Abstract
Heading toward the communication environments of the future, we have been exploring the mechanism of human-to-human communications. In particular, we are focusing on the nonverbal behaviors of conversation participants, which can be expressed by head and body motions. Here we exhibit our demonstration system called MM+Space; it uses mechanically augmented nonverbal behaviors to recreate multiparty conversation scenes. This system simultaneously provides video-projected human faces and physical head motions, i.e. rotations in nodding and shaking directions and left-right/forward-backward translations, which are synchronized with actual human motions. This enhanced expression modality allows viewers to feel more clearly the bodily motions and the telepresence of remote conversation participants.

MM+Space System
1) Capturing conversation scene
2) Measuring head position/pole
3) Controlling the position and pose of screen panels

Flow of process
Capturing meeting scene with cameras, microphones, and sensors

Benefits of proposed system
- Improved expression of pose and the sense of presence, compared with old system with 2-DoF head rotations
- Potential for rich emotional expression, involvement in conversations, and behavioral contagion

Related work

Contact
Kazuhiro Otsuka Sensory Resonance Research Group, Human Information Science Laboratory
E-mail: otsuka.kazuhiro(at)lab.ntt.co.jp (Please replace {at} with @)