Rail Construction Site – Enforcing working hours rules.

Technology to ensure workers comply with working hours and rest period H&S regulations.

The Problem

Due to the high risk working environment, Network Rail impose strict rules on a construction operative's work hours and rest periods. Rail contractors typically enforce this with a paper based system or by manually calculating it from a standard time & attendance report.

When Buckingham Group started work on the new Northampton Railway Station, they wanted to tackle it from a completely new and robust, easy to use electronic terminal which integrated seamlessly into the access control system. They also needed unequivocal reporting which understood the working rules and could therefore display the operatives working hours, rest durations and travel times, and highlight any anomalies in an accurate electronic format.

Implementing a solution like this would demonstrate Buckingham Group's recognition of Network Rail's unique H&S challenges and increase their ability to comply with it.

We were pleased to be in discussion with Buckingham Group as our product is already shipped with open-source and powerful data connectors, meaning we can easily integrate into a host of other common systems, and easily develop bespoke bolt-on solutions such as the one proposed by Buckingham Group for Network Rail.

The Solution

Most access control systems collate time and attendance information as standard, and on top of that, Herongrange have built a suite of T&A reports focusing on the common KPIs of most blue-chip construction companies. But this solution also needed to capture every operative's rest, travel to site and travel from site durations; which is outside the scope of any integrated site based access control solution.

Buckingham Group requested a terminal on the turnstile covering the entrance to site which would prompt operatives to key in their commute times, before they were granted access to site. The terminal needed a simple and quick user interface so that speed through the turnstile by staff was not impacted excessively.

Herongrange prototyped a computer simulation of the software to demonstrate the terminal user interface.

Once the concept was proven to be quick and simple, Herongrange went on to provide an IP65 terminal and keypad located on the turnstile.

The terminal can display full colour graphics, customised text and play sound and music files. We added a welcome screen for when the unit was idle and ensured it could display messages to indicate when people have answered the questions, been granted access or why they have been denied access. The terminal also makes appropriate sounds to draw the users attention to prompts or messages they should read.

The first time each operative enters site in a day, the terminal asks them to select the time taken to commute to work from a list of selections, and then their expected commute to place of rest. On each subsequent attempt to enter site, they are not asked to provide the information again.

Benefits

Buckingham Group staff are now able to effectively collect commute data for every operative. The system can automatically track their work hours and rest hours using turnstile data without errors or time taken by site to collate unreliable paper records.

The creation of a new T&A report which displays the number of hours worked, commute times and the rest hours between days/shifts, means it is

quick and clear to check for issues and analyse working verses rest patterns.

At present the system will flag up any insufficient rest times on a site and provide the instant report from all operatives. This can be extended to automatically prevent access if an operative enters an insufficient rest period and it can be linked across any number of sites. This provides the advantage of checking the operative's rest details in a situation where they have come from a shift on one site and start on a subsequent site or could not have travelled between two sites and had the correct rest times.