



WHAT CAN BE SEEN IN VIDEOKYMOGRAPHIC IMAGES?

J. G. Svec^{1,2}, F. Sram², M.Fric², Q.Qiu¹, H. K. Schutte¹

¹ Groningen Voice Research Lab, Department of BioMedical Engineering, University Medical Center Groningen, University of Groningen, the Netherlands

² Center for Communication Disorders, Medical Healthcom, Ltd., Prague 8, the Czech Republic

Abstract: Kymographic imaging refers to a special way of displaying vibrations by putting together a great number of successive images of a vibrating object viewed through a thin slit. In medicine, the method has been found particularly well suited for imaging vibrations of the vocal folds, which are the ultimate source of human voice. Here we address the question on which vibratory characteristics of the vocal folds can be identified in high-speed videokymographic images and used in clinical practice when diagnosing origins of voice problems? The ultimate long-term goal of the research is to relate the displayed vibration characteristics to the tissue properties of the vocal folds and design strategies how undesirable tissue properties can be altered through conservative or surgical treatment.

ACKNOWLEDGMENTS:

The research has been supported in the Netherlands by the STW project G5973 and in the Czech Republic by the EUREKA E!2614 project.