



# Worcester County IEEE

## Newsletter

November

1996

Worcester Section - Computer Society - Delphi Developers Group  
**Developing Components / Mission Critical Applications**  
Jeffrey Katz, Whaling City Software

**Monday, November 18, 1996 at 7:00 PM, Pencil Pushers, Burlington**

An overview of a factory automation Delphi application written for a cranberry processing company, include interfacing a Delphi application through multiple serial links to industrial controllers; design issues and implementation strategies for a mission critical application; and multi-user, file and record locking programming considerations in a file server environment.

Worcester County Computer Society  
**Network-Centric Computing, An Overview of NCA, Oracle's  
Network Computing Architecture**  
Dr. Samuel DeFazio

**Wednesday, November 20, 1996 at 6:30 PM, Quantum (SHR1), Shrewsbury**

An overview of NCA, Oracle's Network Computing Architecture, and discussion of development of Data Cartridges, the means by which the Oracle Server is extended to handle multimedia and other complex forms of data.

Worcester Section - PACE - Central Mass Internet Group  
**Borland International's IntraBuilder and JavaScript**

**Thursday, November 21, 1996 at 7:00 PM, DEC (SHR3), Shrewsbury**

A demonstration of IntraBuilder, Borland's recently released data-centric, Intranet application development tool.

Worcester County Power Engineering Society  
**A View Of Electric Vehicle Developments By An Industry Leader**  
Dr. Roderick Hinman, Solectria Corp.

**Wednesday November 27, 1996 at 7:00PM, New England Electric, Westboro**

Solectria, has been in the forefront of electric vehicle progress. Come and hear about their "Sunrise" vehicle and recent industry developments.

Worcester County Power Engineering Society  
**Current Electric Vehicle Developments and Local Initiatives**  
Dave Dilts, Boston Edison

**Wednesday, December 4, 1996 at 7:00 PM, New England Electric, Westboro**

The presentation will provide an up-to-date discussion of the rationale for looking at electric vehicles as the best introduced by the big seven automobile manufacturers.

Worcester Section - Computer Society - Delphi Developers Group  
**Importing Object Oriented Libraries and  
Multi-Tier Architecture: Modeling And Programming**  
Monday, December 16, 1996 at 7:00 PM, Pencil Pushers, Burlington  
Steve Carter, and Jean Ichbiah

The principles that apply to porting object-oriented libraries into Delphi 2.0. Also, multi-tier architecture modeling and programming in Delphi.

Worcester Section - PACE - Central Mass Internet Group  
**JavaScript And Internet Application Development**  
Thursday, December 19, 1996 at 7:00 PM, DEC (SHR3), Shrewsbury

JavaScript and Internet / intranet application development - the relationship between windows, forms and frames.

## Section Services

### Larry G. Nelson Sr. (L.nelson@ieee.org)

One of the purposes of the IEEE is to provide services to our members. Headquarters has many services we all make use of. We get the monthly Spectrum magazine and we have the various insurance programs available to us. There are the standards and the technical journals of our Societies. At the next level down we have the Region. Our Region is Region 1. This is where we have an all volunteer group of officers and workers. The next level is the Section. This is the level I serve as Chairman. It is at the section level that local meetings and activities are coordinated. We have been very active with the Computer society and have provided many excellent meetings with fine attendance. Another active society is the Power Society. This group has staggered along for a while but we now have a new Chairman and he is now starting to organize meetings. Please remember we are all giving our time to provide services that are useful to as many members as possible. We need your help. We want meetings and activities you want to go to. If you have a topic of interest, a speaker you think would be of interest, or an activity you think we should provide or support, please let us know. The best way to contact me is via EMAIL but if you call me or fax me I will attempt to act on your suggestions. This is our engineering organization but we can't give you what you want if you don't tell us what you expect. Please give me feedback so the Section Officers can make our local IEEE activities successful. If you call and don't reach me, please leave me a message and I will return your call. I want to hear from you.

Larry G. Nelson Sr., L.Nelson@ieee.org, 508-949-2914  
FAX, 508-943-1075 Phone

## Current Electric Vehicle Developments and Local Initiatives

### Dave Dilts, Boston Edison

The pace of electric vehicle development is quickening. Motors, controllers and transmissions are being optimized. Battery development is progressing at a rapid pace and soon we may see fuel cell commuter vehicles on the road. In the 1995 Tour de Sol, Solectria's Sunrise vehicle traveled 238 miles without a recharge.

Come and hear about the latest progress in the race for a zero emission vehicle. The presentation will provide an up-to-date discussion of the rationale for looking at electric vehicles as the best choice for alternative vehicles and examples of what is soon to be introduced by the big seven automobile manufacturers. In addition, the discussion will include the activities occurring in the greater Boston area regarding readiness for electric vehicles and what some of the things we all need to think about to be able to introduce these new forms of transportation into our communities.

The presentation will be given by an engineer with significant experience and credentials in the alternative

vehicle and energy development field. David Dilts is currently the Manager of Electric Transportation Development at Boston Edison where his responsibilities include research and development projects, new product evaluation and electric transportation commercialization efforts. Mr. Dilts is active in the Electric Power Research Institute's Electric Transportation Business Unit and Infrastructure Working Council, the Electric Transportation Coalition, and serves as a director of the Northeast Alternative Vehicle Consortium.

The presentation will take place at the New England Electric System's auditorium in Westborough at 7 P.M. on December 4, 1996. For further information or directions, call Stan Tanenholtz at 508-485-7185.

## A View Of Electric Vehicle Developments By An Industry Leader

### Dr. Roderick Hinman, Solectria Corp.

The leading local electric vehicle developer and manufacturer, Solectria, has been in the forefront of electric vehicle progress. They have consistently led the "pack" in the Tour De Sol electric car race. Come and hear about their "Sunrise" vehicle and recent industry developments.

Dr. Hinman received his Ph.D. in Electrical Engineering from MIT in 1994. His Ph.D. research applied the principles of power electronics to low energy computing. He joined Solectria Corporation of Wilmington, Mass. in 1994 to design motor drives and other electronics for electric vehicles.

The meeting is scheduled for 7:00 PM on Wednesday November 27, 1996 at the New England Electric Systems auditorium in Westboro.

Directions: Going west on Route 9, take the first right after passing Route 495, the three successive lefts. The entrance to the parking lot is on the right immediately after passing the multi-windowed New England Electric Systems building. The entrance is at the center of the building.

## Developing Components Mission Critical Applications

Jeffrey Katz of Whaling City Software will provide an overview of a factory automation Delphi application written for a cranberry processing company. Topics to be covered include interfacing a Delphi application through multiple serial links to industrial controllers; design issues and implementation strategies for a mission critical application; and multi-user, file and record locking programming considerations in a file server environment.

Howard Schutzman, Principal of Creative Computing will give a detailed discussion on how to develop VCL components. Topics to be covered include applying the Delphi object model to building components; the VCL

object hierarchy; writing property, method, and event handlers; using resource files; registering components; and developing property editors. He has written a CueCard component (simulates a "post-it" note) which will be used as a real-world example to illustrate the presentation topics.

Meeting starts at 7:00 PM on Monday, November 18, 1996 and is held at Pencil Pushers - Tax Software, 10 New England Executive Park, Burlington, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

## **JavaScript And Internet Application Development**

This months meeting will continue the investigation of JavaScript and Internet / intranet application development by investigating the relationship between windows, forms and frames. Included will be an explanation and demonstration on how windows are manipulated with JavaScript; and how JavaScript is used with HTML Forms and Frames. A discussion and investigation of JavaScript user-defined objects and variables will also be included.

Meeting is on Thursday, December 19, 1996 at 7:00 in Digital Equipment Corporation (SHR3), Shrewsbury, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417 or visit <http://www.digital.com/pub/doc/bcs/bcshome.htm>.

## **Borland International's IntraBuilder and JavaScript**

This months meeting will continue the demonstration of IntraBuilder, Borland's recently released data-centric, Intranet application development tool. IntraBuilder provides a complete toolset for building and maintaining live, data-driven, Web server based, Intranet applications. JavaScript's Object Model and Event System will also be explained and demonstrated.

Meeting is on Thursday, November 21, 1996 at 7:00 in Digital Equipment Corporation (SHR3), Shrewsbury, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417 or visit <http://www.digital.com/pub/doc/ieeee/cmig/index.htm>.

## **Importing Object Oriented Libraries Multi-Tier Architecture: Modeling And Programming**

Steve Carter, Travelin' Light and Jean Ichbiah will present the principles that apply to porting object-oriented libraries into Delphi 2.0. The topics they will discuss include inheritance and information-hiding; design-time visual forms vs. dynamic forms; utilizing units to organize a large

project; the Windows API and message handling. The presentation will deal with their experiences and insights gained moving OWL to Delphi 2.

Select Software Tools will discuss multi-tier architecture modeling and programming in Delphi. Select Enterprise is a modeling environment which adds to the strength of client/server implementation tools with enhancements spanning from object-oriented multi-tier architecture modeling to support for Rapid Architected Application Development (RAAD). It utilizes Delphi for large scale distributed systems development, providing integrated business process and systems modeling, multi-tier architecture generation, and application development process support.

Meeting starts at 7:00 PM on Monday, December 16, 1996 and is held at Pencil Pushers - Tax Software, 10 New England Executive Park, Burlington, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

## **Network-Centric Computing, An Overview of NCA, Oracle's Network Computing Architecture**

### **Dr. Samuel DeFazio**

Advances in networking and Internet/Web technology have inspired a new network-centric computing model. The Web and Internet are rapidly evolving to become the infrastructure for the global economy — both on the public Internet and on the vast numbers of corporate Intranets. Within this new domain, many technologies are competing for the role of providing the infrastructure for distributing large-scale applications. Oracle's vision for the infrastructure is based on the premise that no single technology or standard will, or can, win in the foreseeable future.

This presentation provides an overview of NCA, Oracle's Network Computing Architecture, and discusses development of Data Cartridges. Data Cartridges are the means by which the Oracle Server is extended to handle multimedia and other complex forms of data. Each Data Cartridge can implement a new and unique type of data. As such, there is virtually an unlimited number of potential Data Cartridges that could be created. Data Cartridges will enable a new breed of multimedia applications. Today, only a small part of a company's total data is typically stored in a database. For companies to derive information from the massive amounts of non-scalar data that exists today, extended database functionality is required. The Data Cartridge technology will enable companies to go beyond alphanumeric data management and leverage all of their information assets.

Samuel DeFazio is Director of Object Database Technology for Oracle Corporation. His current research and development focus is the design and implementation of

object-relational database technology to accommodate complex forms of data. This work involves developing extensibility features for the Oracle database management system products that enable the integration of modern indexing, search, and retrieval technology for very large collections of text, image, spatial, video and other non-scalar forms of data. Before joining Oracle Corporation, he was the Director of Extensible Database Technology for Digital Equipment Corporation. In this capacity, he was responsible for the advanced development of object and multimedia database technology for Rdb, Digital's database management system product. Prior to his work with Digital Equipment Corporation, he was a member of the Senior Technical Staff at Mead Data Central. While at Mead Data Central, his primary focus was the design and development of indexing, search, and retrieval technology for very large textual databases.

Dr. DeFazio received a BS degree in mathematics from the Pennsylvania State University in 1974, and MS and Ph.D. degrees in computer science in 1980 and 1988, respectively, from the University of Pittsburgh. He is currently located at the Oracle New England Development Center, Nashua, NH 03062 and can be contacted via e-mail at [sdefazio@us.oracle.com](mailto:sdefazio@us.oracle.com).

This is a meeting of the Computer Society of the Worcester Section of the IEEE. It is scheduled for Wednesday, November 20, 1995, at Quantum Corporation's Corporate Technology Center (SHR1), 333 South Street in Shrewsbury. The meeting will start at 6:30 PM and will end at approximately 7:30 PM. Make a left onto South St. from Route 9 West (near Fretters) which is about 5 miles West of Rt. 495, then left to Quantum Corporation. For more information call Ric Perron at (508) 770-6371 or Jim Perry at (617) 455-4560.