Voice changes after using a voice input system: an acoustic study

Whiteside, S. P. and de Bruijn, C. G. and Rosen, K. M. and Hunnicutt, S. and Nord, L. and Syder, D.

journal:   TMH-QPSR
volume:    41
number:    4
year:      2000
pages:     033-048

http://www.speech.kth.se/qpsr
Voice changes after using a voice input system: an acoustic study

* Whiteside SP, * de Bruijn CG, ** Rosen KM, ** Hunnicutt S, ** Nord L & * Syder D
* University of Sheffield UK, ** KTH, Stockholm, Sweden

Automatic speech recognition systems, and voice input systems in general, are becoming more widely used, and more people are opting for speech driven computer interface as an alternative input method to the keyboard, both in the home and office environment. There is some evidence to suggest that the use of speech recognition based human computer interfaces could potentially lead to vocal fatigue, or even to symptoms associated with dysphonia. It has therefore become necessary to qualify any potential risks of voice damage. This study reports on a case study that was carried out to investigate acoustic changes in the voice, after the use of a discrete speech recognition system. Acoustic analyses were carried out on two Swedish users of such a system. These results are presented and discussed. A set of voice care guidelines for regular users of voice-input systems is provided. In addition, recommendations for improving recognition and hence vocal care are provided as an adjunct to the voice care guidelines.