XXVIII. SENSORY AIDS RESEARCH

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RESEARCH OBJECTIVES

The long-range objective of this group is to develop useful artificial sensory mechanisms for people afflicted with sensory deprivation – in particular, vision or vision-plus-audition deprivation.

From our present viewpoint, one important long-range technical problem is to develop "sensor" systems that extract small amounts of information from, for example, an optical image, and "display" systems that feed the processed information into the skin or the ear. Among the sensor-extractor systems that are being considered are (a) edge tracers for the extraction of a "cartoon" from an image, (b) various two-dimensional autocorrelation schemes for extracting position-independent and size-independent qualities of an image, and (c) color sensors for the exploitation of color information in an image. A multiplicity of different "filters" that simultaneously extract different crude aspects of an image may turn out to be a useful sensor-system for a mobility aid and perhaps for a reading machine.

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