



VERICOM NETWORKS LIMITED (K)

HEAVY COMMERCIAL MACHINERY REMOTE MONITORING TECHNICAL PROPOSAL



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ABOUT VERICOM NETWORKS.

Our Background

Vericom Networks has positioned itself as a market leader in the provisioning of turnkey enterprise solutions that have multiple facets which include managed services, communication solutions, converged network, security solutions as well as machine to machine solutions

We specialize in the combination of key technologies to create a wholesome solution customized to our client's specific needs. We make it easy to take advantage of ICT to enhance your business by packaging all our products as turnkey solutions.

Executive Summary

As Vericom Networks, we offer a solution that provides real-time continuous monitoring of heavy commercial machinery as it operates in the field. Our solution offers monitoring for the below:

- Travel hours
- Arm Movement
- Swing Movement
- Boom Movement
- RPM
- Hydraulic oil temperature
- Hydraulic oil pressure (forward/reverse)
- Engine oil pressure
- Engine oil level
- Digging hours
- Air filter status
- Maintenance schedule
- Engine runs hours/HMR
- Fuel Consumption
- Radiator coolant level

We as a solutions provider understand that a well maintained and operated machine serves the owner for a long time and as such we have partnered with

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Maven technologies to empower our customers to have remote visibility of these critical variables within an operating machine that determine its lifespan.

Our solution utilizes GSM technology to provide continuous real-time monitoring.

A comprehensive solution with 100% assured results and 3 year warranty to:

- Stop fuel thefts and machinery abuse
- Extend machinery life
- Eliminate unnecessary service costs
- Increase billing accuracies with a friendly and easy-to-use system
- Remote monitoring and reporting
- SMS / emails notifications
- On the go monitoring using smartphones

The solution is based on a server-client architecture which enables our customers monitor and manage multiple sites from a dashboard which in turn creates extensive cost savings.

More than just a monitoring solution

- Monitoring Operating Statistics of the Machinery Engine
- Monitor fuel consumptions by the Engine
- Energy from the Engine
- Know the total HMR and Maintenance schedule

‘Our solution empowers you to actively track the performance of your machinery by provides supporting reports which can be used to aid in decision making.’

When we say real-time we mean real-time

Most competitor products will only take a measurement and communicate back to the monitoring center at preset intervals, sometime as infrequently as once per day. Our technology provides onsite intelligence by continuous monitoring your diesel levels, battery power ,engine temperatures, engine performance, energy being produced, machinery working hours and provides instant alerts of critical events including;

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- Fuel Delivery Verification
- Fuel Theft or Tampering
- Fuel Spills
- Battery power dissipation
- DG door open alerts to avoid battery thefts
- Low fuel alerts
- Engine high water temperature
- Low hydraulic oil pressure
- High hydraulic oil temperature
- Engine low Oil Pressure
- Coolant levels

Lowest TCO (Total Cost of Ownership)

The Vericom Solution will deliver the lowest overall cost of ownership based on the following factors;

- Quality Approved: Meets all recognized quality standards.
- Low Installation Costs: Each tank is fitted with just one probe. The design, quality and reliability of our technology will also reduce ongoing maintenance costs
- No IT Set-up Costs: Our software is cloud-based which means no extra IT investment in hardware and no integration cost with your existing company IT systems

Secure, User-friendly Management Reporting

- Our secure web-based application is highly intuitive and suitable for a range of users including operations, finance and business owners.
- It provides continuous monitoring for every individual machinery within your fleet

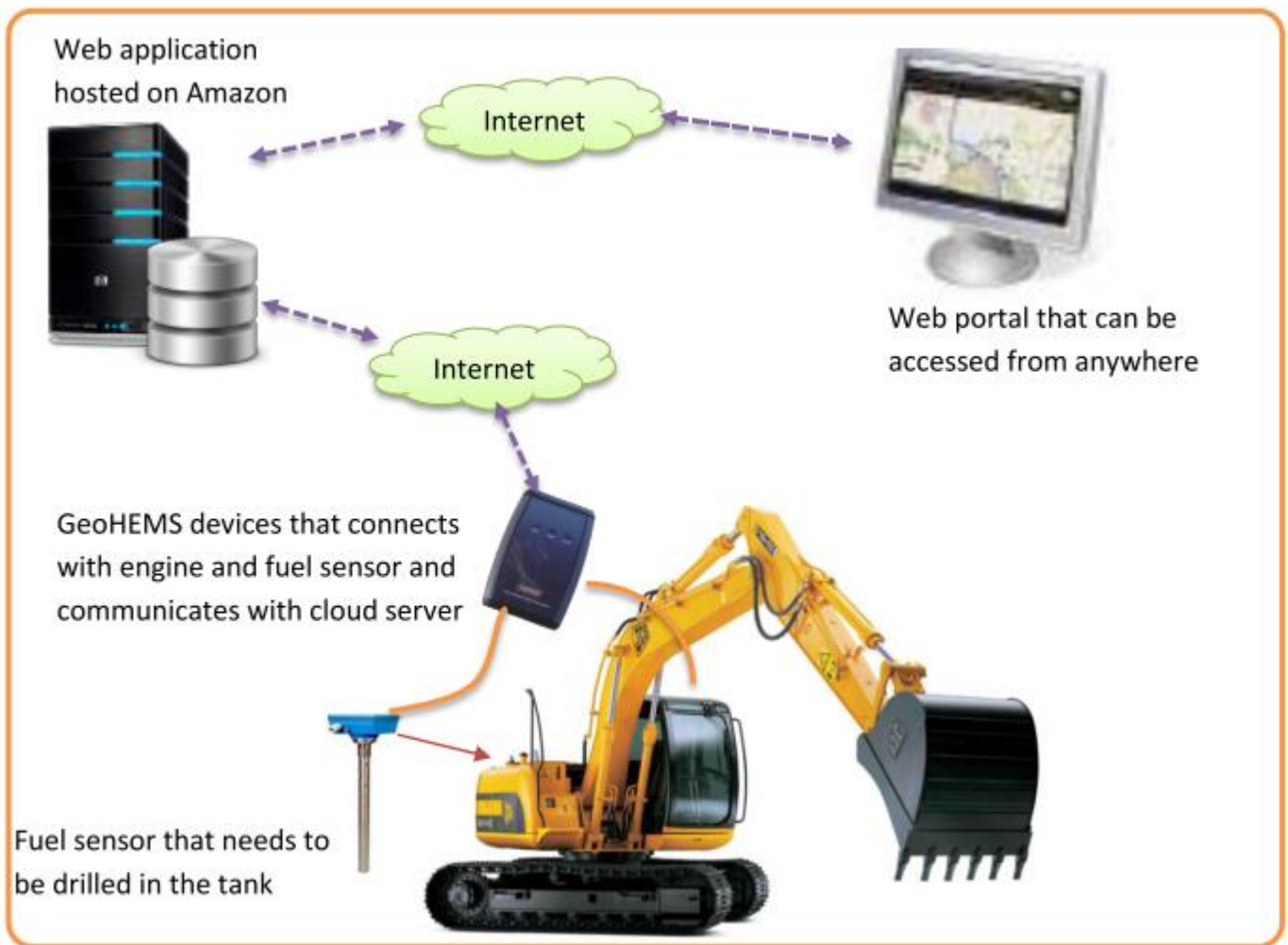


- Our management reports provide a verifiable record of your diesel stocks and the proactive management of diesel and operational costs for each single machine and can be consolidated for your entire operation.
- The remote real-time two way polling visibility provided by our system will aid in highlighting the return-on-investment for your operation.

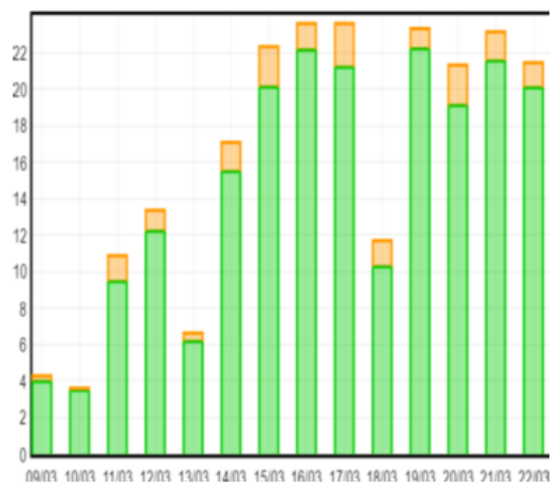
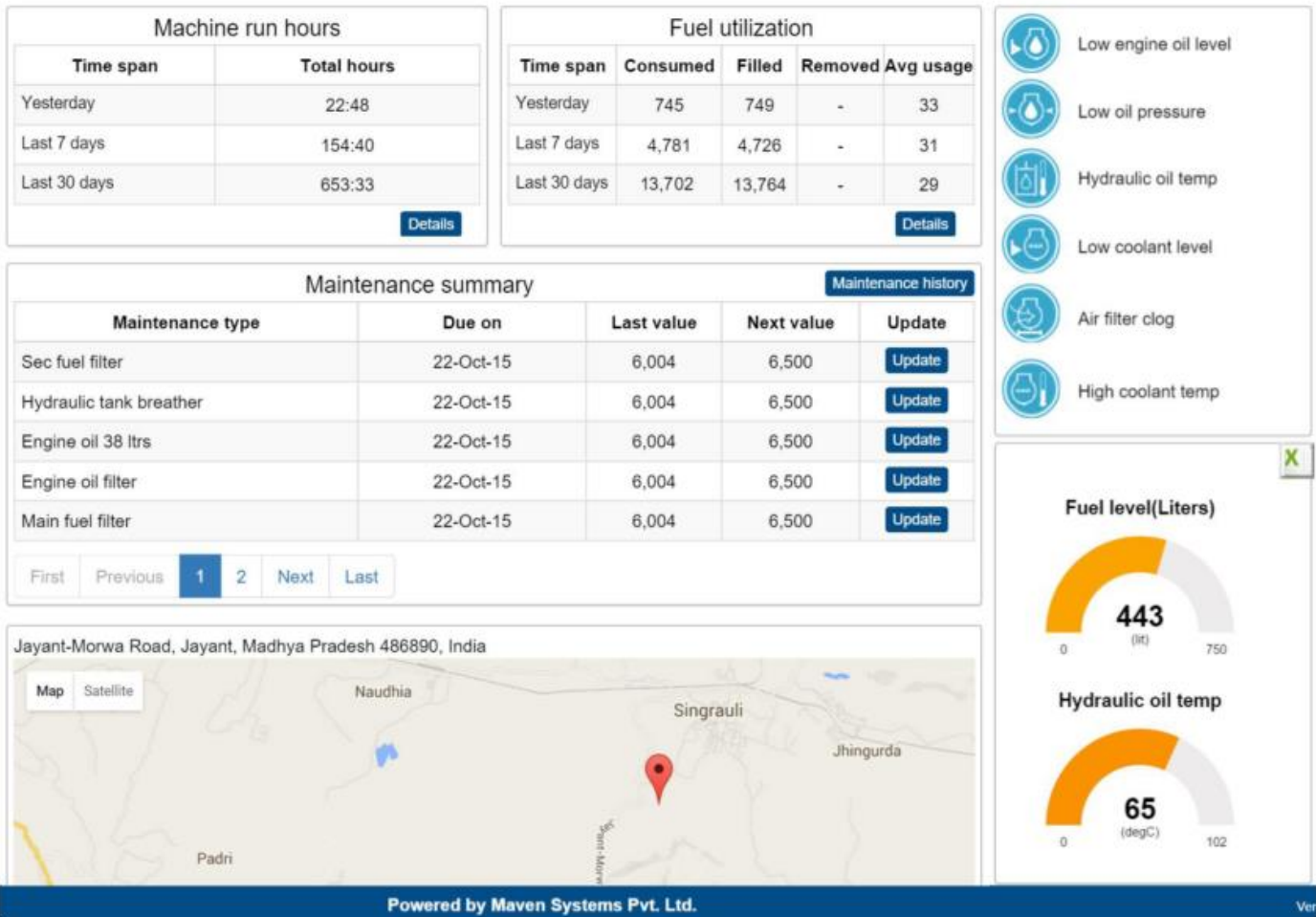
Solution Components



The below diagram shows the flow of information from the IEMS device to the user monitoring platform.



WHAT WE EMPOWER YOU TO MONITOR

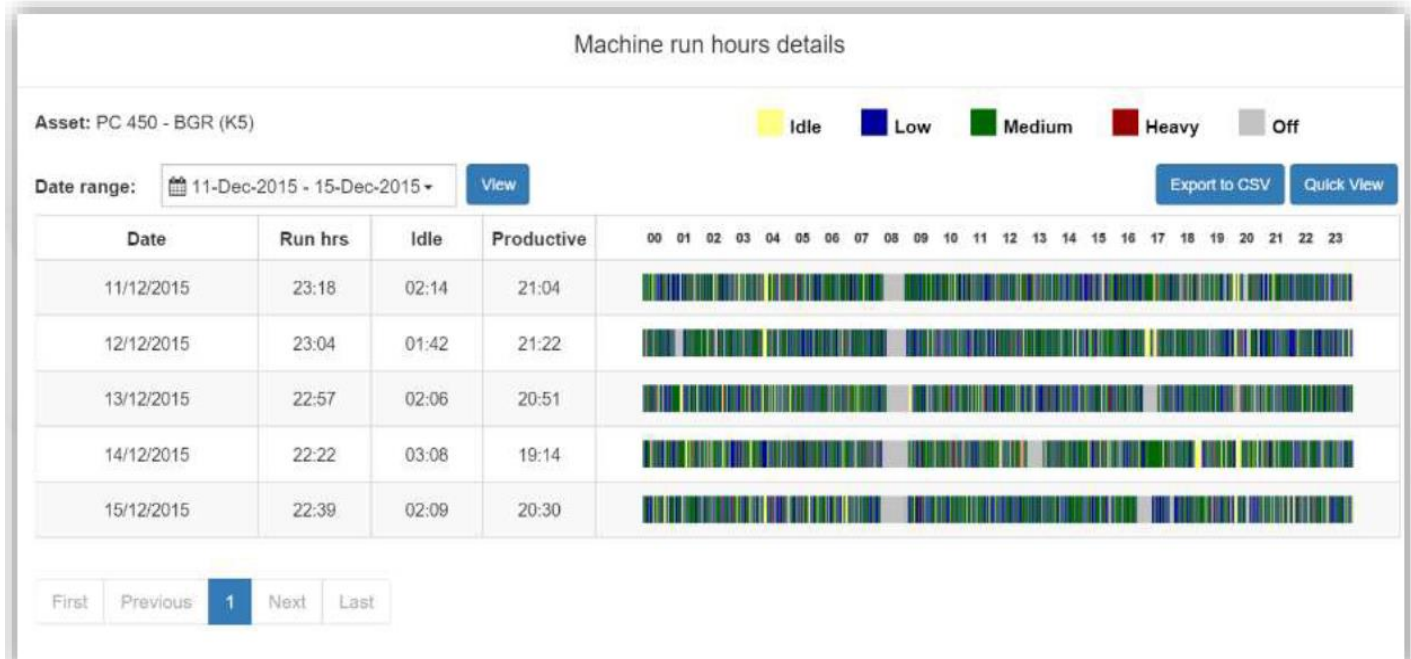


Working analysis

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Know the equipment usage pattern and find out productivity or equipment abuse



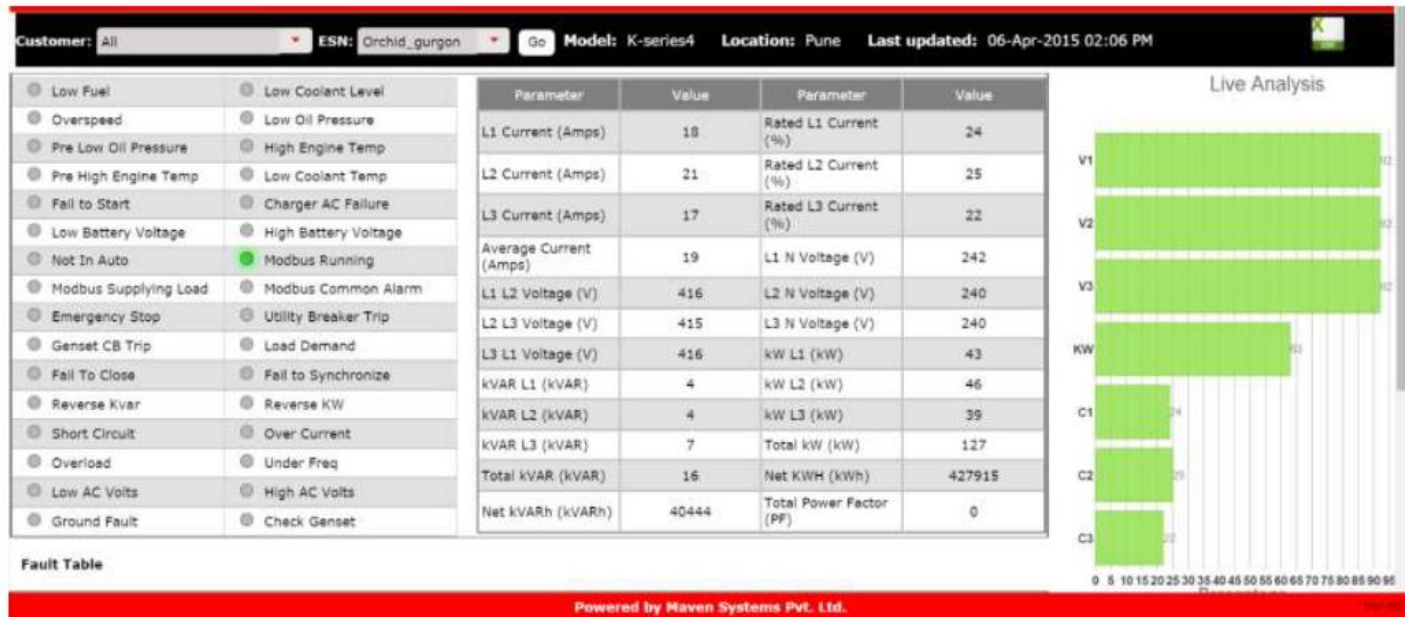
- Monitoring **HMR / SMR**
- Know the total hours and location of operation
- Know the split of actual work time
- Monitoring equipment with multiple engines like RMC trucks.
- Cranes can be monitored for hoist / slewing / trolley / travel motors



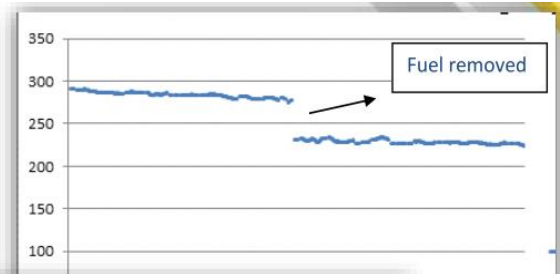
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Engine parameter monitoring:



- Know the **average fuel consumption** per hour
- Know **daily fuel consumed**
- Know **top-ups, thefts**



Fuel consumption analysis report

0-Jul-2013 **Monthly** Select Machine CAT - 980H

Machine number	Date	Total run hours	Total fuel consumed in liters	Total fuel filled in liters	Average fuel usage
CAT - 980H	07-Jul-2013	10:33	190	186	18 ltr/hr
CAT - 980H	08-Jul-2013	15:13	365	311	24 ltr/hr
CAT - 980H	09-Jul-2013	15:00	279	285	18.6 ltr/hr
CAT - 980H	10-Jul-2013	15:03	288	338	19.1 ltr/hr
CAT - 980H	11-Jul-2013	15:20	294	185	19.2 ltr/hr
CAT - 980H	12-Jul-2013	14:50	300	378	20.2 ltr/hr



Effectively manage the maintenance of your machinery to ensure longevity:






Model: PC-450 **M/c serial no:** N600059 **Customer name:** Larsen & Toubro Ltd. **Last connected on:** 16-Dec-15 21:56
SMR: 6,125 **Engine status:** ON **Location:** Unnamed Road, Jharkhand 825326, India

Maintenance summary

	Maintenance type	Due on	Last value	Next value	Update
🚩	Sec fuel filter	12-Nov-15	4,998	5,500	Update
🚩	Hydraulic tank breather	12-Nov-15	4,998	5,500	Update
🚩	Engine oil 38 ltrs	12-Nov-15	4,998	5,500	Update
🚩	Engine oil filter	12-Nov-15	4,998	5,500	Update
🚩	Main fuel filter	12-Nov-15	4,998	5,500	Update

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[Maintenance history](#)

-  Low engine oil level
-  High coolant temp
-  Low oil pressure
-  Hydraulic oil temp
-  Low coolant level



MACHINERY THAT CAN BE MONITORED

- Excavators
- Diesel generators
- Backhoe loaders
- Tensioners / pullers
- Harvesters
- Tractors
- Compactors
- Wheel Loaders
- Dump trucks
- Cranes / Lifts
- Forklifts



HEAVY MACHINERY CUSTOMERS



Conclusion:

We as Vericom networks look forward to having your organization as a valued customer. We are honoured to be given the opportunity to offer your esteem company our service.

