



Report on TERENA Technical Advisory Council (TAC) Meeting

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The Technical Advisory Council consists of senior technical managers of the TERENA member organisations. It has as its tasks to review the progress of the TERENA Technical Programme, advise on its future direction and propose new initiatives.

Christoph Graf welcomed the participants and introduced the agenda:

1. Review-follow up from previous TAC meetings:
 - 1.1. Requirements of international e-science user groups, how NRENs and TERENA respond to them?
 - 1.2. Collaboration on security infrastructure in addition to TF-CSIRT; is there a gap for TERENA to close?
 - 1.3. Cloud Services
2. Community building and communications: networking interest communities beyond task-forces
3. Seamless Synchronous Communications: the potential impact of WebRTC on our video conferencing services
4. MOOC (Massive Online Open Courses) platforms - Should NRENs play a role and engage in MOOCs

Presentations are available at:

<http://www.terena.org/about/tac/20130603-presentations.html>

1. Review-follow up from previous TAC meetings

The goal of this session was to assess the functioning of TERENA technical work by looking back at the discussion from the previous TAC meeting in Reykjavik in 2012 and see how the outcomes of that meeting had developed and to follow up actions. Christoph Graph went through the discussion topics one by one.

1.1. Requirements of international e-science user groups, how NRENs and TERENA respond to them? Christoph reported that things are moving forward by:

- The preparatory work has started to convert the diverse existing data from the NREN Compendium into a comprehensive information system.
- The TERENA Secretariat has created a marketing section to strengthen the prostitution of TERENA by exploring new services and reaching out to research user groups.

- Licia Florio (TERENA) reported that TERENA is broadening its collaboration in the identity space with REFEDS, eduGAIN and FIM4R community as well as international groups such as EUDAT, CLARIN and e-IRG.

1.2. *Collaboration on security infrastructure in addition to TF-CSIRT; is there a gap for TERENA to close?* Christoph reported that, following the 2012 TAC's request, a meeting of NREN-CSO's was held in September 2012 to explore topics of common interest and see whether there is scope for TERENA to support any collaboration. Christoph raised the issue to the TAC again; should NRENs go down to the route of appointing formal CSOs and implementing formal standards such as ISO27001?

Lars Fischer (NORDUNET) indicated that legal compliance requirements at universities ultimately will drive the NRENs. A quick round the table demonstrated that a growing number of universities (and NRENs) will, or already have established the role of a CSO; some with certification on the roadmap, others feel the requirements of medical research. It was concluded that there is not a strong demand yet for NREN coordination, but there is an opportunity for NRENs to enter into the picture. The TAC proposes the following actions:

- Create the profile of an NREN-CSO
- Clarify the role of an NREN CSO
- Network existing and aspirant CSO's
- Reactivate CSO group for this purpose
- Report back to the TAC and GA in a year's time

1.3 Cloud Services

The results of the TERENA Trusted Cloud Drive project are available on the web:

<https://confluence.terena.org/display/CloudStorage/TERENA+Trusted+Cloud+Drive>

2. Community building and communications: networking interest communities beyond task-forces

Introducing the topic, Christoph quoted one of the recommendations from the Reykjavik Group:

"Expand the community in all directions in particular to research communities, as they are important users of our services." The methods that are currently in place for the NREN community include task forces, workshops, projects and services. But as we are reaching out to new user users and groups, the ways we work with community collaboration may not qualify anymore and has to be reconsidered.

Difficulties have been identified for newcomers to break into existing activities such as Task Forces. The non-alignment of Task Force meetings means that there is little cross fertilisation, indeed the very term "Task Force" has become a bit of a misnomer and have evolved into long lived special interest groups with a loose set of objectives. Essentially, the task force structure has become heavy weight rather than agile.

To kick off ideas for a new format for groups and to initiate the discussion, Christoph proposed

the idea of two one-week long joint task force meetings per annum, with all groups meeting at the same location. This structure would deliver the following advantages, he said:

- › Facilitating cross-fertilisation
- › Lower the effort to organise workshops during the same week
- › Easier for newcomers to get an overview
- › The right people around for incubating new ideas

Several people asked why not organise task forces meetings during TNC? In the discussion that followed it was concluded that the TNC program is too busy and does not allow for this, at least not during the parallel sessions. Organizing meetings outside these sessions was felt too much of an effort on top of people's busy schedules during the conference. John Dyer (TERENA) added that given the new requirements there's a call to re-think this.

In general people had major concerns over logistical and time aspects for two one-week meetings. Per Nihlen (SUNET) said that people are overloaded with meetings and consequently have difficulties doing actual work. We should take care not to schedule people to death, he stressed. Christoph reminded everyone that we should take care to align meetings on the user agenda and not the other way around because of our own constraints. It was concluded that one week in autumn as opposed to two weeks during the year found support from most people.

On the subject of cross fertilisation and incubating new ideas, Roland Hedberg (Umeå University) suggested the use of open space techniques to encourage discussions. A nice side effect is that an open space event positively takes the conversation away from the dinner table and allows for more social interaction at dinner. Klaas Wierenga (CISCO) added that cross fertilisation will not just happen, but has to be worked on and thoughtfully introduced to newcomers. He viewed the Open Space event at TNC as a possible answer to the creation of new ideas. Assess what works here, replicate and consider doing it again in the autumn, he recommended. Brian Nisbet (HEAnet) supported the idea of a special group or special meeting. He mentioned that TF-NOC is running down in September this year and is currently re-thinking a format to sustain as a special interest group (SIG).

Jan Meyer and several other people felt that it is difficult for newcomers to break into the inner circles. Groups of experts have been working on areas for years and do not deliberately form closed groups, but it is difficult to break in if you are new or haven't had a lot of experience. An extreme example given was the IETF where it is very difficult for newcomers to break into the inner circles. The IETF is not a place for newcomers as the same people working on the same tasks makes for productivity. Therefore just bringing different task forces in the same location may not solve the problem barriers for newcomers to follow and engage in conversation. Moreover there is a dilemma with new people of causing duplication of effort. So, the cost of investing in new entrants has to be offset by the long-term sustainability and return. A lively discussion led to the following ideas and remarks:

- Task forces have special interest area for people to learn together. Converge talk about all topics and then come together to diverge into projects, Klaas said.
- Jan Meyer thinks the real working collaboration always take place in another place. You only get stuff done if you know people outside your own organisation was his conclusion. Reinstate the idea of smaller working groups, he advised.
- Jan Ferré (DeIC) advocated the idea of a TF -BOF at the new event week.

Working groups used to be the way of working in TERENA and lived forever, then we defined

time-limited task forces, next we have to encourage the creation of special interest groups, Valentino summarized. In conclusion, the TAC did not come to a real conclusion but there are ideas for new initiatives. A starting point is a new format beyond task forces. It will require more time and thinking inside the TTC and TERENA Secretariat for ideas to mature.

3. Seamless Synchronous Communications: the potential impact of WebRTC on our video conferencing services

Jan Meyer (UNINETT) presented a review of the industry, development of standards, predictions and provided an outlook of new things that are likely to happen in the IT-conferencing space. He explained why existing web and video conferencing systems fail to achieve wide adoption and why new innovative technologies will have an impact on the market. While referring to the disruptive innovation theory of Clayton Christensen's – Innovator series of books talking about Disruptive Technologies, he introduced Web RTC.

Web RTC allows good quality VC/UC without a new client (just your browser) and allows for VC applications to operate without much more than just a web server. See: www.webrtc.org/demo. It was developed by Google and Mozilla and supported by other market leaders.

Jan believes WebRTC is such innovative technology that it will disrupt the traditional market, as in Christensen's theory. Currently traditional videoconferencing equipment like MCUs are too expensive because too much money is invested in the current business model. Web RTC on the other hand makes it easier to integrate with other products, portals and browsers -while most traditional tools are ill suited for that- and come at a much lower price. This will initially cater well for low-end markets, including higher education and eventually, he predicts, will change the entire Video conferencing market.

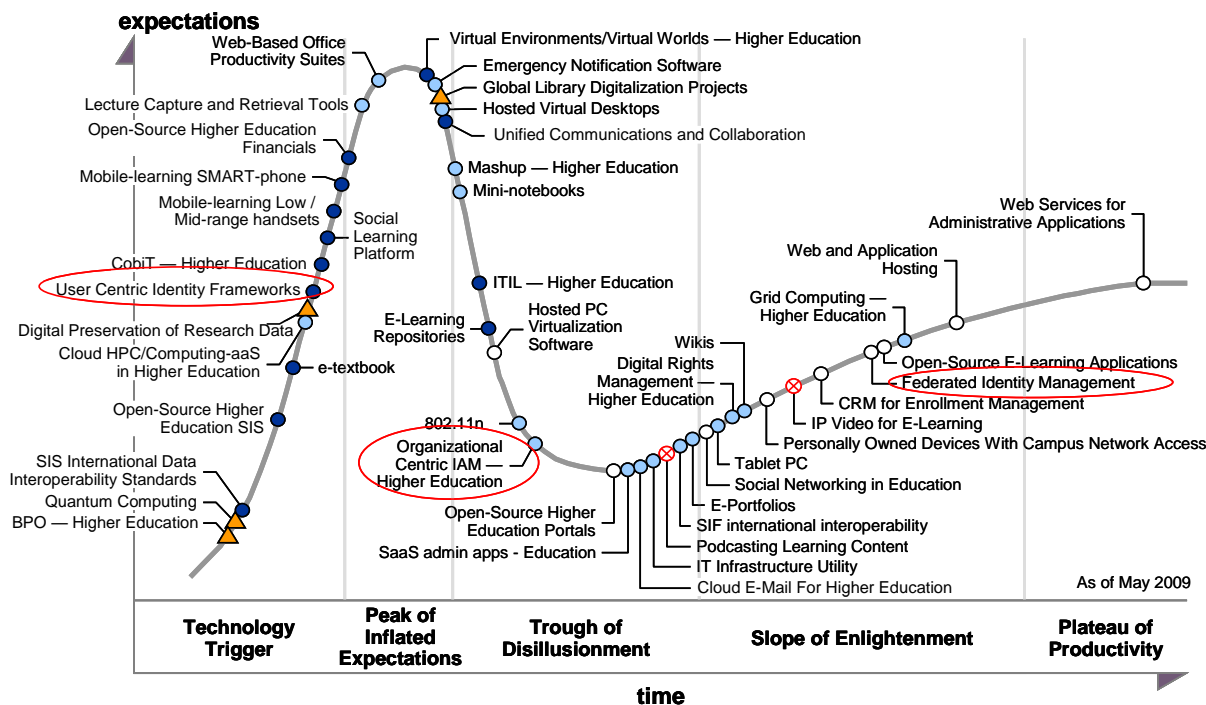
This implies that everyone in our community who is doing or planning something with IT-conferencing should be looking ahead. There *will* be a change at the users desktop and NRENs should start tracking WebRTC now before it is too late, he warned. Existing VC people may not be the best to look ahead as they are probably too entrenched in the current systems, but fresh thinkers are needed to catch the wave of disruptive technologies.

Comments:

- Need standard video conferencing displays and cameras for a proper room experience but what happens beyond the room is irrelevant to the users
- Skype is a disruptive unified communication mechanism and just works. Users already have access to such a unified system – browser – billions of users
- All communications systems in NRENs will change
- Browser use is a daily routine, easy group conferencing for the masses, easier to scale, making RTC really cheap

MOOC (Massive Open Online Courses) – Should NRENs play a role and engage in MOOCs

Yves Epelboin- Head of the E-learning group of Unys described his vision on MOOCs - massive open online courses. He talked about a "MOOC Tsunami", as MOOCs have been multiplying in number, resources and students in just a few years in the US and are moving onto the agenda of many in Europe. At the same time he believes that there will be a fall before maturity. (see chart below).



Yves queried if the US vision should be adapted to Europe? MOOCs were invented to solve an economic problem in the US, he reasoned. Student-debt had increased to such unacceptable level that something had to be done in order to prevent a potential financial bubble. MOOCs were invented as a new way of decreasing tuition fees and to create a more efficient way of teaching, by use of:

- Highly scalable IT-resources
- Blended teaching with social media elements
- Crowd-sourcing for moving some teachers' tasks to students (reducing teacher/student ratio)
- With very large number of students, effort per student decreases

But they come with high cost, a university or institution cannot create a MOOC on its own but need organisational structures. A new business models still need to be found and shared with the industry (certification and degrees being retained by the university). He mentioned Coursera amongst other MOOC consortia that have formed partnerships with many universities and institutions.

So, what does it mean for Europe? MOOCs involve a full redesign of the educational model; new tools to deliver the courses, network, scalable platform and people with enough knowledge in IT and teaching. Designing a MOOC is much more than reusing a traditional lecture course, the MOOC driven course has to be designed as such from the very start. Moreover, he believes that Europe will be much more focussed on deployment of the technology rather than on the courses themselves. Yves sees a clear role here for the NRENS.

The decision to start a MOOC is in the hands of the stakeholders, he said. Still it's not easy in Europe to convince them that they should be taking this path. MOOCs are not just a new way of teaching, but they are changing the DNA of an institution. On top they are expensive. Questions like should MOOCs be organised at university level or at national level? Or should it be a consortium like Coursera or if there's a role for TERENA.

Yves concluded by saying that he believes that major industry players like Google and Microsoft most certainly will play a role in MOOCs in the longer term. Major network providers and cloud providers attended a MOOCs summit he recently attended. That indicates that MOOCs have the attention of the big players. He closed his presentation by stating that in the end, the industry market will demonstrate how the delivery of massive open online courses will look like in 10 to 20 years from now.

Bartosz Belter (PSNC) described the MOOC platform which is run at the Polish NREN. He stated that technically most NRENS are already set up to host MOOCs and that problems usually arise from a political view. You need the support from the local government, he said. The Polish NREN was lucky to receive support from their Ministry of Education who started a Digital School Programme. PSNC was assigned as the technical platform provider, charged with the provisioning of e-books to elementary, secondary and high schools. He explained how PSNC was able to fill in the technical parts since infrastructure and services had already been in place in the NREN.

Several NRENS reported that there was also MOOC activity in their countries and that they would be willing collaborate and to share their experiences: Slovenia, Hungary, Norway, Sweden, France, Poland, Israel.

The general conclusion was that the topic should be monitored and that NRENS are well placed to provide their services to national initiatives. Several open questions remain:

- How do MOOCs affect universities and teachers, and indirectly, the NRENS?
- How will the new players influence the education sector?
- Will MOOCs transform education substantially?

List of Participants

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