Development of Phrase Translation Systems for Handheld Computers: From Concept to Field

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We describe the development and conceptual evolution of handheld spoken phrase translation systems, beginning with an initial unidirectional system for translation of English phrases, and later extending to a limited bidirectional phrase translation system between English and Pashto, a major language of Afghanistan. We review the challenges posed by such projects, such as the constraints imposed by the computational platform, to the limitations of the phrase translation approach when dealing with naive respondents. We discuss our proposed solutions, in terms of architecture, algorithms, and software features, as well as some field experience by users of initial prototypes.

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