



« *networking the networkers* »

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## **The Case for NRENs** (Acknowledgments to John Dyer, TERENA)

TRANS-EUROPEAN RESEARCH AND EDUCATION NETWORKING ASSOCIATION



## What is this all about?

- › European NRENs “a success story”
- › NRENs are special and provide services and support unavailable elsewhere?
- › At times counter voices raised from outside the community
- › Developing a paper to articulate “THE CASE FOR NRENs”
  - › A short story of NRENs in Europe
  - › Assessment of their role
  - › Explore the case for their continuation



## Why develop this paper?

- › NRENs ask for it
- › Some NRENs have developed some material
- › Provide a source document for all TERENA members
- › Experience from helping NRENs in the GN2-NA4 activity to support less advanced countries



## Progress of work

- › DRAFT for DISCUSSION v. 1 - 3 May 2008
- › [www.terena.org/activities/tf-msp/documents/nren-case-v1.pdf](http://www.terena.org/activities/tf-msp/documents/nren-case-v1.pdf)
- › TF-MSP/TF-PR Meeting, Bruges, May 2008
- › Presentations in TNC 2008
- › Discussions at the TERENA GA
- › Emails on the TF-MSP list
- › Compendium data and trends
- › Discussions with CEO of REANNZ
- › Presentation at TF-MSP meeting, Zurich, 30 September 2008



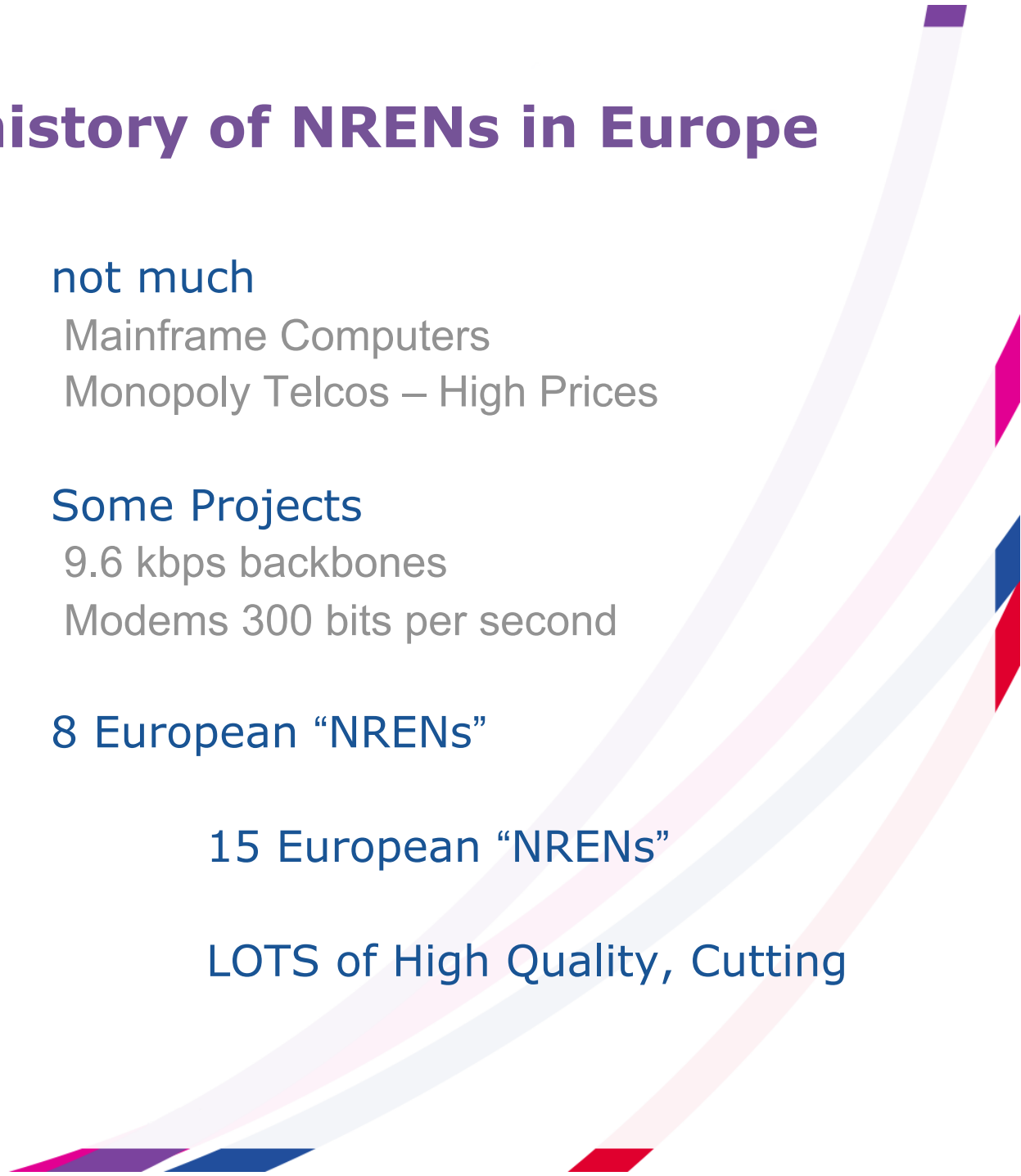
## What did we discover?

- › There is quite a lot of information around
  - › Written Down
  - › Spoken in conversation
  - › In presentations
- › NRENs not currently under any new threats
- › The community would do well to prepare its case whilst it has the time
- › Challenges could arise in the future
  - › We need to engage in a little environmental scanning



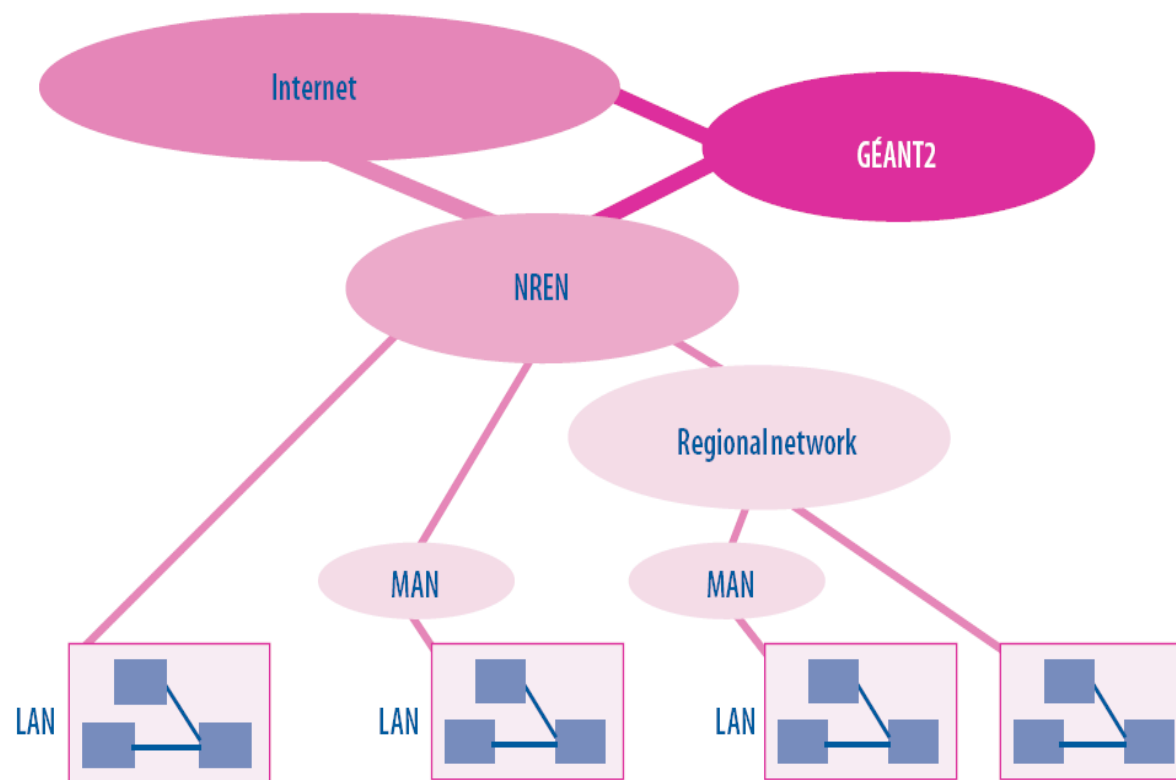
# A little history of NRENs in Europe

- › 1970's      not much  
Mainframe Computers  
Monopoly Telcos – High Prices
- › 1980's      Some Projects  
9.6 kbps backbones  
Modems 300 bits per second
- › 1985        8 European “NRENs”
- › 1990        15 European “NRENs”
- › 2008  
Edge        LOTS of High Quality, Cutting





# The European NREN Model





## European NRENs are special

- › NRENs fulfil a need not met by commercial ISPs
- › There is substantial evidence that the network is becoming an essential element in the scientific landscape in all areas of research.
- › EVIDENCE in Comments:
  - › A continuous and reliable service
  - › Allows me to use all the applications I need
  - › The network has enough speed/capacity
  - › The network preserves privacy and confidentiality
  - › Guarantees security, protection





# Technological Advantages of NRENs

- › Pioneer Development – Integration
- › Can provide multi-domain end-to-end services
- › Confederations of Trusted Federations
- › Enable large scale applied research
- › NRENs can stimulate innovation
  - › But that depends on the NREN philosophy



## Economic & Social Advantages

- › NRENs are part of the constituency they serve
- › Work to address the Digital Divide, Geographic Divide and counter monopolistic markets
- › Benefits of collective procurement
- › Solidarity – fair balance of cost sharing
- › Affiliation to a large respected group
- › Valuable national asset – independent & knowledgeable



## What could be the threats?

- › If Funding Bodies **THINK** services that NRENs provide are available on the commercial market
- › If NRENs are **THOUGHT** to distort the market as they receive government subsidies
- › Commercial ISPs **EVOLVE** to be able to offer identical services to the NRENs
- › Something else



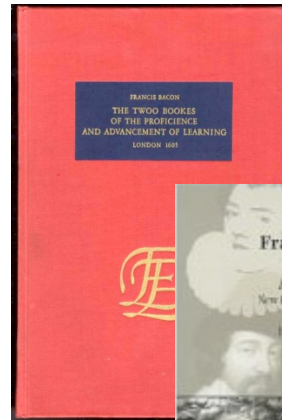
# It is not just a matter of funding

300 BC

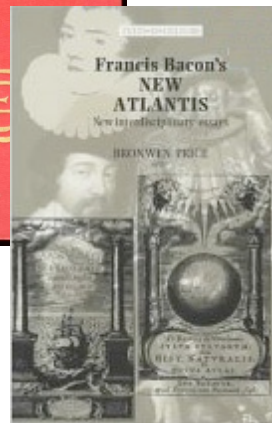


**Ptolemaic Dynasty**  
305 BC to 30 BC

1605

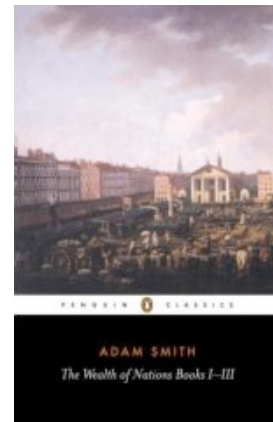


1626



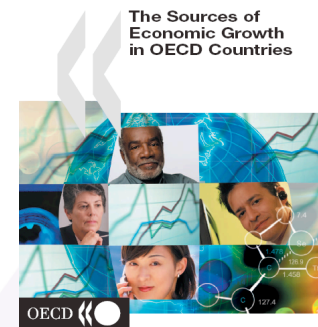
**Francis Bacon**  
1561 - 1626

1776



**Adam Smith**  
1723 - 1790

2003



**OECD**

**It's also a matter of social philosophy  
and always has been**



## Major Suggestions from May TF-MSP/TF-PR meeting

- › **Different NRENs have different situations**
- › **Create a number of scenarios**
  - › **What-if: Issues with Regulator**
    - Commercial / Competition issues**
    - Dissatisfaction from the user/bill-payer**
    - Lack of Political Support**
- › **There are potential dangers in the environment in which we operate**
- › **Keep aware of regulatory, political & commercial impact of our portfolios**



## **Presentations during TNC 2008**

- › **Some serious questions about the future of research networks**
  - › **Do NRENs need to develop more functionality?**
  - › **Should NRENs think about a new business model?**
  - › **Should NRENs remain separate from other (public) services?**
  - › **If NRENs do, will they die, be superseded by the more rapidly developing commercial sector, or continue alongside as a niche market?**
  
- › **Have to offer what people want, not necessarily the technology that is best**



# TERENA GA Discussions

May 2008

- › **“FREE” services - being used by some NREN customers**
  - › **Are they really FREE? What are the costs, implications?**
  - › **NRENs should make use of their position and explore new opportunities**
  
- › **Increasing NREN collaboration on Cross-Border-Fibres**
  - › **Relies less on centralised international connectivity model**
  - › **Requires coordination on SLA, AUP, Security, etc.**
  
- › **Connections becoming available at prices below those currently being paid in the NREN community**
  - › **Procurement by NREN at national level is cost effective**
  - › **NRENs are able to provide SERVICES tailored to the community**
  - › **Users value the services**
  - › **End-to-End community can sort out issues (PERT)**



## What should NRENs do

- › Get closer to the community & establish a long term relationship enabling research and education to do their own jobs better
- › Keep aware of commercial developments – maybe even collaborate with the commercial SPs
- › Maintain the solidarity that has been built
- › Be innovative and leading the further development of the Internet
- › Enabling e-society
  
- › End-users & bill payers must see value in what NRENs offer

Else . . . . .



**THE END**

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