



Mission Statement: Meeting the array of needs for the established IT professional while seeking to develop the IT profession and provide a service to our community and society.

A Publication of the Minnesota Information Professional Society (www.mnips.org) – Vol. 6, No. 9, November, 2005

NEWSLETTER INFORMATION

Published nine times per year (September – June) by the Minnesota Information Professional Society. We welcome materials for publication (articles, news or letters). Submit materials on disk or via email to:

Bob Groethe
3301 Girard Ave. S.
Minneapolis, MN 55408
Tel. (612) 716-5605
E-mail: newsletter@mnips.org

NOTE MEETING INFORMATION

MEETING PLACE:
Holiday Inn – Bloomington
35W at 94th St.
Phone (952) 884-8211

Meeting Times:

3:30 PM Networking Event
5:00 PM Social Hour
6:00 PM Buffet Dinner
6:45 PM Meeting & Program
8:00 PM Adjourn

For a Dinner and Program Reservation, send email to:
reservations@mnips.org

no later than 5 pm on
Thursday, Nov. 10

\$28 Members
\$33 Non-members

Meeting NOTICE

Tuesday, Nov. 15, 2005

Minnesota Information Professional Society

Networking Event Topic:
**“Success Stories and
Résumé Review”**

Speakers:
**Several Recent ‘Graduates’
from Job Transition**

Dinner Topic:
**“Case Study: Reducing the
Learning Curve of Paint
Shop Pro”**
Speaker:
Wade Mueller

SPEAKER TOPIC

One of the themes for the latest release of our popular image-editing product was to reduce the amount of time it takes for our target market to start getting results after purchase. Through user interviews, surveys and usability testing, we were able to design, validate and refine a solution that has thus far been well received in the marketplace. This presentation walks through our approach to providing a solution with consumers being an integral part of the design process, including lessons learned along the way.

SPEAKER PROFILE

Mr. Mueller Mr. Mueller graduated from the U of M IT with a BS in Computer Science and is currently employed by Corel Minneapolis (formerly Jasc Software) as the User Experience Manager for Digital Imaging products. He has spent the past three years in this role creating a User-Experience organization that is tasked with creating customer-centered product experiences. He has been involved with designing and implementing user interfaces for over 10 years.

President’s Letter

In late November early December we will all receive our membership dues notice in the mail. When I receive my notice, I plan to pay it promptly. I encourage everyone to do the same. The dues we all pay make it possible for us to pay our bills.

Also, included with the membership dues notice mailing will be a ballot and notice regarding a change to the MnIPS bylaws. Please refer to the related article in this newsletter for more information about the bylaws change.

Finally, we have a great speaker - Wade Mueller - for our November 15th dinner meeting. Mr. Mueller will discuss how input from end users of a software product can help software designers create and deliver better software solutions.

As always, I look forward to see all of you at the November 15th meeting.

– Jeff O'Connor,
MnIPS President
president@mnips.org

MnIPS Bylaws Change Proposal: Align Fiscal, Membership and Program Year

At the September 20th MnIPS board meeting, the board approved a proposal to change the bylaws. To officially incorporate the new language into the bylaws, a simple majority of the MnIPS membership must approve the change. In Late November a ballot will accompany the dues invoice. Mail completed ballots back with your dues invoice. Below is a summary of the bylaws change.

MNIPS Fiscal Year is currently July 1 – June 30. The Membership year is currently January 1 – December 31. The Program year, although not defined in the Bylaws, is currently September through May.

The Board proposes to align the organization's Fiscal, Membership, and Program years using a September 1 through August 31 year for the organization. This amendment, if adopted, will take effect for the 2006-2007 organization year, starting on September 1, 2006 and ending on August 31, 2007.

The specific language regarding the above change will accompany the ballot. Also, visit www.mnips.org and click on the bylaws language change link to review the wording of the change.

MnIPS Newsletter going (almost) Fully E-mail

For the past three years, MnIPS has distributed newsletters by both regular mail and e-mail, based on member preference. As of February, MnIPS will stop sending printed newsletters by regular mail except by special request. Eliminating or reducing the number of newsletters mailed each month will increase efficiency, save time, and save money.

If you want to get the newsletter by regular mail, please let us know by sending e-mail with your name and address to membership@mnips.org. All other newsletters will be sent by e-mail. (This would also be a good time to update the e-mail address we have on file for you. Please send e-mail to membership@mnips.org with your name and any updated contact information.)

If you have been receiving the newsletter via the postal service and wish to continue to receive it, send your request to membership@mnips.org.

MnIPS Dues Due Soon

Before the end of the year, MnIPS will be sending a Dues Invoice (and a Bylaws change ballot) to all current members. Please don't put it in your "get around to it" pile, just pay it.

If you don't get or mislay your invoice (or are not a current member), and would like to support MnIPS by joining, we can accept your dues at any meeting or you can download a membership form from the website at www.mnips.org and send it to the address on the form. You can also request a membership form by sending e-mail to membership@mnips.org.

MnIPS appreciates your support and involvement.

Volunteer Recognition

I want to recognize the program committee for all they have done to develop the interesting programs for our dinner meetings this year. They have put in a lot of time and effort and brought a great deal of experience (and, of course, their large contact list) to the task. We have had two wonderful presentations already, on communications with business partners and medical imaging, and I am looking forward to the rest of the year's programs. The committee is:

Glen Coakley (chair)

Bill McTeer

Gordon Everest

Mary Brown

Hugh Juergens

Pat Redding

IT in Healthcare: PACS and RIS: What they are and what they can do for us

(Oct. 18, 2005 MnIPS dinner topic by Martin Kappeyne and Nancy L. Bushek, team members at Hennepin County Medical Center (HCMC) on the implementation and integration of Picture Archiving and Communication System (PACS); recap courtesy of Martin Kappeyne.)

Though lagging many years behind other industries, healthcare is finally realizing that great saving can be had by integrating their silos of information and create a cohesive IS service delivery to every level of healthcare.

RIS (Radiological Information System) is the database that contains all patient information (demographic data, insur-

ance, billing, scheduled and performed exams in radiology). The PACS (Picture Archiving and Communications System) is very closely linked to the RIS and acts as the repository of all radiology images that have been acquired, interpreted by the radiologist and saved. These systems are finally getting more and more tightly integrated thanks to the communications standards of HL7 (Health Level 7) and Dicom (Digital Imaging and Communications in Medicine). Vendors are realizing that most hospital environments are a heterogeneous mix of applications and application providers. Their survival depends on rigorously adhering to the communications protocols and allowing other vendors to easily access their products through published APIs.

New devices in radiology, particularly the new CT scanners are providing prodigious quantities of images (2,000 images in under 15 minutes: ~2 GB of data). This stresses the infrastructures in multiple ways. The network must be capable of transferring the data, the archive system must have the capacity to store this data for 7 – 25 years and the workstations and applications must be advanced enough to process and re-process this data within seconds to assist the radiologist in diagnosis. HCMC is installing a fully redundant 10-giga bits per second backbone down to the closest level, which will enable high-bandwidth equipment to connect via copper gigabit Ethernet. SAN (Storage Area Networks) and NAS (Network Attached Storage) are being configured with 15 – 50 TB of disk storage to accommodate immediate access to current and historical data. To address the flood of data, data compression techniques are used. The most accepted forms of compression are lossless and allow for 1:2.5 to 1:3 compression. Some facilities elect to move archived images to a lossy compression which can range from 1:25 to 1:50 after the image has achieved a certain age. The

continued drop in pricing of cheap RAIDed system are altering the way department archive data. The trend is to keep more online and research groups are considering techniques for data mining.

With the use of digital image acquisition, radiologists are:

- Receiving images from offsite locations
- Reading images in their home offices
- Merging images from different diagnostic systems
- Altering the contrast, brightness and color to highlight features
- Creating 3D and 4D renditions (4D = cine of a 3D image)
- Copying data to other locations to ensure disaster recovery
- Computer aided diagnosis (CAD), which helps radiologists investigate questionable areas on an image. This is making big inroads in mammography.

Diagnostic imaging covers every conceivable physical property:

- Ultrasound uses high-frequency sound waves to create echoes from different tissues. This non-invasive technique is very popular in prenatal check-ups. The conversions to 3D images become some of the earliest pictures of the baby, which are far more recognizable than the traditional echograph.
- Magnetic resonance (MR) uses strong magnetic fields and radio frequencies to affect atomic spin. Based on the frequency different chemical elements respond. The response of the spin is converted into an image.
- Computed tomography (CT), x-ray and fluoroscopy use x-ray to snap images, create cines of moving organs and volumetric data. The volumetric data can then be used to create any desired cross-sectional plane, planes that follow the twists

and turns of arteries that allow the doctor to scan for narrowing and clogging of the arteries. CTs can create virtual images of organs. A patient can now choose to forgo an uncomfortable colonoscopy and get the virtual equivalent that allows the radiologist to conduct a virtual fly-through and inspect the colon walls for polyps and other growths. Cines are most often used to thread catheters into the heart or brain to remove blockages, widen clogged arteries, plug aneurisms and repair the heart.

- Nuclear medicine focuses on the functional condition of the patient. Most other diagnostic modes take a snapshot of the patient; nuclear medicine looks at how the body processes radioactive substance. A patient is injected or ingests with nuclear-tagged substances that migrate to the targeted organs where they accumulate and are metabolized. Detectors, usually positron emission tomography (PET) and single photon emission computed tomography (SPECT) pickup up the emissions of the radioactive decay. These images are low resolution and are thus quite fuzzy. To help clinicians determine the exact location of a 'hotspot', these images now get digitally combined with a CT or MR scan that is made concurrently. This technique is being used to scan patients for the occurrence of metastatic cancer. Other applications review heart function and measure the efficiency of the heart.

Healthcare information technology also must ensure that such personal data is correct and kept secure, only allowing access on an as-needed basis. The Health Insurance Portability and Accountability Act (HIPAA) has addressed many of the issues associated with the retention and protection of digital data.

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MnIPS MEETING

Nov. 15, 2005, 3:30-5:00 PM

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

**When I voiced a comment to my
computer, it replied:
“If you want me to do that, you
should get a wife!!”**



by Earl C. Joseph, Futurist