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EyeRing: A finger-worn assistant

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EyeRing: An Eye on a Finger

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Abstract

Finger-worn devices are a greatly underutilized form of interaction with the surrounding world. By putting a camera on a finger we show that many visual analysis applications, for visually impaired people as well as the sighted, prove seamless and easy. We present EyeRing, a ring mounted camera, to enable applications such as identifying currency and navigating, as well as helping sighted people to tour an unknown city or intuitively translate signage. The ring apparatus is autonomous, however our system also includes a mobile phone or computation device to which it connects wirelessly, and an earpiece for information retrieval. Finally, we will discuss how different finger worn sensors may be extended and applied to other domains.

Author Keywords

Pointing-based Interaction; Wearable Assistive Device; Intuitive Interfaces

ACM Classification Keywords

H.5.2 User Interfaces; H.5.1 Multimedia Information Systems; I.4.8 Scene Analysis; K.4.2 Social Issues: Assistive technologies for persons with disabilities

General Terms

Algorithms; Design; Human Factors

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