

Remote Indication Status System Type: RISSIdt



The REMITdetect is suitable for use in a signalling. To assess remotely located failed or non-performing equipment necessitates the technician to travel to individual locations and visually ascertain the status, generally/initially by viewing the indications. Doing so is time-consuming and directly and indirectly costly. It is an inefficient use of technicians' valued time and significantly, the time taken to resolve problems impacts on overall system availability and causes train delays.

Park Signalling has engineered a concept solution to make available the condition of equipment status indications, at a central location.

Concept overview

Simply, using digitised visual recognition techniques, status indications are "converted" into data which is transmitted to a central location.

The monitoring and reporting are "instant" and continuous.

Concept detail

A clear acrylic Receptor Fascia has optical fibres positioned to "see" individual indicators on a module.

Colour and light sensitive devices are continually scanning a visual field of equipment indicators. The collected image is digitised. Multiple images from various pcbs are concentrated via a multi-port (USB connected) local master device that transmits the information via GSM/GPRS etc.

A remotely located central computer receives information multiple locations. Status updates are compared to the "pre-set" expected conditions. Any deviations in illumination, e.g. on/off, frequency, or colour, etc. are "recognised" and the condition is matched with programmed instruction. Trigger alerts, including equipment location, date/time, effect, etc. are logged and displayed via visual displays, or further communicated to another source e.g. transmitting a text message to the Duty Technician.

Concept application

RISS can be applied to any signalling equipment where there is a benefit in remotely monitoring the performance of the apparatus through monitoring status indications. The Receptor Fascia is customised a particular application / type of equipment and therefore can be used to monitor any pcb module.

A significant beneficiary for RISS is in monitoring the (SSI) Long Distance Terminals (LDT).

The LDT provides an interface between SSI and a telecoms system. Indications are provided to indicate the state of the LDT and its interfaces. Unlike other SSI equipment the LDT status cannot be monitored centrally.

A healthy telecoms system will result in all 8 indications lit. Any, or combination of indications extinguished indicates a fault with the LDT or with the telecoms system.

RISS will continuously remotely monitor the status of indications and enable a central controller to dispatching a technician – signalling or telecoms – to precise location.

There are ca 450 SSI interlockings currently operating on the Network Rail controlled infrastructure. It is estimated that there are ca 1,000 LDTs in operation.

Additional applications

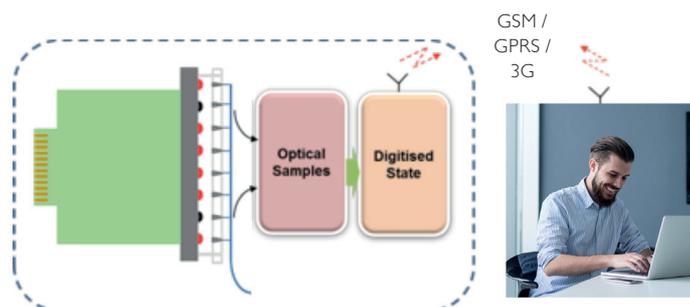
Other (non-LDT) applications would utilise the generic concentrating, data transmission and master computer logging components of RISS. The pcb module Receptor Fascia would be customised to requirements by positioning the optical fibres.

Installation and setup

The design will provide a set-up feature and instructions. It is intended that installing will be a simple Maintenance task.

Safety

The system is not safety critical. It is non-intrusive and doesn't directly connect to or interfere with existing equipment. Should it not operate correctly or fail completely, then the only dis-benefit is to fall back to current methods of diagnosis.



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