

TERENA Technical Advisory Council
Monday 14 May 2001
Talya Hotel, Antalya
Turkey

Meeting Report
John Dyer
11 June 2001

Introduction

The TERENA Technical Advisory Council meets once each year at the TERENA Networking Conference. Attendance is limited to technical managers from the membership who have been nominated to represent their organisations. The major goals of the meeting are to review the status of the TERENA Technical Programme, discuss "hot topics" and make suggestions for future technical directions, identifying Special Interest Areas on which TERENA should concentrate.

Kees Neggens, the TERENA Vice President for Technical Programmes, chaired the meeting that was opened with a round of introductions followed by a review of the notes of the previous TAC held in May 2000.

Status of the Technical Programme

John Dyer, the TERENA Chief Technical Officer gave a presentation on the activities of the technical programme. The CTO reported that there are currently four active Task Forces:

- TF-NGN - Working on lower layer aspects of advanced network deployment with particular emphasis on IPv6, Quality of Service, Measurement and Optical issues.
- TF-STREAM – Piloting the use of pan-European video conferencing and media streaming, developing and disseminating best practice.
- TF-CSIRT – Coordinating security activities of European IRTs, developing training material, developing standards, tools and best-practice in the security area.
- TF-LSD – Developing consensus in the area of directory requirements for European NRENs and evaluating deployment strategies.

The CTO went on to give a brief report of the activities in each of the technical Special Interest Areas that the TAC had previously recommended:

- Lower Layers (including, IPv6, Optical Networking, MPLS, Over Provisioning . . .)
- Quality of Service (including Diffserv)
- Videoconferencing and Streaming Media
- Content Delivery, Indexing and Searching (including Indexing, Caching, Searching and Portals)
- Middleware (includes Directories, Authentication and Security Issues)
- (Mobility)

It was noted that "mobility" had previously been identified as an area in which TERENA should consider as a potential area for future work. Although attempts to identify practical steps that

could be taken in the mobility area had been undertaken, little progress had been made. The meeting agreed that the year 2000 had perhaps been a little early.

The CTO concluded his presentation by giving a review of project proposals in which TERENA is a partner and that were submitted to the European Commission on 25th April. The results of the submissions will not be known until later in the year. The project proposals are:

- ERNESTINE – A coordination activity for RN2 projects
- SCAMPI – An innovative network monitoring tool development capable of both active and passive monitoring of links up to 100 Gbps
- SUNRISE – Building on the Quality of Service work being undertaken by the current TEQUILA project
- 6NET – A project to be led by CISCO to develop a pan-European IPv6 test backbone

It was noted that TERENA would take a similar role in each of the projects should they be approved, acting as an information conduit to and from the project partners and the academic community. This will be achieved by providing a project website, mailing list, running workshops, seminars and liaising with appropriate external communities such as Internet2, Global Grid Forum, IETF etc.

Questions and Comments

The GRNET representative asked about the uptake of results of TERENA projects. The results of the compendium study are that many NRENS find the information on the TERENA web server is useful and use the site regularly. The community has not been so good at taking the results of projects and using them to support new or existing services. TERENA is aware of this and has taken steps to focus the project proposal evaluation process more closely on the likely uptake of results. In particular, to ensure that proposals have demonstrable committed interest and support from the NREN community, preferably in the form of contributions.

The TERENA president raised the issue of how the national networks should respond to the challenges of the emerging GRID activities. The CTO gave a short presentation on GRIDs to raise some of the issues that he considers need to be addressed.

In the context of the TERENA Technical Programme, it was agreed that directories, authentication, security, PKI etc., are areas in which the community already has expertise and in which the TERENA community could contribute to GRID activities. It was noted that by understanding and developing expertise in these areas NRENS could develop an infrastructure capable of supporting GRID applications. There is a real danger that the different players in the grid arena may go off in different directions and not meet up with inter-working solutions. A major question that TERENA should be addressing is how to avoid this situation developing.

Presentation by Dimitrios Kalogeras, GRNET & NTUA on Optical Networking

Dimitrios has been managing the planning and introduction of the proposed optical network for GRNET. He gave a presentation on the technical questions that he had been exploring in this exercise and gave a brief survey of the equipment he had evaluated. The adoption and self-management of Optical Networking technology by the NRN community is still very much in its infancy. TERENA will continue to monitor the situation and report back to the community.

Presentation by Jardar Leira of UNINETT, on Mobility

Jardar gave a presentation on the early work being undertaken by UNINETT in the field of mobile networking, specifically, the UNINETT Mobile Networking System (UNMS). The objective UNINETT have is to always be able to reach the user with a fixed address whilst allowing the user to connect using the cheapest available system. As far as the user is concerned, the service will need to be seamless between all roaming systems.

Ton Verschuren reported that SURFnet are working on a multi-segment system within their office that permits auto-handover. SURFnet also have projects on virtual presence and GPRS usage which are both related strongly to mobility. Peter Kaufmann of DFN said that DFN had had a mobility project that was not going to have a follow-up. DFN is now considering what to do in the mobility field: on the one hand there is a strong development in industry, on the other hand it is very much a campus issue. After the summer DFN will organise a workshop to discuss mobility and in particular what DFN could do in between industrial development and campus implementations; Peter Kaufmann agreed to report back to the TAC when they have some conclusions. David Williams asked about the security aspects of mobile networking. Although UNINETT use some encryption an equally important aspect is to design and build the network with security in mind. UNINETT have been careful in their design so that they can connect and manage users with diverse requirements, ranging from the GRID to the authentication of students taking education from different places.

FEEDBACK on Technical Programme and Advice on New initiatives

- **Mobility**

There was discussion on the issue of what TERENA should do regarding the issue of mobility. It was agreed that the issue is very much an area for development for NRENs and their connected campuses and therefore difficult for a pan-European organisation to be involved. DFN have a workshop in mind for Germany. A major issue that was raised is that of cost. The commercial services about to be delivered by the commercial operators will be expensive. The academic and research community will only be able to use cheap affordable services, particularly for student connectivity.

It was generally agreed that imminent rollout of GPRS around Europe would have some stimulating effect on the need for some work in our community. Already mobile operators have started using an "unofficial" GPRS naming domain and may well build their own Internet. This

may only be one area of impact (distributed databases are essential to support the authentication for mobility is another) and a useful action for TERENA would be to investigate the implications for our community, culminating in a workshop. Kees suggested TERENA try to organise a workshop on mobility for November.

- **Grid Activities**

It was agreed by those present that GRID activities are cropping up on most networks in some shape or form, but the network providers are generally not focusing on supporting GRID applications specifically. The CTO suggested that since many of the facilities needed for GRIDs are needed to support networked applications generally, this was probably OK. He went on to add that the sorts of facilities need by networks include infrastructure for security, directories, certification, authentication and PKI, in fact areas in which TERENA has already been working. It was agreed to handle GRID support within the existing Task Force and Project framework and NOT create any new structures specifically for GRIDs. It will be vital to ensure that the existing groups consider the implications of what they do in the context of GRIDs however.

There was general agreement that some GRID information pointers on the TERENA web site would be helpful. The CTO said he has been developing links with the GRID community through the Global Grid Forum and the European GRID projects and a page of pointers will be provided.

Conclusions

1. It was agreed that the current Special Interest Areas should be continued and that at this moment there is NO need to create any new Special Interest Areas for the Technical Programme.
2. The Task Forces and Projects add a focus on the application of their work to GRID activities.
3. Mobility Issues should receive more active attention in the coming year

The following questions were raised and should be the focus of some TERENA attention and feedback to the community

1. The Issue of whether a Euro-EduPerson is needed for Authentication purposes rather than adopting GRID-Person or EduPerson from the US.
2. In the context of the above, how does an Institution get individuals registered/authenticated in the system
3. The area of wireless/mobile security should be investigated with some recommendations being made to the community
4. The issue of introduction of GPRS and its implications for inter-working academic networks should be investigated

Any Other Business

David Chadwick from Salford, UK gave an overview of a project proposal to add public key certificate retrieval to OpenLDAP. Briefly, the problems are two fold:

- You cannot retrieve single attribute values from an entry; you can only get all the attributes or none of them. (An Internet Draft, now at last call, has proposed a solution to this problem). This is a general problem for LDAP and is not specific to certificate retrieval.
- You cannot search for certificates in LDAP directories, as no matching rules have been defined for them (although the rules have been defined for X.500 directories). (An Internet Draft that describes these matching rules, now at second version, has been published by the IETF PKIX group).

The proposal was received very positively by the TTC. A day earlier, on May 13th, the proposal had been discussed extensively in the meeting of TERENA Task Force TF-LSD, and got a very warm welcome there as well. The LDAP experts gathered in TF-LSD feel that the proposed project will be an important and good piece of work, and that the result of the project will fulfill a real need of National Research and Education Networks (NRENs). NRENs are asked to consider making contributions to funding this work in order that it may proceed.

John Dyer presented a proposal from DAASI to work on a Definition of a European Educational Person (DEEP). The issue is that potential divergence between what is required for a European definition of an EduPerson and in the definitions of GRIDPerson and EduPerson could be problematic for the European networking community. The proposal is to look at the existing definitions and survey a cross-section of European community users for their likely future requirements. Wherever possible the project team would attempt to get changes to the existing definitions accepted, rather than make new definitions.

As identified in the meeting, the need for a definitive study into the Euro-EduPerson issues is important for the European NREN community. The proposal received majority support at the TF-LSD meeting on May 13th and also significant support at the TTC. NRENs are asked to consider supporting this work with a funding contribution in order that the work may proceed.

NRENs interested in finding out more about the above projects or supporting them with financial contributions should contact the TERENA CTO, John.Dyer@terena.nl

Meeting Closed

The chairman thanked the participants for their valuable contribution to an interesting and productive meeting. The meeting was then closed.

Attendees List

CARNET/SRCE, Croatia	Miroslav Milinovic
CERN	David Williams (TERENA President) Olivier Martin
CESNET, Czech Republic	Jan Gruntorád Vladimir Smotlacha
CISCO	Larry Dunn
DFN, Germany	Peter Kaufmann
FUNET, Finland	Markus Sadeniemi
GRNET, Greece	Dimitrios Kalogeras (TTC member)
HEANET, Ireland	Mike Norris
IBM	David Martin
INFN/GARR, Italy	Mauro Campanello Claudio Allocchio (TTC member)
RedIRIS, Spain	Esther Robles
POL-34, Poland	Stanisław Starzak (TTC member)
University of Salford, UK	David Chadwick (TTC member)
SURFnet, The Netherlands	Egon Verharen Ton Verschuren Erik-Jan Bos
SWITCH, Switzerland	Christoph Graf Urs Eppenberger
TELEGLOBE	Yves Poppe
TERENA Executive	Kees Neggers (Chairman) Brian Gilmore
TERENA Staff	John Dyer (Meeting Secretary) Karel Vietsch Valentino Cavalli Yuri Demchenko
UKERNA, UK	Chris Oakley Roger Bolam
ULAKBIM, Turkey	Mustafa Hadi Dilek Yücel Güven
UNINETT, Norway	Olav Kvittem Stig Venaas Jardar Leira