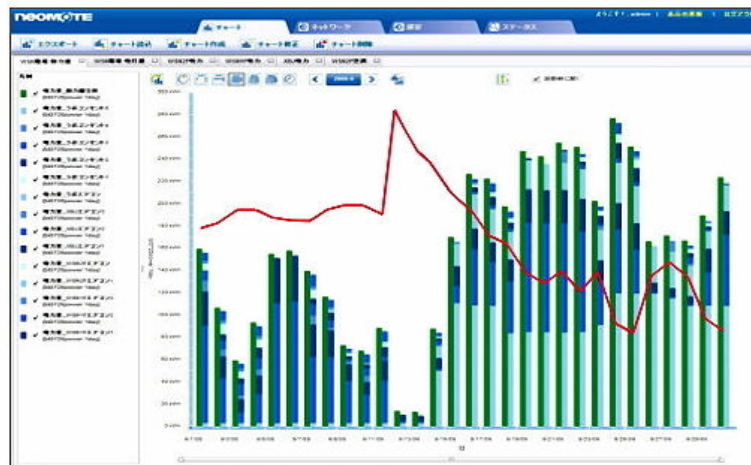


Visualize Energy Maximize Efficiency

Energy Monitoring System using Wireless Sensor Networks



◆ 住友精密工業株式会社
Sumitomo Precision Products Co., Ltd.

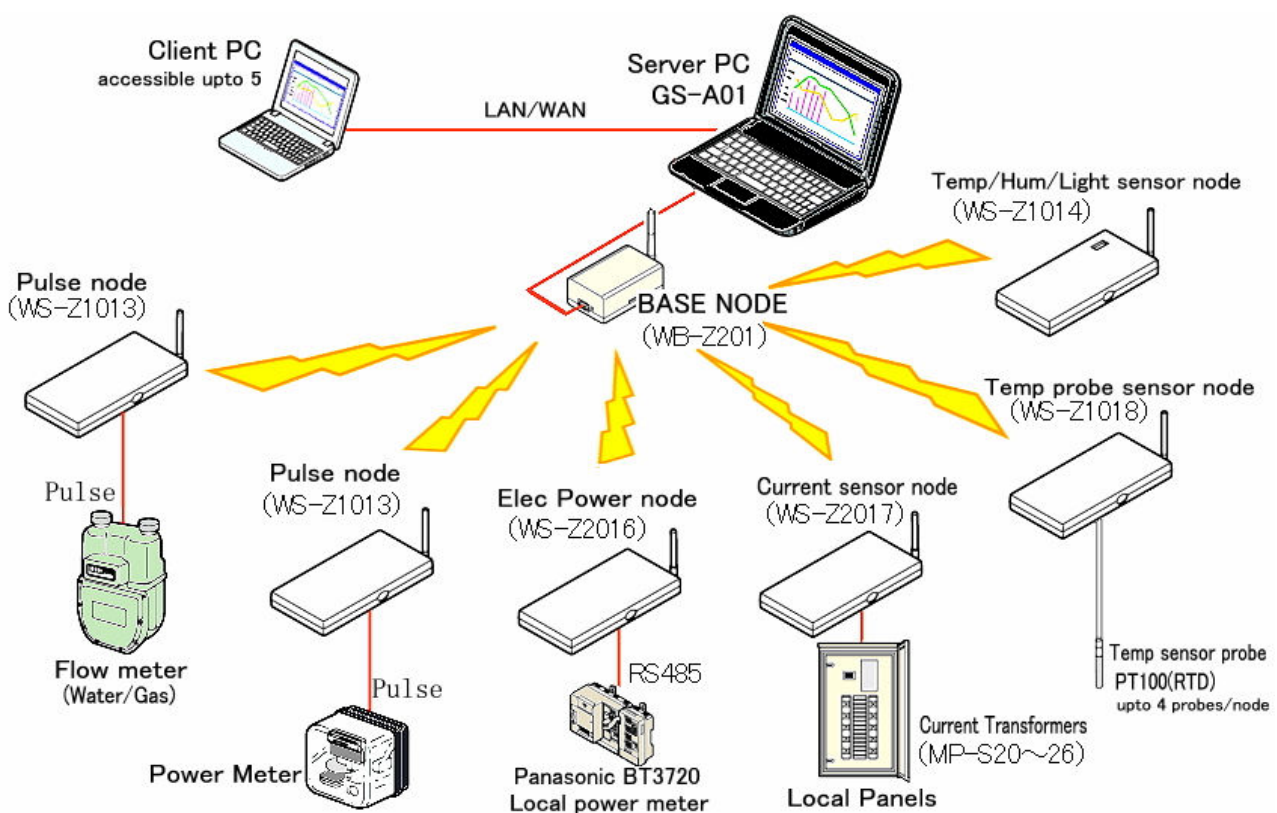
“If you cannot measure it, you cannot improve it.”

Lord Kelvin - Thermodynamics Scientist

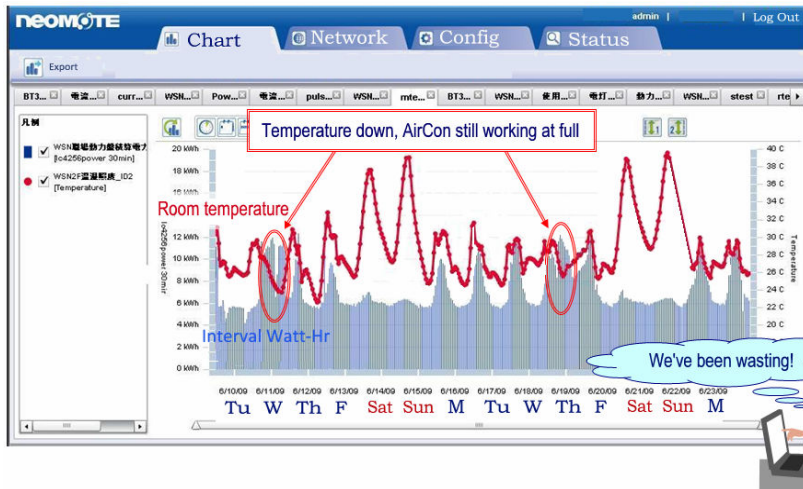
Studies show that employees tend to conserve more energy if they are shown their consumption in real time.

Measure electric consumptions, temperatures, gas, etc. with cutting edge wireless technology and visualize your data with a simple familiar graphical interface.

That is the *EcoWizard* System.



Many Functions – Easy to Use



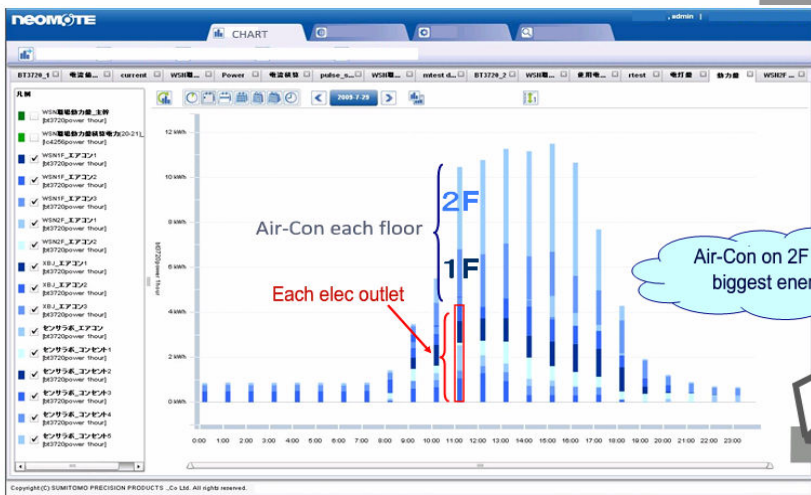
< Easily View Data Integration

e.g.: Understand relationship between temperature and Air conditioner usage

Charts are configurable

Data can be retrieved using a browser from any PC on the same LAN, to see past and real-time data of energy usage within the system.

Data can be exported to a CSV file to facilitate the creation of energy reports.



< Stacked Bar Graphs

Users can easily determine energy usage of each piece of equipment and their combined power usage.

Complete Suite of the Products

- Sensors for electric power, water, gas, temperature, etc.
- Data collection and storage in one location.
- Hardware and software included.

Easy to use Graphs

- Numerous options and functionality with intuitive graphical display.
- No software installation required.
- Familiar web browser (i.e. Internet Explorer) to view and manage data.

Easy Installation due to Wireless

- Compared with wired systems, hardware installation and wiring is cost effective and efficient.
- Modification of layout or installation of additional data points or layout change is effortless.

Real-time Monitoring and Data logging

- Browse from any PC in the same LAN or via the Internet.
- The alert function sends e-mail alert when sensor data exceeds the set value.

Proven NeoMote reliability

EcoWizard utilizes NeoMote (radio hardware that has been deployed in over 30,000 units, made by Sumitomo Precision Products)

Receive E-Mail alerts

You can be notified anytime(24hrs) to changes



Features	Description
Sensor Data Management	All sensor data from each NeoMote collected in real-time (User authorization levels available), Transmit at 1 min interval
Data display	-Data is categorized (e.g. light, Air-con, breaker panel) and shown on stacked bar-graphs / line graphs. Cumulative power consumption is displayed in the interval 10min/30min/1hr/1day. - Display range is configurable : hour, day, week, month, year - Ability to overlay past data to current chart (e.g. to compare last week's trend vs this week's trend)
Data output	Data is exportable in CSV for easy reporting
Network monitor	Wireless network topology and map display. Shows wireless data routing and link quality between each node.
Alerts	Email alerts are triggered if sensor value crosses the set value or threshold.
Maintenance	Database backup capability, Wireless radio strength assessment tool (EasyManager) with maintenance node WM-Z2200XM

Node Types	Model Nr.	Sensor	Description
Elec Power	WS-Z2016	Power / cumulative power	RS485 input (connected to optional power meter BT3720 and CTs), 1Phase2Lines/1Phase3lines/3Phase3lines
Elec Current	WS-Z2017	Ave/Max/Min/Cumul Current	4ch input, Current Transformer (option) 5A to 500A rms +/-6% 50 or 60Hz sinusoidal
Pulse	WZ-Z1013	Power meter/ gas / water	4ch input, Non biased A contact or open collector, width min 30mS, space min 60mS (max 16.7Hz)
Indoor climate	WS-Z1014	Air Temp/humidity/light	-10 to +45C res. 0.01C, 30 to 80%+/-10%RH, 1 to 50000 lx 10%
Temperature	WS-Z1018	Temp probe (PT100/RTD)	4ch input, Temp probe PT100 class-B (option), -30 to +70C resolution 0.01C
Relay Node	WR-Z200	Relays packets from one node to another	Packet routing purpose only
Base Node	WB-Z201	Receive sensor data of all nodes	To be connected to GS-A01 server
Network check	WM-Z2200-XM	Radio strength etc	To be connected to a PC to check network status, comm; To be used with software EasyManager (Option)

Specifications		Remarks	Size / Weight / Power supply			
Radio freq	2.4GHz 15 ch 802.15.4	RF power:10mW for WS-Z2***, 1mW for WS-Z1***	WS- WR- WM- WB-	Size (mm)	Weight (gr)	Power supply
Radio range	Max 800 m	Dependent on model and surroundings	Z-1013 1014 1018	208 x 97 x 24	180	AC* or AA drycell x6
Network type	Multi-hop ad-hoc	Automatic routing / automatic healing	Z-200 2016 2017	208 x 97 x 24	180	AC* (Z2016 by BT3720)
Power supply	3.3Vdc	AC adopter (AA drycell option for WS-Z1***)	Z-201 2200XM	110 x 70 x 45	150	AC*
				Excl projections, ant.	Excl batt, wire	*AC Adopter MP-B33

Crossbow Japan Ltd. www.xbow.jp/ecowiz-e.htm

(EcoWizard is manufactured by Sumitomo Precision Products Co, Ltd.)

1-10 Fusocho, Amagasaki, Hyogo 660-0891 Japan

Tel +81 6 6489 5922 Fax + 81 6 6489 5902 info @xbow.jp

neoMOTE is the registered trademark of Sumitomo Precision Products. Crossbow is the registered trade mark of Crossbow Technology, Inc. Trade marks / product names belong to their respective owners. Photo may not be identical to the real product. Unless otherwise contracted in a written form, no software support or patches are included whatsoever. The use of the product is solely at the responsibility and risk of the user. Features and specifications are subject to change without notice or obligation. The use of software copyrighted by Crossbow Technology is permitted subject to agreement to pertaining license. Copyright 2009 Crossbow Japan Ltd. All Rights Reserved. 2009.12 Printed in Japan