

CO-ORDINATING COMMITTEE FOR
INTERNATIONAL RESEARCH NETWORKING (CCIRN) MEETING

April 17th - April 18th, 1989

Coseners House, Abingdon, England

Present:

B Bostwick	FRICC/US	Bostwick@nmfecc.llnl.gov
R Cooper	RARE	R.Cooper@Rutherford.ac.uk
R L A Cottrell	DOE/HEPNET/ESNET	Cottrell@SLACVM.BITNET
F Fluckiger	HEPNET/CERN	Fluckiger@VXCERN.CERN
S Goldstein	NSF	Goldstein@NASA.GOV
J Hutton	RARE	JSH@nikhef.hep.nl
P Kaufmann	RARE	Kaufmann@zpl.dfn.dbp.de
P Kirstein	ICB	Kirstein@cs.ucl.ac.uk
B Leiner	IAB	leiner@riacs.edu
N Newman	CEC/COSINE	N.Newman@QZCOM.BITNET
M Pullen	DARPA	pullen@vax.darpa.mil
P Shames	STSCI/NASA	PMBS@STSCI.EDU
S Tafvelin	NORDUNET	Tafvelin@ce.chalmers.se
R Taylor	NRC Canada	Taylor@VM.NRC.CA
V Taylor	DND, Canada	vktaylor@ncs.dnd.ca
E Valente	INFN/GARR	Valente@ROMAI.IFN.IT
A Villasenor	NASA	VILLASENOR@NASA.GOV
L Welch	DOE	Welch@anlphy.bitnet
S Wood	JANET (Secretary)	S.Wood@rutherford.ac.uk

Apologies:

F Greisen
D Karrenberg
L Landweber

1. WELCOME

R Cooper welcomed the members of the Coordinating Committee for Intercontinental Research Networking to Abingdon. As a number of new members were present each member introduced themselves to the meeting.

2. AGENDA

The Committee agreed to the changes made to the draft agenda.

3. ACCURACY OF THE MINUTES OF THE PREVIOUS MEETING

The following changes were made to the previous minutes.

II.F

J Curley discussed NRCNet which is planned to operate at T-1.

IV Mail

P Kaufmann was tasked with updating X.500 gateway information on mail conversion.

IX Interconnectivity workshop

A paper from the "Less than Zero Working Group" was distributed. This report addressed the issues of sharing, access control and end-to-end services.

The minutes of the previous meeting held on the 12 October were then accepted.

4. ACTIONS AND MATTERS ARISING (UNLESS ELSEWHERE ON THE AGENDA)

4.1 (VII) ISO Standards

J Hutton stated that the definition of this issue could be found in the COSINE specification report.

B Leiner asked for the actions from each meeting to be distributed as soon as possible after the meeting.

5. SHORT UPDATE ON MAJOR EVENTS SINCE LAST MEETING

J Hutton suggested that a short document should be distributed prior to the meetings describing the major networking updates in Europe and North America in the time between meetings. The meeting agreed with this proposal.

5a US

B Bostwick stated that the FRICC had produced a draft 5 year plan for a National Research Network. Currently it is proposed that the NSF backbone will be increased to 45 megabit. Requests for tender for this backbone have been sent out and it is hoped that work will begin on this in 1990. M Pullen reported that the FRICC hoped to see a gigabit National Research Network within 10 years.

M Pullen stated that the Defence Research Internet is running as a network testbed.

NSFNET

S Goldstein reported that traffic on the NSF backbone was increasing exponentially. Currently there were in excess of 550 attached networks. MERIT expects to upgrade all individual circuits between nodes to full T1 from partial T1. Merit and MCI will replace the Integrated Digital Network Exchange (IDNX) switches at the nodes with MCI's Digital Reconfiguration Service (DRS) which will permit Merit to reconfigure services at the level of MCI's circuit plant.

NASA

A Villasenor stated that NASA had agreement for a two 56 Kbps lines to Japan.

DOE

L Welch stated that ESNET, as the result of a technical review, will use a dual protocol (IP/DECnet) backbone until

products using ISO standards are available.

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5b Canada

R Taylor reported that a draft RFP exists for a national backbone for Canada. He hoped that the backbone would be in place by the end of summer 1989. The initial speed of the backbone will be 56 Kbps.

5c Europe

(i) COSINE Project

The specification phase had been completed and it had been agreed to move to the implementation phase.

A list of proposed projects had been agreed, but the funding had yet to be finalised.

The priorities for funding are,

- services MHS (including US gateways)
- IXI, (X.25 backbone)
- Information Services
- pilots on FTAM, X.500.

(ii) International X.25 Infrastructure (IXI)

Negotiations were taking place with the following bodies. CEC, COSINE, RARE, the Dutch PTT and other PTTs. It was realised that there could be a regulatory problem to be solved between the Dutch PTT and other European PTTs.

Initially IXI would be based on 64 Kbps links with an upgrade to 2 Mbps as soon as possible.

(iii) Community Collaborations

M Newman stated that there was a proposal to provide X.400 access for small groups via YNET.

P Kirstein reported that the RACE project is installing a 2MB network, known as EBIT. N Newman stated that the EBIT project was to be used as a network testbed, which would be ready in 12 months.

(iv) CERN

F Fluckiger stated that HEP were installing links in the 2Mbps range between CERN and Bologna, Saclay, Lyons and Zurich in preparation for the beginning of the LEP experiment.

DFN

P Kaufmann reported that the German PTT will provide a 64 Kbps X.25 research network for DFN by the summer of 1990. The tariff rates for the use of the network will be fixed. There are plans to use 140 Mbps fibre to connect main sites, the first connection is expected to be installed by the end of 1989.

Italy

E Valente reported that Italy have plans to install 2 Mbps links connecting all the Italian networks by the end of 1989. The Italians have stated their commitment to OSI.

Nordunet

S Tafvelin stated that USENET and NORDUNET had agreed to use each other's networks as backup routes to their own.

ICB

B Bostwick said that he found P Kirstein's paper on 'The Terminal and Mail Conversion Relaying Facilities in the CCIRN communities operating in March 1989' very useful and he hoped it would be kept up-to-date. P Kirstein agreed to keep the document up-to-date and stated that he had already produced a new version. He asked all members of the committee to send any updates to him.

Action: P Kirstein
Action: All

P Kirstein stressed the need for technical collaboration between the CCIRN and the ICB. P Kirstein will confirm if it is possible to make available the minutes of the open meeting of the ICB to the CCIRN.

Action: P Kirstein

6. ORGANISATIONAL MATTERS

J Hutton stated that in future he will ensure that each document presented to the meeting is given a reference number.

B Leiner stated that if the minutes of the CCIRN are made public then it would be more useful to know what organisations people are representing rather than where they are from.

a. Membership Matters

(i) Representation

J Hutton stated that the question of representation at these meetings had been discussed a year ago and it had been agreed that the NA CCIRN and the EUR-CCIRN would each decide who would attend these meetings.

The European CCIRN had discussed the question of representatives at their meetings and had decided that ESA (European Space Agency) should be represented. J Hutton felt that all possible representatives should not automatically be invited to the CCIRN, but that wherever possible all the possible EUROPEAN members should ask RARE to represent their interests.

J Hutton said that the European CCIRN were not clear about the relationship of FARNet (Federation of Academic Research Networks) with the NA CCIRN. B Bostwick stated that FARNet should talk to NSFNet, as he thought that they were represented by NSFNET. B Bostwick will distribute a brief description of FARNet to members of the CCIRN.

Action: B Bostwick

S Goldstein stated that a number of European national space agencies, namely France and Germany, were not part of ESA, although they work cooperatively with ESA. Therefore it is not clear that their interests would necessarily be represented by ESA, and it might be advisable to contact them individually to confirm. One example is the French space agency, CNES, which independently is about to install a 56 Kbps (minimum) link between its Toulouse communications headquarters and Landover, Maryland (near Washington, D.C. and NASA/Goddard). J Hutton will contact the French Space Agency via the French RARE contact, to ensure that their views are represented.

Action: J Hutton

(ii) Other Countries

J Hutton stated that currently only Europe and North America are represented on the CCIRN. J Hutton proposed that Japan and Australia should be asked to the next meeting as observers. N Newman asked if Korea would also be invited as they needed to be involved. L Welch asked if there was an automatic path from observer to member. J Hutton stated that currently there was no such route.

It was agreed that B Bostwick should discuss with the NA CCIRN who should be asked to represent the Japanese interests.

Action: B Bostwick

J Hutton will invite a representative from Australia to the next meeting.

Action: J Hutton

N Newman stated that RARE will represent the interests of Korea.

It was agreed that representations from other countries should be discussed when they occur.

(iii) Size of the Committee

J Hutton suggested that each delegation (ie Europe and North America) should aim to have 7 delegates, including a co-chairperson and a representative from the ICB or IAB. Observers would not be included in the numbers of the delegation.

B Bostwick agreed to discuss this proposal at the next meeting of the NA CCIRN.

Action: B Bostwick

b. Relationship with International Academic Network Co-operation Workshops

At the request of Prof L Landweber, the CCIRN considered endorsement of the International Academic Networking Cooperation (IANC) workshops.

The CCIRN considers the IANC workshops to be valuable to overall academic networking, providing a useful forum for information exchange. In reviewing the specific objectives of the CCIRN, it was determined that the workshop was not directly in support of these objectives. The CCIRN therefore decided not to formally endorse the IANC workshops at this time, but encouraged them to continue.

c. Information Sheet

N Newman said that there was a need to inform people of the CCIRN. He proposed that a brief document/set of slides should be produced on the CCIRN. N Newman and S Goldstein agreed to produce a brief draft document, which would be sent to the group for comments.

Action: N Newman
Action: S Goldstein

7. ACCEPTABLE USE STATEMENT

B Bostwick distributed a draft report which summarised the existing 'acceptable use' policy in use by the FRICC member agencies. He also distributed a draft policy statement by the FRICC on the 'FRICC Policy on Interconnectivity and Resource Sharing'.

P Kirstein stated that he had received the current terms for the usage of EARN, DFN and JANET, which he had distributed by electronic mail.

F Fluckiger gave a brief summary of the draft 'acceptable use statement' for HEPnet in Europe. He stated that the following statement had to be discussed fully by the HEPnet authorities.

- In general, HEP funded networking facilities collectively called HEPnet are for use related to Particle Physics programmes
- where appropriate, agreements on the share of resources and infrastructure are made on a case by case basis
- non-particle physics traffic may be accepted on HEPnet facilities, if they are
 - not placing an exaggerated load on the network
 - obeying the various national HEPnet rules, especially on security issues
- HEP will discuss on a case by case basis the exact conditions for such possible arrangements.

P Kirstein stated that the main problem was that the users at each end of a chain of networks would not be aware of the 'acceptable use' policies of each of the networks. The meeting agreed to continue the action on B Bostwick and P Kirstein to produce an 'acceptable use' statement for the CCIRN.

Action: B Bostwick
Action: P Kirstein

8. TRANS ATLANTIC LINKS

B Bostwick reported that in the short term the FRICC is planning to install a higher speed channel (probably H0) to the UK within a year. In the long term the FRICC envisaged connecting this line into the European Research network. B Bostwick stated that the FRICC has an engineering group which should be discussing the long term plans of future US/Europe links with a similar group within Europe. P Kirstein asked if IXI was the correct technical group to discuss long term technical issues.

After much discussion on the bureaucracy of installing International links no decisions were made.

9. GATEWAY ISSUES

P Kirstein had produced a table of known gateways, which he had previously distributed by electronic mail. He asked all members of the CCIRN to inform him of any changes to the table.

Action: All

B Leiner stated that the NSFNet policy is TCP/IP with the intention to move to ISO. S Goldstein reported that NSFNet has a link to INRIA to test a OSI/CONS(INRIA) and OSI/CLNP gateway. Currently the project is converting TCP/IP to XXX.

P Kirstein stated that currently most of Europe is only interested in providing mail gateways between different networks, the exceptions to this are France and the UK, who are investigating the possibility of a range of protocol gateways.

R Cooper stated that a CLNP/CONS gateway should be put onto the list of gateway requirements. The CCIRN should be looking at the different gateways with a view to rationalising them.

B Leiner stated that the CCIRN needed a technical group to produce a definition of requirements, and project specifications for each type of gateway.

a. Mail

Currently RARE has the MHS project functioning within Europe.

b. File Transfer

F Fluckiger gave the following summary of file transfer gateways in Europe.

File Transfer Gateways in Europe

Type	Operational systems
1. Manual staging gateways	unknown exactly probably hundreds
2. Automated staging converters	*Blue Book/EARN at RAL(UK)
3. On-the-fly converters	*GIFT(CERNET/DECNET/ BB/FTP(TCP)/CDC) at CERN (CH) and SARA (NL) ULTRIX (DECNET/FTP(TCP)) probably dozens

F Fluckiger will circulate a brief description of the GIFT project to members of the CCIRN.

Action: F Fluckiger

10. COLLABORATIVE PROJECTS

a. X.400 Mail

A Villasenor presented Prof Landweber's paper on 'An Experimental X.400/X.500 Network' to the CCIRN.

S Goldstein stated that this project is seen to be a testbed for operating and implementing X.400 and X.500. Prof Landweber will work in close collaboration with RARE WG1 on this project.

B Leiner stated that the IAB is currently working on private mail and encryption. RARE WG1 is also looking at security issues. B Leiner suggested that RARE WG1 should invite members of the IAB task force to take part in their discussions on security matters. P Kirstein reported that other ESPRIT projects were looking at security issues, similarly manufacturers were also looking at security issues therefore there was a need for collaboration between all these groups. P Kirstein said that the next meeting of the IAB security task force is in London sometime in May, and if anyone was interested in attending they should contact the chairman, Steve Kent. J Hutton asked B Leiner to report back to the CCIRN from this meeting.

Action: B Leiner

P Kaufmann will distribute a list of X.400 products to CCIRN members.

Action: P Kaufmann

N Newman gave a brief description of YNET to the meeting.

b. X.500 Based Directory Projects

J Hutton reported that a proposal for a distributed pilot X.500 project using different implementations with different user communities is being produced. This will be submitted to RARE WG3 before being submitted to COSINE for funding.

B Leiner stated that the IAB had sponsored a workshop at the beginning of Feb on directory services for global worldwide directory services for academic and research networks. He will distribute the minutes of the workshop to members of the CCIRN.

Action: B Leiner

11. SECURITY AND CONFIDENTIALITY ISSUES, INCLUDING HACKERS, ETC.

B Bostwick said that networks should share their experiences of the effects of the virus, etc. B Leiner suggested that the CCIRN should adopt an ethics statement. A copy of the ethics statement for the Internet was distributed.

The CCIRN agreed to endorse the ethics statement in Annex A. The statement will be proposed through the RARE COA, ICB, FRICC and Canada and J Hutton and B Bostwick will report back at the next meeting.

Action: J Hutton
Action: B Bostwick

N Newman will ask the Commission Lawyers to check the ethics statement.

Action: N Newman

M Pullen distributed documents on the 'Summary of the Cornell investigations of the Morris Worm' and 'Darpa Establishes Computer Emergency Response Team' for information.

R Cooper stated that JANET is trying to encourage universities to adopt a code of conduct which states that a member of that university can be disciplined for the misuse of another university's computers or networks. R Cooper distributed a copy of the relevant paragraphs from the JANET guidelines on hacking. The CCIRN agreed that B Leiner and R Cooper would produce a guideline for a disciplinary code.

Action: R Cooper
Action: B Leiner

S Goldstein stated that there was a need to establish a list of contacts on other networks, who can be contacted if there is a problem with possible misuse from that network. CSNet were expected to propose a set of guidelines on what to do if network/computer misuse occurs, which would be discussed within the Internet community. It was agreed that B Bostwick would take back to the NA CCIRN the idea of a point of contact for each network and main links, similarly J Hutton would discuss this at the European CCIRN.

Action: B Bostwick
Action: J Hutton

A document on the role of an International Link Co-ordinator was distributed.

12. RESEARCH REQUIRED

a. Policy Based Routing

J Hutton reported that the European CCIRN had asked for 'policy based' routing to be included on the agenda.

B Leiner said that routes have to be decided taking into account the policies of the various networks on the sharing of resources, the ability to carry another agencies traffic, the question of authorisation, etc. B Leiner stated that the IAB had looked at the possibility of labelling packets to indicate what kind of traffic it is and therefore what route it should take.

B Leiner agreed to distribute the results of a workshop on 'Issues and Interconnectivity' and a paper on 'Collaboration on High Speed Networking' by Dave Clark.

Action: B Leiner

J Hutton stated that policy based routing would be discussed at the next meeting.

A list of IAB and IETF task forces is as follows:

CURRENT TASK FORCES TO THE IAB INCLUDE:

APPLICATIONS - USER INTERFACE

K Lantz - new and novel applications eg conf

AUTONOMOUS NETWORKS

D Estrin - High level issues of Autonomous Systems policies
etc

END-TO-END SERVICES

B Braden - End Host protocols and gateway support for them

INTERNET ARCHITECTURE

D Mills - Practical aspects of gateways/hosts

INTERNET ENGINEERING

P Gross - Short and medium term problem solutions

INTERNET MANAGEMENT

PRIVACY

S Kent - Security/privacy

SCIENTIFIC REQUIREMENT

B Leiner - Requirements for supercomputer/workstations,
remote experiments DSAB

D Comer - Looking after successor to BSD, MACH

The IETF is now so large that it has spawned a number of Task Forces of its own:

Authentication	Jeff Schiller (MIT)
CMIP-over-TCP (CMOT)	Lee LaBarre (MITRE)
DNS (new)	Paul Mockapetris (ISI)
Host Requirements	Bob Braden (ISI)
Host Dyn. Config. (new)	Ralph Droms (Bucknell)
Interconnectivity	Guy Almes (Rice)
Internet MIB	Craig Partidge (BBN)
LAN Mgr MIB (new)	Amatzia_Ben-Artzi@
NM Ser. Interface (new)	Jeff Case (UTK)
NOC Tools (new)	Bob Enger (Contel)
NSFnet/Reg Monitoring	Susan Hares (Merit)
Open SPF-based IGP	Mike Petry (UMD)
Open Systems Routing	Marianne Lepp (BBN)
OSI Interoperability	Ross Callon (DEC)
PDN Routing Group	C-H Rokitansky roki@isi.edu
Performance and CC	Allison Mankin (MITRE)
Pt-Pt Protocol	Drew Perkins (CMU)
ST and CO-IP	Claudio Topolcic (BBN)
TELNET Linemode	Dave Borman (Cray)
User Services (New)	Karen Bowers (NRI)

The chair of the IAB is Dave Clark (MIT), and Deputy J Postel (ISI).

J Hutton agreed to distribute a RARE list of newsletters to members of the CCIRN.

Action: J Hutton

B Leiner agreed to distribute a paper on 'Critical Issues in High Bandwidth Networking' to members of the CCIRN.

Action: B Leiner

P Kirstein reported that ESPRIT has projects investigating networking at speeds greater than 500 Mbps and RACE (Research in Advanced Communications for Europe) are investigating the possibility of providing 150 Mbps to the end user and therefore wide-area access at a much higher bandwidth. N Newman will distribute general information on RACE to members of the CCIRN.

Action: N Newman

13. INTERNATIONAL USER GROUPS - RELATIONSHIP TO CCIRN

J Hutton stated that the CCIRN was aware of a number of research group requirements, but if there were user groups whose views were not being met at the CCIRN then the CCIRN should be made aware of them.

V Taylor suggested that this item should be kept as a standard agenda item.

14. INTERNATIONAL TECHNICAL LEVEL MEETINGS

a. Actions to be Progressed.

A table of actions and proposed liaisons is given in Annex B.

(i) DECNet Co-ordination

DECNet users had asked the CCIRN to consider DECNet/SPAN/ESNET issues. The meeting felt that the DECNet/SPAN/ESNET groups should produce a set of terms of reference defining their interface with the CCIRN. F Fluckiger agreed to take this action back to the European DECNet users and A Villasenor will coordinate the North American DECNet/SPAN/ESNET users.

Action: F Fluckiger
Action: A Villasenor

(ii) TCP/IP Co-ordination

B Leiner said that until now there had been no TCP/IP research network in Europe which had not come under the IAB/ICB. This situation has now changed. F Fluckiger reported that a meeting had been arranged for the 22 May in Amsterdam to which all TCP/IP European groups had been invited.

The CCIRN agreed that the organisers of the European TCP/IP meeting should consider asking observers from North America to the meeting and the European TCP/IP groups should consider whether they want to progress the matter of representation on the CCIRN. S Tafvelin and F Fluckiger will pass these views to the European TCP/IP groups.

Action: S Tafvelin
Action: F Fluckiger

(iii) Future Shared Links

J Hutton agreed to decide who the appropriate body was in Europe to discuss future shared links.

Action: J Hutton

B Bostwick will confirm that the contact with the FRICC Engineering Group is Phill Gross.

Action: B Bostwick

(iv) CCIRN Workshop

This item will be put on the agenda for the next meeting. RARE would like the workshop to be held in autumn 1990.

(iv) Joint Work on Gateways

It was agreed that B Leiner would provide a list of the IAB contacts for each of the following gateways; Mail, File Transfer, Terminal and Transport level.

Action: B Leiner

J Hutton will provide a list of the RARE working group chairman to B Leiner.

Action: J Hutton

The groups should be encouraged to liaise and collaborate on funded projects. The groups should be asked to produce a short report for the next CCIRN meeting on their collaboration, and any problems.

(vi) Secure Mail

B Leiner reported that the contact in North America was Steve Kent, Chairman of the Privacy Task Force.

(vii) X.400 Mail

The liaison should be between WGI and the MHS Project in Europe, the contact is P Kaufmann. The contact for CDNnet is John Demco and for the US is L Landweber.

L Landweber will be encouraged to participate in the MHS project. J Hutton will ensure that this is happening.

Action: J Hutton

The North Americans should be asked to participate in WGI meetings.

The CDN should be encouraged to establish a North American meeting which should include European representatives. R Taylor will coordinate this action and report back to the CCIRN.

Action: R Taylor

(viii) X.500 Directory

The liaison should be between the COSINE Directory Project and the Working Group 3, chairman Tony Jeffree, in Europe and the IAB workshop chairman Dave Clark, in North America. The groups should be encouraged to propose joint projects and should liaise between existing projects.

(ix) Information Services

The liaison should be between the Information Services Group, contact Shirley Wood, and Working Group 3 in Europe, and the Internics, contact Laura Breeden, in North America. S Goldstein will ask Laura Breeden to contact Shirley Wood.

Action: S Goldstein

b. Organisational Structure

The CCIRN stressed the need for collaboration between Europe and North America. Any collaboration meetings should be shared, in their locations, ie half in Europe and half in North America. The named person in Europe and North America should exchange meeting dates and invite a representative from the other group to attend meetings.

c. Funding

N Newman stated that it was highly likely that COSINE would fund the European side of these collaboration groups, although he thought that funding for the DECNET and TCP/IP initiatives would be unlikely. N Newman stated that he would require an estimate of the required funding from the European CCIRN.

15. FUTURE MEETING

The next meeting of the CCIRN will be held in Ottawa on the 28 and 29 September 1989.

P Kirstein said that an ICB meeting is to be held on the Monday to Wednesday of the same week. He proposed a joint technical meeting on the Wednesday with the ICB and CCIRN. B Leiner suggested the following subjects for discussion at the meeting; private mail, multi-media conferencing, and current policies on routing. It was agreed that P Kirstein, R Taylor and V Taylor will try to organise a joint technical meeting - subject to agreement by the ICB.

Action: P Kirstein
Action: R Taylor
Action: V Taylor

J Hutton suggested holding the Spring 1990 CCIRN meeting at Inria in the South of France. J Hutton will ask Christian Huitema to organise this for May 10 and 11 1990.

Action: J Hutton

16. ANY OTHER BUSINESS

The RARE workshop for 1990 will be held in Dublin on May 14/15/16.

The meeting thanked R Cooper and S Wood for organising the meeting.

J Hutton then closed the meeting.

Networking Ethics CCIRN - April 1989

Status of this Memo

This memo is a recommendation of policy by the Co-ordination Committee for Intercontinental Research Networking (CCIRN) concerning the proper use of resources in research networks (referred to as 'the networks').

At great human and economic cost, resources drawn from government, industry and the academic community have been assembled into a global collection of interconnected networks. The networks have become an important international infrastructure supporting an increasingly widespread, multi-disciplinary community of researchers ranging, inter alia, from computer scientists and electrical engineers to mathematicians, physicists, medical researchers, chemists, astronomers and space scientists.

As is true of other common infrastructures (eg roads, water reservoirs and delivery systems, and the power generation and distribution network), there is widespread dependence on the networks by its users for the support of day-to-day research activities.

The reliable operation of the networks and the responsible use of their resources is of common interest and concern for their users, operators and sponsors. Recent events involving the hosts on the networks underscore the need to reiterate the professional responsibility every user bears to colleagues and to the sponsors of the system. Many of the resources are provided by government; abuse of the system thus becomes a legal matter above and beyond simple professional ethics.

Statement of Policy

The networks form an international facility whose utility is largely a consequence of its wide availability and accessibility. Irresponsible use of this critical resource poses an enormous threat to its continued availability to the technical community.

The governments sponsoring these systems have a responsibility to the public to allocate government resources wisely and effectively. Justification for the support of these systems suffers when highly disruptive abuses occur. Access to and use of the networks is a privilege and should be treated as such by all users of these systems.

The CCIRN strongly endorses the following as unethical and unacceptable.

Any activity which purposely:

- (a) seeks to gain unauthorized access to the resources of the networks
- (b) disrupts the intended use of the networks,

(c) wastes resources (people, capacity, computer) through such actions,

(d) destroys the integrity of computer-based information,

and/or

(e) compromises the privacy of users.

The networks exist in the general research milieu. Portions of them continue to be used to support research and experimentation on networking. Because experimentation on the networks has the potential to affect all of their components and users, researchers have the responsibility to exercise great caution in the conduct of their work. Negligence in the conduct of such experiments is both irresponsible and unacceptable.

The CCIRN plans to initiate whatever actions it can, through the appropriate agencies and other interested parties, to identify and to have set up technical and procedural mechanisms to make the networks more resistant to disruption. Such security, however, may be extremely expensive and may be counterproductive if it inhibits the free flow of information which makes the networks so valuable. In the final analysis, the health and well-being of the networks is the responsibility of its users who must, uniformly, guard against abuses which disrupt the system and threaten its long-term viability.

Acknowledgement

This statement was developed from one prepared by the Internet Activities Board which in turn followed from work undertaken by the Division Advisory Panel of the National Science Foundation Division of Networking and Communications Research and Infrastructure.

ANNEX B

	Europe	North America	
1. DECNet Co-ordination (global)	HEP/SPAN	HEP/SPAN	Joint Group to pr Policy issues to
2. TCP/IP Co-ordination	?	IAB+?	Task Force under propose ToR to CC
3. Future shared links	IXI-PT(?)	FRICC Eng Group	Exchange of outli Comment: Europe w issued paper. When appropriate meeting
4. CCIRN Workshop	RARE	NA-CCIRN	Planning to start Sept 1989
5. Joint work on gateways	COSINE Project Manager Unit +WG1(Ynet)	IAB	COSINE Project Pr requirement that technical co-ordi established
5.1 Mail	+WG2		
5.3 File Transfer	+WG5?		
5.4 Transport Level	+WG4	ICB	
6. Secure mail	WG1		Participation in Consider joint pr proposals
7. X.400 Mail	WG1 MHS Proj (P Kaufman) (contact)	John Demco Canada:CDNnet US: Landweber	1) Landweber to par in MHS Project 2) North America 3) CDN to establi meeting, inclu reps

- | | | | |
|--------------------------|---|--|---------------------------------------|
| 8. X.500 Directory | COSINE
Project
WG3
(T Jeffree) | IAB Workshop
Encourage join
project - at minimum
liaison between projects
(nb Europe funding
coordination
(D Clark). | |
| 9. Info services | IIS/WG3
S Wood | Internics
L Breeden BBN | Liaison between p |
| 10. Ethics Statement | RARE CoA
ICB
progress
through
these
bodies | FRICC+
Canada | Progress in each
report back in Se |
| 11. Security | | | |
| 12. Policy based routing | | | |

ANNEX C

ACTION LIST

P Kirstein agreed to keep the document on 'The Terminal and Mail Conversion Relaying Facilities in the CCIRN communities operating in March 1989' uptodate. All members of the Committee to send any updates to P Kirstein.

Action: P Kirstein
Action: All

P Kirstein will confirm if it is possible to make available to the CCIRN the minutes of the open meeting of the ICB.

Action: P Kirstein

B Bostwick will distribute a brief description of FARNET to members of the CCIRN.

Action: B Bostwick

J Hutton will contact the French Space Agency via the French RARE contact, to ensure that their views are represented.

Action: J Hutton

It was agreed that B Bostwick should discuss with the NA CCIRN who should be asked to represent the Japanese interests.

Action: B Bostwick

J Hutton will invite a representative from Australia to the next meeting.

Action: J Hutton

B Bostwick agreed to discuss the size of North American delegation at the next meeting of the North American CCIRN.

Action: B Bostwick

N Newman and S Goldstein agreed to produce a brief draft information sheet, which would be sent to the group for comments.

Action: N Newman
Action: S Goldstein

The meeting agreed to continue the action on B Bostwick and P Kirstein to produce an 'acceptable use' statement for the CCIRN.

Action: B Bostwick
Action: P Kirstein

P Kirstein had produced a table of known gateways, which he had previously distributed by electronic mail. He asked all members of the CCIRN to inform him of any changes to the table.

Action: All

F Fluckiger will circulate a brief description of the GIFT project to members of the CCIRN.

Action: F Fluckiger

J Hutton asked B Leiner to report back to the CCIRN from the meeting of the IAB security task force in London.

Action: B Leiner

P Kaufmann will distribute a list of X.400 products to CCIRN members.

Action: P Kaufmann

B Leiner will distribute the minutes of the IAB workshop on global worldwide directory services for academic and research networks to members of the CCIRN.

Action: B Leiner

The CCIRN agreed to endorse the ethics statement in Annex A. The statement will be proposed through the RARE COA, ICB, FRICC and Canada. J Hutton and B Bostwick will report back at the next meeting.

Action: J Hutton
Action: B Bostwick

N Newman will ask the Commission Lawyers to check the ethics statement.

Action: N Newman

The CCIRN agreed that B Leiner and R Cooper would produce a guideline for a disciplinary code.

Action: R Cooper
Action: B Leiner

It was agreed that B Bostwick would take back to the North America CCIRN the idea of a point of contact for each network and main links, similarly J Hutton would discuss this at the European CCIRN.

Action: B Bostwick
Action: J Hutton

B Leiner agreed to distribute the results of a workshop on 'Issues and Interconnectivity' and a paper on 'Collaboration on High Speed Networking' by Dave Clark.

Action: B Leiner

J Hutton agreed to distribute a RARE list of newsletters to members of the CCIRN.

Action: J Hutton

B Leiner agreed to distribute a paper on 'Critical Issues in High Bandwidth Networking' to members of the CCIRN.

Action: B Leiner

N Newman will distribute general information on RACE to members of the CCIRN.

Action: N Newman

The meeting felt that the DECNet/SPAN/ESNET groups should produce a set of terms of reference defining their interface with the CCIRN. F Fluckiger agreed to take this action back to the European DECNet users and A Villasenor will coordinate the North American DECNet/SPAN/ESNET users.

Action: F Fluckiger
Action: A Villasenor

The CCIRN agreed that the organisers of the European TCP/IP meeting should consider asking observers from North America to the meeting and the European TCP/IP groups should consider whether they want to progress the matter of representation on the CCIRN. S Tafvelin and F Fluckiger will pass these views to the European TCP/IP groups.

Action: S Tafvelin
Action: F Fluckiger

J Hutton agreed to decide who the appropriate body was in Europe to discuss future shared links.

Action: J Hutton

B Bostwick will confirm that the contact with the FRICC Engineering Group is Phill Gross.

Action: B Bostwick

It was agreed that B Leiner would provide a list of the IAB contacts for each of the following gateways; Mail, File Transfer, Terminal and Transport level.

Action: B Leiner

J Hutton will provide a list of the RARE working group chairman to B Leiner.

Action: J Hutton

L Landweber will be encouraged to participate in the MHS project. J Hutton will ensure that this is happening.

Action: J Hutton

The CDN should be encouraged to establish a North American meeting which should include European representatives. R Taylor will coordinate this action and report back to the CCIRN.

Action: R Taylor

S Goldstein will ask Laura Breeden to contact Shirley Wood about collaboration between the groups interested in Information Servers.

Action: S Goldstein

It was agreed that P Kirstein, R Taylor and V Taylor will try to organise a joint technical meeting between the ICB and the CCIRN.

Action: P Kirstein

Action: R Taylor

Action: V Taylor

J Hutton will ask Christian Huitema to organise a CCIRN meeting for May 10 and 11 1990.

Action: J Hutton