

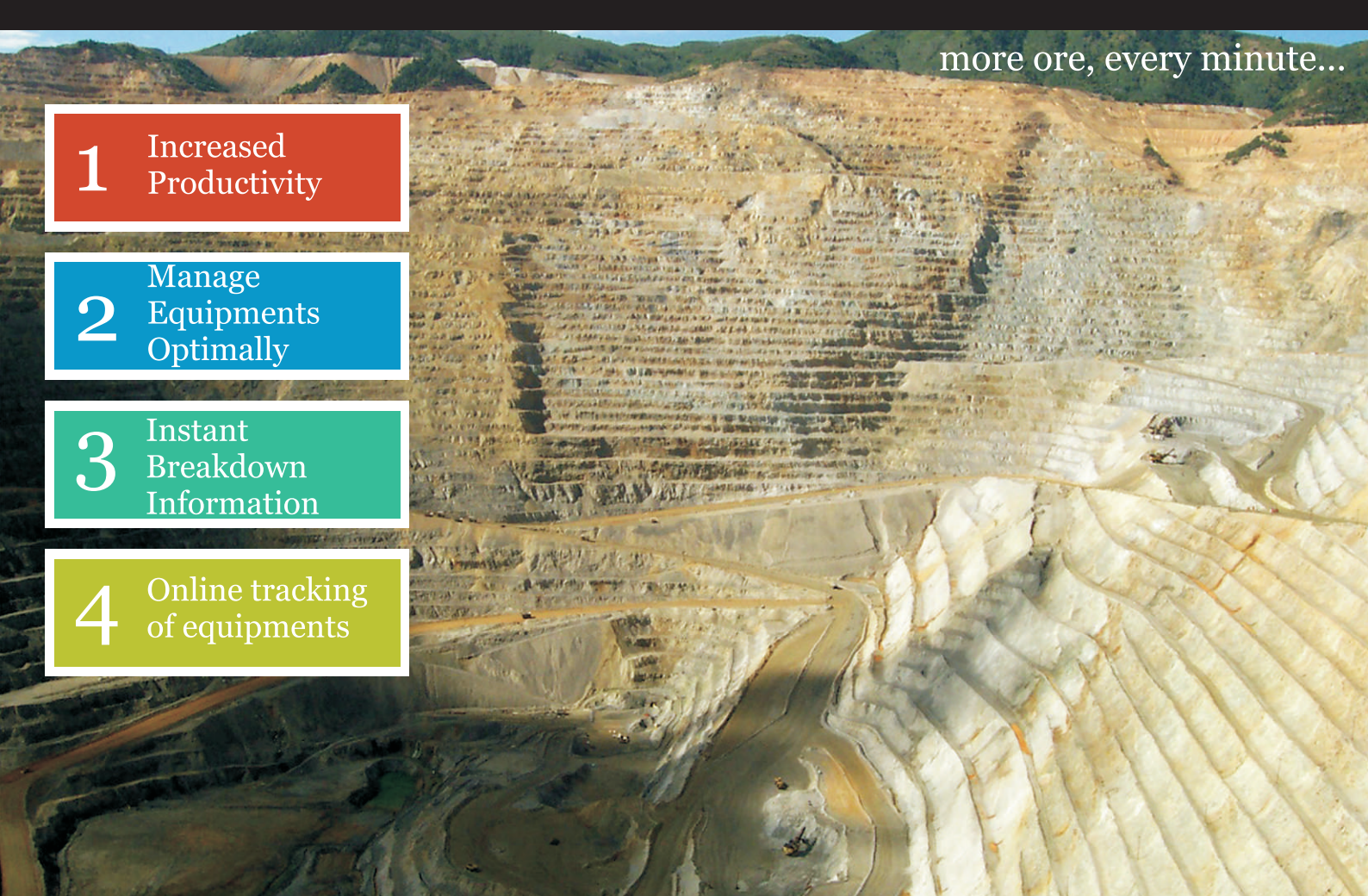
more ore, every minute...

1 Increased Productivity

2 Manage Equipments Optimally

3 Instant Breakdown Information

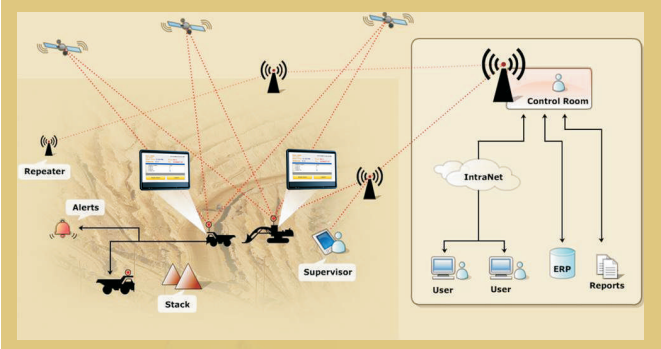
4 Online tracking of equipments



MINE LOGISTICS SOLUTION

OVERVIEW

Aftek Mine Logistics Solution (MLS) is an integrated electronic hardware and software solution designed to improve mining efficiency and productivity for open pit mines. Individual components of MLS deployed in the mining area and on the equipment facilitate collecting real-time data and sending to the control room through seamless RF mesh network. This enables the control room officials constantly in touch with ground mining staff and the activities. Taking timely decisions in case of mechanical equipment failure or deploying additional resources wherever required would save production loss and consequently increase the production and profitability.





MINE LOGISTICS SOLUTION

Solution

Indigenously designed and developed electronic hardware and parameterized software application based on GPS, Wi-Fi, RF & MS .Net technology that collects data in real-time from different equipments such as shovels, dumpers, water tankers, wheel loaders and supervisors inside the pit. The Discrete Event Simulation Algorithm utilizes the data collected automats the dumpers and shovels hauling. The algorithm takes care of minimizing dumper queuing and shovel idling. Setting the shovel priority and directing more dumpers toward this shovel with minimal idling, production can be increased.

Benefits

- Economical turnkey solution – RF survey, hardware, software, installation, and commissioning.
- License free RF band – no recurring cost
- Reduced shovel idling – optimum utilization & fuel saving
- Instantaneous Vehicle tracking – corrective actions on unscheduled stops & slow moving vehicles
- Online production monitoring – Compare with estimated production
- Assisted dispatch – Dumpers are diverted to shovels considering the next dispatch time to avoid queuing
- Simulated production estimation – useful for efficient planning
- Optimized shovel and dumper haulage – increases production and reduces shovel idling and dumper queuing
- Timely decision making
- Quicker ROI

Profitability statistics

If Auto dispatch algorithm is exercised for a single shift, with 2 shovels and 12 dumpers results 2.7% increase in production. Considering average production of 25,000 tons per day and assuming per ton price as \$40 and production cost to be \$5 per ton the total additional earnings per day would be \$23,625.

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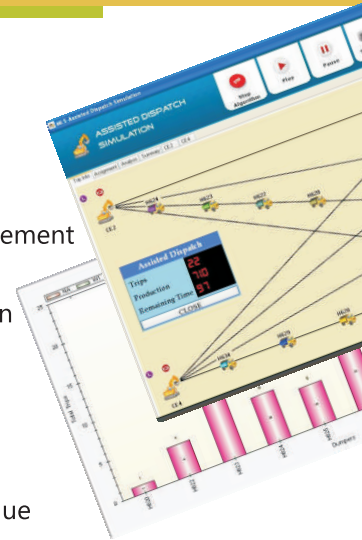
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Features

Control Room

- Control Room User Interface
 - Simple master data management
 - On-line alert notifications
 - Vehicle break down
 - Unscheduled stop
 - Wrong unload
 - Over speed
 - Fuel refill
 - Vehicle servicing due
 - Dumper unload
- Map Console – On-line GPS based vehicle tracking with GIS map
- Production Console – updated on-line production status
- Auto dispatch module – optimized dumper haulage
- Report Viewer - Comprehensive graphical MIS reports
- Optional interface for corporate ERP



Equipments

- Vehicle Console Unit – highly user friendly with integrated touch panel
- Alert generation for control room
 - Manual alert
 - Break down
 - Automated alert
 - Over speed
 - Unscheduled stop
 - Wrong unload
 - Unload
- Automated dumper sensing in shovel vicinity
- Optional Local language voice indication for equipment operator

Open pit

- Seamless RF network
- Automated power management for lamps

Workshop (optional)

- Alerts generation
 - Vehicle fuel re-filling
 - Vehicle maintenance
- Maintenance history
- Vehicle tier replacement and rotation history
- Critical spares consumption history