Abstract

Almost all co-channel talker interference suppression systems use the difference in the pitches of the target and jammer speakers to suppress the jammer and enhance the target. While joint pitch estimators outputting two pitch estimates as a function of time have been proposed, the task of proper assignment of pitch to speaker (two-talker pitch tracking) has proven difficult. This report describes several approaches to the two-talker pitch tracking problem including algorithms for pitch track interpolation, spectral envelope tracking, and spectral envelope classification. When evaluated on an all-voiced two-talker database, the best of these new tracking systems correctly assigned pitch 87% of the time given perfect joint pitch estimation.