

Project B9: Optimum use of CCTV on Railway Systems

Partners:

Network Rail

Researchers:

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Background:

CCTV is widespread but very little guidance exists for successful integration within rail applications such as:

- 'eyes out' at crossings
- mobile maintenance areas
- trackside security
- station security
- passenger safety
- car park monitoring
- vandalism

It is necessary to investigate:

- human performance (number of screens, number of operators, time spent viewing)
- task and workplace design (size and layout of screens in relation to other tasks)
- picture composition and information processing (activity flow, logical progression, mapping onto real world)

Novel Aspects:

This research is using field observation to develop lab-based research into fundamental aspects of CCTV use for rail application, which will then be fed back to end users in the rail domain.



Progress:

To date the following activities have been conducted:

- meetings with Network Rail
- human factors of CCTV literature review
- CCTV in rail applications literature review
- field visits to signal boxes
- lab studies investigating CCTV use
- security perception survey

With the help of Network Rail, field visits have highlighted areas where CCTV is currently used and also where it could be employed in the future.

Development of CCTV for rail:

A number of possible future applications have been identified:

- CCTV to identify 'legitimate' trespassers
- mobile CCTV for trackside security
- behaviour metrics in train stations
- hybrid human/automation monitoring systems

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