The Construction Innovation Forum held its 14th Annual NOVA Awards Banquet last April at the Ford Event and Conference Center in Dearborn, Michigan to honor industry innovators in fulfilling its purpose of recognizing and encouraging construction innovation. The event was notable for its magnificent new venue, record number of NOVA Award Winners, attendance by national Construction Users Round Table members, and induction of new Construction Innovation.

By Robert I. Carr, Ph.D., P.E.

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continued on page 10

CIF is now accepting nominations for the 2004 NOVA Awards. The deadline is October 1, 2003. See page 2 for complete details.
The Construction Innovation Forum, established to annually identify and honor construction innovations worldwide, is accepting nominations for the 2004 NOVA Awards. The NOVA Award honors innovations that improve construction quality, productivity and cost effectiveness.

All sectors of the construction industry are eligible. No fees. Nominations are due October 1, 2003.
CIF Elects New Officers

The Construction Innovation Forum (CIF) has elected new officers for 2003/04.

Larry P. Jedele, P.E., M.ASCE, Principal Manager of Geotechnical Services for Soil & Materials Engineers, Inc., of Plymouth, Michigan has been elected Chairman of the Board. Jedele brings nearly 30 years of experience in civil engineering to his new position. He earned his undergraduate and graduate degrees in Civil Engineering from the University of Michigan.

Timothy A. Alter, President & Chief Executive Officer of Rudolph/Libbe Companies, Inc., in Toledo, Ohio has been named Chair of the Executive Committee. Tim Alter has been with Rudolph/Libbe Companies Inc. since 1983. He is past-chair of CIF’s Membership Committee and also a member of the Ford Motor Company Supplier Council and the Toledo Organization of Management.

Kevin P. Carroll, AIA, of OneSphere, Inc., Sylvania, Ohio has been elected to the position of Vice Chairman. Carroll is a registered Architect and co-founder of OneSphere, an Ohio-based firm dedicated to seamless project integration. Carroll received his Bachelor of Science degree in Architectural Engineering from the University of Cincinnati, and a Master of Architecture degree from the University of Michigan.

Sandra L. Cybulla, Vice President of Operations & Chief Financial Officer for the Construction Association of Michigan in Bloomfield Hills, Michigan has been named Treasurer. The Construction Association of Michigan represents over 4,000 commercial contractors, sub-contractors, suppliers and service providers, and is the oldest and largest regional construction association in North America. Cybulla holds a Bachelor of Science degree in Business Administration from the University of Detroit.

Robert P. Washer, Vice President of Business Development for MICCO, LLA, Pontiac, Michigan will serve as Secretary. In his 30-year career, Washer has worked in numerous capacities, including project management, purchasing, and project engineering. Washer received his Bachelor of Science degree in Civil Engineering from Clarkson University of Technology in Potsdam, New York.

CHAIRMAN’S MESSAGE

At the Nova Awards celebration last April, we acknowledged our deep appreciation to Roger Lane, Dr. Robert Carr, Dave Hamilton and John Doherty for their valuable contributions to CIF, innovation and the construction industry. These individuals were largely responsible for the formation and growth of CIF from its inception. Without their vision, leadership, dedication and passion for innovation, CIF and the NOVA Awards would not exist.

“...”

By Larry P. Jedele, P.E.

These individuals were largely responsible for the formation and growth of CIF from its inception. Without their vision, leadership, dedication and passion for innovation, CIF and the NOVA Awards would not exist.”

Larry P. Jedele, P.E., CIF Chairman
The 2003 NOVA Award Winners

AUTOMATIC REBAR TYING MACHINE REPLACES MANUAL TASK OF TYING REBAR

Tying steel reinforcing bars has always been tough, manual labor, as reinforcing ironworkers spend much of the day hunched over tying rebar. To address this issue, in 1994 the Bentac Company of Japan introduced the U-Tier automatic rebar tying machine. This was the first fully automatic machine to tie rebar. In an independent, but parallel effort, the Max Company of Japan introduced the automatic Re-Bar-Tier. Both machines are uniquely designed to replace the manual and backbreaking process of tying rebar. The machine holds the crossed reinforcing bars, feeds the tie wire, winds, cuts, and ties in one action. The result is a strong, single strand, double wrap tie. The automatic rebar tying machine can be used in numerous applications including highways, roads and bridges, concrete slabs, precast/prestress, electrical vaults, foundations, cages, and manholes. Advantages of the rebar tying machine include saving time through productivity improvements, reduction of on-the-job injuries, consistent results, and reduction of material costs by decreasing wire consumption.

Contact: U-Tier/A Division of Toyojamco, Ltd.
(915) 595-8825 ext. 22-23 • www.u-tier.net
MAX USA Corporation
(800) 223-4293 • www.maxusacorp.com

OPEN CONTROL NETWORK TECHNOLOGY ON A CHIP IS BROADLY ACCEPTED FOR SMART FACILITIES

Traditional control systems require the involvement of multiple trades for installation, require multiple network cabling and conduit systems, and ultimately require that the control software for multiple systems be laboriously programmed to “talk together” in order to function properly. In the 1990s, Echelon Corporation created the LonWorks chip. Smaller than a paperclip, the chip is non-proprietary and enables equipment from different manufacturers to communicate with one another. The LonWorks chip is used to create building automation systems where a single device control network monitors and controls all of the building’s functions, including lighting, HVAC, security access, backup generators, elevators, etc. LonWorks guarantees the interoperability of thousands of manufacturers’ products across almost every vertical industry. LonWorks has benefited manufacturers and end users by creating an open market, simplifying control systems, design, construction, and installation; and reducing initial/running/management costs. LonWorks has countless successful application in commercial buildings, industrial settings, transportation systems, homes, and utilities.

Contact: Steve Nguyen, Echelon Corporation
550 Meridian Ave., San Jose, CA 95126
Ph: 408-938-5272

“...very, very well done event! As a CURT (Construction Users Round Table) member, thanks for allowing me to attend!”

Jack Buttrum, Egizii Electric Co.
DIGITAL CLOSE-RANGE PHOTOGRAMMETRY HELPS CREATE ACCURATE 3D MODELS

Photogrammetry, measuring objects from photographs, has been used since the late 1800s, most commonly for mapping large areas from aerial photographs. Digital Close-Range Photogrammetry (CRP) accurately measures objects directly from photographs or digital images captured with a camera at close range. Accurate as-built 3D models of facilities and plant equipment are produced from multiple overlapping images taken from different perspectives. BE&K As-Built Services created CRP software and processes it has widely used in its consulting services.

Vexcel developed and markets FotoG CRP software that is broadly used for exacting measurements. EOS Systems developed and widely markets PhotoModeler, less expensive CRP software and hardware for a variety of uses. The James W. Sewall Company of Old Town, Maine, nominated close range photogrammetry for the NOVA Award after using it for a dimensional inspection survey of the Waldo-Hancock Bridge across the Penobscot River in Maine.

Contact: Phillip Zicarelli
(205) 972-7800 • www.asbuilt.com
Jason Szabo, Ph.D.
(303) 444-0094 • www.vexcel.com
Alan Walford
(604) 732-6658 • www.photomodeler.com
We were thrilled with the level of quality, attention to detail, as well as the high level of honor to have received the NOVA Award. It is a beautiful award, and is displayed and highlighted in the grand entrance of our headquarters facility.

Mary Tod Winchester, Chesapeake Bay Foundation, Inc.
Michigan Chapter NECA Takes Pride in Helping To Bring New Innovations to Customers

Electrical Construction Innovation Receives NOVA Award For First Time in History of Competition

By Brian Barthelmes

Just as the film industry has its Oscars, the construction industry has its NOVA Awards, and this year’s competition featured a major electrical industry address by the International Brotherhood of Electrical Workers’ (IBEW) International President Edwin Hill.

“Those of us who serve in national leadership positions are charged with taking a step back from the hustle and bustle of daily life and trying to gain perspective...We can identify the need to change, develop strategies to change and emphasize the process of change over and over again. But the real innovation comes from those on the ground who are making change happen. It’s the folks out there in the real world who take the risks, make the strategies work, and refine new methods to build success on the front lines. That’s what we’re here to celebrate tonight. And that’s what makes me proud to be part of the construction industry and confident of our future,” noted Hill.

One of this year’s NOVA Award winners is Echelon Corporation’s LonWorks technology – a control network platform that controls all of a building’s subsystems, such as lighting, card access and ventilation. This is the first time in the history of the NOVA Awards that an electrical innovation has won the top award.

“I am delighted that an electrical entry has won the award, and that one of our own – Paul Harrison – wrote the winning nomination using the technical skills and abilities he learned as an apprentice,” said Mike Crawford, Chapter Manager of the Michigan Chapter of the National Electrical Contractors Association (NECA). “Michigan Chapter NECA was also very proud to host this year’s competition and that Edwin Hill was able to witness the first NOVA Award ever given to an innovation in the electrical construction industry.”

The NOVA Awards competition benefits winning entities, encourages innovation and adds value to the entire U.S. construction industry.

“Echelon Corporation’s LonWorks technology is a great example of a new product that will provide more convenience and cost effectiveness for our customers,” said Crawford. To the electrical contractor, technologies like LonWorks mean simpler and more efficient work that uses fewer resources. Less time spent per project means our industry can build more than ever in less time, which is good for our industry and our customers.”
The Reload Classic is a scramble format with innovative twists that award “reloads” (second shots) based on hole difficulty and golfer ability.

Please choose from the following:

- **Golf Sponsor - $10,000**
  Green’s fees for all players
  *(Signs at registration/assembly/all holes)*

- **19th Hole Reception Sponsor - $5,000**
  Drinks and hors d’oevures following the event
  *(Signs at reception areas)*

- **Golf Cart Sponsor - $3,000**
  Golf carts for all players
  *(Signs at assembly and on all golf carts)*

- **Course Refreshments Sponsor - $2,000**
  Refreshment cart drinks and snacks on course
  *(Signs on refreshment carts)*

- **Lunch Sponsor - $1,500**
  Lunch at the turn
  *(Signs at lunch area)*

- **Golf Ball Sponsor - $1,000**
  Sleeve of 3 balls with your logo to all players
  Named a primary sponsor of the event
  Custom signs as described above
  Name listed in all press releases
  Special recognition at reception at 19th hole
  Named in program at Innovation Celebration
  Lunch tickets
  Reception drink tickets
  Chances in Special Gifts Drawing

- **Eagle Sponsor - $1,000**
  Named a primary sponsor of the event
  Name listed in all press releases
  Custom signs at the tee or green of choice
  Four golf tickets
  Four lunch tickets
  Special recognition at reception at 19th hole
  Refreshments on the course
  Eight reception drink tickets
  Gift for each player
  Four chances in Special Gifts Drawing

- **Birdie Sponsor - $800**
  Four golf tickets
  Four lunch tickets
  Refreshments on the course
  Eight reception drink tickets
  Gift for each player
  Four chances in Special Gifts Drawing

- **Program Sponsor - $500**
  Full page ad back cover of program
  One lunch ticket
  Two reception drink tickets
  Gift received by players
  Chance in Special Gifts Drawing

- **Closest to the Pin/Longest Drive Sponsor - $250**
  Custom sign at green or tee
  One lunch ticket
  Two reception drink tickets
  Gift received by players
  Chance in Special Gifts Drawing

- **Individual Golfers - $200**
  One golf ticket
  One lunch ticket
  Refreshments on the course
  Gift for player
  Two reception drink tickets
  Chance in Special Gifts Drawing

- **Tee or Green Sponsor - $150**
  Custom sign at tee or green
  One lunch ticket
  Two reception drink tickets
  Gift received by players
  Chance in Special Gifts Drawing

**Schedule of Events - September 16, 2003**

- 9 am  Registration/Warm-up
- 10 am  Shotgun start. Scramble begins
- 12 noon  Lunch on the turn
- 3 p.m.  Cocktail reception, Hors d’oeuvres
- 5 p.m.  Conclusion

Name: ___________________________________

Company: ________________________________

Address: _________________________________

City: _______________ State: ______ Zip:_______

Phone: __________________ Fax: _____________

Players: ________________________________

________________________

________________________

________________________

________________________

All sponsors are listed in the program

Please fax to (248) 409-1503
The Construction Innovation Forum held its 14th Annual NOVA Awards Banquet last April at the Ford Event and Conference Center in Dearborn, Michigan to honor industry innovators in fulfilling its purpose of recognizing and encouraging construction innovation. The event was notable for its magnificent new venue, record number of NOVA Award Winners, attendance by national Construction Users Round Table members, and induction of new Construction Innovation Board Members.
What attendees thought of the 2003 NOVA Awards

![Bar chart showing attendee feedback on various aspects of the NOVA Awards event.](chart.png)

- **Pre-Event Reception Food & Beverage**: Exceeded Expectations
- **Banquet Food & Beverage**: Met Expectations
- **Award Video Presentations**: Exceeded Expectations
- **Guest Speaker**: Met Expectations
- **Event Location & Decor**: Above Expectations
- **Overall Quality of Event**: Met Expectations

**Overall Quality of Event**: Met Expectations
Thanks to the following sponsors and attendees for supporting the 2003 NOVA Awards program:

- A. F. Smith Electric
- Air Products & Chemicals, Inc.
- Aladdin Electric
- Aluminum Supply Co., Inc.
- American Glass & Metals Corp.
- Architectural Contractors Trade Association
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- Intel Corp.
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- International Brotherhood of Electrical Workers, Local 17
- International Brotherhood of Electrical Workers, Local 58
- International Brotherhood of Electrical Workers, Local 131
- International Brotherhood of Electrical Workers, Local 219
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- International Brotherhood of Electrical Workers, Local 275
- International Brotherhood of Electrical Workers, Local 445
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- International Brotherhood of Electrical Workers, Local 557
- International Brotherhood of Electrical Workers, Local 665
- International Brotherhood of Electrical Workers, Local 692
- International Brotherhood of Electrical Workers, Local 557
- International Brotherhood of Electrical Workers, Local 498
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- National Association of Women in Construction
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Reserve your Sponsorship for NOVA 2004!

- Event Sponsor: $50,000
- Winner Video Presentations: $15,000
- Pre-Event Cocktail Reception: $10,000
- Pre-Event Hor D’oeuvres: $10,000
- Invitation & Program Printing: $5,000
- Audio Visual Production: $5,000
- Spotlighted Logo on Wall at Event: $2,000
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- “Supporting Sponsor” Ad in Program: $1,000

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**Member Designation:** (circle one primary business)

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  - Labor Organization
  - Sub-Contractor
  - Supplier

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  - Industry Services (bonding, insurance, etc.)

- **Construction Purchaser/Privately Owned**
  - Commercial
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  - Institutional (health care, religious organization, etc.)
  - Manufacturing
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  - Governmental Agency
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Memorial to Robert B. Harris

By Photios G. Ioannou, Ph.D., P.E.

Robert B. Harris, Professor Emeritus of Civil Engineering, was a faculty member in the Department of Civil Engineering at the University of Michigan for forty years, from 1947 to 1987. Over his long tenure, Professor Harris was a pioneer in Construction Engineering and Management research and education, and had a prominent role in the development and advancement of the field of Construction Engineering and Management at Michigan, throughout the United States and internationally. The graduate program in Construction Engineering and Management at University of Michigan that he helped establish in 1954 is the oldest in the world and the first to offer a separate graduate degree, the Master of Science in Engineering (MSE) in Construction Engineering and Management.

Professor Harris was born in 1919 in Idaho. He received a Bachelor’s degree in Architectural Engineering from the University of Colorado and a Master’s degree in Civil Engineering (Structures) from the California Institute of Technology. He began his teaching career at the University of Connecticut, and joined the Civil Engineering Department at the University of Michigan as an Instructor in 1947. He retired in 1987 as Professor and Associate Chair of the Civil Engineering Department. He has also taught at Caltech and was a visiting Professor at the University of Utah. Upon retirement Professor Harris was Professor Emeritus of Civil and Environmental Engineering.

Professor Harris’ research included advanced construction scheduling techniques, time-lapse studies for construction, materials for civil engineering, and computer applications for construction engineering and management.

Professor Harris was a member of several professional and honor societies. He was a Fellow of the American Society of Civil Engineers, and a member the American Concrete Institute. He was a member of and had been very active for many years in Chi Epsilon, the National Civil Engineering Honor Society, including serving as National President from 1972 to 1974.

Professor Harris was a registered Professional Engineer and had served as consultant to a number of construction organizations. He had industrial experience in design and construction of engineering projects in both steel and concrete, including power plant smoke abatement models, airplane hangars, water treatment facilities, concrete dams, reservoirs, and highway bridges. On the international front, he had served as an educational consultant to help establish construction programs in Honduras and India.

Professor Harris had served as Editor of the ASCE Journal of Construction Engineering and Management, for more than 16 years, longer than any other individual, and he is widely recognized as responsible for establishing the Journal as the premier publication in construction both nationally and internationally. Professor Harris was Awards Manager for the NOVA Award for Innovation in the Construction Industry for many years, writing investigation reports, summaries of Nominations, investigation reports on award finalists, and scripts for slide and video programs at the Annual NOVA Award Banquet.

His publications include several papers in construction scheduling and management. He is the author of the most widely used text in construction scheduling, Precedence and Arrow Networking Techniques for Construction, which has also been translated into Spanish.

Professor Harris had received numerous local and national awards. At the local level, he received the ASCE Michigan Section Distinguished Service Award in 1963 and 1964, and the ASCE Ann Arbor Branch Engineer of the Year Award in 1980. He is also a University of Michigan Chapter Honor Member of Chi Epsilon. At the national level, he received the Harold T. Larsen Award from Chi Epsilon in 1986, and the ASCE Construction Management Award in 1983. ASCE has also honored him with its most prestigious construction research award, the Peurifoy Construction Research Award in 1991.

Professor Harris has had a profound impact on the Department of Civil Engineering, on Construction Engineering Management, and the profession. His daily routine while an active faculty member was to serve the department until 11:00 PM every day, including weekends. Upon retirement it took several people to take up and continue his duties. He is responsible for the way the Department looks today having designed the layout of G.G. Brown Building. He was instrumental in hiring every faculty member in Construction Engineering and Management. As late as April 22, 2003 he met with three CEM faculty candidates provided feedback through email. He has taught thousands of students all of whom remember him fondly. Given his long career at Michigan he was our connection with our past and our history.

Professor Harris passed away on Sunday, April 27, 2003. May his memory be eternal.

Photios Ioannou is a Professor of Civil & Environmental Engineering at the University of Michigan
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