POWERLINES

TEAL
We Power Technology

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We Start with People…

Randy Redding, R&D Engineer for TEAL, was recently recognized by TEAL for his extraordinary service & longevity, as our first employee to celebrate his 20th anniversary with TEAL. We hope Randy stays with us for 20 more years !

Randy Redding, pictured here circa 1985 or 1986. Not much has changed...

Bill Bickel, long-time Vice President of Finance, was recently promoted to General Manager for TEAL Electronics, responsible for day to day operations. Mr. Bickel, who has been with TEAL for 18 years, commented "Adapting to the changing business environment while keeping our focus directly on the customer has been the key to our success, and I am confident that we will continue growing and remain clearly focused on our customers. On a personal basis, it has been enjoyable watching the company grow from 15 employees to over 150 employees today." Jim Taylor, who was recently promoted to Executive Vice President and Chief Operating Officer of SL Industries, TEAL's parent company, has assumed the role of interim President for TEAL since the retirement of Rod Bolton from that position at the beginning of the year. A search for a new President is expected to occur later this year.

TEAL News...

TEAL's 20th - 1985 to 2005

Celebrating 20 Years of Successful Partnerships...

May 2005 marks the 20th anniversary for TEAL Electronics! TEAL was founded in May 1985, with 7 employees and some equipment remaining from a recently closed division of Control Concepts.

The first year was pretty tough, with revenue of about $75,000 for the entire year. Within a couple of years, TEAL began to find it's niche in supplying custom power conditioning equipment to OEM customers, based on TEAL's high performance 3-phase isolation transformers. TEAL began selling products into the Semiconductor Automated Test Equipment industry in 1986, with Teradyne and Schlumberger being 2 of TEAL's first OEM customers.

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TEAL Begins Shipping TEALwatch™ Power Monitor

First production units began shipping in March, with several hundred expected to be installed this year...

Beginning in March, TEAL began shipping our new TEALwatch™ Power Monitor fully integrated into production power subsystems. The TEALwatch™ is a very cost effective power monitor designed as an embedded option in TEAL power subsystems. The TEALwatch™ monitors the AC mains voltage and utilizes a very easy to use interface via any standard web browser. No special software is required, only the connection of the TEALwatch™ with a standard Ethernet (10base-T) cable to an internet accessible network or directly to a PC or laptop.

TEALwatch® Power Monitor installed in the top of a TEAL Power Subsystem. The Ethernet port is typically installed in an easily accessed position for easy connection.

The TEALwatch™ enables customers to monitor power at all installations 24/7/365 from anywhere in the world, helping to reduce service costs by proactively diagnosing power related issues prior to service calls.

New installs or retrofits...

The TEALwatch™ can be installed in new power subsystems by TEAL, and can also be installed in the field in a majority of 3-phase power sub-systems. Contact TEAL today to ask about your specific model for installing or retrofitting the TEALwatch™.

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Customer Satisfaction Survey

Results are in for the 2004 Survey. Here is what you had to say, and what we are doing about it...

TEAL Electronics would like to express our appreciation to all participants of our 2004 Customer Satisfaction Survey. Our survey included ratings in responsiveness, quality, product diversity and competitiveness. The results of the 2004 survey showed 96% favorable in "Overall Satisfaction".

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For more information about TEAL Electronics and its products, please visit our web site at *www.teal.com* or contact Kevin Harris at 800.888.8325 or *kharris@teal.com*.

TEAL News...

Customer Satisfaction Survey

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2004 Survey Comment Examples:

1. TEAL needs to supply a UPS.

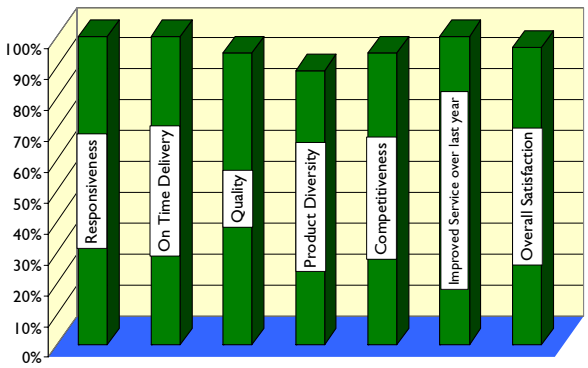
Solution: TEAL has worked to identify UPS suppliers that we can work with to provide either a stand alone or integrated UPS solution.

2. How do you know when the PDU fails or is not functioning properly?

Solution: The best indication that a TEAL PDU is still functioning properly is if your equipment, powered from the PDU, is operating properly. Optionally, you can utilize the TEALwatch™ power monitor.

We encourage you to share your opinion of our products and services.

For your convenience, the new 2005 Customer Satisfaction Survey will be available on the TEAL website at www.teal.com. Our user friendly survey should take about 5 minutes to complete. Feedback will be reviewed on a regular basis and results published annually. Your input is valued as we strive to continually improve our quality and service to meet your needs. TEAL Electronics will be sending each participant a "Thank you" pen for submitting a completed 2005 survey by November 1, 2005.



Results of the 2004 TEAL Customer Satisfaction Survey showing the 7 major survey categories and the results from our customer's feedback.

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TEAL Tech...

TEALwatch™ Power Monitor Now Shipping

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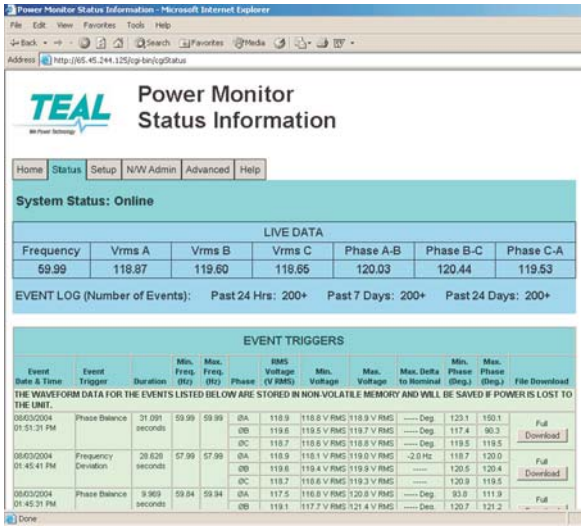
In support of the TEALwatch™ product, TEAL has launched a web-site dedicated to the power monitor product line, www.tealwatch.com. This dedicated website contains the latest information on features and options, as well as the most recent User's Manual and firmware updates. In addition, TEAL is supplying a freeware version of the TEALwatch™ Viewer, an Excel based document that enables you to easily import and view the full waveform data files generated by the power monitor. The TEALwatch™ Viewer is available free of charge to help our customers understand the power quality of their system.



The TEALwatch™ web interface SETUP tab allows the OEM to load both universal settings and adjust triggering and data capture for specific devices or applications.

One of the real benefits of having 24x7 power monitoring is that the customer can monitor real-world sensitivities of their equipment by correlating power quality disturbances to system issues. The customer can quickly learn exactly what kinds of power quality issues are benign, and what kinds are disruptive to their specific equipment. With a temporary monitor installed, you often miss events or are simply too late to capture critical information. Understanding your equipments sensitivities will allow you to apply the proper level of additional power conditioning, but only IF it is needed, and only EXACTLY what is needed !

...The TEALwatch™ was designed to be field retro-fittable. The majority of 3-phase power sub-systems that are already installed can be economically retro-fitted with the TEALwatch™...

Can I get a Power Quality Report?

The TEALwatch™ was designed to be a very easy to use power monitor. It was designed to be accessed over the Internet with a standard web-browser, no special software is required. The interface status screen shows you a summary of each power quality "event" that has been monitored, indicating the type of disturbance, the time of the disturbance, and the most important measurement changes. For many users, this summary information is all that is needed.

For those users that wish to delve further into the data, the captured full waveform of the event is available to download. These event files are created as generic data files that can be opened with standard spreadsheet packages, such as Excel or Lotus 123. The data files can be charted to give the visual representation of the captured waveform, with a resolution of 120 samples per cycle. To simplify viewing of these files, TEAL has created the

macro-based freeware TEALwatch™ Viewer to simplify the charting of these waveforms. The Viewer is an Excel based program that uses macros to import the data files and automatically display the properly scaled waveform data.

As an optional service offering in support of our new TEALwatch™ product, TEAL is also offering (via our www.tealwatch.com web-site) a TEAL generated custom report. For a modest fee (beginning at $200), TEAL can take the data files provided by your TEALwatch™ and create a custom-tailored power quality report that will describe the events that were captured and explain potential issues that may be encountered due to these events. A sample of a TEAL generated report is available online at www.tealwatch.com.

...TEAL can create a custom-tailored power quality report that will explain captured events and issues associated with the captured events ...

Having a TEALwatch™ connected to the output of the TEAL power subsystem to monitor the input to the OEM customer's critical equipment provides a proactive diagnostic tool for power quality issues that will decrease service costs for each site or installation by enabling remote diagnostics of power related events.

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TEAL News...

TEAL's 20th - 1985 to 2005

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TEAL's foray into the medical imaging world began around 1990 with Philips Medical Systems. TEAL's custom Power Distribution Units (PDUs) soon spread to most of the modalities within Philips (X-Ray, CT, MRI, etc.). Since then, TEAL has expanded our market presence into partnerships with most of the companies that supply both ATE and medical imaging equipment.

TEAL in 1985: 6 of the 7 original TEAL employees. Randy Redding (not shown) must have been taking the photo!

Being a custom design house, TEAL was an "early adopter" of CAD design systems. Not long after TEAL was founded, we invested in our first CAD design system, a state of the art "286 running at 12MHz" according to Randy Redding, proud owner of the first system. The price for that first MSDOS based CAD system (with a monochrome monitor, a drawing tablet, and a pen-plotter) was a tidy $15k ! TEAL now has powerful 3-D solid modeling programs on engineering workstations distributed throughout the organization. TEAL now uses computer workstations to utilize our electronic documentation system at every workstation on our manufacturing floor. Computing power and value has come a long way !

In 1995, 10 years after TEAL was founded, SL Industries bought TEAL from the founding owners. Since the purchase, SL Industries has managed TEAL with a hands-off approach. 1995 also marked the year that TEAL received ISO 9000 certification, recognized throughout the world as a symbol of quality excellence and consistancy. Many things have changed at TEAL over the years, but we are most proud of our unwavering customer service and support, something which has not changed over time !

TEAL in 2005: We have grown from 7 employees to about 150 full-time employees, and from about $75,000 in sales in 1985 to about $30,000,000 in sales. The foundation is solid for TEAL's future!

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We Power...

What is MEG Imaging ?

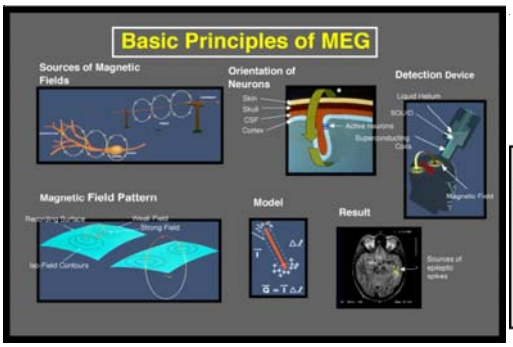
...Magnetoencephalography

TEAL powers many new technologies that provide advanced medical diagnostics, medical treatment, high-speed semiconductor manufacturing and automated test equipment for military and aerospace applications. This edition we will focus on Magnetoencephalography (MEG) from 4-D Neuroimaging, headquartered in San Diego, California.

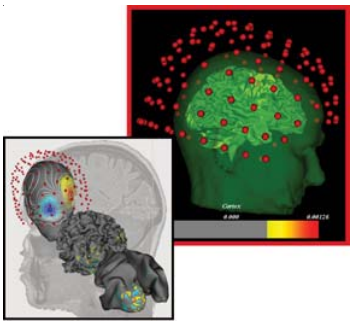
Magnetoencephalography, or MEG, is a non-invasive technology that uses sophisticated sensors based on superconductivity to measure the very small magnetic field created by Neurons in the brain. The spatial distributions of the magnetic fields are analyzed to locate sources of activity within the brain. The Magnetoencephalography brain activity locations can be superimposed on anatomical images created by MRI or CT imaging, providing interesting and new information about both the structure and function of the brain.

> ...MEG is a very effective non-invasive diagnostic tool for evaluating brain function in a variety of surgical planning

Magnetoencephalography is a direct measurement of brain function, and can localize sources of brain activity with millimeter precision and very high temporal resolution, capturing events with time scales in the milliseconds. Magnetoencephalography is a very effective non-invasive diagnostic tool for evaluating brain function in a variety of surgical planning applications.



Explanation of basic MEG principles, courtesy of 4-D Neuroimaging, San Diego, CA



Example images generated by a 4-D Neuroimaging MEG system

The MEG signals of interest are extremely small, several orders of magnitude smaller than other signals in a typical environment that can obscure the signals being detected. Magnetic shielding and clean power are essential to ensure accurate detection and measurement.

TEAL powers this 4-D Neuroimaging MEG application with a combination of required voltages, noise filtering, transient suppression, an integrated UPS, and single point grounding engineered specifically to provide optimal performance of this advanced technology.

TEAL Electronics - We Power Technology™

Submit Your Application

Submit a ***We Power…*** application to TEAL and receive a complimentary copy of our "Power Quality Handbook", a comprehensive publication that details common power quality problems and recommended solutions. If we select your application for inclusion in POWERLINES we'll also send you a complimentary TEAL logo polo shirt.

Let us know how TEAL helps ***Power Your Technology***.

Submit your application to Kevin Harris @ *kharris@teal.com*.

TEAL
We Power Technology

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