

## f4analyse - Distinguishing features

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 f4analyse but is designed to highlight some of its distinguishing features. The Comment section at the end details our opinions on certain aspects of functionality and usability. See also Silver & Lewins (2014) *Using Software in Qualitative Research: A Step-by-Step Guide*, 2<sup>nd</sup> Edition, <https://study.sagepub.com/using-software-in-qualitative-research> and the [f4analyse website](https://www.audiotranskription.de/english/f4-analyse).

**Background** <https://www.audiotranskription.de/english/f4-analyse> f4analyse was first released in 2012, following the success of the transcription software, f4transkript, which was released in 2005 when the company audiotranskription was founded by Thorsten Dresing and Thorsten Pehl. The developmental focus of f4analyse was to design a software program that is both easy for beginners to start using, and which supports analytic methods that do not rely on coding. Therefore special attention was paid to developing flexible and integrated tools for note-taking, and structuring memos, interpretations and summaries. Here we review version 2.4 of f4analyse.

**Minimum System Specifications (recommended by developer)** f4analyse works on Windows (7 or higher), Mac (10.7 or higher) and Linux operating systems ■ The developers recommend Intel Core i3+ and at least 512 MB RAM. The software is exactly the same on Windows, Mac and Linux ■ There is an iPad version which provides the core features in the desktop version.

**Structure of work in f4analyse** There are four main areas of the interface on display when opening an f4analyse project (see Figure 1) ■ **The Text List** is displayed in the left side panel, listing the Texts currently part of the project, from which they can be accessed, renamed, re-ordered and commented upon ■ **The Text View** is located in the central panel, displaying the currently selected Text, Selection, Summary or Distribution, with Comments displayed below ■ **The Code View** is displayed in right side panel, listing Codes in the hierarchical structure created by the user. In-text memos across all Texts can be accessed from the bottom of the Code View ■ **The Toolbar** at the top left of the interface provides access to project-level tools (e.g. project preferences, importing Texts, saving the project, undoing actions, etc.) ■ The Text List and Code List can be hidden to create more space for the Text View, as required

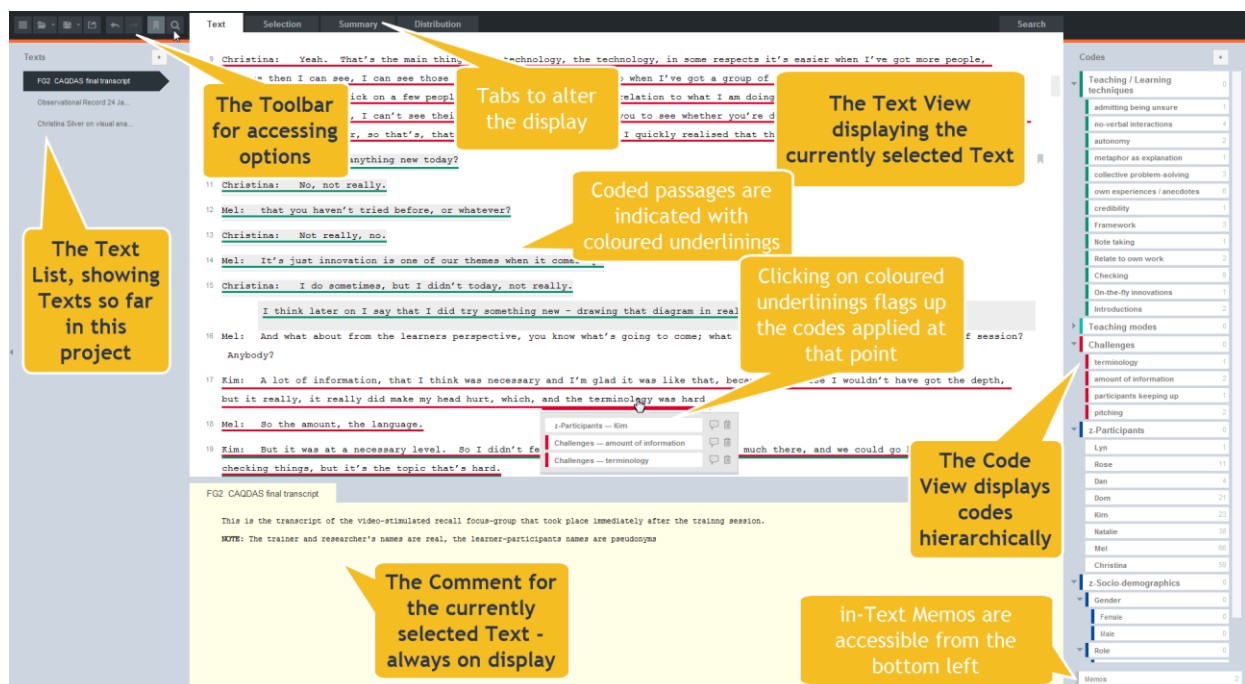


Figure 1. f4analyse User Interface

**Data types and format in f4analyse** f4analyse supports text files saved in rich text format (.rtf). Upon importing .rtf files, an internal copy is made within the f4analyse project file ■ Associated media files (audio or video) can be linked to Texts that have been transcribed with timestamps (not just using f4transkript (Windows/Linux) or f5transkrips (Mac) but any transcription software) ■ Audio for specific passages within Texts can be played back from within f4analyse if Texts are linked to associated media file

**Closeness to data and interactivity in f4analyse** The simple logic of the interface, with Texts listed in the left side panel and Codes in the right side panel makes it quick and easy to flick back and forth between different elements of work ■ Text line-wraps when the central panel is resized ■ The size of the Comment field displayed at the bottom of the central panel can be altered in relation to the Text, Selection or Summary being viewed ■ Viewing coded data initially lifts segments out of source context ■ Interactivity between different displays and elements of work is good – e.g. accessing coded Passages from Distribution table, viewing coded passages within whole Text context ■ Interactivity of interpretive work undertaken by writing in Memos and Comments underlies the design and is integrated throughout

**Coding scheme in f4analyse** The coding schema can be hierarchical or flat as required ■ When working with hierarchies, up to 8 levels are available. Top-level codes do not aggregate coding at lower levels ■ 24 colours available to apply to codes. Sub-codes automatically inherit the colour applied to top-level codes, but can also be changed to have different colours, as required ■ Each Code has a Comment field where Code definitions and interpretations can be written – there is no restriction in the length of Comments in terms of numbers of characters, and Comments are Unicode

**Coding processes in f4analyse** The process of coding text is straightforward whether using existing codes (e.g. when working deductively) and when generating new codes from the data (e.g. when working inductively) ■ Coding to existing Codes: the relevant passage of text is selected and a single click on a code in the right side panel applies it ■ Generating new Codes from text: when a text passage is selected and a new Code created, the selected text is offered as the new Code name – this can be accepted or overwritten as required ■ Codes applied to text passages are visualised with coloured underlinings ■ Where the same or overlapping passages are coded to several codes, up to 10 are visualised with differently coloured coding underlinings ■ Re-coding of already coded passages can be undertaken from any retrieval display ■ Text passages can be auto-coded on the basis of searching for words and phrases or for structure in the Search tab (see below for more information) ■ The content of Memos and Comments can also be coded – and subsequently retrieved along with coded Passages from Texts

**Basic retrieval of coded data in f4analyse** Coded passages are visualized within texts with coloured underlinings, showing which passages have been coded, and how densely ■ Double-clicking on coloured underlinings within Texts flags up all the Codes that have been applied to that passage ■ Retrieving all coded passages for an individual code within all Texts happens by double-clicking on the code in the right side panel – displaying them together in the central panel under the Selection tab. Filters can then be set to selectively retrieve (see below)

**Data organisation in f4analyse** There is no special function for organising factual characteristics relating to whole Texts, or units of analysis within Texts, so this happens via coding – i.e. creating Codes that represent factual characteristics (e.g. socio-demographic variables relating to participants, or metadata about documents, etc.) which are then applied to relevant Text Passages in the same way as thematic or conceptual Codes.

**Writing tools in f4analyse** Writing can happen in Memos and Comments ■ Memos are in-text annotations of selected Passages. They can be created at any time and from within any of the four tabs (Text, Selection, Summary, and Distribution). Memos appear within the Text, under the Passage to which they relate and are highlighted in grey to distinguish from the data itself. Memos can be hidden from within Texts individually or collectively, as required. All Memos created within any Text can be retrieved together in the Selection tab. ■ Comments are writing spaces associated with Texts or Codes and are visible at the bottom of the screen (see Figure 1.) ■ The content of Memos and Comments can be coded in the same way as Passages

within Texts ■ The Summary tab allows coded passages, in-text Memos and Comments on Codes to be retrieved and further interpreted and summarised in Comments

Figure 2 – Displays of selected interrogations in f4analyse

**Comparing two sets of data in the Selection Tab**

**Operators for combining filters and scoping**

**The Distribution Table shows count of Texts by Codes**

**Clicking on a cell retrieves associated data below**

**The Search tab allows words and phrases to be found within Texts or Codes**

**Results are highlighted and can be auto-coded as required**

## Searching and interrogating the dataset in f4analyse

Several ways to search and interrogate the dataset ■ The Selection tab allows coded Passages to be retrieved by filtering Texts and Codes. Coded Passages can be retrieved according to the presence or absence of applied Codes using Boolean operators OR, AND, and AND NOT. Separate filters can be set in two different Selection panels, and then compared in a third panel ■ The Distribution tab displays an automatically generated table of Texts (rows) by Codes (columns), showing count of coded Passages for each Code within each Text. The table is interactive in that single-clicking on a cell retrieves the relevant coded Passages in the panel below, from where the full Text context can be accessed ■ The Search tab enables words and phrases to be found within Texts and/or coded Passages, and optionally for the 'hits' (and surrounding 10 words or paragraph) to be auto-coded.

## Linking devices in f4analyse

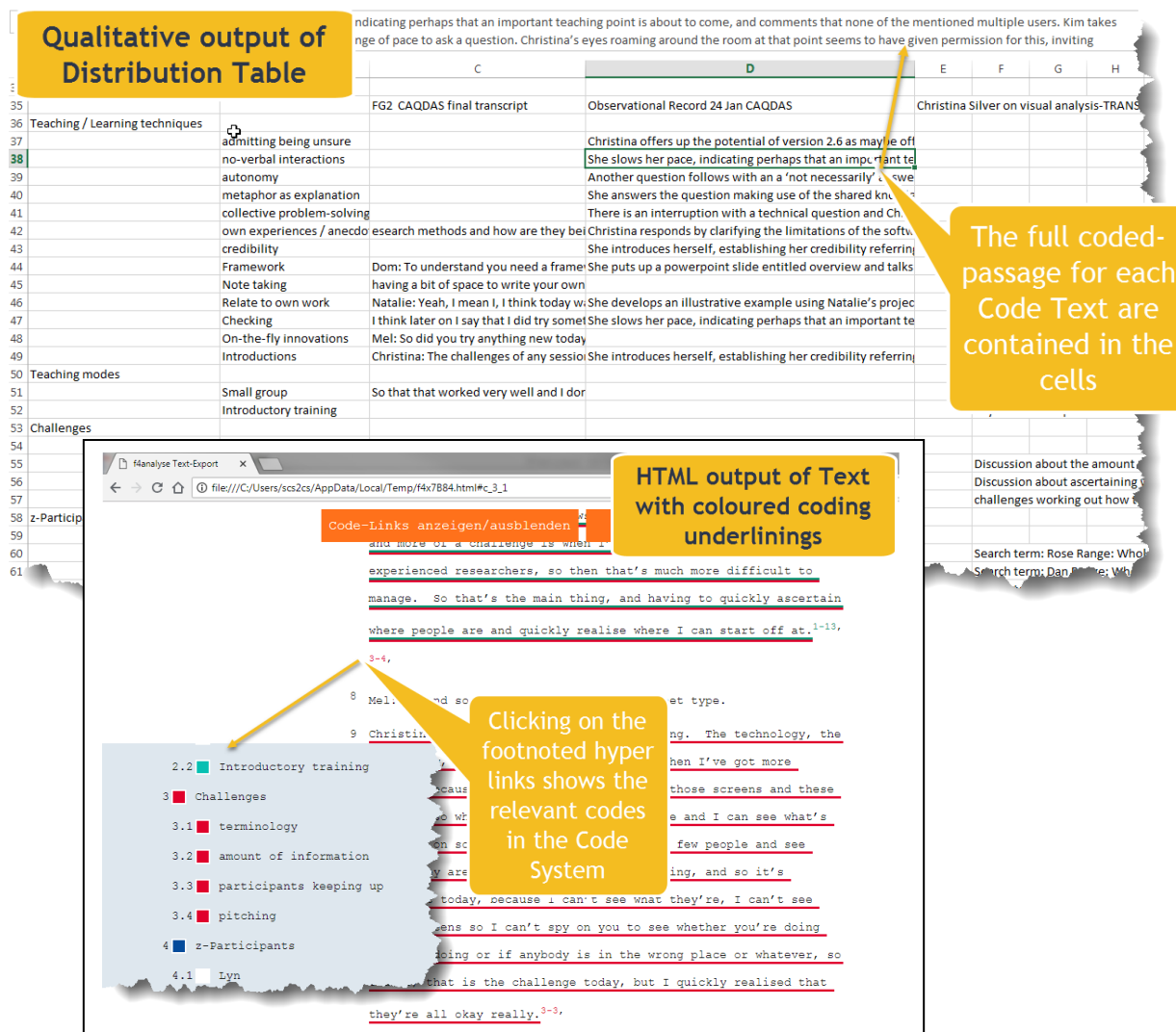
Linking in f4analyse refers to creating an association between a Text and it's corresponding media file (audio or video) ■ The association is enabled via the insertion of timestamps within the Text whilst transcribing, easily accomplished using f4transkript (Windows/Linux) or f5transkript (Mac), transcription software also developed by audiotranscription.

## Output in f4analyse

Several ways to output analysed data in reports ■ Code system and phrases report will output all Codes with their associated coded passages (from Texts and Memos) and associated Comments into a Rich Text Format (.rtf) file ■ View as text report will output the Text or Selection retrieval

currently on View to a .rtf file. In both cases in-text Memos and Comments are included in the report ■ Distribution as Table report will output the count of coded passages by all Texts and all the corresponding coded Passages as an .xls file that can be opened in e.g. MS Excel or IBM SPSS ■ The Print View report will output a Text with all its coloured underlinings, in-Text Memos and Comment as an .html file that can then be saved as a .pdf file. The output includes hyperlinks from each coloured underlining to the Code System, displayed at the bottom of the file

Figure 3 Selected output options from f4analyse



### Team working in f4analyse

f4analyse is a single-user program, so different team-members work on their own f4analyse project and their separate work can be combined by importing one project file into another ■ Texts, Memos, Codes and Comments from the project being imported are added to the host project ■ Codes that exist in both projects are merged, and their associated Comments amended, so that Comments from both projects are maintained

### Comment on f4analyse

*The user-interface is simple, clean, intuitive and flexible, and it is easy to understand and start using the program. The ability to hide the Text List and Code List to create more space for the Text View is particularly useful when working closely with texts, for example when reading and commenting.*

*The integration of writing spaces (in-Text Memos and Comments) with data throughout the program is highly developed and unique. This is a major strength of f4analyse in comparison to other CAQDAS packages and is particularly useful for early stages of data familiarization and exploration, for analytic approaches which are non-code based, and for enabling interpretive insights to be captured as they occur and linked to the data that prompted them. Being able to code the content of both code in-Text Memos and Comments associated with Texts and Codes is unique and incredibly useful.*

*The Summary display uniquely extends the value of integrated writing spaces, facilitating the interpretation of Texts and the development of an integrated account of Texts.*

*The way coded passages are indicated with coloured underlinings is visually satisfying and unique amongst CAQDAS packages. This way of displaying coded passages closely replicates the way researchers' familiar with analyzing texts manually - using highlighter pens - work, and is therefore highly attractive.*

*The lack of dedicated tools for organizing data is a weakness in comparison to other CAQDAS programs. Although there are workarounds (i.e. factual characteristics can be captured by coding), when working with more than a few Texts this way of organizing data is time-consuming. However, new features for organizing data are currently being developed by f4analyse.*

*The recognition of any format of timestamps is highly flexible. Although the integration between the company's own transcription software programs (f4transkription for Windows, and f5transkription for Mac) is seamless, its ability to synchronize timestamped transcripts from other tools means users are not 'locked-in' to audiotranskription's suite of tools.*

*The interrogation tools are well designed, analytically useful and easy to use, although there are fewer options than in many other CAQDAS packages. In particular, the way interrogation happens via filtering in the Selection Tab is powerful and easy to accomplish. The way two sets of selections can be compared is unusual but visually powerful. The ease with which interrogations can be accomplished is a strength but the inability to save previously accomplished interrogations within the software means the user needs to remember to track this process themselves.*

*The range of output options is good. In particular, being able to output a Text with its coloured underlinings is unique amongst CAQDAS packages and In addition, the output of all coded passages into tabular format via the Distribution as table report, along with frequency counts is incredibly useful in many situations.*

#### Further Reading

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