Transana 2.40
Distinguishing features and functions

This document is intended to be read in conjunction with the 'Choosing a CAQDAS Package Working Paper' which provides a more general commentary of common CAQDAS functionality. This document does not provide an exhaustive account of all the features and functions provided by Transana 2.40 but is designed to highlight some of its distinguishing elements. However, Transana is different from the other software packages reviewed here due to its primary focus on audio/video data. The Comment section at the end details our opinions on certain aspects of functionality and usability. See also Lewins & Silver (2007) *Using Software in Qualitative Research: A Step-by-Step Guide*, Sage Publications.

Background   http://www.transana.org

Transana is an open source software package designed to facilitate the transcription, management and analysis of digital video and/or audio data. ∎ It was originally created by Chris Fassnacht, and is now developed and maintained by David K. Woods at the Wisconsin Center for Education Research, University of Wisconsin-Madison, USA. ∎ Here we review version 2.40 of Transana.

Minimum System Specifications (recommended by developer)

For Windows OS   : MS Windows 2000 or XP
For Macintosh OS   : MAC OS/X 10.3 or higher
RAM 64Mb (minimum)
Minimum Screen Resolution of 1024x768 pixels
60-100 MB disk space for Program, 10MB space for Database : the amount and quality of video used is the critical factor relating to required disk space

Structure of work in Transana 2.40

Transana operates using an external database structure comprising 3 components: the application, the audio/video files and the database. The database contains the workings of the project; the transcripts, clips, keywords, collections etc. ∎ Audio/video files are not altered in any way by Transana, but remain external to the database or project.

The Transana user interface comprises 5 elements. The menu bar houses the main program controls. The Video window displays the video; the Visualisation window displays the audio waveform; the Transcript window provides transcription tools and displays textual transcripts; the Data window provides an overview of the 'database tree', which houses various ways of organising data and ideas (episodes, clips, collections, keywords and searches). ∎ The clip is the basic unit of analysis. A clip is a portion of an Episode (a video or audio file) identified by the user as analytically interesting. Clips can be organised into Collections and coded according to thematic or conceptual Keywords.

Data types and format in Transana 2.40

Transana handles MPEG-1, MPEG-2 (which are the recommended video formats), most AVI video, MP3 and WAV audio. Transana will not work with video stored on CD or DVD. ∎ Database and file manipulation tools facilitate the organization and storage of large collections of digitized video. It is not possible to create or import textual documents not linked to a video or audio file or to work with still image files.

Transcribing & Synchronising Audio/Video with written transcripts in Transana 2.40

The Transcription Mode facilitates the process of generating written transcriptions and associating them with corresponding video or audio data. The auto-rewind function and play-back speed can be altered to suit requirements and there are various keyboard shortcuts to speed up the process. ■ The waveform is the visual representation of the volume of the source data's audio which Transana can generate automatically upon importation.

Time codes enable a point in the transcript to be linked to a frame in the corresponding video or audio file. Time codes are inserted manually at appropriate positions in the transcript and their position affects subsequent retrieval for play-back purposes. Time codes can be easily altered if smaller or larger data segments are required. They enable the subsequent synchronised playback of video, sound and transcript. Time coded transcriptions generated outside of Transana can be imported and thus synchronised with corresponding audio/video file.

Figure 1 : Transana 2.400. Main interface showing synchronised videos and multiple transcripts
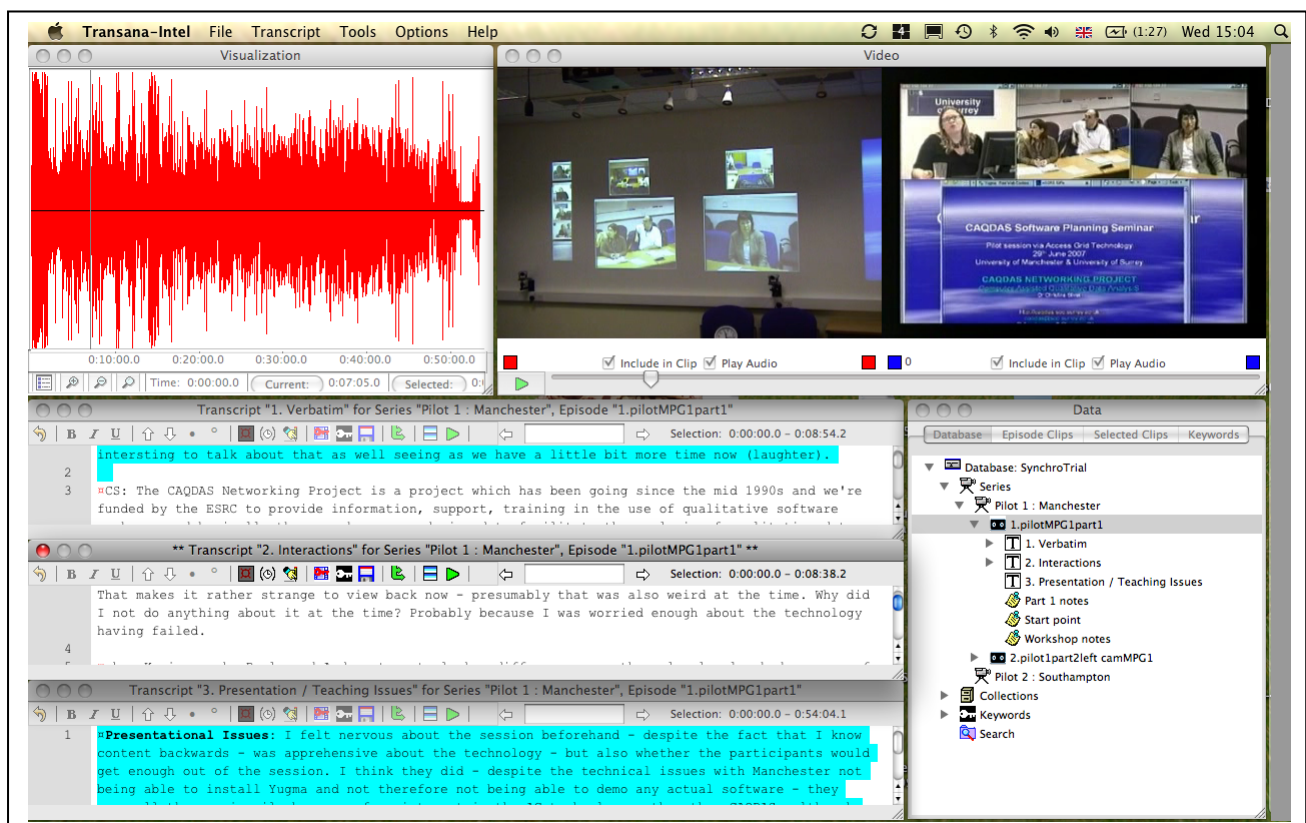
Generating multiple transcripts in Transana 2.40

Up to four separate written transcripts can be created for each audio/video file (Episode) in a Transana database. Individual transcripts can be viewed simultaneously or hidden from view as required. This enables a holistic view and representation of a data file or for individual perspectives to be afforded primacy for certain analytic purposes. ■ Transcripts are synchronised with the media file individually, allowing time codes to be inserted independently. When playing back clips multiple transcripts are also viewable.

Synchronising multiple video files in Transana 2.40

Up to four video files representing different perspectives on the same event or phenomena can be synchronised with one another and then played back and analysed simultaneously. Video files need not begin at the same point and waveforms facilitate the synchronisation process. ■ Synchronised media files can be controlled simultaneously via the media control bar. The audio of individual videos can be disabled as required. ■ Multiple transcripts can be created for each synchronised media file and clips can be created with the multiple files enabling different perspectives to be prioritised as required.

Closeness to data and interactivity in Transana 2.40

Synchronisation of audio/ video, waveform and written transcript keeps the user very close to all three data representations simultaneously. ■ Interactivity is very good: control video playback from any window : clicking on a particular point in one window takes you to the corresponding point in other windows. ■ Resizable windows enable focus on the required aspect. View clips individually or collectively, or view in context. ■ Clips are independent segments of Episodes thus making it possible to work exclusively at the level of Collections and Clips – i.e. without applying keywords.

Coding Schema in Transana 2.40

Coding processes happen in Transana by creating and applying keywords to clips or collections. The process and functionality of Keywords in Transana is essentially the same as coding in other software reviewed here. Collections may therefore be used as the initial 'descriptive' sorting of data with the application of keywords being a secondary, more analytic process. ■ The keyword database tree is hierarchical in that keywords can only be created within a Keyword Group. Keywords can, however, belong to multiple Keyword Groups.

Coding Processes in Transana 2.40

A data segment can only be assigned a Keyword if it is already a clip. This means that coding using keywords must occur via the written transcript. Keywords can be applied to episodes, collections or clips. ■ A Clip can be assigned multiple Keywords, and appear in multiple collections. Keyword(s) can be assigned to clips in various ways, including via drag and drop. Clips can be merged.

Basic Retrieval of coded data in Transana 2.40

There are three ways to retrieve clips within the software: individually, by Collection, or by using the Search tool to find clips (regardless of collection) to which (combinations of) Keyword(s) have been applied. The first two ways are independent of the way the data has been "coded" (application of keywords). ■ Retrieval by Collection is a very quick and easy way to view all clips which have been grouped together sequentially. ■ Summary Information is very easy to access, providing an overview of which Keywords have been applied to the clips. Summary information can be outputted in various ways.

Organisation of data in Transana 2.40

Audio/video files and their associated transcripts are organised into Series and Episodes when assigned to the database. A Series may have multiple Episodes (which are likely to be separate audio/video files). ■ Socio-demographic characteristics are handled at the Keyword level, and can be assigned semi-automatically to Series, Episodes and Clips or manually in the ways described above.

Writing Tools in Transana 2.40

Transana provides writing spaces through its Notes Tool. Individual notes (which may act as analytic memos or practical / procedural comments) can be applied to Series, Episodes, Transcripts, Collections and Clips (but not to Keyword Groups or Keywords – to which definitions can be specified). ■ The Notes Browser allows all notes to be viewed and edited centrally and it reflects the main database tree structure and individual notes can be located within it from the Browser. Clips to which individual notes are attached can be loaded from within the Notes Browser and external reports containing all or selected notes can be generated and exported. ■ Search for words or phrases within notes in order to locate similar comments.

Searching and interrogating the database in Transana 2.40

The presence and absence of keywords as they have been applied to clips is retrieved via the Search Tool using standard Boolean (AND, OR, NOT) operators. ■ Searches can be saved and re-run. ■ The results of searches are initially stored in a separate part of the database structure but they can also be converted into Collections for quick play-back.

Visual tools in Transana 2.40

There are various visual tools in Transana providing alternative representations of aspects of work. Different visualisations enable more or less emphasis to be placed on aspects of work and the ability to alter colours used in the graphics provides an additional level of display. ■ The Keyword visualisation shows how an episode or clip has been coded including the ability to customize the information displayed. ■ The hybrid visualisation displays how a media file has been coded in its entirety alongside the waveform view. ■ There are also a number of ways in which graphs can be generated to represent data alternatively. These include Series Keyword Graphs which enable the identification of coding distribution across Episodes; Sequence Graphs which show how keywords have been used across Series Episodes; and the Bar Graph which shows total keyword usage across Series Episodes.

Presentation Mode in Transana 2.40

Transana includes a presentation mode to facilitate the demonstration of work with others. Video ca be presented during play-back in different ways; 'Video only' displays the video window in full screen and 'Video and Transcript only' displays the video and scrolling highlighting of synchronised transcript (if auto word-tracking is enabled).

Output options

Reports, maps and graphs can be exported from Transana including: Series, Episode and Collection reports, and Series Keyword Maps and graphs. ■ Outputs can be refined using default filter configurations.

Team working in Transana 2.40

The multi-user version of Transana is specifically designed for collaborative projects. It is a separate application and can run alongside the single user version. It allows multiple users (in different locations) to communicate and work on the same Database (e.g. transcripts, clips, keywords etc.) at the same time. ■ This facilitates real-time analytic collaboration between distributed teams working on the same network and between networks. ■ Multi-user projects can be worked on independently by researchers or simultaneously with team members.

The chat window enables real-time communication with team members whilst working in a multi-user database. It is a synchronous text-based tool, facilitating collaboration as well as acting as a record of communication and decision-making.

Comment on Transana 2.40

Transana is a low cost and open source software, developed specifically for the analysis of video data. Comments should be read in that context. Source code is openly available so Transana can potentially be customized to suit the needs of a particular project. Researchers primarily using audio/video data are recommended to consider this software carefully as it may provide a number of important advantages in comparison to other options in this respect.

Interactivity
Transana is very easy to use. The ability to synchronise playback of video, sound and transcript and to control playback from any view is seamless and analytically helpful. Interactivity between windows and analytic functions is good.

Synchronicity of multiple files and transcripts
The ability for each media file to have multiple transcripts associated with it is very useful for analytic purposes where there is a need to interpret the same data from different perspectives. Similarly, the ability to synchronise multiple media files with one another offers a sophisticated means of analysing associated video, which may be particularly useful for projects with a focus on interaction and other forms of non-verbal communication. These features are unusual in CAQDAS packages.

Integration of additional data formats
Transana currently does not easily enable the management and analysis of projects where textual data other than video transcripts are being utilised as a primary source of data. Similarly, the current version does not handle still images.

The structure of the database *tree system is a little confusing at the outset as the organisation of Clips into Collections can play a similar function as the organisation of keywords into Keyword Groups. In addition, each clip, collection, keyword group etc can have its own ID – requiring clear and systematic use of IDs and groups of other objects (collections, keywords etc.).*

The Search Tool *is not as sophisticated as most other CAQDAS packages, only providing standard Boolean operators (AND, OR and NOT) for searching for the occurrence of keywords in the dataset. The ability to create clips and collections can obviate the need to use keywords for general sorting purposes and any clip can belong to any number of collections. However subsequent searches are based on the presence or absence of keywords and keyword groups rather than clips or collections.*

Team working
The ability of the multi-user version to allow geographically dispersed researchers to work on one database simultaneously is unique amongst the software reviewed here and can significantly facilitate collaborative team working. Setting up the multi-user version is quite intensive, although information on the Transana website is useful in this regard. Whilst any team member can make changes to a database when using the multi-user version, changes are not automatically tagged or logged according to who made the change. Therefore teams need to find workaround solutions if it is important to the progress of the analysis to track 'who did what'.

Further Reading

- Lewins & Silver (2007) *Using Software in Qualitative Research: A Step-by-Step Guide*, Sage Publications (uses an ATLAS.ti project as worked example)
- Lewins, A. (2008) 'CAQDAS: Computer Assisted Qualitative Data Analysis' in (ed) N. Gilbert, **Researching Social Life** (3rd ed), Sage, London
- Mavrou, Katerina, Douglas, Graeme & Lewis, Ann (2007). 'The use of Transana as a video analysis tool in researching computer-based collaborative learning in inclusive classrooms in Cyprus'. International Journal of Research & Method in Education, 30 (2), 163-178.
- Parmeggiani, Paolo (2009). 'Going digital: Using new technologies in visual sociology', Visual Studies, 24:1, 71 - 81