PT KAI Improves Service Quality with Monstrack Train

Business Challenge

Trains in Indonesia have a long history like its stretching rail. The first railway line was built during the reign of the Dutch East Indies, with a line that spans Solo-Yogyakarta. The next route covers Semarang, Surabaya, to Malang. Apart from Java, the construction of railway lines is also carried out in Aceh, North Sumatra, West Sumatra, South Sumatra and Sulawesi.

Based on the agreement of the Round Table Conference (KMB), assets belonging to the Dutch East Indies government, including trains, began to be taken over by the Indonesian government. After repeatedly changing its name, PT Kereta Api Indonesia has been officially used since 1998 to date.

PT Kereta Api Indonesia or PT KAI is a State-Owned Enterprise (BUMN) which provides rail transportation services. The services provided by PT KAI include passenger and goods transportation. Currently, PT KAI has seven subsidiaries/business groups, namely KAI Services, Airport KAI, Commuter KAI, Tourism KAI, Logistics KAI, Property KAI and PT Pilar Sinergi BUMN Indonesia.

Engaged in the service sector, PT KAI has won numerous awards for its efforts and performance in providing the best service to its customers. Several awards won by PT KAI include the Public Service Excellence Award 2021, Corporate Social Responsibility at the Indonesia Green Awards 2021, and The Best Infrastructure and Logistic Companies at the CNBC Indonesia Awards 2021.

To improve quality and service, PT KAI should continue to innovate in order to provide the best to the consumers. As a mode of transportation that is used on a mass and scheduled basis, the matter of timeliness is also one thing that needs to be considered by PT KAI. PT KAI needs to use a tool or system that can monitor the location and even the movement of trains as a solution in maintaining the best service.

Solution

Monstrack is a system for monitoring trucks and heavy equipment remotely. The system can monitor the position, machine status and productivity with the support of the ORBCOMM satellite. Utilizing GPS technology, Monstrack can inform the vehicle's position and notify if the vehicle is outside the specified area. In this way, the supply or support of vehicles arriving at the site can be more efficiently monitored.

How Monstrack works:

1. GPS satellites provide position information to equipment in the field.
2. The Monstrack controller in the vehicle collects data and engine position, then transmits this information via GSM Network or ORBCOMM.
3. a. The GSM network forwards the information to the Monstrack data center.
   b. The ORBCOMM satellite transmits information to the Monstrack data center.
4. The Monstrack Data Center in Jakarta stores and processes data. Users can access information collected from vehicles directly via the internet.

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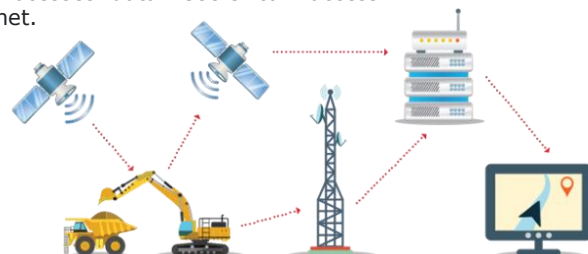
Monstrack Train is a tracking system for trains. By utilizing the GSM/GPRS network, the system allows monitoring the status, location and movement of trains through a web-based application. The system will give a warning if there are safety related events that occur during the movement of the train, including when crossing the speed limit.

Scalable in measure, the system allows having more parameters to observe and more trains to monitor in the future. Monstrack Train can be accessed from both desktop and mobile devices (laptops and smartphones). If the data network fails, continuously recorded tracking data (including location, machine status, working hours, etc.) will be sent via text messages (SMS).

Results

- Know the location/position of the locomotive in the proper location according to schedule
- Know the status of the machine to ensure it is in top condition
- Maintained productivity
- Notifications/warnings if unexpected things happened

Monstrack Train has been used by PT KAI since 2016. Since Monstrack can be implemented to the other vehicles aside the train, the system surely can be used by other companies that are using trucks as well as heavy equipment in their work to support daily productivity. By maintaining productivity, it is hoped that the daily performance can be optimal as well.