Speech-To-Speech Translation Technologies for Real-World Applications

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In this talk, the speaker will briefly introduce the background of Speech-to-Speech Translation, by reviewing related projects and state-of-the-art speech translation technologies and approaches, as well as the history of the IBM Multilingual Automatic Speech-To-Speech TranslatOR (MASTOR) system. The speaker will present an overview of IBM system framework, and various approaches that the IBM team developed under DARPA CAST and TransTac programs, which led the IBM team to the successes of developing and deploying from research prototypes to real world deployment. The technologies the speaker will cover include maximum-entropy (ME)-based statistical Natural Language Understanding and Generation approach, algorithms for colloquial speech recognition and very fast machine translation, algorithms for rapid development of low resource languages, algorithms for low computation resource devices, and scalable algorithm and system development for multiple platforms for real-world applications.