



OCCASION Organising Caucasus and Central Asian Internet Offerings to NRENs

SUMMARY

The Silk Project provides connectivity to GEANT2 from the National Research and Education Networks (NRENs) of the 8 Newly Independent States (NISs) of the Caucasus and Central Asia, and Afghanistan. The Silk Project is supported by a number of organisations, with the largest funding coming from the NATO Security through Science Programme, with substantial contributions from Cisco and DESY. The OCCASION Project manages the Silk Project, provides additional features (e.g. network management, VoIP and videoconferencing tools), and services such as information, CSIRTs and operational support. Their deployment and maintenance help researchers in the Silk countries to collaborate with their colleagues in the European Union. Another aspect of the project is to identify significant User Groups, active in both the Silk countries and the European Union, who need to use the Silk network for their collaborations. It then fosters the requisite training and joint workshops (co-funded with other bodies) to enable useful collaborations. Finally, it will assist the Silk NRENs to move towards an environment in which their networks will be self-sustainable without continued large-scale financial contributions from the EC and NATO.

OBJECTIVES

The main objective of OCCASION is to advance collaboration between European researchers and those in the Caucasus and Central Asia – the Silk countries shown in the figure below. The other objective is to help develop the National Research and Educational Networks (NRENs) in the Silk countries – both in technology and facilities. Specifically OCCASION will pursue the following themes:

- to manage the network linking the Silk NRENs to GEANT2.
- to coordinate the provision of information services by the Silk NRENs.
- to deploy and operate a set of VoIP and multimedia conferencing end-stations to provide collaboration facilities between the researchers from the European Union and the Silk countries.
- to deploy and assist in the operation of a Computer Emergency Response Team in each Silk country.
- to facilitate training in relevant areas.
- to set the scene for the Silk NRENs to move to a sustainable NREN infrastructure with good performance within its financial limitations.

INTERNATIONAL ASPECTS

The project is fundamentally international, with the recipient NRENs covering all of the Caucasus, Central Asia and Afghanistan. The problems encountered are similar to those in other regions; as a result, we will establish links with other similar communities in the Balkans, the Mediterranean countries and in Africa. Here cross-participation of some of the OCCASION partners with other projects working in those areas will be helpful. Another aspect of international activity in the project will be working with NGOs in the Silk region to explore training, complementary funding and moves towards sustainability.

ACTION PLAN

We will first make an inventory of the current status of the NRENs in the Silk countries and how far each has currently reached in attaining sustainability.

The whole Silk project will upgrade its communication facilities later in 2006; the OCCASION partners will be involved in the tender evaluation during Q2 2006, in order to provide a higher performance system starting a few months later. In parallel we will start putting into place facilities for Voice/IP (VoIP) and conferencing. Their full deployment will be delayed until the new system is fully operational. The successful operations of such systems will require us to pay careful attention to the maintenance of Quality of Service, since we expect the system to be very fully loaded.

During this period, we expect also to introduce Computer Security Incident Response Teams (CSIRTs) in each of the Silk countries.

In preparation for forming up-to-date NREN organisations in each of the Silk countries, we will ensure that all have adequate address registration authorities, autonomous domains and information services in place.

USER COMMUNITIES

We will also make an inventory of current collaborations between research groups in the Silk countries and those in the European Union. This will be a precursor to assessing their needs for communication services and training to facilitate their collaborations. We will introduce VoIP and conferencing facilities to help the user groups collaborate, and provide training facilities both to the NRENs themselves and to the users. These will be co-funded with other NGOs as a series of workshops.

There is particular interest in Distance Education by many of the user groups; this will be pursued further.

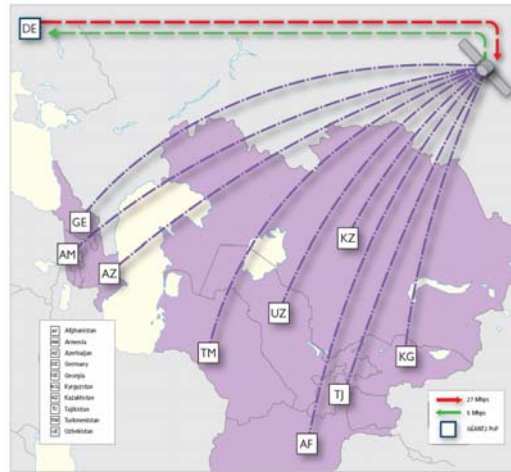
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The Caucasus and Central Asia



SCHEMATIC OF REGION COVERED BY SILK/OCCASION

SERVICE ACTIVITIES

The OCCASION project provides a number of relevant services to the scientific community:

- 1) Management of the Silk Project as a whole.
- 2) Management and Performance measurement of the Silk network communications system between the NRENs and GEANT2. This includes the provision of bandwidth, looking after equipment maintenance and repair, and managing the billing of extra bandwidth on a subsidised basis
- 3) Scheduling and performance management to ensure adequate Quality of Service for the VoIP and conferencing applications.
- 4) Assistance in the addressing organisation and equipment set-up to ensure that the Silk/OCCASION services are compatible with those running on the European NRENs.
- 5) Operations of the CSIRTs in the Silk countries as part of the European CSIRT system.
- 6) Ensuring adequate Web portals and information to keep the NRENs themselves, their users and the European research community informed of the potential of the Silk/OCCASION services.
- 7) Limited provision of supercomputing facilities on the Blue Gene supercomputer at Groningen U.
- 8) Provision of VoIP and Multimedia Conferencing facilities for collaboration with European researchers.

The Silk/OCCASION infrastructure fully exploits the network bandwidth provided by the European research network GÉANT2 and the National Research and Education Networks (NRENs) – both in Europe and the Silk countries.

RESEARCH ACTIVITIES

Besides facilitating a number of research collaborations in areas of science and technology (e.g. Material Sciences, High Energy Physics, Grid research and Life Sciences and Environmental Sciences), OCCASION deploys a strong research activity on the provision of real-time collaboration services over medium speed networks with heavy utilisation.

NETWORKING ACTIVITIES

The total activity of the OCCASION project is to ensure the current integration of the Silk NREN networks into the European GEANT2 research community, and to facilitate their progression to higher performance interconnection in an economic and sustainable manner.