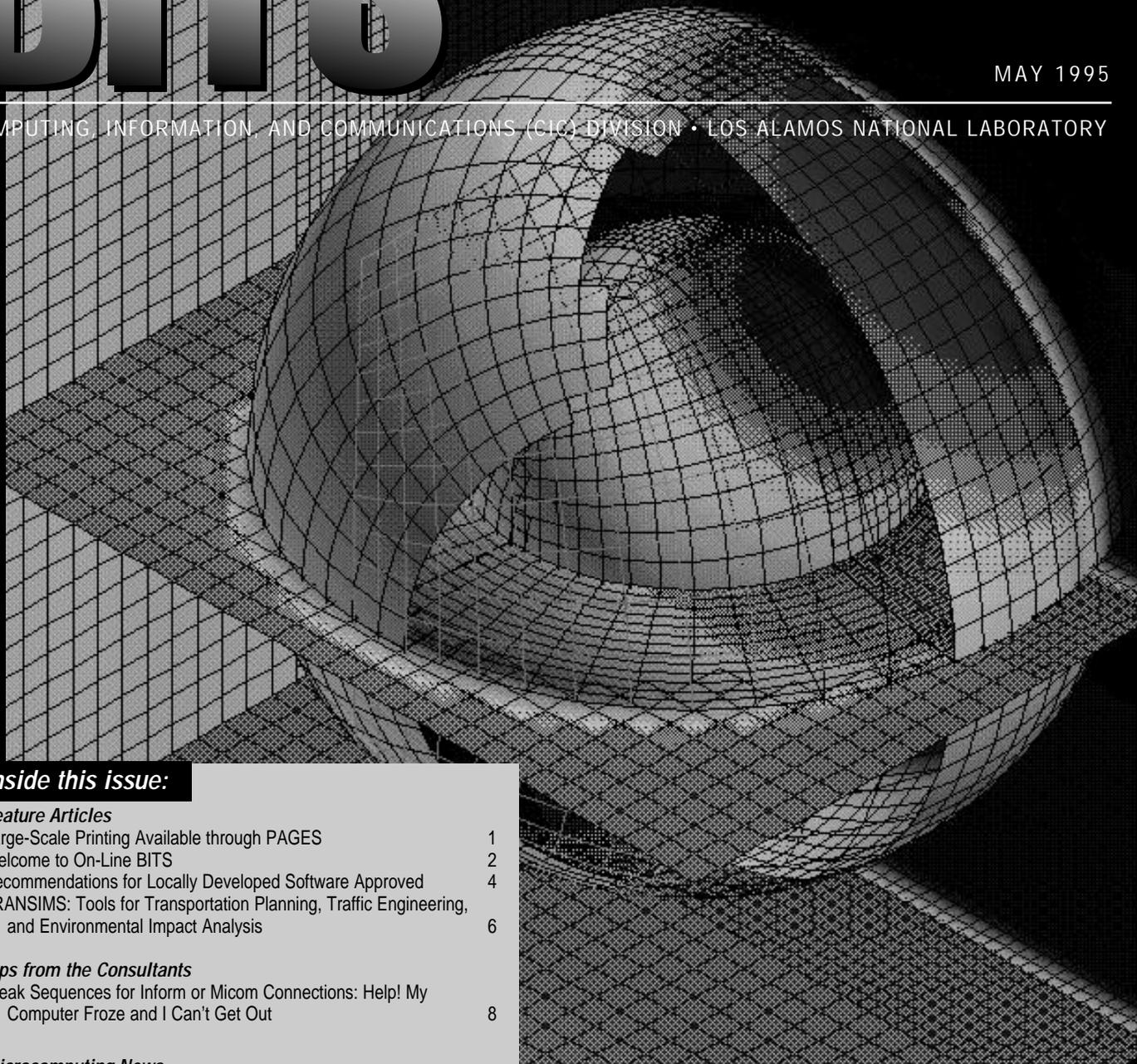


BITS

computing & communications news

MAY 1995

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



Inside this issue:

Feature Articles

Large-Scale Printing Available through PAGES	1
Welcome to On-Line BITS	2
Recommendations for Locally Developed Software Approved	4
TRANSIMS: Tools for Transportation Planning, Traffic Engineering, and Environmental Impact Analysis	6

Tips from the Consultants

Break Sequences for Inform or Micom Connections: Help! My Computer Froze and I Can't Get Out	8
---	---

Microcomputing News

Perils Of Eudora: At Work, At Home, and on the Road	10
---	----

In the Classroom

LANL Research Library Training	11
Lab-Wide Systems Training	12
CIC Computing Classes	15

ICNchanges

19

Index

33

Scientists at Los Alamos have developed a computational method to resolve the complex geometries used in solving problems in non-trivial domains. This method involves the use of adaptive overlapping mesh generation. The accompanying image depicts the simulation of a fluid impinging on a sphere at a speed faster than the speed of sound by using adaptive meshes and overlapping grids. The adaptive overlapping grid approach has broad applications for modeling problems involving complex geometries in aeronautics, chemical process simulation, combustion, and semiconductor design. The work involved in the development of this simulation code is funded by the DOE/BES/AMS and DOE/HPCC programs. The work was carried out by Kristi Brislawn (CIC-12), and David Brown, Geoff Chesshire, and Jeff Saltzman (CIC-3).

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

Integrated Computing Network (ICN)

Consulting:

Centralized scientific and engineering computingconsult@lanl.gov or 7-5746

Lab-wide administrative and business systems.....labwide@lanl.gov or 7-9444

Passwords (required for access to ICN)validate@lanl.gov or 5-1805

Systems documentation (local and vendor supplied).....7-6992

Central Computing Facility (CCF)7-4584

Advanced Computing Laboratory (ACL)5-4530

Local Area Network (LAN) system administration services.....5-2220

Desktop Support Center (DSC)7-4357 (7-HELP)

(PC Help for IBM and Macintosh personal computers)

For questions about PC software: PCSW-help@lanl.gov or 7-5884

For questions about PC hardware: PCHW-help@lanl.gov or 7-9372

For questions about Mac software: MacSW-help@lanl.gov or 5-1361

For questions about Mac hardware: MacHW-help@lanl.gov or 7-6459

Telephone Services Center7-3400

(includes voice mail)

Computer training

Lab-wide systems support training7-9444

Computer/workstation training7-9399

Personal computer training7-9071

Microcomputer support facility seminars7-4357

(Macintosh/IBM software, lending library)

List of Forms and Schedules

Accessing Computing Machines through the ICN9

Accessing the ICN through Dialup Modem9

Course Registration Form for CIC Computing Classes15

CCF Machine Availability and Downtime26

DSC Software Order Form27

ICN Validation Request Form29

Reader Feedback Form31

Large-Scale Printing Available through PAGES

Now operating within the Media Group (CIC-17), PAGES (Print And Graphics Express Station) continues to provide a variety of printing services for customers throughout the Laboratory. All services provided by PAGES are available through electronic access via the Lab's Integrated Computing Network (ICN). This means you can order any PAGES print service without leaving your office. All you need is a computer connected to the ICN and the proper PAGES access tools. These tools are now available for Macs and PCs as well as UNIX machines. For more information about how to acquire and use these tools, contact the ICN Consulting Office (consult@lanl.gov or 667-5746). Advantages for using PAGES over local printers includes quick turnaround, Lab-wide distribution, and large quantity capability. In most cases PAGES can complete your print job the same day or even within hours. Print jobs can be delivered to your mail stop or distributed to on-site locations per your instructions. PAGES can print 90 pages (8 1/2" x 11") per minute, so even large jobs can usually be finished in one day.

CALCOMP Printing Services

For large scale printing, PAGES provides you with computer generated monochrome and color drawings via a CALCOMP 5835XP electrostatic plotter. CALCOMP can produce drawings in sizes A through E (8.5" X 11" through 36" X 44"). The CALCOMP plotter is capable of creating half-tone, or screened, color images at 400 dot-per-inch resolution using a 256 color palette and a special dielectric coating. Imaging is produced from four overlaid images, each using a different color. The colors cyan, magenta, yellow, and black (CMYK) image through separate passes from the plotter.

CALCOMP allows you to create large color posters, flow charts, electrical/mechanical drawings, and other types of large scale drawing applications. Because of the CMYK additive color process, CALCOMP can create drawings for multi-layered electrical applications. Customers have used this device to run CAD data to check for errors in drawings before creating the more expensive printed or integrated circuit board, thus reducing production costs. The CALCOMP plotter can also make a significant contribution to an organization's administrative effort. For example, CALCOMP provided daily flow charting of last year's ICN2 project, a massive and complex initiative that had Lab-wide ramifications. But the CALCOMP plotter does more than just meet individual needs for drafting. This device can cause mechanical or architectural drawings to come alive as large scale color renditions. Large scale color maps, project management schedules, and presentation graphics all create long lasting positive impressions in the minds of your audience.

Coming Soon: NOVAJET III Printing

In an effort to improve the current process, PAGES is attempting to procure an ENCAD NOVAJET III color pen plotter. This plotter is also capable of producing A through E size color drawings on roll fed bond paper or mylar material. The advantage of NOVAJET is that it provides extremely high-quality monochrome drawings via continuous-tone, or unscreened, images. The NOVAJET III is about four times faster than the current CALCOMP plotter so turnaround time will be vastly improved. The biggest improvement, however, is in quality. The ENCAD NOVAJET III color pen plotter is capable of producing brilliant, crisp, full-bleed color images that give you the highest quality graphic presentations, posters, signs, and even blacklight displays.

Other PAGES Services

- 8 1/2" x 11" b&w copies (text and graphics),
- 8 1/2" x 11" color copies (text and graphics),
- 8 1/2" x 11" color photo prints (continuous tone),
- 8 1/2" x 11" transparencies (b&w and color),
- 35 mm slides (b&w and color), and
- 105 mm microfiche.

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PAGES Team Leader (CIC-17)



Welcome to On-Line BITS

In addition to the hard copy version of BITS, we also produce on-line versions. On-line versions of BITS come in four different formats: ASCII, Acrobat, HTML, and PostScript. These on-line versions are available via Gopher and most web browsers, such as Netscape and Mosaic. Which versions are available to you will depend on your network connectivity and available software. Please contact the CIC Customer Service Center (665-4444 or cichelp@lanl.gov) for more information about how to access on-line BITS. By producing four on-line versions, we hope to accomplish at least two major goals:

(1) Increase the availability of BITS.

By providing BITS in formats that are available to a wide variety of computer users, both here at Los Alamos and, via the Internet, the world, we can dramatically expand our audience.

(2) Decrease the production costs of BITS.

By reducing the number of hard copies printed each month, we can significantly reduce production costs. If you are a regular subscriber of BITS and can utilize one of these on-line versions, we ask that you cancel your hard copy subscription. To cancel your BITS subscription, e-mail a request for cancellation to finney@lanl.gov or complete and mail in the Feedback form on page 31 in this issue. Although we intend to continue printing hard copies for those really need them, we want to encourage all readers to convert to on-line if possible.

The BITS Home Page

To help you navigate through the different versions of on-line BITS, we've put together a BITS home page. The image on page 3 shows the BITS home page as viewed through Netscape. This home page can be accessed through the LANL home page by clicking on "Computing at LANL" and then "BITS."

In addition to brief descriptions about BITS and its on-line versions, the home page provides links to other useful web locations for information about Netscape, Mosaic, and Acrobat. Listed under the headings "BITS: Computing and Communications News" and "BITS: ICNchanges" are links that will allow you to access current and past issues of BITS. A keyword search for ASCII versions is also provided. Please send your questions or comments about on-line BITS to Mike Finney.

Mike Finney, finney@lanl.gov, (505) 667-2241
Communications Arts and Services (CIC-1)



Back Forward Home Reload Images Open Print Find Stop

Welcome What's New? What's Cool? Questions Net Search Net Directory

BITS

computing & communications news

What's BITS?

BITS is published monthly by the Computing, Information, and Communications (CIC) Division at Los Alamos National Laboratory (LANL). This publication has been printed in hard copy since 1975. Its original purpose was to document the operational status of LANL's Central Computing Facility for the benefit of its users. While BITS continues to serve this original purpose, its scope has expanded to address the latest technological advances in computing and communications that are ongoing at LANL. The goal of BITS is to provide the reader with a bird's-eye view of the most significant computing and communications activities at LANL.

What's on the BITS Home Page?

This home page provides access to past and present issues of BITS via the World Wide Web. On-line versions of BITS are available in four formats: ASCII, ACROBAT , HTML, and Postscript. These versions are accessible by most Web browsers such as Netscape and Mosaic. Of these four formats, only the Acrobat and PostScript versions contain the complete document as found in the hard copy version of BITS. For the purpose of explaining what is included in the other formats, BITS can be divided into three sections:

- News Articles, short articles written by LANL employees about current projects and activities within CIC;
- ICNchanges, an update of hardware and software changes on CIC's Integrated Computing Network; and
- Forms and Schedules, a section containing useful forms and schedules for LANL computer users.

ASCII versions are available for News Articles and ICNchanges (Forms and Schedules not included). The HTML version is available for News Articles (ICNchanges and Forms and Schedules not included).

BITS: Computing & Communications News

- Keyword Search of all Computing News (?)
- Current Issue
- 1995 Archives
- 1994 Archives
- 1993 Archives
- 1992 Archives
- 1991 Archives
- 1990 Archives

BITS: ICNchanges

- Keyword Search of all ICNchanges (?)
- Current Issue
- 1995 Archives
- 1994 Archives
- 1993 Archives
- 1992 Archives
- 1991 Archives
- 1990 Archives

Recommendations for Locally Developed Software Approved

In the Summer of 1994, the Locally Developed Software Working Group was formed to review the needs of the user community regarding UNICOS systems software products that were created, maintained, and supported by LANL staff. Many of these products were created under the umbrella of CTSS (LTSS in some cases), and they reflect the needs of a time long past. Hence the working group was given the task of developing a strategy and appropriate recommendations for handling existing locally developed UNIOCS software, specifically libraries and utilities developed under "X3" funding. In response to this charter the working group decided to survey the user community, and based upon the response to this survey, make appropriate recommendations in light of the changing computing environment at LANL and its increased reliance on "standard" software tools.

The purview of the working group was taken to be only locally developed software currently maintained by Computing, Information, and Communications (CIC) division personnel for use as production software on the Crays running UNICOS. Hence a survey was sent out in late October to 7500 validated ICN users. Of these, 1650 were validated for UNICOS. The working group received 622 responses, 265 from valid UNICOS users, representing 16% of the UNICOS user community. Based upon the results of the survey and further input from the X-Division and DNA communities regarding the impact and user cost required to change from existing software to alternative products, the working group then categorized all of the products. A fundamental set of principles used as underlying guidelines during this categorization were CIC policies and directions for the future. In addition, since X-Division and DNA are CIC's two biggest "X3" customers, special consideration was given to their suggestions and requirements. The recommendations of the working group have now been officially approved by CIC management.

Summary of Recommendations

The recommendation of the working group is to adopt the categorization and levels of support listed below for the UNICOS tools, libraries, and utilities.

It is further recommended that CIC recognize the needs of its customers for the "value-added" environment provided on the Los Alamos supercomputers through the locally developed and maintained software products. These same customers also seek a "common development environment" that allows for portability of application programs while supporting the "value-added" features traditionally provided by locally developed software at Los Alamos.

A POSIX compliant software development environment available across all worker machines would allow maximum flexibility and portability of end user applications. The working group recommends establishment of such an environment as a natural extension of the existing locally developed software environment. This new environment would include the "value-added" features of the existing locally developed software products required by CIC customers. In addition, this new environment should be easily ported to POSIX-compliant workstations, and a package of this software should be made available to the user community.

Some of the software listed in the survey data are considered 3rd-party software, maintained by a vendor or outside party. These were included in the working group's analysis since they require some additional support from CIC personnel. These items are listed separately from the other categorizations, since the support of these products is of a fundamentally different nature.

Recommended Categorization

The recommendation of the working group is that locally developed and maintained software products be divided into three categories. These categories represent the level of the user's need for the software.

- Category One: software most critically needed,
- Category Two: software used every day and needed to fulfill the missions of CIC's customers, and
- Category Three: software ready for retirement.

It should be noted that the following tools were not included in the survey because it was obvious that CIC will continue to support this software. These tools are, however, included in the working group's recommended categorizations:

acs	cfs	ctou	c2u
iosconv	joinf	libex	mptou
ntext	prod	ppages	recon
rlib	splitf	stext	unfam
unhuff			

Category One: User-Critical Software

The locally developed software tools in this category are absolutely essential to the user community. These tools provide the most "value-added" contribution from CIC-Division, providing software that cannot be found in other UNICOS communities.

cfs	cftlib library	cgs library
cgshigh library	clams library	inquiry
ldb	ppages	pscan
recon		

Category Two: User-Required Software

The locally developed software tools in this category are necessary to the user community and are used extensively. These tools provide a sorely needed contribution to the UNIX and UNICOS environment providing capabilities that allow the user community to be more efficient.

acfs	acs	autosum	c2u
calmath library	cost	ctou	duse
fcl	fcopy	ftype	give
grpmgr	iosconv	joinf	libex
mapper	mptou	nxtxt	pcopy
pps	prod	rlib	route
sc4020 library	shrink	shrmgr	shrview
splitf	stext	unfam	unhuff
unshrink	whatlib		

Category Three: Software Ready to Retire

These tools have been on our systems for some time serving a purpose that is no longer paramount. The software in this category is used only by a small portion of the user community, is being replaced by a product of similar function that is more standard, or possibly both.

archive	cgm library	dearchive	gas
icndoc	mvi	rasview	top
vt2host	vt2pc	vtou	

Please note that in the process of installing ICN2, the following locally developed tools were retired in the Fall of 1994:

block	connect	fiche	fone
hangup	hsp	lfiche	lhsp
move	pest	pfilm	pgcgm
ppen	pgtext	prpp	pspages
reconnect	relabel	unblock	

Third-Party Software Recommendations

For each of these 3rd-party products, the group recommends either keeping the product or not keeping the product.

Products to Keep

compress
disspla library
fedit
fred
historn
hpterm
imsl library
kermit
ncar libraries
re
uncompress
zmodem

Products to Retire

index
old ncar libraries
tidy
xeq

The official report submitted by the working group titled "Final Report of the Locally Developed Software Working Group" contains detailed information about the working group's recommendations and the results of the survey. You can access the report through the LANL home page under "Computing at LANL" or use the following URL:

<http://www.lanl.gov/computer-information/.ldswg/ldswgHome.html>

The PostScript formatted report is stored on CFS as:

/096272/public/ldswg.ps

and the UNIX native text file containing the survey results, data, and summaries is stored on CFS as:

/096272/public/survey.report

Both of these files may be obtained from CFS and printed, for example, through PAGES using the following print commands for ICN UNIX systems:

ppages -ft ps -ds ldswg.ps

ppages -ft txt -ds survey.report

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Computing Group (CIC-7)

TRANSIMS: Tools for Transportation Planning, Traffic Engineering, and Environmental Impact Analysis

As cities across the U.S. struggle to comply with federal regulations like the Clean Air Act Amendments and the Intermodal Surface Transportation Efficiency Act, researchers at Los Alamos are developing an entirely new approach to simulate transportation systems. This initiative is known as the TRansportation ANalysis SIMulation System, or TRANSIMS. Sponsored by the Department of Transportation, the TRANSIMS project represents a major effort to develop the integrated transportation and air quality forecasting procedures necessary to satisfy federal regulations.

TRANSIMS developers are creating advanced traffic simulation tools that city planners and policy makers can use to address their transportation, air quality, and energy efficiency issues. According to John Davis, applications programmer for TRANSIMS, "older methods of transportation simulation will soon be replaced by technologies like TRANSIMS because it provides a level of simulation capabilities not previously available." Traditional transportation simulators, such as NETSIM, use stochastic, or random variable, programming techniques to simulate traffic flow. These systems are limited because they don't allow the integration of certain independent variables that occur in a real transportation environment. TRANSIMS is perhaps the first transportation simulation package to use fuzzy logic, which allows programmers to integrate a multitude of transportation variables like timed-lights, accidents, and lane blockages. "What impressed us most about fuzzy logic," says John, "was that it outperformed the conventional if-then-else code from the very first day we used it."



A Real Sim City

Like the urban planning game Sim City, TRANSIMS users can create cities that include houses, business areas, residents, and vehicles. Unlike Sim City, however, TRANSIMS users can assign residents specific travel plans, specify resident occupations, and define resident work sites and schedules. By utilizing this ability to simulate independent transportation activities, TRANSIMS can develop itineraries, travel routes, and modes of travel based on statistics from actual transportation studies of U.S. cities. The resulting simulation creates detailed routes that include when residents leave for a destination and how long it takes them to arrive. As the simulation runs, TRANSIMS keeps track of the position and speed of every vehicle during every second of travel time. Once the simulation is complete, the event can be placed in a file, analyzed, and checked for compliance to air quality standards and other regulations.

TRANSIMS Architecture and Development

The major high-level components of the TRANSIMS architecture are:

- Household and Commercial Activity Disaggregation Module,
- Intermodal Route Planner,
- Traffic Microsimulation, and
- Environmental Simulation.

The methodology for developing TRANSIMS is to create an interim operational capability (IOC) for each major component. When the IOC is ready, the TRANSIMS team will complete a specific case study to confirm IOC features, capability, and readiness. Case studies will be developed in collaboration with metropolitan planning organizations (MPOs) from major U.S. cities. The Traffic Microsimulation will be the first IOC, with the goal of having it ready for testing in August 1995. As this IOC is developed, the TRANSIMS team will work with a selected MPO to identify studies that the IOC should support. The second IOC will integrate the air quality analysis capability of TRANSIMS with the microsimulation.

Traffic Microsimulation Prototype

In 1994 a prototype of the traffic microsimulation component of TRANSIMS was used to supply traffic flow data in a test application for the Intelligent Vehicle Highway System project. Thirteen sets of vehicle flow data were produced for three different traffic scenarios: incident-free, incident blocking two lanes, and incident near a timed-light intersection. The model was based on Albuquerque's Louisiana Boulevard from Interstate 40 to Menaul Boulevard, with traffic flow densities ranging from 150 to 5444 vehicles during a half hour period. The results demonstrated the functionality of the TRANSIMS microsimulation at a resolution that allowed the simulated drivers to realistically react to road network infrastructures such as timed-light intersections, turning lanes, and stop signs.

TRANSIMS in the Future

Demonstrating the prototype microsimulation was a key milestone for the TRANSIMS project. However, the next version of the microsimulation component may differ significantly from the prototype. The prototype microsimulation evolved as a cross between fuzzy logic for some parts and if-then-else constructs with algebraic formulas for others. According to John, "The prototype is something like a mule, it possesses the best features of its parents, but it's homely and sterile."

The TRANSIMS team is currently developing an interim version of the microsimulation to be used by the City of Dallas to study the LBJ corridor and other problem traffic areas. The interim version will likely be restructured in ways that make the code more consistent, efficient, and manageable. To augment TRANSIMS's development, John Davis (CIC-12) is studying Japanese-language transportation research papers that may help the team further improve their design. (The interpreter is Sharil Osgood, who teaches Japanese at UNM-LA and does contract translation via CIC-1.) The TRANSIMS team comprises specialists from the Technology & Safety Assessment division and the Computing, Information, and Communications division. These specialists have expertise in object-oriented software development, traffic simulation, atmospheric modeling, data management, statistical design and analysis of large parametric studies, and other applicable areas. TRANSIMS is expected to be completed within five years; it is now in its second year of development. For more information about this project refer to the TRANSIMS home page; the URL is:

<http://studguppy.tsasa.lanl.gov>

Applications Programming Group

The TRANSIMS project is one of many projects at Los Alamos that utilize professionals from the Applications Programming Group (CIC-12). CIC-12 provides the Lab with short- and long-term programming support that spans all platforms and technologies. The group's services include software development; database design, development, and maintenance; basic research tools and programming support; graphics coding; data visualization; and applied supercomputing. For more information, contact Gary Clark at 665-4613.

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Applications Programming (CIC-12)

Dawn Hipsh, dhipsh@lanl.gov, 665-3656
Communications Arts and Services (CIC-1)

Break Sequences for Inform or Micom Connections: Help! My Computer Froze and I Can't Get Out

NOTE: The information in this article only applies to terminals connected via an Inform or Micom port.

In these days of distributed computing, it's hard to know just where or why your computer screen might freeze. Is it the application? Host computer? The network? Your own desktop? Sometimes the cause is one of these but more often it's a combination. The bottom line is that it brought your busy schedule to a frustrating halt. Your main concern at this point probably isn't determining what went wrong; rather, you want to know how to get out of your current predicament—that is, sitting unproductively in front of an unresponsive screen.

There is no cure-all, but what follows is a table of keyboard escape, or break, sequences that you may find useful when you try to "unfreeze" your computer screen.

If your platform is ...	And your emulator is ...	Then ...	Quick ref.
Macintosh	VersaTerm	Simultaneously press the <i>Apple</i> and <i>Enter</i> keys three times; then press the <i>Return</i> key.	Apple/Enter
PC	DOS Windows Terminal Emulator	Simultaneously press the <i>Control</i> and <i>Break</i> keys three times; then press the <i>Return</i> key.	Ctrl/Break
	Vterm/Coterm	Simultaneously press the <i>Alt</i> and <i>Break</i> keys three times; then press the <i>Return</i> key.	Alt/Break
	EM4010 or ProComm Plus	Simultaneously press the <i>Alt</i> and <i>b</i> keys three times; then press the <i>Return</i> key.	Alt/b
	EM320 for Windows	Under the <i>Execute</i> pull-down menu, highlight the <i>Short Break</i> option.	
DEC	VT Series	Simultaneously press the <i>Shift</i> and <i>Break</i> keys three times; then press the <i>Return</i> key.	Shift/Break
TIG (Network)	(Not applicable)	Simultaneously press the <i>Control</i> , <i>Caret</i> , and <i>x</i> keys.	Ctrl/^/x

Additional Hints for "Unfreezing" Screens

If your desktop is connected to a host machine (such as a Cray) when your screen freezes, break out in reverse order. That is, use

the break sequence for the application on the host machine first, then use the break sequence for the host machine, then the emulator, and so on until there is a response. Remember that breaking out under these circumstances may leave an orphaned process (application or connection) running on the host machine. If you think this is the case, after you disconnect from the host machine sign back onto the host machine and kill the process or session. If you need help with this procedure call the ICN Consulting Office (667-5746).

If you are connected to the OFVAX (ALL-IN-1 e-mail) system when the screen freezes, first try a control-w. This will "refresh" the ALL-IN-1 screen which often brings the display back to life if your connection to OFVAX hasn't been broken. The "Exit Screen Key" (0 on the keypad) can then be used to move back through the menu structure.

If you are connected to the OFVAX (ALL-IN-1 e-mail) system through a micom port when the screen freezes and control-w doesn't help, you should be able to break out using the break sequence for your platform (see table). However, you may find that you cannot get a response from the port or even if you do break out, OFVAX may think you're still on the system and won't let you back in. In either case you can wait for the port or OFVAX to "time out," which disconnects you due to inactivity.

If time is critical, call the Customer Service Center (665-4444) to kill your process on OFVAX, and then have them connect you to the Network Control Center (NCC, 667-7423) to drop your micom port line, which will cause the port to respond. You are free to call the NCC yourself, but you must know your port number or your exact location so they can determine the port number in order to drop your line.

If the appropriate break sequences don't revive your computer/terminal, you may need to reboot your system or kill the window that's locked. Machinery that freezes often and consistently probably needs troubleshooting. Ask your local system administrator for help in determining the cause or call any of the CIC support centers listed below.

- CIC-2 Desktop Support Center, 667-HELP (667-4357)
- CIC-6 Customer Service Center, 665-4444
- CIC-6 ICN Consulting Office, 667-5746
- CIC-6 Lab-Wide System Support, 667-9444, Option 2
- CIC-4 Network Control Center, 667-7423

Sara Harshman, consult@lanl.gov, 667-5746
Customer Service Group (CIC-6)

Accessing Computing Machines through the ICN

This table shows how to access open machines on the ICN through MICOM lines, TCP/IP hosts, and DECnet hosts. Additional machines outside the ICN are accessible through TCP/IP and DECnet. To access any of these machines, except for LIS, you must first establish an ICN account, which includes obtaining an ICN password and registering as an ICN user (contact the CIC Customer Service Center for details).

Example: Suppose you want to access the REGISTER machine from MICOM. By referring to the table, you can see that the appropriate command to enter is tig. Once you connect to the tig, enter your ICN user number and password as prompted. At the tig prompt (tig>) enter register and login to the register machine.

TO →	Hosts reachable from MICOM Lines: (BETA, CCVAX, IOVAX, OFVAX, STORES, TYM-NET, LIS)	TCP/IP Hosts: (BETA, CCVAX, IBM Cluster IOVAX, OFVAX, REGISTER, UNICOS, ACL Hosts, etc.)	DECnet Hosts: (BETA, CCVAX, IOVAX, OFVAX, etc.)
FROM ↓			
MICOM Lines	hostname	TIG TELNET hostname	TIG TELNET DIG SET HOST hostname
TCP/IP Hosts (e.g., TIG)	TELNET MICOM hostname	TELNET hostname	TELNET DIG SET HOST hostname or, from BETA DLOGIN hostname
DECnet Hosts	SET HOST DIG TELNET MICOM hostname	SET HOST DIG TELNET hostname	SET HOST hostname

Accessing the ICN through Dialup Modem

Dialup access to the ICN is available through the Terminal Internet Gateway (tig). The tig is a gateway to the internet and allows you to telnet to ICN machines as well as other machines. Configure your modem and terminal for 8 bit, no parity, one stop bit. Based on your modem, select the appropriate number listed in the table to dial into the tig. Then enter your ICN user number and password as prompted. At the tig prompt (tig>) enter a machine name or IP address.

Report problems to the Network Control Center at 667-7423 Monday through Friday, 6 am to 6 pm or at 667-4585 during non-business hours.

Type of Access	Phone Numbers
Microcom Modems from 300 to 28,000 b/s	(505) 667-9020, 9021 (Number of Lines 16)
Microcom Modems from 300 to 14,400 b/s	(505) 667-9022, 9023, 9024, and 9025 (Number of Lines 48) (800) 443-1461 (Number of Lines 10)
Note: Use the second phone number if the first does not answer properly.	
<i>Revised December 1994</i>	

Perils Of Eudora: At Work, At Home, and on the Road

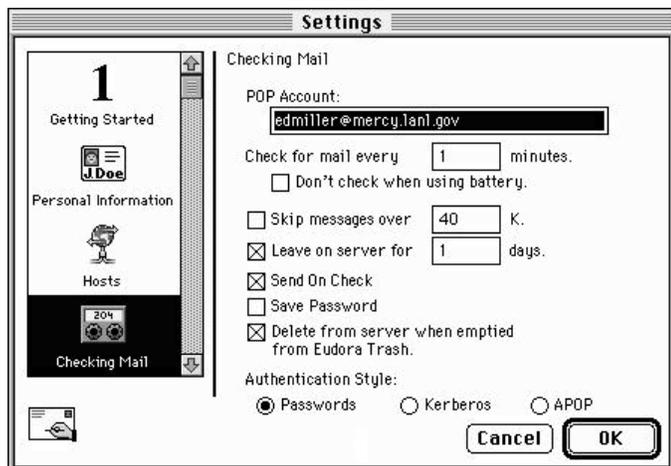
There seems to be no end in sight to the increasing popularity of the Eudora mail client here at the Lab. It is no wonder that more and more users want to keep in touch from home or while on the road. Unfortunately, Eudora is deceptively easy to use, and when many users set it up at home they are confronted by a myriad of frustrations; for example, mail they read at home doesn't show up on their desk at work, or they are unable to retrieve mail at all on travel. First I'll tell you the hardware and software you'll need to pull off this hat trick, then I'll tell you how to configure Eudora. Finally, I'll explain why it works.

Required Hardware and Software

In order to read Eudora e-mail in two places, you will need the commercial version of Eudora, version 2.1 or later. You'll also need a modem and properly configured SLIP software, which will allow you to connect to the Lab's networks over the phone. Installing and configuring SLIP is beyond the scope of this article; consult your local guru for assistance.

Configuring Eudora

I'll refer to the computer in your office at work as your "desktop machine," and the one you use at home or on travel as your "remote machine." To begin with, start up the Eudora application on your desktop machine. Under the Special menu, select "Settings..." Now click on the Checking Mail icon (as shown below); a list of special settings will appear on the right side of the dialog box. Configure Eudora to leave your mail on the server for one day by first checking the box labeled "Leave mail on server for" and then putting a "1" in the box for the number of days. The configuration should look like the example below.



Configure your remote system in the same manner as indicated above except don't put a "1" in the "days" box, leave it blank. Now, if you check your e-mail with your remote system at least once a day, you will receive all e-mail on both your desktop and remote machine. Read on to find out why this works.

Why It Works

Eudora is a post office protocol (POP) mail client. POP mail works a little differently from most mail; every time you check your mail, Eudora moves it to your machine, and then deletes it from the server. So, when you check your mail at work, you are actually removing it from the server. That's why when you go home, even though you might get 100 mail messages at work, none of them show up in Eudora on your home system. If your desktop machine at work is left running Eudora while you are on travel, you won't get any of your e-mail on your laptop either. Your desktop machine is pulling all the mail off of the server before your remote machine can even look at it.

The solution to this dilemma is two-fold: (1) Make your desktop machine leave the e-mail on the server, for a day or two, giving your remote machine a chance to check it; and (2) Make sure your remote machine doesn't pull the mail off of the server at all—otherwise you might not get it on the desktop machine. The configuration described above implements this solution.

Other Tidbits

Notice that you can elect to leave mail on the server for more than one day, and you well might leave it on for two or three, just so you don't have to run Eudora every day while at home or on travel. But beware of raising this number too high as it may result in filling up space on the server and cause Eudora to take an hour to sift through all of that mail every time you check it. One final caveat. Mail you send will only appear in the Out box of the machine you sent it from. If you send official correspondence while on travel, you might want to copy (Cc:) yourself so you'll have a copy on your desktop machine.

With this little configuration, Eudora will serve you equally well in both places!

Ed Miller, edmiller@lanl.gov, (505) 665-1363
Desktop Group (CIC-2)

LANL Research Library Training

The LANL Research Library provides training for using its specialized databases. Training sessions begin at times indicated below. Classes are scheduled for half an hour, except for "Information Resources on the Internet via Gopher/WWW" which is two hours. Space is limited to 8 per session. Classes are free, but you must pre-register by calling the Research Desk at 7-5809 or sending e-mail to ref@lanl.gov; no registration required for the "Library Orientations" class. Special classes and orientations can also be arranged.

Date/Time	Subject Matter
5-3-95/11:00 a.m.	MELVYL (University of California's catalog and associated databases)
5-4-95/1:00 p.m.	Information Sources on the Internet via Gopher/WWW
5-9-95/1:00 p.m.	Library Orientation
5-10-95/1:00 p.m.	Finding Company Information
5-11-95/10:00 a.m.	Information Sources on the Internet via Gopher/WWW
5-11-95/1:00 p.m.	How to Find Items Listed in a Bibliography
5-16-95/11:00 a.m.	Science Sources on the WWW*
5-16-95/1:00 p.m.	Earth and Environmental Resources
5-17-95/11:00 a.m.	MELVYL (University of California's catalog and associated databases)
5-17-95/1:00 p.m.	Library Orientation
5-18-95/1:00 p.m.	Chemical Resources
5-18-95/10:00 a.m.	Information Sources on the Internet via Gopher/WWW
5-22-95/1:00 p.m.	Physics/Weapons Resources
5-23-95/1:00 p.m.	How to Locate Items Listed in a Bibliography
5-24-95/1:00 p.m.	Bioscience and Biotechnology Resources
5-25-95/1:00 p.m.	Business Sources on the WWW*
5-25-95/1:00 p.m.	Library Orientation
5-30-95/11:00 a.m.	MELVYL (University of California's catalog and associated databases)

* Requires working knowledge of a Web browser

Lab-Wide 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 and on the following pages for specific information about courses currently offered.

Course Registration

You must have a valid "A" or "U" level ICN password before taking any of the courses shown in the table. To register for a course, call CIC-6 Training, Development, and Coordination section at 667-9444 or send e-mail to classes@lanl.gov. You will be sent a registration form to be completed and returned.

Course Title	Date	Time	Cost	Course Number
ALL-IN-ONE Basic Electronic Messaging	5/17/95	1:30 - 5:00	\$410	Course #6882
Participants receive hands-on instruction to create, read, and print electronic mail. Participants also learn how to edit mail, create distribution lists, send mail to a FAX machine, and grant mail access to others. Prerequisite: an ICN password and an account on the OFVAX.				
Automated Chemical Inventory System (ACIS):	Scheduled Upon Request		\$410	Course #7480
Participants receive hands-on instruction to update the status (end-user, location, quantity) of chemical containers. Participants will also learn to generate chemical inventory reports by chemical name, end-user, location, and organization.				
Budget Computing System (BUCS):	5/16/95	8:30 - 12:00	\$410	Course #3527
This training is an introduction to the Budget Computing System (BUCS). Students practice generating "quick reports" and reports requiring parameter files. An introduction and demonstration of (no "hands-on") allocating and forecasting procedures are given during the three-hour session.				
Directory Information System (DIS):	Scheduled Upon Request		\$410	Course #7072
Lab-wide customers responsible for maintaining the Laboratory directory in the Employee Information System will receive hands-on instruction to update Laboratory employees, update and add non-Laboratory employees, retrieve location and address information for any employee, and print reports.				
Employee Development System - Basic Training (EDS I):	5/10/95	8:30 - 12:00	\$410	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):	5/24/95	8:30 - 12:00	\$410	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 (course #5289).				
Eudora Electronic Mail for Macintosh Users	5/23/95	8:30-12:00	\$410	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.				

Course Title	Date	Time	Cost	Course Number
Facilities Project Information/Work Orders (FPI/WO):	Scheduled Upon Request		\$410	Course #6996
	Lab-wide users with a need to view the status of work orders and tickets in their organizations will receive hands-on instruction to request, print, and review work order, ticket and project summary information reports.			
Financial Management Information System (FMIS):	5/25/95	8:30 - 12:00	\$410	Course #8338
	Participants receive hands-on instruction to "explode" and "transfer" through the costs, allocations, and outstanding commitments screens. In addition, participants will create/review reports, access the Information Manager Utility for printing reports, and learn how to assign authorities in the system.			
Hazardous Materials Transfer Tracking System for Radioactive Material (HMTTS/NRAM):	Scheduled upon request		\$410	Course # 7907
	Participants receive hands-on instruction to create, update, and print the non-RAM Hazardous Materials Transfer Form (HMTF). Attendees must have completed "Completing the HMTF for Non-RAM," course #7512, sponsored by HS-8.			
Hazardous Materials Transfer Tracking System for Radioactive Material (HMTTS/RAM):	Scheduled Upon Request		\$410	Course #7993
	Participants receive hands-on instruction to create, update, and print the Radioactive Materials Transfer Form (RMTF). Information about the non-RAM Hazardous Materials Transfer Form (HMTF) is included. This course is appropriate for people who fill out both RAM and Non-RAM forms. Attendees must have completed "Completing the RMTF," course #7517, sponsored by HS-8.			
Introduction to LANL Information Systems:	5/30/95	8:30 - 11:30	No Fee	Course #10118
	This three-hour class is a hands-on introduction to the information systems available to Laboratory-wide users. The participants will become acquainted with Lab-wide information systems such as TRIPS and Stores, Electronic Mail, and Netscape (an interface to Laboratory information).			
Lotus Notes Basic Concepts	5/11/95	8:30-12:00	\$410	Course #9917
	This class provides hands-on instruction for Mac and PC users to use Lotus Notes software to create and send e-mail memos; fax documents; search databases; create filters, nicknames, banners, and doclinks; set defaults; and use multiple address books. In addition, participants learn how to use the memo, meetings, and discussion databases.			
On-Line Forms	5/12/95	8:30 - 12:00	\$410	Course #9756
	Participants will learn to use Mosaic software to access Lab-wide information and forms. Using Jetform Filler software, participants will access, complete, and print forms such as the "ICN Validation Request," "Visitor Request for Unclassified Visits to Security Areas," and "Request for Quotation."			
Property Accounting, Inventory, & Reporting (PAIRS):	Scheduled Upon Request		\$410	Course #7411
	This course is for Property Administrators (PA's) and Lab-wide customers with a need to view property record information. PA's receive hands-on instruction to update property element and location information. All participants will receive hands-on instruction to generate and print a variety of property reports. The BUS-6 Property Administrators course is recommended before PA's attend this course.			

Course Title	Date	Time	Cost	Course Number
Property Accounting, Inventory, and Reporting System (Advanced)	5/17/95	8:30-12:00	\$410	Course #9918
	This course will include a refresher of PAIRS, advanced techniques and tips, explanation of the notification system, and report capabilities. Swap Shop, Loan Out information, and support tables will be discussed. Participants should already have a basic understanding of and know how to use PAIRS.			
Secretarial/Contract Services (SE):	Scheduled Upon Request		\$410	Course #7481
	This class provides hands-on instruction for creating secretarial requests for temporary services, entering time for contract employees, and creating reports using the Information Manager Utility. The students will also learn how to review notifications and approve attendance. A training database will be used for the class.			
Signature Authority System (SAS):	5/16/95	1:15 - 4:45	\$410	Course #7582
	Managers or their designees receive instruction to assign, view, and change signature authorities (purchase request, chemical purchase, and handling hazardous material). Participants will also learn how to generate and print authority reports for their organizations.			
STORES:	Scheduled upon request		\$410	Course #3529
	Participants receive hands-on instruction to search for an item in the on-line catalog by key word, part number, or exact name. Participants learn how to select items from the catalog, and place, change and cancel an order. Several methods for reviewing orders are also taught including reviewing an order in detail, scanning all orders, and reviewing back-orders.			
Travel Reporting Information Planning System (TRIPS):	Scheduled upon request		\$410	Course #4369
	Class participants receive hands-on instruction to prepare travel requests (TRs) on-line and learn the print, revise, and cancel options. The participants also learn how to use the on-line approval function. The various reports available in TRIPS-II are reviewed.			

CIC Computing Classes

CIC offers a variety of computing courses for the professional development of Laboratory employees. The courses listed in Table 1 will meet at the time and the date shown.

Course Registration

To register: (1) check the box beside the appropriate course, (2) complete the Enrollment Information section below, and (3) follow the mailing instructions on the back of this form. Submittal of a Course Registration form does not guarantee participation in an advertised class, but it is the only way to get into the queue for notification of upcoming classes. Classes are conducted in a secure area unless noted; uncleared participants require escorts. Call the Training Coordinator at 667-9399 for more information.

Table 1 Courses with confirmed time and date

COURSE TITLE	INSTRUCTOR	COST	DATES
<input type="checkbox"/> C++ for Experienced Programmers	Michael Chase, Boulder Software Group	\$1000-\$1400	7/10/95 through 7/14/95
<input type="checkbox"/> Distributed Object Computing	David Chappell, Chappell & Associates	\$575-\$1000	6/20/95 through 6/21/95
<input type="checkbox"/> HP-UX System & Network Administration for UNIX System Managers (Customized for LANL)		\$1750-\$2650	7/10/95 through 7/14/95
<input type="checkbox"/> HP-UX System & Network Administration for Non-Managers (Customized for LANL)		\$1750-\$2650	7/17/95 through 7/21/95
<input type="checkbox"/> Perl Programming: Beginning/Intermediate	Tom Christiansen	\$250-\$400	6/5/95
<input type="checkbox"/> Intermediate/Advanced	"	"	6/6/95
<input type="checkbox"/> Hands-on Laboratory	"	"	6/7/95
<input type="checkbox"/> UNIX (Beginning)	Ted Spitzmiller & Jeffrey Johnson	\$810	7/10/95 through 7/14/95

Note: Detailed course descriptions are provided on the following pages.

Enrollment Information

Name _____

Phone _____ Z-Number _____

Group _____ Mail Stop _____

Program Code* _____ Cost Code* _____

Group Leader Signature _____

**Enter program code and cost code for all courses. If you need to withdraw from a class fewer than 5 working days before the class is scheduled to begin, your group will still be charged. Substitutes may be sent, but please let the CIC Division Training, Development, and Coordination Office (667-9399) know who your substitute will be.*

cut along dashed line

Do Not Staple
Fold on This Line First



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 88 LOS ALAMOS NM

POSTAGE WILL BE PAID BY THE ADDRESSEE

MAIL STOP B296
CIC DIVISION TRAINING DEVELOPMENT
AND COORDINATION TEAM
LOS ALAMOS NATIONAL LABORATORY
PO BOX 1663
LOS ALAMOS NM 87544-9916



Do Not Staple, Seal with Tape
Fold Here

C++ for Experienced Programmers

Prerequisite: Excellent C Language programming skills

Location: CIC-CTI classroom, TA-3, SM-200, Room 115 (open area).

Enrollment: 20 Maximum

Topics: 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; C++ Course Summary.

NOTE: Some enrollments are already confirmed; other requesters are already in the queue and will be notified of availability of spaces; the first queue confirmations received will comprise the class. Those submitting new requests will be entering the queue ONLY.

Distributed Object Computing

Location: CIC Division Lecture Room, TA-3, SM-200, Room 256.

Enrollment: 25 Maximum

Prerequisite: While some background in both object-oriented concepts and distributed computing will be helpful, none is required; however, knowledge of the C programming language is strongly recommended.

Topics: Defining Distributed Object Computing; The problems to be solved and the players: Object Management Group (OMG), Microsoft, and Others; An Overview of Object-Oriented Concepts; An Overview of Distributed Computing; The OMG Common Object Request Broker Architecture (CORBA) Objects and Interfaces; The Interface Repository; The OMG Interface Definition Language (IDL); Example CORBA Interfaces; Object Services; Microsoft's OLE/COM Objects and Interfaces; COM Components: Structured Storage; Monikers; Uniform Data Transfer; OLE Automation; OLE.

HP-UX System and Network Administration (Customized for LANL)

Location: CTI Conference Room, TA-3, SM-200, Room 116 (Open Area).

Prerequisites: Useful UNIX skills and system administration understanding.

Enrollment: Minimum 10/Maximum 16

Topics: To be developed by using modules from 3 or 4 different HP courses.

Note: HP will supply 8 HP systems and associated software for laboratory practice.

Perl Programming

Tom Christiansen will be providing PERL customized training for the Los Alamos audience. He will be covering the regular topics included in his Beginning and Advanced Programming courses as well as advanced networking/sockets, using PERL with the WWW, using PERL with databases, and there will be an opportunity to define other topics of interest.

There are two days of intense discussion, one on beginning topics and one on advanced topics and the third day will be a hands-on laboratory that will have examples with varying levels of difficulty that you can attempt. (Tom will be there to support your efforts.)

The location will be the CIC secure classroom (TA-3, SM-200, Room 210), the workstation platforms will be Solaris 1.X, and we will be running Version 5 of PERL. This is an area that requires escorting for non-cleared personnel and it is not accessible to non-nationals.

Enrollments may be for any combination of the three days of training but a strong understanding of C is essential. Enrollment will be limited to 16. Additional information for each course is provided below.

Perl Programming Beginning/Intermediate

Prerequisite: Competent C programming skills.

Enrollment: 20

Topics: Syntax and Semantics; Data Types; Operators, Control Flow, Regular Expressions, and I/O Facilities; and the Perl Debugger.

Perl Programming Intermediate/Advanced

Prerequisite: Completion of the Perl Beginning/Intermediate level class or comparable skills using the Perl programming language.

Enrollment: 20

Topics: Packages to Create Your Own Libraries; Pointers to Synthesize Complex Data Types; Bit Vector Data Type and Select System Call; Using h2ph and c2ph to Convert and Access code; Socket Programming; the ioctl and fcntl System Calls; Exception Handling; Networking Topics; and Database Topics.

Perl Programming Hands-on Laboratory for Beginning through Advanced

Prerequisite: Completion of the above Perl classes or equivalent skill.

Enrollment: 20

Description: This class provides an opportunity for individuals who participated in this round of Perl programming classes (or former participants) to hone the acquired information with practical exercises.

UNIX (Beginning)

Location: CIC-Division Classroom, TA-3, SM-200, Room 210 (secure area).

Prerequisite: Familiarity with a UNIX workstation.

Enrollment: Minimum 8/Maximum 10.

Topics: Overview of the Workstation environment; Getting Started; The UNIX File System; Manipulating Files; Customizing Your Environment; The C-Shell; Editing and Writing with vi; Using the Network; Discussing NFS and NIS; Using basic system status commands; Startup and shutdown procedures; Using tar.

Beginning UNIX— This course has been restructured to address generic UNIX information. There is no longer a focus on Sun operating systems and tools. Additional topics are being added. This course will probably be offered on a quarterly basis.

ICNchanges Contents

Change Control for May 1995

Changes

- CFTLIB (UNICOS)20
- INQUIRY (UNICOS)21
- PROD (UNICOS)21

Network Services Information

- LANL World Wide Web Server.....22

Documentation23

Information About Change Control24

Online Information25

June Deadline25

CCF Machine Availability and Downtime.....26

Schedule for Change Control

Date	Activity
<p>May 2 (First Tuesday)</p>	<p>New or changed software is available in experimental (X) files on CFS for testing. This initial testing period is for uncovering problems in the software before the software is put into production. If you find a problem, please call the ICN Consulting Office at (505) 667-5745.</p>
<p>May 9 (Second Tuesday)</p>	<p>The changes become production version on</p> <ul style="list-style-type: none"> • Machine rho (UNICOS) • Distributed processor beta (ULTRIX) • Distributed processor ccvax (VMS)
<p>May 16 (Third Tuesday)</p>	<p>If no problems are reported to the ICN Consulting Office (505) 667-5745, changes are installed on</p> <ul style="list-style-type: none"> • Machine gamma (UNICOS)
	<p>The Department of Energy (DoE) has frozen software changes to the machines in the secure network. X Files and executables will be placed on CFS as usual. Users are encouraged to test the X Files. Executables will be installed in a staggered fashion when the freeze is lifted. The date for lifting the freeze is unknown. In the past month the secure ICN has been accredited. The CIC personnel continue addressing other DoE findings.</p> <ul style="list-style-type: none"> • Machines delta, epsilon, and zeta

Note: A stop sign in front of a title is significant:

 = incompatible changes; please read!

Changes

CFTLIB (UNICOS)

Function Fortran run-time extension library providing capabilities not found in standard UNICOS libraries.

Change The following changes have been installed:

- Subroutines FEMPTY and IOUNITS were rewritten for UNICOS Version 8.0.
- The definition of a “megaword” in terms of what the utility INQUIRY displays has been redefined to be 1024x1024 words. The change was made in subroutine SNAP in CFTLIB, upon which INQUIRY depends. The old definition was based upon the idea that most users think in terms of 1000 instead of 1024. This change was made for compatibility with other system utilities.

X File Access On CFS as: `/ccx/unicos/lib7/libcftlib.a` for Machine Rho.
 On CFS as: `/ccx/unicos/lib7c/libcftlib.a` for Machine Gamma.
 On CFS as: `/ccxs/unicos/lib7/libcftlib.a` for Machines Delta and Epsilon.
 On CFS as: `/ccxs/unicos/lib8/libcftlib.a` for Machine Zeta.

Online Documentation To display the man page (dated 3/95), enter: **man cftlib**

This overview man page includes a functional summary of all routines in the library.

To display the man pages for a specific routine, enter: **man routine_name**.

Printed Documentation The new CFTLIB on UNICOS Reference Manual is available in Standard Text format on CFS in `/icndoc/ascii/scftlib.unicos`.

This 370-page document is designed to be printed through PAGES as follows:

```
cfs get /icndoc/ascii/scftlib.unicos
ntext scftlib.unicos cftlib.manual
ppages -ft txt -format ltr cftlib.manual
```

INQUIRY (UNICOS)

Function	Displays the status and information about existing processes.
Change	This utility has been recompiled and reloaded with the new cftlib . The definition of “megawords” in which memory size is displayed has been changed to be based upon 1024x1024 instead of 1000x1000.
X File Access	On CFS as: /ccx/unicos/bin7/inquiryx for Machine Rho. On CFS as: /ccx/unicos/bin7c/inquiryx for Machine Gamma. On CFS as: /ccxs/unicos/bin7/inquiryx for Machines Delta and Epsilon. On CFS as: /ccxs/unicos/bin8/inquiryx for Machine Zeta.
Online Documentation	To display the man page (dated 9/92), enter: man inquiry For usage help information, type: inquiry -h or man inquiry . The help message summarizes the execute line options, whereas the man page gives more complete information and examples of use.

**PROD (UNICOS)**

Function	PROD provides access to the ICN production system. It allows users to submit and monitor production (batch) jobs on Cray machines at Los Alamos.
Change	<ul style="list-style-type: none"> • The memory limit parameter is now in “megawords” (1024X1024 words) and is defaulted to 16 megawords. • Jobs needing more than 16 megawords must specify an upper memory limit or they will be aborted when they exceed 16 megawords. • The maximum memory parameter shown for machines in the MACHINESTATUS command is in megaword units. • The HELP command is updated with current information. • Displays are reformatted for UNICOS oriented parameters (NQS id, Nice, Compartment, etc.). • The syntax for the RETRIEVE command as well as the jcimach, controller, classification, and partition parameters will no longer be recognized. • The job description parameter can now be any character string up to 20 characters except blanks unless double quotes (“”) are used. • The jci file must be on the machine running PROD and defaults to the current directory. • The default target machine is the submitting machine instead of any UNICOS machine in the open system environment (ucos). • For purposes of the target parameter, machine names are abbreviated to their first letter.

PROD (UNICOS) Contd.

Since PROD is a distributed utility, both Machines Gamma and Rho will be updated at the same time on May 9, 1995. The production system will be inoperative for up to three hours 8:30 — 11:30 MDT on May 9, 1995 to reformat the production data base. Any default parameters saved using the KEEP command from PROD will be lost in this transition and will have to be reset by users. Jobs running on the Crays during the transition will continue and their status will be updated when the system resumes.

X File Access

No experimental (X) files.
Currently available as: **/usr/local/bin/prod** for Machines Gamma and Rho.

Online Documentation

To display the man page (dated 5/95), enter: **man prod**

Network Services Information

This section provides information and a record of changes to the software and hardware that make up the ICN network and the services it provides. If you detect a problem, please call the ICN Consulting Office at (505) 667-5745, or send electronic mail to **consult@lanl.gov**.

 **LANL World Wide Web Server**

The main LANL World Wide Web Server, **www.lanl.gov**, service moved to a new platform and will be changing significantly in appearance and organization over the next few months. The changes will be noted on the LANL Home page **http://www.lanl.gov/** as they become known.

Documentation

New and Updated Man Pages

The following online information has been added or updated.

UNICOS Man Pages

To access a UNICOS man page, enter: **man** *command_name*, where *command_name* is the name of the command, library, routine, or utility whose man page you wish to view.

Man Page	Description
prod	PROD provides access to the ICN batch production system. NQS is not available to the user. It allows users to submit, modify, delete, purge, abort, and obtain the status of jobs in the production system. PROD also allows users to examine the state of the scheduling queues, master queues, and production machines.

To create ASCII files of the UNICOS man pages, use the following command to remove the special characters for bold and underlining:

UNICOS 7.0 and 8.0: **man** *command_name* | **col -bx** > *filename*

Barbara Ritchie (**bxr@lanl.gov**), (505) 667-7275
Communication Arts and Services (CIC-1)

Information About Change Control

ICN Change Control is the set of procedures that coordinates changes in the ICN to ensure quality control and smooth operation and to avoid introducing additional problems. In an environment as dynamic as the ICN, control must be imposed on the scope and timing of changes that involve many components. Please report any problems as soon as they occur by calling the ICN Consulting Office at (505) 667-5745.

The following CFS nodes are used for software that is maintained or announced through Change Control procedures. The files under **/ccx(s)/unicos** are deleted the last Friday of each month because these experimental versions become the production versions on all machines by the third Tuesday of the month. The other nodes keep the most recent versions of their respective software.

Open Network

Non UNICOS	/ccx/platform*/filename
UNICOS	/ccx/unicos/type**/filename

examples: **/ccx/mac/ppages**
/ccx/unicos/bin7/ppagesx
/ccx/unicos/ubin7c/tedix
/ccx/vax/ppages.bak

Secure Network

UNICOS	/ccxs/unicos/type**/filename
--------	-------------------------------------

example: **/ccxs/unicos/lib8/libcftlib.a**

*Where *platform* is:

alpha_osf	tar files for DEC Alpha OSF/1 machines.
alpha_vms	backup save sets for DEC Alpha VMS machines.
convex	tar files for Convex machines.
dec_risc	tar files for DEC RISC workstations.
dos	executables for PC/DOS machines.
hp	tar files for Hewlett-Packard workstations.
ibm_rs6000	tar files for IBM RS6000 workstations.
mac	binhex (.hqx) or MacBinary (.mbin) files for Macintosh computers.
next	tar files for NeXT workstations.
sgi	tar files for Silicon Graphics workstations.
solaris	tar files for Sun Solaris workstations.
sun	tar files for Sun workstation.
ultrix	current executables to test on Beta.
unicos	executable X files for current Change Control cycle.
vax	backup-save-sets for VAX/VMS systems.

**Where *type* is:

bin	binary file.
lib	library.
#	operating system (OS) version.
u	user-supported.

If problems are discovered during the cycle, defective hardware or software is corrected, replaced, removed, or backed off.

Online Information

You can access complete online information about Change Control by using the Internet Gopher Server. For more information on how to connect to the Gopher Server, see the article "Internet Gopher Delivers Information" in the Feature Articles section of the September 1993 News. You may also contact the Customer Service Center at (505) 665-4444 or e-mail cichelp@lanl.gov.

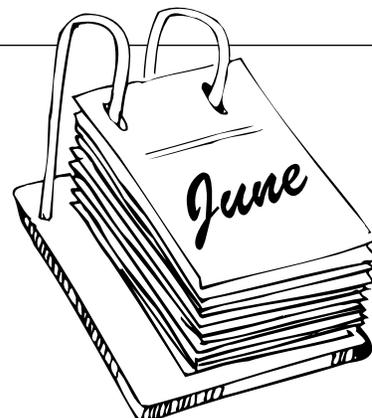
After you connect to the Gopher Server you will see a menu of options. Select the following series of options from the **gopher** menu:

- Computing at LANL
You will get a new menu.
- BITS: Computing and Communications News
- BITS Home Page
WWW=http://www.lanl.gov/computer-information/ComputingNews/bits_homepage.html
- BITS: ICNchanges
You will get a new menu. Select the next menu that reflects your needs.
 - Keyword Search of all ICNchanges (?)
 - Current Issue
 - 1995 Archives
 - 1994 Archives
 - 1993 Archives
 - 1992 Archives
 - 1991 Archives
 - 1990 Archives
- Select "Current Issue"
to get a list of the articles for the current month's Change Control.
You will get a new menu. Select the next menu that reflects your needs.
BITS: ICNchanges - ASCII Version
BITS: ICNchanges - Acrobat Version
BITS: ICNchanges - PostScript Version

*Barbara Ritchie (bxr@lanl.gov), (505) 667-7275
Communication Arts and Services (CIC-1)*

JUNE DEADLINE

The deadline for articles for the June 1995 Change Control is 8:00 a.m. Monday, May 22, 1995. Please submit items to bulletin@lanl.gov.



CCF Machine Availability and Downtime

Machine Name(s)	Machine Type	Operating System	Security Partition	System Availability (Mar. 1995)	Scheduled Downtime*
delta	CRAY Y-MP8/8-128	UNICOS 7.0	Secure	99.3%	May 10 — 0400-0700
epsilon	CRAY Y-MP8/8-128	UNICOS 7.0	Secure	99.2%	May 24 — 0400-0700
rho	CRAY Y-MP8/8-64	UNICOS 7.0	Open	99.8%	May 24 — 0400-0700
zeta	CRAY Y-MP8/2-64	UNICOS 8.0	Secure	99.7%	May 3 — 0400-0700
gamma	CRAY Y-MP/M98-82048	UNICOS 7c	Open	99.6%	May 3 — 0400-0700
tau**	CRAY T3D MC256-16	MAX 1.2	Secure	99.7%	May 10 — 0400-0700
	CRAY Y-MP4I/464-2	UNICOS 8.0			
pi**	CRAY Y-MP EL92/1-256	UNICOS 8.0	Open	100%	
cluster	IBM Workstation Cluster	AIX	Open		
beta	VAX 6320	ULTRIX	Open		
CCVAX	VAX 6410	VMS	Open		
OFVAX	VAX 6410	VMS	Open		
canyon	Thinking Machines Corp. CM-200	SunOS	Secure		
tres	Thinking Machines Corp. CM-200	SunOS	Secure		

* Additional downtime for the Cray machines may occur as a result of Network Dedicated Systems Time (NDST). The schedule for possible NDST is from 0600-0700 Mountain Time, Monday through Friday. Should NDST become necessary, a message listing the scheduled downtime will be broadcast on the applicable machines before the actual downtime occurs. For additional information contact the shift supervisor at (505) 667-4584. All times listed are Mountain Time.

** Access restricted.

Questions About Announced Changes?

Notice of all scheduled downtime will be broadcast on the machine before the downtime. For up-to-date machine status and scheduled downtime call: CCF Status Message (505) 667-5588.

Publication Information

ICNchanges Editor/Publication Coordinator
 Barbara Ritchie (CIC-1)
 Mail Stop B295
 Telephone (505) 667-7275

Change Control Coordinator
 Marjorie Johnston (CIC-6)
 Mail Stop B252
 Telephone (505) 667-7309

All software listed below, except Netscape, is available at no cost (Netscape costs \$30.00). To order software, fill in the blanks below, check the software you would like to have, and mail this form to

Free Software
 Desktop Support Center (CIC-2) MS D445

Name _____ Group _____
 Mail Stop _____ Z-Number _____
 Cost Code _____ Program Code _____ Account Package _____

Please send the correct number of replacement high-density diskettes with your request. If you don't send any disks, we will send you the software with the understanding that you will return the diskettes after you copy the software.

_____ **FREEWARE DISKETTE** (Include one high-density diskette.)

This diskette contains the following software:

Alias Finder: Quickly finds the original of an alias when the alias is dragged on top of the Alias Finder icon.

Disinfectant: Virus protection for the Macintosh.

Disk Copy: Creates copies of diskettes using one floppy drive.

SCSI Probe: Shows connected devices on the SCSI bus.

StuffIt Expander: Unstuffs BinHex 4.0, StuffIt, and other types of compressed files.

Note: The following two applications come with System 7.5:

Extensions Manager: Allows selection of which INITs to load.

SuperClock: Puts a clock in the upper right corner of your Macintosh.

_____ **INTERNET DISKETTE** (Include one high-density diskette.)

This diskette contains the following software:

Fetch: Easy-to-use for FTPing files from FTP archives.

NCSA Telnet: Telnet application

TurboGopher: Gopher client application for the Macintosh.

StuffIt Expander: Unstuffs BinHex 4.0 and other types of compressed files.

_____ **MACINTOSH SYSTEM 7.5** (Include nine high-density diskettes.)

Indicate number of systems on which this System 7.5 will be used: _____

Note: System 7.5 Manuals are available for \$7.50. Enter your accounting information above. CD-ROM version available for free loan. Call 5-1361 for details.

_____ **SYSTEM 7.5 POWERTALK AND QUICKDRAW GX.** (Include four high-density diskettes.)

Note: We recommend that you do not install these parts of System 7.5 unless you have a specific need to do so.

_____ **SYSTEM 7.5 UPDATE, VERSION 1.0** (Include 5 high-density diskettes.) Updates System 7.5, fixes some bugs, speeds up file-sharing, new printer software, etc. Includes Network Software Installer 1.5.

_____ **NETSCAPE** (Include one high-density diskette.)

Netscape is a commercial web browser. Even though it is available on the Internet, it is not free. CIC-2 has bought 1,000 copies of Netscape for a cost of \$30.00 per copy. Enter your accounting information above. We will include a license certificate indicating your purchase. If you do not need a diskette copy of Netscape, check below.

_____ Do not need a diskette. I already have a copy and just need the license.

_____ **ACROBAT READER** (Include one high-density diskette.)

Multi-platform document viewer. Used with viewing "pdf" documents on the LANL web server and fast becoming an Internet standard.

_____ **ACROBAT EXCHANGE** (Include four high-density diskettes.)

An enhanced version of the Acrobat Reader. Allows you to create and annotate "pdf" files as well as read them. Note: CIC Division bought a license of 1,000 copies of Acrobat Exchange. We do not charge for this software but can only distribute 1,000 copies of it (both Mac and PC).

CUT ALONG DASHED LINE

All software listed below, except Netscape, is available at no cost (Netscape costs \$30.00). To order software, fill in the blanks below, check the software you would like to have, and mail this form to

Free Software
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Name _____ Group _____
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Cost Code _____ Program Code _____ Account Package _____

Please send the correct number of replacement high-density diskettes with your request. If you don't send any disks, we will send you the software with the understanding that you will return the diskettes after you copy the software.

_____ **DATA PHYSICIAN** Virus detection programs. (Include one high-density diskette.)

_____ **INTERNET DISKETTE** (Include one high-density diskette.)

- lview31 A gif/bmp/pic viewer.
- tsyncl>8 Set up your pc clock via LANL ftp timeserver automatically.
- WS_Ftp Super ftp client.
- WS_Ping Super ping and nslookup.
- pkunzip File decompression program.

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_____ **JETFORM FILLER** (Include five high-density diskettes.)

Form-based document software for use with the LANL's web server on-line forms. Note: CIC-13 bought a license of 2,000 copies of Jetform Filler. We do not charge for this software but can only distribute 2,000 copies of it (Mac version available soon).

Indicate the number of systems on which this copy of Jetform Filler will be used:___

INTEGRATED COMPUTING NETWORK (ICN) VALIDATION REQUEST

To access ICN Computing resources, please complete all parts of this form that apply to you, including "Special Requirements."

Mall your completed application to:
ICN Password Office (PWO)
Mail Stop: B271
Los Alamos National Laboratory
Los Alamos, NM 87545

If you have questions: Call: (505) 665-1805
E-mail: validate@lanl.gov

All Laboratory computers, computing systems, and their associated communication systems are for official business only. By completing this request, users agree not to misuse the ICN. The Laboratory has the responsibility and authority to periodically audit user files.

Owner Information

Z-Number (if you have one)	PWO Use Only	Name (last, first, middle initial)
LANL Group	LANL Mail Stop	Citizenship (Foreign National see "Special Requirements-Foreign National")
Phone Number	Cost Center	Program Code

Check LANL affiliation:

LANL employee

Contractor _____
(specify contract company)

Consultant, VSM, associate

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:	<input type="checkbox"/> ICN Password	<input type="checkbox"/> Smartcard	<input type="checkbox"/> Both
<input type="checkbox"/> Open partition (e.g., email systems, open machines)			
<input type="checkbox"/> Administrative partition (e.g., IA [BUCS, Stores, Travel], IB [EIS, FMIS, PAIRS]) If you are not a Q-cleared LANL employee, see required steps in section "Special Requirements-Administrative Partition," unless you already have Administrative access with an ICN password.			
<input type="checkbox"/> Secure partition (i.e., secure machines) Indicate level(s) of data to be processed:		I certify this person does require secure access: _____ Manager Signature (Group Leader or above) Date	
<input type="checkbox"/> Unclassified <input type="checkbox"/> Secret			
NOTE: A Q-clearance is required. All classified computing must be performed within the Secure environment.			

PWO Use Only

New <input type="checkbox"/>	Change <input type="checkbox"/>	Clearance Status	Processed	Lv	Smartcard Serial #
Comments:					

CUT ALONG DASHED LINE

Special Requirements

Administrative Partition	
(U.S. Citizens Only)	Lab-Wide Systems (e.g., IA [BUCS, Stores, Travel], IB [EIS, FMIS, PAIRS])
<input type="checkbox"/> 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-Q-Cleared") section below. You may not access the Secure Partition.
<input type="checkbox"/> Contractor or Non-Q-Cleared	Phone (505) 667-9444 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.
Security Briefing Approval Signature	Date

<input type="checkbox"/> 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 Division Director describing your need to access the ICN.
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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, obtain your LANL contact's signature in addition to the contact's manager's signature.
NOTE: LANL contacts are regular Laboratory employees. Contacts are responsible for obtaining annual re-authorizations, forwarding renewals, and notifying the ICN Password Office of changes in user or contact status.

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

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LOS ALAMOS NM 87544-9916



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INDEX

This index is organized according to keywords taken from the original titles of *BITS* articles. Keywords are listed in alphabetical order and the coverage of articles goes back one year from the date of the current issue.

Keywords	Title of BITS Article	Date/Page
ALL-IN-1	<i>ALL-IN-1 ASSUME ALIAS OPTION BEING RETIRED</i>	Dec. '94/p. 7
Apple	<i>Apple Introduces New Version of Apple PhotoFlash</i>	Nov. '94/p. 14
	<i>Apple's Open Transport Communications Architecture</i>	Dec. '94/p. 16
Autosum	<i>AUTOSUM and COST DATAFILES</i>	Dec. '94/p. 12
Binary File Transfers	<i>Binary File Transfers between Workstation and Supercomputer</i>	July '94/p. 8
C++	<i>Using C++ For Scientific Computing Through Array Classes</i>	Nov. '94/p. 6
CFS (Common File System)	<i>CFS SPLIT BEGINS: Significant Changes Become Effective Nov. 1, 1994</i>	Oct. '94/p. 1
	<i>CFS Transitions Tools Available to Aid the Network Separation</i>	May '94/p. 2
CIC (Computing, Information, and Communications)	<i>Organizational Structure of CIC Division</i>	June '94/p. 1
	<i>CIC Consultants: Who to Call</i>	Apr. '95/p.1
CIC-7	<i>CIC-7 Sponsors Computing Conference</i>	Apr. '95/p. 6
CIC-8	<i>Streamlined, Efficient, and Flexible—CIC-8</i>	Sept. '94/p.6
CLAMS	<i>CLAMS Now Available on the CIC ICN Tools</i>	May '94/p. 1
ClariNews	<i>ClariNews Now Available at LANL</i>	July '94/p. 7
Cluster	<i>Introducing Cluster Corner Articles</i>	June '94/p. 10
	<i>IBM AIX XL Fortran (Version 3) Installed on CIC Cluster</i>	July '94/p. 10
	<i>CIC Cluster Update</i>	Oct. '94/p. 5
	<i>Cluster Computing in the Secure Environment</i>	Feb. '95/p. 12
Code Portability	<i>Code Portability Using CrayPointers</i>	May '94/p. 5
	<i>Code Portability: Supercomputers and Workstations</i>	Aug. '94/p. 9
CF90	<i>Cray CF90 Programming Environment Tools</i>	July '94/p. 4
	<i>Cray CF90 Programming Environment</i>	June '94/p. 6
	<i>CF90 Programming Environment Now Available on All Open Crays</i>	Sept. '94/p.3
	<i>CF90 Does Not Support All CF77 Directives</i>	Sept. '94/p. 10
CrayDoc	<i>CrayDoc On-line Documentation</i>	Sept. '94/p. 4
CTI (Computational Testbed for Industry)	<i>Computational Testbed for Industry</i>	Feb. '95/p. 8
Distributed Computing	<i>Distributed Computing Environment</i>	Feb. '95/p. 4
EIS (Employee Information System)	<i>Keeping Your EIS Data Up-to-Date</i>	Oct. '94/p. 4
	<i>Entering Contractors and External Customers in the EIS</i>	Mar. '95/p. 15
E-mail	<i>Distribution Lists for E-mail Users</i>	June '94/p. 4
	<i>LANL E-mail to Print Gateway</i>	June '94/p. 7
	<i>New E-mail Server: POP+</i>	Oct. '94/p. 2
	<i>Basics of E-mail Attachments</i>	Mar. '95/p. 16
Eudora	<i>A Look at Eudora</i>	July '94/p. 12
	<i>Another Look at Eudora</i>	Aug. '94/p. 11
Graphical Monitoring Software	<i>New Graphical Monitoring Software</i>	July '94/p. 6
ICN (Integrated Computing Network)	<i>The ICN2 Project</i>	Sept. '94/p.1
	<i>Improved Turnaround for Processing New ICN Accounts</i>	Apr. '95/p. 6
	<i>New Networking Document for ICN Users</i>	Apr. '95/p. 10

Keywords	Title of BITS Article	Date/Page
Information Architecture (IA)	<i>The Los Alamos Information Architecture</i>	July '94/p. 1
	<i>IA: Announcing the Standards Development Process</i>	Sept. '94/p. 8
	<i>Work Progresses on Information Architecture</i>	Aug. '94/p. 4
	<i>Information Architecture Teams Forming</i>	Nov. '94/p.2
	<i>Information Architecture Sponsors Data Warehousing Study</i>	Dec. '94/p. 1
	<i>IA Targets Infrastructure Services</i>	Mar. '95/p. 12
Kerberos	<i>Kerberos: Life after SIMP</i>	Aug. '94/p. 6
LAICS (Los Alamos Integrated Communications System)	<i>LAICS Update: Interesting Facts about Your Phone Service</i>	Oct. '94/p. 3
Library Without Walls	<i>Library Without Walls: Digital Library</i>	
	<i>Developments at LANL's Research Library</i>	Apr. '95/p. 4
.LOGIN or .CSHRC [Shell Files]	<i>PAPER or PLASTIC? .LOGIN or .CSHRC?</i>	Nov. '94/p.11
Lotus Notes	<i>Lotus Notes: Enhancing Network Communications</i>	Mar. '95/p. 1
Macintosh	<i>The Power Macintosh</i>	June '94/p. 12
	<i>A Look at the Macintosh System 7.5</i>	Sept. '94/p. 13
	<i>Macintosh System 7.5 Follow-up</i>	Oct. '94/p. 9
Microsoft Word	<i>Upgrading to Microsoft Word 6.0</i>	Feb. '95/p.14
MPI (Message Passing Interface)	<i>Parallel Distributed Computing Team</i>	
	<i>Supports MPI Message Passing Software</i>	Feb. '95/p. 10
Netscape	<i>Everything you need to know about Netscape at LANL</i>	Apr. '95/p. 11
Network Licensed Software	<i>The Coming of Network Licensed Software</i>	Nov. '94/p. 13
News Groups	<i>Access to Usenet News Groups is Changing</i>	Dec. '94/p. 7
Paging	<i>New Access Number for Off-Site Paging</i>	Nov. '94/p. 1
PC	<i>New IBM PC Products Available</i>	Oct. '94/p. 15
Print Gateway	<i>Print Gateway Charges</i>	Feb. '95/p. 5
PVM (parallel virtual machine)	<i>Distributed Computing Team Supports PVM Software and Initiates</i>	
	<i>Parallel Tools Users' Group</i>	Nov. '94/p. 11
	<i>PVM 3.3 and XPVM Installed and Supported on the Open Cluster</i>	Dec. '94/p. 13
	<i>PVM 3.3 Development Toolbox</i>	Mar. '95/p. 4
Runaway [UNICOS]	<i>Stop that Runaway!</i>	May '94/p. 8
Security	<i>Need Help with Computer Security?</i>	Dec. '94/p. 8
	<i>UNICOS Security Tidbits in the ICN2</i>	Feb. '95/p. 11
Smartcard	<i>What's So Smart about a Smartcard?</i>	Dec. '94/p. 6
	<i>Smartcards: They Keep Going</i>	Feb. '95/p. 6
Software Distribution	<i>Mac and PC Software Distribution at LANL</i>	Oct. '94/p. 12
Sunrise	<i>Sunrise: Creating A Network-based Distributed, Media-rich</i>	
	<i>Computing and Information Environment</i>	Feb. '95/p. 1
Supercomputing	<i>Drastic Reduction in Supercomputing Recharge Rates!</i>	Dec. '94/p. 5
Survey	<i>Desktop Software Site License Survey</i>	Oct. '94/p. 16
Tatung	<i>Tatung: The New SPARC Workstation Standard</i>	Aug. '94/p. 1
TeleMed	<i>TeleMed: Better Medicine through Sunrise Technologies</i>	Mar. '95/p. 8
UNICOS	<i>What Mother Never Told You: UNICOS Programs and Scripts</i>	Dec. '94/p. 9
	<i>UNICOS Security Tidbits in the ICN2</i>	Feb. '95/p. 11
	<i>UNICOS 8.0: Modifications to Purge Process</i>	Mar. '95/p. 3
Validated ... for LANL Computing	<i>Getting Validated and Registered for LANL Computing</i>	June '94/p. 7

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