

MARKET TRENDS DIGEST

for the Computer, Communications, and Controls Industries

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WEB SITE: <http://www.newton-evans.com>

Second Quarter 2004

*LonWorks® Enabled Device Sales Exceed \$500 Million,
Directly Influencing Equipment Sales of \$7 Billion*

*Device Sales to Utilities and Energy Industry Estimated to
Approach \$150 Million*

In late May 2004, Newton-Evans Research Company published its multimonth study of the LonWorks community, with special emphasis on its presence and growth in the energy industry. The new report is entitled *LonWorks Markets: An International Perspective Focused on Energy Applications*.

The creative force behind the development of the open, interoperable LonWorks platform and the leading supplier of LonWorks enabled devices is the San Jose-based Echelon Corporation. Today, there are thousands of manufacturers and suppliers of LonWorks compatible devices. These networked devices are then integrated or embedded into OEM equipment and products. LonWorks applications can be found in the energy industry throughout the industrialized and developing regions of the world. Thousands of companies have developed and installed LonWorks products, and more than 40 million LonWorks enabled processors have been shipped from device manufacturers for use in homes, buildings, factories, trains, utilities, and other applications worldwide.

The LONMARK® International trade association is an independent, industry-run association that defines the guidelines for interoperable operation of

LonWorks devices, and certifies that devices comply with the LONMARK interoperability guidelines.

While discussions about communications in energy circles often center on wide area network issues and protocols, LonWorks is used by domestic and international electric power and gas utilities, as well as by other energy companies, for control applications in a local operating network. The world's largest publicly traded electric utility, Italy's ENEL SpA, has implemented the LonWorks platform in its customer meters, which it uses to transmit meter data back to the billing computer. In fact, this single user represents nearly one third of all installed LonWorks devices, and has today installed in excess of 15 million LonWorks compatible devices. →

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Recently, Echelon formed a new division, Networked Energy Services (NES), to market its utility metering and infrastructure products. New NES VAR partners include Telvent (Madrid) and EDMI (Singapore).

Usage of the LonWorks platform in the utility and energy fields includes local area operational network applications, (including consumer premises), as well as power plants, wind and solar energy facilities, transformer substations, gas processing plants, oil platforms and refineries, energy pipelines, and cogeneration facilities.

In a broader context, the building, factory, and home automation segments are key markets for the LonWorks platform today. In addition, the platform is growing in use among energy industry firms, consumer product manufacturers, and within the transportation industry. The underlying communications protocol of the LonWorks platform is incorporated into ANSI, IEEE, CEN (pending), AAR, and SEMI standards, and is accredited as an open standard.

The Newton-Evans report is focused on the growing reliance by the energy industry on the LonWorks platform. The study is based on interviews conducted over the last nine months with scores of users, manufacturers and suppliers of LonWorks products, systems and services.

Prior to publishing this report, Newton-Evans staff attended the 2003 LonWorks Exhibition in London, participated in the LonWorld® 2003 Conference and Exhibition in Munich meeting with more than 50 LonWorks suppliers, and completed a market outlook survey of LonWorks manufacturers and integrators.

The 75+ page *LonWorks Markets: An International Perspective Focused on Energy Applications* is priced at \$395.00. Further information is available at the Newton-Evans Research website (www.newton-evans.com) or by e-mail (jsmall@newton-evans.com). The company can be reached at 1-800-222-2856 or 1-410-465-7316, and is located at Suite 204, 10176 Baltimore National Pike, Ellicott City, Maryland 21042.

Staff Time Limitations – #1 Reason to Consider Outsourcing Transformer Management Services

Studying trends in the methods used to manage power transformers and determining preferences for in-house approaches versus outsourcing of transformer management services were the central issues of a proprietary study completed by Newton-Evans Research Company in fourth quarter 2003.

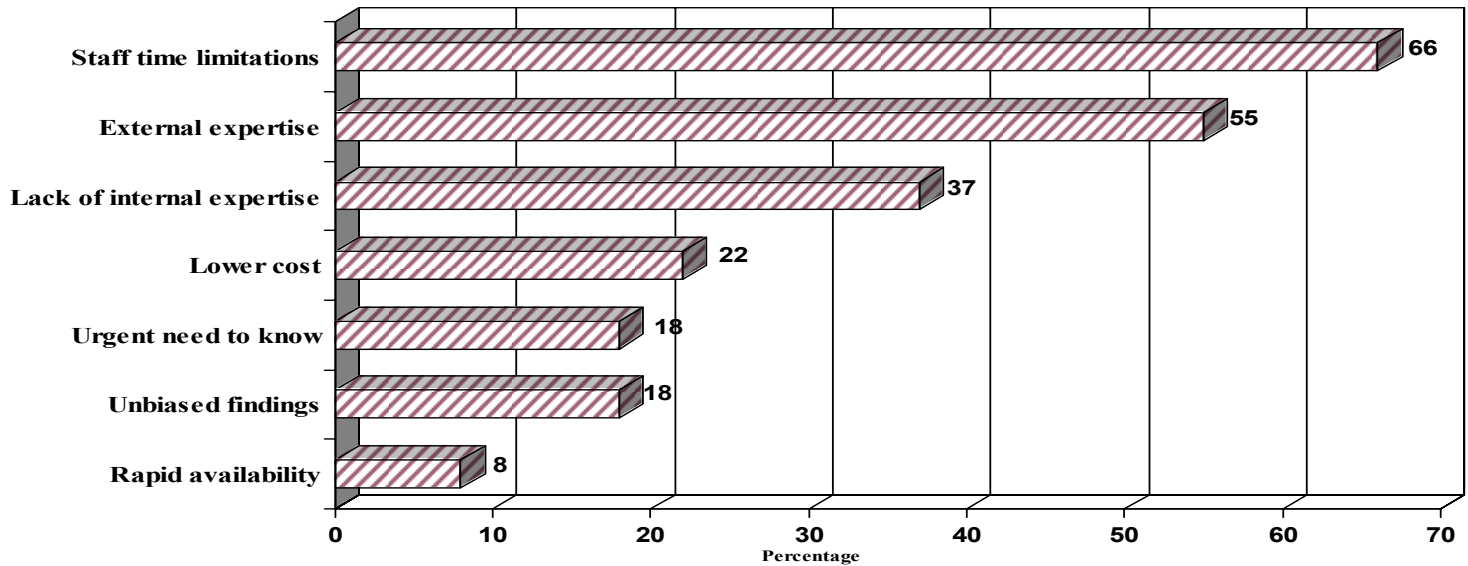
One question included in this research asked respondents what are (or would be) the primary reasons for their utility to consider outsourcing transformer management services? Seven options were provide on the survey, including: lack of internal expertise; staff time limitations; urgent need to know now; external expertise; lower cost; unbiased findings; and, rapid availability.

According to the survey respondents, the primary reasons for considering the use of outsourced transformer management services centered on staff time limitations (indicated by two-third of the group), available external expertise (noted by more than one-half of the respondents); and, lack of internal expertise (indicated by nearly one-half of the group).

Urgent need to know now, unbiased findings, and rapid availability were at the other end of the spectrum, each mentioned by less than 20 percent of the group.

See Figure 1.

Figure 1
Primary Reasons to Consider
Outsourcing Transformer Management Services



There's No Place Like Home.....Especially during Golden Week

by
Jeff Gerhold

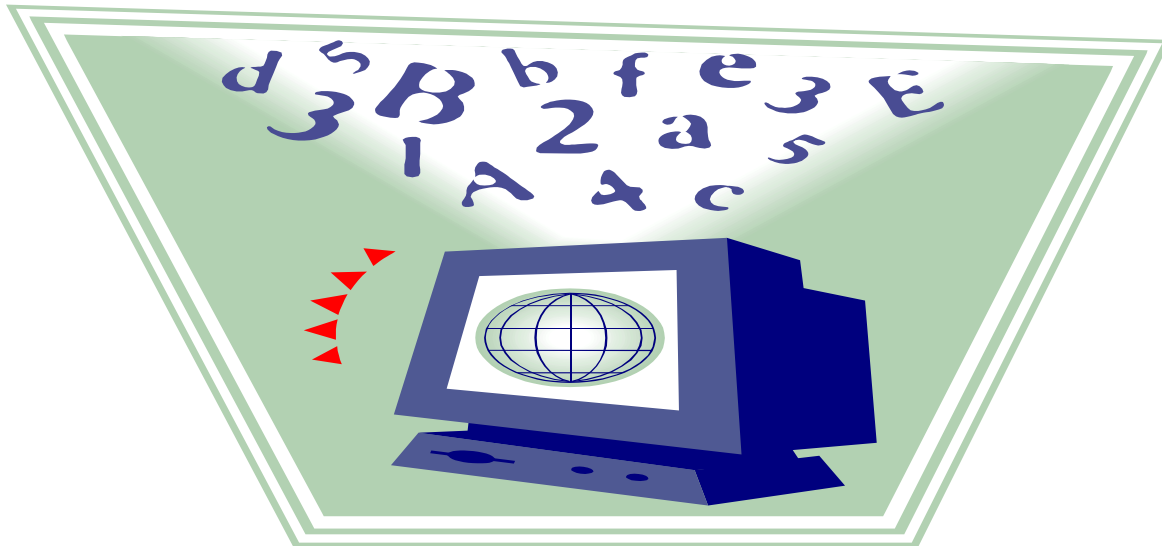
Marylanders know their crab cakes. So, Newton-Evans staff members smiled knowingly when our recent client/guest from Japan announced that he ordered crab cakes as soon as he arrived at BWI airport. Counting on the Chesapeake Bay's reputation, Newton-Evans treated our guest to lunch at the finest local seafood restaurant (Crab Shanty). While devouring crab soup along with oysters stuffed with crabmeat, he informed us that he completed graduate school and received his Master's Degree nearby. He even knew the rule of eating oysters only in months having the letter "R".

His commute into one of Asia's largest cities takes fifty minutes aboard trains and a bus. With limited space in his home country, he remarked at the proliferation of homes here on half-acre, acre and three acre plots. During the business meeting, our client enjoyed a bagel with cream cheese and coffee, which lead to a discussion regarding Starbucks and other restaurant chains expanding internationally, and doing well in his home market. Our pleasant luncheon conversation ranged from our differing healthcare systems to academic

requirements and national holidays. American football is acquiring a following in his country, as evidenced by an intercollegiate championship.

Our client spent a week in the U.S. attending business meetings, then was off to the Far East, back to his family and pleasant holiday period during Golden Week. Golden Week is a collection of four national holidays within seven days and is one of Japan's three busiest holiday seasons, along with New Year's and Obon Week. Ah, there's no place like home.

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 Newton-Evans Research Company, Inc. publishes *MTD* for the applied technology industries, utilities, and energy companies. Editor: Loretta Smolenski. For further information, phone or write to Newton-Evans Research Company, 10176 Baltimore National Pike, Suite 204, Ellicott City, MD 21042. Telephone (410) 465-7316. E-mail us at lsmolenski@newton-evans.com. Please visit our website at: www.newton-evans.com.



***A Wealth of Information Can be Obtained on
Newton-Evans Research Company's Website***

More than 200 Visitors per Week.... and Growing

Newton-Evans Research's website contains an abundance of information not only on our company, but also on upcoming trade events. Our website also serves as a reference point, with links to other sites.

Basically, the website is comprised of eight main sections. A brief description of each is given.

1. **Market Trends Digest** – copies of MTD from the past several years are available.

2. **Trade Events** – upcoming electric, oil and gas, and water events are posted, including pertinent connecting websites.

Some examples to keep in mind:

Electric events

- o Eurelectric Annual Conference – June 14-15th in Lyon, France
- o APPA National Conference – June 19-22nd in Seattle, Washington, USA
- o International Conference on Large High-Voltage Electric Systems (CIGRE) – August 29-September 3rd in Paris, France

- o 19th World Energy Conference – September 5-9th in Sydney, Australia
- o 15th Annual CEPSI Conference - October 18-22nd in Shanghai, China
- o DistribuTECH 2005 – January 25-27, 2005 in San Diego, California, USA
- o IEEE PES General Meeting – June 12-16, 2005 in San Francisco, California, USA

Oil and Gas events

- o 25th Annual NMRC Conference – June 8-11th in Reno, Nevada, USA
- o 12th Annual GIS for Oil and Gas – September 20-22nd in Houston, Texas, USA
- o Gastech 2005 – March 14- 2005 in Bilbao, Spain
- o AGA Operations Conference & Biennial Exhibition – April 27-29, 2005 in Chicago, Illinois, USA

Water events

- o AWWA Annual Conference & Exposition – June 13-17th in Orlando, Florida, USA
- o Aquatech Amsterdam 2004 – September 28-October 1st in Amsterdam, Netherlands

- o WEFTEC 77th Annual Technical Exhibition & Conference – October 2-6th in New Orleans, Louisiana, USA
- o Water & Wastewater Asia – October 5-7th in Bangkok, Thailand

3. **In the News** – Along with recent news articles, more than 44 columns written by President, Charles Newton, for T&D magazine over the past years.

4. **Services and Reports** –information on our client-exclusive (proprietary) marketing research studies, our published and available multient marketing research reports, and teleconference consulting service.

5. **Briefings & Presentations** – synopsis of our presentations on marketing issues and technological topics.

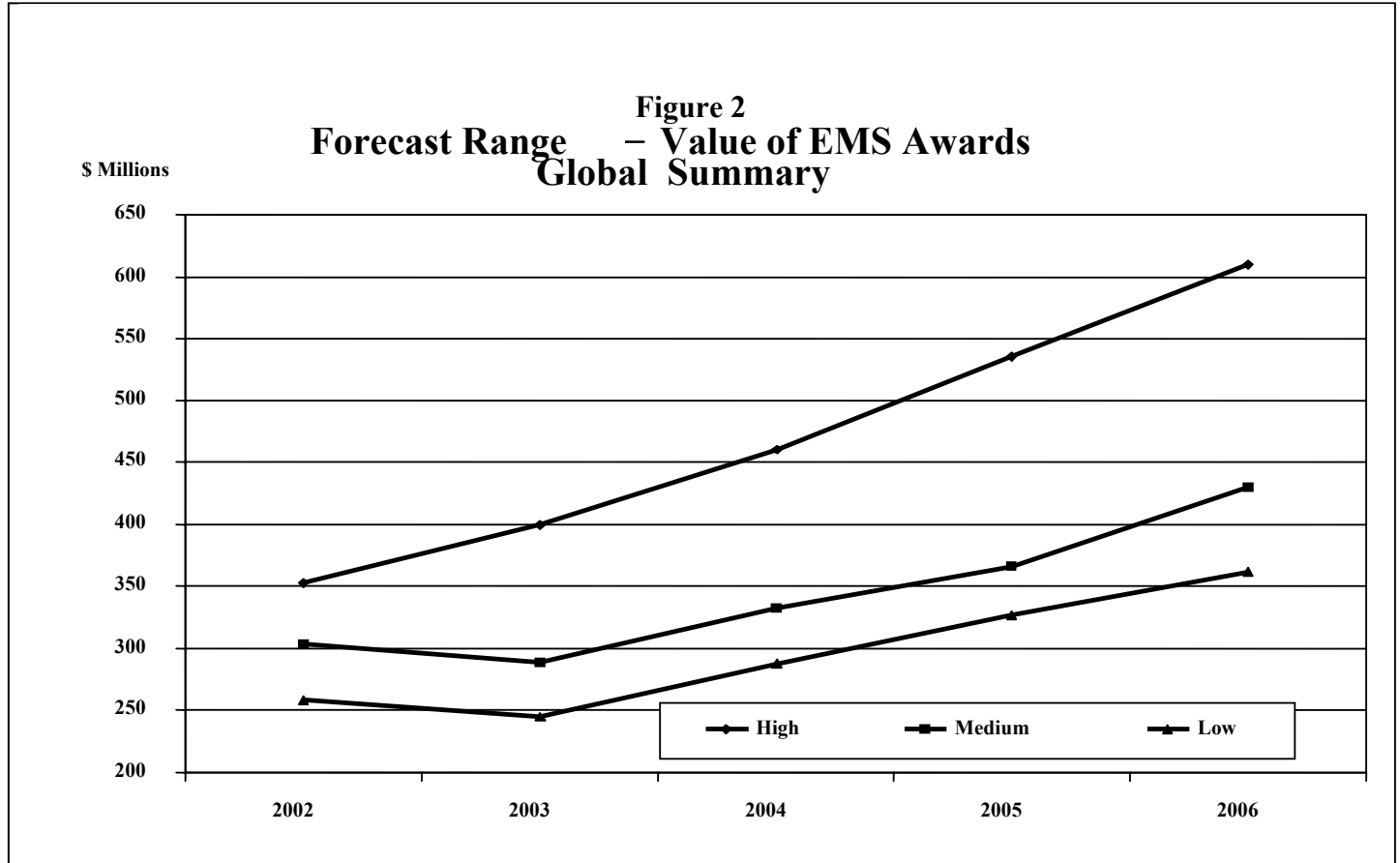
6. **Company Profile** – overview of Newton-Evans’ 26 years of serving the energy industry audience.

Also lists professional association memberships, key personnel, and a representative mix of clients. Included in this mix are; ABB, ACS, Areva, Basler, Booz Allen Hamilton, China Light & Power, Consolidated Edison, EPRI, GE, IBM, KEMA Consulting, Motorola, Pacific Gas & Electric, SAIC, and Siemens Power T&D.

7. **Links** – links to 30 associations and publications, including: American Gas Association; American Water Works Association; EPRI; Power System Relaying Committee, PES, IEEE; Electric L&P; McGraw-Hill Companies; and, Oil and Gas Journal.

8. **News** – more than 20 recent News Releases released by Newton-Evans.

Control Center-based Systems and Technology Spending World Market Assessment



As mentioned in the first quarter 2004 edition of MTD, in November 2003 Newton-Evans Research completed its five-volume series of reports on the status and outlook for energy management systems, SCADA and distribution management systems in electric utilities worldwide.

Volume 3, the Global Market Outlook, forecasts spending for control center-based systems and technology over the three year period of 2004 to 2006. World market assessment and forecast is available, as well as assessment and forecast for five geographic areas worldwide - North America; Western, Central and Eastern Europe; Central and South America; Mid-East, Mediterranean and Africa; and, Asia Pacific and South Asia.

The related market outlook for operational IT systems used by power exchanges and for control systems used by the developing group of regional

transmission operators and independent system operators being established around the world is also covered in Volume 3.

See Figure 2. On a global basis, Newton-Evans estimates that about \$289 million (range of \$245 million - \$400 million) was spent in 2003 on EMS systems, software licenses for EMS applications, field and control center hardware to support EMS systems, and related engineering, training, and maintenance and support service. Project values were about double this amount.

In the report, for each geographic area mentioned above, country-based information provides forecasts for spending based in part on the actual survey data, along with vendor supplied outlook information. See Figure 3, Central and /Eastern Europe and Russia/CIS region, for an example of these numbers.

Figure 3
Central and Eastern Europe and Russia/CIS Region

Country	EMS/SCADA/DMS Procurement Activity Known to be Underway during 2003-2005	Total Forecasted EMS/SCADA/DMS Procurement Activity during 2003-2005
Czech Republic	\$<5 Million	\$3-6 Million
Hungary	\$2-4 Million	\$7-10 Million
Poland	\$3-5 Million	\$10-15 Million
Romania	\$5-8 Million	\$5-9 Million
Russia	\$10-20 Million	\$35-50 Million
Other CIS	\$10-20 Million	\$15-25 Million
Slovakia	\$1-2 Million	\$2-5 Million
Slovenia	\$20-28 Million	\$25-30 Million
Ukraine	\$3-5 Million	\$10-20 Million
Other C/E Europe	\$5-10 Million	\$9-14 Million
TOTALS:	\$64 – 106 Million	\$121-184 Million

For further information on this volume and the other four volumes, please visit our website or call Newton-Evans at 1-410-465-7316 or 1-800-222-2856.

A Look at SAIC and Its Energy-Related Business

Science Applications International Corporation (SAIC), a Fortune 500 company, was founded in 1969 by Dr. J. Robert Beyster and a small group of scientists. SAIC is the fourth largest majority employee-owned company and the largest employee-owned research and engineering firm in the United States. The company and its subsidiaries have more than 43,000 employees with offices in over 150 cities worldwide.

SAIC provides information technology, systems integration and eSolutions to commercial and government customers. The company provides solutions for the following industries: biomedical research, criminal justice, energy, environment, financial services, healthcare, maritime, national security, space, telecommunications and transportation.

For fiscal year ending January 31, 2004, the company achieved revenues of \$6.7 billion, reflecting a growth rate of 14% over previous year's revenues of \$5.9 billion. Net income for the year totaled \$351 million, compared to \$246 million for fiscal 2003, representing a growth rate of 43%.

SAIC has successfully accomplished nearly 900 utilities projects over the last ten years. The projects range in size from \$5,000 to \$500 million.

Energy-Related Business

SAIC offers a full range of energy infrastructure security, reliability and optimization consulting services founded on a systems engineering approach. Focused business areas are intelligent transmission and distribution, energy procurement/risk management, and energy efficiency program design and implementation services.

Within its energy division, the company provides solutions for oil and gas, utilities, energy risk management, energy management, state energy

programs, systems engineering and weather load forecasting.

Oil and Gas: SAIC has helped oil and gas customers for nearly 30 years, and offers experience in exploration and production, refining and petrochemicals, wholesale/retail, and enterprise-wide solutions.

Utilities: For more than three decades, the company has assisted some of the world's largest utilities to improve service, efficiency and business continuity. The company offers its expertise in the areas of IT services, telecommunications, power generation services, asset management, and energy management integration.

SAIC's power generation services business is comprised of these solutions: plant monitoring system; security management system; control room automation; and, combustion organization.

Energy Risk Management: SAIC provides clients with the following energy risk management services: energy procurement advisory services; energy contract negotiation services; energy risk management services; and, energy monitoring and targeting.

Energy Management: The following energy management services are offered by SAIC: facility energy efficiency services; energy management security and infrastructure programs; energy engineering and analysis; energy savings performance contracting services; as well as combined heat and power and distributed generation services.

State Energy Programs: SAIC provides turnkey services to design and implement energy efficiency programs that achieve energy savings and transform markets. The company is a contractor for public benefits energy efficiency programs in India and Japan, as well as for California, New York, Oregon, and Wisconsin.

Upcoming Protective Relay Study Will Offer New Topics of Exploration

Newton-Evans is commencing a study of the protective relay marketplace. This research effort marks the fourth multiclient study conducted by the company in this arena. Pre-publication discounts are being offered until June 20, 2004. Contact our office for further information.

Several new topics will be added to the more than 20 themes covered in the previous study in 2002. Maintenance issues, IP addressable relays, digital protection signaling for distance relays, GPS-synchronized line differential relays, compliance with the loading requirements outline in NERC Blackout Recommendation 8A, and use of standard time base with synchronizing the internal clocks of digital relays are some examples.

Tony Guiliante, a leading consultant in the area of protective relays, has been integrally involved in the formation of the relay survey. Electric utilities

worldwide will be contacted over the next several weeks, and asked for their assistance in completion of the questionnaire.

Volume 5 of the 2002 study provided the market assessment and outlook for protective relays, and provided information on generator protection, transmission line, distribution line, substation, transformer, motor and industry operated substation relays.

Market share charts were provided for North America and international, based on type of relay, by market segment, by protective relay applications, and by relay manufacturers. Dollar value comparisons were presented for 1996 – 1999 – 2002. See Figure 4 for the North American factory shipments of protective relays, by type of relay. This comparison will be carried over into the upcoming report.

Figure 4
North American Factory Shipments of Protective Relays
by Type of Relay
1996 - 1999 - 2002 Comparison (Dollar Value)

