1 **Knowledge sharing workshop**

Tools, techniques, tips, processes, software, hardware

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2 **Some of the challenges conversation analysts face in terms of equipment for data collection and analysis**

- Coordination between assistants consenting patients and those turning on off camera
- Balancing ethics permissions with most efficient practices
- Positioning camera in various scenarios
- Whether to use more than one camera and why
- Transcribing embodied activities
- Capturing starts and ends of interactions
- Management of people (kids) orienting to camera, when participants themselves draw one another's attention to camera
- Planning for and ethically managing issue of fact that non-consented people may come into the recording environment during recording
- Noise from elements that you are not actually wanting to be the focus of recording

3 **Challenges contd.**

- Optimal recording equipment and positioning in public spaces
- Recording simultaneous related interactions – eg with computers, or where psychotherapists are observing interaction behind one way mirror
- Recording phone calls
- Recording interactions on the move, or across larger and unpredictable locations (eg along corridors)
- Whether to invest the time in learning ELAN or other software, and why to do so
- Flicker on computer screens
- Really large groups – 100 people plus – sound and video
- Management of confidentiality

4 **In general**

- Anticipate needs and problems
- Try out different set ups
- Try to find tech support, or other local users of similar equipment, including encoding/processing video
- Get your ethics approvals such as to make it as easy as possible to collect data with minimal effects on the environment (this is not only good for maximum data capture, it should be good for patients and professionals too)

5 **Ideal procedures**

- To get permissions (assent) to record all interactions, and then to delete data for which full informed consent has not been granted (rather than trying to coordinate turning equipment on and off)

- In the UK, ethics committees will sometimes allow verbal assent from patients to be recorded, then allow informed consent to be pursued after. If informed consent not subsequently granted, video data can be deleted without ever using it for research.
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6 ▢ What's on your packing list?

- Camera(s)
- SD flash memory cards (SDHD = high capacity SD)
- Camera clamp/pole/tripod etc.
- Wide angle lens
- Mic(s)
- Mic stand
- Digital voice recorder for back up
- Headphones
- Bulldog clips, duct tape
- Spare batteries
- Consent forms, record forms
- Packing: electrical cables & multiple plugs
- A bag/backpack to hold everything
- Step stools
- Notebook
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7 ▢ Cameras – the basics of what you need

- One or more?
- More is useful for capturing multiple aspects, but
- problem = a temptation to fragment the scene. Instead try and capture the whole scene with one camera and then use other cameras to focus in on certain places as supplementary data
- Ideally don't run them on batteries (but sometimes helpful in mobile environments and/or to avoid interference in sound due to cabling/electronic equipment in environment)
- Fish eye /wide angle lens recommended
  - Wide angle is best, it distorts less. If use fish eye, do not use it on its maximum setting as it will distrort
- Headphone jack
- External mic jack
- Remote on/off control
- Lens cap you can put on to record sound only
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8 ▢ Camera storage media

- Don't go for direct to DVD (they are trouble!)
- Go for high definition + records onto SD card / hard drive memory
- These tend to record to their own proprietary formats
- JVC records to an MPEG4 which houses an MPEG2, Canon records to MTS files.

Some people say dealing with MTS files is easier than some other proprietaries
- Proprietary files will play with something like VLC, but in general files will need converting (encoding) into a format you can play, edit, and that works with your analysis software
- CLAN, ELAN (?transana) work well with MPEG2. If using PC, many people use MPEG2

9 Other ideas

- Camera you can turn into a player that projects onto the wall (show participants straight away) Eg Sony do one
- On the other hand, the more 'gadgets' are included on the camera, the more likely the camera to go wrong and/or to not record in as high quality as would be optimal
- You can plug camcorder into laptop if you want to show participants in the field straight away.

10 More on cameras

- Go-pro (sp?): very small cameras and are in HD; easy to attach to eg helmet (cost around $300), but the sound is often not very good
- Also consider the option of renting equipment eg cameras – can be cheaper than buying
- Generally high end consumer ones are fine, do not need to go to professional end

11 Which camera?

- Useful and up to date guide:
  - http://multimedia.journalism.berkeley.edu/tutorials/video-cameras/consumer/

- Many are available - JVC, Sony and Canon all recommended brands
- Some specifics people in centres of excellence use include
- Canon HF-100, Canon Legria HF M41
- JVC GY-HM100U HD video camera and FFmpeg libraries[1] From JVC Reviewed by Jeremy Hammond, *Max-Planck Institute for Psycholinguistics*
http://scholarspace.manoa.hawaii.edu/handle/10125/4490

12 Camera positioning and fixing

- Consider if you will have one, two cameras or more? And whether you will need to move camera during recording
- Test as much as you can
- Magic arm and clamps (Manfrotto) – various sizes, can get heavy
- Gorilla pod (http://joby.com/gorillapod)
- Monopods can be useful for moving scene, but if you are holding, you may need a belt or harness
- Drip stands and clamps

13 Recording computer screens

- Most cameras have a setting you can use to correct for flicker that happens when you record TV or computer screens (read the manual!)
- Camtasia software – like some other software, records the screen itself

14 ☐ **Microphones**
- Camera's own is generally inadequate
- Use a High frequency one
- Ideally test various ones first – they will vary in how intrusive they are/look, and in their range length and breadth
- Tie pin (lavallier) – good for where you don't want to capture surround but on other hand, they distort how sound is recorded if they are much closer to one individual's mouth and thus pick up all breaths. Try pinning it to the shoulder of the sleeve rather than the shirt.
- Boom – unidirectional
- Wide angle mics – surround mics are recommended
- Rode and Sennheiser are recommended brands
- Make sure you have shielded cables (and care re interference between camera lead and other leads including mic lead)
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15 ☐ **Audio recording (phone calls)**
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- There are companies who will record all an institutions' phone calls, and several researchers have worked with such companies so that the company releases those calls for which consent has been granted

16 ☐ **Audio back up**
- Those in the know say always record an audio back up when you are video recording
- Digital voice recorder (eg Olympus and Zoom are recommended)
- Record to uncompressed format – Linear PCM, Wav
- How to ensure synchronisable with video: clap once just after switching audio back up on. Or film yourself turning the audio back up on in the view of the camera
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17 ☐ **Recommended models include**
Zoom H4n (£202 amazon)
http://www.zoom.co.jp/english/products/h4n/

Olympus LS10 and LS11 (£260 amazon)
http://www.wingfieldaudio.com/olympus-ls-10-review.html

Edirol R-09

18 ☐ **Mic for discussions and large groups**
Large groups
Microcone
http://www.dev-audio.com/products/recorder/

Lectures
- Multi track recorder allowing you to have a number of mics in different positions, and they are all synchronised automatically
- http://www.samsontech.com/zoom/products/multi-track-recorders/
-

19 Mic fixings
- Even if resting it on a table, put it on a stand that will absorb, eg sound of papers moved on table, or hand tapping on table
- Rode do a shock stand with rubber net
-

20 Camera to PC/Mac
- Encoding needed
- Lossless encoding (you want best quality rather than greater portability/smaller size)
- Adobe premiere to get miniDV digitised
- TMPG (tsunami MPEG) for concatenating and recoding (can do in batches overnight)
- Don't try and run computer for something else when you are encoding
- Some cameras, including canons record into sections, these need 'concatenating' into a single file

21 Storing videos
- Very high capacity password protectable ext hard drives now available and very lightweight
- Varying capacity within universities

22 Video clips for talks
- Mac – quicktime
- PC Movie maker
- PC video redo
- ELAN for MPEG2s

- Final cut, adobe premiere, TMPEG,

23 Anonymising
- Very time intensive (frame face and follow frame by frame or in real time)
- But, more rapid is to shade out sections (eg if have people in background want to shade out) – programmes such as TMPEG, Final Cut Pro, Adobe premiere, Windows Moviemaker)
- Also, filters eg Xray, circle framing work particularly well with Windows movie maker (free) Final cut pro High Def

24 How to blur in premiere pro
http://www.youtube.com/watch?v=-f_8g1Qn0RY

25 Adobe premiere

- Useful for digitising and also blurring faces

26 ◻ **TMEG encoder**

- Recommended more highly than adobe premiere for editing, concatenating, manipulating images $99
- http://tmpgenc.pegasys-inc.com/en/product/tvmw5.html
- support for many input and output formats, detailed parameter settings, fast and precise cut-editing, video format conversion, compression, material creation, and much more
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27 ◻ **Final cut pro**

- Complexity and cost but v good results for editing and manipulating video images
- Tutorials available online including here:
- http://multimedia.journalism.berkeley.edu/tutorials/finalcut/

28 ◻ **Free ones**

- Windows movie maker
- Imovie
-
- Cheap one = video canvas (effects such as pencil sketch)
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29 ◻ **Subtitling**

- Premiere, final cut pro,
- Inqscribe easy to learn and use
- ELAN (needs jiggling for overlaps but means that your transcribing is directly converted to subtitles but
- 'STAMP'
-

30 ◻ **Is it worth mastering analysis software such as ELAN, Transana, CLAN?**

To help you decide
- Good to master it when starting a new project
- These programmes are useful in terms of the systematic synchronisation of video, time codes, and transcript, shared projects, large group projects
- Useful for storage and retrieval of multiple episodes into collections
- ELAN particularly good for fine grained work, including where pause length and body movement timing important
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31 ◻ **Some basics**

- ELAN sets your transcript out like a musical score
- TRANSANA and CLAN set it out more like a conventional page
- ELAN has limitations in that you have to use alternative symbols for underlining and the 'quiet voice' symbol
- ELAN 'talks' to PRAAT
- Transana and ELAN can handle more than one data file
- ELAN has limitations in that you have to mark in the overlap, it will not show

automatically as overlap when you export transcript
- ELAN lets you scroll frame by frame, slow down, speed up and loop playing
- If exporting transcript from ELAN, and if exporting subtitle files from ELAN, you always have to do some editing and tidying
- IF you have the right encoding of your video, you can make clips of your video in ELAN
- ELAN automatically measures pauses if you have your transcribed spoken turns marked off in the right places
- People report good syncing with ELAN and CLAN between the sound and the video pictures, important where you want to see bodily conduct timing in relation to talk/sound
- All let you search across multiple files for terms and/or for episodes you have labelled/keyworded
-

32 ▢

CLAN
http://childes.psy.cmu.edu/manuals/CLAN.pdf
ELAN
http://tla.mpi.nl/tools/tla-tools/elan/
TRANSANA
http://www.transana.org/

33 ▢ **ELAN**
- Things you can do
  – Syncing
  – Logging, keywording
  – Transcribing, gaps of silence
  – Exporting transcript
  – Frame grab (and clip exporting)
  – Zooming, looping, slowing down, speeding up
  – Presentations (you can select specific sections eg during a workshop in which you are focusing down onto shorter and shorter sections, and loop the section repeatedly)
  – Searching across videos, playing across
  – It works with PRAAT – you can move files between
  – Subtitling – you export transcript as SRT file. But it will need some fiddling with to make it work if there is overlapping talk
  –

34 ▢ **Elan tutorials**
- http://www.linguistics.ucla.edu/people/schuh/Lx191/PDF_files/07b_ELAN_tutorial.pdf
- http://www.ling.upenn.edu/~wlabov/L560/ELAN_introduction.pdf
- http://www.mpi.nl/corpus/html/elan_ug/index.html
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35 🔲 **Further reading – ELAN – relatively new mode available which speeds transcribing somewhat**

Dingemanse, Mark, Jeremy Hammond, Herman Stehouwer, Aarthy Somasundaram, and Sebastian Drude. 2012. A high speed transcription interface for annotating primary linguistic data. In *Proceedings of the 6th Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities*, 7–12. Avignon, France, March. (Ruth Parry can provide a copy)

We present a new transcription mode for
the annotation tool ELAN. This mode is
designed to speed up the process of creating
transcriptions of primary linguistic data
(video and/or audio recordings of linguistic
behaviour). We survey the basic transcription
workflow of some commonly used
tools (Transcriber, BlitzScribe, and ELAN)
and describe how the new transcription interface
improves on these existing implementations.
We describe the design of
the transcription interface and explore some
further possibilities for improvement in the
areas of segmentation and computational
enrichment of annotations.

36 🔲 **Further reading**

Doing fieldwork on the body, language, and communication by N. J. Enfield
http://pubman.mpdl.mpg.de/pubman/item/escidoc:1482152:5/component/escidoc:15
04286/BLC%20Doing%20field%20work%20on%20gesture%2009%20PRE%20PRINT.
pdf

Lorenza Mondada's chapter in Handbook of Conversation Analysis

37 🔲

- Transcription Linking Software: Integrating the Ephemeral and the Fixed in Interaction Research By Spencer HAZEL, Janus MORTENSEN and Hartmut HABERLAND
- http://www.academia.edu/2094699/Symposium_proceedings_Challenges_and_new_directions_in_the_micro-analysis_of_social_interaction
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38 🔲 **More tutorials – video, audio, camera choice, encoding, editing**

- http://multimedia.journalism.berkeley.edu/tutorials/
- http://www.mediacollege.com/

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