

# **What to say when you don't understand: toward more natural spoken dialogue responses**

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One important area in which spoken dialogue systems fall short of human conversational skill, is in responding when the conversational partner was not understood well or at all. Many systems respond with some variant of "Sorry I didn't understand that, please try again". Not only is this quite different than the way a human would respond, it has the major deficit of giving the user of the system no additional insight about what went wrong, or how to be more successful in the future.

In this talk I will give some background on this problem, then discuss an experimental study that provided naive users of a spoken dialogue system with immediate help messages related to their poorly understood utterances. Using a secondary, much less accurate speech recognizer when primary speech recognition failed, we constructed "Targeted Help" messages that gave the user feedback on what was recognized, a diagnosis of what was problematic about the utterance and a related example that the system could handle. We found that Targeted Help was very effective in improving the user's performance with the system. The final part of the talk will discuss ongoing work to extend the Targeted Help approach into a more general strategy for producing conversational responses under a range of understanding, lack of understanding and error situations.