

The SEEFIRE Project, studies on a South-East European Fibre Infrastructure for Research and Education.

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The Context

SEEFIRE (www.seefire.org), a Special Support Action co-funded by the European Commission 6th Framework Programme, is a project studying the feasibility of acquiring (dark) fibre by National Research and Education Networks in southeast Europe as a way of deploying a cost-effective network infrastructure and contributing to decreasing the digital divide in the region. The project, started on 1 March 2005 and running for 12 months, is run by a consortium of 9 NRENs plus DANTE, under the co-ordination of TERENA.

Regional partners in the project are research networking organisations in Greece, FYR of Macedonia, Albania, Serbia and Montenegro, Bosnia and Herzegovina, Bulgaria and Romania.

The current standard of research networking provision in southeast European countries varies from a very high degree to the lack of effective services in other countries. Some countries in region do not have dedicated networks for research and education either at the national or metropolitan area level.

Developments in the acquisition of (dark) fibre by NRENs are ongoing in some countries in the region and in some case there are concrete plans being developed on exploiting network node terminations close to national borders and investigating the options for border hopping. This is the case in the SEEFIRE partnership and also in some of the project's neighbouring countries, like Croatia, where CARNET has been deploying dark fibre in the Zagreb metropolitan area.

Balkan countries have a strategic geographical role in connecting southeast European, Caucasian and Mediterranean countries to GEANT. Most of the latter countries are currently obtaining international connectivity via direct links to northern European PoPs.

SEEFIRE supports the vision to create a southeast European fibre backbone fostering collaboration of researchers and students in a region where the development of research and education networking, as well as the information society as a whole have suffered from years of political unrest and relative isolation from the rest of the European continent.

The Project

The SEEFIRE project addresses the issues above, by building on the results of previous IST projects (SEEREN, SERENATE and GN1) to produce studies on the options available for acquiring an optical fibre network infrastructure and strategies for the development of research and education networking in southeast Europe, with a specific emphasis on Balkan countries. SEEFIRE will address such a digital divide and contribute to increase research cooperation in the region and with the rest of Europe.

The main objective of the SEEFIRE project is to raise awareness among stakeholders of NRENs, governments, users and telecommunication operators, about providing interconnection facilities in southeast Europe to reduce the digital divide.

The specific goals of SEEFIRE will be to provide:

- a benchmark of existing and potentially available optical fibre for NRENs in the region;
- an analysis of the technical options available for the deployment of dark fibre and the management of optical transmission by NRENs in the region;
- reports on economic and regulatory aspects;
- dissemination of information and increased awareness about dark-fibre deployment both at technical and policy-making levels.

SEEFIRE will provide the research and education community in southeast Europe with information about the availability of existing (dark) fibre and fibre plants, guidelines for the deployment of (dark) fibre networks, and political-managerial assessments of the regulatory and economic aspects of (dark) fibre deployment. The project will undertake studies to gather information about the availability of optical fibre in the SE region and other useful documents like templates for procurement, comparative evaluations of technologies, fibre availability database and a strategic report. This information will be transferred to the strategic players in the region via publications, online information a technical tutorial about (dark) fibre deployment and a policy workshop.

Impact of the project in the region

The findings of the SEEFIRE studies will provide input to the future planning of networks for research and education in southeast Europe, which will result in the availability of much larger network capacity to support the needs of researchers and students in the region and their collaboration with users across Europe.

As far as Croatia is concerned, CARNet, the NREN of Croatia, has some experience in leasing dark fibre only in the city of Zagreb, where point-to-point links have been built, with distances shorter than 15 km. The SEEFIRE project results will be beneficial for planning the future extension of dark fibre countrywide in different ways; by providing access to information about fibre owners, by providing information about deployment experiences and by providing real examples of experiences in neighbouring countries that may influence decision making at the national level.

The exploitation of the SEEFIRE project results will increase the opportunities of the research and education community in southeast Europe, by enabling researchers and students to better cooperate in their scientific endeavours.

Cost-effective higher bandwidth available for research and education networks will allow more users to obtain high-standard services also in remote areas, and will contribute significantly in building the Information Society in the region and in bringing it closer to the rest of Europe.

Increased network capacity will have a significant impact on existing and future project involving users of high-end applications like, for instance, Grids and biomedical applications, which need long-lasting flows of many Gigabits.

The project will ultimately provide countries in southeast Europe (SEE) with a set of useful reports and guidelines about (dark) fibre acquisition by National Research and Education Networks (NRENs), deployment of optical transmission technologies, regulatory, legal, economical and strategic issues of acquiring (dark) fibre by NRENs in the region.

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Short CV	Valentino Cavalli is the Deputy Chief Technical Officer of TERENA, the association of European research and education networks. After graduating in 1987 he worked in Italy as ICT Research Manager. Valentino has been working for TERENA, initially as a Project Development Officer, since May 1999. Valentino is the project manager of the SEEFIRE project, studying the options for optical fibre acquisition by NRENs in southeast Europe. Valentino is leading a specific support activity in the GN2 project dedicated to less developed European countries. Recently he has been working in the SERENATE project - studies on the evolution of research networking as targeted by eEurope - as editor of a report on equipment for next generation networks, and in the SEEREN project, which provided international network infrastructure to countries in South East Europe, by organising the NATO/SEEREN Policy Workshop for NRENs in South East Europe, held in Varna, Bulgaria in September 2003.		
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