

Real-Time Train Tracking System in Sri Lanka

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Abstract. The paper suggests a solution to provide Sri Lanka with a smart real-time train tracking device to improve the existing system of Rail transport. A multipurpose combination of mobile computing, the Global Mobile Communication System (GSM), the Global Positioning System (GPS), the Arduino microcontroller, network services, and applications is the basis of the solution. The in-built GPS module identifies the highest accuracy of the train position and passes the information via GSM to the central system. The availability of this data helps the Train Dispatcher to make accurate choices in the direction of the train. Location data can be further analyzed to include visual positioning using maps that provide a healthy picture of the location of the train. Positioning data combined with train speed enables the administration to recognize and respond rapidly to possible safety issues using contact.

Keywords: *GSM, GSP, Arduino*