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PRELIMINARY RESULTS OF THE RUSSIAN VOWELS' ARTICULATION VISUALISATION OBTAINED THROUGH MAGNETIC RESONANCE IMAGING

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The paper will present main results of the original cross-disciplinary study of the Russian articulation. The research work in progress has been initiated by the Philological Faculty of Moscow State Lomonossov University and was realised in co-operation with the Educational-Research Centre of Magnetic Tomography and Spectroscopy in 2002-2003. The project was targeted at elaboration and experimental testing of original new method for real-time processing and visualisation of the speech articulation dynamics. The main idea was to use MR images in articulatory movements' real-time reconstruction. The initial stage of the experiment dealt with the articulation of Russian vowels (produced both in isolated position as well as in syllables and phrases). The detailed visualisation of lips' and tongue movements, configuration of resonant volume in oral cavities, images of soft palate and larynx in the course of sound production were obtained and analysed. During the presentation we'll expose our essential results to consideration and discussion. We consider our methods of articulation's MR imaging very promising for investigation of speech production processes. The data collected through several experimental sessions form a solid basis for authoritative visual articulatory data base that will be developed and amplified in the future work.