



D & G INSTALLATIONS
INDUSTRIAL MONITORING
SYSTEMS

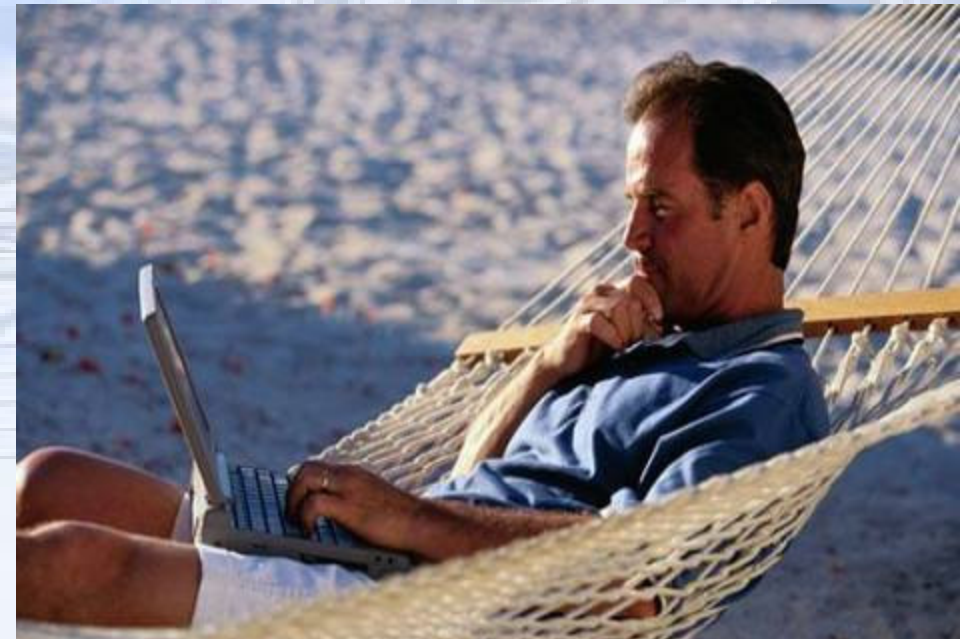


Innovative Industrial Monitoring Solutions

*We deliver your sensed information to you,
wherever you are*

Vision

***To provide turnkey remote telemetry
solutions for industrial sensing
applications with Internet based delivery
/ control.***



Products /Services

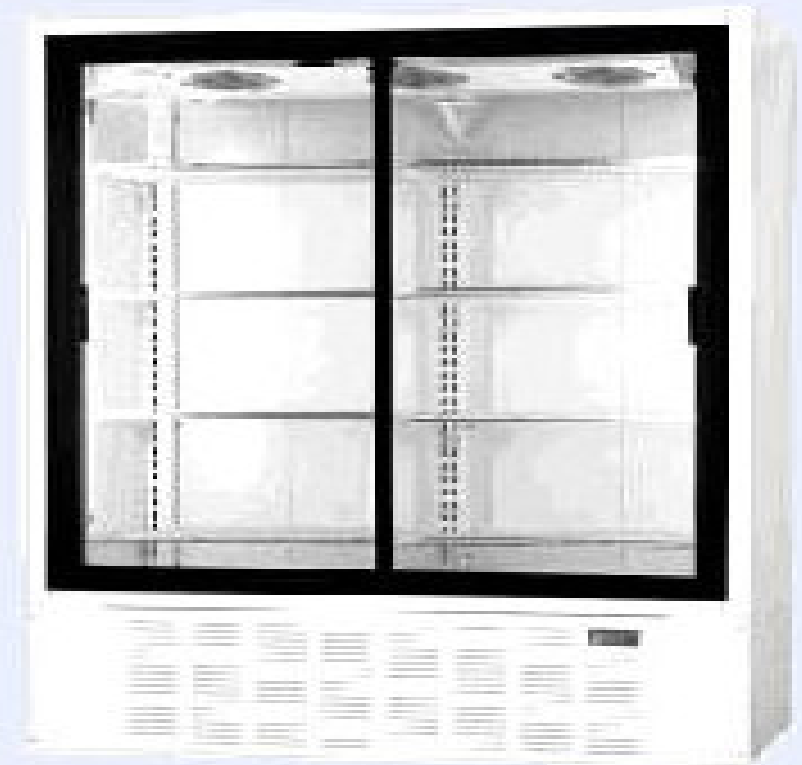
- **Advanced Remote Telemetry Units (GSM GENIE) allow sensing and control of digital/analog inputs/outputs**
- **GSM GENIE can interface with many industrial sensors /controllers such as PLCs**
- **Information is sent via telemetry interface to database on remote server**
- **Depending on client need, server can be maintained by D & G Installations**
- **Data is gathered from database and presented to client via state of the art Rich Internet Applications (RIA's) using such technology as Open Laszlo (www.openlaszlo.org) and PHP (www.php.org) and JavaScript**
- **Several telemetry types are currently supported by the GSM GENIE hardware:**
 - **Wireless connections such as GSM {SMS, Data call, GPRS),**
 - **Wired Connection such as RS485/Ethernet**
 - **Possibility to link via satellite phone**
- **GSM based RTU's provide capability to send alarms via SMS to nominated parties when HIGH/LOW alarm conditions are reached**
- **This system can be managed via your cell phone to obtain information and for control purposes.**
- **GSM GENIE provide capability to integrate with RF ID tags {also developed by D & G Installations)**
- **RF ID tags can sense such variables as temperature, humidity, power failure, movement and report on regular intervals or set events via the GSM GENIE to the remote server**
- **our system is can be intergrated with SCADA type operating systems**

POINTS MONITORED



- GENERATORS.
- AIR-CONDITIONING.
- REFRIGERATION.
- WAREHOUSE AREA AMBIENT TEMPERATURE.
- ICE FRIDGE TEMPERATURE /POWER.
- ICE MAKER
- THE ARTU CONTROLLER WILL HAVE A LCD DISPLAY TO SHOW AN ALARM ACTIVATION WITH AN AUDIBLE SIREN.
- POWER STATUS
- MULTIPLE DIGITAL AND ANALOG INPUTS
- MULTIPLE DIGITAL AND ANALOG OUTPUTS
- TO MONITOR THE FUEL PUMP DB POWER CONDITIONS:
 - EACH OF THE SUBMERSIBLE PUMP CONTACTORS ON THE LOAD SIDE TO LET YOU KNOW IF THERE IS POWER GOING TO THE PUMP
 - TO MONITOR THE OVERLOAD TRIP FOR EACH SUBMERSIBLE PUMP.

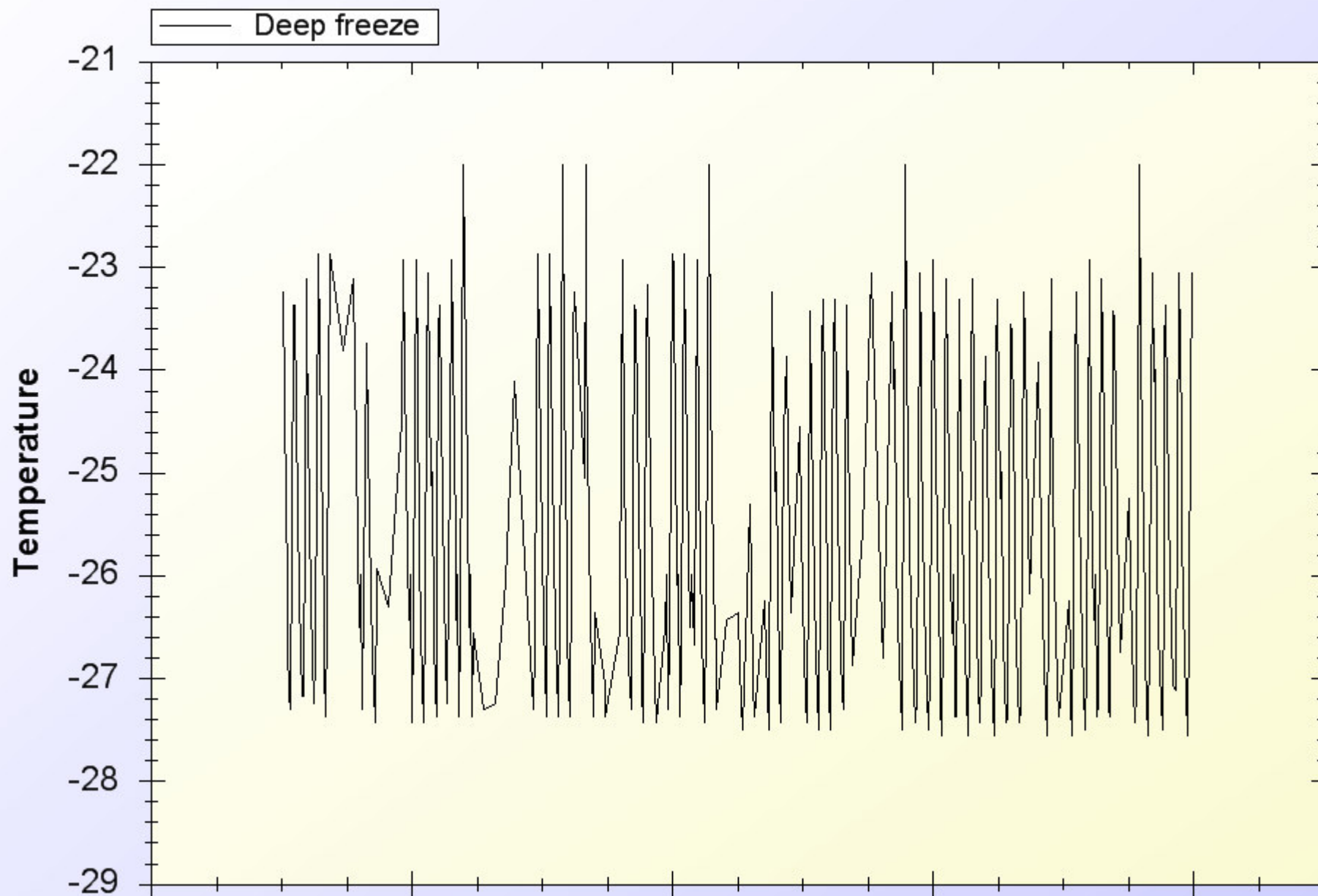
**MONITORING OF ALL TYPES OF REFRIGERATION /
FREEZER UNITS AND POWER FAILURE**



BENEFITS

- ESSENTIAL MANAGEMENT TOOL.
- OUR SYSTEM IS WEB BASED GIVING YOU THE FLEXIBILITY TO CHECK , MONITOR YOUR SITES FROM A REMOTE LOCATION.
- ASSIST WITH STAFF MANAGEMENT.
- REDUCING TIME AND COSTLY MAN HOURS RELATING TO FAULT FINDING.
- WIRE-LESS - CUTTING OUT POSSIBLE CABLE THEFT.
- STORING OF RECORDED HISTORY IN GRAPH AND ANALOG FORM.
- ALARM NOTIFICATION VIA SMS'S AND EMAIL.
- TIME MANAGEMENT.

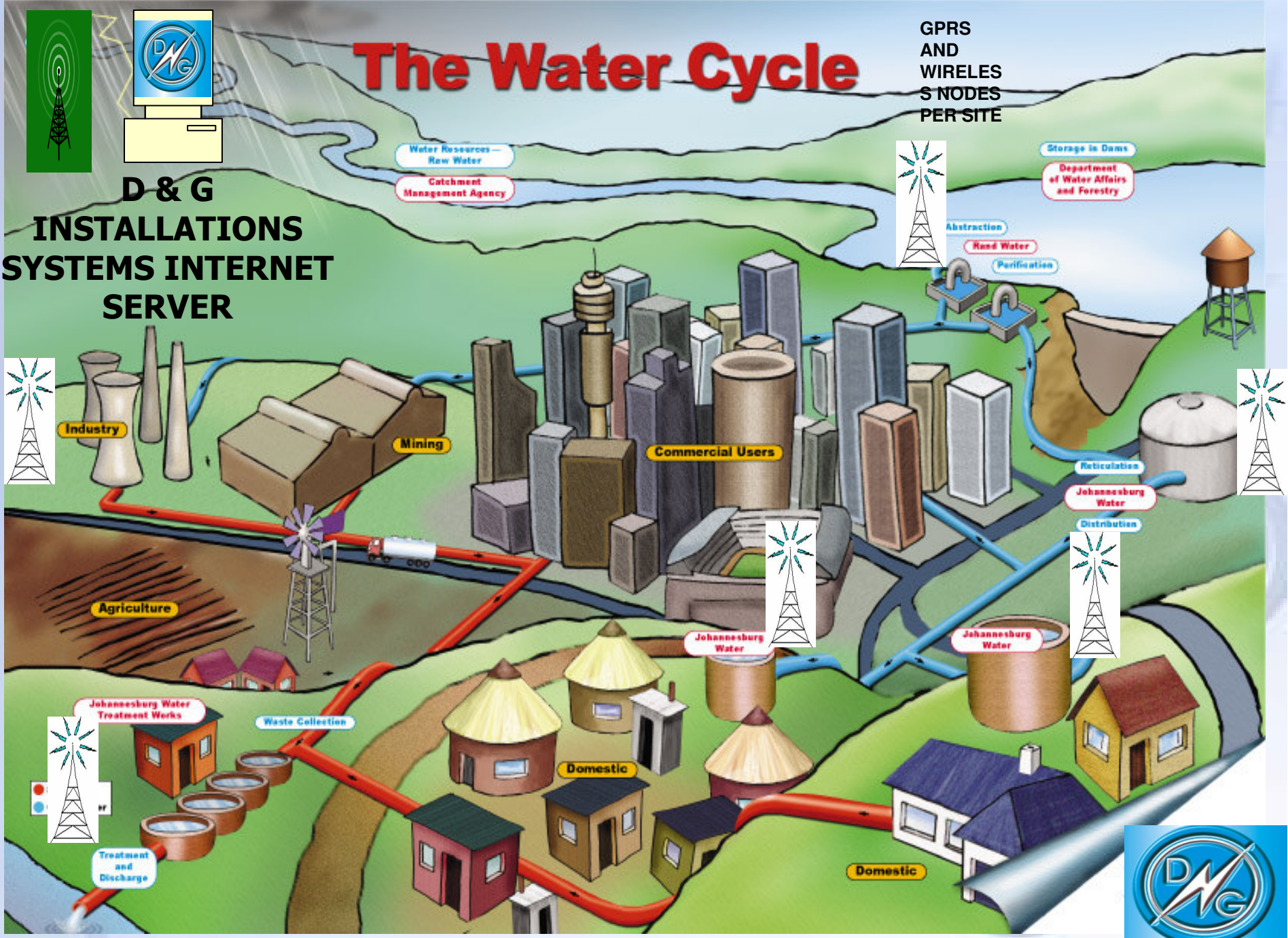
DPR Pharmacy - Deep freezes (2009/07/06-2009/07/13)



The Water Cycle

GPRS
AND
WIRELES
S NODES
PER SITE


D & G
INSTALLATIONS
SYSTEMS INTERNET
SERVER

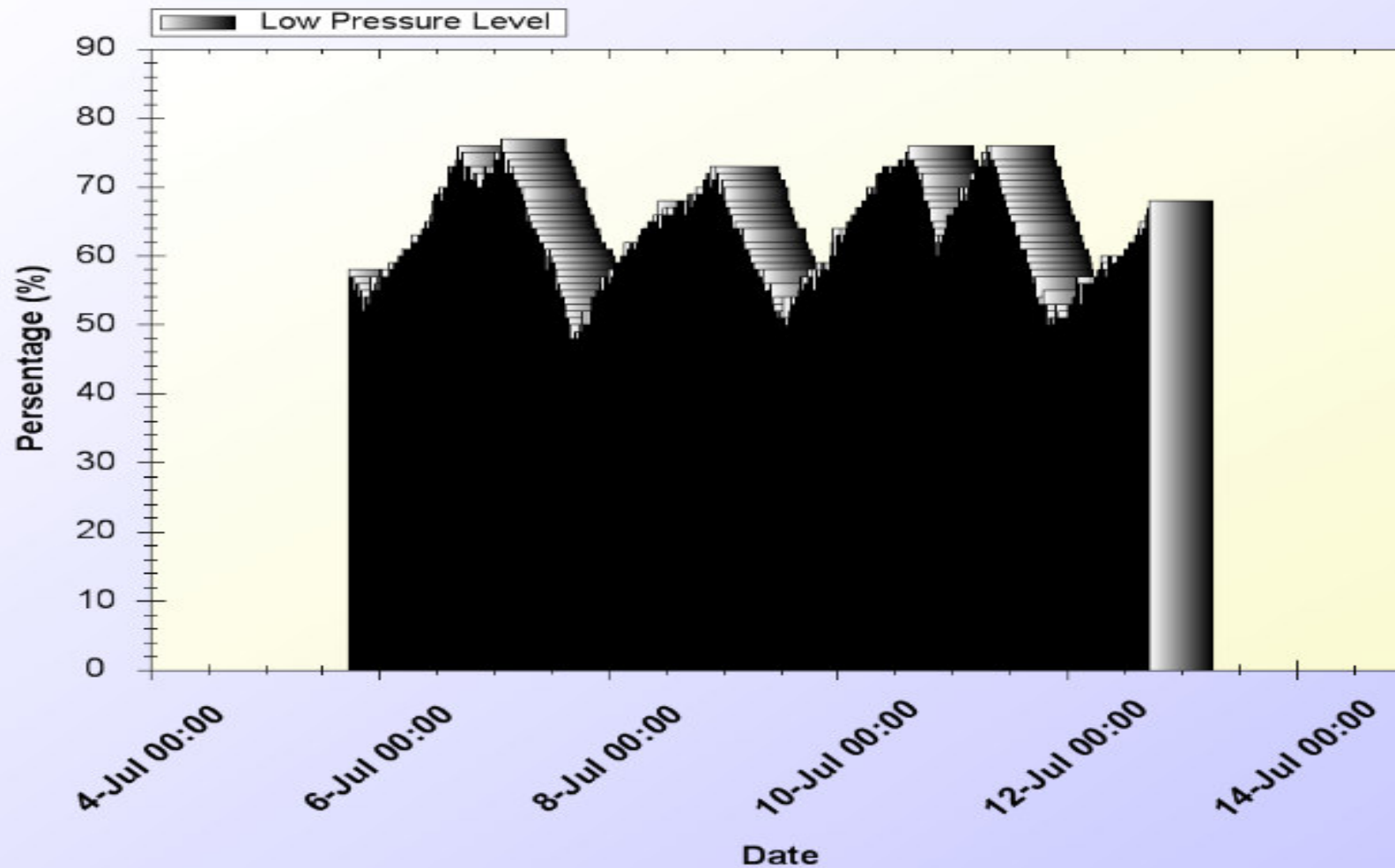


POINTS MONITORED



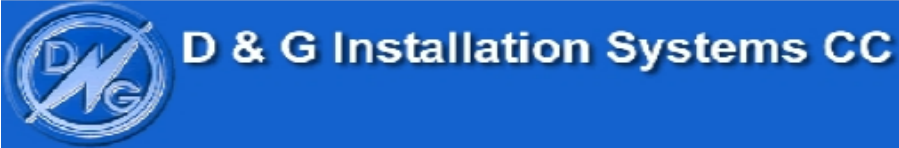
- WATER LEVELS
- FLOW RATES
- POWER STATUS
- MULTIPLE DIGITAL AND ANALOG INPUTS
- MULTIPLE DIGITAL AND ANALOG OUTPUTS
- COTROLING OF PUMP STATIONS

Delmas Low Pressure Tank Level (2009/07/06-2009/07/13)



SMS LOG

Back Forward Reload Stop Home
Copy Print New Window New Tab Most Visited Getting Started Latest Headlines



- Session
 - Logout
 - Change Password
- Service
 - Telemetry
 - SIM Management
- Administration
 - Client Administration
 - Site Administration

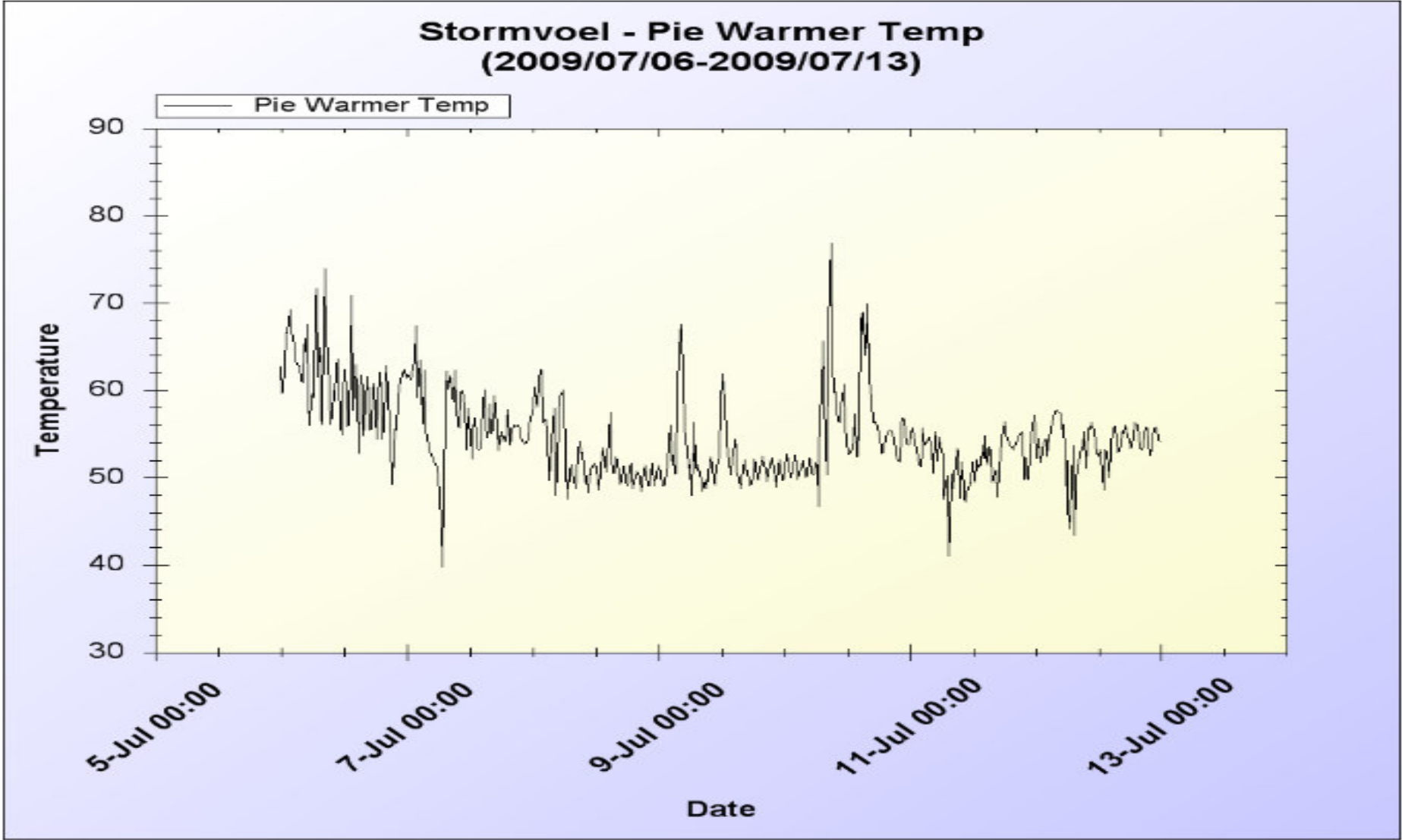
Telemetry - Site Selection - Streams - Data (Message)

Date	Date	Value	
Today	2009/07/15 14:37:19	Modder Pump on sms confirm	
Yesterday	2009/07/15 14:35:00	Switch Modder On	
Week	2009/07/15 03:09:52	Pump off sms sms confirm	
Last Week	2009/07/15 03:06:45	Switch Modder Off	
Specific	2009/07/15 03:06:45	Startup	
From	<input type="text" value="2009/07/13 00:00:00"/>	2009/07/14 23:17:01	Pump off sms sms confirm
To	<input type="text" value="2009/07/20 00:00:00"/>	2009/07/14 23:15:00	Switch Modder Off
		2009/07/14 03:10:18	Modder Pump on sms confirm
		2009/07/14 03:07:12	Switch Modder On
		2009/07/14 03:07:12	Startup
		2009/07/13 16:12:07	Modder Pump on sms confirm
		2009/07/13 16:10:00	Switch Modder On
		2009/07/13 03:09:54	Pump off sms sms confirm
		2009/07/13 03:07:40	Switch Modder Off
		2009/07/13 03:07:40	Startup

POINTS MONITORED



- GENERATORS.
- AIR-CONDITIONING.
- REFRIGERATION.
- SHOP AREA AMBIENT TEMPERATURE.
- PIE WARMER TEMPERATURE.
- SANDWICH BAR TEMPERATURE /POWER.
- DELI FRIDGE TEMPERATURE /POWER.
- COOL DRINK FRIDGE.
- ICE FRIDGE TEMPERATURE /POWER.
- BAKERY FREEZER TEMPERATURE /POWER.
- ICE MAKER
- MONITOR THE BACK DOOR INTO THE COOL DRINK FRIDGE.
- THE ARTU CONTROLLER WILL HAVE A LCD DISPLAY TO SHOW AN ALARM ACTIVATION WITH AN AUDIBLE SIREN.
- POWER STATUS
- MULTIPLE DIGITAL AND ANALOG INPUTS
- MULTIPLE DIGITAL AND ANALOG OUTPUTS
- TO MONITOR THE FUEL PUMP DB POWER CONDITIONS:
 - EACH OF THE SUBMERSIBLE PUMP CONTACTORS ON THE LOAD SIDE TO LET YOU KNOW IF THERE IS POWER GOING TO THE PUMP
 - TO MONITOR THE OVERLOAD TRIP FOR EACH SUBMERSIBLE PUMP.



POINTS MONITORED



- **FUEL LEVELS.**
- **POWER STATUS.**
- **COIL PRESSURE.**
- **BACK – UP BATTERY VOLTAGE**

AGRICULTURAL AREAS MONITORED

- **POULTRY**
- **HATCHERIES**
- **PIGGERIES**
- **DAIRIES**
- **COLD PRODUCE STORAGE**
- **MUSHROOM FARMS**
- **GREEN HOUSES**

POINTS MONITORED



- TEMPERATURE
- HUMIDITY
- Co2 LEVELS
- POWER STATUS
- CONTROL SYSTEMS
- GENERATORS.
- ELECTRIC FENCES
- AIR-CONDITIONING.
- VACCINE REFRIGERATORS.
- LEVELED COLD STORAGE MEASUREMENT AND MONITORING
- SPRINKLER / IRRIGATION SYSTEMS
- BORE HOLES AND RESERVOIRS
- SILO LEVELS
- MULTIPLE DIGITAL AND ANALOG INPUTS
- MULTIPLE DIGITAL AND ANALOG OUTPUTS



Climate for Poultry

Poultry is very sensitive to changes in temperature and humidity. The results of getting it wrong can quickly be seen in the production results; meat or eggs

Ventilation

Whether it is a matter of finding the ideal way for air to enter the structure; be exhausted from the structure; or, be circulated inside the structure

Heating

Depending on the type of fuel used and the application in which it is used, air heaters, can have many configurations.

Controls

Having equipment for climate control without having a controller to orchestrate their functioning is worthless



Climate for Dairy

Heat stress is caused by a combination of temperature and humidity. The milk production of cows suffering from heat stress is decreased significantly.

Common climate control mistakes

Health problems, dirty pens, poor technical performance and high energy and veterinary costs. These can all be due to incorrect climate control. Often it is related to the wrong installation and/or programming.

By René Stevens

Problems with climate control are common on pig farms. The experiences of three industry specialists in the Netherlands have been pooled together to create a list of the most frequent faults and solutions.

Incorrect positioning of the thermostat

The thermostat controls the ventilation and heating. Through the incorrect positioning of this temperature sensor, the ventilation control system cannot react effectively to changes in the air circulation and temperature.

Place the outside thermostat in a protected position. The inside temperature sensor belongs by the door and the ventilation channel in the middle of the department, approximately 30 cm to the side of the feeding passage, just above the pen divisions. With ceiling ventilation, the sensor must hang just above the pigs, making sure it is at a height that they cannot reach.

Temperature too high in the farrowing room

For every degree above 16°C, the feed intake in the farrowing pens drops by around 100g per day. A high temperature leads to less milk produc-



The reason for many climate control problems can be identified using a smoke screen test; very useful for checking that the position and size of the air inlets is correct.

tion, a higher risk of overlaying and insufficient 'robust' piglets at weaning.

Set the temperature in the farrowing rooms at 22°C when litters are due to be born. From birth onwards, reduce the temperature by 1°C per week. Direct the fresh, incoming air past the sow's head, particularly in small departments.

Incorrect programming of the climate control computer

A narrow temperature band results in too quick a reaction by the control computer to temperature changes

and can create high heating costs; while with a large difference between the lower and upper temperature limits, the room temperature stays too high, particularly in the summer.

Input the start day correctly; otherwise the pre-programmed ventilation curve will not correspond to the situation in the pen. Adapt the temperature zone to the outdoor climate conditions. Install an outside sensor for automatic control. Correct the day counter to the piglet weight at introduction. Set the neutral zone in at 1.5-2°C.



GSM Genie

Your wish has been granted

Take Control of your enterprise.

Monitor and control motors, pumps, geysers and a whole range of other electrical machines and devices. By maintaining a constant link with remote equipment, the GSM Genie can put you in total control from your office or home. Resources scattered over vast areas are at your finger tips.



React to your changing environment.

Data streamed to you directly from every corner of your business enables you to respond to alerts and make informed decisions. By using a myriad of remote sensors the GSM Genie tirelessly monitors efficiency and availability, immediately informing you when your attention is required. Use the GSM Genie as a sentry to your secure environment and be notified the second someone trespasses or tampers with your equipment.



Sleep Soundly at night.

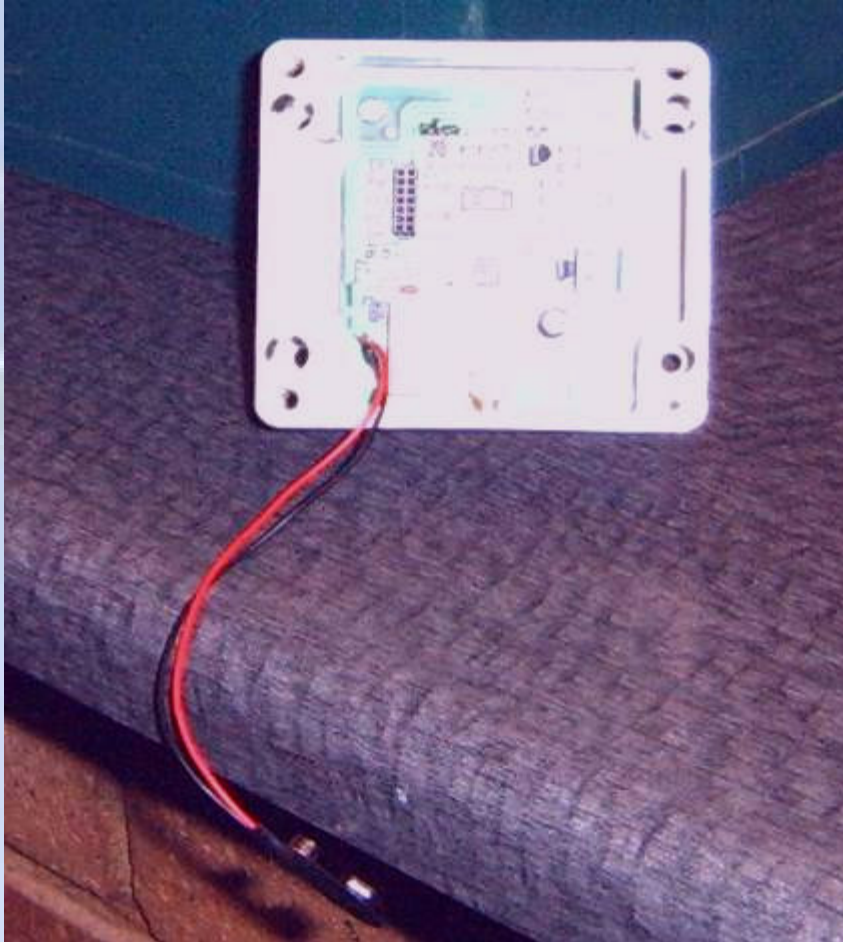
The GSM Genie has been developed for the harsh African environment. Using technologies that have been proven and refined over many years, the GSM Genie delivers consistent and reliable service.



TECHNICAL SPECIFICATION

Data Logging	Industry Standard SD Card up to 2GB capacity
Remote Telemetry	Quad band 3G GSM technology
Sensors	Vast array of 1-Wire™ sensor devices: <ul style="list-style-type: none">• Temperature• Humidity• Wind Speed and direction• A / D Converters• iButton® Devices• <i>etc.</i>
Miscellaneous I/O	<ul style="list-style-type: none">• Analogue Input• Digital Input• Digital Output• 2 x Relays• Configurable LED
Serial Port	RS-232 compatible serial port
Power Management	Monitor and control power supply to your equipment including battery supervisory control.
GVM Scripting	Utilizing Blueroom GVM technology, the behavior can be customized and remotely altered to suit changing requirements.
Warranty	1 Year Comprehensive Manufacturers warranty

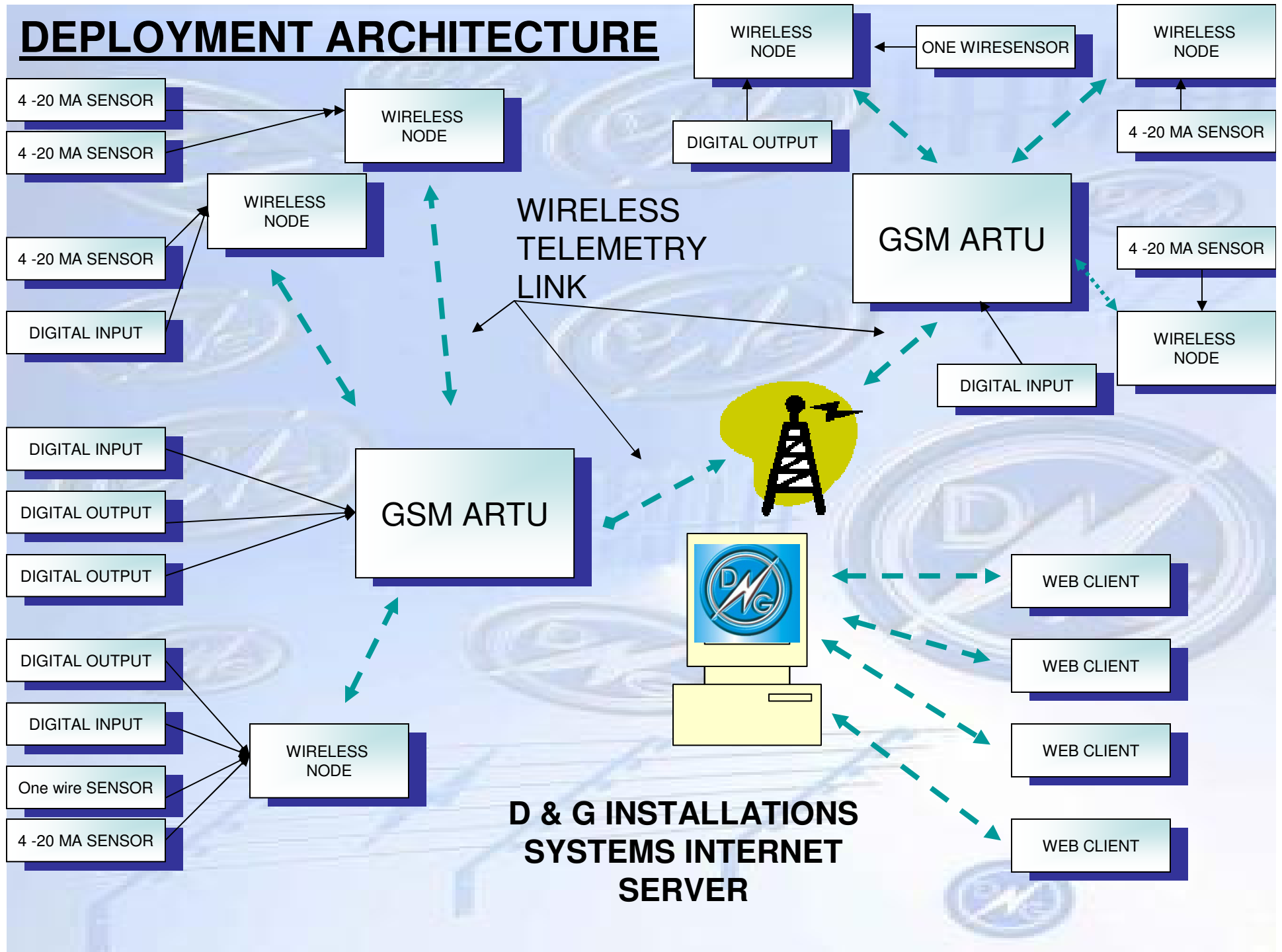
WIRELESS TRANSCEIVER NODE



- DIGITAL AND ANALOG INPUTS
- DIGITAL AND ANALOG OUTPUTS
- BATTERY BACKED UP UNITS
- RS-232 COMMUNICATIONS PORT
- CAN MONITOR 4-20MA SENSORS, TEMPERATURE, HUMIDITY AND Co2 PROBES.

- **RF ID Interface for D & G Installations RF ID tags**
- **A total of 25 RF ID tags can be allocated to one ARTU**
- **Other**
 - 8 Kilobytes e2 Prom storage
- **Power**
 - 12 Volt DC (250mA)
- **Identified by unique ID**
- **Data is represented in a 12 bit binary format and resolution.**
- **Transmission distance is approximately 900m line of site.**
- **Data is transmitted approximately once every 15 minutes (can be adjusted according to users specification)**
- **Antenna type is a PCB BIFA as per manufacturers specification.**
- **4 – 20 mA connector /Rs 485 supported on PCB**
- **NB SPECIFICATION CAN CHANG WITH OUT ANY NOTICE.**

DEPLOYMENT ARCHITECTURE



EASY VIEWING OF YOUR REMOTE SITES



D & G Installation Systems CC

Login

Client :

User :

Password :

Remember Me :



Session

[Logout](#)

[Change Password](#)

Service

[Telemetry](#)

[SIM Management](#)

Administration

[Client Administration](#)

[Site Administration](#)

Telemetry

Welcome to the Telemetry Site.

From here you can access the telemetry data streams for all of your devices in the field.

Data Streams

View the data stream that are being transmitted from your devices.

Alerts

View any alerts that have been generated by your devices in the field.

Manage

Manage your devices in the field. Send control commands to re-configure your remote devices.

Administration

Group your devices into logical groups to ease your management task. Configure preferences to customize this service.



Session

[Logout](#)

[Change Password](#)

Service

[Telemetry](#)

[SIM Management](#)

Administration

[Client Administration](#)

[Site Administration](#)

Telemetry - Site Selection

Telemetry Site Selection

Please select the site that you want to monitor.

D&G

[AECIKZN](#)

[BP](#)

[BP Brickfield](#)

[Delmas Water](#)

[Delmas Modder Pumps](#)

[Delmas Sundra HP](#)

[Delmas Sundra LP](#)

[Ellot High Pressure](#)

[DPR Pharmacy](#)

[Earlybird](#)

[Hekpoort](#)

[Kaalplaas](#)

[Tedstone East](#)

[JHB Water](#)

[SA Blood Bank](#)

[Sasol](#)

[Sasol Circle Centre](#)

[Sasol Mintys Crown](#)

[Sasol Regim Mundi](#)

[Sasol Sedibeng](#)

[Sasol Stormvael](#)

[Sun City](#)



Session

- Logout
- Change Password

Service

- Telemetry
- SIM Management

Administration

- Client Administration
- Site Administration

Telemetry - Site Selection - Streams

	Device	Status	Last Contact	Last Data	Detail		
Sundra Low Pressure					Graphs		
Eskom Power	Delmas Sundra Low Pressure	Active	2009/02/11 10:45:00	ON	Alerts	Graphs	Data
Input Voltage	Delmas Sundra Low Pressure	Active	2009/02/11 10:45:00	11 V	Alerts	Graphs	Data
LOG_1	Delmas Sundra Low Pressure	Active	2009/02/11 03:07:17	GVM_start()	Alerts	Graphs	Data
LOG_2	Delmas Sundra Low Pressure	Active	2009/02/11 03:07:17	3535790171...	Alerts	Graphs	Data
LOG_4	Delmas Sundra Low Pressure	Active	2009/02/11 03:07:47	+CMGS: 190	Alerts	Graphs	Data
LOG_8	Delmas Sundra Low Pressure	Active	2009/02/09 09:14:35	AT+RESET	Alerts	Graphs	Data
Low Pressure Level	Delmas Sundra Low Pressure	Active	2009/02/11 10:30:00	66.0	Alerts	Graphs	Data
Message	Delmas Sundra Low Pressure	Active	2009/02/11 03:09:03	Modder Pum...	Alerts	Graphs	Data

QUICK VIEWING OF 24HOUR GRAPH



D & G Installation Systems CC

- on
- gout
- ange Password
- e
- emetry
- Management
- istration
- ent Administration
- e Administration

Telemetry - Site Selection - Streams - Graphs (Delmas Low Pressure Tank Level)

Graph

Delmas Low Pressure Tank Level
Delmas Low Pressure Tank Level

Date

Today

Yesterday

Week

Last Week

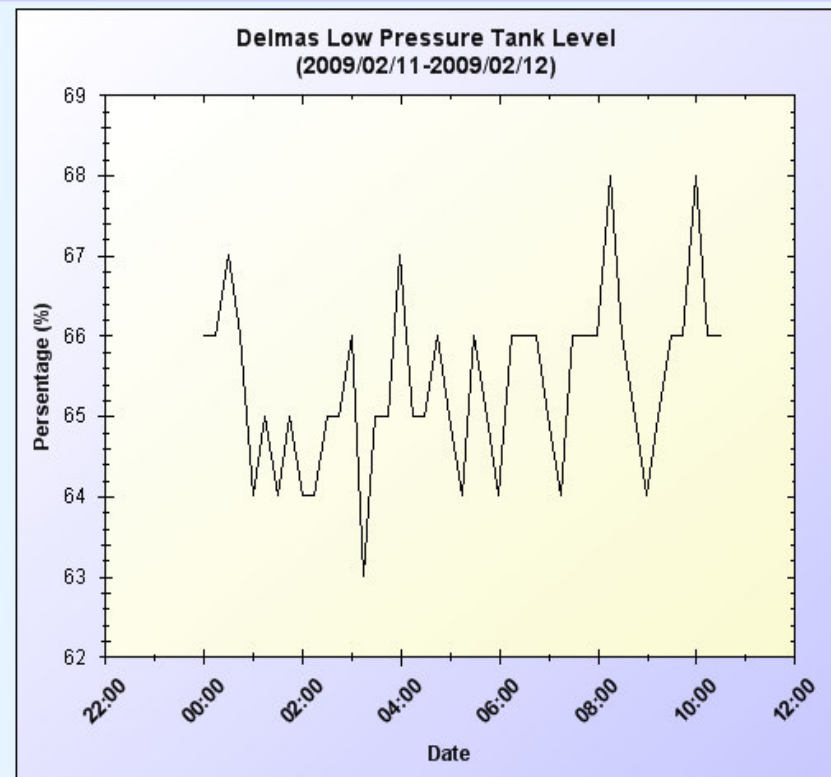
Month

Last Month

Specific

From

To



• **LOGGED HISTORY GRAPH REPRESENTING TEMPERATURE , RELATIVE HUMIDITY, A C SUPPLY CAN BE GENERATED**



- Session
 - Logout
 - Change Password
- Service
 - Telemetry
 - SIM Management
- Administration
 - Client Administration
 - Site Administration

Telemetry - Site Selection - Streams - Graphs (Delmas Low Pressure Tank Level)

Graph

Delmas Low Pressure Tank Level

Delmas Low Pressure Tank Level

Date

Today

Yesterday

Week

Last Week

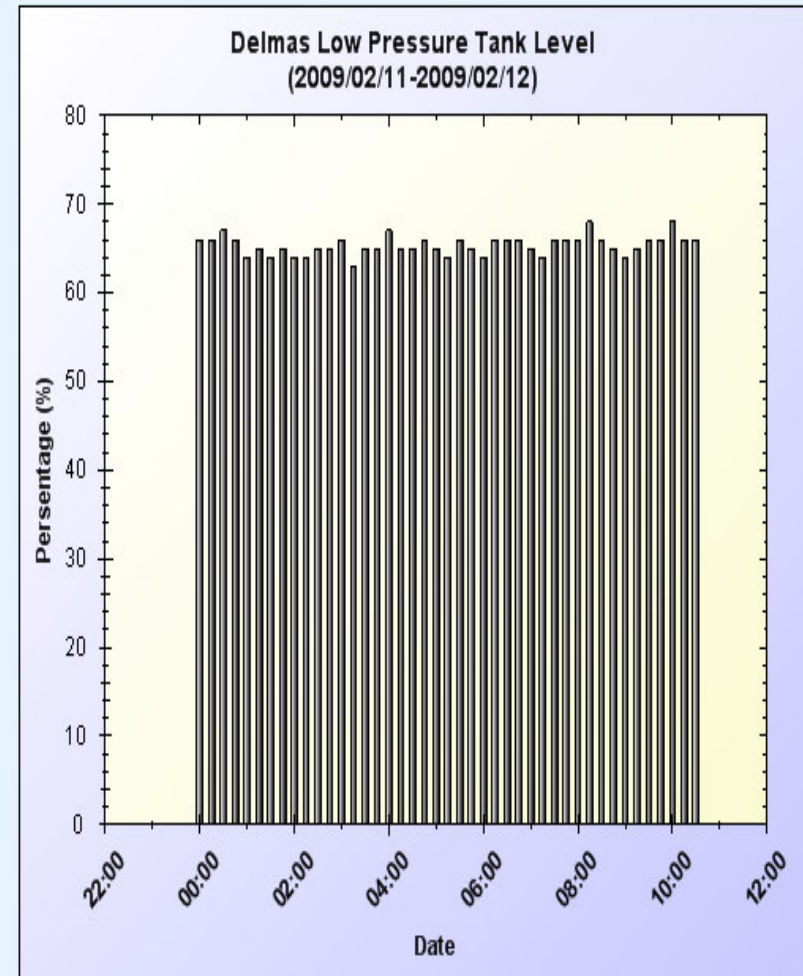
Month

Last Month

Specific

From

To





- Session
- Logout
- Change Password
- Service
- Telemetry
- SIM Management
- Administration
- Client Administration
- Site Administration

Telemetry - Site Selection - Streams - Data (Low Pressure Level)

Date	Date	Value
Today	2009/02/11 10:30:00	66.0
Yesterday	2009/02/11 10:15:00	66.0
Week	2009/02/11 10:00:00	68.0
Last Week	2009/02/11 09:45:00	66.0
Specific	2009/02/11 09:30:00	66.0
From	<input type="text" value="2009/02/11 00:00:00"/> 2009/02/11 09:15:00	65.0
To	<input type="text" value="2009/02/12 00:00:00"/> 2009/02/11 09:00:00	64.0
	2009/02/11 08:45:00	65.0
	2009/02/11 08:30:00	66.0
	2009/02/11 08:15:00	68.0
	2009/02/11 08:00:00	66.0
	2009/02/11 07:45:00	66.0
	2009/02/11 07:30:00	66.0
	2009/02/11 07:15:00	64.0
	2009/02/11 07:00:00	65.0
	2009/02/11 06:45:00	66.0
	2009/02/11 06:30:00	66.0
	2009/02/11 06:15:00	66.0
	2009/02/11 06:15:00	66.0
	2009/02/11 06:00:00	64.0
	2009/02/11 05:45:00	65.0
	2009/02/11 05:30:00	66.0
	2009/02/11 05:15:00	64.0
	2009/02/11 05:00:00	65.0
	2009/02/11 04:45:00	66.0
	2009/02/11 04:30:00	65.0
	2009/02/11 04:15:00	65.0
	2009/02/11 04:00:00	67.0
	2009/02/11 03:45:00	65.0
	2009/02/11 03:30:00	65.0
	2009/02/11 03:15:00	63.0
	2009/02/11 03:00:00	66.0

BENEFITS

- ESSENTIAL MANAGEMENT TOOL.
- OUR SYSTEM IS WEB BASED GIVING YOU THE FLEXIBILITY TO CHECK , MONITOR YOUR SITES FROM A REMOTE LOCATION.
- ASSIST WITH STAFF MANAGEMENT.
- REDUCING TIME AND COSTLY MAN HOURS RELATING TO FAULT FINDING.
- WIRE-LESS - CUTTING OUT POSSIBLE CABLE THEFT, AND LIGHTNING DAMMAGE.
- STORING OF RECORDED HISTORY IN GRAPH AND ANALOG FORM.
- ALARM NOTIFICATION VIA SMS'S AND EMAIL.
- TIME MANAGEMENT.

•Areas targeted

- ⑩ ➤ **Pharmaceutical** (Refrigeration , Storage , Warehouse temperature , Refrigerated transport , Power failure).
- ⑩ ➤ **Agricultural.** (Chicken runs ,Pig runs , Hatcheries , Abattoirs , Refrigerated trucks, Power failure ,Ambient temperature)
- ⑩ ➤ **Water Services.** (Reservoir levels, Controls, Boreholes' , Pump Stations, flow meter readings)
- ⑩ ➤ **Refrigerated Trucks** (Supply temperature , Return temperature , Coil temperature , Running time , Power failure, Ambient temperature)
- ⑩ ➤ **Server rooms.** (Room temperature , Power failure)
- ⑩ ➤ **Fisheries.** (Refrigeration , Storage , Warehouse temperature , Refrigerated transport , Power failure).
- ⑩ ➤ **Abattoirs.** (Refrigeration , Storage , Warehouse temperature , Refrigerated transport , Power failure).
- ⑩ ➤ **Food retail out lets.** (Refrigeration , Storage , Warehouse temperature , Refrigerated transport , Power failure).
- ⑩ ➤ **Blood banks.** (Refrigeration , Storage , Warehouse temperature , Refrigerated transport , Power failure).
- ⑩ ➤ **Hospitals.** (Refrigeration , Storage , Warehouse temperature , Refrigerated transport , Power failure).
- ⑩ ➤ **Laboratories.** (Refrigeration , Storage , Warehouse temperature , Refrigerated transport , Power failure).
- ⑩ ➤ **Mining.** (H.E.F levels, Power failure , Ambient temperature , Fuel Tank levels)
- ⑩ ➤ **Generators.** (Fuel levels, Battery Level, Power status)
- ⑩ ➤ **Petroleum industry.** (Fuel tank levels, Refrigeration, Petrol pump power condition)

All sectors where temperature, level, mass and power failure detection is critical.



THANK YOU

**FOR FURTHER ENQUIRIES CONTACT
D & G INSTALLATIONS**

GEOFF McGEE

(Technical, Sales)

083 658 6201

COLIN McGEE

(Technical, Sales)

083 658 6200

JOSEPH MOLWANTWA

(Sales)

082 416 2427

OFFICE 011 805 4377 / 8

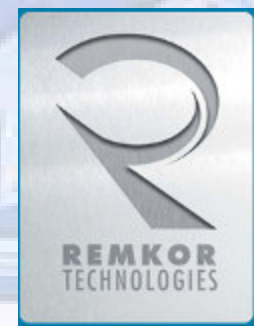
E-mail: info@dginst.com

WEB – PAGE : www.dginst.com

**Business
Connexion**
Connective Intelligence™



AECI



D P R Pharmaceuticals

