

The Emotional Annotation of the Romanian Language

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Overview

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Introduction

- The sounds database: from the project of Voiced Sounds of Romanian Language
- http://www.etc.tuiasi.ro/sibm/romanian_spoken_language/en/index_en.htm

OR

- <http://iit.iit.tuiasi.ro> → Research → Voiced Sounds of the Romanian Language
- We describe the first steps of the annotation process for some phrases of Romanian Spoken Language
- The recordings have been made by a set of young persons

The archive of Romanian Spoken Language

- The database may be helpful in improving voice recognition systems based on acoustical features
- The archive contains:
 - Documentations
 - Archive descriptions / realization protocols
 - List of papers in Spoken Language Analysis area
 - Vocal signal Analysis Instruments
 - Sounds
 - 6 speakers between 26-31 years old, from the Romanian Moldova region.
 - Each speaker has recorded at least tree variants of the same sound, and a single pronunciation, representative for the speaker, was subsequently chosen.
 - The database include professional and non- professional voices
 - Over 500 recordings available in different sampling formats (16 and 24 bits) and encodings (.wav, .ogg, .txt, .grid).

The archive of Romanian Spoken Language

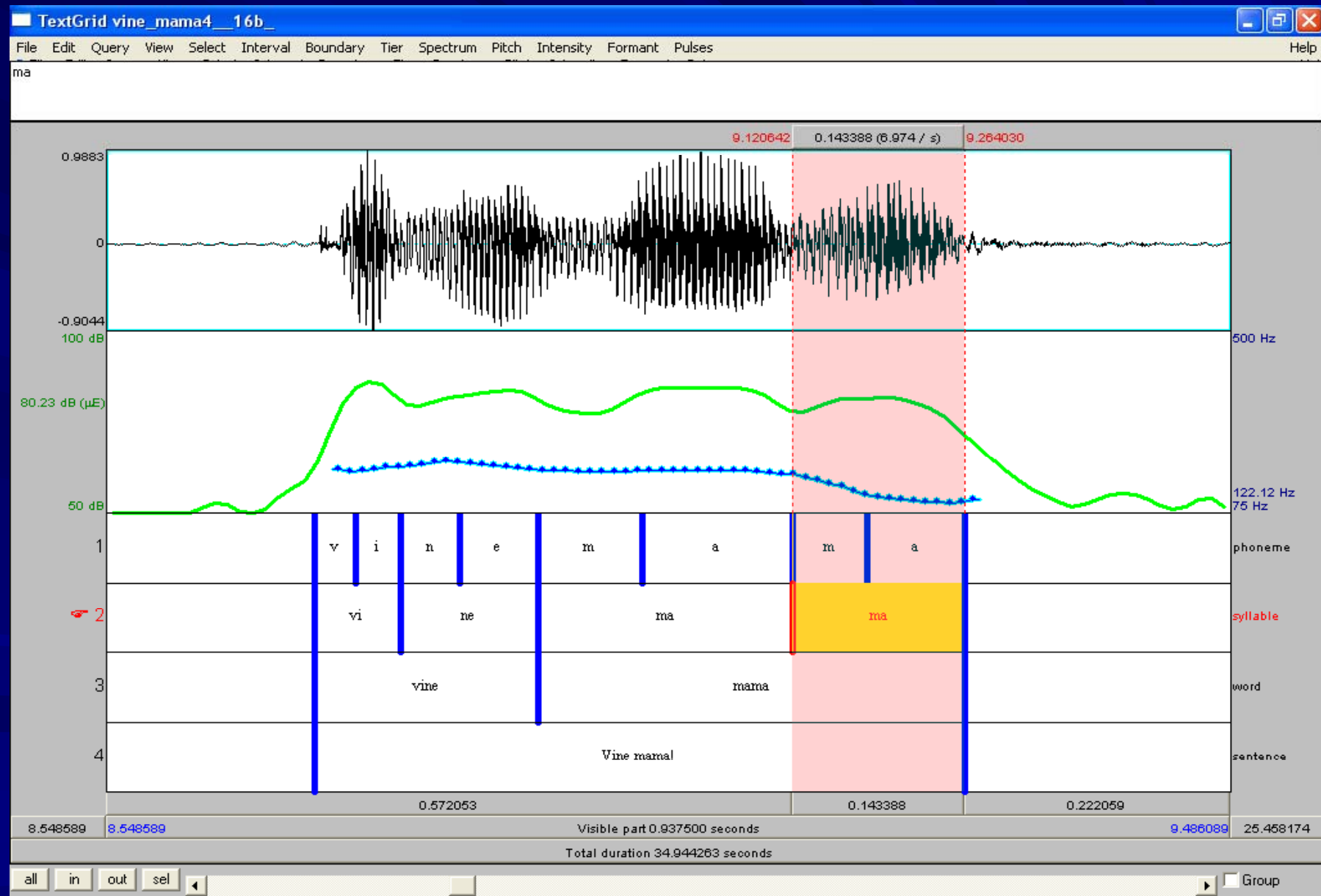
■ The data:

- Vowels (pronounced in a sustained manner)
- Consonants (in vocalic context, e.g. *ba*, *aba* for *b*)
- Diphthongs
- Triphthongs
- Hiatus
- Romanian specific sounds (groups like *ce*, *ci*, *ghe*, *ghi*)
- Some simple sentences (e.g. *Vine mama*, *Aseara*)

The linguistic annotation

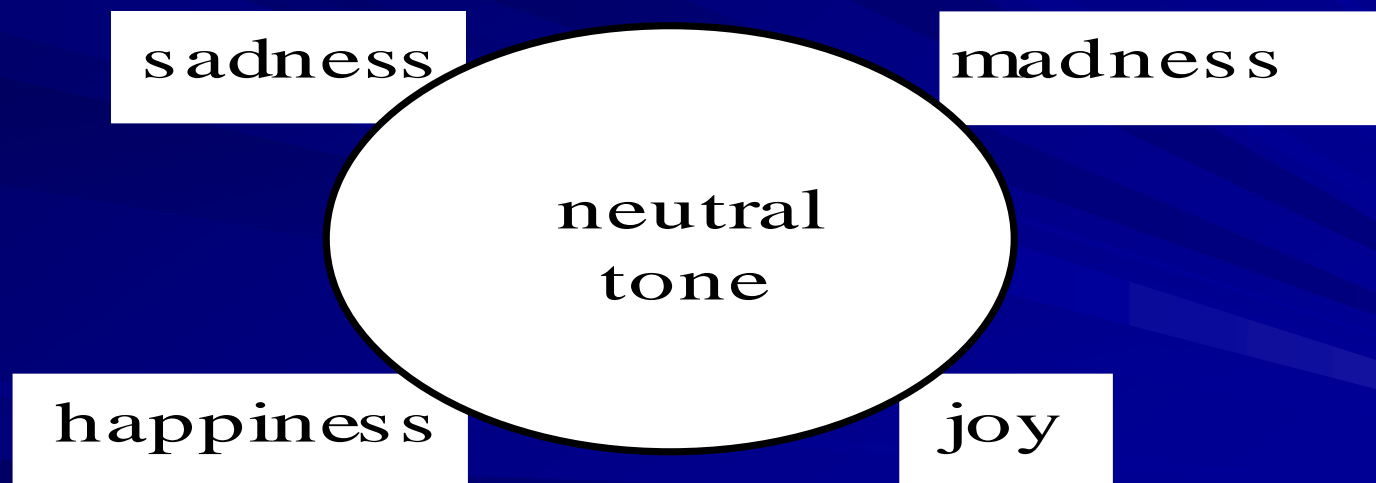
- We have used the Praat software
- The first step of the annotation is the *segmentation* of the voice signal at phonetic (phoneme and syllable) level
- The linguistic level: merging syllables into words and sentence
- For annotations, we have used the signal wave form, the F0 curve and the energy

Annotation for the sentence “Vine mama”



The emotional annotation

- 1998, Johnson-Laird and Oatley said that there are four basic emotions: happiness, anger, sadness and fear.



The emotional annotation

- Besides isolated sounds, short sentences were also recorded. The speakers have tried to simulate the following emotional states:
 - Happiness
 - Sadness
 - Joy
 - Hate
 - Optimism
 - Pessimism
 - Exclamation
 - Interrogation
 - Neutral tone
 - Madness
- We wanted to see how good the emotions simulation was, so we asked several subjects (different from the ones recorded) to try to identify the emotions they are hearing.

The emotional annotation

The people which confirmed us the emotional states made the following observations:

- there is confusion between the happiness and the joy, between sadness and madness;
- there is confusion also between exclamation and happiness, between pessimism and sadness.
- Although, there is a clear distinction between positive vs. negative states.

The emotional annotation

■ 1998, Wallbott analyzed the information from:

- upper body
- shoulders
- head
- arms
- hands
- movement quality
- symmetry

while talking.

Conclusions and further work

- We have presented the annotation process of a corpus for the Romanian Spoken Language, using Praat software.
- We have created a large corpus of phonemes, words and phrases spelled by a significantly number of subjects within various contexts (standard, emotional, pathological, etc.).

Conclusions and further work

- The confirmation of the emotional states is from the persons which are PhD-students, from the persons who finished a faculty and from the students
- In the future will make a validation team
- we hope that this database will be helpful to the researchers on this domain and it'll be a basic point of departure



Thank you!