

**TERENA Technical Advisory Council**  
**Monday 3 June 2002**  
**University of Limerick, Limerick**  
**Ireland**

Meeting Report  
Valentino Cavalli  
21 June 2002

## **0. Introduction**

The TERENA Technical Advisory Council meets once a year at the TERENA Networking Conference. Attendance is limited to technical managers nominated by TERENA members 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.

Claudio Allocchio, the TERENA Vice President for Technical Programme, chaired the meeting that was opened with a round of introductions.

## **1. Status of the Technical Programme**

Karel Vietsch, the Secretary General of TERENA, explained the structure of the Technical Programme, the functions of the TERENA Technical Committee and the role of the Advisory Council in providing input and feedback on the Programme. He mentioned the Special Interest Areas (SIA) and the need to formally review them during the meeting. Then he gave an overview of the Technical Programme presenting the major ongoing activities.

Two SIAs deal with Lower layers technologies and QoS. The main activity in those areas is the Task Force Next Generation Networking (TF-NGN, <http://www.terena.nl/task-forces/tf-ngn/>), but they include also a number of EC projects. 6NET (<http://www.6net.org>) started in January 2002 and recently announced its network operation, new partners were joining the project. TERENA role in the project is limited to information dissemination. TERENA has a very small role also in 6LINK the EC IPv6 Cluster (<http://www.ist-ipv6.org/index.html>), whereas it coordinates SCAMPI (<http://www.ist-scampi.org>), another new project, started in April 2002, about providing a monitoring platform at high-speed 10G. TEQUILA (<http://www.ist-tequila.org>) was ending soon and it held its last workshop in Maastricht in May 2002

The special interest area on video conference and streaming has two main activities: TF-STREAM (<http://www.terena.nl/task-forces/tf-stream/>) issued a final report in spring 2002 but a group of NRENs were discussing about new initiatives related to streaming. A first workshop on IP Telephony (<http://www.terena.nl/tech/IPTel/iptelws.html>) was organized in March 2002 and a second took place the day before the TAC meeting in Limerick.

In the special interest area on content delivery indexing and searching currently the only activity was represented by a proposal for a small project submitted by the RENARDUS consortium. It was noted that the proposal had been approved by the TTC but would require additional funding from e.g. TERENA members and that TAC members could be influential in securing that funding.

The special interest area on middleware and security has quite a few active Task Forces. TF-CSIRT (<http://www.terena.nl/task-forces/tf-csirt/>) gave rise to spin off activities, like the Trusted Introducer pilot service (<http://www.ti.terena.nl/>), which should be continued as a self-sustaining permanent service, and the TRANSIT project that will develop and organize training materials and two workshops per year in the next three years. TF-LSD (<http://www.terena.nl/task-forces/tf-lsd/>) deals with LDAPv3 and provides a framework for a

number of related projects like "Adding Certificate Retrieval to OpenLDAP", DEEP2 (which contract was signed the day before) and "Directory Schema Registry" (for which funding was being mobilized from a number of organisations including RedIRIS, JISC, PSNC and CESNET). TF-AACE (<http://www.terena.nl/projects/pki/>) formally succeeds a number of meetings on PKI coordination in Europe and had its first meeting the day before the TAC.

Mobility (<http://www.terena.nl/mobility/>) was not formally a special interest area, however TERENA had started some initiatives following recommendations from the previous TAC meeting at the last TNC. One meeting was held in Amsterdam in March 2002, followed by a second one the day before the TAC.

Karel mentioned other TERENA activities not falling under any specific SIA, like GRID, where it is important to identify how to interact with the grid community and have mutual exchange benefits. Also TERENA is still maintaining the GNRT (<http://www.terena.nl/library/gnrt/>) project and owns results of the "Decision making by email" project, which produced a potentially useful tool to decide, for instance, the dates of meetings. Finally, the TERENA Development Programme was mentioned as an initiative to help research networking in CEE and Mediterranean countries.

### **1.1. Questions and Comments**

The major issue discussed after the presentation was whether the Renardus project was matching the community requirements about academic portals or not.

SURFnet representatives reported that they had discussed about providing funding to the project and decided not to do it mostly because of its target to the library community. SURFnet have worked on the DESIRE project in the past which was targeting the same community but that area does not match with their core business anymore. Brian Gilmore said that the JISC might have been interested in the project. Karel confirmed that he was in contact with them but the support had not materialised yet.

Following the specific remarks about Renardus it was asked if indexing was still part of the core business for NRENs and if it should still be considered as a SIA for TERENA. Many participants agreed that it is quite an important area, but very relevant to directories and not to searching. The TERENA vice-president Technical Programme remarked that NRENs provide this kind of services to their constituency by running student portals, GARR, for instance, had been requested to provide that kind of support. However it was felt that the content is always very specifically related to local user needs and problems.

Roberto Barbera said that the issue is relevant to the GRID, he was aware of a number of projects discussion about portals and that TERENA might play a role inside some GGF working groups about GRID-portal issues. Yuri recalled a successful DESIRE II portal workshop held two years ago, but it was observed that many issues have now being taken over by middleware activities. Roberto Barbera and other people were rather defining portals as the human interface to the middleware. Francois Fluckiger remarked that the impact of middleware on infrastructure planning and operation is an important issue to be investigated.

### **1.2. Wrap up and Conclusions**

The TERENA vice-president Technical Programme brought the discussion back to the topic of to what extent information-indexing is still an interesting area for the Community. But the remarks were again focusing on the Renardus project. It was suggested that the general theme is interesting but there could be more modern approaches than those proposed by the project. SWITCH representatives added that the project received also poor support from the librarian community in Switzerland.

The TERENA president acknowledged the specific remarks about the project but emphasized the need for NRENs to improve support to their customers in relation to applications and stressed the importance of talking to the user communities, including the librarian ones.

The TERENA vice-president Technical Programme concluded that there were still two weeks time for getting more feedback on the Renardus project but it was likely that the conclusion would be negative for it.

Before moving to the following agenda item, Lajos Balint asked if there was any Expression of Interest being submitted to the Commission on behalf of TERENA. A number of initiatives were mentioned including one for the successor of Geant and some about IPv6 deployment. TERENA was submitting an EoI in the area of optical networking and Victor Reijs would have made a presentation later at the meeting.

## **2. Middleware and Campus issues**

### **2.1. Presentation by Brian Gilmore, University of Edinburgh on Middleware Activities in Europe**

Brian Gilmore is, together with Ton Verschuren, one of the two European experts liaising with MACE, the US-based Middleware Architecture Committee for Education (<http://middleware.internet2.edu/MACE/>). He explained how MACE is organized, with a number of groups and regular phone meetings being held every two weeks. The intention of the European liaison was to set up a similar initiative in Europe. Brian explained why it did not happen yet and pointed out a number of open issues about how to put this forward in Europe. The Internet2 middleware functions are comparable to the role of NRENs for universities in Europe, but Internet2 is also a body for discussing campus issues and therefore has better concrete links than the typical NREN in Europe. Brian raised the issues of how many NRENs address AAA down to the campus level, and whether they have the remit to do that or not. More generally he was arguing that NRENs have very weak links to campus level. Additionally, the amount of resources available to Internet2 to promote solutions on common middleware issues in the US is much larger than in Europe. According to Brian the nearest equivalent in Europe is the TERENA Technical Committee and it meets only four times a year, moreover middleware is not the main strand in its activity. TERENA has weak and patchy relations to campuses and universities and it does not have a remit to link to them.

### **2.2. Presentation by Ton Verschuren, SURFnet, on the Campus vs NREN case**

Ton Verschuren supported Brian's presentation by pointing out the trends towards customer empowered networks as well as Lambdas, with control moving to the edge. He emphasized that many new activities regard wlan roaming, Authorisation and Authentication with the result that innovation comes no longer from the computing centers but deeper from the universities. Ton concluded that if TERENA wants to stay at the forefront of advanced networking it has to reach out to the campuses.

### **2.3. Comments and Questions**

Mauro Campanella confirmed that there are real needs for users to be authenticated in getting services from a university campus at a different NREN. TERENA has to play a role in the coordination of key-area activities like deployment of directories and core services, the focus being not on the coordination of content but on the enabling technologies.

Stanislaw Starzak said that NRENs should probably change the way they support customers, and they will have to address that problem space soon or later. Some coordination is needed but he hardly sees how TERENA can take responsibility for that.

Victor Reijs said in order to reach the campus level the NRENs need to modify the contracts established with the institutes. This however might not be the case for all of them. UNINETT has been working on the campus level since some time, and are moving even more heavily into there with the "Common Identity" Project, unifying student directories systems in Norwegian Universities. Victor remarked that this would be difficult in Ireland, Ingrid Melve replied that all universities in Norway are very positive about their proposal. David Williams would consider of bringing the UNINETT project into discussion of the GA for half a day in the autumn meeting.

Ingrid Melve emphasized the strong need to collaborate in the area. Globus developed their own Common Authentication system, DataGrid announced they will do their own system too in addition there will be commercial alternatives. Brian Carpenter remarked the desperate need to standardization in that area. Some coordination is being materialized in the Greater Nordic Middleware Symposium (GNOMIS, <http://www.uninett.no/info/seminar/gnomis/>).

Back to the campus issue, it was observed that the problem is not limited to TERENA in the first place but regards the NRENs themselves. SWITCH, for instance, does not have links to the universities, but to the computer centers, and they do not know for instance, what the physicists do on Grid. Urs Eppenberger agreed that an effort has to be done in trying to fill the gap.

Ton Verschuren thought that TERENA is in a good position to raise NREN awareness to this sort of issues. Urs Eppenberger added that to the same point by encouraging the adoption of measures to stimulate more participation of universities into TERENA Task Forces. Mauro Campanella suggested that the TTC should meet more frequently and that Task Force chairs should meet in order to coordinate common work items in different groups.

UNI-C in Denmark have contact with the end-user community, Dan Mønster mentioned that they have reference groups of people responsible for campus networks. Also there are for example videoconferences between end-users at different sites. That way the people responsible for campus networks feel the pressure from two sides. Juha Oinonen mentioned that similar groups exist in Finland. Stanislaw Starzak said NRENs have little influence on tackling campus issues, except in some specific countrywide project. He thought it is not feasible to change the relation with their customers in the short time, however it should be possible to improve it by giving examples in delivering good services to the campuses.

### **3. Presentation by Victor Reijs, HEANet, on the ASTON Project**

In the first months of 2002 many NRENs had put forward a proposal for a TERENA project called "A step towards optical networking", short name ASTON. The project could not be submitted to TERENA due to difficulties in the telecom market, however a few activities were started, using limited national and international infrastructure, within TF-NGN: brainstorming on Bandwidth on Demand, transport at 40Gbps and beyond, 10 GigE over long distance. The next step was the submission to the EC of an Expression of Interest to submit a FP6 project proposal. Victor Reijs and Valentino Cavalli were working on the EoI to be sent to the Commission by 7 June 2002. The EoI aimed at a much wider scale and more ambitious goals than the original proposal.

Roberto Sabatino said GÉANT should be a key partner in ASTON and stressed that the infrastructure should be an add-on to GÉANT in terms of management and procurement.

Peter Kaufmann was positive about the EoI, however he thought that a few issues needed to be clarified. It is not clear how realistic it is to establish an experimental optical European network, in terms of finance and of demanding technical questions to be solved. These should be addressed at the smaller national environment first and extended to the international one only after a successful internal experimentation.

#### 4. Discussion on GRID

Roberto Barbera started the discussion about GRID that emphasized the importance of network monitoring and the development of monitoring infrastructure with directories and middleware to be populated with monitoring data. Indexing is also an important issue in many scientific areas. GRID projects in the US are considering choosing standard management and scheduling tools, but it was not clear whether they were adopting an end-to-end approach or a federated one, with different autonomous GRIDS connecting to each other. It was stressed that users need totally transparent end-to end services. At the end of the session Dan Mønster mentioned studies on Grid service requirements done by the ENACTS project (<http://www.epcc.ed.ac.uk/enacts/gridservice.pdf>) that might provide useful input into the discussion.

The GRID community is spread over many different groups and even if the GGF is a very valuable bridge between the commercial and scientific communities there is still an issue for TERENA about how to structure its relation to those groups. OGSA The Open Grid Sources Architecture (OGSA, a proposed evolution of the current Globus Toolkit) is another point of contact between the two communities, bringing web services and grid together. Another suggestion was to discuss the GGF's recent report on Authentication and Authorisation at a workshop to be organised adjacent to a GGF meeting. These are also key issues to strengthen the links to the campuses. The European projects DataGrid and DataTag have work packages on networking, and it was suggested that relevant people from those work packages should be stimulated to collaborate with the US. TERENA people might also attend working group meetings.

Claudio Allocchio remarked that the open issues were too important to wait until the next TAC meeting for a follow up and suggested to continue the discussion about how to contribute to the GRID and to reach out campuses by using the TAC mailing list.

#### 5. Review of the Special Interest Areas

The TAC was asked to formally review the list of Special Interest Areas at this meeting. The first issue was whether GRID should be a new separate SIA or span horizontally over the other areas, including lower layers (regarding Bandwidth on Demand requirements). There was a clear preference for the latter. Also the reaching-out to the campuses should be added as a horizontal coordination activity across all SIAs. The third change to the SIA list was determined by the increase of interest in supporting mobility. Mobility received a special attention in the past but was not a SIA as such. The TAC agreed to consider Mobility as a new TERENA Special Interest Area.

The resulting recommended list of SIAs is as follows:

- Lower Layers (IPv6, MPLS, VPNs etc.)
- Quality of Service (including DiffServ)
- Videoconferencing and Streaming
- Content Delivery, Indexing and Searching
- Middleware (security, AAA)
- Mobility

In addition, Grid and campus coordination across the SIAs

#### 6. Meeting Close

The chairman thanked the participants for their valuable contributions to an interesting and

productive meeting. The meeting was then closed.

## **7. List of attendees**

### **7.1. TERENA Members delegates**

|                    |                               |
|--------------------|-------------------------------|
| Lajos Balint       | HUNGARNET                     |
| Marko Bonac        | ARNES                         |
| Mauro Campanella   | GARR                          |
| Brian E Carpenter  | IBM                           |
| Victor Castelo     | RedIRIS                       |
| Mustafa Hadi Dilek | TUBITAK ULAKBIM               |
| Urs Eppenberger    | SWITCH                        |
| Francois Fluckiger | CERN                          |
| Christoph Graf     | SWITCH                        |
| Torgny Hallenmark  | SUNET                         |
| Avgust Jauk        | ARNES                         |
| Peter Kaufmann     | DFN                           |
| Ingrid Melve       | UNINETT                       |
| Dan Mønster        | UNI-C                         |
| Mike Norris        | HEANet                        |
| Juha Oinonen       | CSC-Scientific Computing Ltd. |
| Victor Reijs       | HEANet                        |
| Rina Samani        | UKERNA                        |
| Stanislav Sima     | CESNET                        |
| Stanislaw Starzak  | POL34/PSNC                    |
| Jean-Marc Uze      | Juniper Networks              |
| Pedro Veiga        | FCCN                          |
| Egon Verharen      | SURFnet                       |
| Tibor Weis         | SANET                         |
| Klaas Wierenga     | SURFnet                       |
| David Williams     | CERN                          |

### **7.2. TERENA Technical Committee**

|                   |  |
|-------------------|--|
| Claudio Allocchio | Chairman (ex-officio) GARR, Italy.   |
| Roberto Barbera   | Universita' di Catania, Italy.   |
| Brian Gilmore     | University of Edinburgh, United Kingdom (TTC liaison with US MACE committee) |
| Christoph Graf    | SWITCH, Switzerland (also a national delegate)                               |
| Olav Kvittem      | UNINETT, Norway  |
| Ton Verschuren    | SURFnet, The Netherlands   |

### **7.3. TERENA Task Force chairs**

|                  |   |
|------------------|---|
| Peter Gietz      | DAASI International GmbH, chair of TF-LSD |
| Roberto Sabatino | DANTE, chair of TF-NGN                    |

### **7.4. TERENA Secretariat staff**

Valentino Cavalli  
Yuri Demchenko  
Licia Florio  
Kevin Meynell  
Karel Vietsch

## 7.5. Apologies

David Chadwick  
John Dyer  
Diego Lopez  
Peter Villemoes  
Stefano Zatti

University of Salford, United Kingdom.  
TERENA Secretariat  
RedIRIS  
NORDUnet  
ESA