Guidelines for Emotion Annotation in AMI (based on the original FeelTrace documentation) *Revision* : 1.4

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November 29, 2004

1 Introduction

The annotation of meetings in AMI is based on the annotation scheme developed by Roddy Cowie et al. at Queen's University Belfast. This scheme uses a program called *FEELTRACE* to track the perceived emotional state in data continuously over time. This document is an almost exact reproduction of the guidelines that are provided with the *FEELTRACE* software. The document is in three parts: an introductory part that describing the *FEELTRACE* annotation tool,

2 About *FEELTRACE*

FEELTRACE is an instrument developed to allow observers to track the perceived emotional content of a stimulus over time. It is based on a two-dimensional representation which we call activation-evaluation space. The space is represented by a circle on the computer screen and, as its name suggests, it is organised around two dimensions, activation and evaluation. The evaluation dimension, running across the circle horizontally, is a negative/positive dimension. That means positive emotions belong on the right-hand side of the circle and negative emotions belong on the left-hand side of the circle. The activation dimension is an active/passive dimension, where active emotions are on the top half of the circle and passive or inactive emotions are on the bottom half of the circle. The centre of the circle represents a completely neutral and unemotional state - that is to say, a clear, alert frame of mind. The strength, or intensity of the emotion is directly related to the distance from the centre. The edge of the circle represents emotions that are as strong as they get, with weaker emotions between the centre and the edge.

To ensure that the outputs are as consistent and meaningful as possible, additional features are included. The cursor is colour coded in a way that users readily associate with the relevant emotional state. For example, the

cursor is green if it is in a position corresponding to a highly positive emotional state, yellow in a position corresponding to a highly active emotional state, blue in a position corresponding to a highly inactive emotional state and red in a position corresponding to highly negative emotional state. Key emotion words are presented within and on the edge of the circle. These words are used as 'landmarks' at strategic points in the space. In the first practice task of the training programme for users , a version of *FEELTRACE* that does not include these landmark words is used. After this task is completed, this feature is introduced to the user.

Fuller accounts of *FEELTRACE* by Cowie et al. can be found in Proceedings of the ISCA Workshop on Speech and Emotion, 5-7 September 2000 (`http://www.qub.ac.uk/en/isca/index.htm`) and (Cowie and Cornelius, 2003)

The value of *FEELTRACE* is greatly enhanced if it is used in a way that gives results compatible with others users'. These instructions are meant to help groups to do that. If they seem difficult to follow in abstract, it may help to use them in conjunction with the program.

2.1 The Program

FEELTRACE is written in Visual Basic. It comes as a zipped file and with installation kit. It runs on a PC and requires Windows 95 or later. It will run on a Pentium 200 or higher, with 64 Mgbytes ram. It also requires Windows Media Player. This can be downloaded from `http://www.microsoft.com/windows/mediaplayer/download/`

FEELTRACE can be used on audio data alone or video data alone or on audio-visual data - see point 6 under *FEELTRACE* : Basic Instructions (below).

The *FEELTRACE* software allows several variants of the program to be run. The default version (described above) presents activation-evaluation space in the form of a circle; and 'landmark' words are placed at strategic points in the circle to identify the emotions to which the points correspond. A form that appears on screen at the beginning of any run immediately allows the option of switching off the words. Choosing 'other' on the initial form opens additional options - presenting the dimensions in the form of a square with or without words, and making the choice of format before every trial. The square option is included because some researchers feel it is more logical. However, our evidence suggests that subjects are both more consistent more at ease with the circle.

An additional type of option is to change the landmark words. They are read from a separate file, called "FTWORDS.txt" If users want to present different landmarks (e.g. words in a language other than English), they can modify the FTWORDS file.

Data from *FEELTRACE* are stored as text files. Each file is labelled with name of the source file that was displayed, the name of the participant who 'feeltraced' the file, and the number of times that participant has traced that source file. Each line in the textfile has 3 numbers. The first is the timecode derived from source file, the second is the evaluation coordinate at that time and the third is the activation coordinate at that time.

3 Using *FEELTRACE*

3.1 Basic Instructions

1. Open *FEELTRACE* Program by clicking on *FEELTRACE* icon.
2. Enter name of participant
3. Choose type of display. Initial options are -Circle with Emotion Words, without emotion words, or other. Choosing 'other' allows you to select Square with or without Emotion Words, or 'choose for every clip'.
4. Click on 'OK'
5. The video window ('Amovie'), the *FEELTRACE* rating window ('Mouse') and a dialog box will come up.
6. Select the type of clip to be rated next - 'Audio-Visual', 'Video Only', 'Audio Only - Unfiltered', 'Audio Only - Filtered' or 'External Source'. Double-check that this setting is correct.
7. Click on 'Next Clip' in the dialog box. A 'Choose Clip' dialog box will come up. (If 'External Source' is chosen in Step 6., Steps 8 to 10 are non-applicable)
8. Select the file to be rated next , then click on 'Open'.
9. For Audio-visual material, a picture of the person to be rated is shown in a separate window. This may or may not be the first person to be seen in the clip. Look at the picture and the click on 'OK'.
10. The clip is loaded (clip name in video window heading) and the *FEELTRACE* circle is drawn. They will remain static until they are activated.
11. To activate the process of recording press the space bar. Reocrding will not begin until the mouse button is pressed.
12. Click and hold down the mouse button to record.
13. Release the mouse button to stop recording.
14. When the clip has finished press the space bar to stop. The dialog box appears again.
15. Click on 'Redo Clip' to rate the same clip again, or on 'Next Clip' to select a new clip.

Note that the system will not record data unless the mouse button is pressed and held down. Non-record mode is indicated by the fact that the cursor is an empty ring. As soon as the mouse button is pressed down, the cursor turns into a solid disc, indicating that the system is recording record where the cursor is. As soon as the mouse button is released, the system stops recording and the cursor becomes an empty ring again. This is seen more clearly when the cursor is moving.

3.2 Training to use *FEELTRACE*

It is critical that anybody wishing to use *FEELTRACE* reads all the relevant literature included in this package, and that raters complete the training in full. Otherwise data cannot be compared to data from other users, and may well be unreliable. Training procedures for using *FEELTRACE* are set out in Section 2 below.

3.3 Additional rating procedure

We suggest that after completing the feeltracing task for each clip, participants are asked to carry out a categorical labelling task which we have developed and tested. This is explained in Section 3. The data acquired through using it allows the experimenter to relate the feeltracing scores to categorical labelling and to compare subjects' performance on the two methods.

3.4 Acknowledgment

Any reported data derived from using *FEELTRACE* should formally acknowledge the authors of *FEELTRACE* .

4 Training instructions

4.1 The training tasks and what you require

Before commencing training of the participant, he/she should read 'Instructions for Participants' (attached as Appendix A). The experimenter should also read 'Instructions for Participants' before attempting to collect data with *FEELTRACE* .

The training session consists of a set of four tasks. Each builds on knowledge acquired in the previous task. The tasks are:

1. Task 1: Describing Emotion Words
2. Task 2: Describing Facial Expressions
3. Task 3: Describing Emotions Expressed Over Time - Music
4. Task 4: Describing Emotions Expressed Over Time - Test Clip

To run the training, you need the following data:

Task 1 - 5 cards, each with an emotion word written on it. The words we have used in training are: irritation, anger, sadness, contentment, and happiness.

Task 2 - 6 pictures of faces, each showing a different emotional expression. The classic printed collection is Ekman and Friesen (1975) Pictures of Facial Affect. Palo Alto CA: Consulting Psychologists Press.

Task 3 - an audio tape with some music on it that shifts in the emotion/mood it conveys. We have used an excerpt from The Great Gate of Kiev from an orchestral work called Pictures at an Exhibition (Musorgski/ Ravel).

Task 4 - 10 video clips (as mpg files). We attach some of our own clips for your use. These are useful for for training partly because they do not show particularly extreme samples of emotion. We also attach bmp files for each of the mpg files. Each bmp file contains a 'still' picture of the person to be 'feeltraced' in the mpg file. This still picture comes up at the beginning of the mpg file to convey to the 'feeltracer' which person he/she is supposed to be feeltracing.

The mpg files contain 2 'neutral' clips and two clips for each quadrant of the *FEELTRACE* circle as follows:

- Neutral - 56a and 76a
- Positive active - 56d and 77d
- Positive passive - 96b and 56b
- Negative active - 56g and 77b
- Negative passive - 77c and 79c

4.2 Task 1: Describing Emotion Words

The aim of the first task is to familiarise the participant with the use of *FEELTRACE* . The participant is presented with a series of five emotional words on cards and is required to indicate where these emotions lie on the circle using the cursor. The participant must move the cursor to the appropriate point and click on the mouse. They should hold the button down for a couple of seconds so that the position is recorded clearly. The words should be presented one at a time, and the emotion for each one recorded after each word is presented. Example: 'Depressed' is a fairly passive, negative emotion. The participant would probably position the cursor near the edge of the circle in the bottom left-hand quadrant. Specific Instructions: In Step 3 of Instructions for Use, choose 'other', then 'choose for every clip'. In Step 6., choose 'External Source' and '*FEELTRACE* circle only'. A separate recording is not necessary for each word - just press the space bar after the position of the fifth word has been recorded by the participant. At the end of this part, introduce the participant to the 'landmark' emotion words. The form for selecting the next clip will offer 'Circle with Emotion Words' as an option. Select it at this stage, and continue with it as a selection throughout rest of training session. Explain the function of the landmark words to the participant (suggested phrasing in Appendix 5).

4.3 Task 2: Describing Facial Expressions

The next task involves the identification of emotions expressed on the face. The participant is presented with a series of pictures of the same person. In each picture, the facial expression of the person indicates a different emotional state. As with the emotion words, the participant is required to identify the emotion by moving the cursor to the appropriate position on the circle, and record their choice by clicking on the mouse and holding the button down for a couple of seconds. Example: A surprised face reflects a high level of activation, but is not really either positive or negative. The participant would probably place the cursor near the top of the circle, but not in either of the positive or negative regions. Specific Instructions: In Step 6., choose 'External Source'. A separate recording is not necessary for each picture - just press the space bar after the position of the sixth picture has been recorded by the participant.

4.4 Task 3: Describing Emotions Expressed Over Time - Music

One of the nicest features of the system is the ability of record the impression of the way emotion develops over time. By moving the cursor around inside the circle while keeping the mouse button pressed down, it is possible to record how emotions change over a period of time. Once the button is released the recording ceases. The stimulus used for this part of the training is music. A short excerpt of music is played to the participant who is required to describe or track the emotions they think are being expressed. With this kind of stimulus,

it is useful to allow the participant to listen to the excerpt once through before recording their impression. When the excerpt is played a second time, the participant should be able to record their impression without any difficulty. If, however, the participant is not happy with the first impression recorded, he or she can re-record by clicking on "Repeat Clip" instead of "Next Clip" Specific Instructions: In Step 6., choose 'Audio Only - Unfiltered'. Then in Step 8., choose the appropriate audio file, or simply play an audio tape.

4.5 Task 4: Describing Emotions Expressed Over Time - Test Mpg Clips

At this stage, the participant should be quite familiar with the system and able to use *FEELTRACE* to describe audio visual material. A series of ten short clips showing people in various kinds of emotional states (two in each quadrant and two in the neutral area) are presented. Often there will more than one person in the clip and it is important that the participant knows which person's emotions they are describing. He or she will only ever track their impression of one person's emotions at a time. A 'still' clip of the person to be traced comes up first to denote the relevant person. This 'still' picture is stored as a bmp file. We have sent you the bmp files for each of the mpg files we attach. (If you want a still picture to appear for your own mpg files, you need to create a bmp file for the relevant person).

What follows is a natural extension of what the participant has already been doing. The participant should keep the mouse button pressed down while the person they are tracking is speaking and describe their emotional state by placing the cursor where, within the circle, that emotion lies. When the focus switches to someone else or someone else starts speaking, the participant may let go of the button. This will cease recording. When the focus switches back to the person being tracked, pressing the mouse button will begin recording again. Again, it is possible to re-record if the participant is not happy, or if he or she feels that they lost track of the emotional state being expressed. Each time a clip is rated, it is saved as a file name with a higher number. Only the file with the highest number is processed. Therefore, the participant should be aware that the last time they rate a particular will be considered their best effort. Again it is useful to allow the participant to view the clip once through before recording his/her impressions. Example: Consider a clip showing a man talking about his relationship. He is happy and getting more excited as he talks. An interviewer comes in and speaks for a while. Then the first speaker comes back - he is still happy but much calmer. The participant would begin by moving the cursor across to the right-hand side of the circle, above the mid-line and press down on the mouse button. As the speaker gets more hand more excited the cursor is moved upwards and towards the periphery of the circle. The mouse button should be released when the interviewer begins to speak. When the first speaker begins to speak again the participant should move the cursor into position again - still on the right but lower down - press the mouse button and continue until he has finished speaking. Specific Instructions: In Step 6., choose

'Audio-Visual'. In Step 8 select the mpg file to be rated.

5 Additional Categorical labelling procedure

After *FEELTRACE* rating each clip, we have found it useful for the participant to complete a verbal rating on the standard spreadsheet form provided. (See Categorical Labelling Appendix 5). The procedure gives a convenient way of relating *FEELTRACE* numbers to categorical labels.

The first part of each rating is a statement of how confident the participant is that they know the emotional state of the person they are tracking. A rating scale from 0 to 5 is used, where 5 means that the participant is completely confident that they know the person's emotional state and 0 means that they have no idea at all - i.e. they simply don't know whether the person is perfectly calm, or furious, or deliriously happy.

The second part involves giving a verbal description of the emotion. The first sixteen words on the list (including neutral) are in bold type, the remaining words in the lower group are in plain font. The first word chosen to describe the emotional state must come from the group in bold type. The participant should choose from this group the word that best describes the predominant emotional state of the speaker in the clip that has just been rated. The number '1' should be written in the box beside it to indicate that this is the predominant emotion. The intensity of the state is indicated by writing 'S' for strong, 'M' for medium or 'W' for weak beside the number. If neutral is chosen, the intensity is described by writing 'C' for completely, 'R' for relatively or 'J' for just.

If the first choice does not capture the participant's impression of the speaker's emotional state sufficiently, he/she is free to choose up to 2 more words from either the top (bold) group or the lower (plain) group. If a second choice is made, it should be labelled in the same way - by writing '2' beside it and describing the intensity of the state as before. The same principle applies to a third choice if it is deemed necessary by the participant. No more than three words can be chosen from the lists on the spreadsheet.

Alternatively, if there is a word that describes the speaker's emotional state particularly well, and is not on the list, it may be chosen as either the second or third choice. The word can simply be inserted in the relevant box on one of the rows at the bottom marked 'Other', and can be labelled as before (with choice number and intensity)

We suggest that this procedure should be completed for each clip after it has been rated using the *FEELTRACE* .

Instructions for participants

Thank you for taking part in this study. It is designed to test a system for recording people's impressions of emotion in various types of stimuli. the system is called '*FEELTRACE* '. The session has two parts. The aim of the first part is to train you in the use of the system. The second part is the experiment proper. It presents you with some stimuli and asks you to record your impressions of the emotions expressed in the stimuli. The training is structured in a way that introduces you gradually to the techniques we will be using in the experiment.

First I would like to show you the basic display that we use (Select *FEELTRACE* Circle only). It is a circle on the computer screen. You will be describing the emotions expressed by saying where they lie on the circle.

> EXPERIMENTER Start program. Select 'other', then ' Type in participant's name in answer to request. Begin Stage 1 of the training.

The circle is organised around two dimensions. One dimension (running across the circle horizontally) is a *negative/positive* dimension. This means that positive emotions belong on the right-hand side of the circle, and negative emotions belong on the left-hand side of the circle. The second dimension is an *active/passive* dimension. This means that active emotions belong on the top half of the circle and passive or inactive emotions belong on the lower half of the circle.

You have probably worked out that the centre of the circle represents a completely unemotional state - that is to say a clear, alert state of mind. The strength of the emotion is related to the distance from its position within the circle to the centre. The edge of the circle represents emotions that are as strong as they get. Weaker emotions lie between the centre and the edge.

Moving the mouse moves the cursor around within the circle. You signal an emotion by moving the cursor to a position within the circle that you think best represents that particular emotion. Feel free to try it out.

You will notice that the colour of the cursor changes as you move it around the circle. We have used colour coding to support the ideas already outlined above. The cursor is green if it is in a position corresponding to a highly positive emotional state, yellow in a position corresponding to a highly active emotional state, blue in a position corresponding to a very inactive emotional state, and red in a position corresponding to a highly negative emotional state.

Finally, there is one more feature of the cursor that you should be aware of. As it is now, the system is not recording where the cursor is. this is indicated by the fact that the cursor is an empty circle. In order to actually record where the cursor is at any time you must press down on the mouse button. As long as you are pressing down on the mouse button, the system will record the position(s) of the cursor. When recording, the cursor will become a solid disc of colour. As soon as you release the mouse button, the system stops recording and the cursor will become an empty disc again. You will be able to see this more clearly when the cursor is moving around. Have a go yourself!!

This is the basic idea. In order to make it easier for you to understand, I will now take you through a series of practice tasks.

EXPERIMENTER Press space bar. Click on next clip.

TASK 1

In this task you will be presented with some emotional words. Your objective is to indicate where these emotion words lie within the circle, by moving the cursor to the corresponding spot and pressing down on the mouse button for a few seconds. You need to do this for each of the five words. Example - 'Depressed is a pretty passive, negative state. You would probably position the cursor near the edge of the circle in the bottom, left-hand area of the circle. 'Dull' is passive and negative, but not as strong or intense. You might want to position the cursor in the same approximate area, but a little closer to the centre. Pressing the space bar after the positions of all of the words have been recorded will end the session.

Now that you have done that, I will show you another feature of the display. If all you have is the information I have already given you, there is a lot of scope for making up your own rules about exactly where an emotion belong in the circle. You might be sure that it belongs to the right of the centre, and above the midline, but you may not be certain how far to the right or how far up you should place the cursor. We have tried to get around that problem by showing you the positions people normally tend to choose for some key terms (Select 'Circle with Emotion Words and continue with this selection throughout rest of training session).

EXPERIMENTER Open version of *FEELTRACE* with 'landmark' words visible.

The words at the edge of the circle are obviously extreme emotions. The words inside the circle show where most people tend to place less extreme emotions. The point of making these words visible is to give you some 'landmarks' that will help you to move the cursor to the left to right , and how far up or down, for any particular emotion.

TASK 2

The next practice task involves identification of facial expressions. I will show you some pictures of a face showing various different emotional states. Your objective is to indicate what emotion each face is expressing. the mechanics are the same as before: you move the cursor to a position on the circle that corresponds to the emotion the face is displaying, then press down on the mouse button so that your response is recorded. Example - A surprised face reflects a high level of activation, but it is not really either positive or negative. therefore you would probably place the cursor somewhere near the top of the circle, not really in either the positive or negative sections. Again, pressing the space bar will end the session.

TASK 3

Now that you are used to the basics, I will introduce you to one of the nicest features of the system. You can use it to record your impression of the way emotion develops or changes over time. there are no new techniques involved - you just use the mouse and the cursor to track the emotions you think are being expressed. Obviously you need to keep the mouse button pressed down when you are tracking these emotions. The second you release the button, the system stops recording. When you feel you have got the cursor in the right position you can press down. As the emotions change or develop, you can move the cursor to the relevant new position(s) while keeping the mouse button pressed down. Don't panic if you feel that you did not really capture the emotions being expressed sufficiently - you can rate the stimulus again if necessary.

To try out this feature of the system, I will play you an excerpt of classical music that suggests various emotional states. You should press the mouse button down as soon as you have the cursor in position for the emotion that the music is expressing. by moving the cursor, you can track the way the emotion changes.

With this kind of stimulus, it is useful to listen to the excerpt once through before you attempt to trace the emotions. So the first time I play the excerpt you just have to listen. The second time you can record your impressions. Again, finish the session by pressing the space bar.

TASK 4

By now you should be fairly familiar with the system. We are now ready to go on to the kind of material we will be using in the experiment proper. From now on, we will be using audio-visual material, in the form of short clips showing people in a variety of emotional states.

There are often several people speaking in one clip, but you will be tracking only one person. A 'still' picture of the person you are to track will appear before the movie picture. What you will be doing is a natural extension of what you have been doing so far. You will be pressing down on the mouse button when the person you are tracking is speaking or being shown. You may let go when the focus shifts to some one else, or when some one else starts to speak. Press down again when the focus shifts back to the person you are tracking.

Example - Consider a clip of a man talking about his relationship. He is happy and getting more and more excited as he talks. an interviewer begins to speak for a while. Then the first speaker comes back. He is still happy but much calmer. You would start my moving the cursor across to the right-hand side of the circle, above the mid-line, and pressing down on the mouse button. As he gets more excited, you would move the cursor upwards and towards the periphery of the circle. You would release the mouse button when the interviewer is speaking. When the first speaker returns you would move the mouse back into position, still on the right but lower down, press the mouse button and continue until he is finished speaking.

Again I will play each clip once through before you have to rate it. When it is played for the second time, you will record your impressions. Again, finish the session by pressing the space bar.

END OF TRAINING

EMOTION WORDS: CATEGORICAL LABELLING

In this part of the exercise, you give two kinds of judgment. You rate how confident you were in your *FEELTRACE* rating, and you supplement it with one or more verbal descriptions.

There are two groups of words on the spreadsheet that you have. The words in the top group (including 'neutral) are in bold, the words in the lower group are in plain font.

Please choose from the top group the word that best describes the predominant emotional state of the speaker in the clip you have just seen. Put a '1' beside it, and describe the intensity of the state by writing either 'strong', 'medium, or 'weak'. If you choose 'neutral' describe intensity by writing 'completely' or 'relatively'.

If your first choice does not capture your impression of the speaker's state sufficiently, you are free to choose up to two more words from either the top group (bold) or the lower group. If you make a second choice, label it in the same way - put a '2' beside it describe the intensity of the state as before. The same principle applies to a third choice if you feel that one is necessary.

Alternatively, if there is a word that describes the speaker's emotional state particularly well, and that is not on the list, you may use it as a second or third choice. Insert the word in the relevant box on one of the rows at the bottom marked 'other'. Label it as before (with choice number and intensity).

FEELTRACE NOTES FOR THE EXPERIMENTER

Before you start, make sure your stimulus files are in a single directory, e.g. directory C: Current FT Experiment Clips This file should contain all video (*.mpg), image (*.bmp), and audio (*.wav) files you need for the experiment. E.g., if you want to test the clips 001a, 001b, and 002b, comparing audio alone and video, the following files are needed: 001.bmp 001a.mpg 001a.wav 001b.mpg 001b.wav 002.bmp 002b.mpg 002b.wav The output files (*FEELTRACE* ratings) will be written into the directory C: Current FT Experiment *FEELTRACE* Data. The FTWORDS.txt file must also be in the same directory.

If you want to change the words that appear, you need to know the structure of the FTWORDS.txt file. The first 6 lines are the words that describe the extremes of the axes. The program positions the words in these lines automatically.

The number that follows is the number of words that will be placed within the circle (or square). The relevant words are then listed, followed by Cartesian co-ordinates (all in the range -1 to +1) for the centres of the words first the coordinates used to position each word in the circle then the coordinates used to position each word in the square.

The number that follows the co-ordinate lists is the number of words that will be located around the edge of the circle. The relevant words are then listed, Followed by numbers that specify where each is to be positioned, in the following format: angle from the start of the relevant quadrant, extreme evaluation associated with the quadrant, extreme activation associated with the quadrant.

The co-ordinates that the file uses to position words within the circle or square were empirically derived by having subjects place the words in a blank circle (or square). The methods was essentially as described under Task 1 in Appendix A. The position entered in the file was the average for subjects who appeared to be broadly in agreement (some subjects do give very idiosyncratic responses, and need to be excluded).

Initial Box " Enter your name. Output files will be named subjectname-clipnameCNDX.dat where CND is the condition of presentation (av, vo, ao, or af), and X= run through number for the clip. " Choose type of display. Unless 'choose for every clip'is selected, the setting indicated here be used until you exit the program.

Next Clip Box " Clip type and condition. setting determines the CND part of the output filename (see initial box, above). In addition, it determines what type of file a user sees in the 'Load Clip' dialog (see below). If one of the four clip types is selected, the timing in the *FEELTRACE* save file is taken from the clip. If the type is set to 'External', no clip will be loaded. This can be useful for external clips (video or audio tapes), or in order to practice with mouse but without a video clip. For 'external', the timing for saving the ratings is determined by an internal clock, starting from the moment the space bar is pressed. " Save data. If this box is unchecked, a dummy filename 'test.dat' will be used for saving the data, instead of the meaningful filenames. (Checked by

default.) " Confirm save file name. If this box is checked, a dialog box will appear letting the user confirm (or modify) the save file name. (Unchecked by default.) " Redo Clip. This button is only available if a clip was done before, and if the 'type and condition' has not been altered. The same clip is shown again, and the save filename run through number is increased by one. " Next Clip. Choose a new clip. For clip type and condition 'audio-visual' and 'video only', MPEG files are shown; for clip type and condition 'audio only unfiltered' and 'audio only filtered', WAV files are shown. " Exit Program. Leave the program (security through dialog box).

Mouse cursor window " To start / stop recording, use spacebar. " First SpaceBar Press: program starts displaying cursor position/colours etc., and starts playing the clip. " Second SpaceBar Press: ends cursor display. If playback not finished, it continues. Press 3 to stop playback, if desired. Once playback is finished AND SpaceBar has been hit for 2nd time: 'Next Clip' Box is brought back (to allow another runthrough of same clip (with or without data save) or to select a new clip) " Press either or both left or right mouse buttons to record data in output file. " Clip control. The keys 1-3 can be used to start/rewind/stop playing the clip. This is something your subjects should not do! 1: Starts video clip playback 2: Rewinds video clip to beginning 3: Stops/Pauses video clip

Output data file Records time as read from video clip and (x, y) of cursor relative to centre of circle. Therefore time in this file records the current position of the video clip. Note clip plays at rate of 25fps, so this will dictate maximum resolution of times recorded in this file. Note: radius of *FEELTRACE* circle is normalized to 1.

References

Cowie, R. and Cornelius, R. R. (2003). "describing the emotional states that are expressed in speech". *Speech Communication*, 40:5–32.