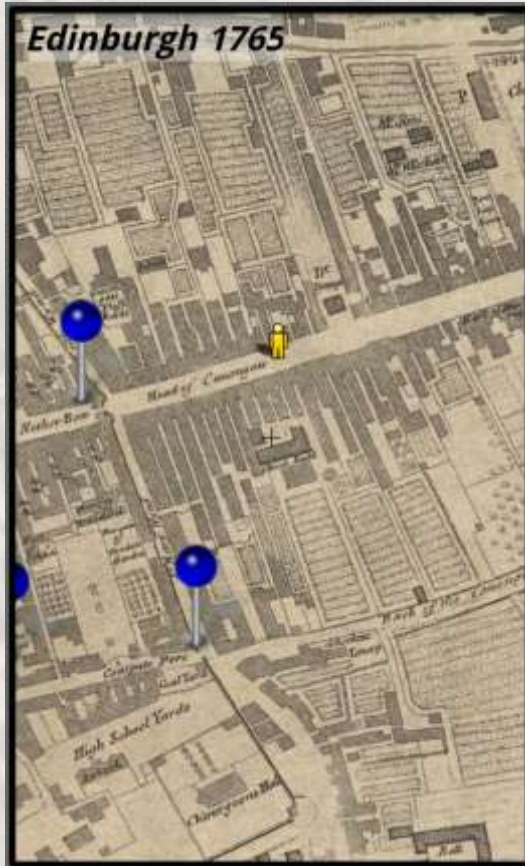
Introduction

- Objective was to create an easy to use Historical Guidebook viewer to be run on Android devices
- Incorporates sign language, audio, video, maps and multi-language support








Operation



St Giles Cathedral

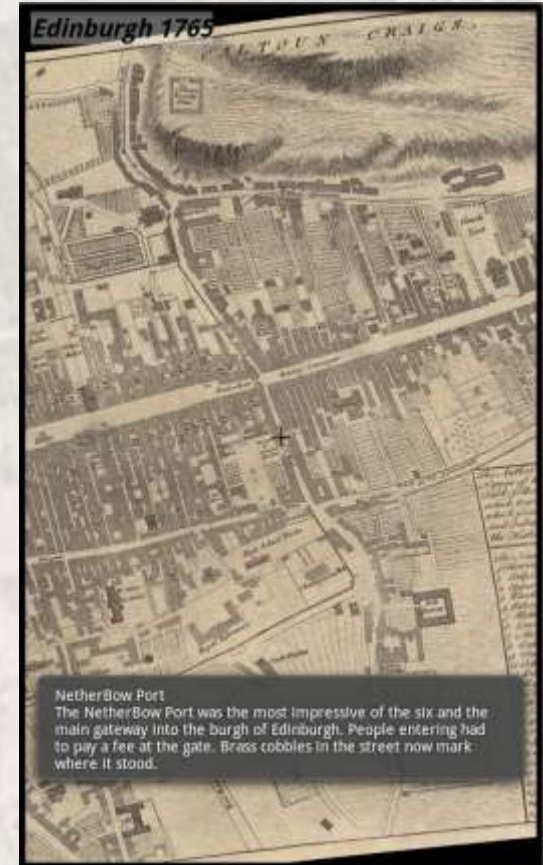
St Giles Kirk, often called St Giles Cathedral, is situated on the Royal Mile in Edinburgh. A church has stood on the site since around 1120-1140, but little remains of the 12th century structure. St Giles

<<



Operation

12:20 PM
NetherBow Port
West Port
Bristo Port
Cowgate Port
Potterrow Port
The Tron Kirk
St Giles Cathedral
The Old Tolbooth



NetherBow Port
The NetherBow Port was the most impressive of the six and the main gateway into the burgh of Edinburgh. People entering had to pay a fee at the gate. Brass cobbles in the street now mark where it stood.



Application Development

- Runs on the Android operating system
- 9 Android Activities used
- XML Framework benefits:
 - Android (Java) DOM XML parser
 - Multi-Language support: Unicode
 - Flexible (Easy to add extra attributes into elements)
 - Cross Platform
- Responsive: “Now or Nothing” approach, don’t expect the user to wait on downloads.
- Mobile platform considerations (Battery usage).



Maps

- At first Google Map component used, then switched to OSMDroid (an open source alternative) with OS Open Data supplied by Ordnance Survey.
- Google's TOS (terms of Service/Terms of Use) prohibits caching of their map data (section 8.2). <http://code.google.com/android/maps-api-signup.html>
- Advantages of using OSMDroid:
 - Locally stored Geo-Referenced maps could then be used
 - Customise the display (cross hairs added)
 - Experience of using open source code!
- Disadvantages
 - Less support if things go wrong.
 - Less Reliable code?



Geo-Referencing

- Historic Maps, Tiling, Warping, Geo-Referencing

Enter map coordinates

Enter X and Y coordinates (DMS (dd mm ss.ss), DD (dd.dd) or projected coordinates (mmm.mm)) which correspond with the selected point on the image. Alternatively, click the button with icon of a pencil and then click a corresponding point on map canvas of QGIS to fill in coordinates of that point.

X: 325927.5627758 Y: 673629.4591127

Snap to background layers

GCP table

x[s]	residual[pixels]
0.00	0.00
0.00	0.00
0.00	0.00



Geo-Referencing

Example Geo-Referenced file before Map Tiling done:





Testing/Questions

- Trial Pack created (phone, headphones, Instructions)
- 3 Groups of testers to get feedback from: Lecturers, NLS Map department, History Group,

- Any Questions?