EARNEST,

 the EARN Newsletter

 Num. 1, May 1992

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 EARN Association\*

Editor: Hans Deckers\*

Special thanks to Daniele Bovio\*, Hans-Ulrich Giese\*, Frode Greisen\*,

Greg Lloyd\* and David Sitman\* for their contributions.

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Next issue: July 1992

 The deadline to submit articles for publication is on 1 July 1992.

Newsletter information:

 If you would like to receive the next issue of 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.

 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. Why EARNEST?,

 by Hans Deckers (deck@frors12.bitnet)

The Editor's corner

 This is the first issue of EARNEST, the EARN Newsletter. EARNEST is

meant to be different things to different people. For those interested

in the technical side of the network, there will be regular features on

changes in network topology, reports and explanations of network, and

lists of those nodes which have joined or left the network. Those of you

interested in network policy issues and internetworking should enjoy the

features on relations with other networking and computer groups,

announcements from the EARN management, reports from the EARN Executive\*

and the EARN BoD\*, and information on special EARN events. In future

issues, we will have guest columns featuring the latest developments in

network user services. And the lighter side of EARN is represented in

this issue by a networking crossword puzzle.

 Much of the information in this issue can be found in official EARN

documents, but we hope to present it here in a way which is accessible

to all readers.

 Whatever your interests and whatever your level of networking

knowledge and involvement, we hope that you find EARNEST edifying and

enjoyable.

2. Liaison to other organizations,

 adapted from a report by EARN President Frode Greisen.

 (To get the full report send the command: GET BOD7 92

 to listserv@frors13.bitnet)\*

 A. RARE\*

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EARN has participated in RARE COA\* meetings and in the task force on the

Operational Unit\*. We have supported the establishment of the RIPE NCC\*

and cooperated on the special RARE project, Ebone\*.

Following a decision by the EARN BoD in November, 1991 in Prague, a

paper was written by Kees Neggers, Michael Walsh and Frode Greisen on

the possible set up of a new organization from EARN, RARE and possibly

other organizations. The proposal was submitted to the January RARE COA

meeting but it did not find favor with the COA. However, while the 'top

down' approach was rejected, it was decided to try to find possible

areas of cooperation in a 'bottom up' way. Subsequently, a working group

was established consisting of Kees Neggers, Howard Davies and Steve

Druck representing RARE and Frode Greisen, Avi Cohen and Paul Bryant

representing EARN, and the preliminary work of this group, on

cooperation between RARE and EARN was approved by both organizations in

May, 1992 in Innsbruck. (For a copy of the report, send the command:

 GET BOD12 92 to listserv@frors13.bitnet).

As in previous years, EARN NOG\* and staff members have actively

cooperated in RIPE\* as the European IP network is increasingly the

carrier of NJE\*, especially after the EARN regionalization was

implemented. Daniel Karrenberg has been employed as RIPE NCC manager and

the center is being set up at NIKHEF in Amsterdam.

As in the past, EARN supported the Joint European Networking Conference

held in Innsbruck, Austria, May 11-14, 1992, and RARE has decided to

support the Networking Services Conference being organized in Pisa this

fall by EARN in cooperation with EUnet, NORDUnet, RIPE and RARE. You can

see the preliminary conference announcement and call for papers in

section 7 of this newsletter.

 B. CREN\*

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The cost sharing of the transatlantic line between CREN and EARN lasted

for about nine months, until EARN decided to cancel the dedicated line

which became redundant with the establishment of Ebone. EARN has

gratefully acknowledged the contribution from CREN. Note that BITNET\*

now reaches several countries in Central and South America as well as in

Asia.

There is close technical cooperation between CREN and EARN people as

well as some activities on the policy level. A good example of this is

the Code of Conduct (for details, send the command: GET EXEC113 91

to listserv@frors13.bitnet).

 C. EurOpen (EUnet)\*

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There have been informal talks with EUnet concerning the Operational

Unit, Ebone and organizational matters. To some extent, EARN and EUnet

serve the same community with different technology, but EUnet does not

limit itself to education and research, and its funding derives directly

from its member institutions.

EUnet is cooperating actively on the Pisa conference and also in Ebone.

 D. Internet Society

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EARN has joined the newly formed Internet Society as an Institutional

member. The society's goal is to promote the evolution and growth of the

Internet in its widest sense. It sponsors an annual conference which

will be in Japan in 1992, in San Francisco together with Interop in 1993

and in Europe in 1994.

The society produces a quarterly news bulletin and there are plans for a

more in-depth journal.

 E. IBM

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The mail gateway between EARN and IBM's internal VNET was established in

January, 1992 and a users' guide is available from Netserv (send the

command: GET IBMMAIL DESCRIPT to the nearest Netserv). Any EARN/BITNET

user can communicate with any IBM employee, but IBM employees must

register in a special (automated) user directory.

Incidentally, the IBM/BITNET RSCS gateway has recently been upgraded to

'any to any' mode, but both IBM and BITNET users need to register.

We have secured IBM support for the NSC'92 and the JENC3 conferences.

 F. DEC

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Digital has been active in East Europe, but unfortunately the G-box\*

equivalents have not yet been installed in the Central and Eastern

European countries. However, some of them are now on order.

3. Changes in topology,

 by Daniele Bovio (hi@frors12.bitnet)

The following table shows the international links which have been tested

and added recently into BITEARN NODES\*. Most of these links have been

added as part of the implementation of the EARN Regionalization plan.

The first column is the date when the link was opened, the second is the

date when test traffic was first routed through the link, the third date

represents the beginning of link monitoring by the EARN Office. The last

column shows the version of BITEARN NODES in which the link was put into

production (a question mark indicates a planned date).

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

LINK | LOCAL | TRAFFIC | MONITOR | BITEARN |

 | TEST | | | NODES |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 TO US

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

CEARN PUNFSV2 | 3/9/90 | 9003 | 9010 | 9010 |

ICNUCEVM UICVM | 10/7/91 | 9108 | 9108 | 9108 |

TAUNIVM RICEVM1 | 18/3/91 | 9103 | 9104 | 9104 |

SEARN CORNELLC | 15/5/91 | 9105 | 9105 | 9106 |

AEARN UGA | 4/6/91 | 9106 | 9106 | 9107 |

DEARN YALEVM | 7/6/91 | 9107 | 9107 | 9108 |

UKACRL VTBIT | 18/7/91 | 9108 | 9108 | 9108 |

FRMOP11 MITVMA | 15/4/91 | 9105 | 9105 | 9112 |

HEARN UIUCVMD | 12/91 | 9112 | 9201 | 9201 |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 EUROPE

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ICNUCEVM CEARN | 28/2/91 | 9103 | 9103 | 9107 |

ICNUCEVM SEARN | 30/1/91 | 9102 | 9103 | 9107 |

ICNUCEVM AEARN | 10/5/91 | 9105 | 9105 | 9107 |

ICNUCEVM HEARN | 27/4/91 | 9105 | 9105 | 9105 |

HEARN SEARN | 21/4/91 | 9105 | 9105 | 9105 |

HEARN CEARN | 22/4/91 | 9105 | 9105 | 9105 |

HEARN AEARN | 10/5/91 | 9105 | 9106 | 9107 |

HEARN DEARN | 15/5/91 | 9108 | 9108 | 9108 |

GBGBOX FRMOP22 | 02/9/91 | 9103 | 9104 | 9106 |

ITGBOX GBGBOX | 06/9/91 | 9107 | 9109 | 9109 |

DEARN GBGBOX | 08/91 | 9108 | 9110 | 9110 |

HEARN FRMOP11 | 15/7/91 | 9107 | 9108 | 9108 |

ICNUCEVM FRMOP11 | 30/8/91 | 9109 | 9109 | 9110 |

FRMOP11 AEARN | 15/7/91 | 9108 | 9108 | 9108 |

HEARN TAUNIVM | 08/91 | 9109 | 9110 | 9112 |

CEARN TAUNIVM | 09/91 | 9110 | 9112 | 9112 |

ICNUCEVM TAUNIVM |18/11/91 | 9112 | 9112 | 9112 |

DKEARN SUEARN2 | 10/91 | 9111 | 9111 | 9111 |

FRMOP11 TAUNIVM | 11/91 | 9111 | 9112 | 9112 |

DEARN TAUNIVM | 11/91 | 9111 | 9111 | 9112 |

AEARN TAUNIVM | 11/91 | 9111 | 9101 | 9202 |

ICNUCEVM DEARN |13/11/91 | 9112 | 9112 | 9112 |

UKACRL HEARN |11/12/91 | 9201 | 9201 | 9201 |

AEARN DEARN | 27/1/92 | 9202 | 9202 | 9203/4 |

AEARN UKACRL |11/12/91 | 9201 | 9201 | 9201 |

UKACRL TAUNIVM | 15/2/92 | 9202 | 9203 | 9207? |

UKACRL SEARN | 15/2/92 | 9202 | 9203 | 9206? |

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4. Statistics,

 by Greg Lloyd (glloyd@frors12.bitnet)

This article is an introduction to EARN network statistics. The most

notable event that has occurred with the EARN network in recent years is

the introduction and implementation of the EARN Regionalization plan.

This was initiated in February 1992 and from that period there has been

a marked improvement in the network's performance.

Another development within the EARN network has been the implementation

of utilities to gather and process network statistics. There is

currently a project to improve and expand data collection and

subsequently make available more sophisticated network reports.

There are two main sources of network statistics: the volume of traffic

sent and received from all EARN international nodes and secondly,

measures of network link performance including down times, queues and

transmission times. Following is a brief summary:

End to End Traffic (4Q91)

The average monthly number of records sent and received was 627 M. This

is an increase over the 536 M in the previous quarter and again over the

same figure for the 4th quarter of 1990, 567 M.

Link Down Times

The EARN network experienced an average down time of all international

links of 8.3% during 1Q92. This is an improvement over the 9.6% seen in

4Q91.

Link Queues

The nature of queues on the EARN international network links has changed

subtly since the regionalization plan has been introduced. We are now

more likely to experience acute (spiky) rather than chronic (flat) queue

profiles on the network. This indicates that queues build quickly due to

link down time, but then they clear quickly once the link is reopened.

This situation is a drastic improvement over the constantly high queue

values experienced before regionalization and it must be borne in mind

that traffic volume on the EARN network is still increasing. There are,

however, a few international network links that continue to experience

chronic high-value queues for site-specific reasons.

Future Directions

We will soon be in a position to publish file and interactive message

round trip time data. This will be useful in evaluating link

transmission performance and reliability. We also intend to produce

separate network statistic reports for only the EARN core sites\* as a

guide to the EARN core network performance. The reports available from

all statistics gathered will be broadened along further parameters such

as link performance over physical versus virtual links.

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 May, 1992. The new nodes are listed below by country.

Brazil:

 BRUFVMUS

Columbia:

 UCHCEC3

 UTANOR

 UTAVMS

France:

 FRUPAS81

Hungary:

 HUSOTE51

 HUBIIF11

Turkey:

 TRITUCS

United-States:

 ARSAIPL

 GIBBS

 MSUMUSIC

 SYREDU

 TTHSC

The following nodes have been removed in May 1992 for different reasons,

eg, the machine doesn't exist any more, or the site is reachable via a

different address. The new address or the name of a person you can

contact to obtain further information is given together with the node

name.

ANLEES1, ANLEES2, ANLEES3, ANLNBI2, Argonne National Laboratory Energy

 and Environmental System,

 Contact: Barry S. Finkel, +1.708.252.7277

ANLVMEX, ANLVMS, ANLVMSP, ANLVMXA, Argonne National Laboratory,

 Contact: Barry S. Finkel, +1.708.252.7277

DM0GSF51, GSF-MEDIS AG Signalverarbeitung Muenchen

 Contact: Mederer, +49.89.3187.5462

FINOUC, Oulu University

 Contact: Paavo Moilaner, +358.81.352592

HUBIIF, Computer and Automation Institute Budapest

 Contact: Sandor Aranyi, +36.1.1497984, ib001ara@huearn

JPNUTDME, The University of Tokyo Dept. of Technical Engineering

 Contact: Kazuhiro Oikawa, +81.3.3812.2111

MCMVM1, McMaster University Information

 Contact: Peter Coleman, +1.416.529.7070 ext. 3856

SENECA, Seneca College

 Contact: Ian Vaz, ian@mars.senecac.on.ca

UHCCUX, University of Hawaii Computing Center

 Contact: Walter S. Yee, +1.808.956.7351, t004480@uhccmvs

UNCCHEM, UNCVAX1, University of North Carolina at Chapel Hill Academic

 Computing Services

 Contact: Daniel Dwingate, +1.919.962.9107, uwingt@unc

UQHULL, Universite du Quebec a Hull

 Contact: ducharme@uqah.uquebec.ca

 Phone: (819) 773-1615

 Fax: (819) 773-1638

6. EARN Visitors program, 2-6 March 1992,

 by Hans Deckers (deck@frors12.bitnet)

A session of the EARN visitor's program was organized from 2 through 6

March 1992 at the EARN Office, CIRCE, Orsay, France. Nadine Grange

coordinated contacts (phone, FAX, e-mail) with the expected guests. The

EARN staff team, reinforced by Niall O'Reilly, who came over from

Ireland, prepared the program and documentation and ran a very

professional visitor's program week with tutorials, hands-on sessions

and informal question and answer sessions. There were even parallel

sessions when visitors interested in IBM or DEC worked separately. CIRCE

contributed to the effort with two well equipped demonstration rooms.

The visitors were:

 Alexander Simeonov and Nikolay Avramov from Bulgaria,

 Polycarpos Hadjipolycarpou from Cyprus,

 Jonas Mockus and Petras Sulcas from Lithuania and

 Manuela Dobre and Eugen Staicut from Romania.

Our strongly motivated and enthusiastic visitors contributed

significantly to the success of the meeting. If there are enough

requests then the next visitor's program will take place in the week of

5 October 1992.

7.NSC 92 - The Network Services Conference 1992

The complete announcement is available from listserv@frors12.bitnet, in

the file NSC92 ANN1.

 First Call for Participation / Call for Papers

 NSC'92, The Network Services Conference 1992

 Pisa, Italy, November 3-5, 1992

 Overview

The world of academic and research networking has evolved to the point

where the protocol wars have become largely irrelevant. This is

demonstrated by the recent appearance of high-level networking tools

which are worldwide in scope and which run simultaneously over many

different lower layers.

NSC 92 will focus on issues in providing services to customers, with

special attention paid to the recent and exciting developments in new

global high-level tools such as World-Wide Web, Prospero, Archie, Alex,

Gopher, and WAIS. 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), upcoming specific services such

as new databases, and the future role of the library. User support at

the campus level, and the role of support in accessing global services,

will be addressed.

The conference will be of greatest interest to network service providers

and sophisticated users who are changing their focus from providing or

obtaining bandwidth to offering, supporting, and using varied and

powerful services. Talks and other conference activities will address

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

industrial, and commercial network communities.

NSC 92 is being organized by EARN in conjunction with EUnet/EurOpen,

NORDUnet, RARE, and RIPE.

 Further Information and General Inquiry

Further information will be available through an ad hoc conference

mailing list. If you want to make sure you receive the invitation as

well as the preliminary program please ask for subscription to the

conference mailing list (NSC92@FRORS12.BITNET) sending mail, e-mail or

fax specifying your e-mail address to:

 Nadine Grange (GRANGE@FRORS12.BITNET)

 EARN Office

 c/o CIRCE

 BP 167

 F91403 Orsay France

 Tel: +33 1 6982 3973

 Fax: +33 1 6928 5273

General inquiries can be made at NSCINFO@FRORS12.

8. Crossword puzzle,

 by David Sitman (a79@taunivm.bitnet)

Here is a crossword puzzle for EARN cognoscenti. Some answers can be

found by reading this newsletter, while others require some knowledge of

the network, names of protocols, countries, people and nodes. Readers

with a technical background might find some of my clues imprecise. For

that I apologize. I hope that you enjoy the puzzle, and if you learn

some network trivia along the way, I will take the blame. By the way,

for those of you who can't wait until the next issue of EARNEST to see

the solution to the puzzle, send the command: GET CROSSWRD SOLUTION

to listserv@frors12.bitnet.

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|1 |2 |3 |XXX|XXX|4 |5 | | 6| |

| | | |XXX|XXX| | | | | |

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|XXX|7 | |8 |9 |XXX| |XXX|XXX| |

|XXX| | | | |XXX| |XXX|XXX| |

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|XXX|10 | | | | | |11 |XXX| |

|XXX| | | | | | | |XXX| |

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|XXX|XXX|XXX|12 | |XXX|13 | | | |

|XXX|XXX|XXX| | |XXX| | | | |

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|XXX|14 |15 | | |XXX|XXX| |XXX|XXX|

|XXX| | | | |XXX|XXX| |XXX|XXX|

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|16 | | |XXX| |XXX|XXX|17 |18 |19 |

| | | |XXX| |XXX|XXX| | | |

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

|XXX|20 | |XXX| |XXX|21 | | | |

|XXX| | |XXX| |XXX| | | | |

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|22 |XXX|23 |24 |XXX|25 | | | | |

| |XXX| | |XXX| | | | | |

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|26 |27 | | |XXX|28 | |XXX| |XXX|

| | | | |XXX| | |XXX| |XXX|

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|29 | | | | |XXX|30 | | | |

| | | | | |XXX| | | | |

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ACROSS

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1. This finds Internet machine names.

4. EARN's Great Dane.

7. RSCS emulation package.

10. What it is important to read (and be).

12. Country code of EARN's past president.

13. Organization of our American cousins.

14. Source of name of popular X.500 software package.

16. Company involved in running Arpanet.

17. Kind of printer control characters.

20. Abbreviation for one of EARN's areas.

21. RSCS emulation package for Unix.

23. Country of JENC3 conference.

25. A Scandinavian network.

26. It's unusual to find this group in an EARN puzzle.

28. Countries which can't get Revised Listserv.

29. Software package for NJE over IP.

30. Site of EARN's Network Services Conference in November, 1992.

DOWN

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2. Protocol used by EARN.

3. IBM communications protocol.

5. IBM is taking a chance on this kind of Unix machine.

6. Us.

8. Author of Revised Listserv.

9. An African site.

11. Turkey's national node.

14. Bitnet's early sponsor.

15. List for EARN NetNews distribution.

18. Appears to be.

19. Suitable name for early CNC programming language.

21. Protocol for News network.

22. Ending for lists or nets.

24. A golfer's tool.

25. Country code for 25 across.

27. Morning in America.

9. EARNEST Glossary

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

marked with an asterisk (\*):

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.

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 - works in the EARN Office, France.

CREN - Corporation for Research and Educational Networking; the merger

 of the Bitnet and CSNET networks.

Hans Deckers - EARN manager, works in the EARN Office, France

EARN Association - European Academic and Research Network.

EARN BoD - Board of Directors; 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.

EARN Executive - elected committee responsible for the execution of BoD

 decisions.

EARN NOG - EARN Network Operations Group; technical body which oversees

 the international network.

Ebone - European Backbone Network; operates a European core backbone

 between 5 central sites (Amsterdam, Geneva, London, Montpellier

 and Stockholm).

EUNet - European Unix Network; provides mail and news services, no more

 restricted to the Unix community.

G-box - A MicroVax which run a particular set of softwares to carry NJE

 traffic on top of OSI. It was part of an EARN-Digital project

 which ended in May 1991.

Hans-Ulrich Giese - EARN Master Coordinator, works in the University

 of Nijmegen, The Netherlands.

Nadine Grange - works in the EARN Office, France.

Frode Greisen - EARN president.

listserv@frors13.bitnet - Listserv address which hosts the filelist of

 official EARN documents.

Greg Lloyd - works in the EARN Office, France.

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.

Operational Unit - entity to provide network backbone services for the

 European academic and research networking community.

RARE - Reseaux Associes pour la Recherche Europeenne; association of

 European networking organizations.

RARE COA - the RARE Council of Administration; RARE's legislative body.

RIPE - Reseaux IP Europeens; collaborative organization of European

 Internet service providers.

RIPE NCC - RIPE Network Coordination Centre; provides network support

 and services for the member organizations.

David Sitman - EARN Documentation Coordinator, works in Tel Aviv

 University, Israel.