

**Outstanding leadership in introducing technologies/
services**

Unirail bell and light railway level crossing protection system

In Sri Lanka there are several hundred unprotected railway level crossings. This has caused innumerable fatal accidents and loss of lives. A limited number of protected railway level crossings are fitted with imported systems costing tens of millions of rupees. The Engineering Design Centre (EDC) of the University of Moratuwa designed and developed the unique “Uni-Rail” railway level crossing protection system to overcome this problem.

This system has an electrically operated audible bell alarm and visual warning twin blinking red lamps for installation at unprotected level crossings. It gives audible and visual alarms only when trains reach the level crossing, and does not indicate any signals when no trains reach the level crossing. No humans are required to be deployed at the level crossings as they do not contain barrier gates, hence no green lamps.

The brain of the system consists of the main control card based on 80C51 micro-controller. Three such control cards are used to enhance redundancy and reliability of the system.

