Tempora mutantur ...

Niall O'Reilly - RIPE 50 - Stockholm, SE - May 2005



RIPE 50 - Stockholm, SE

EARN: what was that?

European Academic and Research Network
 European counterpart of BITNET (users saw single network)
 Co-operative model: spare capacity, fractional personnel
 Key resources from: sponsorship (IBM), later contributions

Proprietary protocol: NJE (IBM)

NJE: how it worked

- Based on remote job entry (RJE)
- SYSIN (cards), SYSOUT (print) data streams
- Signalling (NMR)
- Spool files tagged (node, user/service)
- Remote spooling (RSCS, JES, Jnet, urep)

EARN: available services

- Interactive messaging
- File transfer (e-mail as special case)
- Files servers with mirroring and cacheing
- Remote data base access
- Services offered by participants, not directly by EARN
- Application gateways to other networks

EARN: problems

No NOC: no overall operational focus

Critical components outpaced by demand

Co-operative model: difficulty delivering sustainable services

EARN OSI: the vision

- Dedicated backbone and NOC
- Standards-based protocols
- Migrate existing services to new OSI substrate
- Deploy attractive OSI services on new substrate
- Try not to get trampled in the rush of eager users

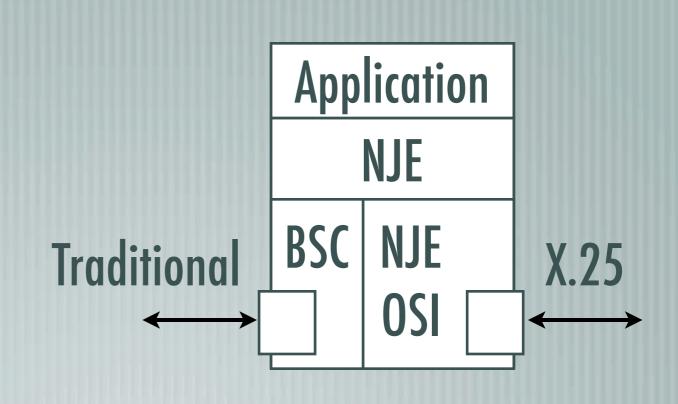
EARN OSI: the concept

X.25 as OSI backbone

Dual-stack nodes

E-box (IBM/SNA)

G-box (DEC/Jnet)



X.25: we weren't alone!

CERN.DD.CS-G36 page1

HEP - CERN X.25 ADDRESSING SCHEME Addressing scheme agreed between HEPnet X.25 Networks

Author: F.Fluckiger, CERN

Date: 29 May 1989

Version: 5

The present document describes the scope, the objectives and the nature of the HEP-CFRN X25 addressing scheme.

1. SCOPE

The addressing scheme has been agreed between the managers of the dedicated (private) X.25 HEP networks (or more general purpose networks used by HEP physicists) interconnected via leased lines and which collectively form the X.25 HEPnet network. It applies to the following networks or institutes:

EARN OSI: partners

- Northern Telecom (since NORTEL) X.25 switches
- Digital Equipment Corp (since Compaq, HP) G-boxes, NOC
- Joiner Associates Jnet
- IBM E-box development
- EUnet, NORDUnet extended X.25 backbone

EARN OSI: 1989-1991



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EARN OSI: 1989-1991



EARN OSI: the technology?

X.25 backbone linked to NORDUnet at CWI

G-box in each country connected to local "national node"

G-boxes interconnected over extended X.25 backbone

Actually worked

EARN OSI: X.25 backbone

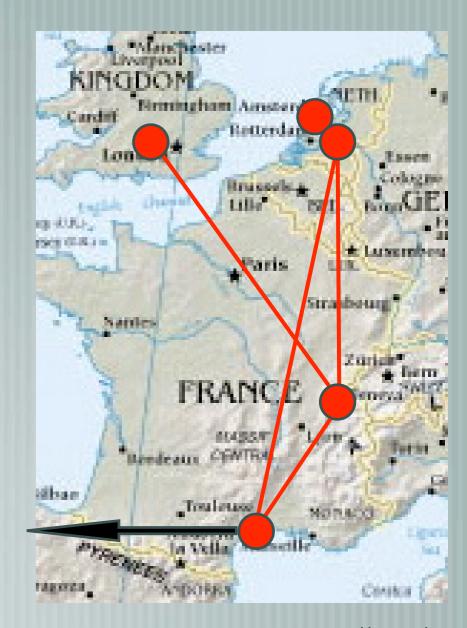
CERN (Geneva, CH)

RAL (Didcot, UK)

CNUSC (Montpellier, FR)

CWI (Amsterdam-Watergraafsmeer, NL)

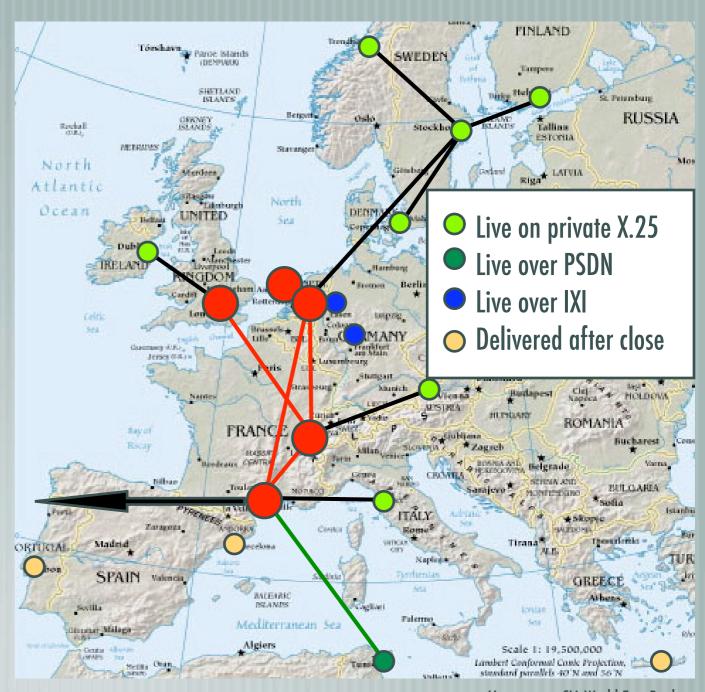
EOC (Amsterdam-Sloterdijk, NL)



Map source: CIA World Fact Book

EARN OSI: countries

NO, SE, FI, DK
IE, UK, NL, DE
FR, CH, AT, IT
PT, ES, GR, TN



Map source: CIA World Fact Book

EARN OSI: partners' goals

- Develop relationship with REN community
- Showcase products (equipment & software)
- Showcase expertise

EARN OSI: what happened?

EARN's and key partner's goals didn't match

EARN members' goals diverged

EU Commission sponsored X.25 interconnect (IXI)

IP arrived

EARN OSI: actual traffic?

- EOC connected via CERN, August 1989
- DECUS Europe via EOC and CERN, September 1989
- Pilot Nordic EARN customer traffic, January 1990
- Production UK and IE traffic, March 1990
- Production TN connection over PSDN, June 1990

EARN: what became of it?

- Private X.25 closed down in favour of IXI
- NJE/OSI difficult to manage over X.25 interconnect
- NJE/TCP replaces NJE/OSI
- Services over TCP/IP attract users
- EARN, RARE merge to form TERENA in 1994

EARN OSI: recall the vision

- Dedicated backbone and NOC
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Tempora mutantur ...

Central Europe: re-discovered as Cold War ends

Piet Beertema: decorated and godfathered

De "Schermschool op de Prinsengracht" closed

Phones ring at RIPE meetings

Piet and the undead EOC.NL

Menacing Dutch word for 'please'

>In mijn NL database staat Niall O'Reilly nog steeds geregistreerd
>als kontaktpersoon voor het EOC.NL domain. Ik weet echter dat hij
>daar allang vertrokken is, maar ik heb nooit nieuwe info ontvangen.
>Verder zou het EOC helemaal niet meer bestaan, hoewel er volgens
>andere informatie nog steeds mail met EOC.NL wordt uitgewisseld.

>Gaarne bevestiging dat EOC.NL nog steeds bestaat plus gegevens van >de buidige kontaktpersoon/kontaktpersonen. Mocht deze bevestiging >uitblijven, dan zal ik het EOC.NL domain uit de NL zone verwijderen.

Date: Mon, 25 May 1992 09:48:10 +0200

From: Piet Beertema <Piet.Beertema@cwi.nl>

Subject: Re: EOC.NL domain

To: "Niall O'Reilly (NOREILLY@IRLEARN.BITNET)" <NOREILLY@irlearn.ucd.ie>

Cc: Former Colleagues at EOC <eoc-l@eoc.nl>

The information you have is still correct, and that's why I haven't sent you any newer info. Before the EOC was closed down, I made an arrangement for mail directed to its personnel to continue to be delivered for an undetermined "reasonable period".

The anniversary of the closure of the EOC would seem a good time to finally remove this last truce of its existence.

Ah, so a "determined unreasonable period". :-) :-)

Unless the delay is causing you a serious problem, I would prefer to do this at end of July
Fine with me.

Piet

Characteristic humour

De schermschool

- Schermschool is Dutch for "Salle d'Armes"
 - Schermschool van Oeveren stood on the Prinsengracht near the corner of the Spiegelgracht
- That's where I first met the author of the IXI test suite
- Summer 1991, Maître van Oeveren moved to France

Phones didn't ring at RIPE

...ik heb een korenveld gemaakt,
heel erg geel en heel licht,
misschien het lichtste doek dat ik nog
gemaakt heb ...
om de natuur hier goed weer te geven,
moet je er lang zijn, net als
overal elders ...

Back then, people didn't have mobile phones. They had to use a fixed phone, and perhaps a card like this



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Back then, people didn't have mobile phones. They had to use a fixed phone, and perhaps a card like this

€2.27

And the money was different



... et etiam mutati sumus!



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