



LRDC Computing Services

Computing Services Newsletter

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Countdown to the Year 2000 by Karen Bassett and Gary Wilde

The year 2000 is rapidly approaching. As the Center's Year 2000 (Y2K) coordinators, our immediate goal is to raise awareness and encourage users to upgrade out-dated software. In some cases, upgrading software will necessitate an operating system upgrade and/or a hardware upgrade or replacement. First, we will review LRDC Computing Services' compliance strategy and list what steps you can take to help make the transition into the year 2000 as smooth as possible. The last part of this article presents an overview of Y2K compliance and lists some pertinent issues.

LRDC Computing Services Compliance Strategy

Eric Fussenegger is the team leader for our Y2K project. In this role, Eric is testing software and hardware solutions, evaluating compliance testing software, and researching the Year 2000 status of major software companies. Shortly, we will be asking all projects to appoint a liaison to help us inventory software and hardware and to set up a time-line for testing PC's for Y2K compliance. In some cases, we will be able to apply a patch to your operating system to make it Y2K compliant. In other cases, we will make a recommendation for upgrading or replacing the system.

What You Can Do

- ✓ Use 4-digit years, for example, type 2/17/1999 instead of 2/17/99. This eliminates ambiguity and ensures your date will be correctly interpreted by compliant systems.
- ✓ Upgrade your software to current versions. Contact Computing Services for prices.
- ✓ Upgrade or patch your operating system to the current version. Please seek assistance from Computing Services so we can assure that your system meets the necessary requirements.
- ✓ Replace or upgrade obsolete equipment:

Minimum PC Requirements

- ❑ 486/66 Processor, Pentium preferred
- ❑ 32 MB RAM, 64+ preferred
- ❑ 500 MB HD, 1+ GB preferred
- ❑ Windows 95, 98 or NT (with YK2 patch)

Minimum Mac Requirements

- ❑ PowerMac (models over 1,000)
- ❑ 32 MB RAM, 64+ preferred
- ❑ 500 MB HD, 1+ GB preferred
- ❑ System 7.5.5 or higher

Year 2000 Problem Overview

The Year 2000 problem arises from a computer's inability to recognize "00" as "2000" when processing a date. Although this problem traditionally arose from mainframe programs using a 2-digit date to save then valuable storage space and memory, the Y2K problem can also affect modern personal computers and embedded microprocessors that control systems such as security systems, building climate systems, elevators, office equipment, and fire alarms.

Year 2000 Compliance:

A compliant product must recognize 2000 as the 21st century, smoothly make this transition, and accurately process dates. This includes date calculations, comparisons, and sorting. Compliant systems must also recognize 2000 as a leap year and correctly determine the day of week, the day of the year, and that a leap year has 366 days, not 365.

Year 2000 Problems:

The roll-over problem: On midnight December 31, 1999, computers that are not Y2K ready might not "roll-over" to 01/01/2000. Some computers will update the date at this time, but after a reboot, might not retain the correct date and will have to be manually set.

The 2-digit problem: Many applications base date calculations on a 2-digit year. This can result in serious errors, for example, a date calculation for age based on birthday and the current year (2000 - 1975 is 25, not 00 - 75 = -75). Date comparisons will also be affected (a file dated 1/3/00 is more recent than 1/3/99).

The leap-year problem: A century is not a leap year unless it is divisible by 400 —1900 was not a leap year, but 2000 is. Non-compliant systems will fail to recognize 2000 as a leap year; therefore, February 29, 2000 will not be a valid date.

Sources of Year 2000 Problems on the Hardware and Software Manufacturer Side:

Hardware: The internal real time clock (RTC), which keeps the time and date when the computer is on or off, may not store the century. The computer's basic input/output system (BIOS) gets the date and time from the RTC. Some newer BIOS's can compensate for the lack of century information. If not, the hardware will not be compliant. There is a hardware fix for about \$69.00.

Operating System: The operating system may not correctly recognize and process a date beyond 1999. In fact, even newer PC operating systems such as Windows 98 require a patch. Although all Apple Macintosh computers are compliant, Apple has only thoroughly tested System 7.5.5 and 7.6.1, and Mac OS 8.1, 8.5, and 8.5.1.

Software Applications/Utilities: These may have limited date-processing capabilities. Also, program updates that are compliant may have to make assumptions when converting old 2-digit dates to 4-digit dates, which may not give the expected results.

Sources of Year 2000 Problems on the Computer User Side:

All Computer Users: If your software application recognizes a 4-digit date, but only a 2-digit date was entered, the program must “guess” which century to use. For example, the Corel WordPerfect Suite assumes dates entered as 00-49 are 2000-2049, and dates entered as 50-99 are 1950-1999, which may or may not be correct.

Database Users and Administrators: You could potentially create a database using your own date manipulation code, which could render your database non-compliant—even with a compliant software package. To avoid this problem, always use built-in date manipulation functions and thoroughly test all your code.

Computer Programmers: You have the responsibility to thoroughly test any date manipulation code you write.

Year 2000 Websites:

<http://www.year2000.com>— ***Information center with links to major computer companies***

<http://www.pitt.edu/~y2k>—***University of Pittsburgh's Year 2000 Project***

Virus Hoax or the Real Thing: How to Tell the Difference

By Shari Kubitz

You've probably seen the urgent alert in your mailbox warning you of a new virus transmitted by email that will erase your hard drive or crash your machine if you read it. The warning usually appears to come from the Federal Communications Commission (FCC), Microsoft, or the technology department of a major university. It goes on to urge you to forward the message to all of your friends and colleagues. You may panic, run your virus software, keep an eye out for suspicious emails, and then forward the message to everyone you know. In reality, this is one of the dozens of virus hoaxes that are maliciously created but are spread by well-intentioned people. They both cause needless panic and fill our mailboxes with junk mail.



Because computer viruses can be very serious and can cause irreparable damage to your computer and/or data, it is important to be able to recognize the difference between real virus warnings and virus hoaxes and to protect your data and computer using virus software and the latest virus definitions.

Signs of a Virus Hoax:

- ✓ The message tells you that your hard drive will be erased or your computer destroyed if you open an email message. Only executable files can cause the type of damage described. Simply reading an email message can not spread a virus. Be aware, though, that an executable file disguised as an attachment could be a virus. Make sure your virus program scans downloaded files and attachments. When in doubt, check your attachment for viruses before opening it and do not execute a program that does not come from a reputable web site or manufacturer.
- ✓ The message encourages you to pass it along to all of your friends and colleagues.
- ✓ The warning includes very technical-sounding language.
- ✓ The warning appears to come from the FCC. Monitoring computer viruses and warning users is not a job of the FCC.

If you receive a virus warning, it is important to rule out the possibility that it is a hoax. Before forwarding the message to anyone, please:

Contact LRDC Computing Services S we will determine if the message is a hoax.

Check reputable web sites that provide lists and descriptions of known virus hoaxes:

- ciac.llnl.gov/ciac/CIACHoaxes.html
- www.kumite.com/myths
- www.nai.com/services/support/hoax/hoax.asp
- www.symantec.com/avcenter/hoax.html

Signs of a Real Virus:

- ✓ Your virus software reports an infected file.
- ✓ Someone you share your files with tells you that their virus protection software detected an infected file.
- ✓ While using a word processor you are suddenly forced to save all of your files as templates.
- ✓ You receive a message that a program is trying to write to the boot sector of your hard drive or that your boot sector has been changed.
- ✓ An unusual message (not an error message) appears on your machine.

If you suspect that you have a computer virus, please run your anti-virus program or contact LRDC Computing Services (x4-7033) for assistance. If you find a computer virus, please inform any colleagues with whom you share files.

Virus Prevention:

- ✓ Make sure that you have an anti-virus program on your computer and that it is running in the background.
- ✓ Make sure that your virus definitions are up-to-date.
- ✓ Make sure that your program is set up to automatically scan floppy disks, attachments, and downloaded files.

Better Color Printing by Gary Wilde

LRDC has a new Tektronix 740 color laser printer with better color and faster print speed, which is located in room 506. The printer is capable of 16-page-per-minute monochrome printing, and 5-page-per-minute color printing up to 1,200 dots per inch. The printer works with all flavors of Windows, Macintosh, and Unix systems. The installed options include a duplexing unit for printing on both sides of a page, 128 megabytes memory, and an external disk drive for storage of large numbers of fonts.



Pricing for using the new printer will be based on our customary procedure of charging only for the cost of consumables such as toner and paper (see price chart below). To prevent accidental printing and to insure proper operation, all printing must be done in room 506. We are very fortunate to have a state-of-the-art color laser printer. For more information or a demonstration, please contact Gary Wilde (x4-7038) or Kawa Shwaish (x4-7060).

Paper Type		Cost
Standard	0 - 50% coverage ¹ — 25¢ per page	51 - 100% — 50¢ per page
	Transparency/Glossy	0 - 50% coverage — 60¢ per page
		51 - 100% — 85¢ per page

¹Coverage is the proportion of page covered with toner.

LRDC Computing Services Support by Karen Bassett



Having computer troubles? Don't smash your computer—call Computing Services. Lately, I've noticed that some of the newcomers to LRDC are hesitant to call us when they experience computer problems. We are here to provide computer support to the LRDC community. Our hours of operation are 8:00 A.M. - 6:00 P.M., Monday - Friday.

Some of the services we provide:

- ▶ Solving problems that arise in your computing environment
- ▶ Providing training for computing systems and software used at LRDC
- ▶ Installing your office computers
- ▶ Offering consultations on new purchases of hardware and software
- ▶ Providing documentation for the LRDC network and Pitt dial-in services

For more details, visit our web site: <http://www.lrdc.pitt.edu/compserv/cs.html>.

Below is an updated staff roster. I'd like to give a formal welcome to Eric Fussenegger and Wayne Bruch. Wayne, our newest Student Operator, started with us last November. Unfortunately for us, he will be graduating this Spring and moving back home to Bethlehem, PA. Eric, our newest Systems Analyst, joined our group in January and has been an asset since his first week. Eric brings PC hardware and software experience, and is quickly learning the Mac. In addition to his support role, he is the team leader for our Year 2000 project. Again, please don't hesitate to call any of us anytime. If you are unsure who to call, dial our main number at x4-7033 and a Student Operator will direct your call.

Computing Services Staff Roster

Karen Bassett, Manager	Room 508A, x4-7037
Gary Wilde, Manager	Room 506A, x4-7042
Shari Kubitz, User Consultant	Room 504, x4-2881
Eric Fussenegger, Systems Analyst	Room 507, x4-7060
Kawa Shwaish, Systems Analyst	Room 507, x4-7060
Kim Flotta, Head Student Operator	Room 506, x4-7033
Wayne Bruch, Student Operator	Room 506, x4-7033
Tim Cooper, Student Operator	Room 506, x4-7033