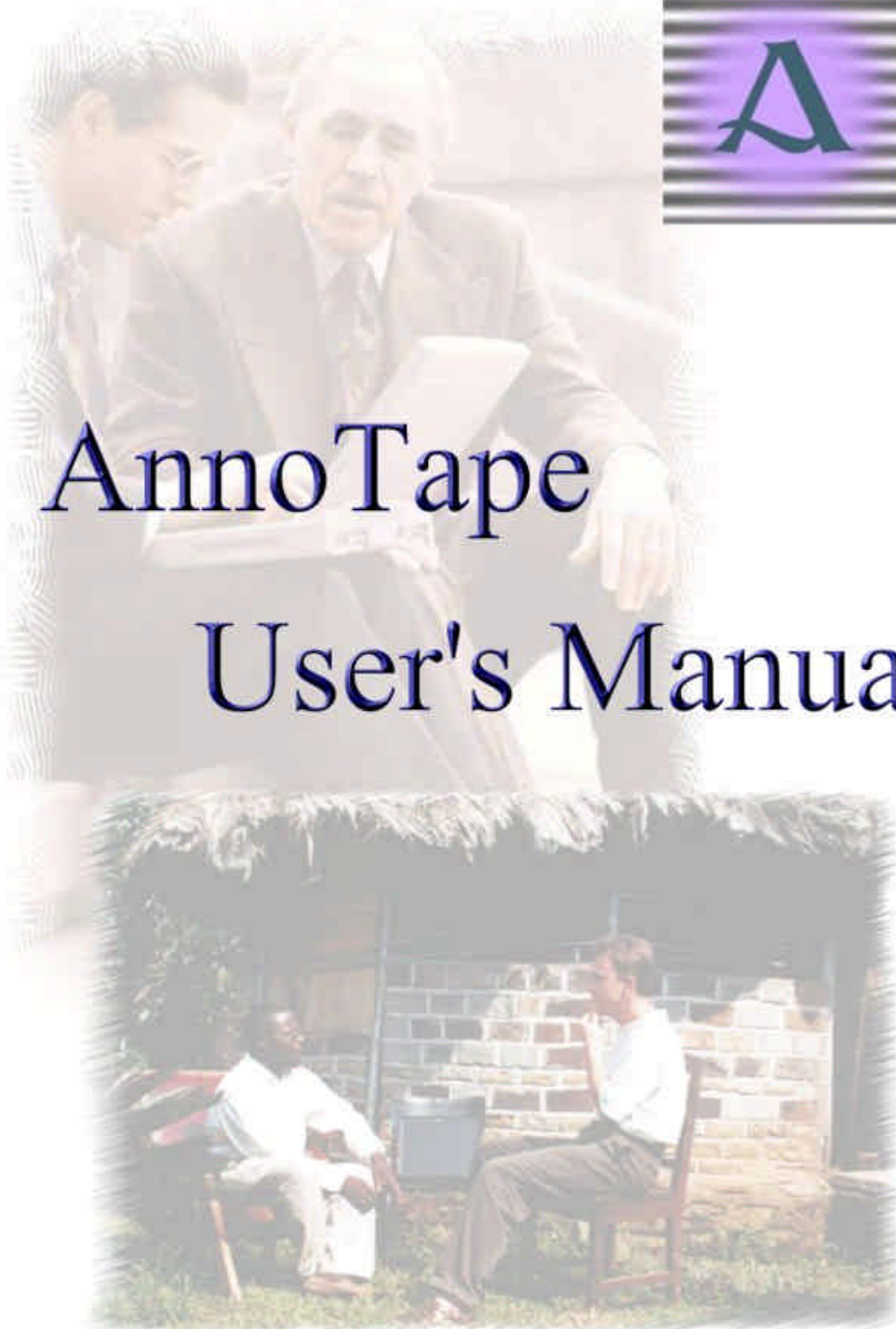




AnnoTape User's Manual



For PC

Version 1.0

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Introduction

Congratulations on choosing AnnoTape PC! AnnoTape is the solution for recording and analysing audio and text data for qualitative research. AnnoTape was developed for ethnographic research and is used for a variety of qualitative research tasks.

AnnoTape takes its name from its principal functionality: the ability to mark up and ‘annotate’ virtual ‘tapes’ that the computer has recorded to its hard disk. By allowing the user to work directly with audio data, analysing it while still in that form, AnnoTape gets round the otherwise tiresome process of researchers having to transcribe their audio material before they can analyse it.

Why not keep the AnnoTape team informed of how you are using it in your work? Email us on annotape@eircom.net and let us know. Your feedback and suggestions for future versions of AnnoTape would also be welcome.

About This Guide

This guide contains information on getting started with AnnoTape, specifically:

- ✧ Instructions for downloading, installing and registering AnnoTape
- ✧ Recording audio and text material to AnnoTape
- ✧ Analysing and indexing audio and text data
- ✧ Using AnnoTape as a transcription editor
- ✧ Outputting data

Systems Requirements for AnnoTape PC

To use AnnoTape PC, you need the following hardware and software:

- ✧ A PC laptop or desktop running Windows 98
- ✧ A soundcard, speakers and an internal or external microphone – an ‘audio in’ socket is also necessary if you will want to upload audio from existing sources such as tape or CD
- ✧ At least 32 Mb of RAM
- ✧ At least 100 Mb of hard disk space for each hour of audio stored through AnnoTape

In addition, we highly recommend some form of mass data storage – such as DAT, recordable CD or external hard disk – for data back up.

Registering AnnoTape PC

When you first download and install AnnoTape you are working with an evaluation version. When you launch the application, you will see the 'Un-Registered Software' window which informs you that the software will expire after 30 days:

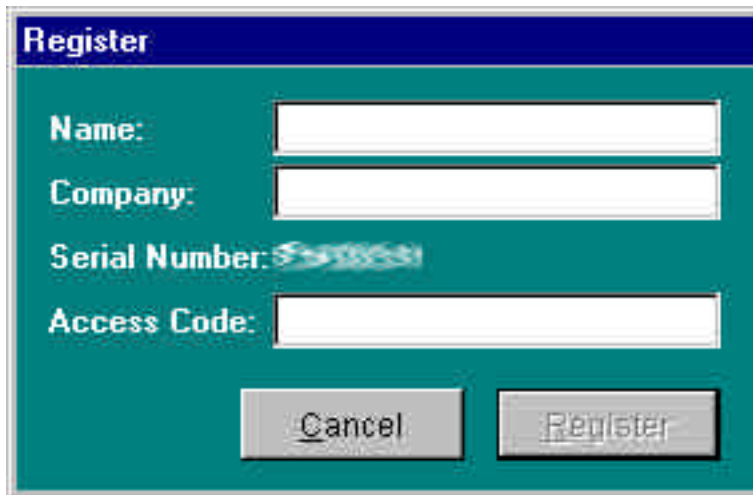


The Un-registered Software window will appear for 30 days, or until the software is registered. Once the 30 days pass, you will only be allowed to register or exit.

During the demonstration period of 30 days, click 'Register Later' to begin working immediately. All of your work conducted during this period will be preserved when you register AnnoTape fully.

To register:

1. email annotape@eircom.net with the serial number that appears in the launch window. On payment of the current price for AnnoTape (details on <http://www.annotape.com>) we will email you your unique access code which will unlock AnnoTape for full use.
2. After receiving this code from us, click the 'Register Now' button in the launch window. The registration window will then appear:

A screenshot of a 'Register' dialog box. The dialog has a dark blue title bar with the word 'Register' in white. The main area has a teal background. It contains four labels with corresponding text input fields: 'Name:', 'Company:', 'Serial Number:', and 'Access Code:'. The 'Serial Number' field is filled with a pattern of small, overlapping, light blue and white shapes. At the bottom, there are two buttons: 'Cancel' and 'Register', both with a grey 3D effect.

Register

Name:

Company:

Serial Number:

Access Code:

3. Enter your name, company and the access code you have just received. Then click the 'register' button. AnnoTape will then be registered fully. If this procedure does not function correctly, please immediately email annotape@eircom.net for support.

Working with Projects

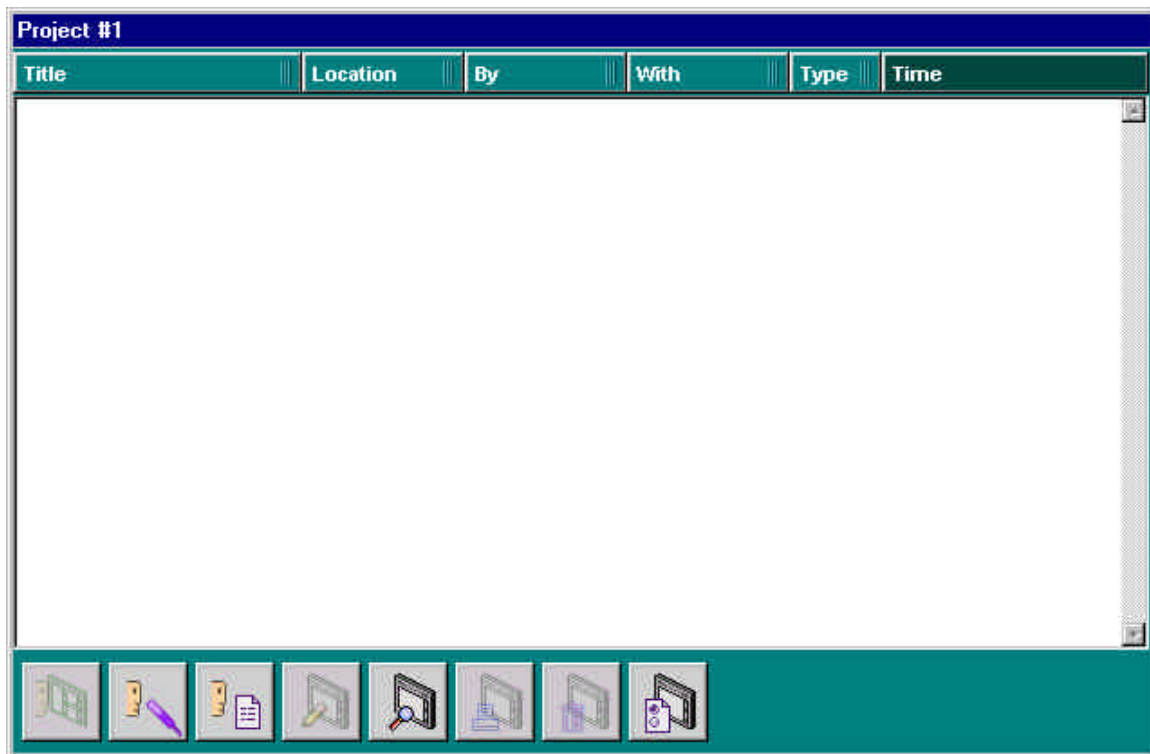
When AnnoTape is launched, the 'Project' Window appears. The 'Project' window is the principle workspace within AnnoTape: all journeys begin here!

In AnnoTape, a **project** holds all of the data associated with the research being undertaken: that means all of the primary audio and text materials you are working on, together with all of the analysis that you do on those raw materials. AnnoTape can manage multiple projects, provided available hard disk space permits.



Terms highlighted in blue – like the term '**project**' above – are given formal definitions in the glossary at the end of this manual.

Initially, the project will be unnamed, and all of the 'Project' window columns will be empty:

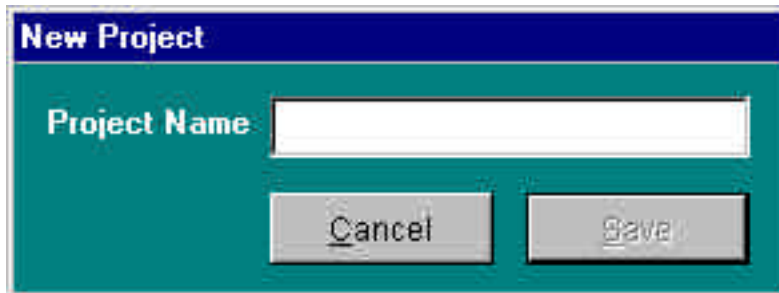


At the bottom of the Project Window is a row of shortcut buttons. Their functions will be introduced in due course. For now, you can experiment by holding the mouse over them

for a short period of time (without clicking): this will cause a pop-up a window to appear, showing their functions.

Creating a New Project

The first thing you will want to do is create a new project in which to store your primary research materials and the analysis that goes with them. From the File Menu, choose 'New Project' and you will be prompted for a name:



Enter a name from your project and click the 'Save' button. From now on, all materials you record, and all analysis you perform on those records, will be stored within this project.

Managing Projects

AnnoTape can manage multiple projects. When you have created more than one project, you can switch between them by choosing the 'Open Project' command from the File Menu (Ctrl+O) and choosing the project you want.

Editing Projects

You can edit the name of a project after it has been created.

Choose the Edit Projects command from the Tools Menu. This lists all current projects available within the AnnoTape environment. Here you can create, modify and delete projects. You can also determine which project is 'active': "Make Active" makes the selected project the current project (the same as choosing "Open Project" and selecting the project).



Later in this manual, you will learn how to share some of your analytical categories across projects.

Customizing the Project Window

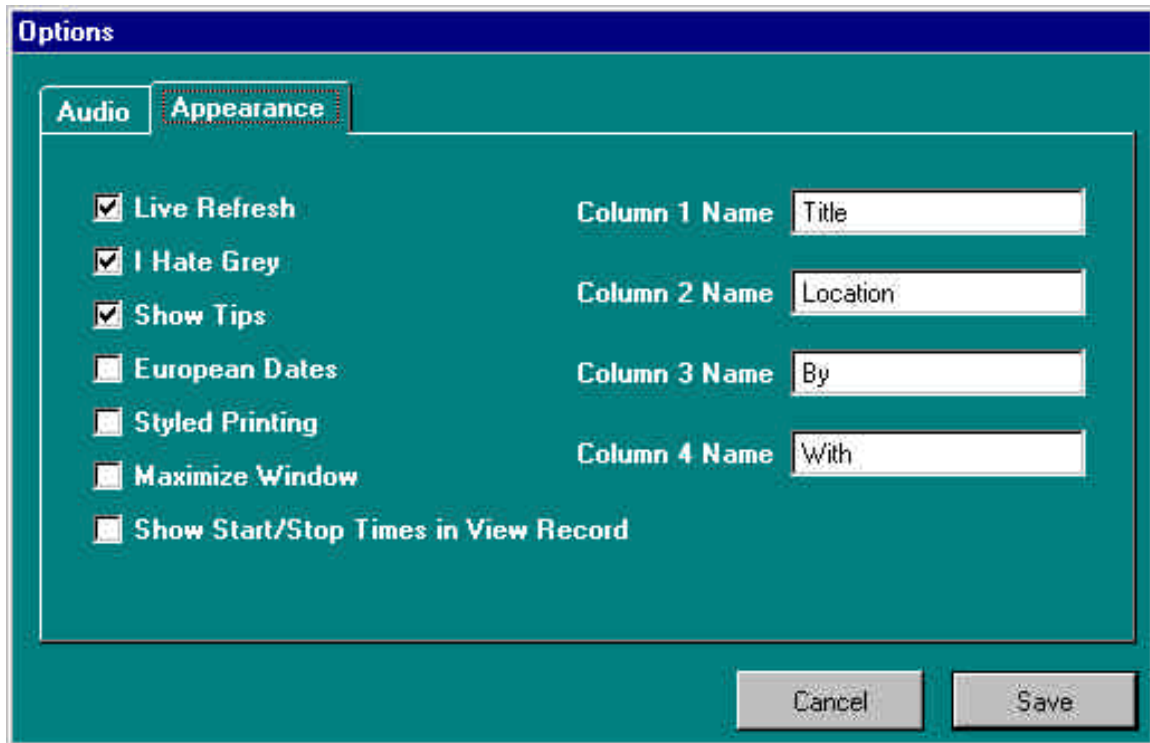
The Project Window can be adjusted in a number of ways to suit your usage.

Title	Location	By	With	Type	Time
Carl	Carl's House	SSJ		Audio	04/03/01 02:08:47 PM
Eric	Office	SSJ		Text	04/03/01 06:56:07 PM
Sarah	Sarah's House	SSJ		Audio	15/03/01 05:41:23 AM
Eric 2	Eric's House	COB		Audio	15/03/01 05:41:38 AM
Michael	Blarney			Audio	15/03/01 11:54:48 AM
Deirdre Transcript	Office	COB		Text	27/04/01 02:52:41 PM

Clicking on the title bars of a column, will sort all records in the project alphabetically by that column [Clicking on the Time column will sort chronologically]. Thus, you can sort by when the record was created, its kind (Audio or Text) or any other.

You can adjust any column's width by clicking and dragging it.

Further customisation of the Project Window can be achieved by choosing the 'Options' command from the Tools Menu (Ctrl+Y), and then clicking on the "Appearance" tab to view appearance options:



Now you can rename the column titles in the Project Window to suit your needs. You might, for example, decide that you did not need a 'With' field, and alter it to contain the 'Language' in which each record is recorded. Again, if you do this, then clicking on the column name within the main 'Project' window will sort all records by that field.

You can also flip between two different desktop colour schemes ('I Hate Grey') and control whether Tips are shown or not.

Important Note: How Projects are Stored

Within AnnoTape, all data is held in a central Data Folder within the AnnoTape application folder. **Audio** and **Text Records** (see next section and or glossary) are stored individually along with other files relating to annotation and analysis the user performs on the records.



It is extremely important that the user does not interfere or re-arrange the data folder in any way. To do so risks loss of data overall within AnnoTape, corrupting the database and the AnnoTape environment. If for some reason you urgently need to re-arrange the data folder in some way, make certain to back-up first and check with AnnoTape support first before making changes to the data folder on annotape@eircom.net

Working with Records

Within a project, your basic units are **records** – audio or text files from which your research will begin.

- ! For the technically minded, audio records within AnnoTape PC are stored in .WAV format; text records are in .RTF format.

Recording an Audio Record

One of AnnoTape's primary features is to turn your computer into a souped-up tape-recorder for bringing in audio materials for analysis. To record an audio record, choose the 'New Audio Record' command from the Record menu (Ctrl-N) or click the button with the microphone icon at the bottom of the Project Window. The 'New Record' window will appear:

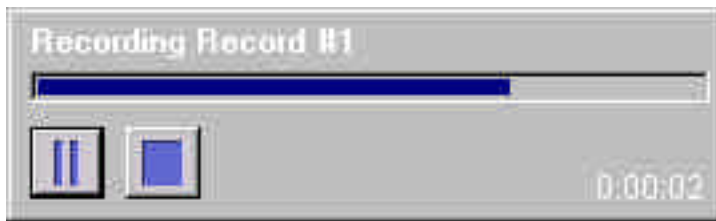


- ! Note: if you have used the 'Options' Command to alter the names of columns in the Project Window, these changes will also be reflected here...
- ! To record a text record at this point, select/deselect the "Text Record" click-box (Alt-T)

You can choose to fill in these boxes before you begin recording; or you can leave it to later, at which point AnnoTape will give the record a default name in numerical order of appearance (starting with 'Record #1').

! AnnoTape offers a variety of different recording options and can work with a number of different sound input devices. For more on setting up your audio specifications and using microphones and sound cards, see the 'Advanced Options' section of this manual. Choosing the 'Options' Command from the 'Tools' menu [Ctrl-Y] brings up the 'Audio Options' window. You can alter the recording quality between three different settings: 'Good', 'Better' and 'Best' sound. With these settings, there is a straight trade-off between recorded sound quality and storage-space on your hard disk. 'Good' is roughly the quality of a telephone call, and uses the least memory; 'Better' is approximately twice as hungry in terms of memory; 'Best' uses twice as much memory again, but records sound similar to FM radio quality. Also from the 'Audio Options' Window you can alter settings for your soundcard in terms of input device and driver.

To begin recording audio, click the 'Record' button. The 'Recording Record' window will appear, to indicate that recording has started.



The blue horizontal 'Level Bar' provides visual feedback on the volume of the audio input, and is a useful indicator that your microphone and soundcard are working as they should...

! If they appear not to be working, consult the 'Advanced Options' section of this manual for more on how to set-up your particular sound card and microphone options.

The 'Pause' and 'Stop' buttons, represented by their conventional icons, play the roles they would on any normal tape recorder. 'Pause' temporarily halts the recording of audio to the hard disk. 'Stop' terminates recording and saves the record permanently to your project: this will immediately be reflected in the 'Project' window (to which you are returned at the end of recording), with the name of the new audio record appearing there.



N.B.: The 'Recording Record' window displays the length of time the window is open, not the time of the recording – i.e. if you click the 'Pause' button, the timer still advances)

Editing Record Names or Other Details

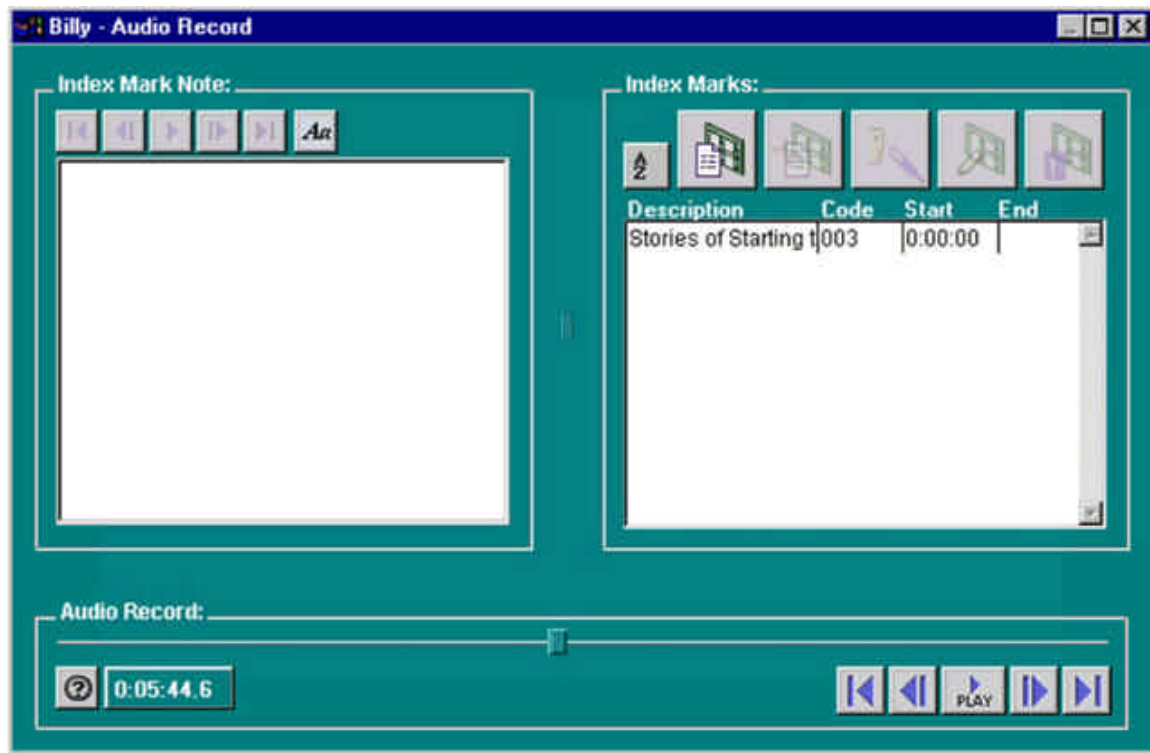
If you chose not to provide a name (and other data) for the record prior to beginning recording, then AnnoTape will have provided its own: 'Record #1', 'Record #2', and so on, in numerical order, together with the date of recording. At some point in the future, you may want to change this to a name of your own choosing; you may also want to add information in the other fields, such as 'Place', 'By' and so on. Or you may simply wish to change the information that you added earlier.

To work in any of these ways on the details of a record, choose the 'Edit' command from the Record menu. The 'Edit Record Details' window appears, and prompts you to enter the 'Title', 'Location', 'By' and 'With' fields for the selected record.

Reviewing an Audio Record

Now that you have used AnnoTape to record an audio record, you will want to listen back to it.

From within the 'Project' Window, double-clicking the name of the record will open the window that corresponds to that particular record. From within this record, you can play, rewind and fast-forward, as well as starting to analyse your audio.



Playing an Audio Record

Running along the bottom of the window is a slider that represents the ‘tape’ of audio you have recorded. At the bottom right is a set of standard tape recorder controls, whose functions can be revealed by leaving your arrow-pointer over them briefly so as to reveal pop-up windows. You can play your audio record by clicking the ‘Play’ button (which will then turn into a ‘Stop’ button). When the record begins to play, the slider will start to move to the right, representing the progress of the tape, and the timer in the bottom left of the window will start to count along the recording in hours, minutes, seconds and tenths of seconds.

You can also start and stop playing from the keyboard by hitting either F2 or CTRL+Return.

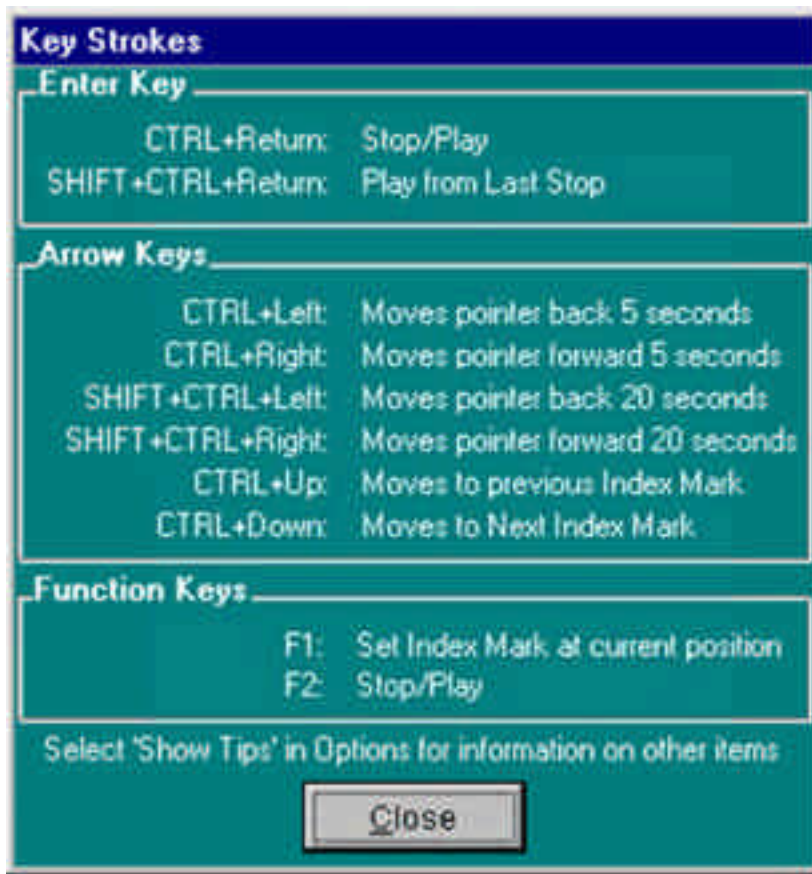
Fast-Forwarding and Rewinding in an Audio Record

Clicking and dragging the slider tab will move forwards and backwards through the audio record – as you do this, the timer will keep track of where you are in the record.

The remainder of the standard cassette buttons in the bottom right also move you through the record: two buttons which move you immediately to the beginning of the record, and two which rewind and fast-forward you by five seconds at a time.

Finally, for very precise movement within the audio record, a number of keyboard shortcuts are available. By clicking the ‘Question Mark’ button in the bottom left of the

screen, you can reveal a short-cut menu of keyboard combinations which move you forward and backwards by exact increments of five or twenty seconds respectively.



You will need to close this window again, once you have verified the information that you need, in order to keep working.



You may want to review an audio record without leaving the main 'Project' window – perhaps for a quick reminder of what a particular audio record contains. To do this, while within the 'Project' window, simply click to select and highlight the record you wish to listen to, and then press the 'Return' key. The record will start playing, and will continue until you press the key again.

Importing and Linking to Audio Records

Apart from helping you to record original audio files, AnnoTape also allows you to import or link to existing sound files. There are a number of different possibilities here:

Importing Audio from Cassette, CD, or Other Sources

If your computer has a 'sound in' or 'external microphone' jack, then you should be able to connect your CD player or cassette recorder to this jack with a suitable cable. Then,

alter the settings on your internal sound card so as to accept audio from here rather than the built-in microphone on your computer. Then, by following exactly the same steps as you would for recording a standard audio record from within AnnoTape, you can start recording within AnnoTape and begin playback from your CD or Cassette player, bringing the audio into AnnoTape as an audio record with which you can then work.

The 'Import' and 'Link To' Commands

You may already have audio files in the appropriate .WAV format residing on your computer which you want to bring into the AnnoTape environment. Two commands on the 'File' menu help you do this.

If you import a file using the 'Import' command, then a copy of the .WAV file you select is placed into the AnnoTape environment for your to use as a new audio record.

! The 'Import' command is 'intelligent' – when you browse for a file to import, AnnoTape will bring in text or .RTF files as text records (see later in this manual) and .WAV as audio records.

If you choose the 'Link To' command, no copy of the .WAV file is placed into the AnnoTape environment. Rather, a link is enabled, which allows AnnoTape to remember where the .WAV is located and access it as though it were included in the AnnoTape environment. This can be useful if the sound files being worked with are stored on a CD, DAT tape, or other kind of mass storage device.

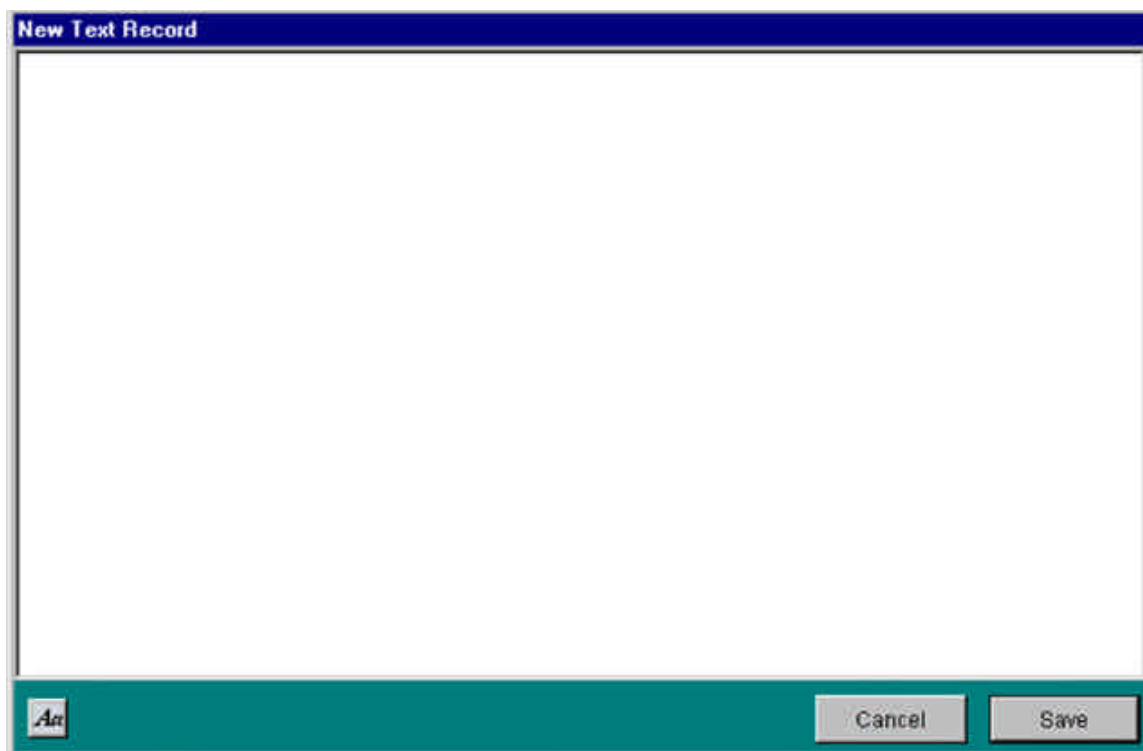
Creating and Reviewing Text Records

An equally important function for AnnoTape is to create, store and analyse text based data. These might consist of notes on interviews where consent to record was not granted; or they might hold your research notes, diary, jottings, or full written documents brought in as part of research data.

Text **records** are easily created in AnnoTape. The 'New Text Record' command from the Record Menu (Ctrl-T) opens the same window as with the 'New Audio Record' command, but this time, the check box for 'Text Record' is checked. As with audio records, you can either provide a title and other details now, or leave it to later, with AnnoTape inserting a temporary title until then.

! AnnoTape's text records are stored in .RTF format, used by many common word processors. Any .RTF file can therefore be imported to the AnnoTape environment with ease.

When you create a new text record, AnnoTape opens the 'New Text Record' window. You can type freely in the text window provided, saving when you have finished.



If you want to change the font format of the text you are typing, click the 'Aa' button in the bottom-left hand corner. This reveals the 'Format Text' window, which provides basic formatting options such as font type, size, bold and italic.



When you have finished creating your text record and you save it, you will be returned to the 'Project' window. As you might expect, you will now see the title and other details of your new record listed there – but this time, the 'Text' column in the 'Project' window will be marked 'Text' rather than 'Audio'.



Remember, clicking on the heading of the 'Type' column in the 'Project' window will sort your records by type, separating audio and text records from each other.

Importing Text Records

You may wish to import pre-prepared text files as records – these might be files you prepare yourself in a word-processor, or files that you have acquired which contain important research data.

Importing text records, as with audio records discussed earlier, is straightforward. First, ensure that the file you will import is stored either as plain text, or in .RTF format. Then choose the 'Import' command from the 'File' menu, browse your hard disk to find the file, and click the 'Import' button (you may need to choose the 'All Files' option for your file to be revealed). When you import, the new text record will have as its title the title of the file you import – you may keep this or edit it with the 'Edit File Details' command already discussed.

Indexing Records

Indexing audio and text records is at the heart of AnnoTape's functionality.

In essence, indexing allows the user to compile a database which cross-references key moments across all of the audio and text records she or he is using so as to return, with one or two commands, to that exact place once again for review or output.



It is this feature in AnnoTape that makes audio-transcription unnecessary. In essence, most research projects only transcribe their audio material because it makes it possible to review and analyse the data with ease. However, by indexing audio records, AnnoTape makes it possible to review and analyse the original audio with just as much ease, obviating transcription altogether.

Some Glossary Terms for Indexing

Before continuing, we introduce a few technical terms (repeated in the glossary at the back of this manual) which will guide the discussion:

project A collection of records, together with all the analysis and annotation performed upon it through indexes

record A single unit of continuous audio or text data of varying length – the basic research unit, a collection of which composes a **project** within AnnoTape

index An index consists of a **description** and a **code** uniquely associated with each other. These may be global (across projects) or local (unique to a project); they may be set-up at the beginning of the project or as it continues

index mark A unique instance of an index, inserted into a particular audio or text record at a specific point of interest to which the user will wish to return in the future.

An index mark consists of the **description** and **code** which make up the parent **index** from which it is derived. It is also uniquely associated with a specific **snippet** of audio or **block** of text where it is inserted, and with optional text or audio **notes**.

description An optional text field which contains information from the user classifying the index. Descriptions usually contain thematic classificatory terms such as 'teenage smoking' or 'tobacco:under 18:peer pressure'. As one part of an **index**, they may be global or local. Again, they may be set-up at the beginning of the

project or as it continues

code A second optional text field which contains information from the user classifying the index. Codes usually contain numeric information uniquely associated with the corresponding **description**. Thus, if the **description** is ‘tobacco’ the code might be ‘008’ – if the **description** is ‘tobacco:under 18’ the code might be ‘008/018’, and so on. Again, codes may be set-up at the beginning of the project or as it continues (standardized coding schemes exist in various sub-fields of qualitative research, and may be used within AnnoTape).

note Associated with a unique **index mark**, audio and text notes contain the user’s free form comments, jottings, transcriptions and annotations on the **index mark** in question.

snippet A segment of an audio **record** pointed to by an **index mark**

block A segment of a text **record** pointed to by an **index mark**

We will clarify each of these terms below as we consider a hypothetical research project – ‘Teenage Smoking’ – which blends audio and text data to look at the reasons why teenagers smoke. We further imagine that, with this project having continued for some time, the ‘Teenage Smoking’ now contains a large number of different text and audio records and that analysis is about to begin.

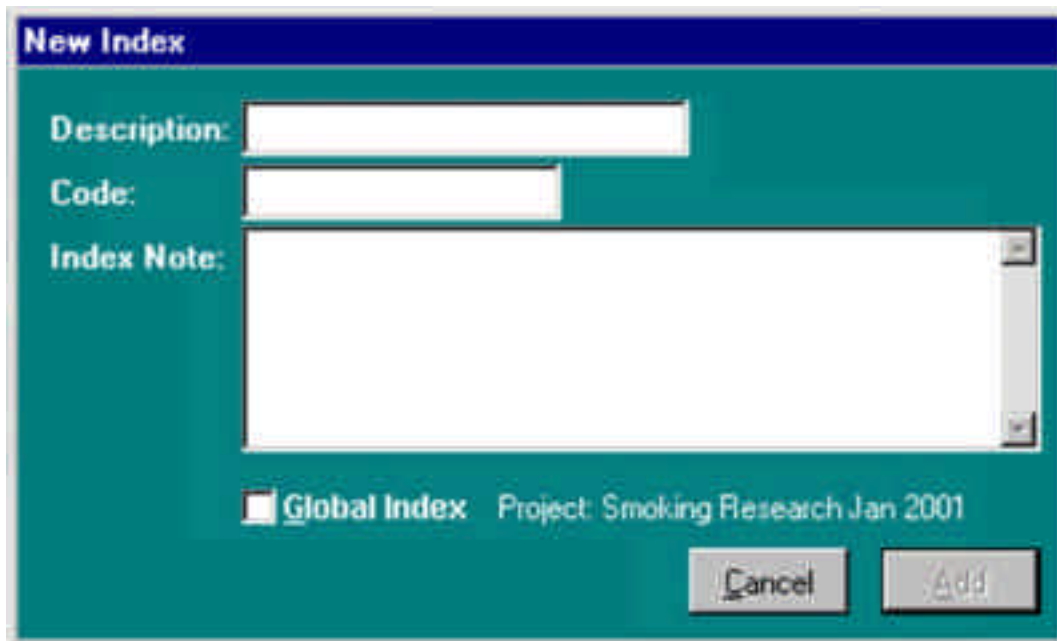
What indexing does, in brief, is allow you to ‘mark up’ your audio and text records into **snippets** of audio and **blocks** of text which you associate with particular index marks which allow you always to return straight away to return to them with a quick ‘Find’ or ‘Sort’ command.

Indexes

What is an Index?

The analyst may have ideas already about what he or she is looking for; or these may come organically as the process of indexing ensues. But at the core of the process is the idea of an **index**, a general research category which the user defines and uses to construct cross-references across the data. Imagine, for example, that a consistent feature of many of the interviews was a teenager describing how he or she first began smoking. Wouldn’t it be useful if, for the purposes of comparison, it were possible to jump quickly between each such moment in all of the interviews?

This is exactly the idea behind an index. The user might set up an index called 'Stories of Starting to Smoke'; here's how: choose the 'Edit Indexes' command from the 'Tools' menu.



This command reveals a window which allows you to add the new index. Each index comes in two parts, each of which is optional. The **description** is a free text field in which you would put the phrase 'Stories of Starting to Smoke', for example. The **code** field is also free text, and can be used in what ever way the user wishes, but would usually contain some kind of numeric code which corresponds uniquely to the Description. Here, say, we might code this as '001' and the next code as '002' etc. [This feature is particularly designed with certain standard numerical coding systems, such as Dewey decimal etc., in mind].



Note that the user is entirely free to use codes or descriptions as they choose. You can use just descriptions, just codes, or both. It is not necessary to use both for AnnoTape to function correctly.

You can also add an index note which is there to remind you at a later stage as to what exactly you had in mind for this particular index, such as: 'I use this index to reference all the moments where interviewees started to narrate the ways in which they began to smoke; but when they start to talk about why they started to smoke, that is indexed differently as 'Stories of Why Started to Smoke''. This can be extremely useful for keeping your indexing consistent in a large project.

! You may also wish to use some form of hierarchical indexing. Again, AnnoTape allows a great deal of flexibility here. Since index terms are free text, you can include in them what you wish. You may find it useful, for example, to start with ‘Stories of Starting Smoking’ as your index term, and then sub-specify as the research continues: ‘Stories of Starting Smoking:Under16s’ and ‘Stories of Starting Smoking:Under 14s’; or ‘Stories of Starting Smoking:Boys’ and ‘Stories of Starting Smoking:Girls’. Note that later, when you perform a search on indexes, you can restrict to the top level [‘Stories of Starting Smoking’] or refine your search to a specific sublevel [‘Stories of Starting Smoking:Girls’]. Note also, that there is no limit to the number of levels you can include here [‘Stories of Starting Smoking:Girls:Under14’] subject only to a total limit on the number of characters in the index of 40 characters over all for the description and 30 for the code field.

Global and Local Indexes

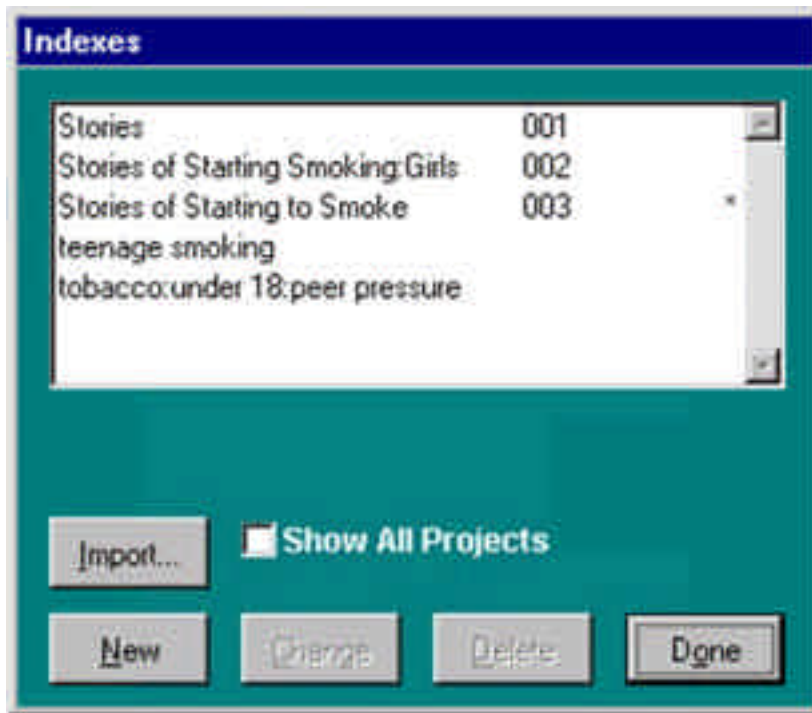
Note that you can make indexes either local (restricted to use only within the project you are working in) or global (available across all projects). To Set or Unset ‘Global Index’, use Alt-G. When a code is local, the corresponding project name is displayed; otherwise “Global Index” is displayed.

Editing Indexes

At a later stage, you may wish to alter the names of indexes, or import new ones. This can be accomplished by choosing the Edit Indexes command from the Tools Menu. From the resulting window you can:

- ✧ Create a new index by clicking the ‘New’ button.
- ✧ Change the details of an existing Index by selecting it and clicking the ‘Edit’ button.
- ✧ Delete an index by choosing the ‘Index’ button.
- ✧ “Show All Projects” will show codes from all projects, otherwise only active project codes and global codes will be displayed. Global Codes are indicated in the list by “*”.

! It is possible to import predefined indexing schemes from elsewhere into AnnoTape by clicking the ‘Import’ button from this window. See ‘Advanced Features’ later in this manual for more on how to format a set of indexes for importation.



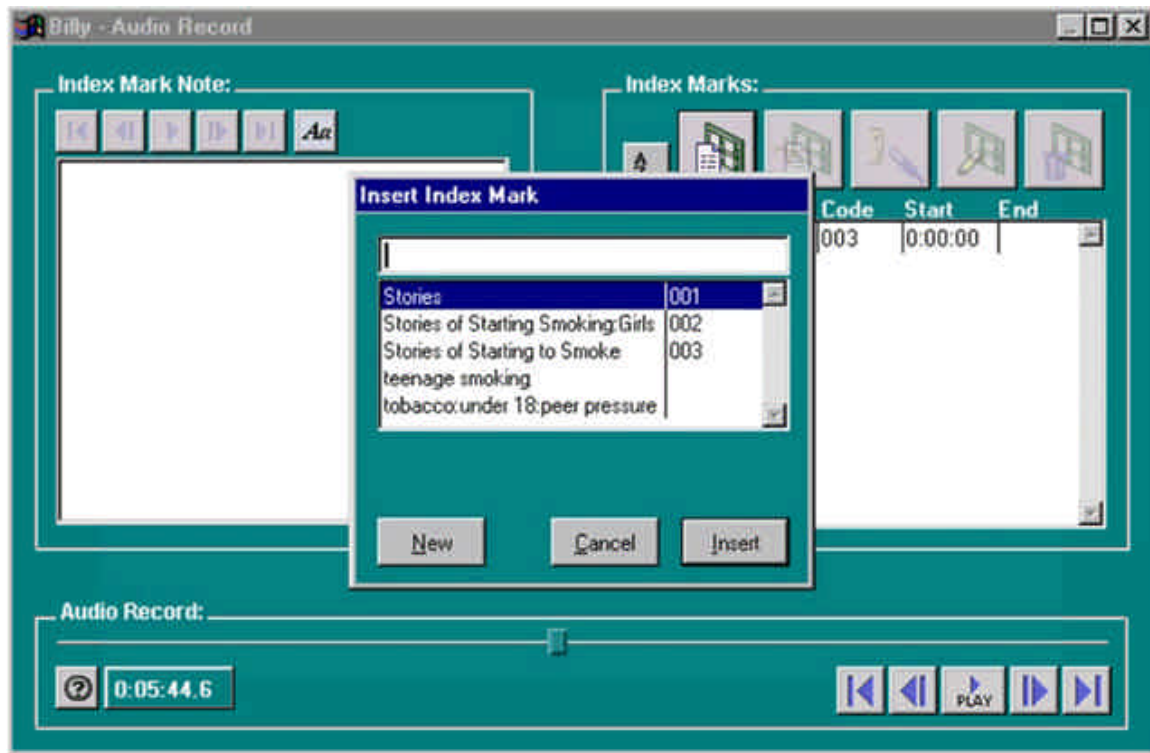
Index Marks

AnnoTape uses the term 'Index Mark' to mean the unique instance of a particular index in a particular record. So, if your index is 'Stories of Starting Smoking', then an **index mark** is when you attach this index to a particular point in an audio or text record.

Say, for example, that in a half-hour interview with a teenager called 'Carl', the interviewee starts to describe to you the time when he first smoked, and he does this at a point about half way through the interview. You might insert an index mark at the starting point (and optionally at the end point of his description also) of this point in the interview so that you could come back at any point later and listen again.

Setting a Starting Index Mark for an Audio Record

How would you do this? First, as in the previous section on reviewing an audio record, you would open the record by double-clicking it in the 'Project' window and playing, fast-forwarding and rewinding until you find the exact moment at which 'Carl' begins his story about taking up smoking.



When you have found the exact point that you want, hit the F1 key, and AnnoTape will offer to insert an index mark of your choice. If you have already set up the **index** 'Stories of Starting Smoking' then this will be included in a pop-up menu of existing indexes from which you can choose after pressing F1. If not, you may set it up now.

! A very useful timesaving function of AnnoTape is that when the pop-up menu of existing Index Descriptions appears, you can select the one you want by simply typing the first few letters of the Description. As each letter is typed, AnnoTape automatically narrows down the pop-up menu to only those Index Descriptions containing those letters, until ultimately only the one the user is seeking is left.

! Note that when you hit the F1 key while an audio file is playing back to you, AnnoTape can actually 'roll back' the 'tape' just a fraction in order to take account of the reflex time involved in hitting the F1 key. This offset is measured in milliseconds and you can set it by choosing the 'Audio Options' (Ctrl-Y) menu and filling in the precise number of milliseconds of offset to be used.

Once the index mark has been set, you can add note fields to it, delete it, change its name or associated code, and so on. Ultimately, you will also be able to search for it from anywhere within the AnnoTape environment (see later in the manual for these).

Setting an Ending Index Mark for an Audio Record

AnnoTape is designed flexibly to allow you so that you can either assign an 'Ending Index Mark' in association with the 'Starting Index Mark' just assigned, or else leave it open. This becomes clearer with an example:

In some instances, the start and end of a particular audio snippet will be quite clear. Imagine a rigidly structured interview in which a sequence of twenty questions is asked and answered. Here, it might be very useful to be able to mark the beginning and end of each answer with index marks so that the resulting **snippet** of audio is clearly defined and demarcated.

By contrast, if Carl, talking of taking up smoking, slowly deviates from the question into a discussion of the joys of tobacco smoking before returning again to the matter of how he began, it would be difficult to define exactly where the relevance of the discussion ends. Here, it might be better to let the end remain unmarked, and during analysis one can determine how long to listen for.

Setting an End of an Index Mark is straight forward: click on the matching Start of Index Mark, move/play the slider to where you would like the end to be marked, then click on the End Mark button.

To remove an End of an Index Mark, click on the matching Start of Index Mark, move the slider completely to the beginning of the Audio Record and click on the End Mark button: the End of Index Mark is deleted, leaving only the Start mark.

Moving Through an Audio Record by Index Mark

When you have a sequence of Index Marks defined within an Audio Record, it is very straightforward to navigate quickly through the Record by flitting from Index Mark to Index Mark. Highlight the first Index Mark in the Index Window of the Record. Arrow down the list of Index Marks and you will see the slider jump each time to the corresponding part of the Record.

Indexing Blocks of a Text Record

Indexing Text Records works in an exactly parallel way to indexing Audio. Here, however, instead of 'cutting' the audio into various audio **snippets**, text is marked up into **blocks** to which you can return at a single search on the blocks index term.

Imagine, for example, that Carl actually refused to be recorded when talking about taking up smoking. Now, instead, you have been obliged to write up the notes of your conversation with him as a text record. On reviewing this text record, you would still like to index the moment at which Carl starts to talk about taking up smoking. So: you highlight the text of interest, beginning from the point in the record where Carl takes up the theme, and ending where you think he leaves it. With the text highlighted in this way, as with Audio Records, hit the F1 key to bring up the very same menu of index terms

already defined (or, as before, define a new one of your choosing). Pick the appropriate index term as before, and an Index Mark is placed which corresponds to the highlighted block of text.

Later, when you are reviewing a Text Record, clicking on a particular Index Mark in the Index Window automatically moves you to the exact block of text within the record with which it is associated and highlights the block of text in red for easy recognition.

! Note that you should only begin to index a Text Record when it is in its final form. Once indexing has begun, you cannot add more basic text data to a Record. If you have already begun to index a Text Record, and you then attempt to add more text anywhere within that Record, you will receive a warning message saying that adding that text will erase and invalidate all the Index Marks so far applied.

Moving Through a Text Record by Index Marks

As with Audio Records, you can use the Index Marks to move quickly through a Text Record for review. Click on the first Index Mark in the Index Window of a particular text record to begin; then use the arrow keys to page up and down through the text from Index Mark to Index Mark.

Changing or Renaming Index Marks

Index Marks – applied either to Text or Audio records – can very easily be renamed.

- ✧ Open the Record's Window.
- ✧ Click on the Index Mark you wish to rename
- ✧ Click on the 'Edit' button in the top-righthand corner of the screen.
- ✧ The Edit Window appears, allowing you to alter the name of the Index Mark: you can either choose a different existing Index term or you can create a new one at this point.

! Creating a new name may be particularly useful at this point if you discover that you need to divide an existing term with more hierarchical precision. Example: up until now, you only indexed items as 'Taking Up Smoking'. Now you find that you want to distinguish between 'Taking Up Smoking:Peer Pressure' and 'Taking Up Smoking:Advertising'. You can go back to those Index Marks already inserted and create new sub-Indexes in this way and apply them to your materials.

Analysing Records

AnnoTape makes it easy to revisit data once indexed. The application's strength is its flexible indexing coupled with powerful organisational and search functions which allow the user quickly to pinpoint the original audio snippet or text block that covers the matter under inquiry.

Viewing the AnnoTape Database by Index

As your database of Audio and Text Records, Index Marks and Notes grows, you will want now and then to take a global view of the database and how the research is progressing. The easiest way to do this is to view the database organised by individual Index:

- ✧ From the Main Project Window, choose the 'By Index' option under the View Menu (Ctrl+I).
- ✧ AnnoTape will produce a complete list of all existing instances of index marks in the database. Initially this list will be sorted alphabetically by record title; within each record, the Index Marks will be given in sequential order as they appear in the record.
- ✧ The user can then click on any column heading, as normal, to re-order the list. For example, clicking on the Index Description heading will re-order the list alphabetically, showing the complete list of instances of Index Marks grouped by Index (i.e. all instances of 'Taking Up Smoking' across the database grouped together, and so on).
- ✧ To return to the standard Main Project Window organised by Record only, choose 'By Record' from the View Menu (Ctrl+R).

Annotating Index Marks

Associated with every Index Mark inserted into an Audio or Text Record is a **Note** Field which the user can utilise in a number of important ways for data analysis.

Effectively, as a free text field, the user has complete freedom to choose what to store in the note field. Returning to the familiar example of smoking, a user might note, for example, that while speaking at this point in the interview where the subject, the interviewee started to look embarrassed and uncomfortable. Or, the user might insert a Note observing 'when Carl spoke about taking up smoking, it resonated very much with the description that Carol gave in her interview. Worth checking back to see if other's made the same points'.

Thus, the free text Note field can be used to start building analysis across Records which go beyond basic indexing to build non-linear relationships amongst data.



The free text Note field is also the basis of AnnoTape's transcription machine functions, explored in a later section. See 'Transcribing with AnnoTape'.



Aside from free text fields as notes, the user can also add an audio note to any Index Mark – in either an Audio or text Record. This is accomplished by clicking on the Audio Note button to the top-right hand side of the Record Window. A standard recording dialogue box will appear, and the user can begin to record the audio note. Thereafter, using the 'cassette player' buttons at the top left of the Record Window; each of these has the function (record, play, fastforward, rewind) for the Note that one would expect. Later, when reviewing the Record, the user will be alerted to the fact that there is an audio Note attached to an Index Mark by the fact that when that specific Index Mark is selected

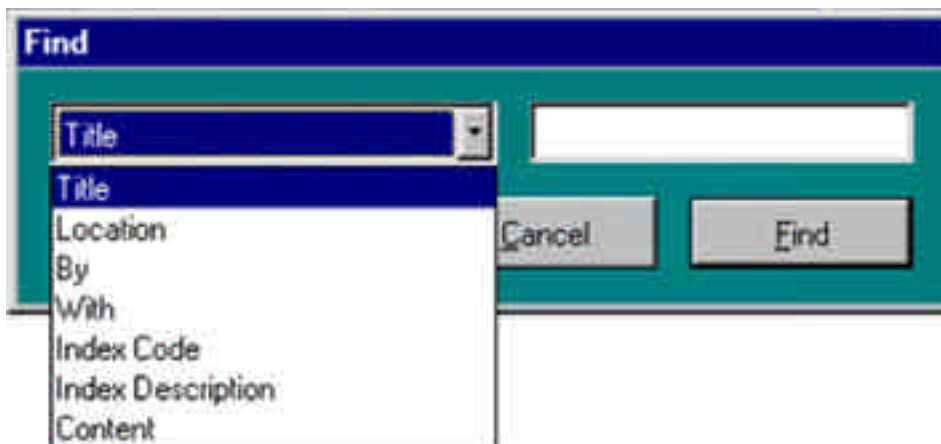
Notes are saved to the AnnoTape database as soon as the User moves on to another Index mark or closes the Record Window. Subsequently, the notes will appear

Finding

AnnoTape's powerful search facilities allow the user to find individual Records, content within Records, particular Index Marks or families of Indexes.

Finding Records

The 'Find' Command is available under the View Menu (Ctrl+F). The Find Window appears: at this point, the user can choose from a pull-down list of possible fields to search for Records on. All four of the main fields pertaining to records may be searched on. If the user has redesignated the names of these four fields (see earlier Section on 'Working With Records' then the pull-down menu will reflect these changes).



For example, you can Find all records which were recorded in 'Location = Office': the resulting search will list all matching records in the Main Project Window.



To return to the Main Project Window in its natural state – with all Records displayed, choose Find All (Ctrl+J) from the View Menu.

Finding Index Marks

AnnoTape naturally allows the user to search on Index Marks – either by **description** or **code** fields.

Again, choosing the Find Records command permits this: but this time, the user would choose either Index Code or Index Description from the View Menu. When an Index Description search is chosen, the same useful time-saving function AnnoTape provides for Indexing to begin with comes into play: the pop-up menu of existing Index Descriptions appears, and you can select the one you want by simply typing the first few letters of the Description. As each letter is typed, AnnoTape automatically narrows down the pop-up menu to only those Index Descriptions containing those letters, until ultimately only the one the user is seeking is left.



Rather than wishing to search on one Index Description or Code exclusively, the user may wish a broader search in which only some characters of the Indexes are specified. This will be particular useful where the user is utilising the kind of hierarchical indexing scheme mentioned earlier in the Section on 'Indexing Records'.

For example, if you have sub-specified the Indexes as 'Stories of Starting Smoking:Under16s' and 'Stories of Starting Smoking:Under 14s', then when you perform a find on indexes, you can restrict to the top level ['Stories of Starting Smoking'] or refine your search to a specific sublevel ['Stories of Starting Smoking:Girls']. Note also, that there is no limit to the number of levels you can include in a find ['Stories of Starting Smoking:Girls:Under14'].

With a find on Index Terms (Descriptions or Codes), the results are displayed in the Main Project Window, organised alphabetically by the search criterion. As usual, the results can then be sorted in other ways by clicking on individual columns (allowing, for example, you to sort all 'Stories of Starting Smoking:Girls:Under14' that were located in 'Office').

Double-clicking a particular entry in the list of found Index Marks then takes the user directly to the occurrence: if an Audio Record is marked, then this will begin to play after double clicking. If a Text Record is marked, this will open with the appropriate text blocked and highlighted in red.

As before, Find-All from the View Menu (Ctrl+J) resets to the Main Project Window in its default state with all records showing.

Find By Content

Find by content – another option available on the pull-down menu on the Find Command (Ctrl+F) – is a powerful tool for searching on text in AnnoTape. This option searches across all records – both Audio and Text Records – for textual occurrences of the search term. Within Text Records, this option will find all occurrences either in the body of the Text Record or in the Notes fields associated with specific Index Marks. Within Audio Records, the search term is looked for in Notes fields only (clearly, AnnoTape can not search for text within the actual Audio Record itself).

As before, double-clicking an entry will take the user directly to the appropriate point in the record; with this form of search, the exact occurrence of the text term searched upon will then be highlighted.

Again, the find results are sorted in the Main Project Window; return to default with Find-All from the View Menu.

Find Within Text Records

A final version of the Find command is available to the user when actually within a single Text Record. With a Text Record window open, the Find command available under the View Menu (Ctrl+F) is restricted to this form of find only. The user enters a text sequence to search for within the record, and it will be looked for within the Notes and within the Record itself. After the first occurrence is found and highlighted, the 'Find Again' command (Ctrl+G) takes the user to successive occurrences of the same text.

Closing the Record returns the user to the Main Project Window as usual.

Printing Records

AnnoTape allows the user to print out the contents of an individual record (text or audio).

From the Main Project Window, select the Record to be printed. Then select the 'Print' command from the File Menu. The printout can be in either of two formats – 'Report' and 'Styled'. The user switches between these, if required, from the Options command ('Appearance' Tab) under the Tools Menu: by toggling the 'Styled Printing' box.

- ✧ In the Report format, plain text is used.
- ✧ In the styled format, the font and style used in the fields themselves are reproduced.

Transcribing with AnnoTape

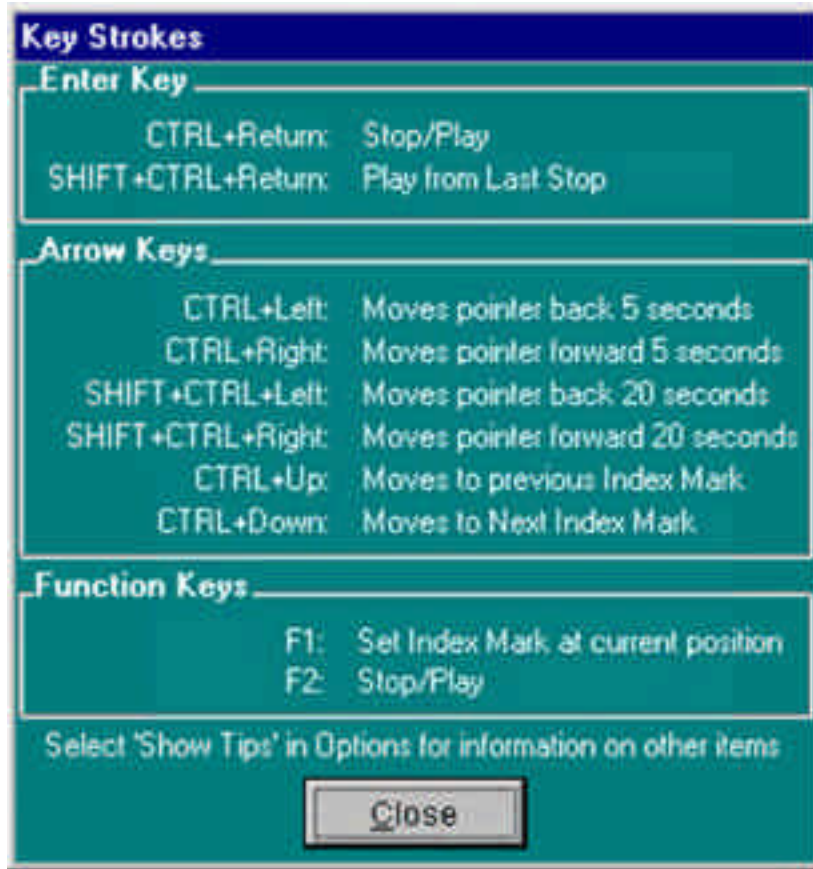
As underlined at the start of this manual, the whole purpose of AnnoTape is to get rid of the necessity to transcribe large numbers of Audio Records, a time-consuming and expensive mechanical process that has always dogged qualitative research.

However from time to time, a user will need to transcribe small amounts of text from audio. The user will likely conduct all of the cross comparison of audio and text data within AnnoTape using the techniques already discussed in this manual. But towards the end of the process, it may be useful to transcribe small quantities of text from audio. And, indeed, AnnoTape can be used as a formal transcription machine for entire audio records, since it makes even the mechanical task of transcribing audio much easier than conventional machines allow.

Starting to Transcribe

To transcribe within AnnoTape:

- ✧ Open the particular Audio Record in question.
- ✧ If you wish to transcribe only a portion of the Record, select the Index Mark (or if necessary, attach a new Index Mark) to the particular portion in question.
- ✧ Click in the corresponding Note field of the audio record. This is where the transcription will take place.
- ✧ You can now begin typing your transcription within the Notes field. You can control the Audio playback with the standard keyboard shortcuts described in the earlier section on 'Working with Records'. To display a reminder of these, click on the 'Question Mark' help button in the bottom-left hand corner of the Audio Record window.



- ✧ AnnoTape can playback the audio and allow you to type at the same time. So, you can start the playback and begin to type, hitting CTRL+Enter or F2 to halt the recording after five or so seconds to allow your typing to catch up. With practice, this soon becomes a very efficient method of transcription. You can use the Ctrl+Left key to move you back five seconds to review a section that you need to here again, or move back twenty seconds by using CTRL+SHIFT+Left.

! Be aware that the Note field of an Audio or Text Record is only saved to the AnnoTape database completely when the Record Window is closed. When transcribing long Audio Records it is good practice to close the Window periodically to ensure your work is saved.

Exporting Transcriptions

At the end of the transcription process, the easiest means for exporting your transcription is simply to block, copy and paste from the Notes field into a wordprocessor or other application for formatting and further use.

Advanced Features

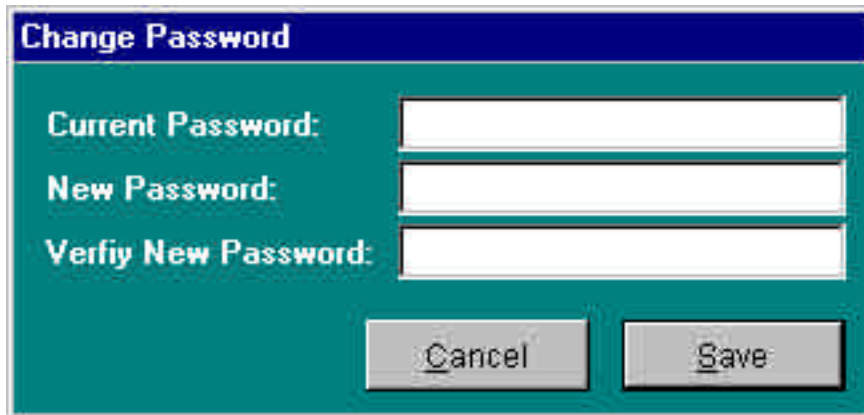
Thus far, this manual has covered a complete 'research cycle' within AnnoTape, from recording to editing and analysing, to transcription and output. In this section, various more advanced features are discussed.

Password Protection

For protection of sensitive data, AnnoTape allows a simple password protection mechanism.

To turn on password protection:

- ✧ Choose 'Change Password' from the Tools Menu



The screenshot shows a 'Change Password' dialog box. It has a title bar with the text 'Change Password'. Inside the dialog, there are three text input fields. The first is labeled 'Current Password:', the second 'New Password:', and the third 'Verify New Password:'. Below these fields are two buttons: 'Cancel' and 'Save'.

- ✧ Nothing is entered in 'Current Password' because there is no Current Password. Enter a new password in the 'New Password' field, and verify it in the 'Verify New Password' field.
- ✧ Click 'Save', and protection is enabled.
- ✧ To change a password: follow the same procedure, this time entering the current password in the 'Current Password' field as well as entering the new password twice in the 'New Password' and 'Verify New Password' fields.
- ✧ To remove password protection: enter the current password and type nothing into the two other fields. Click 'Save'.

Advanced Options

A variety of Advanced Options – including, importantly, setting up your microphone or other sound input to AnnoTape – are accessed by the ‘Options’ command under the Tools Menu (Ctrl+Y).

Advanced Audio Options

Having chosen the Options Command, click the ‘Audio’ tab to reveal the audio options available.

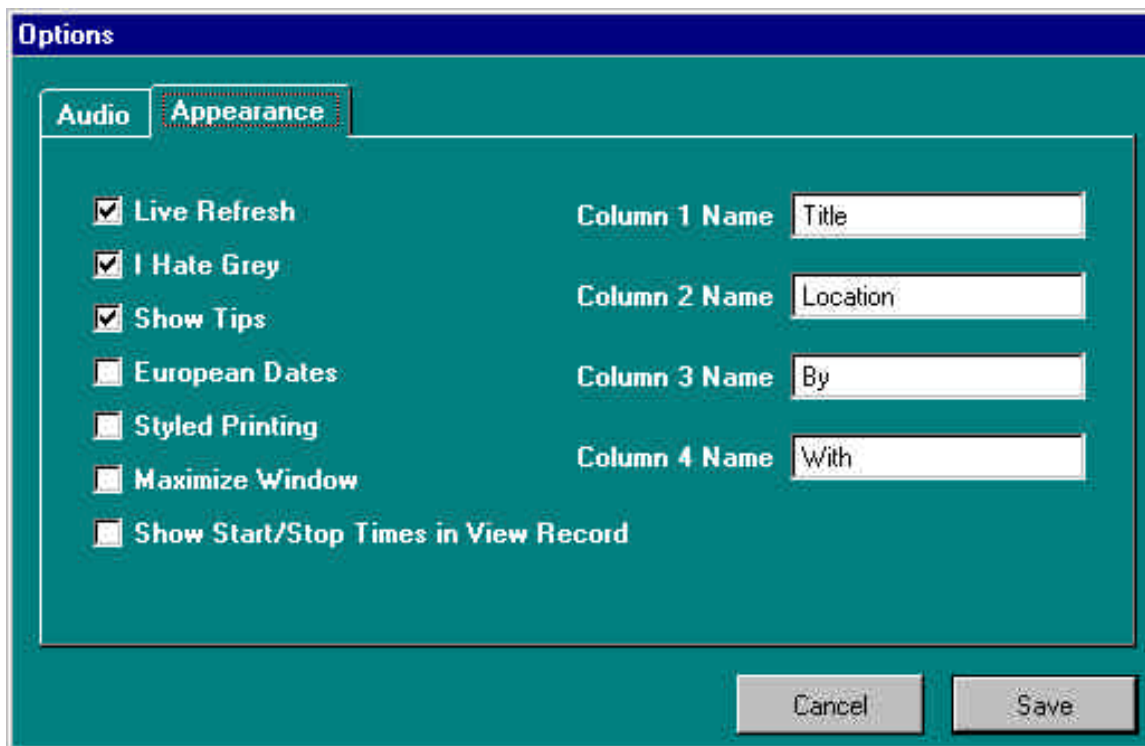


- ✧ Before AnnoTape can correctly function and record Audio Records, the correct Audio Input and Output devices need to be selected. Click on the Audio Input Combo and select the required Audio Input. Then select the source in the adjacent Combo ('Microphone' is the normal selection assuming you are using a Microphone to record audio)
- ✧ 'Quality' defaults to 'Better' (22khz/Mono). You can choose "Good" quality to save on hard disk space or "Best" quality to improve playback quality. You will achieve much better compression of sound files if you have L3CODECA.ACM version 1.2 or greater installed on your system.
- ✧ "Play/Select When Opening Record Details" will automatically start play and audio track, or select the text in a text Transcript when opened.

- ✧ ‘Stop Audio Play at End Mark’ will stop play back if started from an index mark and an End Mark is set.
- ✧ ‘Right-Click record Views Details’ will view the record if right-clicked on the main screen, otherwise it will play from an Index Mark in an Audio Record.
- ✧ ‘Index Mark Offset’ controls the amount of time (in milliseconds) that AnnoTape steps back when setting Index Marks while an Audio Record is in playback mode.
- ✧ Right-clicking a record will list index marks set for the record. If the record is audio, then you can play the index mark or view the record (depending on Options setting). You will also get the option to play the Audio track from start. If the record is a text record, then you will only see any index marks associated and will always view the details when selected.

Advanced Appearance Options

Having chosen the Options Command, click the ‘Appearance’ tab to reveal the appearance options available.



- ✧ As discussed in the section on ‘Customising the Project Window’, the Options Command allows you to alter the names of the columns in the Main Project Window.
- ✧ Live Refresh: allows control over screen refreshing.

- ✧ I Hate Grey: alters the default colours used for the AnnoTape environment.
- ✧ Show Tips: controls the appearance of on-screen help tips.
- ✧ European Dates: toggles between European and North-American style date formats for recordings.
- ✧ Styled Printing: alters the format of Record printouts.
- ✧ Maximise Window: controls the size that AnnoTape windows default to.
- ✧ Show Start/Top Times in View Record: explains itself.

Importing Coding Systems into AnnoTape

AnnoTape can import and make use of standardised data coding systems that exist in other environments.

To accomplish this, the user needs to ensure that the specifics of the coding system desired are available as a text file with a format that AnnoTape can read. Technical details of the format follow:

- ✧ Fields must be TAB (ASCII 9) delimited and records must be CARRIAGE-RETURN (ASCII 13) delimited. The file must have no header details.
- ✧ Index Description (Max 40 characters)
- ✧ Index Code (Max 30 characters)
- ✧ Note (No Limit)
- ✧ Global (Nothing, 'F', 'False', 'No', 'N' will be considered not Global, any other content for this field will be considered Global – the field is not case sensitive)

Glossary

The following is a glossary of the key terms used in the AnnoTape environment:

project A collection of records, together with all the analysis and annotation performed upon it through indexes

record A single unit of continuous audio or text data of varying length – the basic research unit, a collection of which composes a **project** within AnnoTape

index An index consists of a **description** and a **code** uniquely associated with each other. These may be global (across projects) or local (unique to a project); they may be set-up at the beginning of the project or as it continues

index mark A unique instance of an index, inserted into a particular audio or text record at a specific point of interest to which the user will wish to return in the future.

An index mark consists of the **description** and **code** which make up the parent **index** from which it is derived. It is also uniquely associated with a specific **snippet** of audio or **block** of text where it is inserted, and with optional text or audio **notes**.

description An optional text field which contains information from the user classifying the index. Descriptions usually contain thematic classificatory terms such as ‘teenage smoking’ or ‘tobacco:under 18:peer pressure’. As one part of an **index**, they may be global or local. Again, they may be set-up at the beginning of the project or as it continues

code A second optional text field which contains information from the user classifying the index. Codes usually contain numeric information uniquely associated with the corresponding **Description**. Thus, if the **Description** is ‘tobacco’ the code might be ‘008’ – if the **Description** is ‘tobacco:under 18’ the code might be ‘008/018’, and so on. Again, codes may be set-up at the beginning of the project or as it continues (standardized coding schemes exist in various sub-fields of qualitative research, and may be used within AnnoTape).

note Associated with a unique **index mark**, audio and text notes contain the user’s free form comments, jottings, transcriptions and annotations on the **index mark** in question.

snippet A segment of an audio **record** pointed to by an **index mark**

block A segment of a text **record** pointed to by an **index mark**

Appendices

Article: ‘AnnoTape’: The Pros and Cons of Developing & Using Software for Ethnographic Recording and Data Analysis

from *Anthropology News*, December 2000.

Stephen Jackson, National University of Ireland, Cork

Developing integrated software to facilitate interview based ethnographic work sprang from a dream following a nightmare. Preparing for fieldwork on political violence in the DR Congo, I knew much of my work would revolve around recorded, unstructured interviews. The nightmare’s first half was the thought of lugging several hundred cassette tapes, a recorder, and other paraphernalia around a war zone. The second half was the inevitable, laborious transcription at a ratio of six to eight hours per hour of tape.

The dream was deceptively simple. Could one record a hundred hours of interview straight to a laptop’s hard disk, avoiding cassettes and recorders altogether? Further, could software permit cataloguing and indexing specific ‘moments’ within interviews under headings which I would devise? If an interview turned suddenly to interethnic violence, could I insert a marker at that precise moment so as to return later, at the click of a mouse, to that exact point in that particular interview, and compare it with other such moments in other interviews? If this proved possible, then all of the comparative analysis, the search for telling themes and cross-references in the fieldwork materials could be accomplished while still dealing with the raw sound itself, rather than having to wait for everything to be transcribed before the analysis could begin.

Working with a programmer-colleague, we developed a package for recording of sound interviews to hard disk and annotating afterwards – hence the punning name AnnoTape we chose. I then left for Congo to battle-test the software through my research.

Interviewing, listening as soon as possible to the entire interview again on the laptop and using the software to insert coded indices wherever I felt something interesting had come up kept me very close to the field materials. Initially, there were no pre-determined indices. Instead, they grew organically from the first interview to the next. In one interview, I would introduce a new index term because material would emerge about cattle as foundational in Congolese social relations. After more interviews, I would discover the need to subdivide the index: ‘Cattle Relations:Conflict:Tutsi and Hutu’ or ‘Cattle Relations:Land Issues:Displacement’.

As the project progressed, the index list grew to perhaps forty primary index terms such as ‘Cattle Relations’ and two hundred or so further subdivisions. By continuously reviewing previously indexed interviews as I indexed new ones, I began comparison

between different descriptions of the same materials, searching in my mind for the description that seemed best to capture the particular phenomenon. The programme also stored my fieldnotes and other written documents, indexed in exactly the same way, allowing me to return to particular words or paragraphs at the click of the mouse. For both text files and sound files, the programme allowed the user to add written or audio 'notes' on top of particular indexed moments. After several months of continuous use, what resulted from using AnnoTape in the Congo was a non-linear, hypertext/hypertape rhizome of interconnections, interindexings, annotations and observations linking text and audio together.

One of the biggest dividends of working in this way has simply been to have all my ethnographic materials in one place, instantly accessible. As I write, all one hundred hours of interview reside comfortably on my hard disk, instantly accessible (backed up on a portable DAT drive). When working on articles, I keep AnnoTape and Microsoft Word open at the same time, switching from one to the other constantly in search of the specific moment in an interview which most closely captures the essence of what my research has revealed. Only when I have found that representative minute or so of interaction on 'tape' do I then transcribe that section, using the transcription interface we built in to the software.

From an ethnographic angle, are there downsides to such an approach? I had prior field experience in the Congo and so knew, to some extent, what was 'interesting' from the beginning, and could annotate on that basis. By indexing as my research progressed, rather than waiting until the very end as I ordinarily would with full transcription, did I bias my research and overlook things that might have proved significant? I also wonder if the sheer ease of interviewing –surprisingly, my Congolese colleagues reported being recorded by a laptop greatly less threatening than using a tape recorder and microphone, quickly relaxing and almost forgetting its presence – lulled me into depending more on interviews, and less on fieldnotes and observation, than was appropriate? Did I have a tendency to concentrate too hard on searching for 'on the record' materials?

Perhaps. Any new technology, compared with the pencil and spiral-bound notebook, will clearly alter the ethnographic process. But continuously working with the original sound of an interview had the advantage of keeping much of the original context of the interview in the foreground of my mind. And in any case, I would do virtually anything to avoid the drudgery of transcription...

Interested readers can visit <http://www.annotape.com> or contact Stephen Jackson on s.jackson@ucc.ie