

Training And Testing Application For Audioperceptual Evaluation – VOICE-PE (Voice – Perceptual Evaluation)

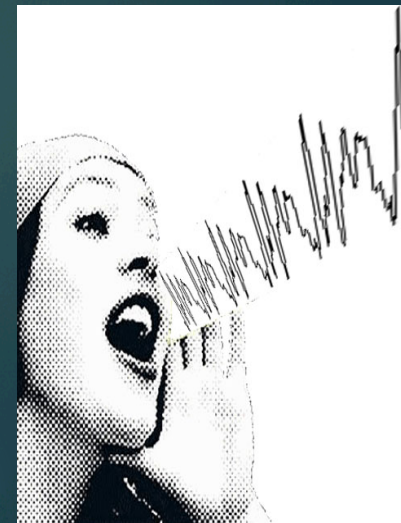


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- ▶ 22_02_2014

VOICE-PE

- ▶ *Voice-PE* is a software program designed for **training and testing** skills related to audio perceptual evaluation of the human voice.
- ▶ **MOTIVATION:** voice and its assessment are an **auditory** phenomenon, in its essence, so they depend on **training** (Bassich & Ludlow, 1986; De Bodt et al., 1997).
- ▶ Based on Oates & Russel (1997) and Awan & Lawson (2009).



AUDIOPERCEPTUAL EVALUATION

- Low intra and inter-raters consistency;
- Subjectivity;
- Non-existence of a universal scale.

BIAS



- Assessment tasks,
- Type of scale
- Answers format,
- Quality of the voice samples under classification,
- Evaluation training and previous experience,
- Existence of external anchors.

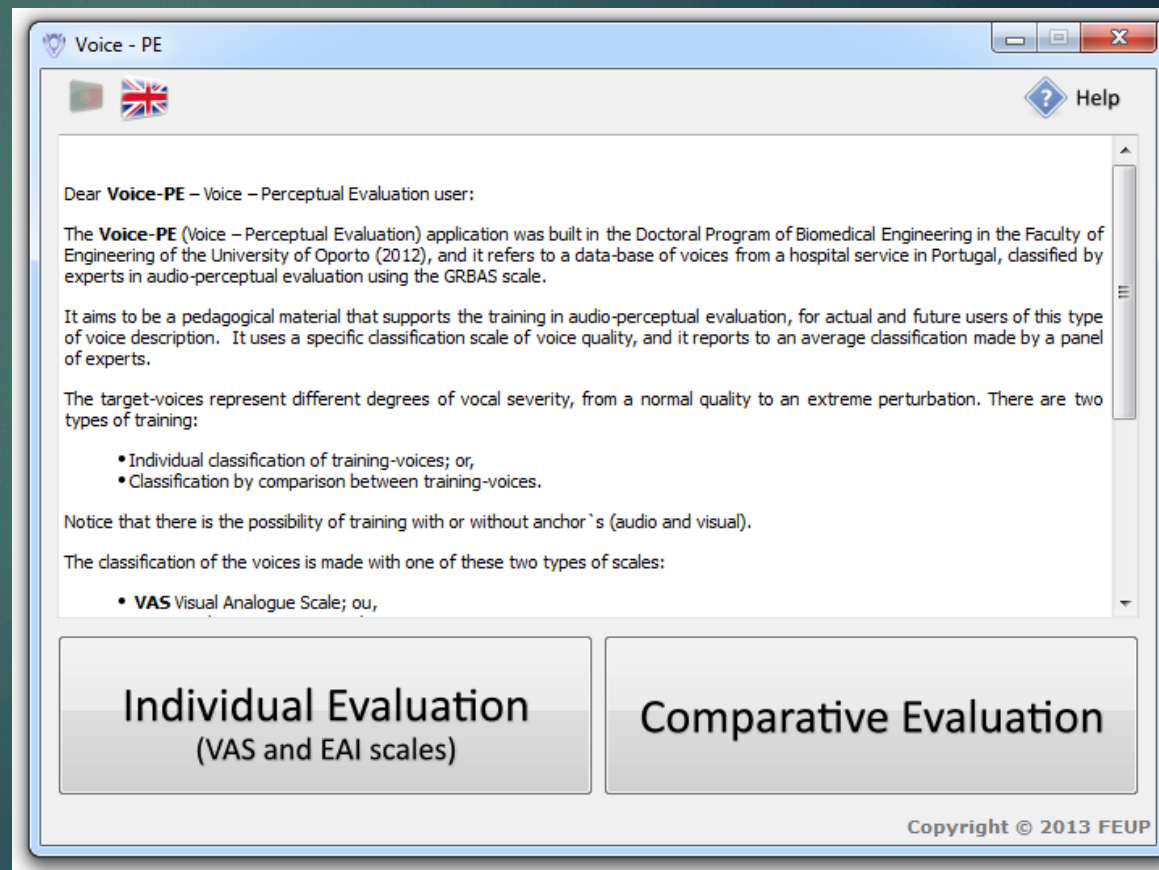
SOLUTIONS



VOICE-PE

► It is structured upon a database with the average classification – made by a group of 6 experts – upon **90 different voices**.

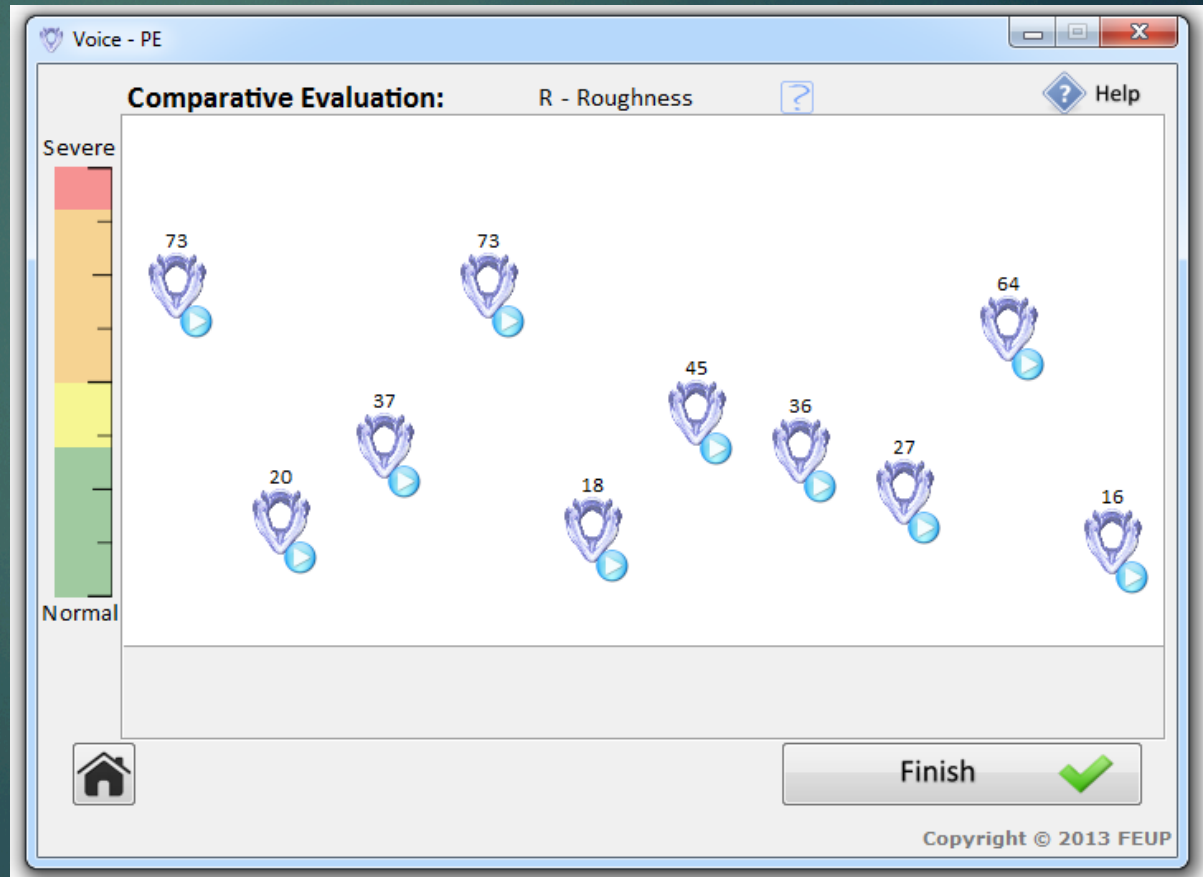
► It has the possibility of selecting between two types of classification.



VOICE-PE

- ▶ The training starts in a window that displays groups of 10 voices, which the **user listens and arranges for comparison**, dragging the icon representing this voice vertically.

- ▶ It is possible to use **visual anchors**.



VOICE-PE

- ▶ When the user chooses the **VAS**, a window appears and - by moving a slider on a ruler - can evaluate each parameter of the **GRBAS** scale, between 0 and 100.

- ▶ It is possible to use **visual** anchors and/or **auditory** anchors.

The screenshot shows the 'Voice - PE' software window. It contains five horizontal sliders, each representing a parameter of the GRBAS scale. Each slider has a ruler with tick marks and a slider knob. The parameters and their current values are:

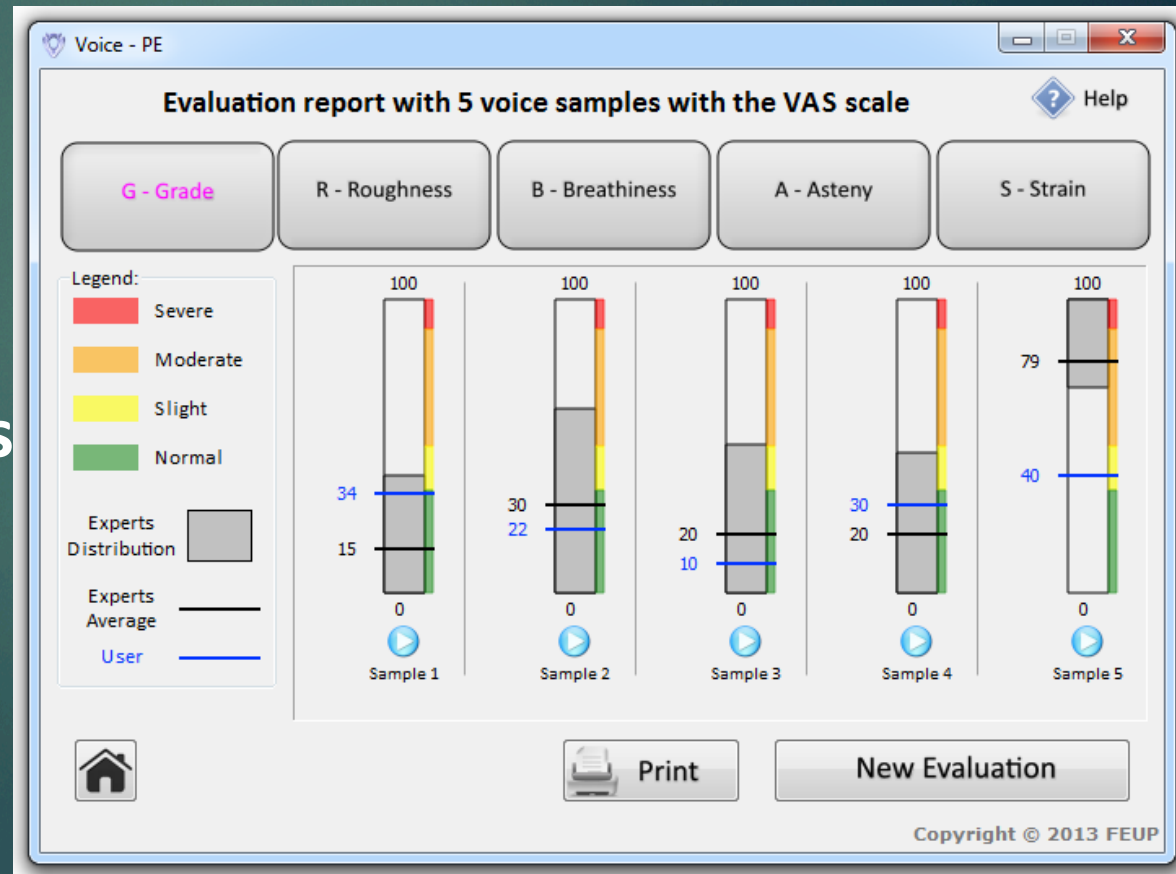
Parameter	Current Value
Grade	22
Roughness	30
Breathiness	10
Astheny	10
Strain	0

Each slider has a green speaker icon on the left (Normal) and a red speaker icon on the right (Severe). The window also includes a 'Help' button, a 'Previous' button, a 'Listen' button, and a 'Next' button. A blue vertical bar is visible on the right side of the window.

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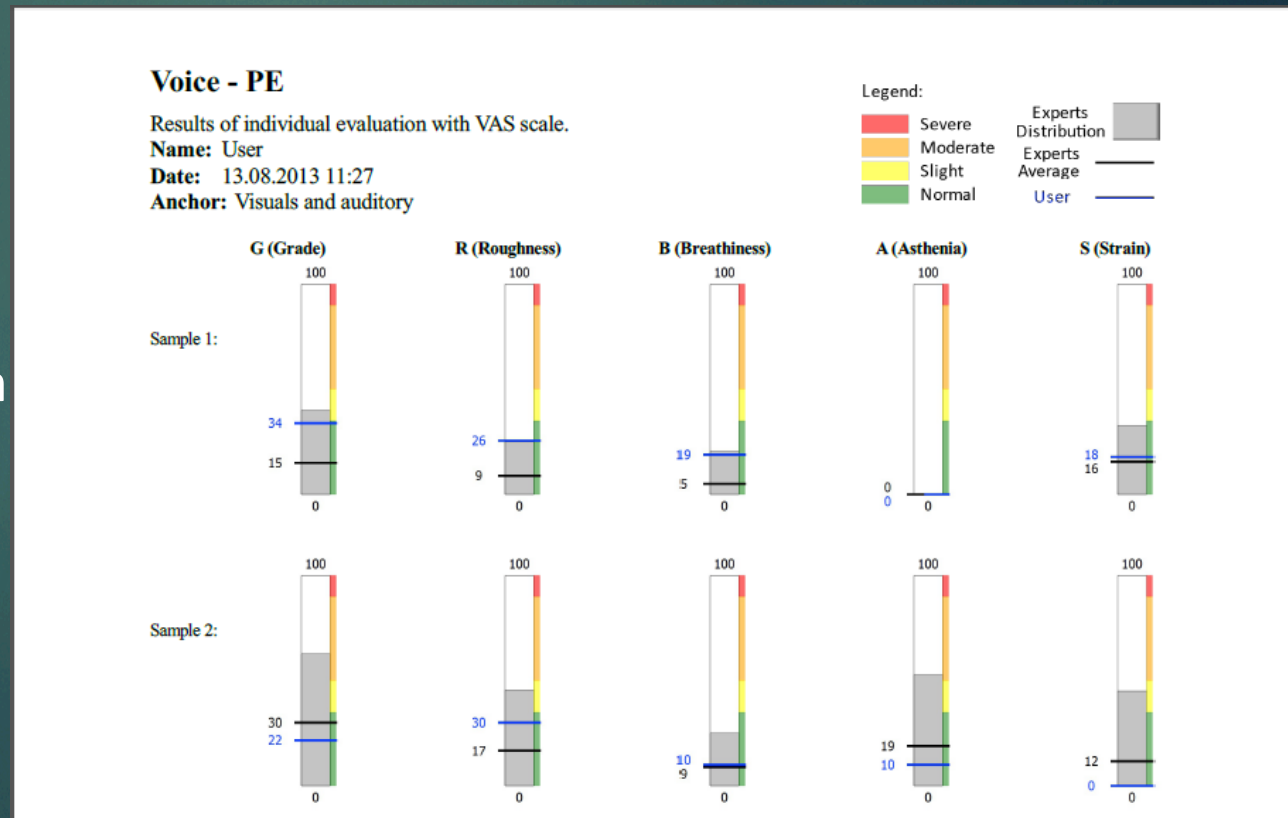
VOICE-PE

- ▶ At the end of the classification of the 5 training voices, a **report** is created automatically.
- ▶ Each parameter is compared with the **average of the judges** and the **cutoffs of the degrees of vocal disturbance**.



VOICE-PE

- ▶ It is possible to **print the report**, with the opportunity to:
 - ▶ identify the author of the evaluation,
 - ▶ the date,
 - ▶ with reference to all parameters (GRBAS),
 - ▶ the classification of the user and experts.



VOICE-PE - CONCLUSIONS

- ▶ Voice-PE will be distributed to actual and future SLP and other who benefit from the training in audioperceptual evaluation.
- ▶ It's a way of **re-calibrating the internal standards** of the audioperceptual parameters that define voice **quality** (Gerratt et al., 1993; Chan & Yiu, 2002; Eadie & Baylor, 2006; Kreiman et al., 2007; Awan & Lawson, 2009; Brasolotto & Rehder, 2011; Gould et al., 2012; Iwarsson & Petersen, 2012; Sofranko & Prosek, 2012).

VOICE-PE - CONCLUSIONS

- ▶ The *Voice-PE* is a tool for training and testing skills on audio perceptual assessment of the human voice.
- ▶ Gives to the user the possibility of immediate feedback by comparing its classification with the experts.
- ▶ Its possible to monitor the evolution of the results.

VOICE-PE – FINAL COMMENTS

- ▶ Need for the use of Voice-PE to obtain **more assessments** – in different users, different times, with or without anchors, visual or auditory.
- ▶ It aims to overcome the difficulties of intrajudge consistency and loss of auditory internal references for defining the vocal quality parameters.

THANKS FOR YOUR
ATTENTION!



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