



Worcester County IEEE

Newsletter

March

1998

Worcester Section/PACE
Dancing Engineers?

Larry G. Nelson Sr., Section Chairman

Friday, March 13, 7 PM to 9 PM, Pizza at 6:30 PM, Trinity Church, Northboro

An introduction to formal dancing with a professional dance instructor. \$15.00 per couple for IEEE members with guest and \$25.00 per couple for non members. If you are a member but your partner is not the cost is \$15.00 for both of you. We will be having Pizza and drinks available along with chips so the cost includes food.

Worcester Section - Computer Society
Multimedia Delphi Application Development

Howard Schutzman, Creative Computing

Monday, March 16, 1998, 7:00 PM, Pencil Pushers, Burlington

This months meeting will focus on the major issues of interest to multimedia developers, investigate how multimedia can be handled in Delphi applications, and explore opportunities Delphi developers have for including multimedia technology in their applications.

Worcester Section - Computer Society
Putting the Future at the Fingertips of Our Students and Staff

**Robert Cornacchioli, Director of Technology and
Media Service for Shrewsbury Public Schools**

Thursday, March 19, 1998, 6:30 PM, Quantum, Shrewsbury

A talk about Shrewsbury's experiences participating in the state-wide initiative, "NetDay", in getting the schools connected to the Internet.

Worcester Section - Computer Society
**TurboPower AsyncPro, Memory Sleuth,
SysTools, Abbrevia, Orpheus, Essentials**

AI Reinhart, DisCom Systems

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This months meeting will investigate a number of application development topics of interest to Delphi developers.

Annual Meeting

Friday May 15, 1998, Colonial Restaurant, Webster

The Annual Meeting for the Worcester County Section. This will be the night of our elections. More details will follow in the next newsletter.

Worcester Section - Computer Society
Multitier Application Architecture

Beth Gold-Bernstein, IllumiSys Corp.

Monday, May 18, 1998, 7:00 PM, Pencil Pushers, Burlington

The major concepts of distributed, component based, multitier architecture and the issues application developers will need to be aware of.

THE PACE PAGE

Engineers Week

Stan Tanenholtz

Once again, the engineering profession will be celebrating National Engineers Week from February 22 - 28. Our theme is "Turning Ideas Into Reality". The "kickoff" to this year's celebration was the joint annual dinner of the IEEE and ASME on February 5 at Worcester Polytechnic Institute. The featured speaker was Dr. William A. Beckman from the University of Wisconsin. He took us through poignant illustrations of the importance of and the potential economic impact of solar-thermal energy conversion.

Several Worcester County IEEE board members participate in programs fostering the goals of engineers week. One important goal is to promote an understanding of the engineering profession. To this end, mentoring programs are in effect at local middle schools. Anyone wishing to become involved in their own local school should e-mail Stan Tanenholtz at stanenholtz@bentley.edu for information regarding ways to contact schools, give a presentation and provide activities to involve students.

Technological Literacy Counts Workshop

Stan Tanenholtz

The IEEE is bringing together engineers and educators to promote the advancement of technological literacy in the primary and secondary schools worldwide. The Technological Literacy Counts Workshop (Oct. 9-10, 1998, Baltimore, Md.) will be attended by approximately 75 educators and 75 engineers. Attendance will be limited to insure the workshop is truly a "working" meeting of change agents.

The Education 21 Workshop will include panel sessions and breakouts designed to open communications lines between the education and engineering

communities. Workshop attendees will consist of a balance of science, math and technology educators, as well as engineering professionals, who will identify the issues related to the design of appropriate methods enhancing the quality of technological literacy in pre-college education.

IEEE is the world's largest technical society, and is committed to taking a leadership role in influencing enhanced pre-college education worldwide. For more information, or to express interest in participating in the October workshop, contact Barbara Coburn, Manager, Career Development Programs, IEEE Educational Activities at 732-562-5498 or e-mail to b.coburn@ieee.org.

Annual Meeting

On Friday May 15 is the Annual Meeting for the Worcester County Section of the IEEE. This will be the night of our elections. We will be having dinner at the Colonial Restaurant in Webster MA. More details will follow in the next newsletter so please be sure to mark your calendar now for this function.

Multimedia Delphi Application Development

Howard Schutzman, Creative Computing

Multimedia - enhanced text, sound, images, animation and video - has become an important technology for Delphi developers to understand and incorporate in their applications. This month's meeting will focus on the major issues of interest to multimedia developers, investigate how multimedia can be handled in Delphi applications, and explore opportunities Delphi developers have for including multimedia technology in

their applications. Using a multimedia Delphi application he recently developed, Howard Schutzman, Creative Computing, will demonstrate the multimedia effects he incorporated in the application and explain how he implemented them. The areas he will cover include:

- Canvas Rendering Techniques, including 3D effects
- Transparent Controls
- Active Controls (“pop up” when your mouse passes over them)
- Color and Palette Usage
- Device Independent Bitmaps
- Playing sound and movie files

Understanding and incorporating these and other multimedia techniques in your Delphi applications will produce a more polished and usable look and feel than the standard Windows user interface.

This meeting of the Worcester Section - Computer Society, held in conjunction with the Delphi Developers Group of Greater Boston, will be held on Monday March 16th, from 7:00 to 9:00 at Pencil Pushers - Tax Software, 10 New England Executive Park, Burlington, MA. For additional information contact Al Reinhart, DisCom Systems at 508-869-6417 or reinhart@DisCom.com.

Dancing Engineers?

Larry G. Nelson Sr., Section Chairman

Our Dancing Engineers sessions have been a great success so we are doing it again. Our next session of dancing engineers is scheduled for Friday March 13 at the Trinity Church on Main street in Northboro. We are having an introduction to formal dancing. We have a professional dance instructor, Roxana Dumitriu, that will guide us through some basic dance steps for Waltz and Foxtrot. The cost for this will be \$15.00 per couple for IEEE members with guest and \$25.00 per couple for non members. If you are a member but your partner is not the cost is \$15.00 for both of you. We will be having Pizza and drinks available along with chips so the cost includes food. Wear comfortable shoes and be prepared to have fun. The lesson will last for 2 hours from 7 PM to 9 PM. and Pizza will be there at 6:30. If the weather is bad like last time check

with me to see if we have had to cancel. If we do cancel we will have a snow date of Saturday 3-14-98 at the Aurthur Murray Studio in Worcester and I will announce directions when you check with me or via Email.

There is one more of these which we have scheduled for 5-8-98 so be sure to mark your calendar.

The Trinity Church is located at 23 Main Street in Northbrough, Mass. (in Northbrough, Main Street is also Route 20), one block east from Northbrough Center. Northbrough Center is at the intersections of Main Street, Route 135, and Church Street.

From Northbrough Center, head east for one block and take the first left after the railroad tracks. This left will be between an Exxon gas station on the left and the “Trinity Church” on the right. Take your first right into the parking area of the Trinity Church and enter the church from the back door off the parking lot.

Northboro Center is centrally located:

From the north or Worcester: Take Route 290 to the “Church Street” exit and head south, follow Church Street to Northbrough Center. From the east, this is the second set of exits from Route 495 and a left turn at the bottom of the exit ramp. From the west, this is the exit after the Route 140 exits in Shrewsbury and a turn right at the bottom of the exit ramp.

From Marlboro: Follow Route 20 East to Northbrough Center. From Westbrough: Take Route 9 to the “Route 135 North” exit and follow to Northbrough Center.

From Shrewsbury: Follow Route 20 East to Northbrough Center.

I hope to see many of you there. Registration is not required but I really want to get some idea of how many of you will be attending so we can have sufficient refreshments. I want this to be a great time for all. If you know how to dance please come since there will be something for everyone. This is for anyone at any level of skill, from none to instructor. If you do not have a partner come along and we will try to match you with someone so you too can learn to dance.

If you are interested in attending please contact: Larry G. Nelson Sr, L.Nelson@IEEE.ORG, 508-943-1075 phone, 508-949-2914 FAX, PO Box 416, Webster MA 01570

Putting the Future at the Fingertips of Our Students and Staff

Robert Cornacchioli, the Director of Technology and Media Service for Shrewsbury Public Schools and a member of the Educational Technology Advisor Committee, Massachusetts' Department of Education, will be presenting a talk about his and Shrewsbury's experiences participating in the state-wide initiative, "NetDay", in getting the schools connected to the Internet. This presentation will cover:

- 1) History of NetDay
- 2) Goals of NetDay
- 3) Obstacles, Concerns and Timelines
 - Outreach to Volunteers and Team Structure
- 4) Vendor Partnerships
- 5) Training
- 6) NetDay
- 7) The Implications of a Wired Community
 - AUP's, Professional Development, etc.

Robert Cornacchioli currently serves on Educational Technology Advisor Committee, Massachusetts' Department of Education. Previously, in 1995 and 1997, he served as served as Chairman of the Donations and Vendors Committee for the State of Massachusetts for NetDay '96.

Robert Cornacchioli is Shrewsbury's Director of Technology and Media Service, since 1995. Previously, he was the Director of the Shrewsbury Educational Television Studio from 1986 to 1995, and a Science Teacher from 1976 to 1986. Robert Cornacchioli holds a Masters Degree in Educational Technology from Lesley College.

This meeting will be held Thursday, March 19, 1998, 6:30 PM in the Amphitheater at the Quantum Research Center in Shrewsbury.

Directions to Quantum Research Center:

From the East: Take Rt 9 West from Rt. 495, go several miles on Rt 9 (through Westboro, Northboro, to Shrewsbury). After passing the Rt. 20 interchange, make a left at the next traffic light onto South Street. The Ragsdale Superstore is on the south east corner. Quantum Research Center is located up the hill on the left.

From the West: Take Rt 9 East (Worcester, to Shrewsbury). After passing the Rt. 140 interchange,

make a right at the next traffic light onto South Street. The Ragsdale Superstore is on the south east corner. Quantum Research Center is located up the hill on the left.

TurboPower AsyncPro, Memory Sleuth, SysTools, Abbrevia, Orpheus, Essentials AI Reinhart, DisCom Systems

This months meeting will investigate a number of application development topics of interest to Delphi developers. We will investigate asynchronous communications and serial port control, debugging Delphi applications, file compression and decompression, file and system resource handling, and more using the following members of the TurboPower family of Delphi products. AsyncPro Serial Communications Library. APRO delivers full serial port control including components for handling data packets, TAPI, Winsock, modem, terminal, file transfer and fax protocols for real world business telephony. Memory Sleuth Debugger. Memory Sleuth is a Delphi specific debugger for tracking down memory and resource bugs. SysTools System Library. SysTools consists of over 600 system-level routines and classes which includes string manipulation, date and time manipulation, high-precision arithmetic routines including BCD, classic data structure container and sorting classes. Also included are operating system utilities that implement low-level data manipulation, direct operating system calls, and text file handling routines including registry and INI file access classes. Abbrevia. PKZIP 2.0-compatible Delphi components for data compression and decompression. Abbrevia includes advanced support for disk spanning ZIP files spread across multiple diskettes, self-extracting archives, support for long filenames, file and archive comments. It also provides a powerful API level for creating and manipulating ZIP files directly from your code. Orpheus Component Library. Orpheus consists of over 50 native Delphi components and 100 classes for extending Delphi's forms-building and data-handling capabilities. Essentials. A set of Delphi controls that include drop-down calendars and calculators, roll-up dialogs, 3-D labels, tiled backgrounds,

scrolling messages, and menu buttons. For additional information concerning the TurboPower family of products visit their web site at www.turbopower.com.

This meeting of the Worcester Section - Computer Society, held in conjunction with the Delphi Developers Group of Greater Boston, will be held on Monday, April 13th, from 7:00 to 9:00 at Pencil Pushers - Tax Software, 10 New England Executive Park, Burlington, MA. For additional information contact Al Reinhart, DisCom Systems at 508-869-6417 or reinhart@DisCom.com.

Multitier Application Architecture

Beth Gold-Bernstein, IllumiSys Corp

Emerging application architectures are multitiered featuring thin clients requiring no application installation or support, application servers that manage the business logic, and data sources on various platforms. A key ingredient to make multitier applications adaptable to rapid changes will be a middleware, component-based architecture. A major challenge for application developers will be understanding the pieces of the middleware puzzle in order for their applications to incorporate good business decisions and practices.

At this month's meeting, Beth Gold-Bernstein, IllumiSys Corp, will explain the major concepts of distributed, component based, multitier architecture and highlight the issues application developers will need to be aware of. Application architectures of the future will be distributed and integrated. Furthermore, they will be component-based in order to quickly adapt to rapid changes in business and technology. The goal of this architecture is to allow new applications to be easily assembled from prefabricated components. These components may be purchased components or applications, "wrapped" legacy applications, and custom-built ones. They may reside on different technology platforms within and outside the organization. Properly designed, a component-based architecture will easily integrate legacy, current, and emerging technology.

Enabling seamless integration and communication among these components requires an extensive infrastructure or middleware architecture to connect the

multitier application. This emerging middle-tier middleware is called various names: transaction server, application server, component server, and business rules server. Regardless of the name, terminology, or technology used in the current vendor solutions, the same set of services is required to deliver the full functional abilities of a distributed component architecture. These abilities include scalability, adaptability, recoverability, and manageability.

For a more detailed overview of the distributed component, middleware architecture visit <http://www.dbpd.com/9802feat.htm> and attend the May meeting.

This meeting of the Worcester Section - Computer Society, held in conjunction with the Delphi Developers Group of Greater Boston, will be held on Monday, May 18th, from 7:00 to 9:00 at Pencil Pushers - Tax Software, 10 New England Executive Park, Burlington, MA. For additional information contact Al Reinhart, DisCom Systems at 508-869-6417 or reinhart@DisCom.com.

<http://www.ultranet.com/~ieeeworc/>