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A Two-Step Framework for Unsupervised Speaker Segmentation Using BIC and Artificial Neural Network

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Abstract : This work proposes a new speaker segmentation approach for two speakers. It is an online approach that does not require a prior information about speaker models. It has two phases, a conventional approach such as unsupervised BIC-based is utilized in the first phase to detect speaker changes and train a Neural Network, while in the second phase, the output trained parameters from the Neural Network are used to predict next incoming audio stream. Using this approach, a comparable accuracy to similar BIC-based approaches is achieved with a significant improvement in terms of computation time.

Keywords : artificial neural network, diarization, speaker indexing, speaker segmentation
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