Light-Field 3D Videoconferencing

Áron Cserkaszky[1], Attila Barsi[1], Zsolt Nagy[1], Gábor Puhr[1], Tibor Balogh[1], Péter András Kara[1]

[1] Holografika Ltd., Budapest, Hungary

Light-field technology is often looked at as the final frontier of glasses-free 3D visualization, as no additional viewing gear is required to experience its capabilities to their full extent. Among the numerous industrial and commercial use cases, light-field telepresence stands out, as such natural visualization may significantly boost the sense of presence. In this paper, we present a fully-implemented real-time light-field 3D telepresence system. We provide a comprehensive analysis of the implementation of the one-way system, highlighting how the achieved capabilities satisfy the reasonable requirements towards such system. The paper also discusses future enhancements to the 3D telepresence system, since its true potential is yet to be fulfilled.

Contact address: a.cserkaszky@holografika.com