A CONFIGURABLE DISTRIBUTED SPEECH RECOGNITION SYSTEM

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Abstract

The growth in wireless communication and mobile devices has supported the development of distributed speech recognition (DSR) systems. During the last decade this has led to the establishment of DSR standards and an increased interest in research aimed at systems exploiting DSR. So far, however, DSR-based systems executing on mobile devices are only in their infancy. One reason probably is the missing availability of corresponding easy-to-use software development packages. This paper presents a prototype version of a configurable DSR system for the development of speech enabled applications on mobile devices. The system is implemented on the basis of the ETSIDSR advanced front-end and the SPHINX IV recogniser. A dedicated protocol is defined between the DSR client and the recognition server supporting simultaneous access from a number of clients. This makes it possible for different clients to create and configure recognition tasks on the basis of a set of predefined recognition modes. The paper gives a detailed introduction to this system including its architecture, design considerations and evaluation results.