Emotional Speech Processing With the Help of F2 Syntactic Parser

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Abstract

F2 syntactic parser is a part of F2 emotional robot, designed to support natural emotional communication with the help of gestures, facial expressions and speech. The parser constructs syntactic and semantic representations (frame networks) of an input text, saves them to memory (database) and selects a communicative reaction for the robot in BML (behavior markup language) format. The model of reactions and inferences is based on scripts if-then operators, competing for the processing of semantics. In particular, scripts detect emotionally relevant meanings: when it is declared, that somebody threatens the robot, does not care about it, behaves inadequately 13 negative scripts, and also when the robot is superior, attracts attention, etc 21 positive scripts. Parser may run in a standalone mode, daily processing sentences from news and blogs. Balancing of scripts allows us to tune the understanding and reproduce different emotional profiles for the robot. (Research is supported by RSF, project No 17-78-30029).