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TR2000-06 December 2000

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Players of a video game may sometimes find the use of conventional interfaces inappropriate. In such cases, we think that interfaces realized with a vision-based gesture recognition system may find favor. The artificial retina (AR) chip is a versatile image sensor whose use ranges from normal image acquisition to on-chip image processing, including on-chip image convolution. In this paper, we describe a gesture-input video game system, with the AR module including the AR chip, and motion-based gesture recognition algorithms. We showed that the algorithms can be accelerated by projection data, the direct output from the AR chip. To show its performance, we have applied our system to two commercially available video games.

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