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UNIVERSITY OF MINNESOTA**Supercomputing Institute**
Scientific Development & Visualization
Laboratory

Newsletter of the Supercomputing Institute Scientific Development & Visualization Laboratory

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Workstation Rooms Acquire a New Name

The workstation rooms at the Supercomputing Institute have acquired a new name: the Scientific Development & Visualization Laboratory. The new name has been chosen to emphasize the dual roles that this laboratory serves in supporting Institute research programs.

Susan Levy Haskell has been named manager of the lab. She is available, as before, at 624-8862 or sblh@msi.umn.edu. She invites all Supercomputing Institute researchers with comments or suggestions for the lab to contact her.

High-Performance Networking

The Supercomputing Institute has recently acquired an Asynchronous Transfer Mode (ATM) switch, which provides local networking at speeds of up to 155 megabits/second.

Currently, the ATM network is being used to mount /home, /wrk, and various other filesystems on the Indigo² and Onyx workstations (i2, i3, i12, i13, and i14). Since these systems are "multi-homed"--they are networked both by ethernet and ATM--users may connect between these systems using the ATM network by referring to the machine as hostname-atm (e.g., `rlogin i13-atm`). Notice that these names will only work among the workstations connected to the Institute's ATM network.

Soon, the new ATM network will permit routing elsewhere on the University's ATM backbone, which will include the Institute-affiliated Medicinal Chemistry-Supercomputing Institute Visualization/Workstation Laboratory, the University of Minnesota-IBM Shared Research Project, and the Supercomputer Institute Basic Sciences Visualization Laboratory, as well as many departments around the U.

To check the progress of the Supercomputing Institute's ATM networking project see <http://www.msi.umn.edu/sdvl/whatsnew/new-hardware.html>.

New Gray-Scale Printers

The Supercomputing Institute has upgraded the gray-scale printers for UNIX and Macintosh workstations in Workstation Room A and the East Wing reception area. These upgrades provide increased speed, memory, and print quality.

The default UNIX printer, lw1, is now an Apple LaserWriter 16/600 printer capable of printing up to sixteen pages-per-minute, with substantially improved gray-scale quality. For the Macintoshes, the printer lw3 has been replaced by a LaserWriter IINTX with twelve megabytes of memory. This printer will handle much larger print files than were previously possible from the Macs.

Printing services in the East Wing reception area have been consolidated to print to one printer, lw7, which has been upgraded to a LaserWriter IINT. This printer will queue simultaneous printing requests from the Macintosh and UNIX systems. To print to lw7 from a UNIX workstation, type the command:

```
% lpr -Plw7 printfile
```

where printfile is the name of the text or PostScript file to be printed. To print from a Macintosh, select the printer lw7 East Wing LaserWriter from the MSI zone and print as usual.

The procedure for printing to the Macintosh and UNIX printers in Workstation Room A is as before; for details, please refer to The Computer Users' Information Package, or see the procedure on-line at <http://www.msi.umn.edu/sdvl/info/printing.html>. There is also a new on-line color printing guide at http://www.msi.umn.edu/sdvl/info/color_printing/.

New and Upgraded Software

For the latest software and hardware updates, see our What's New pages at <http://www.msi.umn.edu/sdvl/whatsnew/>.

IBM Data Explorer

The Supercomputing Institute has recently installed IBM Visualization Data Explorer (DX) on the SGI workstations. We have also purchased DX for the IBM Cluster; it should arrive soon. DX is a general-purpose visualization tool. DX reads most data formats, is easy to use, and produces very nice images from 2-D and 3-D data. DX uses visual programming; that is, to control DX, you link a sequence of modules together into a program. Each module handles both structured and unstructured data. This feature is particularly useful because once data has been read, you never again have to be concerned with the data types.

For more information about DX or how to visualize data, contact Barry Schaudt at 626-1765 or schaudt@msi.umn.edu.

DQS

DQS (Distributed Queuing System) has been installed on our SGI workstations, with execution queues running on the high-end machines. DQS is being developed at Florida State University's Supercomputer Computations Research Institute with a U.S. Department of Energy grant, and its purpose is to manage batch jobs in a way that minimizes the effect felt by the console user. The Supercomputer Institute has also agreed to be an alpha test site for version 3.1.3.

For information about submitting jobs, please see the URL <http://www.msi.umn.edu/sdvl/info/DQS>.

TEX and LATEX

TeX, LaTeX, xdvi, dvips and dvi2ps have been reconfigured on the SGI workstations. There are many style files used with LaTeX and many fonts are available for TeX and LaTeX.

A Request Regarding TEX and LATEX from the Graphics Support Coordinator

I would like to install the latest versions of fonts and style files. Each font and style file installed slows TeX and LaTeX down a bit, so I only want to install fonts and style files that are being used. This is where I need your help.

1. If you are a LaTeX user, would you please email me the names of the style files that you use? (I have installed many, including article, report, color, graphics.)
2. If you are a TeX or LaTeX user and use fonts other than the computer modern fonts, would you email me the names of the fonts that you use?

Thank you,

Barry Schaudt schaudt@msi.umn.edu

For Technical Assistance

If you have any questions about technical documentation or systems, see <http://www.msi.umn.edu/sdvl/info>, or contact the Scientific Development & Visualization Laboratory Manager, Susan Levy Haskell, at 624-8862 or sblh@msi.umn.edu. For technical support, please call Susan at the above number, or send mail to problems@msi.umn.edu.

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Lab Manager:	Susan B. Levy Haskell, sblh@msi.umn.edu , 624-8862
Lab Hours:	Facilities are available to Institute researchers 24 hours a day, seven days a week, technical support is available in room 2079 Monday through Friday, from 8:00a.m. until 5:00p.m. Barry Schaudt, problems@msi.umn.edu
Graphics Support: email:	
New account info:	http://www2.msi.umn.edu/Programs/SciDevVisLab.html
