Worcester County IEEE
Newsletter

Worcester Section
Perfect Office
Beth Gile, Novell
Monday, March 13, 1995 at 7:00 PM in Kennicutt Hall, WPI, Worcester

The speaker will demonstrate new features of PerfectOffice, and outline future directions of Novell's networking and desktop application strategy.

Worcester Section - PACE
Retirees Enhancing Science Education through Experiments and Demonstrations (RE-SEED)
Kit Juniewicz, Northeastern University
Wednesday, March 15,1995 at 7 PM, New England Electric, Westboro

The goal of the RE-SEED project is to improve science teaching in grades six through nine and to bring a vital and underutilized resource, retirees, into the schools.

Worcester Section - PACE - Internet Subsection
Software Creations Internet Service and BBS
Dan Linton, Software Creations
Thursday, March 16, 1995 at 7:00 PM, DEC (SHR3), Shrewsbury

Software Creations provides full Internet access with SLP, PPP, Telenet FTP, WWW, etc., in addition to their BBS . The speaker will describe their Internet and BBS capability.

Worcester Section
Microsoft Windows 95
Rob Bennet, Microsoft
Monday, April 10, 1995 at 7:00 PM, Kennicutt Hall, WPI, Worcester

The speaker will present the new features of Windows 95, including the new user-interface, Plug and Play, and 32-bit architecture.

Computer Society/NESQC
Software Process Modeling
Karen Huff, GTE Laboratories
Wednesday, April 12, 1995 at 6:00 PM, Quantum, Shrewsbury

We discuss selected languages and systems, summarize the current state of process modeling, and consider possible future directions. A practical application of modeling will be presented.

Worcester Section - PACE - Internet Subsection
Internet Search Agents
Jim Winkleman, Intuitive Information Inc.
Thursday, April 20, 1995 at 7:00 PM, DEC (SHR3), Shrewsbury

The speaker 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.

"Engineers and the Global Economy"
(Continued from January newsletter)

The following is the second 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.

The world is already short of jobs. According to the United Nations' International Labor Organization 120 million people are unemployed, and 700 million are under employed. 47 million more enter the job market every year, and there will be 750 million more in the next 20 years. With the demise of subsistence agriculture that is the inevitable result of free trade in agricultural goods, hundreds of millions more will be moving to the cities and clamoring for jobs.

Another way to improve profits is to move facilities overseas to cheap, but productive, labor markets. Motorola, for example, gets workers as skilled as those in the U.S. in Beijing for $65 per month. Even a superb education system cannot protect U.S. workers against this type of move.

We praise the European and Japanese educational system and their apprenticeship training programs for young people. But, according to the Financial Times earlier this week (8/31/94), joblessness in Japan is at a seven-year high, creating the worst job outlook for new college graduates in many years. There are 100 job seekers for every 62 jobs. The cause? Corporate Japan is shifting production to cheaper south-east Asia locations and cutting domestic recruitment.

Germany's BMW and Mercedes-Benz are willing to leave their highly skilled workforce behind, build new plants and train new workers in the U.S., not because they are better, but because they are cheaper. And U.S. companies do the same with Mexican or Chinese workers. According to the UN's World Investment Report, multinationals have created 8 million jobs since 1985. Virtually all of them were in foreign affiliates; 7 million were in developing countries.

But while their productivity climbs, Third World workers face multinational corporations no more conducive to improving the workers' lot in life than were the coal and steel barons of another century. Just as Cummins Engine cut workers and pay by 50%, Third World plants are also looking for ways to cut salaries and employees. When I visited the GM-owned maquilladora in Matamoros last fall, the manager told us that the company moved there because of the low wages. Workers make $2 an hour, but the plant's technological, productivity and quality levels are equal to or greater than comparable plants in the U.S.. But even at $2 an hour, reduction of the workforce by upgrading technology is already underway.

Maquiladoras in Matamoros are also trying to re-impose a 48-hour work week. Just recently, Sony broke the 40-hour ceiling gained after a long union struggle by stetting up a dual system: 40 hours for old workers and 48 hours for new.

It is also forcing its mostly female workforce to work on Sundays, their only family day. So much for family values.

Nissan, Texas Instruments and Xerox have state-of-art facilities in Aguascalientes, Mexico, employing tens of thousands of Mexicans. But they don't share the profits of their work. Most of them live in slums with two telephones for 20,000 people. The developed countries cannot maintain their standards of living if forced to compete with equally productive, but dramatically cheaper, Third World workers. These countries will continue in a labor oversupply mode for many years, a situation which significantly distinguishes them from the United States in the same stage of development and guarantees long-term downward pressure on wages.

What we have is a situation where the developed world is losing well-paying jobs that have supported a consuming middle class. We may have been actually losing consumer power. The developing world is getting the "good" jobs, but they aren't middle-class jobs any more and don't support much more than a subsistence lifestyle.

What should the role of the policy maker be in meeting these challenges? First, he or she should get his or her respective head out of the sand and stop mouthing platitudes about free trade, the shortage of scientists and engineers in the U.S. and pipe dreams about the magical future awaiting anyone who undergoes additional training. It is, however, very possible that the dominance and political correctness of the free trade gospel will stop any meaningful discussion of the problem. One of the most disappointing aspects of the NAFTA debate was the refusal of any of its proponents to have a serious free-trade policy debate. At a time when we should have been discussing what kind of society we wanted, and how we were going to achieve it, all we heard from the administration, the think tanks and other pro-NAFTA forces was, "Trust me, free trade is good for you;."

I believe that the goal of policy makers should be to ensure that U.S. workers — and I am including all of us in

that phrase because we are just professional workers — are free to compete on an even playing field with other workers who are receiving a fair day's pay for a day's work. That is called managed compassion, and that is how this country became great. We should not become a Third World country ourselves by running a dual society of (1) low-wage jobs held by new immigrants and the unfortunate and (2) overpaid Wall Street, legal and CEO jobs. The policy wonks, however, seem to have accepted the latter scenario with barley a whimper. A recent meeting in Jackson Hole, Wyoming, of government officials, economists and other experts from industrialized countries concluded that the developed countries had only two choices: to keep their minimum wage low and below inflation growth to attract low-paying jobs for their citizens or to keep their income support benefits up with the resulting high unemployment rates of the European countries.

Paul Krugman, described as a "wunderkind" among academic economists, was at that conference. He recently wrote in Foreign Policy that "it is obvious that something has gone wrong with the promise of economic growth" stimulated by technological gains. The paradox created is "growing misery in the face of growing wealth."

Market forces, Krugman said, are increasingly pushing against income equity. I often wonder about the innate intelligence of economists. I could have told them that five years ago. Don't they understand supply and demand which is, after all, the underpinning of capitalism? What the economists are saying, ladies and gentlemen, is that free trade and technological advances are bringing us increasing income inequities and there is nothing we or our govern- ments can do about it. I call that deliberately "Third Worlding" our own society. Perhaps if they untangled themselves from their rigid adherence to free-trade theories, they could come up with some more creative ideas.

President Clinton brags about the new jobs created, but a survey of American industry indicates that most are not high-paying jobs; they are service, temporary and retail jobs. Just this morning, CNN reported 180,000 jobs created in July but a decrease in family income. Income is not keeping up with the inflation rate.

Labor Secretary Reich says that all American workers need is more education, preferably in technical fields. If 50 percent of our college graduates had science, math and engineering degrees, would they find high-paying jobs in their field? No. There would be too many of them. The New Scientist reported in June (6/13/94) that current science and engineering college graduates were having a hard time and should think about combining their degrees with study in law, business, public policy or communications so they could get a job.

And we must remember that 75% of our citizens are only high school graduates. They are the ones who define our standard of living. If 50 percent of the new high school students went on to become skilled technicians, would they find high-paying jobs in their fields? No, because the country can absorb only so many of them. The result would

be falling wages. I have nothing against better-trained workers, but that is the India solution, where you train workers and then have to export them because there are no jobs domestically.

Perfect Office
Beth Gile, Novell
Novell recently introduced its office suite, PerfectOffice, including Wordperfect, QuattroPro, Presentations, InfoCentral, Envoy, GroupWise, and Paradox. With a consistent user interface and QuickTasks, PerfectOffice is designed to work over a network. At this months meeting Beth Gile from Novell will demonstrate these and other new features of PerfectOffice, and outline future directions of Novell's networking and desktop application strategy.

Meeting is at 7:00 on Monday, March 13, 1995 in Kennicutt Hall, Salisbury Labs, Worcester Polytechnic Institute, Worcester, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

RE-SEED
Kit Juniewicz, Northeastern University.
The topic of this PACE meeting involves an amalgamation of a long neglected element of our society with the future of our society.

The goal of the RE-SEED (Retirees Enhancing Science Education through Experiments and Demonstrations) project is to improve science teaching in grades six through nine and to bring a vital and underutilized resource, retirees, into the schools. Participants should have a science or engineering background and will be provided with work- shops and materials to prepare them to help in the science classrooms. Although several sites are currently operating, workshops are planned for several more sites throughout Massachusetts, Maine, Rhode Island and New Hampshire. The 3-year-old program is paid for by a five-year National Science Foundation grant of $888,000 and has already trained over 100 volunteers. Come and prepare yourself to find out about how one might embark on a new adventure in education.

The speaker, Kit Juniewicz, is the coordinator for the RE-SEED project at Northeastern University and the Southern Maine Partnership at the University of Southern Maine. She has rich and varied credentials as a registered nurse, teacher and public school principal. She is currently writing her doctoral dissertation in Educational Administra- tion.

The meeting will be held at the New England Electric Systems Auditorium in Westboro on March 15,1995 at 7 p.m..

New England Electric Systems is located close to the junction of routes 9 and 495, on the west side of route 495 and just to the left of route 9 going west. Take the first right after route 495 and take three left turns. Proceed to the end of the road and turn right into the NEES parking lot. The meeting will be held in the center building.

Software Creations Internet Service and BBS
Dan Linton, Software Creations

Software Creations will demonstrate their recently announced Internet access service. Software Creations provides full Internet access with SLP, PPP, Telenet FTP, WWW, etc., in addition to their BBS - for the second year voted the most popular BBS in the country. Dan Linton, president and founder, will describe their Internet and BBS capability. Beginner and advanced, hands-on Internet workshops are held between 6:30 and 7:00.

Meeting is at 7:00 on Thursday, March 16, 1995 in Digital Equipment Corporation (SHR3), Shrewsbury, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

Microsoft Windows 95
Rob Bennet, Microsoft Systems Engineer

Windows 95, Microsoft's integrated PC operating system with faster 32-bit, multithreaded, preemptive design supports true multitasking among, and multithreading within, applications. Rob Bennet, Systems Engineer for Microsoft and co-author of the upcoming Windows 95 Resource Kit, will present the new features of Windows 95, including the new user-interface, Plug and Play, and 32-bit architecture.

Meeting is at 7:00 on Monday, April 10, 1995 in Kennicutt Hall, Salisbury Labs, Worcester Polytechnic Institute, Worcester, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

Software Process Modeling
Karen Huff, GTE

In the continuing quest to improve software quality and increase productivity, attention has recently turned to the processes by which software is developed, with a view to understanding how processes impact quality and productivity. Software process modeling focuses on making software processes into explicit objects of study. Requirements for a modeling approach derive from two principal sources. First, the characteristics of software processes themselves must be considered. Second, the objectives of the modeling activity, ranging from process understanding and improvement to supporting process enactment, must be factored in. The resulting requirements lead to a set of representation issues that any modeling approach must confront. The principal types of modeling approaches that have been applied fall within several broad categories: non-executable, state-based, rule-based, and imperative; we discuss selected languages and systems that exemplify these approaches. Finally, we summarize the current state of process modeling and consider possible future directions. A practical application of modeling is presented.

Speaker's Background: Dr. Huff received her Ph.D. from the University of Massachusetts and has a broad background in software development and software technology, including programming languages, compilers, software process, and software reuse. She currently manages the software process technology project at GTE Laboratories.

The talk will be followed by an informal meeting of the New England Software Quality Council.

This meeting of the New England Software Quality Council sponsored by the Computer Society of the Worcester Section of the IEEE, is scheduled for Wednesday, April 12, 1995, at Quantum Corporation, formerly Digital Equipment Corporation's Northeast Technology Center (SHR1), 333 South Street in Shrewsbury. The meeting will start at 6:00 PM and will end at 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.

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, April 20, 1995 in Digital Equipment Corporation (SHR3), Shrewsbury, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

**Worcester County IEEE
c/o Marie's Direct Mail Inc.
55 Portland Street
Worcester, MA 01608-2091**

Introduction to the "C" Programming Language
Course Announcement
Jim Jensen

The Worcester County Section is sponsoring a 25 hour "Introduction to the 'C' Programming Language" mini-course. Last fall, this course was canceled since we did not have enough people willing to register (actually only one, thank you, C.M.). We would still like to sponsor the course as we have already purchased the text books. The course will be given at Digital Equipment Corporation Hudson Facility Education and Training Center, 3 miles from the intersection of Route-495 and Route-290. We took a survey of the people who expressed interest and have tried to solve their issues with this course announcement:

1: "No interest in using a VAX/VMS system, use PC's instead."

> The C we are teaching is "ANSI Standard C", and the programs that we will write will run on any standard system, including PC's. We are teaching on VAX/VMS systems because they are convenient and familiar for the instructor and the use of them are donated/traded. You are certainly welcome to bring and use your own systems, but we cannot offer a course discount since the time on the VMS systems is being donated/traded.

2: "There was not enough notice given for me to fit the mini-course into my schedule, or mini-course is being given at a time I can't attend, or currently to occupied with work requirements."

> Our plan is to hold the course starting mid May and continuing through the summer. We hope that the planned start date will allow enough notice to allow interested people to work this into their schedules.

3: ""Mini-course is to intensive time-wise."

> We will offer the course in the form that satisfies the most students. If/when you send in the request for a reservation form, we are asking that you indicate what would be the best setup.

4: ""Mini-course is to expensive."

> We believe this course is a good bargain. However, we have looked into PACE funding, it could be used for the verifiably unemployment attendees and possibly some for current students.

The course will include lectures and hands-on programming on the VAX/VMS workstations in the Training Center. Books and other material for the course will be given out on the first night. Material to be covered will include:

- Statements (data types, variables, operators, string, arrays,...)
- Control structures (if, else, else if, switch-case-default)
- Looping (for, while, do-while)
- Functions - system supplied, user defined
- Disk I/O
- Structures
- Pointers

A certificate will be given to those who complete the course.

The number of workstations is 19 so students wanting to use the VAX/VMS systems is limited to 19 (not applicable if you supply your own PC), though if interest warrants, we may be able to schedule additional courses). The fee for the course is 300 dollars for IEEE members, 350 dollars for non-members. If you are interested in taking this course, please send a letter to Jim Jensen (82 Edgewood Road; Shrewsbury, MA 01545) to get a registration packet. Within the letter, please indicate your preferences (indicate all that are possible, and those that will prevent you from attending, as we will try to accommodate). Also indicate any other information that may be pertinent:

Start the course the week of:	(5/16) / (5/23) / (5/28) / (other)
Hold classes in the evenings on:	(Mon) / (Tue) / (Wed) / (Thu)
Have classes be:	(2-hours/night) / (3-hours/night)
Have classes held:	(weekly) / (biweekly)
Have mid course vacation time:	(include) / (don't include)

Future Meetings

Chapter/Section

Meetings are held on the second Monday of the month at 7:00 in Kennicutt Hall, Salisbury Labs, Worcester Polytechnic Institute, Worcester, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417.

Month	Topic	Presenter
May	BBS, Shareware and Games	Software Creations
June	Visual Basic - An Overview	Business & Technology Development

PACE- Internet

Meetings are held on the third Thursday of the month at 7:00 in Digital Equipment Corporation (SHR3), Shrewsbury, MA. For more information call Al Reinhart, DisCom Systems at 508/869-6417. Beginner and advanced, hands-on Internet workshops are held between 6:30 and 7:00.

Month	Topic	Presenter
May	WindowsNT / Windows95	Microsoft
June*	Publishing On The Internet	Apple
July*	WWW Home Page Design	Digital Equipment
August*	WWW Home Page Construction	Digital Equipment