EARNEST,

the EARN Newsletter

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Editor: Hans Deckers\*

Special thanks to Manfred Bogen\*, Daniele Bovio\*, Hans-Ulrich Giese\*,

Nadine Grange\*, Turgut Kalfaoglu\*, Greg Lloyd\*, David Sitman\* and

Eugenie Staicut\* for their contributions.

Items which are followed by an asterisk (\*) are explained in the

glossary at the end of this newsletter.

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Next issue: June 1993

The deadline to submit articles for publication is on 2 June 1993.

New project? New tool? New views on the network? Express your ideas

in EARNEST! Submit articles for publication, ideas for articles,

letters, etc., to Nadine Grange (grange@frors12.bitnet).

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1. Editor's Corner

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by Hans Deckers (deck@frors12.bitnet)

Enjoy EARNEST number 6. I am looking forward to receiving more letters,

mail and contributions for future issues.

The first issue appeared in May 1992, so this particular issue marks

EARNEST's first birthday! I would like to take this opportunity to thank

all our contributors and readers for making EARNEST a success. In this

issue, we have started a new column: "EARN member profile". In each

issue , we will bring you details on EARN and networking in one of the

EARN member countries. We will concentrate at first on new member

countries. In this issue, you will find a profile on EARN and networking

in Romania.

2. News from the Exec\*

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by Hans Deckers (deck@frors12.bitnet)

Highlights of the EARN Executive\* meeting of 29 and 30 March 1993 in

Israel:

To a large extent this was the main preparation meeting for the Board of

Directors\* meeting in Trondheim on 9 and 10 May 1993.

The Executive welcomed Daniele Bovio's 'dress rehearsal' of the

presentation on 'EARN Staff and EARN Services - Ongoing Activities and

Plans', which Daniele will present to the BoD\*.

The Executive approved a paper by Marco Sommani\* and Eric Thomas\*,

'Enhancing EARN Distribution Services' (EXEC17 93).

Therefore the following two proposals were approved:

1. That EARN staff investigates the costs and technical issues

associated with the provision of a file, similar to DOMAIN NAMES, but

containing only topological information for Internet\* addresses. This

should be discussed on the NOG\* list and the Technical Manager would

report back to the Executive when agreement has been reached.

2. That EARN starts investigating the feasibility of an unsolicited file

transfer mechanism similar to SENDFILE\* for the Internet. This mechanism

would be useful both to EARN users and to applications such as LISTSERV\*

where the only other alternatives in a non-NJE\* environment are lower

reliability and rewriting an entire SMTP\*-like service which would be

useful only to LISTSERV.

A NEW CHAIRMAN FOR THE EARN INFORMATION GROUP

Shortly after the Executive meeting EARN President Frode Greisen\*

announced the appointment of David Sitman as chairman of the EARN

Information Group\* (EARNINFO\*), replacing Avi Cohen\*, who had asked to

step down.

3. Changes in topology

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by Daniele Bovio (hi@frors12.bitnet)

The most significant topology change that occurred in the March routing

tables, at the international level, was the definition of several new

INTERBIT\* gateways. INTERBIT is actually a dummy node. The name INTERBIT

is used to denote a gateway between EARN/Bitnet\* and the Internet. Up

until recently, only a few sites had a defined "link" to INTERBIT. The

node INTERBIT does not exist in reality and it is used to trap mail

directed to the Internet and pass it to the closest "real" Internet

gateway. This function can be performed wherever an NJE node is

connected to both networks.

Until recently, there were 11 INTERBIT links defined in BITEARN NODES\*,

one at each of the 9 European core sites\*, and 2 in Bitnet (CUNYVMV2 and

PUCC). With the recent change, the number of INTERBIT links has

increased to 22, adding 11 links to Bitnet core sites, thus virtually

doubling the number of gateways.

This enhanced structure allows a better distribution of the load among

the gateways and, therefore improves the connectivity of the NJE world

towards the Internet. This result was achieved thanks to a joint effort

of European and US technical people, who provided the technical

background for the topology change, and to the US core sites which

accepted to act as "official" INTERBIT gateways.

4. Statistics

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by Greg Lloyd (glloyd@frors12.bitnet)

and

by Daniele Bovio (hi@frors12.bitnet)

Here is the general overview on the BITEARN NODES file for April. It

includes the minimum, maximum and average number of hops that exist in

the global NJE network.

----------------------------------------------

April

General Statistics -

Number of nodes 3286

Number of links 3773

Hop Statistics -

Network diameter: 15

Average number of hops: 6.680

Minimum average hops: 3.800

Maximum average hops: 10.752

----------------------------------------------

The network diameter is the maximum distance (in hops) that can be found

between two nodes. The minimum average hops as of April, 1993 is at

PUNFSV2. The maximum average hops is at AROSARIO (in Argentina). The

global average, for any node, is currently 6.68 hops.

GENERAL OVERVIEW OF DATA COLLECTION

In order to get a complete and objective picture of its network's

performance, EARN collects data along four scales: traffic volume, link

availability, link file queues and round trip times (RTTs) for both

files and interactive messages. These figures reveal how busy the

network has been (traffic volume); the percentage of time that network

links have been available to carry this traffic (link availability); the

size of any file queues that may be formed on these links; and finally,

a measurement of time showing delays in sending files and interactive

messages around the network.

EARN monitors its traffic volume, network links, file queues and message

RTTs down to its international level. That is, each member country

subscribed to the EARN Association has designated one international node

that acts as that country's gateway into the international network. A

subset of these international nodes have been selected as the EARN

backbone and make up the EARN core sites. The remaining international

nodes are allocated into regions, each region being serviced by a

specific EARN core site. In addition to collecting figures on the above

three scales that relate solely to its own network, data is also

collected for EARN's transatlantic links with the Bitnet network.

File RTTs are measured down to an inter-regional level (across the EARN

backbone). In addition to collecting figures relating solely to its own

international backbone, round trip time figures are also recorded for

EARN's transatlantic links with the Bitnet network. These files traverse

a section of the Bitnet backbone, cross the Atlantic and enter the EARN

backbone and are subsequently returned to the USA.

TRAFFIC, LINK AVAILABILITY AND QUEUES

This section reports on traffic volumes passing between the EARN network

regions and the performance of all regional network links. Traffic

volume is measured in the total amount of records sent and received

between each network region. Each record may contain up to eighty

characters (bytes) of information. Link performance is measured by the

percentage of time they were available for use and the average size of

file queues on them.

+------------------------------+------------+

| Link | Traffic |

+--------------+---------------+------------+

| Average | Average | Volume |

| Availability | Files Queued | (records) |

+--------------+---------------+------------+

-- 1993 | | | |

January | 94.8 (%time) | 28.5 (files) | 400 M |

February | 94.4 (%time) | 42.6 (files) | n/a |

March | 93.0 (%time) | 40.2 (files) | n/a |

+--------------+---------------+------------+

These figures show a reasonably stable percentage of link availability

in the 93-95 percent range. It must be noted that some regional links

operate on dial-up modems and are purposely disconnected for long

intervals. The queue figures have remained high for the first quarter of

1993. The chronic queues reached a peak in February on several regional

links which skew the report data upwards. One of these heavily saturated

links has since been improved and its queue figures have dropped

dramatically. The queue performance during March may be considered worse

than February due to regional link instability.

ROUND TRIP TIMES

This section reports on Round Trip Times (RTTs). Two measurements of

Round Trip Time are made on the EARN network: by file and by interactive

message. The file RTTs are designed to approximate the quality of

service (in terms of elapsed time) a user may expect when transferring

files across the network. These figures are designed to measure the

speed with which files are physically moved on the network and any

delays caused by file queues that may be encountered. File RTTs are

measured for two different file sizes; the first is 50 records files

(representative of a typical piece of electronic mail) and the second,

1001 records files (representative of a medium sized data file). They

are measured on an hourly basis. Interactive message RTTs are designed

to approximate the quality of service (also in terms of elapsed time) a

user may expect when talking to other users or service machines on the

network. They are measured every ten minutes.

+--------------------+--------------------+-----------+

| 50 Record files | 1001 Record Files | Messages |

+----------+---------+----------+---------+-----------+

| Average | Overall | Average | Overall | Overall |

| Minimum | Average | Minimum | Average | Average |

+----------+---------+----------+---------+-----------+

-- 1993 | | | | | |

January | 5 secs | 1m13s | 9 secs | 2m01s | 6.0 secs |

February | 4 secs | 3m05s | 7 secs | 3m41s | 7.0 secs |

March | 4 secs | 37s | 7 secs | 52s | 7.0 secs |

+----------+---------+----------+---------+-----------+

The minimum and average RTT figures show the average fastest and overall

average in time taken for files to be sent out and returned over the

network. The minimum figures for both files drop due to code

enhancements introduced in February. The jump in average round trip

times jumps in February as a result of a week of poor EARN intra-core

and inter-Bitnet link and queue performance. March shows the positive

effects code enhancements which better reflect the real delivery times

associated with a functioning EARN backbone (which is the usual case).

5. New Nodes and Deleted Nodes in the Network

------------------------------------------

by Hans-Ulrich Giese (u001212@hearn.bitnet)

The following nodes have joined EARN, Bitnet or the other cooperating

networks in March or April 1993.

The new nodes are listed below by country.

For details on any node, you can send mail to any LISTSERV machine,

eg: LISTSERV@FRMOP11.BITNET with the line: SHOW NODE nodename

Brasil:

BRPUCRSN

BRUNIJUI

Italy:

IRMLNFA

IRMLNFB

IRMLNFC

Japan:

JPNTMIG

Korea:

KRKIF

Mexico:

REDVAX1

Poland:

PLKRCY52

Portugal:

PTIFM2

Romania:

CEPES

ROBCUB

Sweden:

LISTSERV

United States:

DENISONB MARPUP NIHCOTD

FNALV MDTF NIHODE15

HARVMAIL MONRRCSD NIHOD10E

IUKCMS MUVMS6 SLACGATE

LOYNOMUS NIHCDCT2 SLACSLDA

A listing of the nodes which have been removed in March and April, and

the new address or the name of a person you can contact to obtain

further information, is given in the files NODES DEL9303 and NODES

DEL9304 available on LISTSERV@FRORS12.BITNET. To receive the relevant

file send mail to LISTSERV@FRORS12.BITNET with the line:

GET NODES DEL93mm (where mm represents the month).

6. Announcing the QK-MHS Manager's Guide

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by David Sitman (a79@taunivm.bitnet)

The QK-MHS\* Manager's Guide describes the procedures for setting up and

managing the QK-MHS X.400\* Messaging System for VM\*. This is a new

manual describing version 1.0 of QK-MHS and OSI\*/VM.

The guide is intended for the experienced VM system administrator who

must manage the QK-MHS X.400 Messaging System. General networking

experience, especially with mail-based networks, is assumed.

The guide was produced by GMD\*, Germany, under contract to EARN.

The QK-MHS Manager's Guide is available from: LISTSERV@EARNCC.BITNET\* in

plain text and Postscript format. Due to the size of the guide (over

12,000 lines) and its intended audience, the guide is available to Node

ADministrators\* only. A listing of the table of contents is available to

all.

To get the QK-MHS documentation, send the command:

GET file

where 'file' is one of:

QKMHS PS (Postscript)

QKMHS MEMO (plain text)

QKMHS CONTENTS (table of contents)

7. HEARN has converted to Listserv 1.7f and LMail 1.1d

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by Hans-Ulrich Giese (u001212@hearn.bitnet)

HEARN (the central node of The Netherlands) has recently installed

Revised Listserv 1.7f following an agreement with the author (Eric

Thomas), SURFnet (the networking body of The Netherlands) and the HEARN

management. Coupled with Eric's new mail delivery software, LMail, it

allows Listserv to deliver mail items that are wider than 80 characters

per line as well as other important features.

A comparison between Listserv and LISTEARN shows a substantial

performance gain, most likely due to structural changes made to the code

in the past years.

8. EARN member profile: Romania

----------------------------

by Eugenie Staicut (estaicut@roearn.bitnet)

The ROEARN node is located at the Research Institute for Informatics in

Bucharest. It was put into operation at the end of November 1992 and the

address ROEARN was introduced into the BITNET routing tables at the

beginning of December 1992. It is connected by a leased line (9600 bps,

with JNET\* running over TCP/IP\*) to the AEARN node in Vienna. It has

also been connected to the Internet since from the beginning of March

1993. Its domain name is roearn.ici.ac.ro. The following hosts are now

running .RO nameserver:

PYTHIA.EDVZ.UNIVIE.AC.AT 131.130.1.11

NS.EU.NET 192.16.202.11

SUNIC.SUNET.SE 192.36.125.2

NS.UU.NET 137.39.1.3

AOS.BRL.MIL 128.63.4.82, 26.3.0.29, 192.5.25.82

There are at present four nodes in Romania connected to ROEARN:

- ROIFA, Institute for Atomic Physics, Bucharest;

- ROIPB, Polytechnical Institute of Bucharest;

- ROUTT, Technical University of Timisoara;

- ROIMAR, Mathematical Institute of Romanian Academy.

ROIFA, ROIPB and ROUTT are Bitnet nodes. ROIMAR is connected to ROEARN

node by SMTP over DECNET\* using MX mailer. The domain names for these

nodes are: ifa.ro, ipb.ro, utt.ro and imar.ro.

There are plans to connect other nodes. CEPES (a UNESCO Institute in

Bucharest) and ROBCUB (Central University Library) have just joined EARN

at the beginning of April 1993. CEPES is now connected to Tilburg

University in the Netherlands. It can be reached either as cepes.kub.nl

or cepes.ro. The Internet address of ROBCUB is bcub.ro.

Other institutions are making efforts to get computers which could be

connected to Bitnet or Internet.

One of the lines available at ROEARN has been equipped for dial-up

access. Users from the following institutions have access to this line:

CNI : Romanian National Commission for Informatics

IPB : Polytechnical Institute of Bucharest

IMAR : Mathematical Institute - Romanian Academy

ASE : Economical Science Academy

ITC : Research Institute for Computers

OSIM : Oficiul de Stat pentru Inventii si Marci

UMTgM: University of Medicine, Tirgu-Mures

Univ Oradea: Oradea University

IAS : Astronomical Institute

CSM : Mathematical Statistics Center

RPNES: Romanian Psyhoneuroendocrine Society

FCC : Computers University of Cluj

ITIMC: Institute of Izotopic and Molecular Technology of Cluj

IMS : Institutul de mecanica solidelor

UMF : University of Medicine, Bucharest

IGA : Institute of Geodynamics, Romanian Academy

BCU : University Central Library, Bucharest

The list is growing almost daily, so it may be incomplete already.

The ROEARN node is based on VAX machines, DECWAN Routers, DEC Terminal

Servers, PC Routers and PC stations. The project has been financed by

the National Commission for Informatics. The hardware and software for

the ROEARN gateway has been donated by Digital Equipment France - CDG.

The hardware and software for the ROIFA node has been financed by the

Mellon Foundation.

ROEARN is the central routing node for EARN traffic for Romania. It

consists of:

- a Micro Vax 3100/20 with 20 MB RAM, 600 MB hard disk, Ethernet

interface, 4 asynchronous serial interfaces;

- a DECRouter 250 with 8 synchronous/asynchronous lines allowing the

connection of 8 other nodes (ROIFA, ROIPB, ROUTT, ROIMAR, etc.)

throughout the country by leased and/or dial-up lines, using the DDCMP

protocol;

- a PC Router for connection with the EARN node in Vienna through a 9600

bps leased line using TCP/IP;

- a DEC Server 90 with 8 asynchronous lines allowing the connection of 8

terminals;

- Software: VMS\*, DECNET, VAX, PSI, VMS Ultrix Connection, JNET, KERMIT

and MX Mailer.

Services provided through the EARN/Bitnet and Internet networks allow

Romanian users to communicate with researchers from other countries in

their field of interest, covering all academic audiences and subjects:

science, technology, humanities, medicine, economics, etc. as well as,

topics of general interest and worldwide news.

The services available are:

- exchanging electronic mail and files,

- computer conferencing;

- interactive messages,

- remote login;

- access to data bases;

- access to public domain and shareware software;

- access to network information services (archie\*, Gopher\*, WAIS\*,

WWW\*);

- news.

ACKNOWLEDGEMENTS

It would have been impossible to start up networking in Romania without

the help of the staff of the Vienna University Computer Center. In

particular, we wish to thank Dr. Peter Rastl, Dr. Hermann Steinringer,

Erwin Halpern, Ewald Jenisch, Gerhard Winkler and all those who helped

us with initial startup and provided us with insights into normal Bitnet

and Internet practice. We also wish to thank Dr. Frode Greisen (EARN

President), Dr. Hans Deckers, Daniele Bovio and Turgut Kalfaoglu from

the EARN Office, as well as Professor Stephen Ruth for his continuous

support of expanding network services in Romania, Dr. Steven Goldstein

for accepting Internet routing on NSFnet for Romania, Piet Beertema for

setting up several nameservers for .ro, and Daniel Karrenberg for his

support in fulfilling all the procedures for Internet registration. Last

but not least, we acknowledge the support of Digital Equipment (France)

and the Mellon Foundation which financed the hardware and software

necessary for initial startup.

9. A BITFTP server in Germany

--------------------------

by Manfred Bogen (mabogen@dearn.bitnet)

After the successful completion of the BITFTP\* beta-test, I am pleased

to announce that GMD's BITFTP server is now available for public use.

This new version of the software has been developed as a joint venture

between EARN and CREN\* at Princeton University (USA).

BITFTP offers asynchronous delivery of files that are retrieved by FTP\*.

This service is particularly useful for users without Internet access.

You just have to send mail with FTP commands to the BITFTP server. The

server does the actual FTP access and sends you the results as a file or

in an electronic mail message.

For detailed information on this service, request the on-line help file

by sending the HELP command in an electronic mail to

BITFTP@DEARN.BITNET. EARN/Bitnet users can also send the HELP command by

interactive message. Other introductory materials, such as a FTP site

list, are also available.

GMD's BITFTP server is the first public one in EARN. It provides the

same service as the Princeton server (BITFTP@PUCC), but is located in

Germany and should be preferred for accessing the European and German

FTP archives.

If you have questions or problems with GMD's BITFTP server, please

contact Dagmar Horch, HORCH@DEARN.BITNET.

10. EARN Help Desk - Net-Consulting service announced

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by Daniele Bovio (hi@frors12.bitnet)

Users as well as system administrators often come across a problem in

dealing with the network and have no local source of help to turn to.

EARN has decided to address the problem by offering a net-consulting

Help Desk service.

THE SERVICE

A Network Consulting Team (NCT) available via e-mail to handle questions

from users has been established. The service is free of charge and is

accessible to users from EARN countries.

The NCT is mandated to handle questions and problems related to the

realm of networking. An example of items the team would \*not\* handle

would be general computer programming and debugging problems (see

examples below).

In order to submit questions to the NCT, users should send electronic

mail written in English to:

NETHELP@EARNCC.BITNET

In order to obtain a quick and meaningful answer, it is recommended to

submit questions using the following template:

--------------------------------------------------------------------

MY QUESTION IS:

....................................................................

THE PROBLEM I HAVE IS:

....................................................................

WHAT DO I WANT TO ACHIEVE IS:

....................................................................

--------------------------------------------------------------------

The template should be completed as in the following example:

--------------------------------------------------------------------

MY QUESTION IS:

How can I write e-mail to users in Romania?

THE PROBLEM I HAVE IS:

I do not know any e-mail address in Romania and, as a matter of fact,

I do not even know if Romania is connected at all.

WHAT DO I WANT TO ACHIEVE IS:

Collaboration with Romanian researchers working in the field of high

energy physics.

--------------------------------------------------------------------

(..this example is purely fictional!)

The questions will be answered by the NCT following the first-in

first-out logic.

The service has been established for a test period of 6 months.

Questions can be submitted at any time, the NCT, however, will usually

reply during working hours.

EXAMPLES OF QUESTIONS THAT WOULD BE HANDLED:

- I want to achieve cooperation with German and French researchers

working in the field of Tandem accelerators and post-accelerator

(booster) systems.

- I have a brand new workstation on my desk and I'd like to have...

- Where and how could I find these programs, XGOPHER XWAIS XARCHIE?

- How could I send a program to another computer for execution?

- Usually, when I send an e-mail I receive an acknowledgement. But,

sometimes, I don't. Do you know why ?

- How can I write e-mail to users in India ?

- I tried to send a mail to the following address and it bounced back.

What's wrong?

- I would like to know where the Bitnet protocol specifications are

available?

- I want to send a mail to a friend who has an X.400 address. How can I

do?

- I'd like to set up a mailing list to discuss the teaching of the

French in Germany with my German colleagues. How can I do?

EXAMPLES OF QUESTIONS THAT WOULD \*NOT\* BE HANDLED:

- I'm looking for a summer job in the US.

- When compiling the Xgopher distribution, I get the following error

message: "ld: Undefined symbol...". Please help.

11. Announcing the "Guide to Network Resource Tools"

------------------------------------------------

by David Sitman (a79@taunivm.bitnet)

The "Guide to Network Resource Tools" describes many of the key tools in

use today among the academic networking community for accessing

resources on the net.

The tools described in this guide have been divided into five functional

areas. The first section, "Exploring the Network", covers Gopher and

World-Wide Web\*, WAIS and ASTRA\* are documented in section two,

"Searching Databases". The third section, "Finding Network Resources",

deals with archie, WHOIS\* and NETSERV\*. Trickle\* and BITFTP are covered

in section four on "Getting Files". The final section, "Networked

Interest Groups", discusses Listserv and Netnews\*.

For each tool, the guide provides a general overview and details on

availability, intended audience, basic usage, and examples.

The guide was produced by the EARN staff.

The "Guide to Network Resource Tools" is available electronically from:

LISTSERV@EARNCC.BITNET

in Postscript and plain text format.

To get the "Guide to Network Resource Tools", send the command:

GET NETTOOLS PS (Postscript format)

GET NETTOOLS MEMO (plain text format)

12. Documentation for end users - New modules

-----------------------------------------

by Nadine Grange (grange@frors12.bitnet)

New documentation modules compiled and produced by the EARN Association

have been released since the March issue of EARNEST. The modules are

available from the EARN information server at LISTSERV@EARNCC.BITNET.

The modules contain documentation on the use of various operating

systems (VM, Unix\*, VMS and MVS\*) for network communications, as well

as information on important network services (LISTSERV, Gopher, archie,

BITFTP, TRICKLE, WAIS, World-Wide Web, WHOIS and NETNEWS), summaries

of software for mail processing on personal computers, and general

information on EARN.

Permission to copy all or part of the documents without fee is granted

provided the copies are not used for commercial advantage and that the

EARN Association is cited as the source of the document.

The modules are available both in plain text and in Postscript (PS

'extension' in the filetype). The Postscript layout fits on A4 and

US-letter formats.

New available modules are:

Topic Files

Network services:

archie ARCHIE MEMO

Gopher GOPHER MEMO

WAIS WAIS MEMO

WHOIS WHOIS MEMO

World-Wide Web WWW MEMO

(The Postscript version will be made available soon).

EARN/Bitnet servers:

ASTRA ASTRA MEMO, ASTRA PS

BITFTP BITFTP MEMO, BITFTP PS

NETSERV NETSERV MEMO, NETSERV PS

Network communication on VMS:

Sending mail VMS EMAIL, VMS EMAIL-PS

Sending files VMS FILES, VMS FILES-PS

Interactive messaging VMS MESSAGES, VMS MSGS-PS

General introduction VMS GENERAL, VMS GEN-PS

Network communication on VM:

General introduction VM GENERAL, VM GEN-PS

Other modules are nearing completion and will be available soon.

Wide distribution of these modules is encouraged. Comments should be

sent to EARNDOC@EARNCC.BITNET.

For a full listing of the modules, send the command:

INDEX DOC

to LISTSERV@EARNCC.BITNET. You will obtain a list of files identified by

a filename and a filetype. Then, to get a file, send the command:

GET filename filetype

to LISTSERV@EARNCC.BITNET.

Operating system-specific documentation on VM or VMS can be ordered

using the command: GET osname\_USE PACKAGE (e.g., GET VM\_USE PACKAGE).

In addition, "LISTSERV Quick Reference" and "Starting out with LISTSERV"

are available in printed version. Ask your national EARN Network Country

Coordinator\*.

13. Server World

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by Turgut Kalfaoglu (turgut@frors12.bitnet)

Welcome to the Server World's fifth issue, where we'll talk about what

is happening in the world of servers, provide usage tips and provide

usage statistics.

SERVER NEWS

NEW BITFTP SERVICE IN EUROPE

The most exciting news this month is a new BITFTP server that just

started at DEARN. As you may know, a BITFTP server acts as a "gateway"

between the sites using the NJE protocol, and the FTP sites on the

Internet. The FTP sites hold software and information on many different

subjects ranging from medicine to multimedia. By providing the BITFTP

server an entire script of an FTP session, you can have it connect to

the FTP site of your choice, execute the given instructions in the

script, and return the results to you, including any files you might

have asked for, via SENDFILE.

The response time of BITFTP@DEARN proved adequate at the time of

testing, taking just five minutes to fetch a file from a well-connected

FTP site. It seems that depending on the FTP site being connected to,

and the speed of your EARN connection to DEARN, it may take between

minutes and hours to receive your files.

To learn more about this server, send a message to BITFTP@DEARN.BITNET

with the line: HELP

TRICKLE ACCEPTS WILDCARDS, ADDS NEW DIRECTORIES

One lingering problem with the Trickle server was that you could not

specify wildcards while asking for directory listings or while ordering

files. Finally, both /PDDIR and /PDGET commands have been enhanced to

accept wildcards in any of the fields, except the main directory name.

For example, "/PDDIR <MSDOS.\*>INF\*" will list all files starting with

INF in any subdirectory of the MSDOS repository. The command "/PDGET

<MSDOS.\*ZIP\*>\*" will attempt to order all files in all subdirectories

that contain the word "ZIP" anywhere in the name (not a very good idea!)

As usual, the daily quotas are still respected, so it is not possible to

overload the server by specifying searches that are too generic.

TRICKLE@FRMOP11 also started supporting the "X11" directory, which is a

direct mirror of all files on the FTP site "export.lcs.mit.edu", the

main source for the X-Window software. Another "entertaining" directory

has also been recently added, and is called "GARFIELD". Named after the

famous cat, GARFIELD is a direct mirror of the FTP site

"garfield.catt.ncsu.edu" which is a large collection of material for

multimedia, including sound and graphics files.

SERVER STATISTICS

\* LISTSERV@FRMOP11 has received 88,000 DIST jobs during the last

month, which led to the "fanning out" to 160,000 DIST jobs in over

3 million lines of messages.

\* In the month of March, the 12 TRICKLE servers in Europe received

62,000 commands, excluding administrator commands and inter-server

communication. They delivered 5 gigabytes of software to these

users, a 10% increase from the previous month.

\* NETNEWS@FRMOP11 received 1.5 gigabytes of news feed from USA, and

sent out nearly 15 gigabytes of data during March. This is a 13%

increase compared with the previous month.

RECORD OUTPUT FROM NETNEWS@FRMOP11

With 3 gigabytes of input and 15 gigabytes of output, NETNEWS@FRMOP11

has beaten its activity records in February. The sudden increase was

attributed in part to a large number of Unix sites within France that

receive their news from this server. In fact, 35% of its output was

directed to sites within France. The news feed itself from USA has come

down by 400 Megabytes, in contrast with the news feed generated in

Europe, which has gone up by 300 megabytes.

That's all for this issue. I hope to see you again soon.

14. Upcoming events

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Conferences:

The Network Services Conference 1993 - NSC'93

organised by EARN in cooperation with

EUnet/EurOpen, NORDUnet\*, RARE\* and RIPE\*.

12-14 October 1993 Warsaw, Poland

IETF

12-16 July 1993 Amsterdam, The Netherlands

Interop

23-27 August 1993 San Francisco, United States

25-29 October 1993 Paris, France

2-6 May 1994 Las Vegas, United States

12-16 September 1994 Atlanta, United States

Decus Europe Symposium

6-10 September 1993 Montreux, Switzerland

SHARE Europe (SEAS)

25-29 October 1993 The Hague, The Netherlands

(Anniversary Meeting)

SHARE

15-20 August 1993 Washington D.C., United States

20-25 February 1994 Anaheim, United States

7-12 August 1994 Boston, United States

INET'93

17-20 August 1993 San Francisco, United States

15. Newsletter information

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If you would like to receive the EARN Newsletter automatically, send the

command:

SUBSCRIBE EARNEST First\_name Last\_name

to LISTSERV@FRORS12.BITNET. To consult the previous issues, send the

command:

GET EARNEST NEWSLTOC

to LISTSERV@FRORS12.BITNET. The last issue is also available from

NETSERV in the file EARNEST NEWSLET, send the command:

GET EARNEST NEWSLET

to the nearest NETSERV; a copy of the last issue is also kept in the

file EARNEST NEWSLET on LISTSERV@FRORS12.BITNET.

The EARN Newsletter is available at the RIPE NCC\*, thanks to Rob

Blokzijl from RIPE, by means of:

WAIS wais.ripe.net

Gopher gopher.ripe.net

WWW www.ripe.net

Interactive telnet\* info.ripe.net

Anonymous FTP\* ftp ftp.ripe.net

The interactive service also gives the possibility to have documents

returned by e-mail (for those who don't have FTP).

The EARN Newsletter is included on the CONCISE\* service, thanks to

Juliana Evans, from the CONCISE helpdesk.

If you want to retrieve the newsletters from this service by e-mail,

send the commands:

start

goto /networks/earn/earnest/issue-#

info

in a piece of mail to concise@concise.level-7.co.uk, where '#' is the

number of the issue you want.

For interactive access over X.25 networks dial:

IXI network address: 2043 3450 3999 15

Public X.25 address: 2342 3440 0193 15

Using this method, you will find it under NETWORKS (top-level index item

No. 23), then type 493 (for EARN), 495 will lead you to EARNEST and 496

(issue-1) will bring up the document.

16. EARNEST Glossary

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Here is a brief explanation of the items in this newsletter which are

marked with an asterisk (\*):

Anonymous FTP - special username (anonymous) that can be used by any

user to access and retrieve files on a FTP site; the e-mail

address is usually used as the password.

archie - server that helps you to locate information at FTP sites across

the Internet.

ASTRA - user interface to databases accessible from the network.

BITEARN NODES - table of all the nodes and links in the international

NJE network (EARN, Bitnet and cooperating networks); every

computer which routes mail in the network must have a copy;

updated at least once a month.

BITFTP - Bitnet FTP server provides a mail interface to allow users to

ftp files from sites on the Internet.

Bitnet - "Because It's Time" NETwork; originally, the academic network

in the US based on NJE; this term is popularly used to refer

to the whole international academic NJE network.

Board of Directors - BoD; EARN's legislative body; a representative from

each EARN member country.

Manfred Bogen - NCC\* for Germany; GMD, Germany.

Daniele Bovio - EARN Technical Manager, EARN Office, France.

Avi Cohen - EARN Vice-President; Tel Aviv University, Israel.

CONCISE - COSINE Network's Central Information Service for Europe.

core sites - Main sites in the regions defined in the EARN

regionalization plan (for details send the command

GET BOD7 91 to LISTSERV@EARNCC.BITNET).

CREN - Corporation for Research and Educational Networking; Bitnet's

governing body.

Hans Deckers - EARN General Manager, EARN Office, France.

DECNET - protocol developed by Digital Equipment for communication in a

computer network.

EARN Association - European Academic and Research Network.

EARNINFO - EARN Information Group; EARN permanent group on Information

Services.

Executive Committee - EXEC; EARN's executive body; 7 members elected by

the EARN BoD;

FTP - File Transfer Protocol; method for transferring files over TCP/IP.

Hans-Ulrich Giese - EARN Master Coordinator, University of Nijmengen,

The Netherlands.

GMD - Gesellschaft fuer Mathematik und Datenverarbeitung, St Augustin,

Germany; hosts the German international EARN node (DEARN).

Gopher - The Internet Gopher is a distributed document delivery service

that allows a neophyte user to access various types of data

residing on multiple hosts in a seamless fashion.

Nadine Grange - Technical staff, EARN Office, France.

Frode Greisen - EARN President, UNI-C (Danish Computing Center for

Research and Education), Copenhagen, Denmark.

INTERBIT - gateway service into the Internet.

Internet - concatenation of many TCP/IP networks.

JNET - NJE emulation for VAX/VMS operating systems.

Turgut Kalfaoglu - Technical staff, EARN Office, France.

LISTSERV - list servers, either "Revised Listserv" by Eric Thomas or

its derived version by EARN Association.

LISTSERV@EARNCC.BITNET - Listserv address which hosts the official EARN

documents and minutes, and the documentation for the end

users.

Greg Lloyd - Technical staff, EARN Office, France.

MVS - one of the operating systems provided by IBM with their machines.

NAD - Node ADministrator; EARN contact at each EARN node.

NCC - Network Country Coordinator; main EARN contact in a country, he/she

coordinates the national EARN nodes.

NETSERV - NETwork SERVer; file server mostly dedicated to the Network

Management.

NETNEWS - computer bulletin board and conferencing system. Herein, it

refers to the VM/CMS implementation.

NJE - Network Job Entry; a service developed by IBM for reception and

transmission in a computer network; the basic service

provided by EARN, Bitnet and their cooperating networks.

NOG - Network Operation Group; technical body which oversees the

international network; one representative from each EARN

member country and the EARN staff.

NORDUnet - Research and Academic Network which covers Denmark, Finland,

Iceland, Norway and Sweden.

OSI - Open Standard Interconnection; constructor independent protocol

suite developed by the CCITT (International Telegraph and

Telephone Consultative Committee) for communication in a

computer network.

QK-MHS - X.400 Mail Transfer Agent for the VM/CMS operating system;

originally developed by Andrew Hooper from Queen's University

Computing Services, Kingston, Canada.

RARE - Reseaux Associes pour la Recherche Europeenne; association of

European networking organizations.

RIPE - Reseaux IP Europeens; collaborative organization of European

Internet service providers.

RIPE NCC - RIPE Network Coordination Center; provides network support

and services for the member organizations.

SENDFILE - VM/CMS implementation of the unsolicited file transfer used

in a NJE-only environment.

David Sitman - EARN Documentation Coordinator, Tel Aviv University,

Israel.

SMTP - Simple Mail Transfer Protocol; electronic mail transfer method

over TCP/IP.

Marco Sommani - EARN Treasurer; CNUCE - Istituto del C.N.R., Pisa, Italy.

Eugenie Staicut - NCC for Romania; Research Institute for Informatics,

Bucharest, Romania.

TCP/IP - Transmission Control Protocol / Internet Protocol; constructor

independent protocol suite developed for communication in a

computer network.

Telnet - remote terminal connection method over TCP/IP.

Eric Thomas - Swedish University Network (SUNET), Kungliga Tekniska

Hogskolan, Stockholm, Sweden; developer of "Revised Listserv".

TRICKLE - server that mirrors software archives accessible via FTP and

caches recently requested files for faster delivery.

Unix - constructor independent operating system.

VM/CMS - one of the operating systems provided by IBM with their

machines.

VAX/VMS - operating system provided by Digital Equipment with their

machines.

WAIS - Wide Area Information Server; experiment for automating the

search and retrieval of many types of electronic information

over wide area networks.

WHOIS - network service which provides directory information.

WWW - World-Wide Web; client/server application that allows to retrieve

and browse documents from various sources: FTP sites,

newsgroups and other information systems such as Gopher or

WAIS.

X.400 - electronic mail transfer method documented in the OSI protocol.