



# Worcester County IEEE

## Newsletter

April

1999

Computer Society / Delphi Developers Group  
**Client/Server Programming Using the Web**

**Howard Schutzman, Creative Computing**

**April 26, 1999, 7:00 PM Kronos, Inc., Waltham**

How you can develop customized client/server systems using the World Wide Web as your network. The Client is a Delphi program; it need not be browser/html based. The Server is implemented as a Delphi dll; the Web Server is simply used as a connection manager.

Annual Joint Dinner Meeting of the IEEE Worcester Section and the ASME  
**Renewable Energy Systems And Electric Vehicles**

**NEES Experience Over Fifteen Years**

**Dr. John J. Bzura - New England Power Service Company**

**May 11, 1999, 8:00 PM, optional dinner at 7 p.m., social period at 6:30 PM**

**Higgins House, WPI Worcester**

Presentation of the company's experience with residential PV systems, commercial PV systems, the unique 100-kw ground-mounted PV system at Beverly (MA) high school, PV-assisted lighting and Medford Solar Project. For further information and reservations, call (508) 831-5425.

Worcester County Section

**Annual Meeting and Election of Officers**

**Friday, May 21, social period at 6:30 PM, dinner following a brief business meeting at 7:00 PM, Cheng Du restaurant, Westboro**

### **Renewable Energy Systems And Electric Vehicles**

**NEES Experience Over Fifteen Years  
Dr. John J. Bzura - New England Power  
Service Company**

The annual joint dinner meeting of the Worcester section of the IEEE and the ASME will be held at the Higgins House, on to campus of Worcester Polytechnic Institute, on May 11, 1999. The optional dinner at 7 p.m. will be preceded by a social period at 6:30 p.m. The choices for dinner are chicken or fish at \$15.

The speaker will begin at 8 p.m. For further information and reservations, call (508) 831-5425. This year's presentation, "Renewable Energy Systems and Electric Vehicles", will be given by an outstanding individual with many years experience in the field.

Massachusetts Electric Company, one of the New England Electric Systems (NEES) distribution companies, has supported research, development and demonstration projects in customer-sited, grid-connected renewable energy projects since 1980. Interest in electric vehicles (EV's) goes back approximately 15 years, and has included three phases of EV technology. The company remains active in both areas, with ongoing tests of state-of-the-art EV's and a

pioneering integrated photovoltaic (PV) technology (the AC Module).

Dr. John Bzura, principal engineer - retail R&D, will discuss the company's experience with residential PV systems, commercial PV systems, the unique 100-kw ground-mounted PV system at Beverly (MA) high school, PV-assisted lighting and Medford Solar Project. This project began in February and will monitor the performance of the AC Module. The AC Module is a unique combination of a single large

(4' x 6') PV module and an inverter attached to the back. The system produces up to 250 watts of a.c. power and is easily connected to home wiring. The company has also monitored wind energy systems from 300 watts to 10 kw.

Dr. Bzura will also discuss his experience with electric vehicle development. Early electric vehicle R&D, focused on small foreign cars with lead-acid batteries and d.c. motors. Projects begun in the mid-1990's examined cars with a.c. induction motors and nickel-cadmium batteries. Current tests include two types of EV's, both with nickel-metal-hydride batteries. The first is a four-door sedan with an induction motor; the second is a small sport-utility vehicle with a permanent magnet d.c. motor.

Dr. Bzura has worked in energy R&D for 24 years, starting with high-power ( 5 megavolt, 100 kiloamp ) electron beam research at Cornell University where he earned his Ph.D. in Electrical Engineering. Following a year of postdoctoral work at Cornell, he completed an M.B.A. at Syracuse University. He then spent eight years at Arthur D. Little, Inc. (ADL) in Cambridge, MA. Work at ADL ranged from railroad electrification to advanced power transmission technologies. Since joining New England Power Service Company (a NEES company) in 1983, he has worked on load management projects, home surge protection technology, electric vehicle systems and distributed generation (DG) technologies; these include solar power systems, wind energy systems, fuel cells and microturbines. He is a senior member of the IEEE and has been active on several Power Engineering Society committees and working groups since 1980.

Higgins House is located on the northwest part of the WPI campus, off Salisbury Street. There is no parking at Higgins House, so please park on West Street, or in the area parking lots.

Directions: From I-290 northbound, take the Belmont Street/Lincoln Square exit (exit 17), and turn left, follow through WPI campus. At the intersection with Salisbury Street, turn left, the first left is the entrance to Higgins House. From I-290 southbound, take exit 18, bear right at the end of the ramp, then take the next right, proceed straight, merging with Salisbury Street. Continue west on Salisbury Street until the WPI campus is on the left. Parking may be found on Salisbury Street or on West Street. The entrance to Higgins House is the first left after West Street.

## Client/Server Programming Using the Web

### Howard Schutzman, Creative Computing

This month's presentation will demonstrate how you can develop customized client/server systems using the World Wide Web as your network. The Client is a Delphi program; it need not be browser/html based. The Server is implemented as a Delphi dll; the Web Server is simply used as a connection manager. Howard Schutzman, Creative Computing, will investigate the central issues of Web based development Delphi Developers should be familiar with. The topics he will consider include:

1. HTTP - the World Wide Web protocol
2. ISAPI - the API used to implement extensions to the Microsoft Web Server (IIS)
3. THttpClient, THttpServer - Delphi classes that have been developed to facilitate client/server communications using the World Wide Web.
4. EmIIS - an IIS emulator program developed to facilitate debugging of Web applications.

The THttpClient and THttpServer classes are the key elements to this technology. They use a special protocol developed on top of HTTP to allow communications. They are capable of passing any type and length of data — string, binary, and files. The details of the protocol and implementation techniques will be presented in depth.

This meeting of the Worcester County Computer Society and the Delphi Developers Group is at 7:00 PM on April 26, 1999. The location is Kronos, Inc., 400 Fifth Avenue, Waltham, MA

#### Directions:

Heading South on Route 128 / I95 take Waltham Exit 27A, Totton Pond Road. Proceed up the exit ramp and cross over the Route 128 overpass. At the second traffic light (the first and second traffic light are separated by about 50 feet) turn right onto Third Avenue.

Heading North on Route 128 / I95 take Waltham Exit 27A, Totton Pond Road. Proceed up the exit ramp and just before the traffic light, bear right towards the stop sign. Turn right onto Third Avenue.

On Third Avenue, proceed about a 100 yards and turn left onto Fifth Avenue, the first "real" left just before the Westin Hotel. Proceed up the hill on Fifth Avenue, at the top turn (bear) right. You will pass 4 buildings (3 red brick and 1 tan brick) on your left. Kronos is located in the last (4th) building on you left, the only tan brick building in the office park.

Park in the parking lot and proceed to the main entrance of the tan brick building. Signs in the lobby will direct you to the meeting room.

Additional Information:

Al Reinhart, DisCom Systems

Voice: 508/869-6417

E-Mail: reINHART@DisCom.com

WebSite: www.DisCom.com/Delphi

# THE PACE PAGE

## Employment Assistance

- Employment-assistance Information Package is available through IEEE headquarters in Piscataway.
- IEEE-USA National JobListing Service offers Web Gopher and e-mail versions of regional job posting files at Web URL [www.ieee.org/jobs.html](http://www.ieee.org/jobs.html) and e-mail autoresponse files at [info.ieeusa.jobs.r0x@ieee.org](mailto:info.ieeusa.jobs.r0x@ieee.org) ( x = region : 1 through 6 ).
- Electrotechnology Resume' Referral Service is a national data base that is accessed by employers with job opennings. U.S. IEEE members may register at no charge for the service by contacting Resume' Link at 614-529-0429 or at Web URL [www.resume-link.com/](http://www.resume-link.com/).
- Electro-Technology Industries (ETI) Database was developed by Region 3 and is available to all U.S. IEEE members. Register and access via the Web URL [sandbox.ieee.org/r03/eti/eti.html](http://sandbox.ieee.org/r03/eti/eti.html) .
- Other Non-IEEE Employment Information Cites :
  - America's Job Bank ( [www.ajb.dni.us](http://www.ajb.dni.us) )
  - Career Builder ( [www.careerbuilder.com](http://www.careerbuilder.com) )
  - Career Mosaic ( [www.careermosaic.com](http://www.careermosaic.com) )
  - CareerPath ( [www.careerpath.com](http://www.careerpath.com) )
  - JOBTRAK ( [www.jobtrak.com](http://www.jobtrak.com) )
  - The Monster Board ( [www.monster.com](http://www.monster.com) )
  - Online Career Center ( [www.occ.com](http://www.occ.com) )
  - The World Wide Web Employment Office ( [www.toa-services.net/annex.html](http://www.toa-services.net/annex.html) )
  - Yahoo! Classifieds ( [www.classifieds.yahoo.com/employment.html](http://www.classifieds.yahoo.com/employment.html) )

## Worcester County Section IEEE Annual Meeting

The Worcester County Section annual meeting is scheduled for Friday May 21 at the Cheng Du restaurant on route 9 (westbound side) in Westboro. We will meet for a social period at 6:30 pm and be seated in the banquet room at 7:00 pm. We will be ordering from the menu.

The annual meeting for the election of officers will be preceded by a brief business meeting. The slate of officers of the Worcester County Section of the IEEE for the 1999 – 2000 term are:

Section Chair ..... Larry Nelson  
Section Vice-Chair ..... Al Rinehart  
Section Secretary/Treasurer ..... Jim Jensen  
Section Membership Chair ..... Vern Gaw  
Section Newsletter Editor ..... Bob Hassinger

Section Pace Chair ..... Stan Tanenholtz  
Section Education Chair ..... Rich Fahey  
Section Power Society Chair ..... Dick Kane  
Section Computer Society Co-Chair Ric Perron  
Section Computer Society Co-Chair Jim Perry

Nominations are accepted from the floor at this meeting, if you would like to run or nominate someone for an office. Alternately, you may contact the secretary/ treasurer ( Jim Jensen ) at 82 Edgewood Road ; Shrewsbury, Ma. 01545.

## Industry Survey on Software Schedule Management

### Ziya Ma

I am a Ph.D. candidate at Arizona State University and am conducting a survey on software management practices. I am very interested in getting responses from professionals within your IEEE Computer Society group. I have put my survey questionnaire at URL: <http://enuxsa.eas.asu.edu/~ziya/index.html>.

## Interesting!!

### Forwarded by Dick Kane

Dilbert's "Salary Theorem" states that "Engineers and scientists can never earn as much as business executives and sales people."

This theorem can now be supported by a mathematical equation based on the following two postulates:

Postulate 1: Knowledge is Power.

Postulate 2: Time is Money.

As every engineer knows:

$$\text{Power} = \text{Work} / \text{Time}$$

Since:

$$\text{Knowledge} = \text{Power}$$

$$\text{Time} = \text{Money}$$

$$\text{Knowledge} = \text{Work} / \text{Money}.$$

Solving for Money, we get:

$$\text{Money} = \text{Work} / \text{Knowledge}.$$

Thus, as Knowledge approaches zero, Money approaches infinity, regardless of the amount of work done.

Conclusion:

The less you know, the more you make.