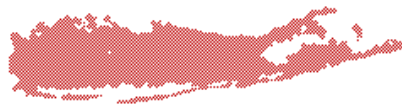


Long Island & Metro NY Chapter



Institute of Industrial Engineers

NEWS-LETTER

IIE-Vol.107 Issue 08

Gold Award Winner for 10 Straight Years (1997-2007)

Oct., 2008

Calendar of Events

Oct. 22nd, 2008 (Wednesday)

IIE Oct. Meeting

Topic: Details on right

Nov., 17th, 2008 (Monday)

Topic: Energy Efficiency Incentives (tentative)

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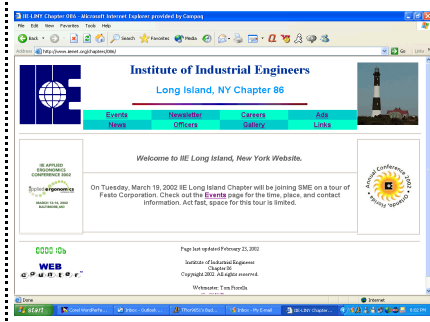
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Visit IIE Long Island Chapter on the web at:
www.iienet.org/long_island



October MEETING

Wednesday, Oct. 22nd, 2008

Time: Networking/Refreshments - 6:00pm, 6:30pm Presentation/Tour

Place: One Penn Plaza, Manhattan, NY

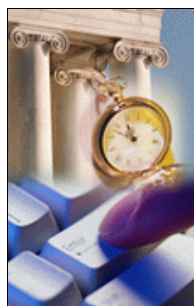
A Lite buffet/dinner/refreshments will be provided - \$5

This is a joint event with the Long Island & NY Chapters of **IIE & SME**
Preregistration Required (see back page)

Topic: **Time & Labor Management /Shop Floor Control**

Speaker: Andrew J. Trager, M.A.- ADP

Automatic Data Processing, Inc. (ADP), with nearly \$9 billion in revenues and over 585,000 clients, is one of the world's largest providers of business outsourcing solutions. Leveraging nearly 60 years of experience, ADP offers the widest range of HR, payroll, tax and benefits administration solutions from a single source. ADP's easy-to-use solutions for employers provide superior value to organizations of all types and sizes. ADP is also a leading provider of integrated computing solutions to auto, truck, motorcycle, marine and recreational vehicle dealers throughout the world.



This Presentation will cover the following:

- Why automate Time and Labor Management?
- Live Product Demo of ADP's ezLabor Manager
- American Payroll Association Study Findings
- Methods of Capturing Time
- Integration with Payroll
- Comprehensive Reporting
- Case Studies

Registration is required. See back page for registration information.

Professional Events Calendar

AIAA / IEEE JOINT MEETING

Thursday, November 13 2008 - 6pm

Topic: V-22 Osprey - Deployment Status and Update

Speaker: Brett Hoffstadt, Boeing Rotorcraft Systems

Location: Bethpage Public Library
Auditorium, First Floor
47 Powell Avenue
Bethpage, NY 11714

Details are posted at iienet.org/long_island

APICS - Professional Development Meeting

Tuesday, October 28, 2008

5:30pm Networking, 6:15pm Dinner,

7:15pm President's Welcome & Announcements, 7:30pm Presentation

Topic: Strategic View of Software Implementation and Providing Value-Added Training for a maximum ROI.

Speaker: Linda Burke and Alan Knapp

Location: Panama Hatties - 872 Jericho Tpke, Huntington Sta, NY 11746

For complete details and fees go to: www.li-apics.org

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Offices 2007-2008

President:

Tom Fiorella

Air Techniques, Inc.
B (516) 214-5588
H (718) 258-3143
email: tfior9651@msn.com

Vice President:

Bob Schroter

H (516) 489-4017
423 Elm St, West Hempstead, NY
11552-3226
email: rschroter1@optonline.net

Secretary/Treasurer:

Carolyn Chen

E-Z-EM, Inc.
B (516) 333-8230 Ext. 3423
H (718) 565-6820
email: cchen@ezem.com

Directors:

Robin Cole

Consultant
H (631) 586-1253

Peter Kontigiannis

Product Assurance Engineer
Cox and Company
B (212) 366-0200 x534
H (516) 484-1773
email: pkontog@coxandco.com

Richard Stripeikis

H (516) 8728350

Roop Tawney

National Storage & Conveyor Systems,
Inc.
B (631) 941-3900
M (631) 455-6460
email: NationalStorage1@aol.com

Newsletter:

Editor: Tom Fiorella
Assistant Editor: Carolyn Chen
Distribution: Bob Schroter &
Richard Stripeikis

PRESIDENT'S MESSAGE



Last month the well attended September kickoff meeting was held at DIS, Inc. Carolyn Chen has written a detailed review of the presentation and machine demonstrations. Please see Carolyn's article beginning on page 3.

For the October meeting we are returning to Manhattan at conveniently located one Penn Plaza next to Penn Station. Andrew Trager of ADP will be providing a presentation on Time & Labor Management. I hope many of you that had turned out for the first meeting in many years in Manhattan, last April, will come out the evening of Wednesday October 22nd and bring along a quest and/or another IIE member.

I have been listening to the Presidential and Vice President debates, as many of you may have. It is an important time in United States history as the country struggles with high energy costs and the worse financial crisis since the Great Depression. I urge all of you to vote on November 4th.

Next month the Chapter will be holding its own annual elections, which was switched from June to be inline with the Institutes calendar. Please look for the election ballot, which will be issued with the November Newsletter. If you are a member in good standing and would like to take on a challenging and rewarding IIE board position please contact me and I will forward your name to the nominating committee.

Chapter 86, President

Tom Fiorella

CAREER OPPORTUNITY

Local job positions that may be of interest to IIE members are posted on the Chapter's website at www.iienet.org/long_island.

Current Postings include:

Director of Industrial Engineering

Toys R Us, Wayne, NJ
The Director is responsible for leading strategic and technical projects that support the continuous improvement within our 9 hard lines & distribution centers. Performance, quality, speed-to-market and safety are all responsibilities of this person and their team. The positions will lead and direct cross-functional teams to ensure supply chain strategies are implemented effectively and delivered in a cost effect solution.
\$135K-\$160K

Contact: Robert Woods, Toys R Us Human Resources, (973) 617-4311

MEMBERSHIP

**Current Active Membership
Long Island Chapter & Metro Chapters
Combined = 120**

About IIE

Founded in 1948, IIE is the premier society dedicated to serving the professional needs of industrial engineers and all individuals involved with improving quality and productivity. IIE has over 15,000 members and more than 280 chapters worldwide

Who benefits from membership?

There are hundreds of job titles given to people, who manage, design, install, or maintain integrated systems of people, machinery, and information. No matter what your job title, if you are the person called upon for solutions when there is an issue that requires your attention, you belong in IIE.

**To become a member of IIE call
1-800-494-0460**

**or log onto to
www.iienet.org & click on Membership
then on Join IIE**

(Continued from page 3)

The equipment tour started with the PRS - 77 L/U: Pinless Registration System with the pre-loading / panel unloading. The operator watches two cameras to match the position of two dots / markers as closely as possible. From there, the machine platen perfects the positioning, holds the layers, and then uses DIS Inc.'s patented welding system. Examples of other throughput enhancements are designing to allow two operators to load and work from opposite sides, and a shuttle system move work from a pre-alignment table to a welding station (this allows an operator to align a board while another board is being welded).

The PWS Pin Welding System is designed to align and bond layers together prior to the lamination step. The equipment can handle lay-up, layer to layer alignment, and welding. The PWS eliminates added costs and tolerance problems associated with trying to maintain alignment with rivets or pin lamination.

An example of how the product line is being developed to complement existing equipment is the DataAlign™ Registration System. Using 10 cameras, the Camera Measurement System will check the artwork position and feed data of four target positions to a DataAlign™ Registration System. The layer is assigned a serial number which marks it for tracking. Layers are physically transferred to a PRS for lay-up, and the positional data associated with that layer serial number is used to align the layer.

For further information on DIS, Inc., see their web site: www.distechology.com or call the Islandia office at (631) 851-0102.

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Review of Sept. Tour of DIS, Inc.

By: Carolyn Chen

The September meeting was held at DIS, Inc. (Duetto Integrated Systems) in Islandia, NY. DIS began their business with a concept to improve the accuracy of aligning multi-layer printed circuit boards. The alignment step is a very small part of the entire PC board manufacturing process. However, their technology plays an important part in minimizing scrap and facilitating high density component packaging to meet the demand for smaller platforms in the electronics industry. They have a family of machines that have been sold all over the world to top PC board manufacturers. The presenters gave their insight on how their small business has adapted to conducting business overseas and staying ahead of their competition.

Tony Faraci is the President of the company, and spoke about the history of DIS, Inc., who their target market is, and how they pursue that market. Tony worked as a machine representative for other companies. He started DIS, Inc. around 2003, since no one else was as dedicated as he was to developing his concepts for multi-layer board alignment. He looked at the market trends after the year 2000: in 2001, PC Board manufacturing went to Asia, drying up the domestic market for equipment. The decision was made to sell abroad. In 2003, he built business relationships by traveling to Europe and presenting at electronics trade shows in Asia. By 2005, the market was built up for new products, such as an induction welding system, for tack welding boards into aligned positions. By 2006 DIS, Inc. began adding agents to sell their products and was able to focus on bigger PCB manufacturers such as Samsung and Nanya.



Tony Faraci, President of DIS, Inc. presenting to the meeting attendees

They still concentrate their efforts abroad. Their experience has shown them that Asia is always willing to try new technology. The European market is second, and The United States tends to be last as they do not want to be the first to try anything new. DIS, Inc. must carefully craft their marketing approach to build demand and plan how their next generation will work with the existing product line. Equipment representatives need to see new equipment functioning, so DIS, Inc. must install some units "for free" so people can see it work. It typically takes one year to go from an introduction to closing a sale.

DIS, Inc.'s competitors are usually considerably larger companies and they have older, established technology. So DIS, Inc. has to be LEAN to get to the market faster. They cut the prototype stage by taking advantage of the modeling and animation features of CAD/CAM software. This allows them to go from concept design to production very quickly. One example has taken 3 months. They may prototype certain assemblies to check similarity to their other components. Their technical specialty is in their vision system and software. Competitors may try to copy the machine, but they cannot copy the software.

Gary Sortino, Engineering Manager, gave some history on circuit boards and gave the tour of the equipment line. In 1903, there was a patented process to add metal to a substrate, but it did not work well. After World War II, the subtractive process was invented. A board is layered with foils. A paint pattern is applied, with black and clear areas. Polymerized copper is removed. In the 1950's & 60's, printed circuit boards were single sided, with leads coming through to the other side. Later in the 1960's plated through holes were perfected, so a top and bottom surface can be joined together. This led to greater component density and smaller size boards. By the 1980's, multi-layered boards were invented, which further increased the density and decreased the board footprint size. Surface mount components were a third to a tenth the size of their predecessors.

Today, the desire for smaller electronics still continues. A 50+ layer board is not uncommon. With super high density boards, all the layers must be aligned properly. Most manufacturers use pins for alignment. A slot or hole is punched in the board, but there is some inherent shifting. DIS, Inc.'s Pinless Registration System addresses that problem with an overall accuracy of 0.0007" inch. This accuracy is a selling point for customers because they can concentrate on improving other processes. A board is built by repetitively adding inner layers and pre-preg (non-conductive) layers. In the P-stage, fiberglass and epoxy resin are added. In the C-stage, all layers are cross linked (bonded together). So maintaining the alignment to ensure functionality all the way to the end of the process will minimize wasted resources, materials, and defective boards.

Software Manager, John Adamo, discussed how they maintain their competitive edge. The key is in understanding the customers' needs and understanding the market. Ask yourself the following: "what are the competitors doing and how do we fit in where the market wants to go? What is the patent landscape for our technology?" Introduction of new technology has to be a tenfold improvement over existing technology. DIS Inc. designs with 3D CAD layouts, and they use the animation packages to move parts around. This gives insight to any potential mechanical interferences. This gets them so far ahead, that they generally do not need to build prototypes. They may make some small prototypes, but their CAD work eliminates the need for full scale models. If you design using the right CAD software, the Bill of Material (parts list) work will already be done. With AutoCAD Inventor, vendors will have the individual CAD drawings of their components to work from.

John decided to go with a Control System for a PC platform as opposed to a PLC platform. PLC's are better for smaller applications, but PC's are expandable and best suited to support the family of products they have designed. There are two paths within PC control systems: (1) Pre-fab systems (2) Self designed systems. Pre-fab can get you to the market faster, but you are limited in the equipment you can use, you must consider licensing agreements, and changes drive the software. If you want a clean slate with a self designed system, be prepared to get "your way but not right away". DIS, Inc. did start out using pre-fab systems, but switched to a self-designed control system. They chose the developers' environment provided by Windows Microsoft Solutions for most flexibility.

In 2006, the control system path was chosen, and in 2-3 months, John designed the software platform. His goal was to take an object oriented design approach, which allows him to have many re-usable parts in future designs. He also knew he needed to provide good technical support in the International market. Thus, he designed an event log for better long distance troubleshooting. They ask their customers for the event log. If the auto track was not engaged, they can turn it on to see the equipment sequence. DIS, Inc. also has an upgrader. Maintaining the intellectual property and protecting the software is very important for a small company. They must track how it is used, how many systems their software can be used on. They deploy paid algorithms to track which customers have paid for system upgrades.

(Continued on page 2)

Next IIE / SME Meeting - Wednesday, October 22nd, 2008
Topic: Time & Labor Management /Shop Floor Control
Time: Networking/Refreshments: 6:00PM, Presentation: 6:30PM
Place: One Penn Plaza, Manhattan, NY
(see page 1 for details)

Reservation must be received no later than **Monday, Oct. 20th** - *Fax to: Tom Fiorella, 516-740-4616, or Mail to: Bob Schroter, 423 Elm St, West Hempstead, NY 11552-3226, or email: Tom Fiorella at tfior9651@msn.com with: Name, Title, Company for yourself and each guest. For contact person please indicate: address, member affiliation (IIE / SME), phone, fax, and/or email address.* For inquiries call Tom at 516-214-5588

NAME	TITLE	COMPANY

Send Directions to: _____ Phone Day: _____ Member Affiliation (IIE/SME): _____

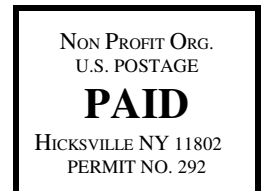
Address: _____ Phone Eve. _____ Include fax or email for a speedy reply.

Address: _____ Fax: _____ You will receive complete directions and instructions to ADP's office at One Penn Plaza, NYC once your reservation has been received.

City/State/Zip: _____ email: _____

Institute of Industrial Engineers
Local Chapter # 86
423 Elm Street
W. Hempstead, NY 11552-3226

Oct., 2008 Newsletter



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