An emotionally intelligent actor model for virtual conference presenters

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Abstract

Hosting a scientific conference in Virtual or Mixed Reality becomes a reality. One key advantage of this format is the possibility to use Virtual Actors controlled by Artificial Intelligence as conference participants, in such roles as a Virtual Poster Presenter, a Discussion Panel Moderator, a Lightning Session Chair, and a Virtual Party Servant. All these roles require human-level socially emotional functionality and can be implemented using one approach, which is based on the emotional Biologically Inspired Cognitive Architecture (eBICA). At the core of the model is a semantic map of human emotional states. Interaction modalities include facial expression, gaze and other body language, voice intonation, and the sentiment of verbal content of communications - using both recognition and expression technologies for each modality. Paradigms involve establishment and maintenance of believable socially emotional contact with a human participant. The conference BICA*AI 2020 (https://bica2020.bicasociety.org) is used as a testbed. Support: Russian Science Foundation Grant #18-11-00336.