



Auto DESPATCH



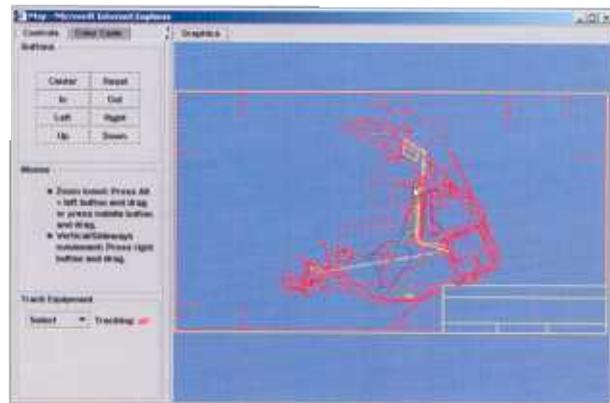
Some Typical Features

- Centralized Online tracking of HEMMs on a GIS map
- Configurable GUI (Graphical User Interface) and iconic representations of monitored HEMMs
- Individual and cumulative tracking of HEMMs with the changes in states (loaded, empty, wait...etc.) also visually represented
- Replay of vehicle movements in previous shifts is also possible
- KPIs (Key Performance Indicators) of Online Monitored HEMMs, stored and displayed in a customizable format for advanced reporting, trending and analysis

Overview

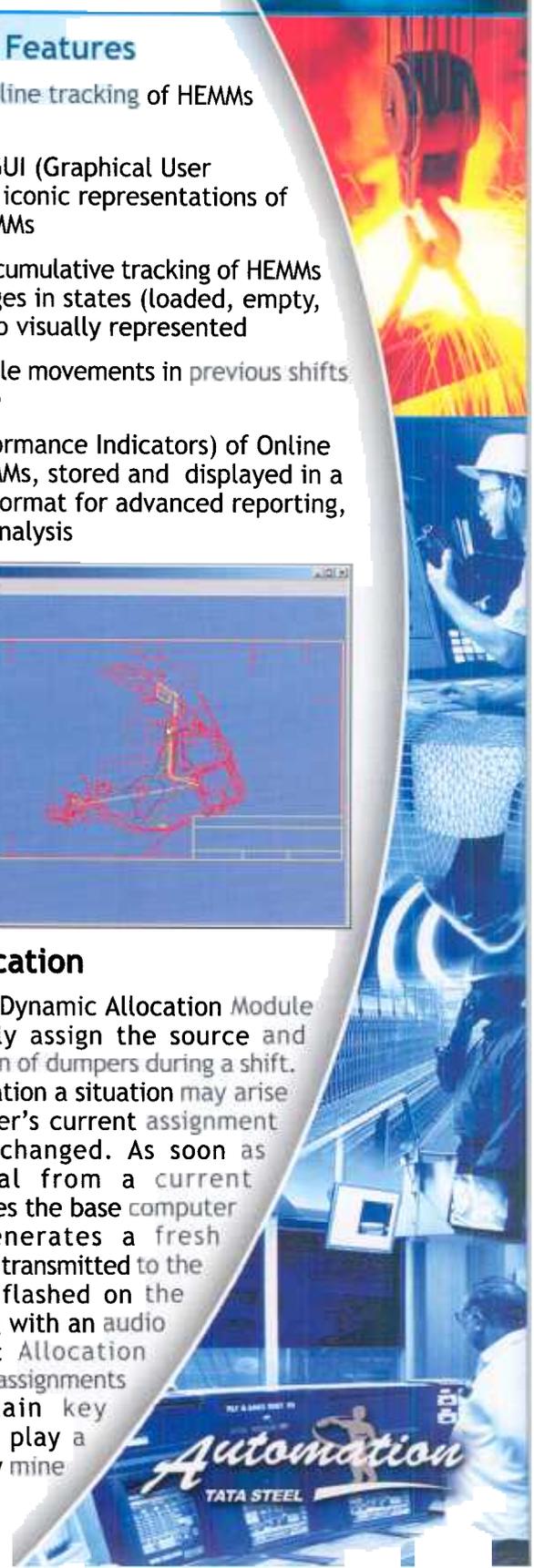
Work practices in the mining industry have traditionally been immanent in nature, subverting efficiency and conducting unaccountability. Today with the use of technology, we are able to redefine work practices with great benefits accruing on account of optimizing inputs of cost, effort and time. Automation Division, Tata Steel has developed AutoDESPATCH, a web based real time open cast mine production and monitoring system that enables the centralized monitoring, control and optimization of all mining activities.

AutoDESPATCH provides real time productivity and utilization information of all vehicles (Heavy Earth Moving Machines - HEMM) configured into the system, enabling optimal scheduling of operations and maintenance activities. Hence maximizing utilization, reliability and productivity of the equipments. It also helps to keep the decision makers well informed about the entire operations and ensures accountability. Its Online Engine Health Monitoring System monitors various engine parameters for better preventive maintenance and longer operational life. Fuel dispensing system monitors and tracks fuel efficiency and consumption of the vehicles. The Online Tracking and Assignment module using GPS receivers mounted on board, displays real-time location of HEMMs on a GIS (Geographical Information System) Map of the mining area.



Dynamic Allocation

The objective of Dynamic Allocation Module is to intelligently assign the source and destination location of dumpers during a shift. During mine operation a situation may arise in which a dumper's current assignment requires to be changed. As soon as unloading signal from a current assignment reaches the base computer the module generates a fresh assignment that is transmitted to the dumper. This is flashed on the display unit along with an audio alarm. Dynamic Allocation Module generates assignments based on certain key constraints that play a crucial role in any mine operation.





High Precision Drill Guidance System

AutoDESPATCH uses a high precision GPS receiver for guiding drill machines to their correct positions. On the basis of their drilling schedules fed in to the system, drill machines are guided to appropriate locations for drilling.

Online Engine Monitoring System

AutoDESPATCH monitors the health of the Engine Online using an onboard Engine Monitoring System. Crucial parameters like temperature, pressure, engine run hours etc. are monitored. Customizable Alarms can be generated for preventive maintenance and safety.

Attendance Recording and Scheduling

AutoDESPATCH is capable of interfacing with attendance recording system. The operator's attendance is fed into the system as soon as he swipes his identification card in the Attendance Recording Machine

The module is triggered in the beginning of a shift just after the attendance recording time expires and allocates available equipment to the operators considering their skills, priority of the operator, etc.

IVR System

AutoDESPATCH can be accessed using telephones via an IVR (Interactive Voice Response) system. Any information regarding production statistics or breakdown status can be obtained by dialing into the system.



Offline Data Correction

AutoDESPATCH provides facility for making corrections in the online captured data by the authorized personnel. Important parameters can be entered into the system and reports of complete mine performance can be generated using the Manual Data Entry Screens.

Online Payload Monitoring

Payload system of a dumper can be integrated with AutoDESPATCH. Payload carried by the dumpers is captured by the load cells of the dumpers and sent online. Thus instead of mathematical approximations actual weight of the load is known.

Production cum Maintenance Planning and Monitoring module

Using this module actual production figures can be tracked on a daily basis. The balance target production figure for the rest of the month can be extracted. Maintenance planning is also entered in the beginning of the month or year. The module updates every time maintenance is done for a particular vehicle.

Operator's Performance/Efficiency

Performance of each operator is logged carefully hence reward and recognition can be easily decided upon in a transparent manner.

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