

# Collecting geographical metadata

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# What is geodata?

Minimally:

- latitude
- longitude

Possibly also:

- altitude
- direction
- outlines

## Where does it come from?

- Use other people's data
- Collect/create your own

## Problems with other people's data

- Copyright
- Accuracy
- Availability/findability

## Problems with institutional data

- *What* institutional data?
- Persuading people to release it
- Lots of different data created for different purposes, e.g.
  - Computing Services thinks a "department" is something that has a mail router
  - Estates thinks it's something that pays electricity bills
  - (and so on...)

with no single 'master list'

## Collecting/creating our own data

Two basic ways:

- with GPS devices
- from maps

## GPS devices: the call of the 'shiny'

- We like gadgets :-)
- They *look* more accurate than pointing at a map



## Which GPS?

We tried:

- MioMap DigiWalker
- iPhone
- Google G1
- Garmin eTrex
- (and a few others...)

# The numbers don't lie

... and they all disagreed with each other.



## GPS devices: not so shiny after all

Also...

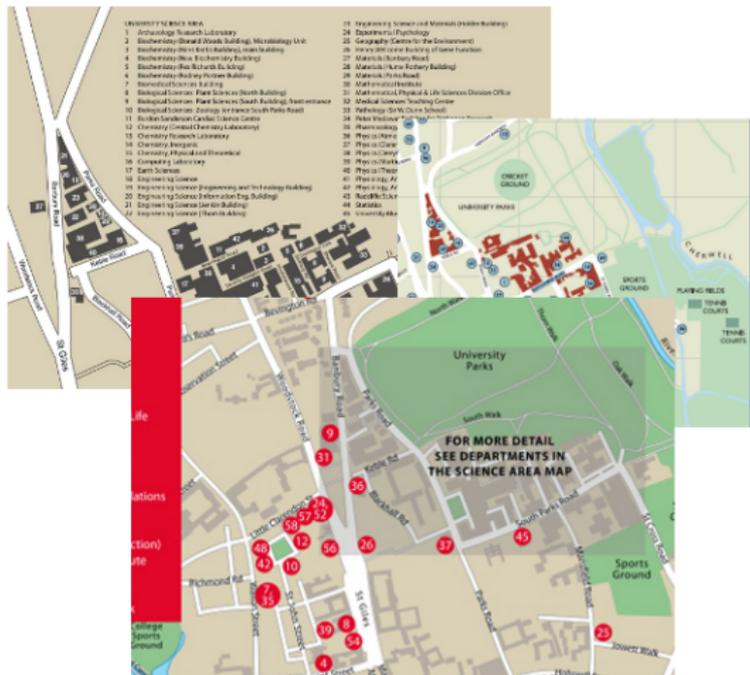
- it proved difficult to get a 'fix' ...
- ... especially in areas where there are lots of buildings;
- it's even worse indoors (for pinpointing individual rooms)

In summary:

- GPS is good for tracking routes...
- ...but not so good for pinpointing locations.
- We're interested in pinpointing locations.

# Back to the maps

Of course, the University already had plenty of maps...



OXFORD  
UNIVERSITY  
LIBRARY  
SERVICES

- 68 Lady Margaret Hall Library (E2)
- 69 Lincoln College Library (F4)
- 70 Lincoln College Library (D4)
- 71 Magdalen College Library (F7)
- 72 Mansfield College Library (E5)
- 73 Perton College Library (E7)
- 74 New College Library (E4)
- 75 Nuffield College Library (C7)
- 76 Oriel College Library (E7)
- 77 Pembroke College Library (D7/8)
- 78 Queen's College Library (E4/7)
- 79 Regent's Park College Library (C5)
- 80 Somerville College Library (C4)
- 81 St Anne's College Library (C3)
- 82 St Antony's College Library (C3)

## Digital maps

Maps are like standards...

- Google Maps/Earth
- Yahoo Maps
- Microsoft Bing ('Live') Maps
- Multimap
- Streetmap
- Open StreetMap
- Ordnance Survey maps

... there are loads of them, and they're all slightly different.

We ended up using Google Maps and Open Streetmap, because

- They have good coverage for the areas we're looking at
- Google Maps API is awesome

## Pinpointing (and clicking)

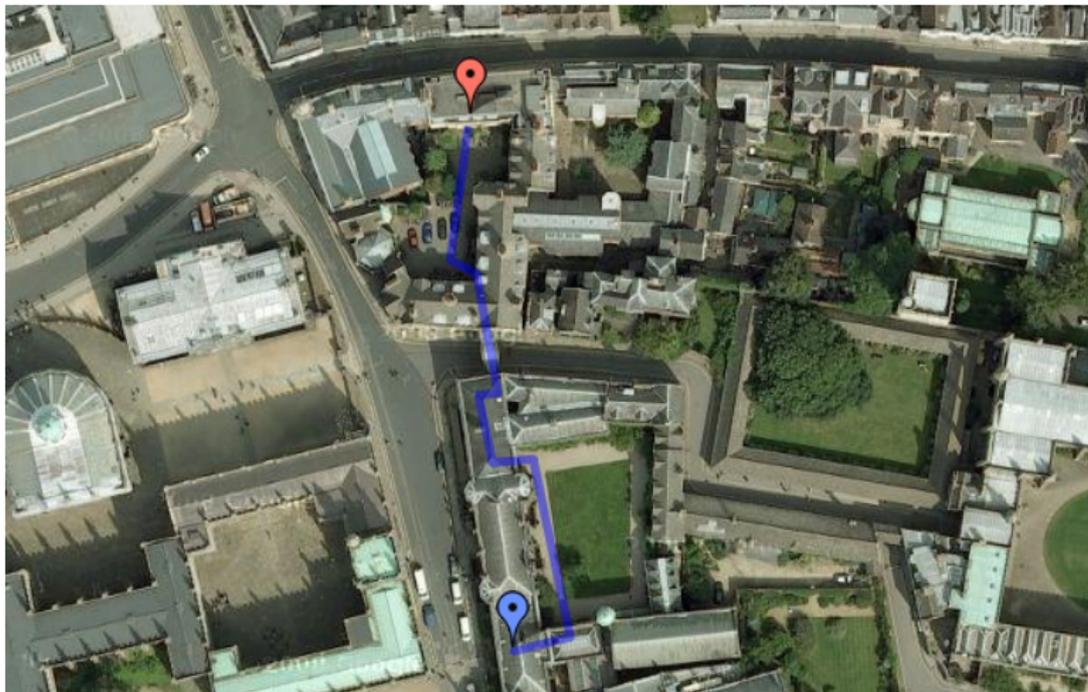
Crowdsourcing (with a small crowd) and our own effort.

Soon started to see the problems:

- It's easy to point at a map and say "it's there"...
- ... but *what's* there?
- Are we looking for
  - an area,
  - a building,
  - an entrance,
  - or all of the above?

## Here, there and everywhere

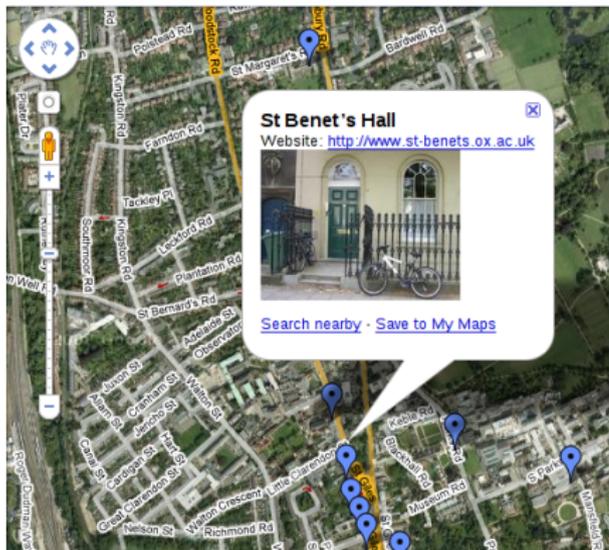
Does it help to know that a building is "there" if you don't know how to get there?



## Point of entry

We decided that the **entrance** was the important thing to pinpoint - plus, where possible,

- a photo of the entrance
- the direction of the entrance



## And the rest

Of course it's not just buildings, but

- cycle and car parking
- wireless access points
- manhole covers (yes, really)
- trees (yes, really)
- students??

There is no limit to the things that people want to geolocate -- and all have their own problems, whether practical, technical, or ethical!