

Erica Moore
CSCI 4893 Computer Science Internship – Spring 2003
Ohio Department of Transportation
Advisor: Mr. Bodnovich

Background:

Concluding Spring Semester 2003, I will be a senior at Youngstown State University. My major is computer information systems and my minor is forensic science. Currently I have a 3.72 cumulative grade point average. I plan on graduating with a BSAS in May 2004. Eventually I hope to work in the field of computer forensics.

My past work-related experiences in computers included setting up a small network for my supervisor at U.S.A. Parking Systems, Inc. where I worked as a cashier. I troubleshooted and maintained this system over a period of 2 years. I also worked as a CSIS tutor at YSU for 3 semesters where I tutored students in C programming, HTML programming, Windows applications which included the Windows 95/98 OS and the Microsoft Office Suite, and multimedia educational technology courses which included a graduate course. The multimedia courses allowed me to experiment with software such as DreamWeaver and Inspiration.

At YSU I am involved with the Centurians National Honor Society, Golden Key National Honor Society and Forensics Club. Outside of school I am involved with The National Scholars' Honor Society and the Cleveland Chapter of SpiritSeekers of Ohio. I also volunteer my time as a Host Guide for America Online. I spend 2 hours a week answering AOL-related questions that members may have and monitoring the chat in People Connection rooms.

About ODOT:

I began work at the District 4 office of the Ohio Department of Transportation (ODOT) on December 30, 2002. My work schedule is Monday, Wednesday, and Friday from 7:00am until 3:30pm with a half hour lunch break. There are 6 other people in the Information Technology department; 4 are full time (Brian Everett, Mike Putnam, Jim Croyle, and our supervisor Lori Best) and 2 others are interns (George Khoury from Cleveland University and Wally Renner from Kent State).

ODOT's mission is to provide a world-class transportation system that links Ohio to a global economy while preserving the state's unique character and enhancing its quality of life. A few things that ODOT oversees include maintaining our state's highways, constructing bridges, and removing snow and ice from roads.

Introduction:

The Information Technology (IT) department at ODOT does much troubleshooting, maintaining, and some programming of the computer systems located at the District 4 main office and also at various outposts across the counties encompassed by District 4. District 4 services the counties of Ashtabula, Trumbull, Mahoning, Stark, Portage, and Summit. ODOT operates on a Local Area Network (LAN). District 4 has approximately 50 CAD units and 270 non-CAD units.

Position Description:

Everybody who works at ODOT is given an email address and account through Lotus Notes. These are either `UserName@dot.state.oh.us` or `UserName@state.oh.us` for the interns. It is through this email that we receive the majority of IT-related complaints, although some complaints are received through phone calls or walk-ins. All of the IT personnel have administrative privileges on the computers, which are necessary when we have to modify, download, install, or delete something. These past few months I have been involved with a lot of software in preparation for the summer months, when ODOT is anticipating receiving new computers for the entire district. During the summer months, my studies will be focused on the hardware aspects of computing as we hook up the systems and peripherals and try to get all of the equipment working.

Experiences:

I was engaged with a lot of software and networking opportunities at ODOT during this spring semester internship. Here are a few examples of typical days:

Friday 1/3/02

Today I helped organize the vault, tested the vault's monitors to determine whether they were in operable condition, fixed an ODOT employee's Cardscan 600c by loading in the appropriate software and drivers, installed Microsoft Office on another employee's computer, replaced another gentleman's mouse,

and networked four outlets. This consisted of stripping the wire with a straight through connection, hooking it up to the plate, then going back to the server room and hooking up the wires to the outlets in the hub. Then I used a device called a "toner" to test the attenuation of each wire and whether the wires were punched securely.

Monday, January 06, 2003

Today at ODOT I hooked up two computers for the personnel office. The network was not finding either line, so I connected the toner to the line jack in the personnel office and used the amplifier in the back server room. After the amplifier found the empty port that was emitting the signal from the toner, we determined that the patch cable had not yet been connected. After connecting this, the network connected. I also diagnosed the system status on a current build of a computer and determined which software was faulty and what hardware was on the system.

Monday, January 27, 2003

Today I went over to the garage and Mike and I troubleshooted Charlotte's McAfee Antivirus, which was causing her printer to lag and her programs to run slow. It was also causing her sound to be choppy. We installed some updates in addition. We had to change some lines in her autoexec.bat file and we configured some settings within the program itself. Additionally, I troubleshooted an intern's Quattro Pro software program. I reinstalled the software using custom configuration and it worked perfectly.

Friday, February 7, 2003

Today at ODOT I attempted to troubleshoot Paul's Hummingbird BI Suite connection, which was not accessing the server through the administrative account as it should have been. I also troubleshooted my optical mouse, which Wally and George thought would be humorous to apply duct tape to. The remaining residual residue combined with the fact that Wally and George enabled my remote keyboard and mouse access software caused the mouse to leap across the screen, go the opposite direction, and click windows I did not want clicked. I solved this problem by switching my mouse with Wally's. I also turned off my remote access.

Wednesday, February 19, 2003

Today I installed a ULEAD Picture Viewer on an employee's computer, installed updated barcode software, associated databases with the new software, updated the fax address book and installed a new printer onto my desktop and notebook computers.

Friday, February 21, 2003

Today I uninstalled and installed some copies of Microsoft Office. I also worked on my bar code system I've been creating for computer identification by including the required numbers on the bar codes so that it will read in when you scan it, as well as the design of the bar codes. I edited the Excel file I am using to import the data and designed the bar codes to be the proper size and contain the correct information.

Wednesday, March 5, 2003

Today I ghosted (an image of our ideal hard drive is written out to our network and then we install the image of the hard drive onto the computer to save install time) a CADD unit that was malfunctioning horribly. After using the canned air on the machine, the thing started working normally. There was about an inch of dust clogging up the crevices. I also renamed some CADs by disconnecting them from Server Manager, adding them to the Server Manager under a different name, going to Network Neighborhood > Properties > Rename the Computer, then restarting the computer. The bullet will initially be in Workgroup. After restart, the bullet should be in domain and you must input D04 and restart. Of course, it didn't work out like that and no domain server could be found. Finally we traced the problem back to our very own server room and a loose cable. I also downloaded CADD updates and reinstalled the print driver. Also, I set up the MicroStation account on another employee's computer so that he would be able to log in.

Monday, March 31, 2003

Today I installed the software for my new device, the MobileInventory v3 Combo Pack. It is a handheld palm pilot that supports Palm OS 3.5. The handheld features a built-in scanner that will allow me to manage our inventory, improve inventory counts, and effectively update all of the computer bar code identification numbers. The combo pack includes the Symbol SPT 1500, cradle, and MobileInventory software. The computer communicates with the handheld through the cradle and must be synchronized through HotSync and connects via SQL Server.

Wednesday, April 9, 2003

Today at ODOT I ran a repair fix on Word 2000 software. Additionally, Brian and I returned to the North Canton project site where Mike and I had done wiring. We reghosted the computers there, hooked up the DSL lines, and connected them to the network. We also assisted in helping the employees back up their data on Zip disks and then put their info back on the computers after the ghosted reformat. We also watched the employees from Columbus use their laptop to program the router.

Strengths of the Internship Experience:

Through working with a variety of computers on a daily basis, I was able to familiarize myself with both the hardware and software. Had I not had this internship, I would not have had the chance to work with computers at the level that I did. I gained invaluable networking experience, was able to study a variety of Operating Systems including Windows NT 4.0, Windows 95, Windows 98, and Windows XP, and worked on a variety of computer systems including the Dell GX1, Dell GX110, Dell Gxa and the Intergraph TD310, TD320, and TD325, our CAD units. The internship continually challenged me, and no two days were ever the same.

Conclusion:

This internship has helped me define my career path and goals in life. I realized that I would love to continue working with the government, either on a state or federal level. I also decided that I will most likely further my education after I complete my Bachelor's degree, perhaps pursuing my Master's while working full-time for a government agency or department. I highly stress to anyone attending college to actively pursue an internship. Invaluable experience is sure to be gained, and increases the likelihood of acquiring a full-time career upon completion of college. When you are working at an internship, you are confronted with situations not taught to you, unlike a classroom. This encourages the intern to analyze certain situations and, by using previously acquired experience, hopefully solve the issue or problem at hand. I also encourage students to sign up for Career Services, as they will provide your resume to various organizations. These organizations then, in turn, contact the students they would like to have work for them.

Acknowledgements:

YSU's Career Services and Internship/Co-Op Interview Day provided me the opportunity to meet

with various companies and organizations. Gwenn Clark, YSU's Professional Practice Coordinator, helped me considerably through constant email contact about the upcoming events and by providing workshops relevant to the interview experience. Also, I would like to thank Lori Best for taking the time out of her busy schedule to drive to Youngstown and interview with the students from Youngstown State. All of the other IT personnel were extremely beneficial as well, as I learned something from each and every one of them. I would also like to thank Tom Bodnovich, my professor and internship advisor. He periodically met with me and discussed how the internship was going and read the logs I kept each day. He also kept in contact with my supervisor and discussed my progress throughout the internship.

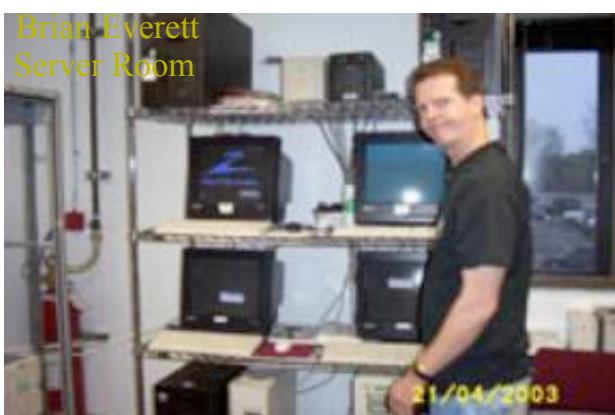
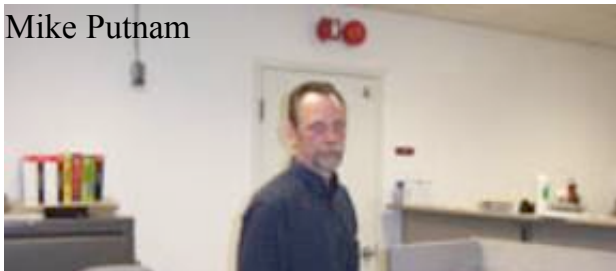
A Closer Look at ODOT:

The Staff

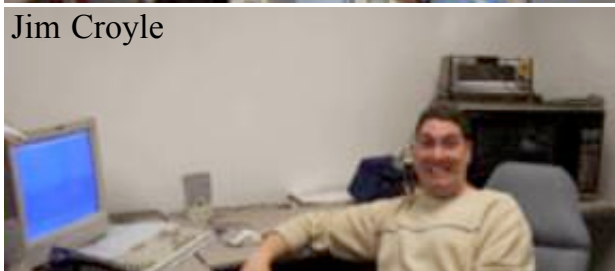
George Khoury
Intern, Cleveland University



Mike Putnam



Jim Croyle





Lori Best
Supervisor

Wally Renner
Intern, Kent State University



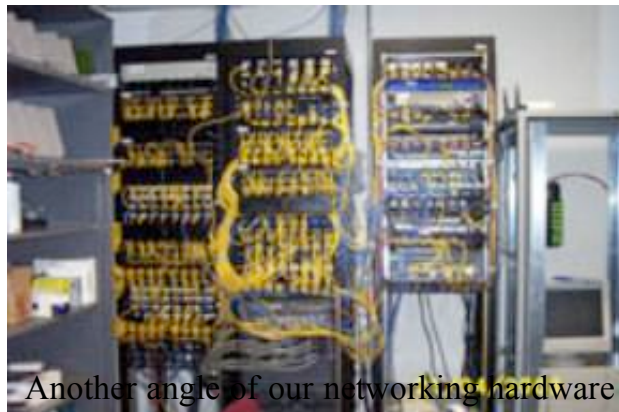
Erica Moore

Charging the wire tester (tests for attenuation, etc.)

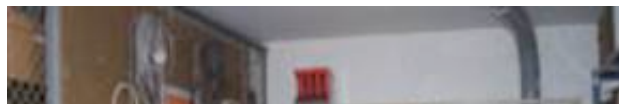
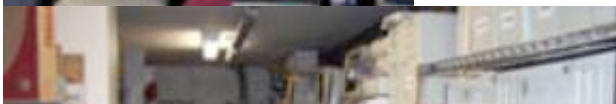
The Equipment



Hubs, Routers, Cables
Server Room



Another angle of our networking hardware





This is the vault where we keep our extra hardware



All In A Day's Work

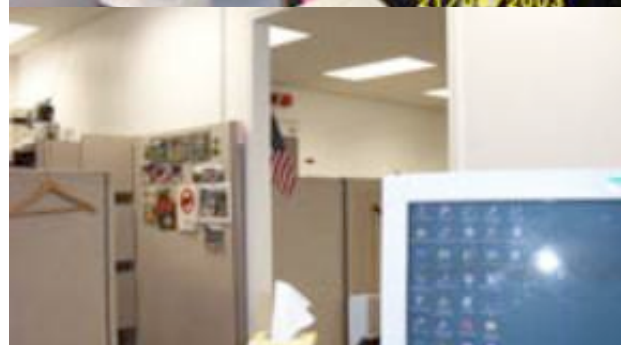
My Desk



We use the dry erase board to keep track of projects to be completed that day



Everyone has his or her own desk / cubicle





Helicopter Landing Pad

IT van for trips to project sites and outposts



ODOT Employee Entrance