Kari-Jouko Räihä, Oleg Špakov, Howell Istance, Diederick C. Niehorster

Gaze-assisted remote communication between teacher and students

Fluent communication is essential for interaction between teacher and students, and has a significant impact on the learning experience in the classroom. Communication is facilitated by means (like chat boxes, audio channel, or video feed) that do not reveal the point of attention of the student.

In other contexts, gaze been found useful to establish joint attention in peer-to-peer communication. We expand on that by facilitating transmission of gaze points between several networked participants. In our setup, students are able to see the teacher's desktop in a window on their own desktop, and the teacher's active point of gaze superimposed over it. The teacher, in turn, has an additional monitor that shows the desktops of each student, again with their gaze points superimposed.

We have run a pilot study with four students and the teacher in a separate room. The screen video was transmitted using the VNC tool, and gaze data was transmitted via in-house software. The teacher and students were also connected by Skype chat; students mostly listened to the teacher (by earphones), but if someone raised a question, it was heard by all participants.

We will present the implementation issues and share the experiences from the pilot study.