



Worcester County IEEE

Newsletter

September

1995

Worcester Section

Microsoft Visual FoxPro

Jim Vacca, Microsoft Systems Engineer/Database Specialist

Monday, September 11, 1995, at 7:00 PM, WPI, Worcester

The speaker will demonstrate Visual FoxPro's new client/server and database application development features and enhancements.

Worcester Section - Computer Society

Visual Basic to Delphi Conversion and Delphi Database Components

Rich Lussier, Apogee Information Systems

Monday, September 18, 1995 at 7:00 PM, Pencil Pushers, Burlington

The speaker will present his Borland Developers Conference paper on Delphi client/server development tools and database components.

Worcester Section - PACE - Internet Subsection

Internet Search Agents

Jim Winkleman, Intuitive Information Inc.

Thursday, September 21, 1995 at 7:00 PM, DEC, (SHR3) Shrewsbury

Internet access service (SLP, PPP, Telenet FTP, WWW, etc), how to locate information on the Internet, and Internet search agents (Archie, Gopher, WAIS).

Worcester Section

Visual dBase and the Visual dBase Compiler

Peter Marquez, Systems Engineer, Borland International

Monday, October 9, 1995 at 7:00 PM, WPI, Worcester

The speaker will demonstrate this Windows95, object-oriented, rapid application development tool including the new Visual dBase compiler.

Worcester Section - Computer Society

Delphi, Object Pascal, and Object Oriented Programming

David Stein, Pencil Pushers - Tax Software

Monday, October 16, 1995 at 7:00 PM, Pencil Pushers, Burlington

This month's meeting will explore Object Pascal and object oriented development.

Worcester Section - PACE Internet Subsection

Internet Security

Mark Swartwout, Digital Equipment Corporation

Thursday, October 19, 1995 at 7:00 PM, DEC (SHR3), Shrewsbury

The speaker will talk about Internet Security issues, Digital's longstanding firewall philosophy, and three tier firewall product strategy.

THE PACE PAGE

Engineers and the Global Economy

(Continued from the May newsletter)

The following is the final part of the speech given by Edith Holleman, Counsel of the Science, Space and Technology Committee of the U.S. House of Representatives at the September 3, 1994 PACE conference.

When I came to the Science Committee in July of 1991 as an investigator, by the end of my first week, I had heard that the much-repeated statement from the National Science Foundation about a pending shortage of scientists and engineers was false. When I started to ask more questions, the first people I heard from were engineers telling me it certainly wasn't true for them. Older engineers were being off-loaded into contract positions, losing their benefits and their careers as quickly as the new ones were graduated. Young engineers were doing work that in years past was done by draftspeople.

Then I heard from the young scientists who were struggling from one post-doc to another to patch together a career until some university would give them a position. Often that never happened, and, after years of education and near-poverty, they were forced into other careers. Mathematicians, geologists, biologists and, of course, the physicists, all confronted that reality while the policymakers denied it was happening and said these particular young people must not be very good.

The Committee's attempts to expose the myth were not welcome. The National Science Foundation, the National Science Board, AAAS, the universities and influential members of Congress stood behind the idea of a shortage. The NSF orchestrated, with others, the media and public policy campaign that put hundreds of millions of dollars into science and math education. I have no quarrel with money to improve the science and math literacy of our children, but we should never mistake basic literacy with degree achievement or market demand. However, these projections of shortage had no basis in reality, and the NSF knew it. But because everyone had a vested interest in getting more federal dollars, no one would admit it, even after the Berlin Wall fell, and there was clear evidence that the defense budget was going to be cut.

The Hudson Institute also manipulated figures to project an enormous demand for highly skilled workers. Again, the media and the policymakers used this number to play "Chicken Little".

The NSF and the Hudson Institute studies were the impetus behind a provision in the 1990 immigration reform bill that allowed 65,000 skilled, temporary workers into the U.S. annually and also generated the ill-fated pilot labor market certification program. The latter program would have allowed immigrants in 10 mostly high-tech fields supposedly in shortage to obtain permanent work certification in the U.S. by simply demonstrating that they had a job offer in one of the shortage areas. Engineering societies, along with other scientific organizations, banded together last year

during the proposed regulation stage to object because the Labor Department could not credibly demonstrate any labor shortages in the selected occupations. Secretary Reich then aborted the program.

Clearly, the "vision thing" is still lacking among many of our policymakers. Now they tell us that if we train or retrain, there will be new high-tech, high-paying jobs waiting for us. And for some, there will. But all of us know highly skilled people already out of work or taking new jobs that pay significantly less than their previous ones. If there aren't good jobs for them, where will the jobs be for the new workers? Policymakers are very careful not to mention the number of jobs that will be created, and the salaries they are going to pay. Perhaps it is then true, as one economist said, the whole purpose of all this downsizing and free trade is to reduce our salaries.

Labor Secretary Reich already knows these problems; he built his academic reputation on alerting us to the challenges of the global market. In a 1991 article in the Harvard Business Review (Robert Reich, "Who Is Them?", March-April 1991) he said "corporate decisions about production and location are driven by the dictates of global competition, not by national allegiance.... For the past two decades, U.S. businesses have maintained their shares of world markets even as America has lost its lead." Let me quote Secretary Reich:

In deciding where around the world to do what, the global manager seeks to meet the needs of the customers worldwide for the highest value at the least cost. Some production will be done under the company's direct supervision; much will be outsourced.

Often design and marketing activities will be sited close to the markets to be served; research and complex engineering, where skilled scientists and engineers can be found When two or more locations are about the same, the decision will be based on where the global manager can secure the most profitable deal.... The global web's highest value-added activities — its most advanced R&D, most sophisticated engineering and design, most complex fabrication — need not be in the nation where most of the company's shareholders and executives are. Ford's state-of-the-art engine factory is in Chihuahua, Mexico, where skilled Mexican engineers and technicians produce more than 1,000 engines per day.

Profit. That's why Mercedes-Benzes for the U.S. market will now be built in Alabama — not because the workers are better than

those in Germany. They aren't, but they certainly are cheaper.

What Secretary Reich recommended was not more trade agreements — he said they were irrelevant — but a U.S. Investment Representative whose job was to bring international investment and good jobs to the U.S. by threatening to close the huge U.S. market if this was not achieved. That's what China did with Ford Motor Co. earlier this year. There would be no assembly plants in China without development of components manufacturing in China. But now as a key policymaker, Reich is constrained by political pressures to downplay both the ability of the rest of the world to compete with us as workers and the need for us to develop any concrete action plans. Publicly, he supported NAFTA and GATT unreservedly. Privately, he admits that he doesn't know any more than you or I do where the high-tech jobs are or how many there are going to be or what his training programs are for. His main legislative program, which will probably not succeed in this Congress, is combing six dislocated worker programs and beginning to simplify the employment and training system. These are laudable goals, but they do not create jobs.

I want to pose a partial solution — a variation on the managed competition that made our country great. It will not be politically correct in economic circles. If we are not going to have tariffs and a meaningful “most favored nation” process for controlling trade, we have the right to demand, as a condition of access to our markets, that Third World countries trading with us give their workers the opportunity to organize for better pay and living standards. Only if the standard of living of Third World workers increases will our standard of living remain constant. Notice that I did not say improve. We are struggling just to maintain our standard of living. In addition, we must allow subsistence farming to continue in the developing country so that they can limit the urban labor market supply until the standard of living has increased. That means that U.S. agricultural interests must have restricted access to other countries' agricultural markets.

One of the most devastating impacts of NAFTA in the next decade will be the replacement of Mexican corn by U.S. corn. Millions of subsistence farmers will be driven off the land with nowhere to go because we are the most economical corn producers in the world. They will skew the labor market for decades.

If you look at the legislative battles over both the NAFTA and the GATT — or the recent dispute over granting most favored nation status to China — you can see how controversial the idea of taking deliberate step to raise worker's standards worldwide is. The multinationals fought so hard to keep workers' rights out of the NAFTA and the GATT because countries that allow their workers to organize aren't as cheap as those which don't. The same is true for environmental standards which we also need to establish. Countries that enforce environmental laws instead of allowing helter-skelter use and disposal of toxic chemicals increase the cost of doing business — and leave their workers with the energy to demand better salaries.

Just as we were once told that our society would demand more engineers and scientists to function, we are now being told that high-paying, high-skill jobs for everyone are the foregone result of free trade, and we must prepare for it. It is not true. We must say that loud and clear so we can take the first step toward changing the reality. As AAES' Dick Ellis said in his report “At the Crossroads: Crisis and Opportunity for American Engineers in the 1990's”, if we do not create prosperity for the rest of the world, there will be no room for our own prosperity. The policymakers need to hear that from you.

Junior Solar Sprint Project

One of the major PACE projects of 1995 involved the support through mentoring of a science class in the Sudbury Curtis Middle School. Among other support activities was the development of a project in which students designed and built model solar electric powered vehicles to be raced in competition. Several unique designs were developed. These were tested in preliminary races at the Minuteman Technical School in Lexington. The final New England Championship race was held at Beverly High School on June 10.

The bright sunny weather was ideal for the several exhibits and demonstrations as well as for the race itself. Teams from across New England participated and the Curtis Middle School won a trophy for innovation.

Microsoft Visual FoxPro

Jim Vacca, Microsoft

Visual FoxPro - the real FoxPro for Windows! The June release brings true visual development tools and object oriented development to FoxPro. Jim Vacca, Microsoft Systems Engineer and Database Specialist, will demonstrate Visual FoxPro's many new client/server and database application development features and enhancements.

Meeting is at 7:00 PM on Monday, September 11, 1995 in Kennicutt Hall, Salisbury Labs, Worcester Polytechnic Institute, Worcester, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

Visual Basic to Delphi Conversion and Delphi Database Components

Rich Lussier, Apogee Information Systems

Rich Lussier, Apogee Information Systems, will present his Borland Developers Conference paper on Delphi client/server development tools and database components. Several example programs will be used to demonstrate each component and how it should be used. This talk will be preceded by EarthTrek discussion and demonstrating Visual Basic to Delphi Object Pascal conversion.

Meeting is at 7:00 on Monday, September 18, 1995 at Pencil Pushers - Tax Software, 10 New England Executive Park, Burlington, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

Internet Search Agents

Jim Winkleman, Intuitive Information Inc.

The Internet provides both access to vast resources of information and the search agents to help you locate the information you want. Jim Winkleman, president and founder of Intuitive Information

Inc. (iii.net), a central Mass Internet access provider, will describe their Internet access service (SLP, PPP, Telenet FTP, WWW, etc), explain how to locate information on the Internet, and demonstrate Internet search agents (Archie, Gopher, WAIS). Beginner and advanced, hands-on Internet workshops are held between 6:30 and 7:00.

Meeting is at 7:00 on Thursday, September 21, 1995 in Digital Equipment Corporation (SHR3), Shrewsbury, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

Delphi, Object Pascal, and Object Oriented Programming

**David Stein,
Pencil Pushers - Tax Software**

This month's meeting will explore Object Pascal and object oriented development. David Stein, Pencil Pushers - Tax Software, will demonstrate Delphi's object oriented capabilities, explain classes and subclasses, and explore Object Pascal's object oriented language extensions.

Meeting starts at 7:00 PM on Monday, October 16, 1995 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.

Visual dBase and the Visual dBase Compiler

Peter Marquez, Borland International

The second generation, client-server Visual dBase provides stronger encapsulation, visual subclassing and inheritance, embedded ANSI SQL-92, and automatic detection of server based stored procedures. At this month's meeting Peter Marquez - Systems Engineer, Borland International will demonstrate this Windows95, object-oriented, rapid application development tool including the new Visual dBase compiler.

Meeting is at 7:00 on Monday, October 9, 1995 in Kennicutt Hall, Salisbury Labs, Worcester Polytechnic Institute, Worcester, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

Internet Security

Mark Swartwout, DEC

Mark Swartwout from the Digital Equipment Multivendor Customer Service organization will talk about Internet Security issues, Digital's longstanding firewall philosophy, and three tier firewall product strategy. Beginner and advanced, hands-on Internet workshops are held between 6:30 and 7:00.

Meeting is at 7:00 on Thursday, October 19, 1995, 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>.
