**Oréau Database**

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# Introduction

This document describes a speech synthesis database recorded in a quiet environment. The database is designed for general study of emotional speech and analysis of emotion characteristics for speech synthesis purposes. It contains 79 utterances which could be used in everyday life in the classroom. Between 10 and 13 utterances were written for each of the 6 emotional styles plus neutral style in French language by 32 non-professional speakers.

## Directory structure

The directory structure is the following:

\<database>\<spk>\<session>

Where:

|  |  |
| --- | --- |
| <database> | Defined as: <dbName><language code><#> i.e. OréauFR\_01  Where:  <dbName> is Oréau  <LL> is the ISO 2‑letters code FR for French  <#> is \_01 for verison 1 |
| <spk > | Defined as: <n>  where <n> is m (male) or f (female) speaker. |
| <session > | Defined as: SESS<s>  Where :  <s> is a character standing for the emotional style performed by the speakers. |

Table 1 : Oréau speech database directory structure

In addition to the previous structure the following directories are used to store some other files:

- The file \<database>\contents.txt contains the text corpus.

- « readme.txt » file describing the second version of Oréau speech database.

Finally the root directory contains three folders :

- « OréauFR\_01 » folder that contains the first version of Oréau speech database (v1).

- « OréauFR\_02 » folder that contains the second verison of Oréau speech database (v2).

- « Doc\_fr » folder that contains documentation file.

## File nomenclature

Each audio file of Oréau database have been recorded as separate.wav file and have been named as follows : XXYYYS.wav,

where

• XX : Speaker identifier

• YYY : Utterance identifier

• S : Emotional Style (C = colère, T = tristesse, J= joie, P = peur, D = dégoût, S = surprise, N =neutre)

•.wav : Sample format

# Recording conditions

## Recording platforms

Recordings have been made using two Rode NT1-A Complete Vocal Bundle microphones and two anti-glare filters LD Systems RF1 were used and the whole session was recorded using free Audacity software. Speech signals were first recorded at 44.1 kHz and then down sampled to the required 16kHz samples.

## Recording environment

The Oréau database was recorded in a silent isolated room with low background noise. The speaker was standing in front of two microphones at the distance of about 30 cm, what permitted him a certain gesticulation in emotion expression. Prior to the recordings, the speaker was given a very brief introduction to the recordings and the prompting text. Each session lasted approximately 10 minutes.

Four operators supervised the recording at recording time. One of them explained the instructions and how it works. The second operator checked the utterances correspond exactly to the text to be read. The others operators checked the recording system.

# Database contents

## Emotional styles

To study only the influence of emotions on speech, the same speakers are asked to utter the same speech material in different emotional styles. Basic specifications concern neutral style and the 6 basic emotions proposed for video analysis: anger, sadness, joy, surprise, disgust and fear.

## Speech contents :

The corpus contains 79 different sentences which could be used in everyday life in the classroom. An example of sentence for anger emotion is as follows  :

|  |  |
| --- | --- |
| **French sentence** | **English sentence** |
| Ça fait trois mois qu’on a passé le contrôle et on n’a pas encore reçu les notes. | It’s been three months since we passed the exam and we have not yet received the notes. |

Table 2 : Example of sentence for anger emotion

The complete list of sentences is given in file OréauFR\_01\contents.txt.

The corpus was recorded in the 6 basic emotions plus neutral (C = anger, T = sadness, J = joy, P = fear, D = disgust , S = surprise and N = neutral).

# Speaker information

32 speakers (8 female and 24 male), between the ages of 22 and 27, were participated in the design of Oréau database. The complete list of speakers is given as follows :

|  |  |  |
| --- | --- | --- |
| **Identifier** | **Gender** | **Age** |
| 7 | M | 25 |
| 8 | M | 24 |
| 9 | M | 25 |
| 10 | F | 25 |
| 11 | F | 24 |
| 12 | M | 24 |
| 13 | F | 23 |
| 14 | M | 26 |
| 16 | M | 25 |
| 18 | M | 24 |
| 19 | M | 23 |
| 20 | M | 24 |
| 21 | F | 23 |
| 22 | M | 23 |
| 23 | M | 23 |
| 24 | F | 23 |
| 25 | M | 23 |
| 26 | M | 23 |
| 27 | M | 25 |
| 28 | M | 24 |
| 29 | M | 24 |
| 30 | M | 24 |
| 31 | M | 24 |
| 32 | M | 24 |
| 33 | M | 24 |
| 36 | M | 28 |
| 37 | F | 42 |
| 38 | M | 24 |
| 40 | M | 25 |
| 41 | M | 24 |
| 42 | M | 23 |
| 43 | F | 25 |