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Manipulation of Video Eye Gaze and Head Orientation for Video Teleconferencing

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Many desktop videoconferencing systems are ineffective due to deficiencies in gaze awareness and sense of spatial relationship. Gaze awareness and spatial relationships can be restored by software if heads and eyes can be tracked in video, and then graphically manipulated. We discuss graphics algorithms for manipulating eye gaze and head orientation. Our system takes video input annotated with head and eye information and outputs an adjusted video with appropriate gaze and head orientation. Initial results demonstrate the viability and usefulness of such a system.

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