SERENATE

Study into European Research and Education Networking As Targeted by *e*Europe

Abstract:

The SERENATE studies have the broad aim of providing inputs to the European Commission on initiatives that could help to keep the evolution of European research networking at the forefront of worldwide development, and enhance the competitiveness of the European Research Area. The SERENATE project contributes to achieving these policy goals by investigating the technical, organisational and financial aspects, the market conditions and the regulatory environment.

Objectives:

The objective of the SERENATE project is to provide important inputs to the development of policies by the European Commission, but also to national governments and funding bodies, the management of universities, and the national research and education networks. By the end of the project, SERENATE will have produced a number of reports that will provide inputs to the policy making of these actors in the field of European research and education networking.

While much of the history of European research networking over the past two decades was characterised by the need to keep up with developments in North America, currently Europe has a leading position in many aspects of networking. Using the opportunity of access to fibre at a much larger scale than before will give the entire European research networking infrastructure – including the trans-European, national and local levels – the possibility to offer not only much larger capacities but also new services that are of great importance for the most demanding users.

Technical Approach:

SERENATE's working methods include desk research, case studies, interviews and workshops. The work is broken down into 14 interlinked work items, each looking into certain strategic aspects that are of crucial importance for the development of European research networks. A public report has been published or will be published on each of these work items.

Results:

The SERENATE studies have produced important insights into a number of strategic issues that are crucial to development of research and education networking in Europe.

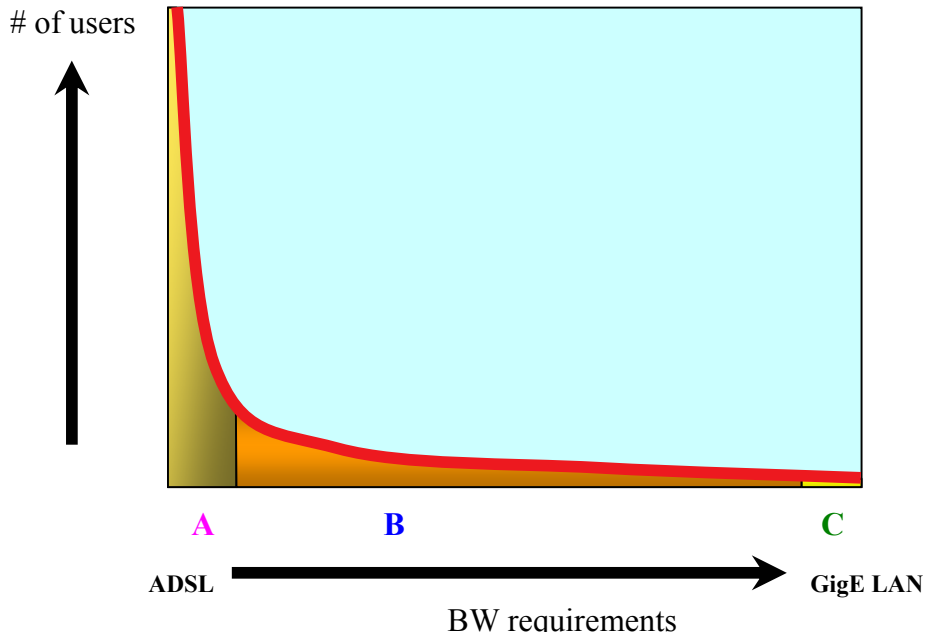
Some of the most important findings include:

- Impressive achievements have been made in research networking in Europe over the past five years. Currently the networking requirements of users are rapidly increasing, in all countries in Europe and in all fields of research. At the same time we see the appearance of different classes of users with widely varying needs. The most demanding researchers require very high capacity networks and end-to-end services. It is essential for the existing research networking organisations to cater for the needs of these most demanding user groups. This will require the introduction of new technologies and new organisational and funding models.
- There is a substantial and arguably increasing Digital Divide in Europe, which turns the political objective of equal opportunities for researchers throughout the European Research Area into an elusive goal. National governments and the European Commission will have to

take radical actions to address the problem of the Digital Divide in European research and education networking.

- Although the implementation of the new regulatory package for telecommunications is delayed, in theory regulations in all member states and accession states of the European Union are such that markets are truly liberalised. However, in practice the situation leaves much to be desired in a number of countries, where there is no real competition and there are obstacles for alternative methods of infrastructure acquisition. This results in significant obstacles for the development of research and education networks. National governments, supported by the European Commission, should be more pro-active in this field.
- During the lifetime of the SERENATE project there have been sudden developments in the international telecommunications market with a high impact. A number of operators have unexpectedly left the market place, either temporarily or permanently. It is expected that it will take some time before markets are stable again. In the mean time the period of revolutionary price decreases for international and national links has come to an end, and is not expected to return.
- The study into the characteristics and availability of equipment for next-generation networks have provided insights in what can and what cannot be expected to become available over the next years, as well as some feeling for the costs involved.
- The points above make it possible, cost effective or even necessary for research networks to get direct access to fibre, although probably not for all geographic locations and for all distances. There are various operational, managerial and financial forms of obtaining this access. The European research networking infrastructure of the near future will consist of a mix of different components with varying technologies and management characteristics. The plans for the next generation of networks at the European level (GÉANT), the national level and the campus level will have to consider the many consequences of this development.

SERENATE's Final Workshop (Bad Nauheim, June 2003)



A -> Lightweight users, browsing, mailing, home use
B -> Business applications, multicast, streaming, VPN's, mostly LAN
C -> Special scientific applications, computing, data grids, virtual-presence

The emergence of different classes of users

Project name:
SERENATE

Contract no.:
IST-2001-34925

Project type:
Accompanying Measure

Start date:
01/05/2002

Duration:
20 months

Total budget:
€959,890

Funding from the EC:
€959,890

Total effort in person-months:
58

Website:
http://www.serenate.org/

Contact person:
Dr. Karel Vietsch
email: vietsch@terena.nl
tel.: +31 20 5304488
fax.: +31 20 5304499

Project participants:

Academia	UK
CTI	DK
DANTE	UK
ESF	FR
TERENA	NL

Keywords:
Research networks
Strategy

Collaboration with other EC funded projects:
COMREN
GN1

IST - Research Networking - Networks for Research – Strategy and Benchmarking