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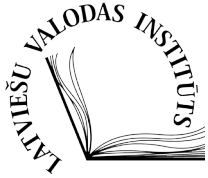

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ABSTRACTS

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INTON@TRAINER COMPUTER AIDED SPEECH INTONATION TRAINING SYSTEM AND ITS USAGE IN TTS PROSODIC QUALITY ASSESSMENT

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Inton@Trainer software system was originally designed to train learners in producing a variety of recurring intonation patterns of speech. The system is based on comparing the melodic (tonal) portraits of a reference phrase and a phrase spoken by the learner and involves active learner-system interaction. Since parametric representation of intonation features of the speech signal faces fundamental difficulties, we show how these difficulties can be overcome. The main algorithms used in the training system proposed for analyzing and comparing intonation features are considered. This work is a follow up study to the previously introduced model of universal melodic portraits (UMP) of accentual units (AU) for the representation of phrase intonation in text-to-speech synthesis. At the moment demo versions of the *Inton@Trainer* system focused on learning Russian and English intonation are available for free download at https://intontrainer.by/.

The paper describes an experiment on an instrumental evaluation of the prosodic quality of synthesized Russian speech by using of *Inton@Trainer* computer system. Our approach to assessing the intonational quality of speech allows treating a synthesized speech with the same strict requirements as are applied to students studying Russian as a second language. We describe the technology used for the instrumental evaluation of the intonation quality of synthesized speech and the acoustic database of reference phrases used to assess the intonation quality of synthesized speech. The paper presents the results of testing the intonation quality of two Russian synthetic voices. We discuss the results of the experiment and outline the ways for improving the methods for objective evaluation of synthesized speech prosodic quality, as well as the possibility of applying the developed system in other linguistic tasks.