Temporary line UK to Amsterdam:
Installation 8 weeks
Maximum duration 1 month
Cost 750 UKL installation plus 518.66 UKL
Permanent line UK Amsterdam
Installation 19/20 weeks
Cost 750 UKL installation plus 6284 UKL per year
Installation free if line is kept for more than a year.
For comparison CERN line is about 8000 a year plus 16000 a year for
CERN end.   Paul

The attached questionnaire has been received for EARN to complete.

To: IXI-CC

From: IXI Project Team (MP)

Date: 29 September 1989

Subject: COSINE IXI Pilot Service
         X.25 Connection Questionnaire

Attached is the IXI X.25 Connection Questionnaire. The purpose
of this
questionnaire is to gather information regarding the private networks,
and the
directly connecting systems, to permit initial configuring of the IXI
backbone
and to commence the detailed planning for the commissioning phase. We
will be
following up directly with each network/site shortly after receipt
of the
completed questionnaires to finalize the schedules and acceptance
testing
requirements.

As promised at the IXI-CC meeting of 22 September, and as an aid to
completing
the questionnaire, also enclosed is a copy of the Technical Annex
to the
Contract for the Provision of the Pilot IXI Backbone Service. This
document
contains detailed information regarding the X.25 facilities that

will be
offered, and the addressing formats that will apply during the pilot period.
(Note that the list of access points as indicated in Article 2 is not current,
and that the up-to-date information will be used in further planning with PTT
Telecom.) The X.25 Recommendation document may also be useful in completing the
questionnaire.

As agreed, and in light of the fact that the clock is now running on the
2-month preparatory phase, the questionaires should be returned as soon as
possible, but no later than October 15, 1989, to:

        Maria Pallares
        c/o Systematik Associates
        Avenue Louise 251, Box 14
        B-1050 Brussels
        Belgium

If you have any questions regarding the completion of the questionnaire, please
contact me either by telephone or fax:

        Tel: +32 2 646.22.01
        Fax: +32 2 646.24.01

Thank you in advance for your quick response.

                    COSINE IXI PILOT SERVICE

                 X.25 CONNECTION QUESTIONNAIRE

                                        NETWORK
NAME: EARN

1. NETWORK INFORMATION
    Please complete this questionnaire once for each network connecting to IXI
    in your country. If you have any comments or open questions about

the IXI
     connection, please attach a separate page.

1.1 Management contact
     Name: J Striplin
     Function: (if   not   IXI-CC Manager of EARN OSI centre
     member)
     Located at: The Einstein Buliding
     - Country: Holland
     - City: Amsterdam
     - Postal Code: Sloterdijh 1014 BA
     - Address: The Einstean Building
                                    Kabelweg 21
                                    Sloterdijh 1014 BA
                                    Amsterdam
                                    Holland
     - Telephone: + 31 20 869591
     - Fax: + 31 20
     - E-Mail: NORIELLY@HASEOC   (EARN)

1.2 Connection Date

     Please indicate the date(s) by which you will be prepared to
connect the
     access point(s) listed on the following pages to the IXI
backbone? (by
     access point, if more than one)

     As soon as a line is provided

1.3 Addressing Information

     Describe the address scheme of your network:
     (or attach separate description)

     X.25 with DNIC 2000, next 3 digits are ISO country code, next 5
     digits define equipment, next 2 digits are an unpoliced
subaddress.

     What value of N do you require in the COSINE X.121 address format?
7
     (Refer to Annex 2 of the contract for Pilot IXI Backbone.)

     How many DTE's connected to your private network will have

access to the
    IXI backbone during the Pilot period? About 20

1.4 PSPDN Connection

    Who in your country will coordinate the connection/authorization
of users
    to IXI via PSPDN?

    Name: N O'Reilly
    Function: Serior technical leader
    Telephone: +31 20 869591

                    COSINE IXI PILOT SERVICE

                 X.25 CONNECTION QUESTIONNAIRE

                                        NETWORK
NAME: EARN

1.5 X.2 Connection user facilities on a contractual basis (NOTE)

    Unless otherwise indicated, please mark with an X those facilities
which
    you wish to have available over the IXI backbone.

    1   Extended packet sequence numbering (module 128)
No.......
    2   Nonstandard default window sizes (1-127) Specify default
2........
         size
    3   Nonstandard default packet sizes (16, 32, 64, 256, 512,
No.......
         1024, 2048, 4096) Specify default size
    4   Default throughput classes assignment 75, 150, 300, 600,
         1200, 2400, 4800, 9600, 19200, 48000, 64000 Specify
         default
9600.....
    5   Flow control parameter negotiation
Yes......

4

```
      6    Max. packet size: 128, 256, 512, 1024, 2048, 4096  Specify
4096.....
      7    Max. window size: 1-127   Specify
7........
      8    Throughput class negotiation
Yes......
      9    Packet retransmission
Yes......
     10    Incoming calls barred
No.......
     11    Outgoing calls barred
No.......
     12    One-way logical channel outgoing
No.......
     13    One-way logical channel incoming
No.......
     14    Closed user group
No.......
     15    Closed user group with outgoing access
No.......
     16    Closed user group with incoming access
No.......
     17    Incoming calls barred within a closed user group
No.......
     18    Outgoing calls barred within a closed user group
No.......
     19    Bilateral closed user group
No.......
     20    Bilateral closed user group with outgoing access
No.......
     21    Reverse charging acceptance
No.......
     22    Fast select acceptance
Yes......
     23    Charging information (segment count + call dur.)
Yes......
     24    Direct call (NUA address)
No.......
     25    Hunt group (NUA address)
No.......
     26    D-bit modification
No.......
     27    Local charging prevention
No.......
     28    Call redirection (NUA address)
No.......
     29    Network user identification
No.......
```

```
    30    Extended frame sequence numbering
No.......
    31    RPOA selection
Yes......
```

NOTE : The above mentioned facilities are only valid for the X.25-
interface
        between the Private Network and the IXI-Network. This means
that the
        above facilities will apply for all the DTE's connected to the
Private
        Network.
        However it is possible to negotiate on a per call basis for
those X.2
        facilities that are negotiable, unless otherwise provided by
the
        Private Network. (Refer to Annex 2 of the contract for Pilot
IXI
        Backbone.)

                    COSINE   IXI   PILOT   SERVICE

                    X.25 CONNECTION QUESTIONNAIRE

                                        NETWORK
NAME: EARN

2. ACCESS POINT INFORMATION

2.1 Access Point Site *
     Located at: (institution)   EARN EOC Centre
       - Country: Holland
       - City: Amsterdam
       - Postal Code: 1014 BA
       - Address: The Einstein Building
                                    Kabelweg 21, Sloterdijh 1014 BA
                                    Amsterdam, Holland.
       - Room No: -
       - Telephone: +31 20 869591
       - Fax: +31 20 824772

2.2 Access Point Contact
     (operational interface)
     Name: N O'Reilly
     Function: Senior technical leader
     Located at:
     - City: Amsterdam
     - Postal Code: 1014 BA
     - Address: The Einstein Building
                                     Kabelweg 21, Sloterdijh 1014 BA
                                     Amasterdam. Holland
     - Telephone: +31 20 869591
     - Fax: +31 20 824772
     - E-Mail: NOREILLY@HASEOC (EARN)

2.3 Access Point Equipment

     Product Make/Model of the DTE equipment directly connected to the
Access
     Point: Nothern Telecom DPN100
     Is equipment certified for attachment to national X.25 network
in your
     country?
     (Yes/No) Northern Telecom does not know
     Is equipment certified by any country to your knowledge?
     (Yes/No) Northern Telecom does not know
     If yes, which country?_____
     Which X.25 version is used? (1980 or 1984) 1984

2.4 Estimated Traffic

     Indicate the anticipated traffic at this access point in data
packets per
     second
     - during a peak hour. Not known
     - during the average month. Not known

*   If this network will be connected to the IXI backbone at multiple
points,
     please complete pages 3 and 4 of the questionnaire for each site.

                         COSINE IXI PILOT SERVICE

                                         NETWORK
NAME: EARN

2.5 SPECIFICATION OF LEVEL 1-3 PARAMETERS

2.5.1 Physical Level
     - Physical interface: Circle one   X.21 or V.35 or V.24
     - No. of Active Links: 1
     - Link Speed: 64 kbits/sec or 9.6
kbits/sec

2.5.2 Link Level
     (See LAPB parameters in X.25 Rec.)
     - Protocol: LAPB (single link)
     - Modulo Circle one   8
     - T1*   100..... msec
     - T2* (< T1)   3....... msec
     - T3 (idle channel timer)   4....... sec
     - T4 (unsolicited polling frequency) .... msec
***We have knowledge of what the T4 timer is. It does not appear in
CCITT
   Red Book***
     - N1 (maximum frame size)   4096 +... bits (dep. on max
packet siz
e)
     - N2*   10
     - K*   7

     * Parameters marked with an asterisk will be set to the value
indicated in
  the response column unless otherwise indicated.

2.5.3 Packet Level
     (refer to X.25 Annex A)
     - Logical channels   none
       (reserves for PVC up to LIC -1)
     - LIC   none
     - HIC   none
     - LTC   1
     - HTC   50

```
        - LOC                                    none
        - HOC                                    none
```

2.6 Commissioning Test System

    Please provide the following information regarding a system
located at the
    access point site that can be used to run backbone test and
performance
    monitoring programs during the commissioning phase of the project:

```
    - DTE (private network address)          200020000101
    - system hardware (make/model no.)       VAX 3600
    - operating system (UNIX, VMS)           VMS DV360S1-B3
    - operating system release level         generic 25
    - level of C compiler                    None
    - contact person
      Name:                                  N O'Reilly
      Function:                              Senior technical
laeder
      Telephone:                             +31 20 869591
      Fax:                                   +31 20 824772
      E-Mail:                                NOREILLY@HASEOC
(EARN)
```