STATE OF THE ART ON THE CURRENT RESEARCH LINES IN SPEAKER RECOGNITION BASED ON CLUSTERING METHODS

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Abstract— The objective of this overview is to summarize some of the well-known algorithms already studied and tested for the task of speaker recognition during the recent years. First, we give an overview of speaker recognition, then we present the development and understanding of its state of the art by highlighting the contribution from the latest developed techniques in general, followed by the inclusion of the state of the art part in speaker recognition based on clustering techniques. Again, a special emphasis on the current research lines is given in order to know the new approaches of speaker recognition. Thus, an introduction on speaker recognition and a summary on the state of the art related to clustering methods are offered and discussed.

Keywords— Speaker recognition, State of the art, Clustering methods, Latest research.

I. Introduction

Speech is the main way of communication between human beings. From speech signal, we can characterize many important characteristics about the speaker: the nature (sympathetic, respectful, etc…), the language, the approximate age (teenager, young, and old), the gender (male or female), the emotional state, the origin, the background (culture), etc... Speaker recognition (SR) is a biometric modality to recognize the individual who is speaking from a speech utterance, also called voice recognition regarding the personal basis of person's voice information, while speech recognition is not a biometric modality, but a method to recognize