Abstract: Client/Server-Based Cultural Tourist Guide System Using Voice User Interface

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Abstract

In this paper, a cultural tourist guide system based on a client/server framework using a voice user interface is proposed. When a user wants to take a tour, the proposed system performs speech recognition for path names. After that, it searches for tourist attractions near to the specific path, and relays the information on the tourist attraction to the user via speech synthesis. In particular, speech recognition is performed at the server of the proposed system, while speech recognition features are extracted at the client. For the tour path search, a geographic database is populated with thirty well-known cultural tourist attractions in the south-western part of Korea, and speech synthesis is performed at the client using a hidden Markov model based speech synthesis technique. The performance of the proposed system is evaluated by measuring average word error rate and intelligibility scores for speech recognition and speech synthesis. It is also shown from a user satisfaction survey that the proposed cultural tourist guide system provides sufficient tour guide information for cultural tourists.

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