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## EXECUTIVE SUMMARY

Over the years, there has been a progressive increase in the demand for energy. It is perceived that this increase will continually soar, owing to increase in production rate as well as a need for more energy in today's dynamic economy.

Fuel has come to stay as an expensive yet fundamental component in our everyday business. In the light of this, accountability must be given to this resource to enjoy its total benefits.

Fuel Manager is a Remote Fuel Monitoring solution which gives empirical analysis of your stationary and mobile fuel tanks, using a web based technology.

As it were, remote fuel monitoring is in growing demand. Most often, it is used on assets that are left unsupervised or usually stationed at distant areas or constantly on the move e.g generators at base sites or collocation sites.

With Fuel Manager, stationary fuel tanks (e.g. in fuel Farms, generators etc.) as well as mobile fuel tanks (e.g. in trucks, busses, heavy equipment etc.) are remotely monitored 24 hours, 7 days a week. Fuel consumption reports, real-time detection and alerts are generated for:

- Low fuel levels,
- High consumption rates,
- Leaks detection,
- Fuel-theft attempts,
- Refuelling events, and more.

The solution is a combination of a hardware fuel monitoring device (sensors and probes) and a robust cutting edge web enabled application giving it the ability to capture real-time statistics on the consumption rate of fuel and also the condition as well as location of your asset. It is designed in such a way that it serves as a condition

monitor (monitoring the working process of your asset as it concerns engine hour), fuel monitor and a location notification tool - thereby, providing insight to the use of your fuel as well as asset's engine.



## WHY DO WE NEED A REMOTE FUEL MONITORING SYSTEM

It is no news that most economies today is to a very large extent dependent on fuel energy. Hence there is a need for accountability of this very precious resource as well as the assets that make use of it for other production.

A fuel monitoring system is needed for the following reasons:

- Determination of low fuel levels in generator, thereby protecting the asset from quick deterioration.
- Detection of high fuel consumption rates.
- Ability to discover leakage or faults.
- Ability to ascertain fuel-theft attempts and clarify refuelling events.
- Ability to tell when your asset is running i.e. if it is working or not.
- Real-time tracking of the asset's location.
- To monitor engine operations, allowing the detection of alarms or failures, and the identifying of issues before they become real problems.
- It helps the organization in calculating and generating various reports that are of benefit in terms of cost effectiveness and savings.



Fuel manager  
Condition, Fuel, Anti-theft Monitor

## FUEL MANAGER - OUR VALUE PROPOSITION AND BENEFITS

Our Fuel manager solution is designed to offer value to the organization in which it is deployed in. It gives organizations an opportunity to worry less about the security of their assets in remote areas where they cannot easily reach at all times and also provides a tested cost savings opportunity to a minimum of 30% on operational costs alone.

The Fuel Manager comes with a number of values-add which are outlined below:

- Very competitive cost - good value at reasonable price.
- Advanced control and reporting features catering to operations and administration.
- Excellent data analysis and reporting.
- It is compatible with any generator model.
- Excellent service support.

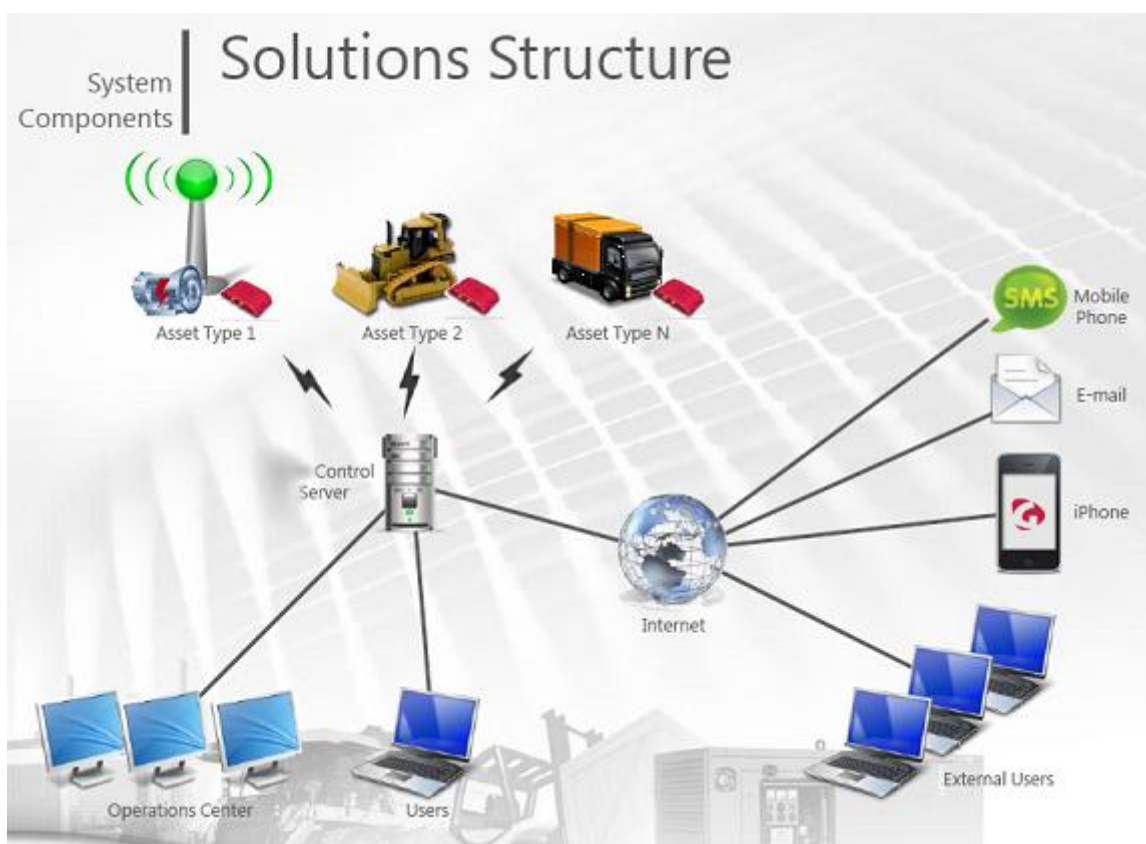
The benefits include but not limited to:

- Ability to analyze the behaviour of the generator from actual fact sheets and not second guessing - This helps you match the total expenditure vis-a-vis the derived utility on the asset.
- Ability to determine cause and time of the asset's (e.g. generator) temporary malfunction or total breakdown from the reports and history thereby facilitating accuracy of information in the process of investigating such incidence.
- Ability to ascertain employee theft or burglary incidence on the asset itself or the fuel.
- Ability to monitor engine operations and raise alerts on failures, identifying issues before they become real problems.
- Ability to view reports and information on-the-move via web.

**THE SOLUTION**

The Fuel Manager has been designed for use as a condition monitor, a fuel monitor, an anti-theft tracking monitor and also for determining the status and precise geographic position of your asset e.g. generator.

**Schematic of Solution Architecture**



## CONDITION MONITOR

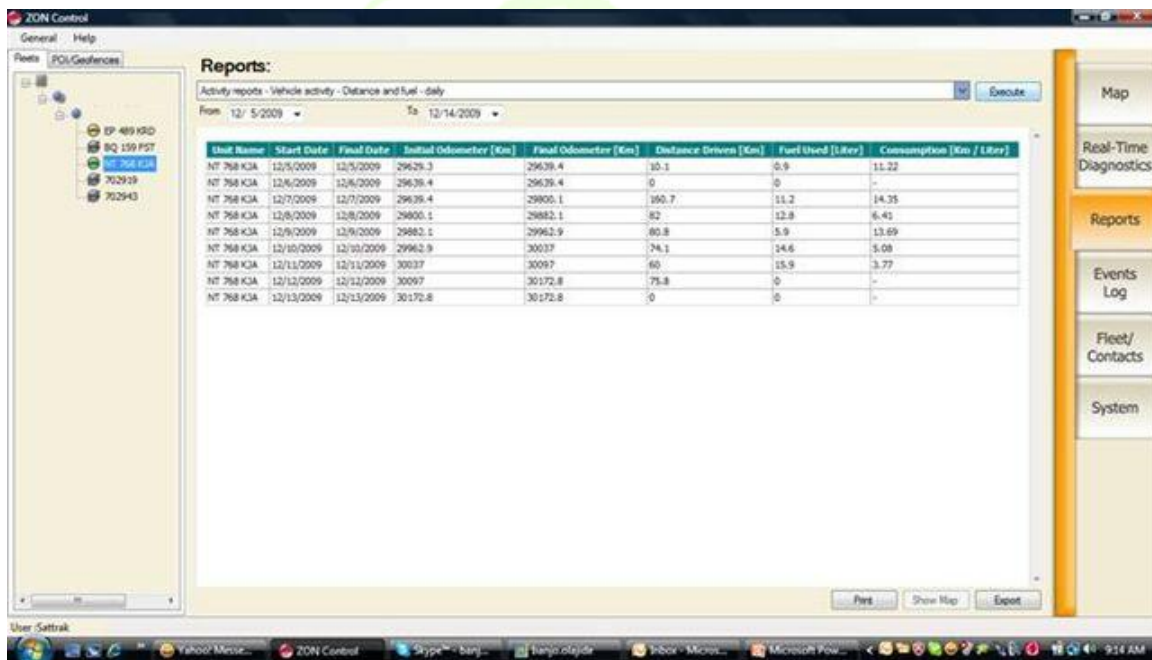
This part of the solution gives you all that you need to know about the condition of the asset. The monitor lets you know the precise number of hours that the asset has been up for, as well as reports fault and gives maintenance reminders. This monitor provides a detailed overview on the condition of your asset

## FEATURES

- Engine run hours.
- Real-time fault reports and alerts notification, such as general fault or common alarm, low fuel, engine temperature, oil pressure, engine over-crank, engine.
- Maintenance reminder: Alert reminder for service renewals either via e-mail or SMS's
- Low battery and battery disconnect alarms: An alert notification is sent if the battery goes low or is disconnected.
- Engine on/off updates: automatically reports each time the asset (generator) is turned ON and OFF.
- The detailed work history of the Asset (e.g Generator work history)



Real-Time Diagnostics



Activity Reports, showing distance covered and fuel used.

## FUEL MONITOR

The fuel monitor is a sensor that gives real-time information of the asset's calibrated fuel gauge. This sensory device can be deployed in any fuel tank, whether it's a farm tank, generator, etc.

### Features

The sensors can be applied to gauge various tank models with the following depths:

- Up to 700mm (70cm) for the shallowest tanks,
- Up to 1000mm (1m),
- Up to 1500mm (1.5m),
- Up to 1700mm (1.7m),
- Up to 2000mm (2m), and
- Up to 2500mm (2.5m) for the deepest tanks.



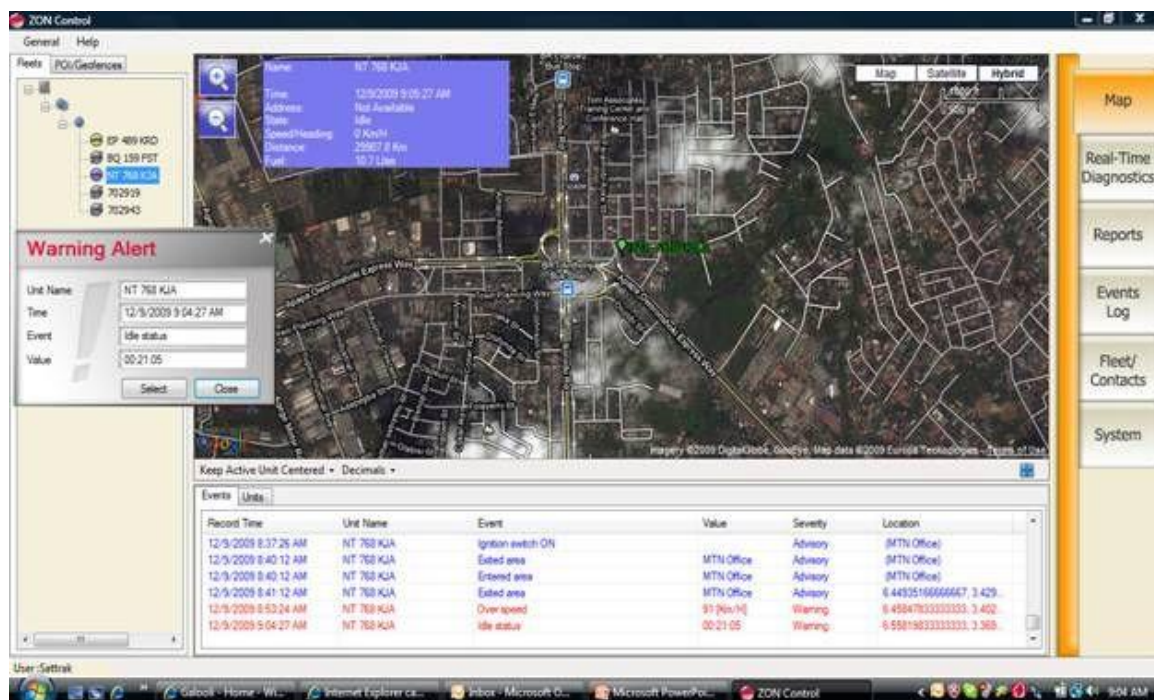
Graph showing fuel consumption and distance makes fuel theft easier to spot.

### ANTI-THEFT TRACKING MONITOR

The tracking device monitors the asset's geographic position using GPS satellite system.

#### Features

- Location tells you the exact point your fixed asset are residing on.
- Geofencing which gives an alert when the asset has moved out of a defined radius



## OTHER FEATURES

All parts of the solution also have the following features:

- Capable of supporting any make or model of generator, overhead fuel tank or fuel farms.
- Real-time updates: authorized users can collect up-to-the minute updates from any machine, at any time or can be sent via e-mail or integrated with an SMS gateway for SMS alerts.
- Data export: The database information can be exported upon demand to an Excel, Word or Pdf format.

## Security Features

Fuel Manager has sensitive and robust **security** features, such as:

- User access privilege definition.
- Activity log.
- Transaction entry restrictions.
- Data view restriction.
- Multilevel transaction approval.
- Backup and restore - this allows your data to be backed up in a repository and can be recalled for auditing.

## IMPLEMENTATION

A timetable/work plan for the implementation of the software will be drawn up and agreed. The implementation schedule will contain responsibilities and timelines shall be allotted appropriately.

Following completion of our work, we shall issue a written report to you.

## FEES

Our fees are based on the following:

- **Licensing fee of the Software:** This is a nonexclusive and non-transferable license to use the application in object code form installed in a single or multiple locations on a workstation for an agreed number of users.
- **Hardware fee:** This is the cost of the modem and sensors that will be installed on the fixed asset. This is a one off cost; however renewal or replacement after expiration of the warranty period will attract a token.
- **Implementation fee:** This is the cost associated with deployment.
- **Training Fee:** This fee is associated with transference of knowledge and skill acquisition. The type of training recommended is the off-the-job training, this allows people to get away from work and totally concentrate on the training being given. The personnel recommended for this training includes Admin Personnel's, Fleet managers, Accountants, Managers, and I.T Administrators.
- **Annual Maintenance agreement fee:** This fee is for continuous support for the software. This fee is free for the year of acquisition of the package. But shall be due at the anniversary of the sign-off of the project.

The rates do not include Value Added Tax (VAT) (assessed at 5% of the fees) and all expenses incurred for services outside Lagos Metropolis

will be on your account; air-tickets, Taxi fares, Hotel Accommodations and Feeding.

#### **ABOUT CONCEPT NOVA**

Concept Nova, a member of the Concept Group, is one of Nigeria's fastest growing Information Technology service companies, utilizing an extensive indigenous and robust infrastructure to provide bespoke software solution to clients and partners worldwide. As an operating subsidiary of the Concept Group, our disciplined processes and significant investment in our people has helped us build a platform which has achieved significant growth to date.

We offer a leading edge array of applications / products with an uncompromising emphasis on value. We have serviced various industries within the past thirteen years and continue to deliver excellence to our clients and partners in this ever dynamic space

Our transparent, efficient and flexible world-class software development processes zero down risks of project failures and creates powerful software solutions that meet present as well as future demands. We are proud to make our customers satisfaction our pride

#### **Our Vision**

Concept Nova will become the reference point for all Africa Business Software Solution.

#### **Our Mission**

We aim to become a genuinely customer-focused organization by providing highly-customized service solutions which complement generic products that are superior to all others in any market we choose to compete.

### **Our Services**

Our dedicated team of qualified developers apply their ardent insight and visualization skills to your creativity to convert your business requirements to an excellent functional and visually appealing digital solution while maintaining consistent value and superior quality.



Combining proven expertise in technology, and an understanding of emerging business trends, Concept Nova gives its customers access to numerous services and solutions, including:

- Custom software design and development
- Information technology consulting
- Hardware sales and supplies

