## EARN Document

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This is the signed EARN NORDUnet agreement

September 1989

## THE EARN/NORDUNET AGREEMENT

This agreement between EARN and the four Nordic Countries as represented by the Nordic EARN Directors and NORDUNET, is based on the discussions and correspondence between the parties as well as EUNET and HEPNET. It covers the two main resources discussed - the line (communications) resources to connect Nordunet to EARN, and the use of the EARN G-Boxes in Nordunet.

This agreement takes effect from the date of signature by all parties. It can be terminated at the end of a year by either party after three months' notice, but not before the end of 1990.

## 1. Line Resources

1.1 Nordunet will install a 64Kb link between CWI, Amsterdam, and KTH,

Stockholm, and make available 9.6Kb channel to EARN and Nordunet for existing EARN RSCS/BSC traffic, and a further 9.6Kb channel for

X.25 in the context of the EARN OSI Transition Programme. This link

will be shared, using bandsplitters to be provided by Nordunet, until the traffic can technically be combined to run over a single

production X.25 network. It is intended that sufficient bandwidth will continue to be available to EARN traffic in 1990 and subsequent

years.

1.2 EARN will contribute 14.5K ECU in 1989 to the cost of the 64K link between CWI, Amsterdam, and KTH, Stockholm.

EARN has no commitment to any future contribution to the cost of the connection between the Nordic countries and the rest of EARN. The 1989 amount is a special contribution to facilitate cooperation between EARN, Nordunet, Eunet and HEPNET, and to further

the EARN Transition to OSI. Payment of the full costs of the connection between Nordunet and EARN in 1990 and subsequent years will be determined by the then effective normal EARN funding model.

1.3 The plan is to connect the RSCS/BSC channel to the present EARN backbone. Details of the connection between the termination of this

channel at CWI and Nijmegen have yet to be agreed. The cost of this

local link between CWI and Nijmegen will be borne by Nordunet and the Nordic Countries.

- 1.4 The plan is that the X.25 channel will be to an NT backbone switch (currently installed in CWI.). Initially this link will connect to the EARN G-Box at KTH in Stockholm (See below).
- 1.5 The remainder of the link will be used by EUNET and HEPNET and Nordunet for their traffic.
- 2. G-boxes
- 2.1 EARN will make available four (4) of the G-boxes, provided by
   Digital to EARN, of predetermined configuation agreed between
  EARN
   and DEC, to the four Nordic EARN member countries, to be located
  at
   the EARN Nordic backbone sites (RUNIT, UNI-C, KTH, and VTKK).
- 2.2 these machines will be used:
  - (a) to provide existing EARN services and to carry NJE/OSI/X.25 and other OSI services, as part of EARN's OSI

Transition Programme. Between the Nordic countries, temporary solutions such as bandsplitting the Nordunet bandwidth, or the use of other temporary protocols such as NJE/OSI/802.3, may be used.

- (b) to act as DECnet routers on behalf of the intra Nordic traffic according to the Nordunet/HEPNET scheme.
- 2.3 The G-boxes will remain the property of EARN, and will be managed by the EARN OSI Operations Centre in Amsterdam, in cooperation with Nordunet, taking into account the constraints arising from the use of the G-Boxes as part of HEPNET in the Nordic

countries.

2.4 DECnet configuration, as required for 2.2 (b), will be the responsibility of a designated NORDUNET Operations Manager, acting in consultation with the EARN OSI Operations Centre so that no conflicts arise in DECNET service between Nordunet's requirements for operational DECNET services and EARN's requirements

for DECNET for G-Box management purposes.

- 2.5 The intention is to operate services to EARN and to NORDUNET with the G-boxes which are, as far as is practical, independent of the sites hosting the machines. In this respect, the designated NORDUNET Operations Manager, the Nordic national EARN operations managers (or EARN NCCs), and the EARN OSI Operations Manager, will take all necessary precautions with regard to security both of the hardware and software.
- 2.6 Use of the machines as in 2.2 (b) will be the subject of a letter of authorisation from Digital Equipment Corporation (Europe) to EARN, under the terms of the current DEC-EARN agreement.
- 2.7 For purposes of on-site maintenance, and software support, sites may have to conclude standard service contracts with the local DEC subsidiary. However, responsibility for hardware and software maintenance will remain with EARN.