

The communication accommodation of the machine to deal with errors

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All dialog systems make mistakes, either because of background noise, or the quality of the microphone. The concept of error is polysemous: in linguistics it means variability while in spoken dialogs it means failure, such as errors in speech recognition, understanding or dialog management. Engagement in dialog with a machine is not only linked to the error rates. We argue that the communication accommodation theory is a promising paradigm to globally consider the errors in the convergence or divergence dimensions. People can converge through many features of communication such as their use of language, their pronunciation, pause and utterance lengths, vocal intensities, non verbal behaviors and also their meanings. The use of these dimensions for dialog strategies management could improve communication problems and improve effectiveness of the dialog systems. One of these pragmatic concerns implies understanding the relational issues. Convergence in the dialog is linked to the concept of engagement of the user. In the framework of the JOKER project, we aim at building an intelligent user interface, which provides a multimodal dialog system with social communication skills including humor, and other informal socially oriented behaviors. We illustrate with examples of JOKER dialogs from Human-robot interaction and also from Human-Human interaction, the use of communication accommodation theory for understanding the engagement despite the errors in the dialogs.