

## ARTIFICIAL VISION SYSTEMS FOR MONITORING LEVEL CROSSINGS

In February 1989, SD-Scicon approached British Rail Research with a proposal that an artificial vision system based on neural networks should be developed for evaluation. To this end, level crossing monitoring was put forward as a potential application. The techniques needed for level crossing monitoring could be applicable to a range of signal and image processing applications of interest to BRR. As SD-Scicon already had some expertise in these areas, BRR agreed to fund the project.

SD-Scicon started work on the project in July 1989 and the completed system was handed over to BRR in March 1990. This report is an assessment of the system produced, and gives recommendations for further development of the technology.

To a large degree, the work by SD-Scicon has been successful in that a real-time image processing system that can be used for a number of applications has been produced. There remain, however, a number of significant problems to overcome before it could be applied to level crossings.