EARNEST,

 the EARN Newsletter

 Num. 5, March 1992

 Published by the

 EARN Association\*

Editor: Hans Deckers\*

Special thanks to Daniele Bovio\*, Hans-Ulrich Giese\*, Nadine Grange\*,

Frode Greisen\*, Turgut Kalfaoglu\*, Greg Lloyd\*, Rogelio Montanana\* and

Dominique Pinse\* 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: April 1993

 The deadline to submit articles for publication is on 31 March 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 5. I am looking forward to receiving more letters,

mail and contributions for future issues.

I told you in the October EARNEST, that EARN and RARE\* will jointly

publish the "R/E Teletribune, which will contain EARNEST amongst other

items. At present, it is planned to change the name from Teletribune to

'Computer Networks for Research and Education'. This publication would

be a supplement to 'Computer Networks and ISDN Systems', published for

RARE and EARN. The composition of the Editorial Board is in progress.

2. Letter to the Editor

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

Dear Hans

 Rather than the "message" you got last time, I will take the time

to write a "real" letter to the editor - and with good cause.

 Thanks to Jack Kessler for his piece on "Europe, at least,

discovers the users", and a huge congratulations to the contributors of

the conference itself, especially to Peter Deutsch for his appropriate

comments. As one of those "users", it is good to hear someone finally

recognizing that we exist. All of us out here wait in eager anticipation

for the next step - someone doing something about it.

 I "got onto" the net because I heard rumors about its existence

and fantasized that it would put me in communication with academic

colleagues. I got an emulation card for my PC and was fortunate to be

able to link up through my university's mainframe. The local structure

provided "some" information, but only the bare minimum. Most of what I

know about using the net I had to learn by myself, through trial and

error, search and hunt. I was \*lucky\* to hear that I could subscribe to

a list like Michael Strangelove's (441495@uottawa.bitnet) CONTENTS

project at University of Ottawa for those interested in religious

studies (\*lucky\* because this information did not come from the net; I

read about CONTENTS elsewhere, quite by accident). From there I found

out about ftp\* and managed to get a copy first of the "Electric Mystic's

Guide to the Internet\*" and then "Zen and the Art of the Internet". My

latest \*lucky\* find was signing up for Richard Smith's (rjs4808@usl.edu)

on-line course, "Navigating the Internet".

 The point here is that everything I have learned so far I have had

to find on my own. The technology evolves so quickly or comes to light

so unpredictably that most of us cannot keep up. Even with the sources

referred to above, I must admit complete ignorance about Archie\*,

Gopher\*, WAIS\*, WWW\*, and a lot of the other things you mention in the

EARNEST glossary. I don't even know the differences between VM\*, VMS\*

and Unix\* (although I know my link is with the first, but do not know

why; our university has all three, and the "big boys" are allowed to

play on all three if they want, but not us "users"). Yet I am aware that

something like Telnet\* is system specific. So what do I and my fellow

users do?

 I would really hate to be patronized with the standard "RTFM\*" -

primarily because there simply IS NO MANUAL available for us

non-technicians. There are reams of paper available for those who do

nothing else but... But are these the people for whom the networks were

created? Are these the people for whom the research funds are being

spent? I doubt it. I think I speak for many when I say hurray for Peter

Deutsch and those who think like him and are willing to do something

about it. And remember, I am probably speaking for many \*thousands\* of

people who are not even on the nets yet and do/will/can not get there

simply because of the technological wall that keeps them from using

these tools at all, let alone using them efficiently.

 All that said, thanks for EARNEST. This may be the most necessary

- perhaps because it is the only - forum that we users have. Keep up the

good work.

 Joe Selling, Leuven, Belgium

3. News from the Exec\*

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 by Hans Deckers (deck@frors12.bitnet)

Highlights of the EARN Executive\* Meeting of 20 and 21 January 1993 in

Paris.

- Executive members responsibilities for 1993-94

Whilst in earlier Executive Committees, responsibilities were

distributed amongst individual committee members, this time it was

decided to make a 'team' responsible for each area:

1. Operations: Jean-Loic Delhaye and Marco Sommani

2. Development: Avi Cohen, Pedro Amorim and Marco Sommani

3. User Services: Tomasz Hofmokl, Avi Cohen, Jean-Loic Delhaye and Paul

Bryant

4. Information and documentation: Paul Bryant and Frode Greisen

5. Finances: Frode Greisen and Marco Sommani

6. Policy: Avi Cohen, Pedro Amorim, Marco Sommani and Tomasz Hofmokl

7. Liaison: Frode Greisen and Tomasz Hofmokl

- Organization of Staff Management

The Executive approved a proposal to change the reporting structure of

EARN staff. (See paper BOD2 93 available from LISTSERV@EARNCC.BITNET)

Accordingly Hans Deckers, currently EARN Manager was appointed EARN

General Manager and Daniele Bovio was appointed Technical Manager.

- New role for EARN in new countries

A task force consisting of Tomasz Hofmokl, Jean-Loic Delhaye and Frode

Greisen will study new roles EARN may play in newly independent

countries.

New Network Operations Group Chairman

On 2 February 1993 Hans Deckers stepped down as NOG\* Chairman. Daniele

Bovio was appointed as the new NOG Chairman. Congratulations, Daniele !

4. News from the Ebone consortium

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

 by Frode Greisen (neufrode@vm.uni-c.dk)

On February 3rd in Luxembourg, the 21 partners of the Ebone\* consortium

confirmed their commitment for 1993. To briefly summarize: they

finalized the budget; made plans to upgrade the backbone lines; set up

an operational structure for the Ebone; and confirmed the Ebone's long

term strategy.

(excerpted from the press release published on February 9, 1993)

"At the meeting, a plan to upgrade part of the backbone was decided.

This means 1.5 Mbps from Stockholm to Washington and to Amsterdam, 1.5

Mbps from Amsterdam to Geneva, 1 Mbps from Geneva to the US and 2 Mbps

from Geneva to Paris, and 1.5 Mbps from Paris to Washington. The US

links are provided in cooperation with NSFnet and other US IP providers.

In addition, 256 kbps links from London to Paris and to Stockholm are

being considered for upgrade and the inclusion of a London to Washington

link is being investigated. A new backbone site in Bonn has been decided

and one in Vienna is being investigated. With this much needed upgrade

Ebone can more confidently transport traffic from the rapidly growing

number of IP hosts in the partners' networks.

... The meeting also confirmed Ebone's long term strategy to concentrate

in the future on providing a neutral interconnect for all networks,

while it is assumed that provision of backbone services will be offered

by one or more (competing) providers in the longer run. Until such

offers are forthcoming, Ebone will take care of its partners' needs in

this area too."

5. Changes in topology

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

 by Daniele Bovio (hi@frors12.bitnet)

The January routing tables contained once more a brand new international

node connected to AEARN (Wien, Austria) called IREARN. IREARN is, in

fact, the first Iranian node joining the NJE\* community and it is hosted

at the Institute of Studies in Theoretical Physics and Mathematics, in

Teheran. The contact for networking problem at IREARN is Ebrahim N.

Mashayekh (ebrahim@irearn), tel +98 21 8014856. Welcome and best wishes

to our Iranian colleagues :-)

The February routing tables contains one small but relevant change. the

international node of Portugal (PTEARN) got a new connection to the

international Spanish node (EBCESCA1) and therefore is now closer to the

EARN2 backbone.

The connectivity situation of the former Soviet Union is also getting

better and soon, thanks to the European Space Agency (ESA), Russia will

again have a permanent connection.

6. Statistics

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 by Greg Lloyd (glloyd@frors12.bitnet)

 and

 by Daniele Bovio (hi@frors12.bitnet)

As we promised in the last issue of EARNEST, we are presenting some data

on the size of the global NJE network, including the minimum, maximum

and average number of hops between nodes (this is the number of nodes

that a message must pass through to get from one computer to another in

the network).

The following table covers the period: December 1992 - February 1993.

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

 December January February

General Statistics

Number of nodes 3389 3337 3326

Number of links 3872 3824 3809

Hop Statistics

Network diameter: 15 15 15

Minimum average hops: 3.81 3.81 3.80

Average number of hops: 6.69 6.71 6.69

Maximum average hops: 10.77 10.77 10.76

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

EARN Core sites

AEARN Avg hops: 4.41 4.43 4.42

CEARN Avg hops: 4.41 4.43 4.43

DEARN Avg hops: 4.41 4.44 4.43

FRMOP11 Avg hops: 4.35 4.36 4.35

HEARN Avg hops: 4.39 4.41 4.40

ICNUCEVM Avg hops: 4.36 4.38 4.37

SEARN Avg hops: 4.37 4.39 4.38

TAUNIVM Avg hops: 4.38 4.40 4.40

UKACRL Avg hops: 4.43 4.46 4.45

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

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

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

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

global average, for any node, is currently 6.69 hops. Since the

completion of the EARN regionalization plan, there have been only small

fluctuations in the values for the European core sites\*.

One important recent change is the move of the Portugal connection from

EB0UB011 to EBCESCA1, which has reduced the average hops of PTEARN from

7.33 (January) to 6.33 (February), and contributed to a general small

reduction of the average values.

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. These are 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 have 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 nodes. The remaining international

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

specific EARN Core node. 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 the links were available for use and the average size

of file queues on them.

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

 | Link | Traffic |

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

 | Average | Average | Volume |

 | Availability | Files Queued | (records) |

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

 -- 1992 | | | |

 June | 93.6 (%time) | 13.7 (files) | 411 M |

 July | 91.8 (%time) | 12.7 (files) | 418 M |

 August | 90.6 (%time) | 19.2 (files) | 376 M |

 September | 94.8 (%time) | 11.1 (files) | 427 M |

 October | 94.1 (%time) | 21.9 (files) | 417 M |

 November | 93.8 (%time) | 31.4 (files) | 423 M |

 December | 91.8 (%time) | 43.7 (files) | n/a |

 -- 1993 | | | |

 January | 94.8 (%time) | 28.5 (files) | n/a |

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

These figures show a reasonably stable percentage of link availability

since June 1992.

The August 'holiday' effect may be observed in the dips for link

availability and traffic volume and a corresponding jump in the files

queued figure. October and November 1992 show the effects of some

chronic queue build-ups over some regional network links. During

December 1992, the EARN backbone suffered some severe disruption due to

changes in its physical configuration. This resulted in the steep

increase in the files queued value for that month. January 1993 shows an

improvement in the overall performance of the network. However, the

chronically overloaded regional links continue to keep the files queued

value high.

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 |

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

 -- 1992 | | | | | |

 June | 8 secs | 7m03s | 19 secs | 8m45s | 4.5 secs |

 July | 7 secs | 7m39s | 15 secs | 9m34s | 4.5 secs |

 August | 7 secs | 8m24s | 15 secs | 8m41s | 4.5 secs |

 September | 7 secs | 5m07s | 15 secs | 7m44s | 5.5 secs |

 October | 6 secs | 6m02s | 12 secs | 6m50s | 6.0 secs |

 November | 6 secs | 4m15s | 12 secs | 4m44s | 6.0 secs |

 December | 5 secs | 3m21s | 10 secs | 3m22s | 6.0 secs |

 -- 1993 | | | | | |

 January | 5 secs | 1m13s | 9 secs | 2m01s | 6.0 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 figures continue to show and overall downward trend in the

figures concerning the files. These figures reflect the extremely good

performance of the EARN backbone, both in terms of transmission speeds

and low file queues. The interactive message figures show a slight but

steady increase due fundamentally to congestion on some links from the

backbone to regional nodes.

7. The gateway between EARN/Internet and IBM Mail

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

 by Dominique Pinse (domi.pinse@ibmx400-fr.ibmmail.circe.fr)

The electronic mail gateway between EARN and the internal PROFS network

for IBM personnel has been in service since January 1992. We have

gathered statistics on the usage of this gateway for the past year.

During the first year of its existence, more than 3,500 users have made

use of this gateway, and almost 40,000 messages have been exchanged.

Since the third quarter of 1992, there has been a sharp increase in

gateway traffic, and more than 1 Mbyte moves through the gateway each

day. This volume has continued in January 1993.

The volume of traffic from EARN and the Internet to IBM is much larger

than from IBM to EARN and the Internet due to the large number of

LISTSERV\* mailing lists to which IBM people have subscribed.

TRAFFIC IN 1992

1) Total traffic in 1992

 EARN/Int to IBM IBM to EARN/Int Total Traffic

 msgs Mbytes msgs Mbytes msgs Mbytes

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

jan 283 0.4 185 0.4 468 0.8

feb 865 3.4 638 2.0 1503 5.4

mar 987 3.4 682 2.1 1669 5.5

apr 795 2.0 627 1.9 1422 3.9

may 814 2.6 610 2.9 1424 5.5

jun 889 3.3 857 2.1 1746 5.4

jul 1103 4.2 809 2.1 1912 6.3

aug 3292 13.0 808 6.5 4100 19.5

sep 4848 17.7 924 2.9 5772 20.6

oct 4513 16.6 1049 4.5 5562 21.1

nov 5404 26.4 1340 4.3 6744 30.7

dec 5370 19.1 1200 4.1 6570 23.2

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tot 29163 112.1 9729 35.8 38892 147.9

2) Number of users having sent or received at least one message in 1992

 IBMers 1080

 EARN/NJE 653

 Internet 1961

 Bad addresses 81

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 Total 3775

HOW TO USE THE GATEWAY

To get a user's guide for the gateway, send the command:

 GET IBMMAIL DESCRIPT

to any NETSERV\* (eg, NETSERV@HEARN). A French version of the user's

guide is available only from NETSERV@FRMOP11 by sending the command:

 GET IBMMAILF DESCRIPT

OVERVIEW OF THE PROJECT

This gateway allows communication between IBM personnel and their

correspondents in the academic community whether they are on EARN,

Bitnet or Internet.

IBM-Europe, initiator of the project, provides the financing, IBM-France

organizes the activities, the EARN Office provides technical assistance

and CIRCE (computer center for the scientific research, Orsay, France)

offers its computing and networking environment.

CONTACTS

If you require assistance, you can contact:

 Dominique Pinse,

 IBM France,

 Phone: +33 1 40 01 56 87

 E-mail: Domi.Pinse@ibmx400-fr.ibmmail.circe.fr

 IEA Address: FRIBM9GM at IBMMAIL

or:

 Nadine Grange,

 EARN Office,

 E-mail: grange@frors12.bitnet

8. New Nodes and Deleted Nodes in the Network

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

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

networks in January or February 1993. Note that Iran joined EARN in

January.

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

Egypt:

 EGFRCUDB

Germany:

 DULRUU52

 DULRUU53

Hungary:

 HUGIRK51

Iran:

 IREARN

Japan:

 JPNJTLSR

The Netherlands:

 HLERUL5F

 HTIKUB50

 HTIKUB51

Portugal:

 PTMAT

Romania:

 ROIFA

 ROIMAR

 ROIPB

 ROLMN

 ROUTT

Russia:

 RUINRVM1

 SUMPEI1

 SUMPEI2

Singapore:

 NTIVAX

 NTIVAXA

 NTIVAXB

 NTIVAXC

 NTUVAX

Turkey:

 TRERUNVM

 TRULUDAG

United States:

 ALMOND HUXTAL1 SNYBCCVB

 ANBIOR INNOSOFT STEIN

 ASU1 MEAD SUFFOLK

 ASU2 NIHCPMB2 SUHMVSF

 CARSON NIHRR31 TUSKACD

 FNMAIL SEMO UNIVSCVS

 HUXTAL0 SNYBCCVA WISCGATE

A listing of the nodes which have been removed in January and February,

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

further information, is given in the files NODES DEL9301 and NODES

DEL9302 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).

9. Documentation for end users

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 by Nadine Grange (grange@frors12.bitnet)

New documentation modules compiled and produced by the EARN Association

are available from the EARN information server at

LISTSERV@EARNCC.BITNET.

These 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, TRICKLE\*, NETNEWS\*,

ASTRA\*, BITFTP\* and NETSERV), 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.

The currently available modules are:

 Topic Files

 LISTSERV:

 Quick reference LSVQUICK MEMO, LSVQUICK PS

 Starting out LSVSTART MEMO, LSVSTART PS

 Network communication on VM:

 Sending mail VM EMAIL, VM EMAIL-PS

 Sending files VM FILES, VM FILES-PS

 Interactive messaging VM MESSAGES, VM MSGS-PS

 Network communication on Unix:

 Sending files UNIX FILES, UNIX FILES-PS

 Interactive messaging UNIX MESSAGES, UNIX MSGS-PS

 EARN/Bitnet servers:

 TRICKLE TRICKLE MEMO, TRICKLE PS

 Relay RELAY MEMO, RELAY PS

 NETNEWS NETNEWS MEMO, NETNEWS PS

 Bringing messaging to the desktop:

 Desktop mail clients MAILCLI PRODUCTS, MAILCLI PS

 Mail server software MAILSRV PRODUCTS, MAILSRV PS

 EARN general information:

 General description EARN BROCHURE, EARN BROCH-PS

 Code of conduct CONDUCT CODE, CONDUCT CODE-PS

 Charter of EARN EARN CHARTER, EARN CHART-PS

Other modules on VMS, MVS, Unix, and LISTSERV, 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.

10. A Spanish version of the EARN Pocket Guide

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

 by Rogelio Montanana (montanan@vm.ci.uv.es)

With the authorization of the EARN Association, Raul Tamarit

(tamarira@vm.ci.uv.es) and I have made a Spanish translation of the well

known EARN Pocket Guide, published by Peter Sylvester in 1991. This

version can be useful for Spanish speaking communities in EARN and

Bitnet.

At present, the Spanish version includes only the general parts of the

guide and the VM specific chapter. Eventually future versions of the

Guide could include other operating systems also, but it is not yet

planned; contributions are welcome!

The document can be obtained from NETSERV@EBCESCA1 with the command:

 GET EARNGUIA LIST

sent in an interactive message or in the text of a mail message.

In order to allow maximum printing facilities the file has been written

in plain text, losing the nice presentation of the original written in

Postscript. Also, national characters have been intentionally avoided.

The guide can distributed and copied without restriction, as long as the

preface, that includes the appropriate attributions, is included.

Please do not hesitate to contact me if you have any questions,

suggestions, etc.

11. Server World

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

 by Turgut Kalfaoglu (turgut@frors12.bitnet)

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

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

usage statistics.

AN NNTP SERVER FOR VM

The first news item I have is the availability of the NNTP\* server for

VM/CMS. An NNTP server allows users who have TCP/IP\* connectivity to

read the Usenet\* news and post replies using the news reader software on

their workstation or PC. Both NNTP servers and clients have been

available for Unix for some time, and now clients are becoming available

for DOS and OS/2 on the PC platform as well.

The VM NNTP server uses the news found on the minidisks of NETNEWS for

VM, so you need to have the NETNEWS server installed to use this

package. The server provides full support of RFC\* 977 protocol, has fast

XHDR processing, and has a full authentication and access control

system. It accepts multiple connections and provides detailed

statistics.

VM NNTP was developed by Kris Van Hees from the University of Leuven in

Belgium. For more information, you may contact him as:

gutest6@blekul11.bitnet.

VMS-STORE

Although there was an article in the last EARNEST, I finally got around

to trying it for myself. This server provides several capabilities that

are not present with the "plain" ftp service, and yet, it is \*not\* an

ftp server - in fact, it's an ftp client.

First of all, it has excellent mirroring capabilities - all that the

file author has to do is to notify VMS-STORE of the site where (s)he

intends to store new copies of the program. VMS-STORE keeps this

information forever, continuously checking and updating the copy stored,

whenever the author places a new copy of the software at an ftp site.

Further, it allows you to subscribe to files using the familiar LISTSERV

commands like AFD\* and FUI\*. So you can automatically receive new copies

of the software, whenever they are updated at VMS-STORE. Since files are

stored in VMS-DUMP format, I am told, there is no messy conversion step

on your system once the files arrive.

I will try to tell you more about it in the next issue, when I know more

about the software, but I'll give you some hints and things to try: Send

an "INDEX <...>" command to LISTSERV@SEARN.BITNET. This appears to show

all the VMS files available on the server - a listing of over 200 files.

To order one, you use the "GET <directoryname>filename" syntax, and

there is even provision for multiple GETs with a single command.

TRICKLE AND FTP

Since its beginnings TRICKLE has relied on anonymous ftp sites to

deliver its directories and requested files. Whenever it needed some

software, it would send a command to a slave ftp server that would

obtain the file.

Taking this idea one step further, efforts are being made to enable the

server to also deliver the files to the users using ftp. In other words,

the server would be the "user", and send you the file to your "host" for

storage at your workstation or PC.

Provided you have the necessary hardware and software, this solution

makes it much more convenient to access software intended to be run on

your workstation. For example, an Internet user in Europe with no

NJE-mainframe access would have to order the file from TRICKLE via mail,

and since TRICKLE splits large files, the user would have to merge the

pieces together using whatever utility was available. Then the poor user

would have to UUDECODE the file before finally having the result. Lots

of work just to have the file in its original format.

The new method requires that you have ftp capabilities available on your

workstation or PC, and that it allows you to accept "anonymous" users.

You just use the /ftp ADD command (once) to your closest server, and

from then on, TRICKLE always uses their ftp-ing sub-servers called

"TRftp" to deliver you the files - provided that the server that has

your file has TRftp slaves defined.

This is the catch: not all TRICKLE administrators have yet defined their

TRFTP servers, thus some TRICKLEs have no idea how to use ftp to send

you the files. If it happens that your file is cached at a such site,

you might still receive your file in the "old fashioned" way, in UUE

format, in a mail message.

A description of the ftp feature is available by sending a /HELP command

in the body of a mail message to a TRICKLE server, for example to

TRICKLE@FRMOP11.BITNET.

SERVER STATISTICS

As you may know, I collect extensive statistics on NETNEWS@FRMOP11 and

TRICKLE servers on a monthly basis. Here are some figures from the

January 1993 reports:

 \* NETNEWS@FRMOP11 has received 1.6 gigabytes of uncompressed news

 feed, and has forwarded it to nine countries with varying feed

 levels, for an output of 9.7 gigabytes of data.

 \* During the same period, all TRICKLE servers combined have

 processed 58 thousand commands from users, received 1 gigabyte of

 data, and sent out 4.5 gigabytes, with Germany, Netherlands and

 Turkey being the top three countries to request software from

 TRICKLE.

 \* LISTSERV@FRMOP11, one of the busiest LISTSERV servers, has

 received over 60,000 DIST jobs, and produced 2.3 million lines of

 output in 125,000 DIST jobs.

I store the data on NETNEWS and TRICKLE statistics on my PC, and you are

welcome to download it via anonymous ftp. I keep the full reports, and

raw data files at earn-ps.circe.fr.

I'll see you again in two months and meanwhile, let me know if you would

like me to review or talk about a particular server.

12. NSC'93 - Call for papers

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NSC'93 will take place in Warsaw from 12 through 14 October 1993. The

first announcement and call for papers is being sent out. Most important

information is given below. You can obtain the full announcement from

LISTSERV@FRORS12.BITNET in the file NSC93 ANN1. Wide distribution of

this announcement is encouraged.

 NSC'93

 The Network Services Conference 1993

 Warsaw, Poland, 12-14 October 1993

Overview

Networking in the academic and research environment has evolved into an

important tool for researchers in all disciplines. High quality network

services and tools are essential parts of the research infrastructure.

Building on the success of the first Network Services Conference in Pisa

Italy, NSC'93 will focus on the issue of providing services to

customers, with special attention paid to the exciting developments in

new global high-level tools. We will address the impact of the new

global tools on service development and support, the changing function

of traditional tools and services (such as archives), new services (such

as multi-media communications), the future role of the library and the

effects of commercialization of networks and network services. Customer

support at the institutional and campus level, and the role of support

in accessing global services, will also be covered.

Talks, tutorials, demonstrations and other conference activities will

address the needs of the research, academic, educational, governmental,

industrial, and commercial network communities.

NSC'93 is being organized by EARN in conjunction with EUnet/EurOpen,

NORDUnet, RARE, and RIPE\*.

Tutorials, Demonstrations and Posters

There will be tutorial sessions on specific network services as part of

the regular conference program. A room will be available for

workstations and PCs to be used for demonstrations throughout the

conference.

Proposals for tutorial sessions and demonstrations are welcome. See the

section "Call for papers" of this announcement for details.

A poster wall will be available to participants for the display of their

posters and projects.

Further Information and General Inquiry

Further information will be available through the conference mailing

list, NSC93-L@FRORS12.BITNET (or NSC93-L@FRORS12.CIRCE.FR). If you want

to make sure you receive registration information as well as the

preliminary program and other information of interest to conference

participants, join the list by sending e-mail to:

 LISTSERV@FRORS12.BITNET (or LISTSERV@FRORS12.CIRCE.FR)

with the line:

 SUB NSC93-L Your Name

If you have any questions or require any assistance, you can contact the

conference organizers at the address below.

Call for Papers

The Program Committee for NSC'93 is soliciting proposals for papers,

tutorials and demonstrations in all fields related to network services.

Subject areas for presentations include, but are not limited to, the

following:

- Network resource tools

- Network directory services

- Multimedia Communications

- Electronic Publishing

- Libraries and Networking

- Special Interest Communities

- Groupware, Cooperative Work over the Network

- Networking for Schools

- User Support

- Delivering Services to the Desktop

- Commercialization of Network Services

- Networking in Eastern and Central Europe

Speakers will be entitled to a 25% discount on the registration fee.

Proposals for presentations, tutorials and demonstrations, including a

short biography and an abstract should be sent by mail, fax or

PREFERABLY e-mail, to:

 NSC'93

 EARN Office

 c/o CIRCE

 BP 167

 F-91403 Orsay

 France

 Tel: +33 1 6982 3973

 Fax: +33 1 6928 5273

 E-mail: NSC93@FRORS12.BITNET or

 NSC93@FRORS12.CIRCE.FR

Dates to remember:

 Deadline for papers - 8 May 1993

 Notification of acceptance of papers - 8 June 1993

 Deadline for demonstrations - 3 August 1993

 Notification of acceptance of demonstrations - 17 August 1993

Please include the following information in your proposal:

Name(s):

Affiliation(s):

E-mail address(es):

Postal address(es):

Title of presentation:

Type of presentation (paper, demo, tutorial):

Biographical sketch (5-10 lines):

Abstract (25-40 lines):

Equipment required:

13. Upcoming events

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Meetings:

 EARN Board of Directors\*

 . 9-10 May 1993 Tromdheim, Norway

 RARE Council of Administration\*

 . 13/14 May 1993 Trondheim, Norway

Conferences:

 4th Joint European Networking Conference - JENC93

 10-13 May 1993 Trondheim, Norway

 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

 29 March - 2 April 1993 Columbus, United States

 12-16 July 1993 Amsterdam, The Netherlands

 Interop

 8-12 March 1993 Washington D.C., United States

 23-27 August 1993 San Francisco, United States

 25-29 October 1993 Paris, France

 18-22 March 1994 Washington D.C., United States

 12-16 September 1994 San Francisco, United States

 Decus Europe Symposium

 6-10 September 1993 Montreux, Switzerland

 SHARE Europe (SEAS)

 19-23 April 1993 Hamburg, Germany

 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

 Interim SHARE

 23-26 May 1993 San Antonio, United States

 INET'93

 17-20 August 1993 San Francisco, United States

14. 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.

15. EARNEST Glossary

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

marked with an asterisk (\*):

AFD - Automatic File Distribution;

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 a password.

Archie - server that helps you to locate information at ftp sites across

 the Internet.

ASTRA - user interface to data bases accessible from the network.

BITFTP - Princeton Bitnet ftp server provides a mail interface to allow

 EARN/Bitnet 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.

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

CONCISE - COSINE Network's Central Information Service for Europe

Hans Deckers - EARN General Manager, EARN Office, France

EARN Association - European Academic and Research Network.

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

 from each EARN member country.

EARN 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)

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

 elected from the EARN BoD;

Ebone - European Backbone Network; operates a European core backbone

 between 5 central sites (Amsterdam, Geneva, London,

 Montpellier and Stockholm).

FUI - File Update Information;

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

 The Netherlands.

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.

Internet - concatenation of many TCP/IP networks.

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.

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.

NNTP - Network News Transfer Protocol; protocol used for transferring the

 news.

RARE - Reseaux Associes pour la Recherche Europeenne; association of

 European networking organizations.

RARE Council of Administration - CoA; RARE's legislative body.

RFC - Request For Comments; technical notes of the Internet research

 and development community.

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.

RTFM - Read The Fantastic Manual...

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.

TRICKLE - server that mirrors software archives accessible via ftp and

 caches recently requested files for faster delivery.

Unix - constructor independent operating system.

Usenet - provides the news broadcast service

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.

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.