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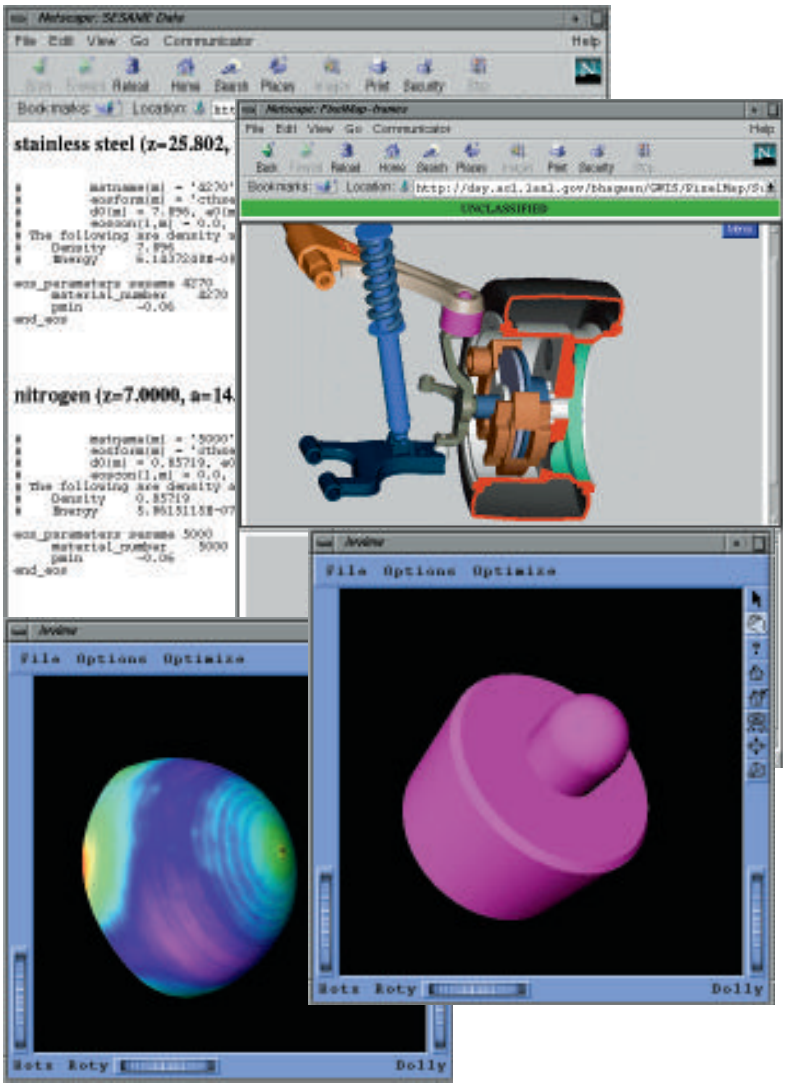
COMPUTING, INFORMATION, AND COMMUNICATIONS (CIC) DIVISION • LOS ALAMOS NATIONAL LABORATORY

Inside this issue



This image shows the Global Weapons Information System (GWIS) application in operation. The Netscape interface allows the user to browse the CAD model by clicking on its parts. The model's parts have various types of additional data attached to them. These supplemental data are viewed using external applications or Netscape plug-ins, or they are viewed as additional HTML pages. Here we show a 3-D representation of the part and its materials, and a 3-D depiction of machining errors. Kristi Carlson (CIC-8) is the project leader and Bob Webster (XCM) is the project manager. For more information see the article on page 4.

Customer Service Center . . . . . .(505) 665-4444 or cichelp@lanl.gov

Because of the wide variety of CIC computing services, numerous facilities are available to address your questions. If you are uncertain whom to call, you can always call the Customer Service Center (CSC). CSC consultants are trained to either answer your question or locate someone who can. To reach the appropriate consultant, dial 665-4444 and make your selection from the following choices:

Option 1: New user topics including e-mail, passwords, registration, and World Wide Web.

Option 2: Labwide Systems such as Travel, Time and Effort, and Purchase Cards.

Option 3: Scientific computing, storage systems, and networking.

Option 4: Classroom instruction and training.

Option 5: Desktop Consulting for PC and Macintosh software and network configurations.

Consulting Via E-Mail

Customer Service Center.....cichelp@lanl.gov

Scientific and engineering computing.....consult@lanl.gov

Administrative and business computing.....labwide@lanl.gov

Passwords and registration.....validate@lanl.gov

Macintosh computing.....Mac-help@lanl.gov

PC computing.....PC-help@lanl.gov

UNIX computing.....UNIX-help@lanl.gov

Other Useful Numbers

Advanced Computing Laboratory.....665-4530

Central Computing Facility.....667-4584

Network Operations Center.....noc@lanl.gov or 667-7423

Telephone Services Center.....667-3400

Division Leader Gives "30,000-Foot View"

This article is one in a series of interviews BITS is conducting with CIC managers to get their views of the "big picture" as it relates to their work and the Laboratory mission. In this article our new division director sets forth his vision and the strategic goals for CIC over the next five years.

Charlie Slocomb was named CIC Division Director in January. (Or was it December?) We caught up with him recently to discuss his vision for CIC Division and to learn of his priorities and strategic plans. He began by strongly affirming his belief in the importance to the Laboratory and to the nation of the computationally based stockpile stewardship program. He has committed CIC Division to do everything in its power to support this program and to facilitate the path to the 100-teraflop goal. This will be a priority for the division and for Slocomb, personally. The division is already intimately involved in negotiations with SGI/Cray for the staged delivery of the hardware and is playing a major role in the development of the problem-solving environment.

CIC Division has many computer scientists and computer engineers working directly on the code teams to enable code conversion to the new architecture and in the development of advanced frameworks for new models and fully three-dimensional simulation capabilities. This is a major research and development challenge, which will have a significant impact on the future of the goal of the Accelerated Strategic Computing Initiative (ASCI), which, as the name implies, is to accelerate the development of the power of the hardware and software systems to achieve the needed capability in a shorter time than the natural forces of the marketplace would expect. The commercially driven rate is a factor of two every eighteen months, and we are striving for a factor of 10 every four years in order to meet the mandate of a fully computer-based certification capability by the year 2010. We are partnering with industry, as we have done historically, to meet those needs and, in particular, to provide input and expertise to the design and the implementation in a fully collaborative environment.

The computing industry is focused on selling products to a large marketplace. Computers of the scale we must have to perform our weapons simulations sell in a much more restricted market. Slocomb says we must work with our

Figure 1. (RN97-050-075026) The ASCI Blue Mountain supercomputer's capability has recently been upgraded from 100 gigaflops to 400 gigaflops.

industrial partners to enlarge the marketplace by developing applications in a broad suite of problem areas, including, for example, energy research, environmental remediation, biotechnology, and drug design. To achieve this we will need a research capability to develop methods for scientists to apply machines with tens of thousands of processors, to develop techniques to visualize petabytes of data, and to transmit those data at gigabyte/second speeds over great distances to facilitate collaborations. This is a major computer science challenge and mandates that CIC Division hire computer scientists and software engineers to address these issues.

Funded by DOE Defense Programs through the ASCI initiative, the 100-teraflop capability with the infrastructure to support it will allow scientists at the weapons laboratories to ensure the safety and reliability of nuclear weapons and enable the laboratory directors to certify the weapons in the stockpile without the aid of full systems experiments. The need is urgent because weapons expertise is being lost as designers retire and as weapons in the stockpile age beyond their intended lifetimes.

A 100-teraflop facility will not appear overnight. On the path to this capability we are working with our industrial partner to obtain a series of machines, on which the software tools, system, and infrastructure will be developed. The ASCI-supported Blue Mountain supercomputer was recently upgraded from 100 to 400 gigaflops; the next planned refresh is for the fourth quarter of calendar year 1998 to achieve well over a teraflop. Our major intermediate goal is a 30-teraflop machine in the time frame around the year 2002, with several intermediate increases in capability along the way. We are already beginning to dream about machines beyond 100 teraflops and a petaflop is beginning to be a gleam in our eyes.

“In today’s market, with a severe national shortfall of such expertise, hiring is a major challenge,” says Slocomb. “We need the ability to compete successfully with industry to hire the best researchers, which means we must be able to offer competitive salaries and provide an exciting work environment.” He adds that one way to create that environment is to encourage people to work on exciting problems and to reward breakthroughs and the publishing of results. The good news

Figure 2. (RN97-402-23) The Laboratory is partnering with Xerox to make all the Laboratory’s records available electronically—even these contaminated ones that were transferred here from Rocky Flats.

is that we, at Los Alamos, are responsible for the most challenging modeling and computational problems, which in and of itself will attract computer science talent. He points out that, based on our experience at Los Alamos, we can supplement the lure of our challenging science by recruiting a handful of outstanding scientists to serve as magnets to gather others who want to work with them on these research problems. Computation, modeling, and simulation have historically been recognized as an essential core competency at the Laboratory, and therefore our initiative to develop the software tools, to provide the networking and the storage, and to contribute in a major way to all aspects of the infrastructure are supported by Laboratory management and the DOE.

As he looks toward the future and responds to the strategic needs of our largest customer base, Slocomb affirms the importance of continuing to provide the finest and most cost-effective production environment for the needs of today. He states that there is a continuum of calculations that must be done with the tried-and-true codes of today to answer immediate questions. Our facilities and our support must be maintained at high levels even as we pave the way for the next generations of hardware and infrastructure.

In looking five years into the future, Slocomb sees that we need to develop better means to manage our legacy data as well as the massive amounts of new data that will be generated by this exploding computational capability. To ensure that the new codes in support of stockpile stewardship provide accurate and believable information to the policymakers who must rely on the results, validation and assessment of the predictions is a key component of the process that leads to stockpile certification. CIC is actively involved in a massive effort to manage the records of 50 years of design and experimentation and in making those records readily accessible to the design physicists to aid in the verification of the new codes. As part of our effort to meet these needs, we are partnering with Xerox to develop systems to convert the archival data to digital form and to make them accessible at the desktop. Just as in our partnership with computer vendors, we are working with Xerox to develop a system that they will then be able to market to other customers. Slocomb's goal is to have all the Laboratory's records available electronically to anyone who has a need to know. He believes that in the realm of scientific data, as in our very successful initiative to develop the "Library without Walls," and in the area of institutional administrative data, we must develop coordinated approaches to serve all parts of the Laboratory with the finest search and delivery approaches.

Slocomb makes the point that because of our conversion to an electronically based information system, "everyone" at the Lab must have access to the network to perform routine tasks as time-and-effort reporting and travel data entry. Our systems that serve these customers must be intuitive, self-contained, and usable without additional instruction. He wants to see institutional data provided to people at their desktops in a form they can use. He would like to see the technologies of data mining applied to these local needs as we develop them to meet the challenges of our external customers in the health care industry, the Social Security Administration, and the Internal Revenue Service.

Slocomb concluded the interview by emphasizing his firm belief in the importance of a strong research component in CIC Division, in information research, in numerical analysis and algorithm development, in computer science, and in the manifold techniques associated with managing and delivering data, both scientific and administrative. The strength of CIC Division is in the diverse talents of a large number of people in complementary disciplines. He strongly believes that the original rationale that brought the parts of the division together are only more important today, and he plans to do all he can to facilitate the transference of technologies and points of view across the various components.

Slocomb's new position as Division Director has capped a career spanning 21 years in providing computing and information technologies to all segments of the Laboratory. He served as a group leader in the old C Division and as a Deputy Division Leader first in C and then in CIC Division, ever since it was created by coalescing the Laboratory organizations involved in the creation, management, and dissemination of data and information. He is an enthusiastic fisher, driver of his new tractor, and the proud father of two adult daughters.

TeleFlex and GWIS

The TeleFlex architecture, a continuation of work begun in 1993 for the Laboratory's Sunrise project, enables the construction of distributed, Web-based enterprise information systems. TeleFlex provides an infrastructure on which it is convenient to build sophisticated applications that allow users to readily query, manipulate, and compare complex multidimensional data (for example, historical and 3-D graphical data compiled from multiple databases and objects) and create a virtual record from the data. To date, the technology has been used in two separate applications: a medical application, Telemed, and an engineering application, Global Weapons Information System (GWIS). GWIS (pronounced "gee whiz") provides a simplified interface to engineering data, thereby improving communications between weapons designers and weapons engineers. This improved communication supports stockpile stewardship.

TeleFlex

TeleFlex is an integration of various state-of-the-art tools, languages, and systems. These include an object-oriented distributed computing system called CORBA (common object request broker architecture), programming languages such as C++ and Java, a mechanism to store CORBA objects on a commercial object-oriented database, 2-D and 3-D Web-based graphical interfaces, multimedia technologies, security mechanisms, and data-mining technologies. The TeleFlex technology set allows developers to build systems with a simple-to-use yet powerful user interface and with sophisticated back-end data manipulation and retrieval services connected with a clean, well-documented object-oriented programming interface.

The distributed nature of the technology allows the user to manage data transparently: the originator of data can keep control of it, use it, and update it while other users access and manipulate it simultaneously. TeleFlex also lets researchers distribute their computing resources. In other words, remote users of the data can actually perform computations that are closely tied to that data on the originator's computer rather than having to download the data to their own computers and perform the calculations there.

New Technology and Applications

With the GWIS application of the TeleFlex technology, users can easily browse and query computer-aided design (CAD) models of weapons to understand their structure and view their properties. We have begun to digitize and incorporate legacy information (for example, old scanned memos and Nevada Test Site documents), experimental results, and engineering CAD and test data to enable design physicists to explore data associated with weapons of interest.

This system provides access to the actual 3-D CAD model of a weapon, so there is no need to search for 2-D drawings of parts, look up the material properties of parts, or interact directly with the engineer to gather data from the necessary model. The user can easily navigate the hierarchy of assemblies and parts that constitute a CAD model, then merely click on a part displayed in the view of an assembly to select it for further operations. Designers do not need to operate the underlying CAD system or to have access to the full functionality that engineers might need, so interfaces that are more user friendly provide access to the limited subset of functionality a designer might require. Conversely, designers need to pull together more data than is provided by the CAD model in isolation, and GWIS enables that data coupling.

After the user selects a part, GWIS presents certain properties and data associated with that part: for example, its material properties and automatically generated 2-D CAD drawings. With the 3-D viewer, the GWIS user can manipulate the view of a part dynamically (in real time), examine any existing measurement data, and become familiar with the part's geometry and its relationship to other parts.

Recently we've added access to legacy test data (radiographs and tabular data) used for validation and verification work (i.e., testing bombs without detonating them). This allows users to select a test and view radiographs and other associated scientific data for that test together in one interface. We plan to couple this data to simulations and other tools using the GWIS architecture.

Future Directions

In the future, we will continue the integration of mesh generation with GWIS. GWIS will provide an interface that lets the user browse any available 3-D CAD model, select parts of interest, intersect those parts with an arbitrary plane to generate a 2-D cross section, submit that cross section to a mesh-generation code, and retrieve the computational mesh. Most automatically generated meshes need to be modified somewhat, but if GWIS can do 80% of the job, the mesh designer will be spared the tedious work.

We will also continue to adapt GWIS for validation and verification work for the Accelerated Strategic Computing Initiative, which is part of the stockpile stewardship program. We will continue to add a variety of useful data to the system

including more legacy test data and interfaces to computer simulations and databases. We would also like to use GWIS to help simulate test devices or actual weapons within the stockpile by converting parts inspection or measurement data directly to a CAD representation of that part. After this as-built model is constructed, any GWIS functionality that currently operates on the nominal model will operate in the same way on the as-built model. Researchers can use these simulations to ensure that actual stockpiled weapons remain safe, reliable, and effective. Finally, we are working on including need-to-know, per-object security, allowing individuals access to information about only those components that are essential to their work.

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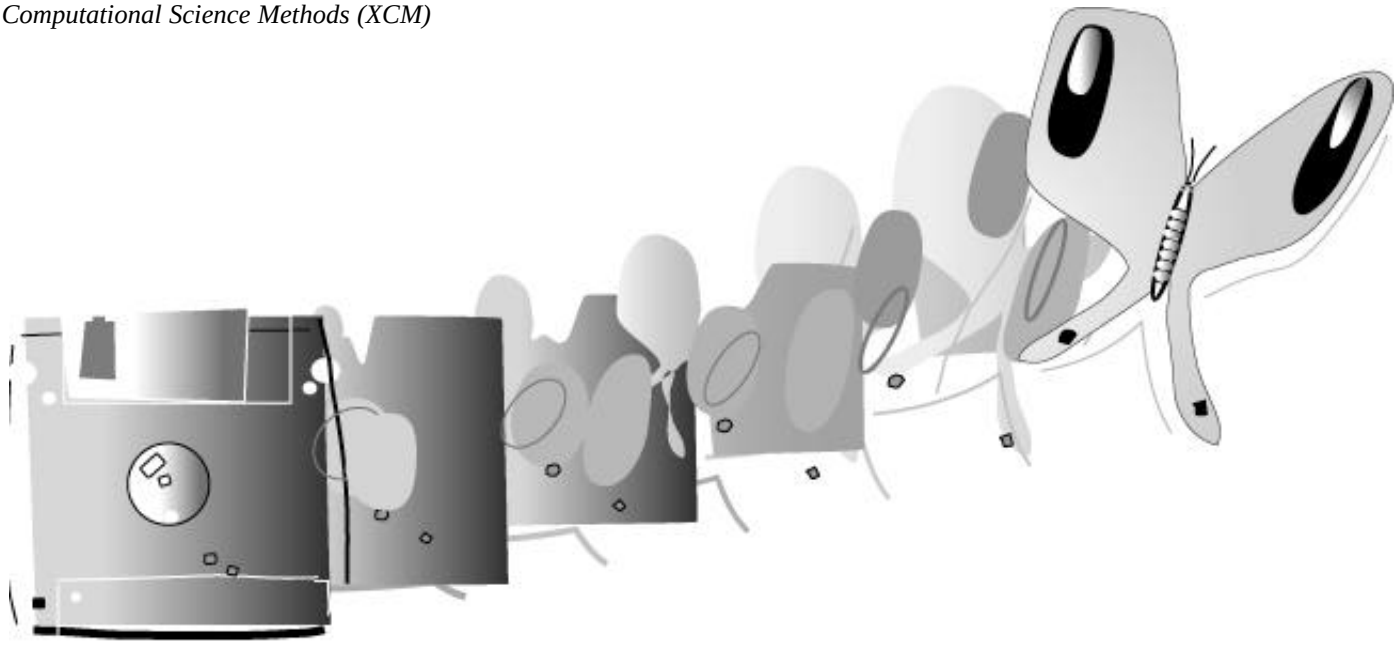

The Next Step For LANL Business Systems

Those who have been around the Lab for a few years have seen several fundamental changes occur in the availability and usability of our business systems. The emergence of shared data for administrative operations began in the late 1970s with the advent of the INFORM system, mainframe applications and terminals that interacted with employees through a series of menus. At the time, this was a big step forward in gathering and distributing corporate information. Over the years, INFORM and its successor LAB-WIDE were enhanced and expanded to provide a wide variety of applications.

The introduction of personal computers provided new opportunities to improve the acquisition and retrieval of information. Their advent also called for a new strategic approach as to where to store data and how to access it. A Corporate Information Repository was defined as the basic foundation on which to build a structure that would enable virtually anyone at the Lab to access the data they need to perform their job (see Figure 1).

Figure 1. Strategic Approach for Acquisition and Retrieval of Information

Movement of data to and from this repository is through a series of operational Transaction and Feeder Systems. These operational systems, which are responsible for running the day-to-day business of the Laboratory, collect data from service organizations as well as Laboratory employees throughout the enterprise. The information is then moved on a predefined time frame to a Data Warehouse. It is at this point that most employees (users) view the data through a series of report structures.

To make this model as effective as possible, CIC began the transition from the menu-driven, mainframe-based applications to the client/server model (which requires an element of the application be present on the user's desktop computer). This transition was not without its share of problems. A wide variety of platforms and configurations of those platforms had to be accommodated. In some instances a lack of resources, such as memory and disk space, inhibited effective use of these applications.

While the client/server model was moving forward, another advancement in technology saw the emergence of the World Wide Web and intelligent browsers such as Netscape. The prospect was readily apparent that these browsers could be used to access the Data Warehouse and provide an effective user interface without requiring software to be installed on the user's desktop computer. It was also understood that some classes of user (such as the power user) should continue to use the client/server applications because of volume or transaction repeatability considerations. The Web technology must mature before these types of applications will run effectively.

While we are in the process of moving technology forward, the Data Warehouse provides customers with three options for accessing the stored information: through common Web browser, client/server model, or ad hoc reporting. Each of these options provides the customer with a different set of options and can be used to meet a series of needs. This model is shown in Figure 2.

The use of this strategy is also being expanded to the transaction systems as well as the Data Warehouse. The business model includes three major customer groups:

- The information seeker—typically represented by the average employee performing tasks such as time & effort or travel expenses reporting.
- The power user—as exemplified by those who need to perform complex tasks.
- Service Organization—major support organizations who deal with the major transaction and feeder systems on a regular basis.

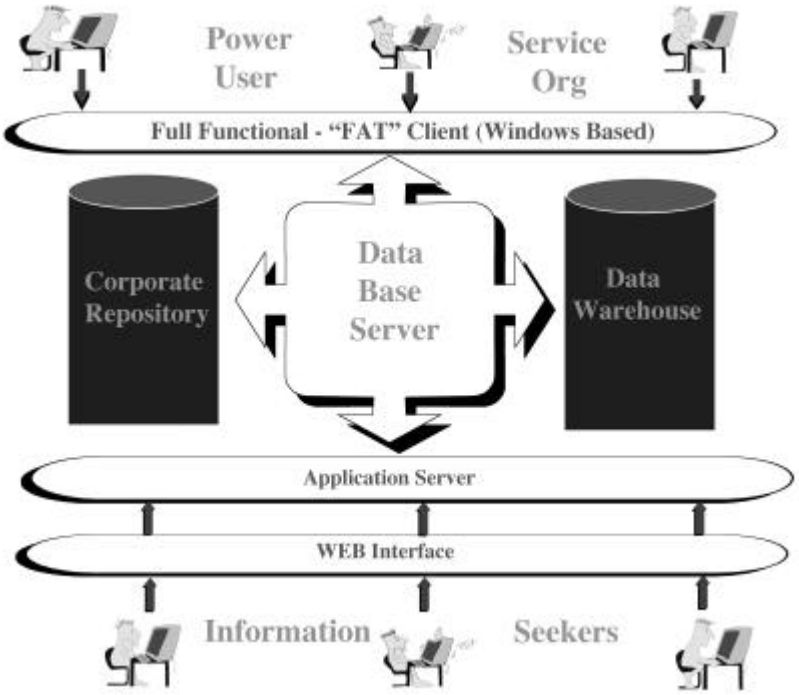

Figure 2. Data Warehouse Concept

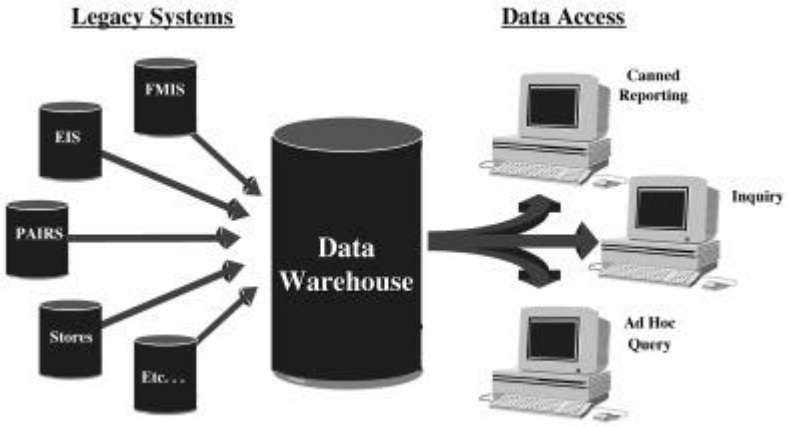

Figure 3. Database Server Model

Each of these users represent some common but also some very specialized needs. To support the needs of each, as well as take advantage of application reuse, transaction systems are now being developed under the model presented in Figure 3.

The model will have an impact on enterprise-wide computing for the Laboratory's information systems in the short and long run. The major differences customers can expect are as follows:

- The typical Laboratory employee needing to access information or provide information through a transaction-based system will do so through a Web browser.
- The Laboratory's service organizations will operate the heavy transaction systems from a client/server model on Wintel platforms.
- The power users of enterprise-wide information will operate on a client/server model on Wintel platforms.

The concept of the Corporate Information Repository coupled with Data Warehouse and a variety of access mechanisms, such as the Web, provides a degree of flexibility that will enable the effective dissemination of business information to the Laboratory.

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Group Leader, Business Information Systems (CIC-13)

E-Mail Server Now Available in the Secure Network

We now have an e-mail server, named smail, available in the secure network. It is aliased to mailhost and the lanl.gov domain, so the same functionality to set e-mail addresses exists in the secure as in the open (e.g., res@lanl.gov).

Currently, the secure Register does not support all the functionality of the open Register, so propagating names and forwarding addresses to databases must be done manually. Please send e-mail to mail-manager@lanl.gov in the open network if you would like to have a lanl.gov address or account on smail.

We have links set up to Sandia and Livermore from smail, and we have completed the security test enabling us to exchange e-mail with these sites. The e-mail server at Livermore is pop.scf.cln; the e-mail server at Sandia is scn-mail.scn.sandia.gov. If the person with whom you wish to exchange e-mail is on either of these systems, all should go well. Check with your system/network administrator to ensure that the "smart relay" in your sendmail configuration file is set to one of the names for smail.

In the (I hope) near future we will also have links open to Oak Ridge, Kansas City, and Pantex. We are now waiting for these sites to pass certification.

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Network Engineering (CIC-5)

ESD Provides Unexpected Software Savings

What is ESD?

ESD is the Electronic Software Distribution Web site that enables LANL personnel to purchase, download, upgrade, or transfer software/software licenses through a desktop computer configured with a Web browser.

A convenient and cost saving tool, ESD provides software at discounted prices through site-licensing and bulk acquisitions. In FY97, ESD saved Laboratory organizations $4 million on software products.

Hidden Savings of ESD

ESD savings go beyond the initial software purchase. Not only do you save software dollars from an ESD purchase, but you also save time and money through the following services and tools.

- ESD Announcements
- License Utility
- Recycling Software Licenses
- Proxies

ESD Announcements

Free of charge, ESD Announcements remind and inform LANL personnel of software product offerings. Customers can easily stay current with software upgrades. The following are the different types of announcements offered:

- ESD E-mail: Subscribe and receive notices of all new ESD product releases, upgrades, and other happenings. To subscribe, log on to ESD and click the Get ESD E-mail button.
- Automatic Upgrade Notices: Receive automatic e-mail upgrade notices for products registered to you.
- ESD What's New: A listing of current ESD news. Archives of old postings are also available.
- LANL What's New: A listing of current ESD news on the LANL home page.

License Utility

The License Utility simplifies software updates and accountability records. Through the License Utility you can upgrade, download, return, or transfer software/software licenses. Using this tool, system administrators can ensure that their clients are properly licensed for the software they use and that the clients' software is current with IA Laboratory software standards (see Information Architecture Project at http://www.lanl.gov/projects/ia/).

Furthermore, the License Utility is a software management tool that enables you to generate a list of your ESD registered software. Unlike traditional software packaging boxes and their contents (license, diskettes, or CDs), the License Utility stores your ESD licenses where they are not subject to being "borrowed" by co-workers. Therefore, you can generate this list of licenses for auditing purposes as well.

Recycling Software Licenses

The ESD License Utility provides the option to transfer your ESD software licenses to others. Transfers save time and money by "recycling" licenses. In particular, system administrators can use this tremendous time and cost savings service.

Possible transferring features/scenarios include the following:

- Individuals can transfer one, some, or all of their licenses to one or more other people.
- Individuals can purchase software licenses for an entire group and then transfer the licenses to the individual users.
- An employee leaving the Lab can transfer his or her licenses to either a new employee or to an individual who will be responsible for the excess licenses in the group.
- An employee salvaging a computer and its ESD licenses can transfer the licenses to another individual.

Note that software licenses are platform specific. In other words, if you move from a Mac to a PC, the Mac software licenses cannot be transferred to PC licenses. In this case, you must purchase new PC software.

Also note that licenses are assigned to individuals, not to computers, and as people move from one group or assignment to another within the Lab, their licenses will go with them, unless they specifically transfer them to others.

Proxies

The ESD License Utility provides a proxy capability that allows system administrators to perform ESD functions on behalf of others. The proxy function can save administrators valuable time when they are servicing clients' computers.

Proxies are at an organizational level. Any organizational designation recognized by the EIS database can have up to two proxies. A person identified as a proxy for a given group need not be part of that group and may, in fact, be a proxy for numerous groups.

A proxy can do the following:

- Download any software licensed to group members,
- Return software licenses on behalf of group members,
- Transfer software licenses on behalf of group members,
- Ensure software is made available only to registered users,
- Transfer proxy authority to another individual, and
- Purchase/register software for anyone (this ability is not unique to proxies).

Note that a proxy cannot perform Network Installations on behalf of other persons.

To become a proxy you must

1. Have group authority, and
2. Send an e-mail containing your group designation and Z-number to ESDmaster@lanl.gov.

How To Use ESD

1. Access ESD at http://esd.lanl.gov.
2. Log on with an ICN password or Smartcard (required).
3. Have charge code information ready for software purchases.

Please e-mail your questions and comments to ESDmaster@lanl.gov.

If you would like an ESD presentation or manual, contact Nikki Watson.

Nikki Watson, nwatson@lanl.gov, (505) 667-0726
The REDI (Remote Electronic Desktop Integration) Project
CIC-6 Training, Development, and Coordination

Avoiding Print Problems on Labwide Systems

Question: I am trying to print a report from the Information Manager on the IB machine, and I get a PUTTCP1 error message. What causes this error?

Answer: When you print from the Information Manager, it has to transfer the print file to you using a File Transfer Protocol (FTP) server. Solutions are listed below.

Solution I: Mac and PC Users

Select option 3 on the Information Manager Main Menu and follow the instructions below:

1. Ensure that the IP address displayed is correct.

2. Ensure that the FTP Server UserID is the same as your Z Number.

3. Tab to the FTP Server Password and type your Z Number.

4. Press <Enter> (or <return> on a Mac) to update the information.

5. Press <Enter> or <return> again to exit the screen.

Try printing again. If you made any changes, you may have fixed the problem. If you still get the error, follow the appropriate instructions below, depending on the platform you use.

Solution II: PC Users

If you are using a PC, be sure the FTP server is active and properly configured by following the instructions below:

Note: These instructions apply to version 1.0 of OnNet32, which is the most common network utility used to access the IB machine. If your screen looks different, you may have a different version of OnNet32, or you may be using a different type of software. In either case, you will need to call your group's computer technician for assistance.

1. If the FTP server is displayed on the task bar at the bottom of your screen, click on it; if the FTP server is not displayed on the task bar, select Start/Programs /OnNet32/FTP Server.

2. Pull down the Commands menu and highlight Start FTP server.

3. Pull down the Settings menu and highlight Configure FTP Server... to bring up the screen shown in Figure 1. Be sure the Use Password File box is checked.

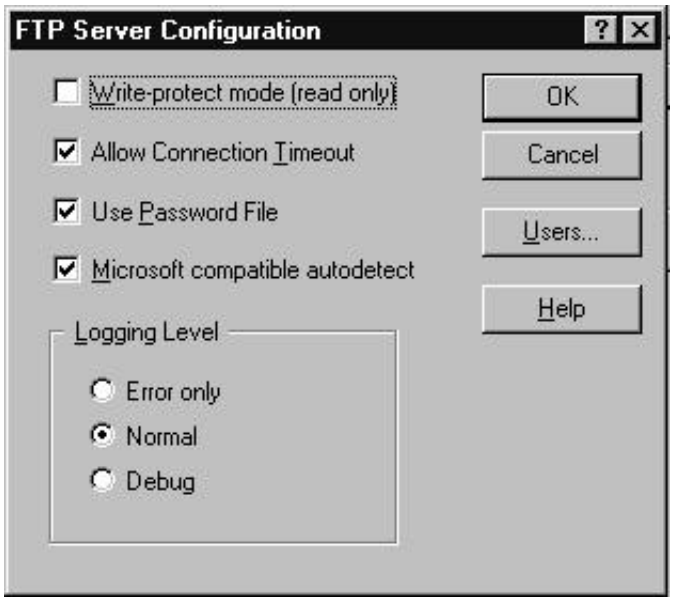

Figure 1. FTP Server Configuration Window

4. Click on the Users... button.

5. If you are not a configured user, click Add... to bring up the screen shown in Figure 2; if you are a configured user, click Modify to bring up the screen shown in Figure 2.

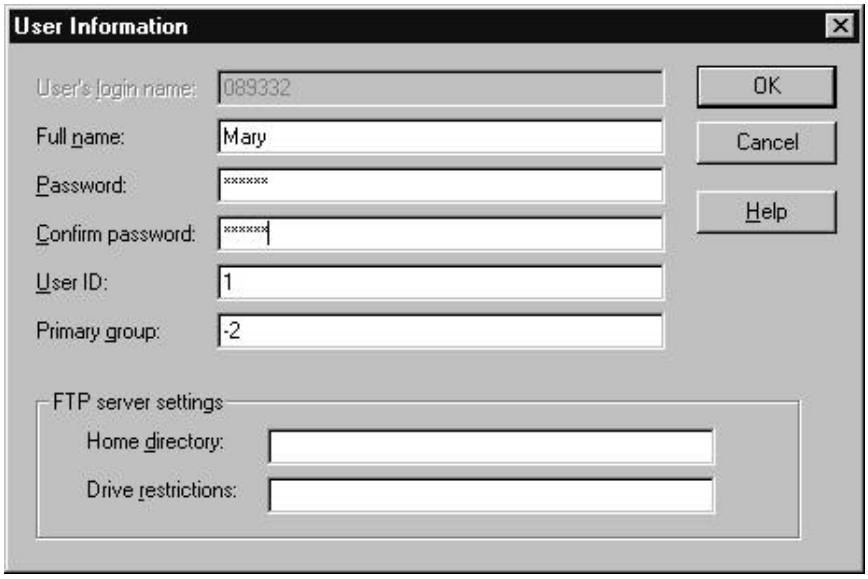

Figure 2. User Information Window

6. Enter your Z Number in the User's login name field.

7. Enter whatever you like in the Full name field.

8. Enter your Z Number in the Password field.

9. You can ignore the rest of the screen.

10. Click OK several times to exit.

11. Minimize the FTP server; do not exit.

Solution III: Mac Users

If you are using a Mac, there are two common types of FTP servers: TN3270 and NCSA Telnet.

If you use TN3270, follow the instructions below.

1. Open the FTP password file in the tn3270 folder.

2. If your Z Number is displayed, go to step 4; if your Z Number is not displayed, click the New User button (see Figure 3).

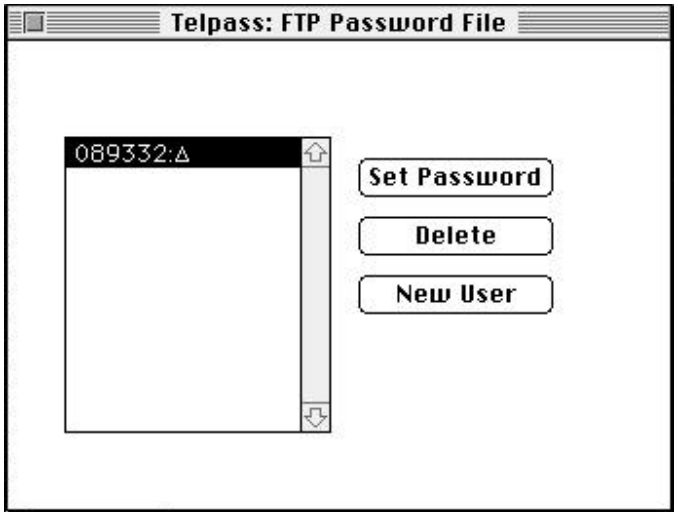

Figure 3. FTP Password File

3. Type your Z Number and press <return>.

4. Click on your Z Number to highlight it.

5. Click on the Set Password button to bring up the screen shown in Figure 4.

6. Type in your Z Number and press <return>.

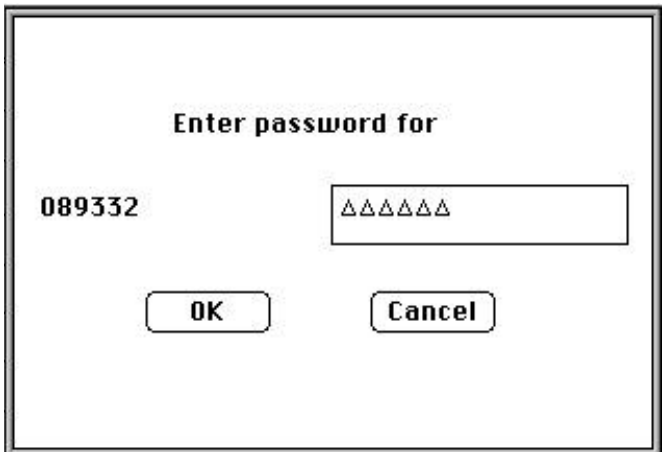

Figure 4. Enter Password Window

7. Select Save from the file menu.

8. Select Quit from the file menu.

If you use NCSA Telnet, follow the instructions below.

1. Launch NCSA Telnet if it is not already running.

2. Select Edit/Preferences/FTP Users.

3. If your Z Number is not displayed, click New; if your Z Number is displayed, click Change to see the screen shown in Figure 5.

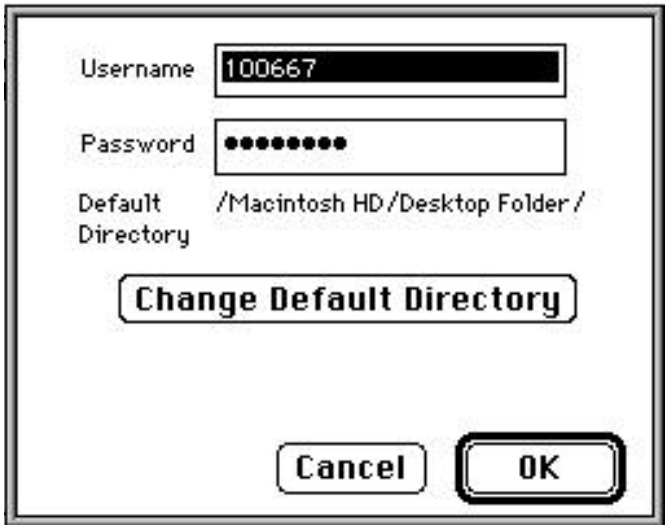

Figure 5. Change Default Directory Window

4. Enter your Z Number in the Username field.

5. Enter your Z Number in the Password field.

6. Make note of the default directory. This indicates where your print file (PRN file) will be sent. The screen displayed in Figure 5 directs NCSA Telnet to send the PRN file to the hard drive.

7. Click OK.

8. Click OK again.

9. Select Edit/Preferences/FTP Users to bring up the screen displayed in Figure 6.

10. Ensure that On, Username & Password required is selected. Selecting Show FTP log at startup is optional.

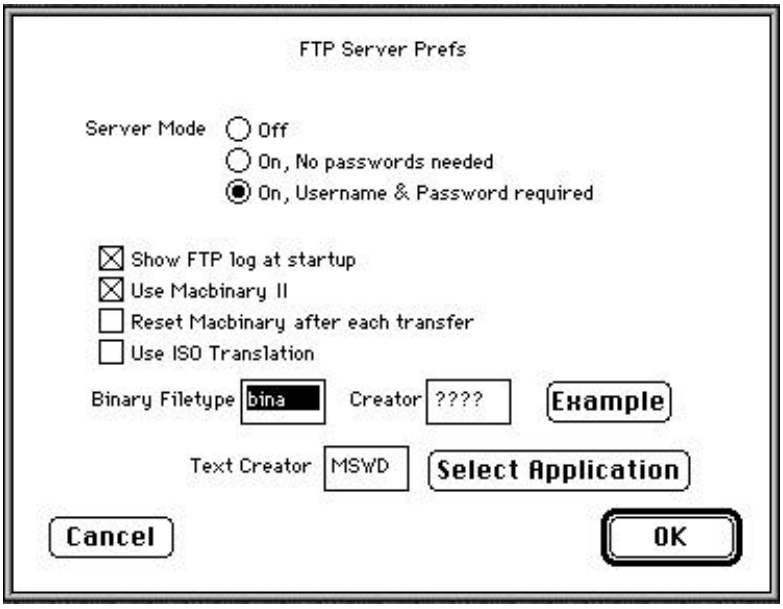

Figure 6. FTP Server Prefs Window

Mary Billen, mbillen@lanl.gov, (505) 665-3195
Customer Service Group (CIC-6)

Accessing Electronic Journals for Research in Computer Science

The Research Library has access to approximately 130 electronic journals related to computer science. LANL employees can view the entire list from the Research Library home page at http://lib-www.lanl.gov; select the Electronic Journals button and then select the subject link Computer Science.

We recently added 19 Association for Computing Machinery (ACM) titles, including the Journal of the ACM, Communications of the ACM, and the ACM transactions series. Most of these titles have PDF (portable document format) articles back to 1991. ACM conferences are also accessible electronically at http://www.acm.org/dl/toc.html. Records for individual conferences will be added to our online catalog over the next few months.

Electronic access to Society for Industrial and Applied Mathematics (SIAM) journals is also available. Titles include SIAM Journal on Computing, SIAM Journal on Optimization, and SIAM Journal on Scientific Computing. SIAM is reengineering their production process and expects to reduce time between a paper's acceptance and its electronic publication to an average of four months. However, there may be delays between electronic publication and the appearance of the print article.

Access is provided to several Institute of Electrical Engineers (IEE) titles including IEE Proceedings: Control Theory and Applications; and IEE Proceedings: Vision, Image, and Signal Processing.

Unfortunately, the Institute of Electrical and Electronics Engineers (IEEE) does not have a model for institutional access to their electronic journals as yet.

There are links for many popular and language oriented journals, some of which are not available in print at the Research Library. Titles include DBMS, Enterprise PC, JAVA Developer's Journal, Linux Gazette, and MacCentral. Suggestions for additions to this list are most welcome.

Frances Knudson, fknudson@lanl.gov, (505) 667-9233
Research Library (CIC-14)

BIOSIS® at LANL Database Available from the Research Library

What has over 11 million records and covers life sciences literature from abscisic acid to zoster virus and is available at the desktop of LANL researchers? The Research Library now provides access to the BIOSIS® at LANL database which indexes journal articles, conferences, books, and other documents from around the world. Additional subject areas covered include botany, biochemistry, biophysics, biotechnology, ecology, and the environment.

BIOSIS at LANL includes citations from 6,000 journals, including 3,500 that are not covered by MEDLINE and 3,000 that are not covered by SciSearch at LANL. BIOSIS at LANL also covers over 2000 conferences per year that are not in either MEDLINE or SciSearch at LANL. Coverage is 1969 to present.

BIOSIS at LANL includes the LANL Research Library holdings so that you can quickly determine if the article or book you need is available from the Research Library. Also, many recent journal articles include hyperlinks to electronic versions of the articles.

Training for this database is available; see the Research Library training page (http://lib-www.lanl.gov/libinfo/training.htm) or call 667-5809.

BIOSIS at LANL can be accessed from the Research Library home page (http://lib-www.lanl.gov) under the Electronic Databases button.

Kathy Varjabedian, kv@lanl.gov, (505) 667-3031
Research Library (CIC-14)

GeoRef Now Available at Your Desktop!

The Research Library is pleased to announce Web access to GeoRef at http://muscat.gdb.org/repos/georef/ or via the Research Library home page under Electronic Databases at

http://lib-www.lanl.gov/edata/edata.htm

GeoRef was established by the American Geological Institute in 1966, and it provides access to the geoscience literature of the world. GeoRef is the most comprehensive database in the geosciences and continues to grow by more than 60,000 references a year. The database contains over 1.8 million references to geoscience journal articles, books, maps, conference papers, reports, and theses.

The GeoRef database covers the geology of North America from 1785 to the present and the geology of the rest of the world from 1933 to the present. The database includes references to all publications of the U.S. Geological Survey. Masters' theses and doctoral dissertations from U.S. and Canadian universities are also covered.

GeoRef editors/indexers regularly scan more than 3,500 journals in 40 languages as well as new books, maps, and reports. They record the bibliographic data for each document and assign index terms to describe it. Thousands of new records are added to the database twice each month.

This Web version of GeoRef lets you

- Select a search interface designed for your level of search experience,
- Search for abstracts in specific journals, and
- Download search results in citation formats for use with most citation management software packages.

A variety of search interfaces are available to access the GeoRef database. Selecting the search interface that meets your experience level and information needs can help you retrieve the best search results.

The option to search for abstracts in specific journals is a convenient method for professional societies and publishers of scientific journals to make information from their archives available to readers.

The Research Library appreciates your feedback. Please feel free to contact us at library@lanl.gov or call 7-5809 to register for the February 11th class or to schedule group on individual training onsite.

Lou Pray, lpray@lanl.gov
Research Library (CIC-14)

Yesterday,

All those backups seemed a waste of pay.

Now my database has gone away.

Oh I believe in yesterday.

Suddenly,

There's not half the files there used to be,

There's a milestone

hanging over me

The system crashed

so suddenly.

I pushed something wrong

What it was I couldn't say.

Now all my data's gone

and how I long for yesterday-ay-ay-ay.

Yesterday,

The need for back-ups seemed so far away.

I thought my data was all here to stay,

Now I believe in yesterday.

Research Library Training

The LANL Research Library provides training for using its specialized databases. Training sessions begin and end at times indicated below. Classes are free but you must preregister by calling the Research Desk at 7-5809 or sending e-mail to library@lanl.gov. Special classes and orientations can also be arranged.

Date	Time	Subject Matter
2/3/98	1:00 - 1:30 p.m.	SciSearch at LANL
2/4/98	1:00 - 1:30 p.m.	Finding Addresses and Phone Numbers on the WWW
2/5/98	1:00 - 1:30 p.m.	Research Library Catalog
2/5/98	2:00 - 4:00 p.m.	InfoSurfing: Basic Web Searching
2/10/98	1:00 - 1:30 p.m.	Introduction to Electronic Resources
2/11/98	1:00 - 1:30 p.m.	GeoRef on the Web
2/12/98	1:00 - 1:30 p.m.	Federal Regulations on the Internet
2/17/98	1:00 - 1:30 p.m.	Finding Addresses and Phone Numbers WWW
2/18/98	1:00 - 1:30 p.m.	Research Library Tour
2/18/98	1:00 - 1:30 p.m.	Grants and Funding on the WWW
2/19/98	1:00 - 1:30 p.m.	SciSearch Alerting Service
2/19/98	2:00 - 4:00 p.m.	InfoSurfing: Basic Web Searching
2/24/98	1:00 - 1:30 p.m.	Research Library Tour

Labwide Systems Training

The Customer Service Group (CIC-6) offers training for users of Laboratory information systems. The CIC-6 courses offer training for a variety of personnel including property administrators, group secretaries, training coordinators, budget analysts, group leaders, or anyone needing to access training records, property records, costs, employee information, travel, chemical inventories, etc. Refer to the table below for specific information about courses currently offered.

You must have a valid ICN password before taking any of the courses shown in the table. To register for a course, call the CIC-6 Training, Development, and Coordination section at 667-9559 or access our Web page. From the LANL home page, look under "Services/Computing at LANL/Training" or enter the URL: http://www.lanl.gov:8010/computer-information/cic6/teampage.html.

Course Title	Date	Time	Cost	Course Number
Employee Development System - Basic Training (EDS I)	2/4/98	8:30–12:00	$375	Course #5289
	The course provides hands-on instruction to request course enrollment, use the on-line course catalog, retrieve training transcripts, and assign EDS authorities. The student will learn to create courses, add students to the courses, and generate several training reports.			
Employee Development System - Training Plans (EDS II)	2/18/98	8:30–12:00	$375	Course #7155
	Participants receive hands-on instruction to create and maintain training plans, assign assignment codes, and generate training plan reports. Attendees must have prior training in the Employee Development System.			
Eudora Electronic Mail	2/3/98	1:30–4:30	$200	Course #9762
	This class is a hands-on class that teaches the participant how to use Eudora software to create, send, receive, and edit electronic mail messages. In addition to these procedures, the participant will learn what related settings mean and how to configure the system to meet his or her individual needs.			
Data Warehouse Basics	2/10/98	8:30–10:30	$200	Course #11961
	Students will receive hands-on training to generate standard reports and make quick queries from information in the data warehouse, a real-time collection of data tables from Laboratory financial, time-reporting, and personnel systems.			
Data Warehouse/ Financial Reporting	2/10/98	10:30–12:00	$200	Course #11960
	Prerequisite: Data Warehouse Basics. Students will receive hands-on training to generate standard financial reports and make on-line queries from information in the "data warehouse," a collection of data from Laboratory budgeting, accounting, and time-keeping systems.			
HTML Basics	2/3/98	8:30–12:00	$375	Course #11605
	Students will gain a basic understanding of HTML (Hypertext Markup Language), the language for the World Wide Web. Topics covered will be commands and standards, creating and editing documents, and authoring programs.			

Course Title	Date	Time	Cost	Course Number
HTML Enhancements	2/19/98	1:30–5:00	$400	Course #14456
	For the more advanced HTML expert, this course covers the bells and whistles. Topics include font size and color, background colors (including table cells), altering display and layout of text, and a discussion on creating style sheets and adding other multimedia. Prerequisite: HTML Basics or permission of the instructor.			
HTML Tables	2/13/98	8:30–12:00	$375	Course #11959
	Students gain basic understanding of how to create various tables in HTML and new tags in HTML 3.0. Netscape-specific tags are also identified for clarity. Prerequisite: HTML Basics or permission of the instructor.			
Lotus Notes Basics 4.5	2/18/98	1:00–4:30	$375	Course #9917
	Participants receive hands-on computer instruction to learn to create and send Notes e-mail memos, fax documents, search on one or multiple databases, use views and folders, create nicknames and distribution lists, set defaults, create doclinks, send attachments, and replicate databases.			
Meeting Maker	2/3/98	1:30–4:00	$200	Course #12395
	Students learn how to create an address book, create personal groups, utilize the Auto-Pick feature, utilize e-mail integration with non-Meeting Maker users, and customize various Meeting Maker features.			
Purchase Card System (PCS)	2/4/98	1:30–2:30 or 3:00–4:00	$100	Course #11924
	Participants will learn to reconcile monthly statement of account, submit reconciled statement of account for approval, print statement of account for audit records, and delegate reconciliation authority. Participants must attend PCS Overview which is scheduled through Ruby O'Rear, 5-4523.			
Reporting with Infomaker	2/9/98	8:30–5:00	$550	Course #11054
	Hands-on training to query data and develop ad hoc, or non-standard, reports from the LANL data warehouse using Infomaker software.			
Time and Effort System (GUI)	2/19/98	8:30–10:30	$200	Course #11018
	The student will learn how to enter attendance, amend attendance, approve attendance, and submit exception and approval reports. Time codes and associated policies will be discussed. The student will also learn how to use the Information Manager utility to view and print reports.			
Travel	2/11/98	1:00–4:30	$375	Course #12091
	Hands-on training to submit and approve travel requests and expenses in the new Travel System, which replaces the TRIPS on-line system and the post-travel expense worksheets.			

Advanced Technical Computer Training

The Customer Service Group (CIC-6) supports advanced technical training in computing areas such as programming languages, system administration, networking, and World Wide Web development tools. The support provided by CIC-6 can be as limited as providing the appropriate facilities for a specific group or as extensive as coordinating training functions such as system administration, vendor acquisition, EDS administration, and class facilitation. The table below lists classes that are either currently being offered or are available on request. An expanded list of classes that are potentially available can be viewed on the Internet at http://www.lanl.gov:8010/computer-information/ComputerTraining/Vendor.html. To request registration in any course or for general assistance, please contact the CIC-Division Advanced Technical Computer Training Coordinator at (505) 667-9399 or send e-mail to cic6-train@lanl.gov. *Cost per student will vary depending on the total number of students enrolled in the class.

Course Title	Date	Cost	Course Number
C++ for Experienced C Programmers	3/2–6/98	$1800–$2300*	9050
	Prerequisite(s): Excellent C Language programming skills. Topics Include: Major Differences and Additions to ANSI C; Building C++ Classes; Introduction to Text I/O with C++; Function Overloading; Single Inheritance; Virtual Functions; Multiple Inheritance; Operator Overloading; Creating, Initializing and Assigning Objects; Passing and Returning Objects; Templates, Parameterized Functions and Classes; C++Stream I/O with the File System; and C++ Course Summary.		
C-Shell Programming	Available on Request (5 days)	$1800–$2300*	4790
	Prerequisite(s): Knowledge of basic Unix commands and the ability to use basic programming constructs, such as variables and loops, to write simple programs in at least one programming language. Topics Include: Use Local and Environment Variables; Use Shell Metacharacters and Redirection; Perform Basic String Manipulations and Integer Arithmetic; Use Aliases, History, and Exit Status to Determine if a Command Succeeded or Failed; Employ Flow-Control Constructs (Branching and Loops); Customize the .cshrc and ..login Start-up Scripts and the Search Path and Prompt; Create and Debug C-Shell Scripts; Create a C-Shell Script That Interacts With Users, Accesses Command-Line Arguments, Returns an Exit Status, and Makes Decisions Based on Numeric Comparison, String Comparison, or Command Exit Status.		
IDL 5.0 Graphic Object Workshop	4/14-16/98	$1100–$1400*	
	Prerequisite(s): Completion of Foundations of IDL Programming course or equivalent knowledge and experience.Topics Include: IDL Objects (Object Inheritance and Encapsulation, Object Methods, Creating and Destroying Objects, and Memory Tricks); IDL Object Graphics Workshop - Building an IDL Object Graphics Application (Building an Object Graphics Hierarchy, View-Model Hierarchy and Container Objects, Graphics Atoms [Plot, Surface, Image, Polygon, Polyline], Positioning and Rotating Objects in 3D Space, Light Sources, Color Models - RGB vs. Indexed, System Fonts and 3D Text, Texture Maps, Creating Contours with Object Graphics, IDL Pointers to Pass Data, Using IDL Draw Areas for Object Graphics, Implementing Background Tasks, Bulletin Board Base to Change Object Properties, WYSIWYG Printing, and Helper Objects [Annotations]); and Linking IDL with Other Languages (Call_External, Linkimage, and Callable IDL).		

Course Title	Date	Cost	Course Number
Java Programming	3/30-4/3/98	$1800-$2300*	11686
	Prerequisite(s): Students must have the ability to create compiled programs using an advanced language (such as C or C++) and the knowledge to use basic Solaris commands and a World Wide Web browser (such as Mosaic or Netscape). Topics Include: Using the Java Programming Language to Create Java Applications and Applets; Defining and Describing Garbage Collection, Security, and the Java Virtual Machine; Describing and Using the Object-Oriented Features of the Java Language; Developing Graphical User Interfaces in Java, Taking Advantage of the Various Layout Managers Supported by Java; Describing and Using the Java 1.1 Delegation Event Model; Using Java Windowing Components, Including Mouse Input, Text, Window, and Menu Components; Using Java Exceptions to Control Program Execution and Define Custom Exceptions; Using the Advanced Object-Oriented Features of the Java Language, Including Method Overriding and Overloading, Abstract Classes, Interfaces, Final and Static, and Member and Field Access Control; Using Java to Perform File Input/Output; Using Java's Built-In Threading Model to Control the Behavior of Multiple Threads; and Using Java to Access Servers and Clients Through Sockets.		
Origin 2000 Applications Programming and Optimization	3/30–4/3/98	$1800–$2300	14817
	RTF O{\rtf1\mac\deff2 \ftnbj\fracwidth \sectd \linemod0\linex0\cols1\endnhere \pard\plain Prerequisite(s): User-level knowledge of IRIX and Fortran or C/C++ programming experience. Topics Include: IRIX Application Development Overview (General SMP Overview, Introduction to SGI Compilers, IRIX Development Utilities, and Debugging Environment); Origin System Overview (Origin Architecture, Origin Scalable Shared Memory, and IRIX System Utilities); Single-CPU Tuning (Performance Analysis Tools, Identifying Performance Bottlenecks, and Automatic and Manual Optimization Techniques); Multiprocessor Programming (Parallel Speedup and Amdahl's Law, Implicit and Explicit Models of Parallel Computation, and Tuning Parallel Code for the Origin); I/O and S		
SGI Network Administration	4/20–24/98	$1800–$2300*	11690
	Prerequisite(s): Completion of Silicon Graphics System Administration (Beginning) course or equivalent knowledge and experience. Topics Include: Networking Fundamentals; Network Configuration; Network Troubleshooting; Resource Management with Network; Information Services; Domain Management with Domain Name System; Electronic Mail with Sendmail; Remote File Sharing with Network File System & Automounter; Network Performance Monitoring; and Network Security.		
SGI System Administration (Advanced)	2/23–27/98	$1800–$2300*	11689
	Prerequisite(s): Completion of Silicon Graphics System Administration (Beginning) course or equivalent knowledge and experience. Topics Include: System Error Monitoring; Kernel Reconfiguration and Debugging; System Monitoring Tools; Process Management; MultiProcessor CPU Management; Memory Management and Tuning; Swap Management and Tuning; Disk Management and Tuning; XPS Filesystem Management; and System Security Concepts.		

Course Title	Date	Cost	Course Number
Solaris 2.X System Administration (Beginning)	3/16–20/98	$1800–$2300*	7477

Prerequisite(s): Knowledge of Unix commands and an editor. Topics Include: Custom Install a Solaris 2.X Server; Use the Solaris 2.X Device Naming Conventions; Use the Format Utility to Display Partition Information; Change System Run Levels; Add Startup Files for Additional Services; Add and Remove Software Packages; Add Peripheral Devices, Configure Terminals and Modems; Administer Disks and File Systems; Configure NFS to Support the Client-Server Environment; Use the Automounter; Add and Remove Diskless Clients; Back Up and Restore File Systems; Perform Basic Recovery and Troubleshooting Procedures; and Use Scripts to Configure and Administer the NIS+ Environment.

Solaris 2.X Network Administration	6/8–12/98	$1800–$2300*	8107

Prerequisite(s): Completion of Solaris 2.X System Administration (Beginning) class or equivalent knowledge and experience. Topics Include: TCP/IP Networking Model's Major Protocols; Monitor Network Traffic; Monitor and Control the Address Resolution Protocol Cache; Set Up, Configure, and Manage a Sun Internet Router with Subnets; Identify the Differences Between TCP and UDP; Manage Client-Server Transport Layer Communications; Configure and Maintain RPC-Based Applications Support; Describe Common Applications, Systems, and Network Bottlenecks; Test and Monitor System, Disk, and Network Loads; Use Monitoring Commands to Find Performance Bottlenecks; Set Up and Maintain a Simple Domain Naming Service (DNS) Environment; Set Up a Jumpstart Automated Network Installation Server; Identify Sendmail Functionality and Configuration; Install a Mail Server; and Install UUCP Between Existing Solaris 2.X Systems.

UNIX (Basic)	2/17–20/98 (mornings)	$400	5267

Prerequisites: Basic computer literacy (knowledge of the keyboard and mouse) are helpful. Topics: Getting Started; UNIX File System; Editing with VI; Manipulating Files; Using C-Shell Features; Customizing Your Environment; Navigating the Network; Job Control; Generic UNIX E-mail; and Electronic Mail Registration (EMR).

UNIX (Advanced)	3/10–13/98 (mornings)	$400	12972

Prerequisites: The Basic Unix class or equivalent knowledge. Topics: File Manipulation; File Reorganization; Network File System Concepts; Introduction to C-Shell Scripts; Conditional Execution; Shell Programming; The Korn Shell; Korn Shell Script Features; and SED Filtering Tool.

UNIX and Windows NT Integration	Available on Request (4 days)	$1400–$1800	14608

Prerequisite(s): Familiarity with Unix and NT network administration and TCP/IP protocols is useful. Topics Include: Common NOS Characteristics; Comparing the Operating Systems; Developing an Integration Strategy; Identifying Elements to Integrate; Integrating Protocols; Optimizing Protocols in the Enterprise Environment; Administering IP Addresses; Network File System (NFS); Server Message Block (SMB); Printing Across the Enterprise; Configuring User Accounts; Application Support; Remote System Administration; Resolving IP Addresses; IP Routing; Running Diagnostic Utilities; and Resolving Network Problems.

Windows NT Security	Available on Request (5 days)	$1800–$2300*	14611

Prerequisite(s): Windows NT 4.0 Workstation and Server class (EDS # 12729) or equivalent knowledge and experience. Topics Include: An Overview of Security Objectives; Developing a Windows NT Security Policy; Trusted Computing Base (TCB); Microsoft's Security Commitment; Practical Implications of C2 Security; The NT Security Subsystem; NT Security Components; Planning Domains; Managing Accounts and Groups; The Windows NT Server and its Registry; Setting Up Shared Resources; Basic ACLs for Files and Directories; Controlling Access; Mechanics of Auditing; Common Auditing Scenarios; Tracking Applications with Security Logs; Protecting Your Network from Hostile Intruders; Securing Microsoft IIS; Implementing Firewalls; Thwarting the Threat from Within; and The Evolution of Windows NT Security.

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Los Alamos
National Laboratory

INTEGRATED COMPUTING NETWORK (ICN) VALIDATION REQUEST

Instructions:

(1) Complete all parts of this form that apply to you. Please take note of the "Special Requirements" section and complete any applicable parts.
(2) Manager (Group Leader or above) authorization and signature are required for all validation requests.
(3) Before submitting this request, ensure that your Employee Information System (EIS) information is current.
(4) Once completed, either mail this request to the Password Office at MS-B251, fax it to (505) 667-9617, or, if you are cleared, handcarry it to TA-3, SM-200, Room 257.

If you have **questions** call (505) 665-1805 or send e-mail to validate@lanl.gov

Owner Information

Z-Number (if you have one)			Name (last, first, middle initial)
LANL Group	Phone Number	LANL Mail Stop	Citizenship (Foreign National see "Special Requirements-Foreign National")

Check LANL affiliation:

- ☐ LANL employee
- ☐ Contractor _____ (specify contract company)
- ☐ External user_____ (specify employer)
- ☐ Other (specify)_____

Send password / smartcard to:

☐ Mail Stop or ☐ Mail to address indicated below

Name / Organization
Address
City, State, Zip Code

Access

Check access method and needed partitions:

Access method: ☐ ICN Password ☐ Smartcard ☐ Both

☐ **Open** partition (e.g., open machines, or for dial up access)

☐ **Administrative** partition (e.g., Travel, Data Warehouse, IA [BUCS, Stores], IB [EIS, FMIS, PAIRS])
If you are not a cleared LANL employee, see required steps in section "Special Requirements-Administrative Partition".

☐ **Secure** partition (i.e., secure machines)
A Q-clearance is required for secure access. After obtaining Manager signature for Secure access, handcarry this form to the Password Office to obtain your Secure account.

I certify this person does require **secure** access:

_____ _____
Manager Signature (Group Leader or above) Date

Password Office Use Only

New ☐ Change ☐	Clearance Status	Processed	Lv	Smartcard Serial #
Comments:				

Form 1646 (3/95) Supersedes previous versions (rev. 4/97).

Continue

Special Requirements

Administrative Partition

Lab-Wide Systems (e.g., Travel, Data Warehouse, IA [BUCS, Stores], IB [EIS, FMIS, PAIRS])

☐ Under 18 years of age

If you need to access Administrative systems, your Group Leader must provide a memo accepting responsibility for your actions and justifying your need for access. This memo is to accompany all forms taken to the security briefing (see "Contractor or Non-Cleared") section below. You may not access the Secure Partition.

☐ Contractor or Non-Cleared

Phone (505) 665-4444 (option #2) to obtain Access Authorization packet.

Phone (505) 667-9153 to schedule a security briefing.

Bring all forms including this ICN Validation Request to the security briefing for approval.

CIC-6 Security Briefing Approval Signature	Date

☐ Foreign National

Attach a copy of Form 982 (REQUEST FOR UNCLASSIFIED VISIT OR ASSIGNMENT BY A FOREIGN NATIONAL) with all approval signatures. Be sure Box #11 of Form 982 is completed. If you are not a visitor/assignee under a LANL/DOE approved Visit / Assignment Request, attach written justification from your host Group Leader or Division Director describing your need to access the ICN.

Authorization (required)

Print Manager Name (Group Leader or above)	Manager Z-Number	Group
Manager Signature (Group Leader or above)	**Mail Stop**	**Date**

If you are NOT a LANL employee you must have a LANL contact and obtain the contact's signature in addition to the contact's manager's signature.

LANL contact: Read the following and sign below.

By signing this form I affirm that I understand and accept the following:

a. I am a regular Laboratory employee.

b. I am responsible for forwarding password reauthorizations and verifying annual account reauthorizations for this user.

c. I am responsible for notifying the Password Office within 10 days of changes in my status.

d. I am responsible for notifying the Password Office immediately of changes in this user's status (termination, end of contract, etc.).

Print LANL Contact Name	Contact Z-Number	Phone Number	Group
LANL Contact Signature		Mail Stop	Date

NOTE: All Laboratory computers, computing systems, and their associated communication systems are for official business only. By completing this validation request and signing for a password and/or smartcard, you agree not to misuse the ICN. The Laboratory has the responsibility and authority to perodically audit user files.

Reader Feedback

Feedback helps us to provide a document that responds to the changing needs of its readership. If you have comments or questions about this publication, please let us hear from you. We have reserved the back of this form for that purpose. We also accept articles for publication that are of interest to our readers. Contact the managing editor for more information. This form is also used for new subscriptions, deletions, or changes. Instructions are on the back. If you prefer to contact us by E-mail, send your comments and/or subscription request to finney@lanl.gov.

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Feedback

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