MnIPS NEWSLETTER

A Publication of the Minnesota Information Professional Society (Formally ACM & ASM) - Vol. 1, No. 9 - September, 2000

NEWSLETTER INFORMATION

The MnIPS Newsletter is published nine times a year (September-June) by Minnesota Information Professional Society. We welcome materials submitted to our calendar or articles on computing topics. Submit materials by disc or e-mail to:

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NOTE:

MEETING INFORMATION

The meeting place:

Holiday Inn Bloomington
35W & 94th
1201 W 94th St.

Meeting Times:

5:00 P.M. Social & Registration
5:45 P.M. Dinner
6:45 P.M. Meeting and Program
8:00 P.M. Adjourn

For reservations e-mail:
info@nwaitp.org
or call (952) 830-1362
with your name, company name, and dinner selection

Choose
Filet Mignon
--or--
Walleye entree'

$15 for Students
$25 for members
$35 for non-members

Dinner Meeting NOTICE
Tuesday Sept. 19, 2000

Speakers Topic**:**
"Cyber-Education Futures"
Speaker:
Earl C. Joseph, Futurist

President's Letter

Welcome back to MnIPS and the 2000-2001 season. We hope to have a great year again for all of our current and future members!! We have a powerful meeting season planned, and hope you can join us for each of the presentations. Also, we hope to have some special events throughout the year to keep things interesting. Additionally, you should be aware that we are deciding on date options for the November meeting. It will either be the 21st or the 28th. Watch for next month's newsletter with the information. We are excited about our slate of candidates for this year, and hope you will attend the September 19th meeting to help us elect our next board of directors. At this writing, we are still awaiting a nomination for club Secretary. If you, or any member you feel is qualified, are willing to help provide direction and support to the organization, it will be greatly appreciated, and rewarded with appropriate recognition.

Our current slate of candidates is as follows:

- President Dennis Cummings
- Vice President Kurt Linberg
- Treasurer JerryLindner

We have had a last minute change in the program for September, so we cannot announce the presenter at this time. However, all of the alternates we are selecting from have great information to share with us. As in the past, we are looking for good people to share in the volunteer support of MnIPS. Any suggestions you might have regarding the growth, development and improvement of our organization, or any time you can contribute to committees and programs will be greatly appreciated. We welcome all opportunities for positive growth!

We hope you have had a great summer, and look forward to seeing you on the 19th.

Sincerely,
Joe Perzel **,** President

A Past Presidents night will be scheduled for ASM and ACM presidents at the October 2000 meeting.

I would like anyone who has a phone number, address or e-mail address of a past president to forward that information to me so I can contact those people.

Thanks Jim Sundlin
Office phone (651) 634-1433
Cell Phone (651) 5926181

ST. PAUL DISTRIBUTES HOLY ORDERS TO ATTENTIVE MnIPS CULT

April 2000 MnIPS
Meeting Review
(Written by Dennis Cummings)

Paul Kiley was the featured speaker at the MnIPS monthly dinner

held on April 18 at the Bloomington Holiday Inn. He has worked with NEC Computer/Japan leadership and served as a lecturer in communication technology at the University of St. Thomas graduate program in business communication. Mr. Kiley currently works to build online communities of citizen advocates who can enable system change. He is a self-declared cynical romantic about communication technology and the future, thus his topic for the program "Religion of Technology / Ethics be Damned" should come as no surprise.

I'm sure that the audience felt (as I did) as though they were attending a "Murder Mystery" café performance in between the entrée' and dessert courses. It was confusing at first (for about 15 minutes) as Mr. Kiley started the program by offering stories that initially did not seem to relate to the program's main topic. Some of his comments concerned Jesuit professors arguing about the number of angels on a pinhead and how (in a fictional novel) a Vatican aide, Father Arrigone, told the Pope about a possible hacker break-in on the papal home page. Then there was the sermon about selling your church's steeple and (heaven forbid) its cross for a satellite dish and how some "religions" successfully keep a hold on us via guilt trips or glamorous TV infomercials. But then acting a good trial attorney, Mr. Kiley presented his convincing arguments to the jury in the final 30 minutes. One of his points is "every religion has its own set of properties, like a 'company culture'" and another is that there is almost always a "faith of a transcendent". Their religious motto is "technology = progress" and their mission is to convert people into "technology doctrines" and to preach the "theology of personal computing".

The Internet has become the "universal cathedral" to which all must worship (or at least conform) or die! The web will instantaneously embrace multiculturalism and diversity at all of its "religious" services. In addition, Americans drive the web's success and as a result, English is the dominant language that will be used on it. Then after some politically financed miracles, many metropolitan high schools would be wired. These converted kids were surveyed. In a given year, they did not read any specific book, saw 4-8 movies and 25-30 videos, and spent the rest of their time on the Internet. Reading and writing skills for a good share of these kids were at the 3rd-grade level. The kids are answering the Internet's call for worship, but is the minister leading his/her young congregation to a "promised land" of successful tool usage or are the kids' current education opportunities going to hell. Even when they enter a different temple such as a computer store, the PC evangelist is preaching the manufacturer's gospel. Selling out the faithful flock's soul for technology (or removing the church steeple's cross for a satellite dish) has become the newest temptation facing the computer-driven shepherd.

Mr. Kiley claims Microsoft (MS) founder Bill Gates as one such computer evangelist. We'll hear about Gates' early company history and struggles about 20 years ago. We bought into his easy-to-use software and saw MS as the religion that keeps the business flock together, at least in a "standard" sense. As a result, our contribution to his "collection plate" has reaped billions for Gates and his "universal church". Now he tells us to keep the faith by saying that the "best is yet to come" in TV commercials after the Justice Department's "monopoly" decision went against him. That ad may appear to religious ploy by a TV evangelist, but does Gates really meat hook his audience with the message "Believe in MS!" Mr. Kiley also told that Ron Moody worked at MS in Bellevue (WA) for 18 months and wrote the "I Sing the Body Electronic" book. He tells how the MS staff created ENCARTA and that every MS work activity has a ritual. Workers get 30-40 e-mails per day and don't talk to each other at the work site personally, unless on they are on their annual company retreat. If MS employees never seem to come together, how are they successful at piecing parts together?

What are the threats to this "religion of technology"? Are we preparing people to be future gurus (or is it "priests") of technology? What is women's place in the religion of technology? Mr. Kiley says that MIT's Sherry Turkle once remarked, "when will women be ready for technology preaching?" Are we doing enough to educate girls in the new technology? Boys always seem to be on the Internet or playing violent video games. Maybe the computer culture must attract girls rather than vice versa. We could also be religious radicals for technology, similar to Martin Luther's medieval break from the Catholic church, whose motto is "this is not working….I'm a girl". Some people protest technology on their own. 50,000 people physically beat their computers. 43,000,000 people swear at computers and even one guy urinated on an ATM because it did not pay him his $25 that he thought the account had. Although the machine may have performed brilliantly to prevent a $25 overdraft, the ATM cleanup did cost the bank $2500.

With his presentation nearly done, Mr. Kiley concluded that we have been co-opted into the theory "Ethics be Damned" as the IS conquistadors have spread the IT religion. It used to be "alms for the poor" in medieval times (or the Vincent dePaul box now) where you secretly give. Now, MS and others donate items for you to use, but you must tell others to buy and use their products as repayment. At one college, all presentations had to be in the PowerPoint packages donated by MS. Get it free and sell MS' PowerPoint to each freshman as they enroll. It seems that in each of our IT club/organization's charter, there is an ethical belief (like the Cub Scout pledges "I promise to do my duty to God & my country..."). Does that pledge actually affect or direct your life (i.e., do you still follow it)? We seem to accept this religion of technology doctrine. Are you a convert now (to MS or others) and do you want others to be converts as well? Do we participate as

an outsider in secret (i.e., old Roman catacombs for the early Christians)? Many talk about "social change", but how many do it? Is it the same situation for your IT club / organization?

Where were we at when all this happened? "Net Day" was held some years ago to promote getting schools online, but shouldn't the physical plant of a school taken care of first before PC's are bought? After all, a leaky roof will ruin the new PC lab. We are in a rush to get schools connected to the Internet, but then we need a strong filter to weed out pedophile e-mails, con artists and pornography on the web. In Minneapolis, a frustrated, autistic child once destroyed the technology tool that was used to communicate with the parents and others. He did not receive additional help until his parents lobbied for 3 months at the Minnesota state Capitol building to insert the word "all people" in the tech education bills and/or laws to eliminate loopholes – confirming the old saying "where it is not written, the law is not done". Mr. Kiley covers these points when he teaches a course entitled "The Internet Between Hype and Hope" course, which focuses on the political IT development between U.S. and Canada. End of sermon. See you at the next MIPS service.

DNA Computer Research: WISCONSIN RESEARCHERS USE DNA TO RUN A COMPUTER PROGRAM

by Earl C. Joseph, Editor

Scientists at the University of Wisconsin have used DNA molecules to solve complex problems, according to a report in a recent issue of the journal ***Nature***. It's a significant step toward more powerful computing.

It will be awhile before DNA could replace silicon, but the Wisconsin research is a significant milestone a series of recent moves to harness the power of DNA for tasks now performed by miniature electronic circuits. The DNA molecules that control the codes for life are naturally equipped to store enormous amounts of information and to execute operations by working with DNA, RNA, and enzymes, which will effectively act as the software in the organic world of future computers.

As transistors and circuitry on computers shrink to increase processing power, certain physical limits are reached with silicon technology. Many experts say designers are approaching the limits to the computational power that they can pack on a silicon microchip. Since the 1980s, studies have suggested that DNA could help overcome practical barriers in electronic computing and to extend and continue Moore's law quite a ways into the futures.

The Wisconsin study shows that DNA computing can be scaled-up. Further, in the not so distant future, it can be moved out of test tube labs onto the solid surfaces that would be needed to make it practical. These are but a few of the claims made by Lloyd Smith, a chemistry professor at the University of Wisconsin-Madison who co-wrote the study. The researchers worked with DNA strands attached to a glass plate overlaid with gold.

One "remarkable" feature of the research is that a DNA computer solved problems with only a small fraction of the steps that would be required of a conventional computer, alleged a commentary article in the same issue of Nature. Even so, "solving a problem that would embarrass a conventional computer is a long way off," it was claimed in the article.

Smith agrees that the research is nowhere near practical application as yet.

The Wisconsin team started with a problem that had 16 possible answers, not all correct, and solved it by using DNA's ability to spell out codes in patterns of the four letters A, T, C and G (which represent the four constituent chemicals of DNA). The scientists translated each of the possible solutions into 16 different sequences of DNA.

One way a DNA computer would work is by repeatedly washing the "computer" with enzymes that could stick only to DNA that represented appropriate steps toward the correct solutions. In the experiment, they weeded out the strands with wrong answers and decoded the remaining DNA to find the correct solutions. Smith said the team plans to tackle 48-bit problems which could have 280 trillion solutions.

The research illustrates the promising field of molecular computing, said Dr. Ronald McGlennen who directs the Molecular Diagnostics Laboratory at the University of Minnesota. "With the introduction of molecular computers, we are challenging computer premises, and we are saying there is more than one way to design computers. Just as the human brain can consider several different "correct" choices to reach a decision, so a molecular computer can process several possible solutions to a problem, he said. As a result, it is capable of greater complexity while using less space.

A number of semiconductor manufacturers are researching DNA Bio-molecular memories, bio-transistor arrays, and bio-computers. At a recent nanotecnology conference this year, a number of presenters forecasted the first benefactors of bio-molecular nanotech will be the semiconductor industry.

In the June, 2000 issue of Scientifuc American Neil Gershenfeld and Isaac L. Chuang authored an article on "Quantum Computing with Molecules." They pointed out that by taking advantage of nuclear magnetic resonance, scientists can coax the molecules in some ordinary liquids to serve as an extraordinary type of computer.

Further, Adleman in 1994, pointed out that Watson-Crick hybridization of pairs of complementary DNA strands makes possible a representation of highly parallel selective operations that could allow one to do computations using molecules.

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MnIPS Newsletter
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ADDRESS SERVICE REQUESTED

DINNER METTING
Tuesday, Sept. 19, 2000
5:00 PM - 8:00 PM
TOPIC:
TO BE ANNOUSED

NOTE: MEETING LOCATION
Holiday Inn Bloomington
(35W & 94th – 1201 W 94th St.)

"DEBUGGING PROGRAMS IS STILL LIKE SHOVELING A SIDEWALK IN THE MIDDLE OF A RAGGING SNOW STORM!"

by Earl C. Joseph