

Joined-up thinking: using CAQDAS and Google Earth to analyse 'place'

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Outline of presentation

- Details of a pilot project used to develop techniques
- Comments on data preparation and handling
- Demonstrations of applications in MAXqda, NVivo, ATLAS.ti and Google Earth
- Comments on analytical approaches
- Pitfalls and problems encountered

A Neighbourhood Research Project

- Investigate perceptions of an area amongst its residents
 - Sense of boundaries
 - Fear of crime
- Walking interviews recorded and logged on GPS
- Sketch maps, photographs
- Environmental audit

Data Preparation

- Audio recordings transcribed using F4
- GPS waypoints and tracks uploaded to Google Earth
- Sketch maps scanned to PDF
- Digital photos copied to project folder
- Planning and control required outside and within CAQDAS program

Why use Google Earth?

Map in ARC-GIS

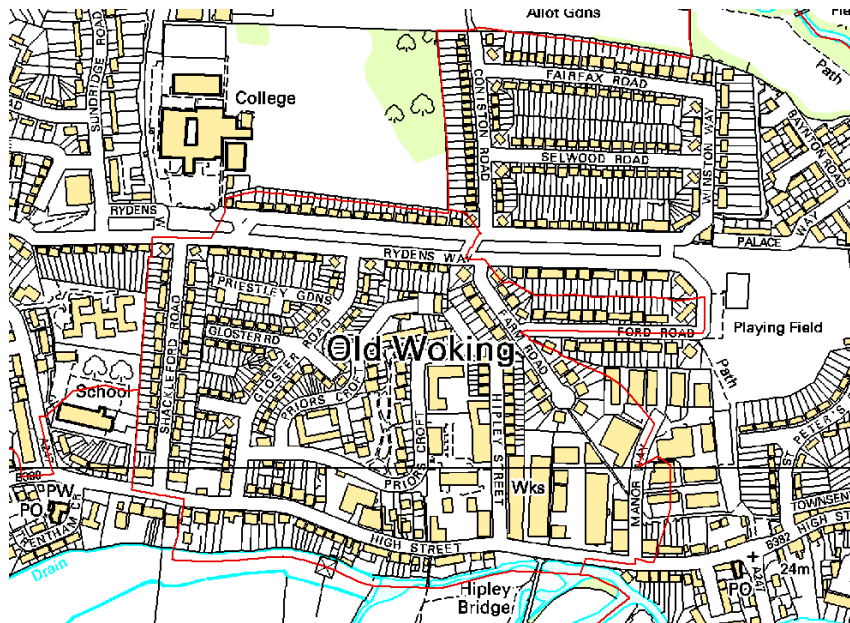
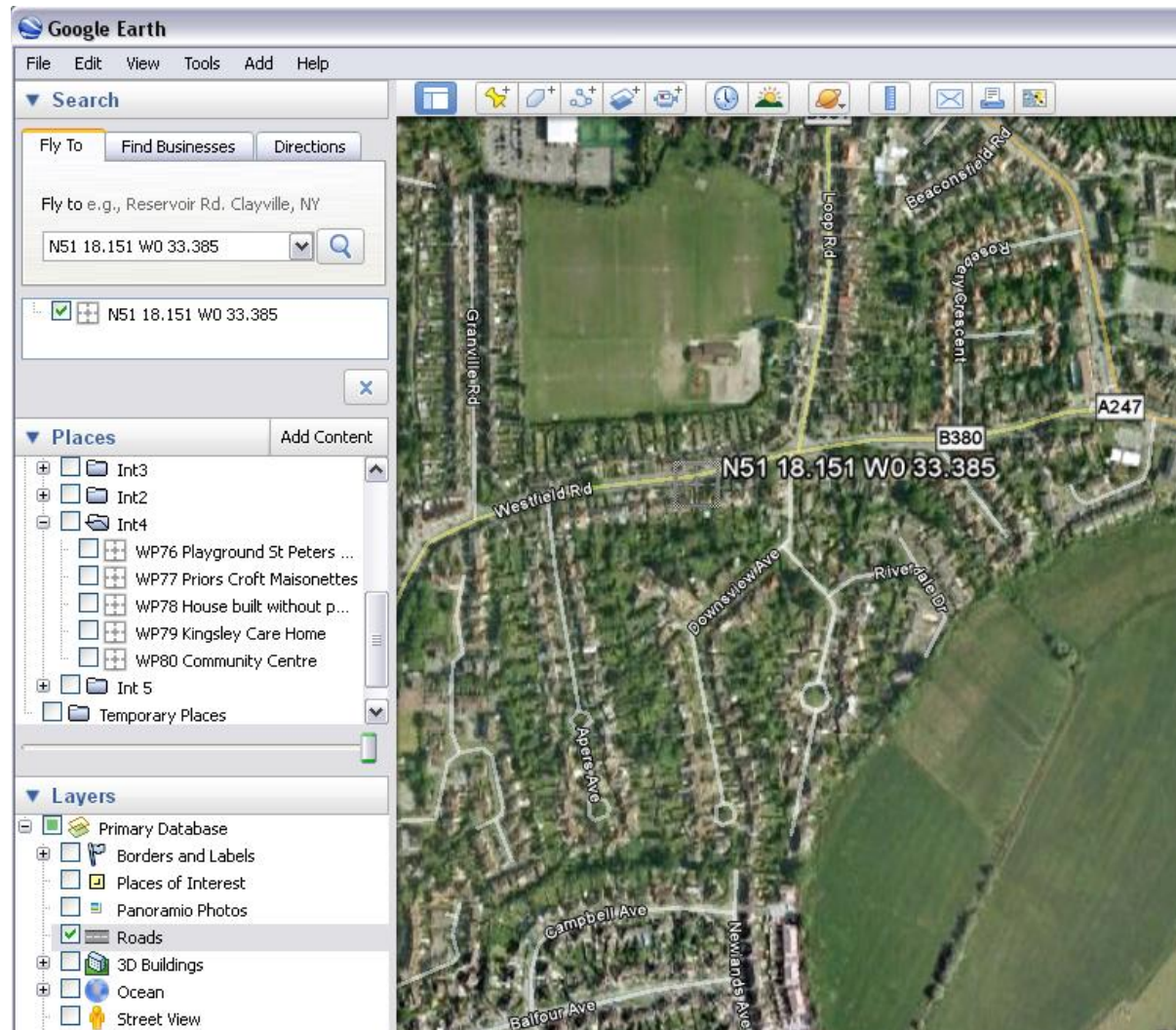


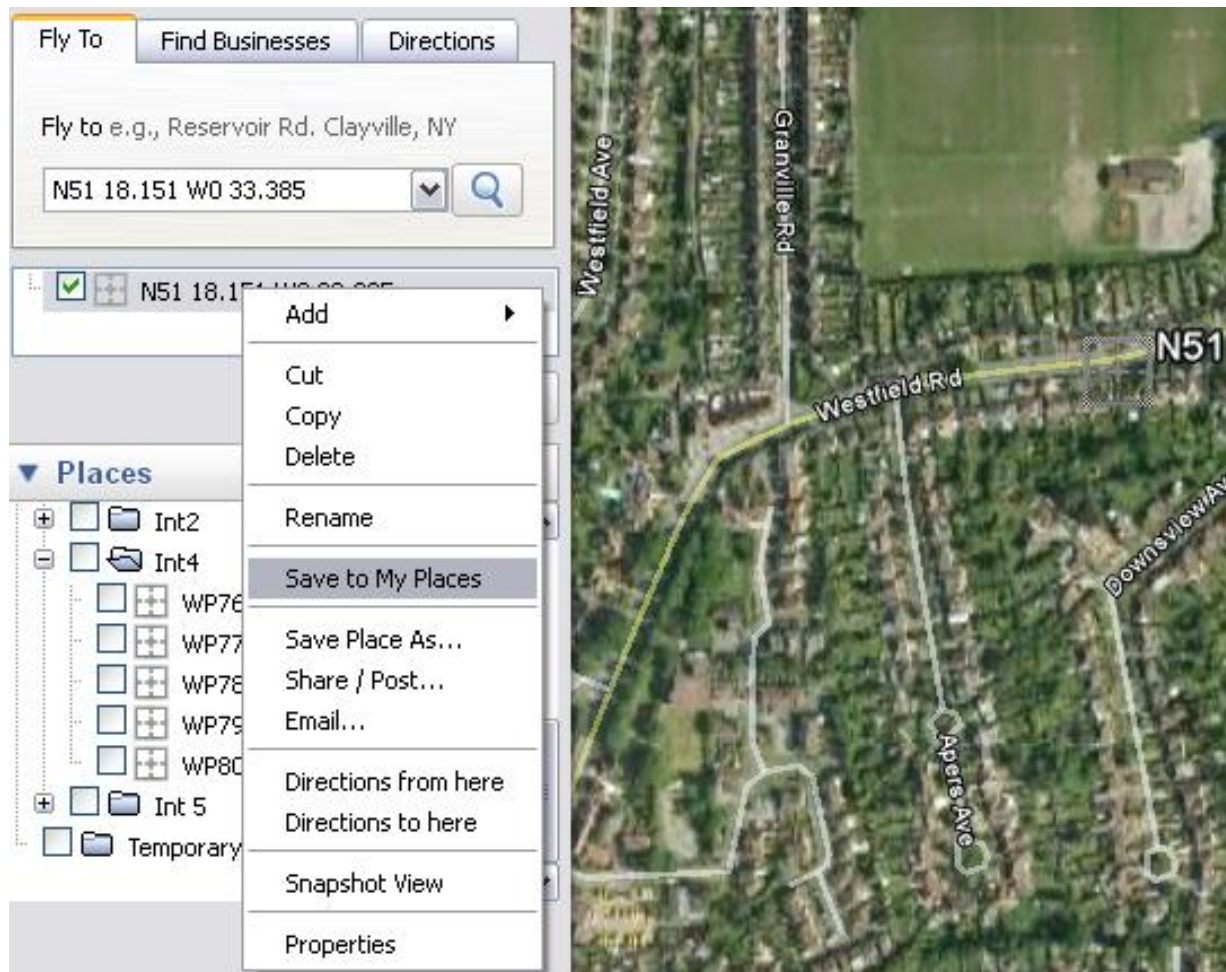
Image in Google Earth



Google Earth control panel



Save a “place” in GE



Creating a geolink in MAXqda

The screenshot displays the MAXQDA 10 software interface. The main window shows a document browser on the left with a tree view of folders and files. The central pane displays a text document with several paragraphs of text. A context menu is open over a text segment, listing various actions such as 'Undo', 'Cut', 'Copy', 'Paste', 'Wrap and line number', 'Code with a new code', 'Code in-vivo', 'Code with 'Specific Places'\Gloster Road', 'Code with activated codes', 'Insert text link', 'Insert external link', 'Insert geolink', 'Remove link', 'Show geolink bar', and 'New memo'. The 'Insert geolink' option is highlighted in yellow. The bottom status bar shows 'Retrieved Segments'.

Document System

Document Browser: Interviews\Interview2 19Nov09

Documents 88

- Google Earth Images 1
 - GEstreetview Shackle... 0
 - GESnap St Peters Rec 0
 - GESnap Derrys Field ... 0
 - GESnap Fusion & Win... 0
 - GESnap Gloster Road 1
 - GESnap Rydens Way 0
- Photographs 3
- Sketchmaps 0
- Place Memos 1
 - Gloster Rd Memo 1
- Interviews 83
 - Interview5 14May10 20
 - Interview4 26Apr10 19
 - Interview3 20Nov09 8
 - Interview2 19Nov09 27
 - Interview1 1 Oct09 9
- Sets 0

Code System 88

- Specific Places 88
- Sets 0

Retrieved Segments

34 R902- No way through at the end. Again it's another cul-de-sac and as I said, it's quite individual I think. Umm, it would be a nice place, it's got , it's got, as I said, young v in the day time and it's quite empty. Very few people stuck at hon houses they will have bought them when prices were higher, and both couples, both halves of the couple have to work, which make feeling.

35 Umm, footpath at the back here, there's 2 footpaths, one goes, th Rydens Way houses, to the garages, which I don't ever really go t Priors Croft. Which actually would be a good route to take, I supp

36 INT- OK. Shall we go that way then?

37 R902- Yup ... Umm. Now Priors Croft has its problems! As I said /attempting to change it/

38 INT- /That's all right/

39 R902- and we have put a lot of effort into trying to improve the pr filled with rubbish, and I do have a suspicion that people who, you nothing better to do in their life will come here because it's a bit d do that they don't want their parents to know about. And so there is always a selection of beer cans and occasional other issues that you don't really want to know about. Umm .. We've got here, this Henley Court, again exactly the same as Priestley Gardens, the're all tiny little, teeny tiny little, flats with only one bedroom or so. There are actually 2 doors on each front and so again they are working people who are never there and I'm not sure that there's any definite community thing there because they don't seem to. I

How a geolink shows in MAXqda

The screenshot displays the MAXQDA 10 software interface. The main window is titled "Document Browser: Interviews\Interview2 19Nov09". The interface is divided into several panes:

- Document System:** A tree view on the left showing the project structure. The "Interviews" folder is expanded, and "Interview2 19Nov09" is selected. The "Sets" folder is also visible.
- Code System:** A pane below the Document System showing the "Sets" folder with a count of 0.
- Document Browser:** The main text area on the right displays the content of the selected document. It shows a list of text segments with line numbers and speaker identifiers:

34 **R902-** No way through at the end. Again it's another cul-de-sac and, as I said, it's quite individual I think. Umm, it would be a nice place, it's got , it's got, as I said, young working couples and so you come round in the day time and it's quite empty. Very few people stuck at home, and again, because they are newer houses they will have bought them when prices were higher, and so they have to have big mortgages and both couples, both halves of the couple have to work, which makes it an empty street without too much feeling.

35 Umm, footpath at the back here, there's 2 footpaths, one goes, the bit to the left goes to the back of the Rydens Way houses, to the garages, which I don't ever really go to, and the other one cuts through to Priors Croft. Which actually would be a good route to take, I suppose.

36 **INT-** OK. Shall we go that way then?

37 **R902-** Yup ... Umm. [Now Priors Croft has its problems!](#) As I said I'm a bit opinionated, I do, I am /attempting to change it/

38 **INT-** /That's all right/

39 **R902-** and we have put a lot of effort into trying to improve the problems. But this little lane here is always filled with rubbish, and I do have a suspicion that people who, young children, teenagers, who have nothing better to do in their life will come here because it's a bit out of view, to do whatever they wish to do that they don't want their parents to know about. And so there is always a selection of beer cans and occasional other issues that you don't really want to know about. Umm .. We've got here, this Henley Court, again exactly the same as Priestley Gardens, the're all tiny little, teeny tiny little, flats with only one bedroom or so. There are actually 2 doors on each front and so again they are working people who are never there and I'm not sure that there's any definite community thing there because they don't seem to. I

At the bottom of the interface, there is a "Retrieved Segments" pane which is currently empty.

Working with GE and MAXqda

The screenshot displays the MAXQDA 10 software interface. On the left, a 'Document Browser' window shows a transcript titled 'Interviews\Interview2 19Nov09'. The transcript contains several paragraphs of text, with the following segments highlighted:

- 34 **R902**- No way through at the end. Again it's another cul-de-sac and, as I said, it's quite individual I think. Umm, it would be a nice place, it's got , it's got, as I said, young working couples and so you come round in the day time and it's quite empty. Very few people stuck at home, and again, because they are newer houses they will have bought them when prices were higher, and so they have to have big mortgages and both couples, both halves of the couple have to work, which makes it an empty street without too much feeling.
- 35 Umm, footpath at the back here, there's 2 footpaths, one goes, the bit to the left goes to the back of the Rydens Way houses, to the garages, which I don't ever really go to, and the other one cuts through to Priors Croft. Which actually would be a good route to take, I suppose.
- 36 **INT**- OK. Shall we go that way then?
- 37 **R902**- Yup ... Umm. [Now Priors Croft has its problems!](#) As I said I'm a bit opinionated, I do, I am /attempting to change it/
- 38 **INT**- /That's all right/
- 39 **R902**- and we have put a lot of effort into trying to improve the problems. But this little lane here is always filled with rubbish, and I do have a suspicion that people who, young children, teenagers, who have nothing better to do in their life will come here because it's a bit out of view, to do whatever they wish to do that they don't want their parents to know about.

Below the transcript is a 'Retrieved Segments' window, which is currently empty. The right side of the screenshot shows a satellite map from Google Earth. The map displays a residential area with several streets, including 'Gloster Rd' and 'Priors Croft'. A specific location is labeled 'WP77 Priors Croft Maisonettes'. The map includes a scale bar, a compass rose, and copyright information for 2010 Tele Atlas, Infoterra Ltd & Bluesky, and Google. The coordinates shown are 51°18'15.53" N, 0°32'45.24" W, with an elevation of 0m. The map is dated 2009 and shows a view from 191m altitude.

MAXqda coding and audio

The screenshot displays the MAXqda software interface. The main window shows a document titled "Interview2 19Nov09" with the following text:

...emerges to be that... that makes the... Once they get younger than that they are not too bad, and older than that they start being more interested in getting a bit further away from home.

133 Umm, Rydens Way! Which, as I said, is actually a central part of Old Woking, really important, that lots of people gather here. Woking College, all the kids hang-out on the green outside it, lunchtimes. Umm, and there's another little block, there's 2 blocks of flats here, one little block of old people's flats, but I don't think they're actually sheltered, I don't think they have a warden come round, they might do, but they are 1 bedroom flats. And then behind it there's 1 bedroom flats which are all single mums again, the same as the ones at the back of Priors Croft. But those ones aren't quite as rough as the ones in Priors Croft, they are all a little tiny bit nicer, not massively, but a tiny bit nicer.

134 The Community Centre, everybody has a sneaky feeling, and this is purely supposition, because the Community Centre is built on land that belongs to the council, and the little bit of grass next to it also belongs to the council, and they've got a 100 year lease, but the building belongs to the community. Everyone's got a sneaky feeling that the council is waiting for the Community Centre to get to the point where it becomes too dangerous to keep there, and they can knock it down and build housing on the site. Because whenever they apply for a grant for money to repair the roof or whatever, they are denied, whereas people in Maybury and

The interface also shows a "Code System" with the following categories and counts:

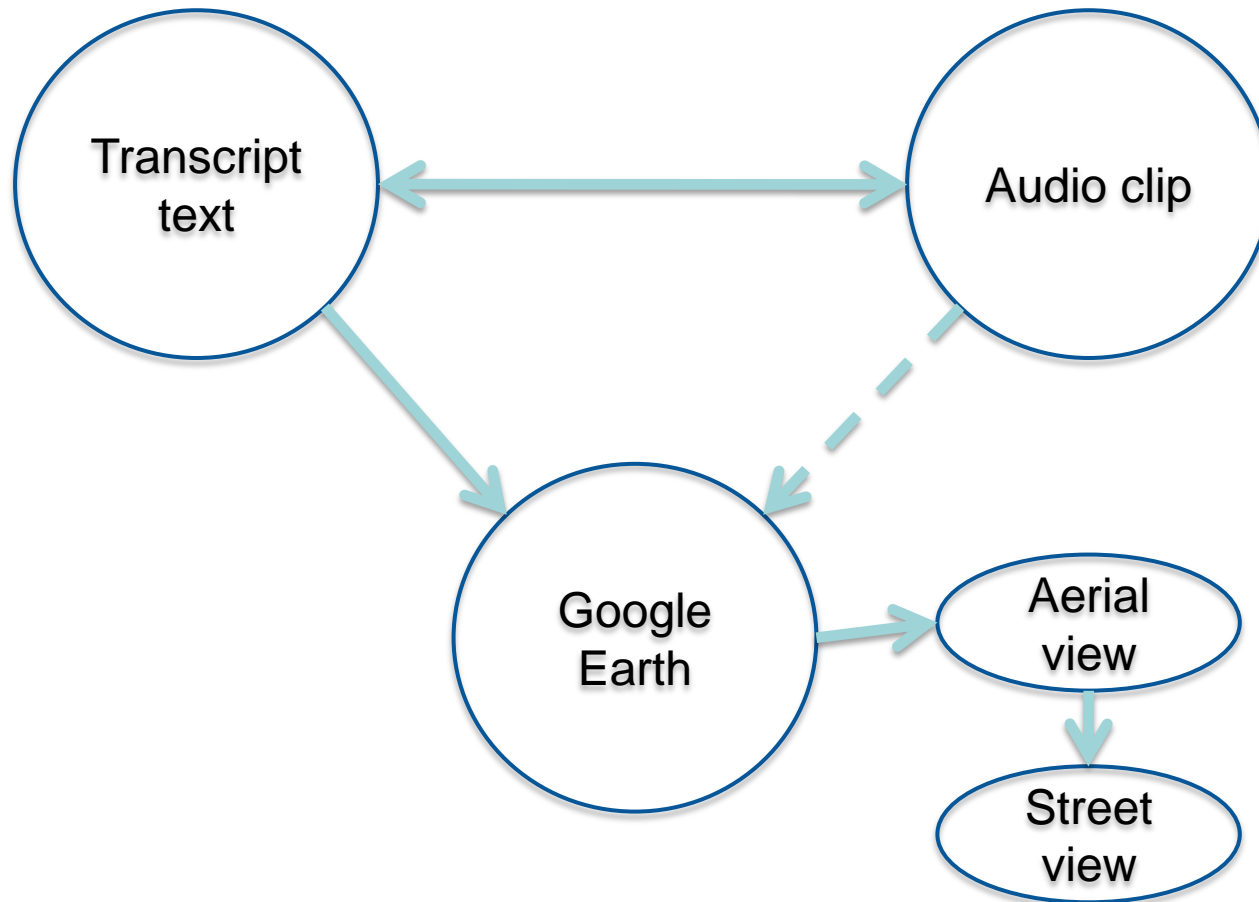
- Specific Places: 0
- Ford Road: 6
- Shackleford Roa...: 5
- Gloster Road: 23
- Allotments: 6
- Community Centre: 6
- Watermeadows: 14
- Rydens Way: 13
- St Peters Rec: 15

A "Retrieved Segments" window shows a table of timestamps:

Begin	End	Comment
00:41:23.500	00:43:44.900	
00:43:44.900	00:43:44.900	
00:43:44.900	00:43:57.800	
00:43:57.800	00:44:58.200	WP66 Woking College
00:44:58.200	00:45:37.900	
00:45:37.900	00:45:40.600	
00:45:40.600	00:46:59.200	
00:46:59.200	00:47:09.300	

On the right, an aerial map shows the location of Rydens Way, with labels for "Rydens Way by College", "Rydens Way", and "Priestley Gardens".

Data Linkages



Creating a geolink in NVivo

The screenshot displays the NVivo interface. On the left, the 'Sources' pane shows a tree view with 'Internals' expanded, containing folders like 'GE Images', 'Photographs', and 'Sketchmaps'. The main window shows a table of 'Internals' sources:

Name	Nodes	References	Created On	Created By	Modified On	Modified By
GH GM Int1 1Oct09	0	0	12/05/2010	NGH	20/05/2010 11	NGH
GH LM Int2 19Nov09	0	0	12/05/2010	NGH	12/05/2010 14	NGH
GH NJ 14May10	0	0	19/05/2010	NGH	19/05/2010 12	NGH
GH TN Int4 26Apr10	1	1	12/05/2010	NGH	10/06/2010 10	NGH
Interview1 1 Oct09	1	1	12/05/2010	NGH	21/06/2010 10	NGH
Interview2 19Nov09	1	1	12/05/2010	NGH	17/06/2010 12	NGH
Interview3 20Nov09	1	1	12/05/2010	NGH	12/05/2010 12	NGH

The transcript view shows a text selection with a context menu open. The menu options include 'Cut', 'Copy', 'Paste', 'Delete', 'Links', 'Code Selection', 'Code In Vivo', and 'Uncode Selection'. The 'Links' submenu is open, showing options like 'Memo Link', 'See Also Link', 'Annotation', and 'Hyperlink'. The 'See Also Link' option is selected, and a 'New See Also Link...' dialog box is open, allowing for the creation of a new link.

How the link appears in NVivo

The screenshot displays the NVivo software interface. On the left, the 'Sources' pane shows a tree view with folders like 'Internals', 'Externals', and 'Waypoints'. The main window is titled 'Internals' and contains a table of nodes. Below the table, a specific node 'GH LM Int2 19Nov09' is selected, showing a waveform and a content pane. The content pane displays text with a highlighted section. Below the content, a 'See Also Links' table lists related items.

Name	Nodes	References	Created On	Created By	Modified On	Modified By
GH GM Int1 1Oct09	0	0	12/05/2010	NGH	20/05/2010 11	NGH
GH LM Int2 19Nov09	0	0	12/05/2010	NGH	12/05/2010 14	NGH
GH NJ 14May10	0	0	19/05/2010	NGH	19/05/2010 12	NGH
GH TN Int4 26Apr10	1	1	12/05/2010	NGH	10/06/2010 10	NGH
Interview1 1 Oct09	1	1	12/05/2010	NGH	21/06/2010 10	NGH
Interview2 19Nov09	1	1	12/05/2010	NGH	17/06/2010 12	NGH
Interview3 20Nov09	1	1	12/05/2010	NGH	12/05/2010 12	NGH

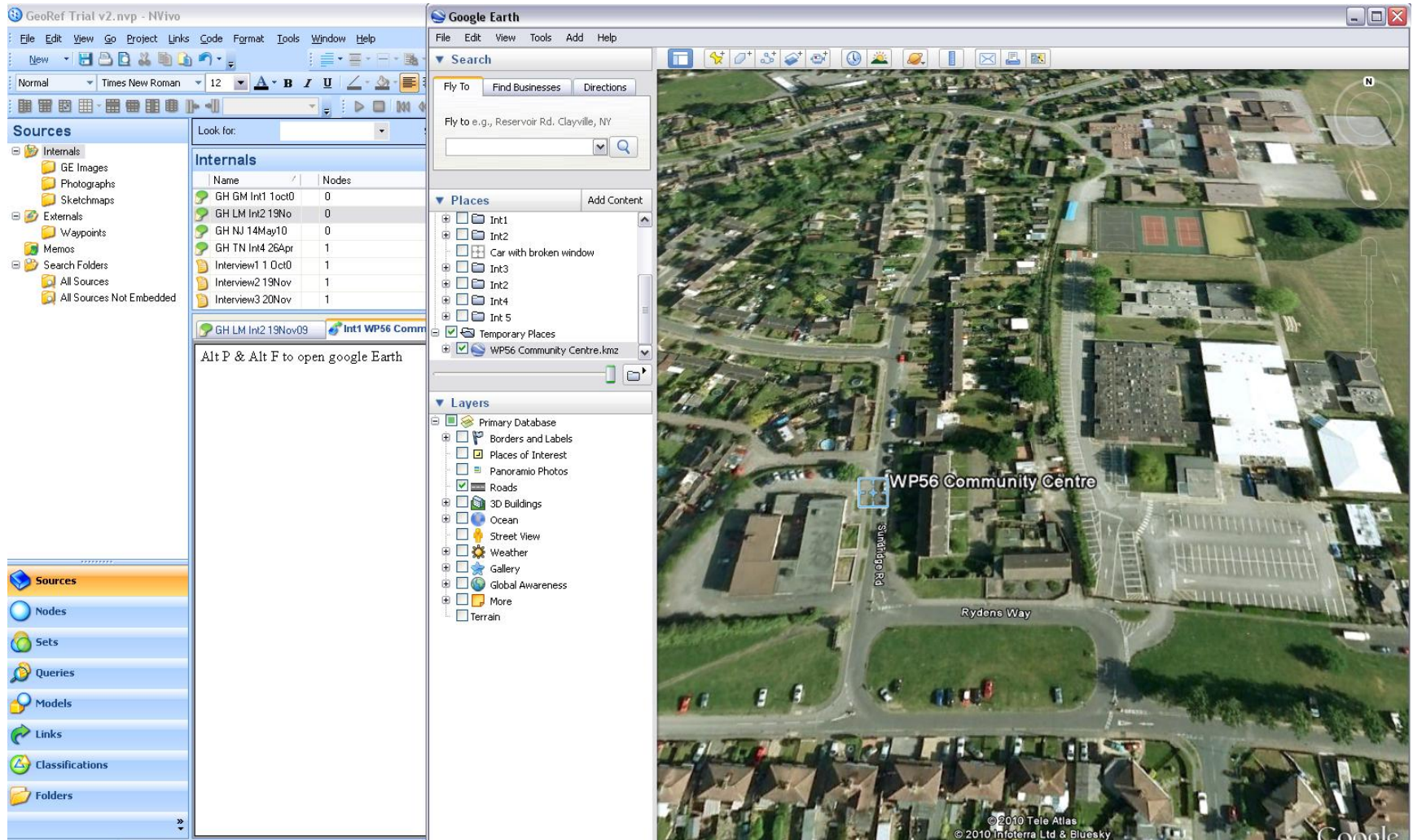
GH LM Int2 19Nov09

0:00.0 6:40.0 13:20.0 20:00.0 26:40.0 33:20.0 40:00.0 46:40.0 53:20.0 1:00:00.0 1:06:40.0 1:13:20.0

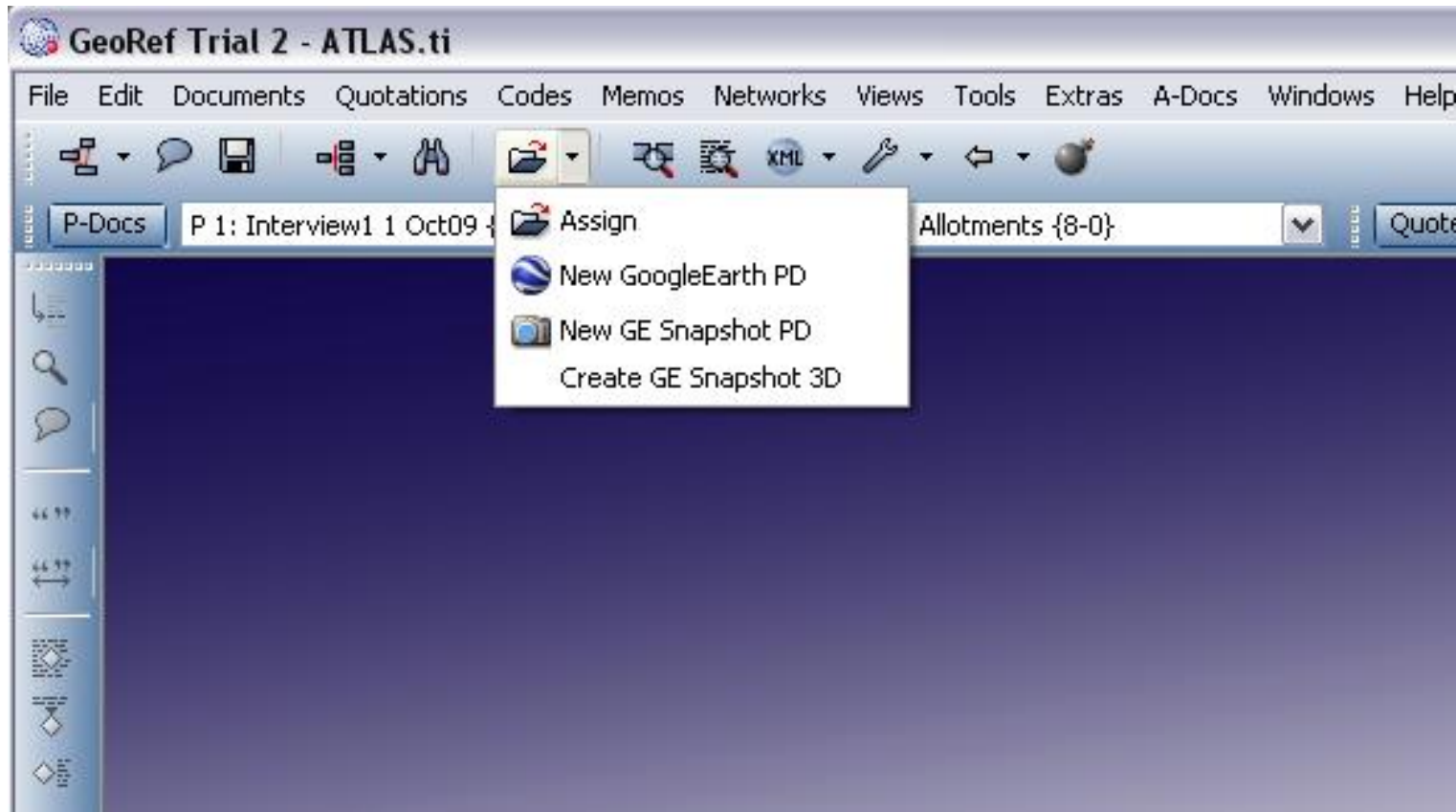
Timespan	Content
129 44:58.2 - 45:37.9	R902. The Community Centre, everybody has a sneaky feeling, and this is purely supposition, because the Community Centre is built on land that belongs to the council, and the little bit of grass next to it also belongs to the council, and they've got a 100 year lease, but the building belongs to the community. Everyone's got a sneaky feeling that the council is waiting for the Community Centre to get to the point where it becomes too dangerous to keep there, and they can knock it down and build housing on the site. Because whenever they apply for a grant for money to repair the roof or whatever, they are denied, whereas people in Maybury and Sheerwater get millions. Umm, and our Community Centre is gently falling to pieces.
130 45:37.9 - 45:40.6	INT. It's a surprisingly large building.
131 45:40.6 - 46:59.2	R902. It's got 3 big halls in there, and they are, they were very under used, lately they've started trying to use them a bit more, but what's happened is they are now using them for outside the community things. They've

Item	To Name	To Folder
9	Int2 WP66 Rydens Way by College	Externals/Waypoints
10	Int1 WP56 Community Centre	Externals/Waypoints
11	Int2 WP67 Rydens Way by Police House	Externals/Waypoints

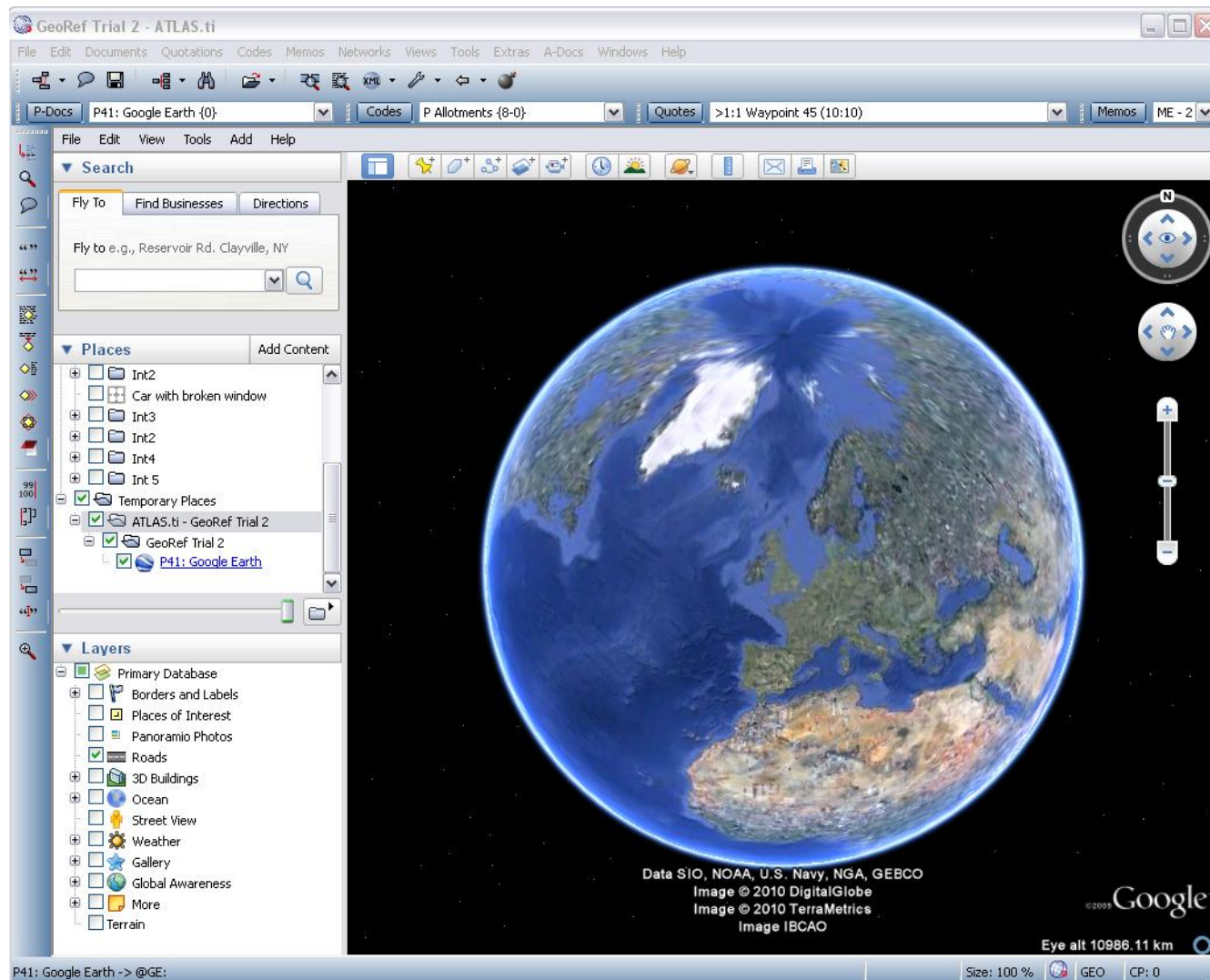
Working with GE and NVivo



ATLAS.ti has a different approach



Google Earth is embedded within ATLAS project



Make a quotation (not a link)

The screenshot displays the GeoRef Trial 2 software interface, which is used for managing geographical data and creating quotations. The interface is divided into several panels:

- Primary Doc Manager [HU: GeoRef Trial 2]:** A list of documents with columns for Name, Media, and Quotations. The list includes various image files (e.g., Int4 Community Centre.JPG, Int5 RA Noticeboard.JPG) and a Google Earth file (P41).
- Quotation Manager [HU: GeoRef Trial 2]:** A list of quotations with columns for Id and Name. The list includes quotations for various locations (e.g., GE Int5 WP86 Hipley St & High St, GE Int5 WP87 Hale House) and a Google Earth quotation (41:1).
- GeoRef Trial 2 - ATLAS.ti:** The main application window showing a satellite map of a residential area. The map is overlaid with various data layers, including a Primary Database, Borders and Labels, Places of Interest, Panoramos Photos, Roads, 3D Buildings, Ocean, Street View, Weather, Gallery, Global Awareness, and Terrain. The map also shows a search bar, a search results list, and a list of places. The search results list includes Int4, Int 5, and various temporary places. The places list includes Int4, WP76 Playground St Peters..., WP77 Priors Croft Maisonnettes, WP78 House built without p..., WP79 Kingsley Care Home, Int 5, and WP80 Community Centre. The layers list includes Primary Database, Borders and Labels, Places of Interest, Panoramos Photos, Roads, 3D Buildings, Ocean, Street View, Weather, Gallery, Global Awareness, and Terrain.

A Google Earth PD is a set of places

The screenshot displays a software interface for managing a Google Earth PD. On the left, a file manager window shows a list of files with columns for Name, Media, and Qu. Below it, a 'Primary Doc' window lists 40 items, including various Google Earth PDs and documents. The main window, titled 'GeoRef Trial 2 - ATLAS.ti', features a search bar, a 'Places' list, and a map view. The 'Places' list includes items like 'Int4', 'Int5', and 'ATLAS.ti - GeoRef Trial 2'. The map view shows a residential area with several locations marked with red and blue globe icons and labeled with IDs such as '18:2 GE Int4 WP77 Priors Croft Maisonettes', '18:3 GE Int4 WP78 House built without permission', and '18:5 GE Int4 WP80 Community Ce'. The map also shows streets like 'Loop Rd' and 'Broad Mead Rd'.

Text quotes can be linked to GE quotes

The screenshot displays the ATLAS.ti software interface, which is used for qualitative data analysis. It is divided into several windows:

- Primary Doc Manager [HU: GeoRef Trial 2]:** A table listing various documents and their media types. The table has columns for 'I.', 'Name', 'Media', and 'Qu'.

I.	Name	Media	Qu
P 3	Interview2 19Nov09	Rich Text	37
P 4	GH LM 19Nov09.WMA	Audio	5
P 5	Interview3 20Nov09	Rich Text	8
P 6	GH DB 20Nov09.WMA	Audio	0
P 7	Interview4 26Apr10	Rich Text	19
P 8	GH TN 26Apr10.WMA	Audio	1
P 9	Interview5 14May10	Rich Text	20
P10	GH NJ 14May10.WMA	Audio	2
P11	Int2 19Nov09 sketch.pdf	Text	0
P12	Int3 20Nov09 sketch.pdf	Text	0
P13	Int4 26Apr10 sketch.pdf	Text	0
P14	Int5 14May10 sketch.pdf	Text	0
P15	Google Earth Int1	GEO	12
P16	Google Earth Int2	GEO	11
P17	Google Earth Int3	GEO	7
P18	Google Earth Int4	GEO	5
P19	Google Earth Int5	GEO	9
P20	Int2 Damaged car.JPG	Image	0
- Quotation Manager [HU: GeoRef Trial 2]:** A table listing individual quotations with their IDs and names.

Id	Name
1:24	R901 - Ok, as I say, we'll turn left into Ford Roa..
1:25	INT - There are some council people out, picking u..
2:1	GM Rydens Way1.WMA
2:2	GM Rydens Way2.WMA
2:3	GM Rydens Way3.WMA
2:4	GM Rydens Way4.WMA
<3:1	That's point 58 by the way
<3:2	That's point 59
<3:3	Point 60
<3:4	That's 61
<3:5	OK. That's 62
<3:6	That's point 63, by the way
<3:7	OK I'll mark that as 64
- GeoRef Trial 2 - ATLAS.ti:** The main text view window showing a transcript of an interview. The text is organized into paragraphs and includes several quotes from participants, such as R902 and INT. The quotes are linked to specific points in the text, as indicated by the 'Quotation Manager' window.

With a network create a “virtual crowd”

The screenshot displays a software interface for qualitative data analysis, likely ATLAS.ti. The interface is divided into several windows:

- Primary Doc Manager [HU: GeoRef Trial 2]:** A list of documents with columns for Name, Media, and Quotations. Documents include interviews and audio files.
- GeoRef Trial 2 - ATLAS.ti:** The main application window showing a network diagram. The central node is "P Rydens Way {27-0}". It is connected to numerous other nodes, each containing a quote and a reference to a document. For example, one node contains "[40:5] GEsnap Old Woking Area" and another contains "[9:2] R905 - One of the, we are now in Rydens Way, [10:1] NJ Rydens Way1.WMA".
- Quotation Manager [HU: GeoRef Trial]:** A list of quotations with columns for Id, Name, and text. It shows a list of quotes related to "Rydens Way" and "R901".
- Satellite Map:** A Google Earth-style map showing an aerial view of a residential area. A red pin is placed on a building, with the text "15:12 GE Int1 WP57 Police Station" overlaid on the map.
- Video Player:** A small window at the bottom right shows a video player for "P 2: GH GM 1oct09.WMA (0:54:03.50)". It includes a progress bar and playback controls.

Comments on analytical approaches

- Assist a shift from etic to emic perspective
- Working from qualitative data to the place (not so useful if you want to do the reverse)
- Most effective with public spaces, accessible by road
- Connections and juxtapositions have to be made by the analyst
- Analysis should be more transparent and replicable

Pitfalls and Problems

- Place as a point, a line or an area
 - When a respondent talks about a particular street, which of these is it?
- Tracking system does not cope when a respondent talks about one place whilst standing in another
- Chance encounters with third parties during mobile interviews
- Difficulty of anonymising interview data which is linked to accurate place data
- Privacy issues with Google Earth