

Being There Together?

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Abstract

A man walks into a bar and looks around. A bartender looks up and smiles quickly. The man notices, smiles back and heads over towards the bar. A very simple interaction between two people just took place, but the punch line of this example from a recent experiment in our CAVE-like system is that the bartender is a simulated agent. Never the less the man's response appears to be genuine: it seems that he acts to some extent, even if its only subconsciously, as if the bartender is real.

Two friends meet in a collaborative virtual environment (CVE). Both are using CAVE-like immersive virtual environments which give them a 1-1 scale view of the world. They are both quite tall, but one comments that the other is looking quite short today. They laugh about this and then get down to the task in hand. The "shortness" is actually true in the virtual sense and is due to a tracker calibration problem in one of the CAVE-like systems.

These two small examples highlight what a complex phenomena a CVE is. Today tens of thousands of people regularly use simple versions of such systems through online game technology. But their experience of interacting with other people is limited by the crude interfaces they must use.

This talk investigates how good communication at a distance can be using the best available technology. We will look at the qualities of inter-personal communication that are possible in CVEs using a range of examples from recent experiments and trials. We will then analyze how distributed system technology supports and hinders various aspects of this communication.

Dr Anthony Steed is a Senior Lecturer in virtual environments in the Department of Computer Science, University College London. He is co-leader of the Virtual Environments and Computer Graphics (VECG) group, numbering some 30 researchers. He has published widely in the areas of using and developing collaborative virtual environments (CVEs), 3D interaction, real-time rendering and mixed-reality. He has ten years experience of designing and building CVE systems and applications. He has over 60 refereed publications to date and is co-author of the book "Computer Graphics and Virtual Environments: From Realism to Real-Time". He has taken part in several UK and EU projects, and is currently one of the PIs on the UK EPSRC project EQUATOR.