

# Minutes of the OFG19 Education and Training working group sessions

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## ***IPR for Grid Education and Training***

This was the first of six Education and Training Working Group sessions at OGF19. The minutes for this session contain only a high level summary of the discussions on the topic of IPR. The detail of this discussion is available as a draft document at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/IPRForGridEducationTraining>

## Participants

Malcolm Atkinson – NeSC

David Fergusson – NeSC

Morgane Artacho – NeSC

Kilian Schwarz – GSI

Rüdiger Berlich – Forschungszentrum Karlsruhe

Ben Clifford – University of Chicago, OSG Education

Deitmer Erwin – Forschungszentrum Juelich

Steve Brewer – OMII Europe

Kathryn Cassidy – Trinity College Dublin

## Reference Materials

1. IPR in Networked eLearning (JISClegal)
2. Copyright Law for eLearning Authors (JISClegal)

## Progress to-date

We began with introductions and then a brief review of the Group's progress so far. Links to website & wiki were shown and attendees were encouraged to sign up and volunteer.

The agenda for the entire conference was outlined briefly. There are six E&T sessions overall:

- IPR Policy
- Policy for sharing t-infrastructure
- National and International Policies 1
- National and International Policies 2
- E&T Content - to cover recommended curriculum issues
- E&T Frameworks - to look at the Certified Grid Engineer concept and Industry engagement

The following issues and gaps were identified with the work done so far

- The Glossary document <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Definitions>
  - Needs more terms
  - Needs more work on existing terms
  - More terms will arise as additional documents are written
  - Editors/proof-readers will need to review documents to ensure that they use the terms once they are defined

**ACTION ALL : Review definitions of terms and add more at**

**<https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Definitions>**

**ACTION Kathryn Cassidy : Cull additional terms from Draft Documents**

- The Recommended curriculum document <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Curriculum>
  - Needs more input
  - Should consider European shared Training Credit system (ESTC)

- ICEAGE has previously recommended creating separate curricula for CS and Application Scientists

**ACTION ALL : Review Draft curricula at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Curriculum>**

- Catalog of existing courses <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/ExistingCourses>
  - Need to be an authoritative and representative list although it cannot hope to be comprehensive
  - Structuring of descriptions required
  - Structuring of the list required e.g. split courses into categories such as Masters, Modules in summerschools, etc.

**ACTION ALL : Review the descriptions of your own courses, add information on other courses at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/ExistingCourses>**

It was pointed out that a regular phone conference might be needed in order to get work, frequency to be decided at one of the later sessions.

## IPR

We then went on to discuss IPR issues, looking at copyright, licencing and citation issues for material in shared repositories. The beginnings of a document based on these discussions is now available at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/IPRForGridEducationTraining>. We should continue to develop this document in the wiki.

A distinction was made between materials which are produced by the OGF ET-WG and therefore come under the OGF copyright and other documents produced by other organisations but collected into the repository.

Issues such as national law were also highlighted and input from American, Asian and other regions was encouraged in order to ensure that we do not ignore IPR issues from any particular region which may make it difficult for them to use the repository.

## Future work

It was agreed that we would produce a draft document based on the IPR discussions. This will outline the issues and include recommendations. The document is now available at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/IPRForGridEducationTraining>

**ACTION ALL : Review and edit draft IPR document at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/IPRForGridEducationTraining>**

The aim is to have a draft ready for discussion at OGF20.

It was also agreed that David Fergusson and Rüdiger Berlich will work on getting a companies view point on the IPR issues and what they would like or expect from a repository.

**ACTION David Fergusson, Rüdiger Berlich: Industry viewpoint on IPR and repository issues**

## ***Policies for cooperation on t-Infrastructure***

This was the second of six Education and Training Working Group sessions at OGF19. The minutes for this session contain only a high level summary of the discussions on the topic of t-Infrastructures. The detail of this discussion is available as a draft document at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/PoliciesForCooperationOnTInfrastructure>

### **Participants**

Kathryn Cassidy – Trinity College Dublin  
Morgane Artacho – NeSC  
Malcolm Atkinson – NeSC  
David Fergusson – NeSC  
Rüdiger Berlich – Forschungszentrum Karlsruhe  
Kilian Schwarz – GSI  
Ben Clifford – University of Chicago, OSG Education  
John Mincarelli – Synopsis  
Donal Fellows – University of Manchester  
Stephen Newhouse – OMII UK  
Andreas Savva – Fujitsu Laboratories Ltd

### **t-Infrastructure Policy**

This session covered t-Infrastructure and began with an overview of what t-Infrastructure is and why we need it. This overview is to form the basis of a t-Infrastructure document deliverable and the content used for the presentation is now available in the wiki at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/PoliciesForCooperationOnTInfrastructure>

It was suggested that prioritising the requirements listed in this document might be a useful exercise, although the priorities are likely to differ for different users and communities. Stephen Newhouse indicated that support for self-paced learners was a priority for OMII UK.

### **t-Infrastructure Experiences**

We then went on to hear from those involved in projects which use t-Infrastructures.

- John Mincarelli talked about the Synopsis approach to t-Infrastructures, giving us an industry viewpoint.
- Ben Clifford from Globus talked about their experiences with t-Infrastructures particularly for the OSG summerschool.
- Stephen Newhouse then gave the OMII UK view.

These accounts are summarised in the wiki at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/TInfrastructureExperiences>

## Future Work

As a result of this session we now have the following:

- A general description of t-Infrastructures
- A set of requirements for t-Infrastructures
- Some information on current practice

**ACTION ALL : Review draft policy document at**

**<https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/PoliciesForCooperationOnTInfrastructure>**

**ACTION ALL : Add to current practice document at**

**<https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/TInfrastructureExperiences>**

It was agreed that we should have further sessions to discuss particular requirements and come up with definite recommendations. For example, at OGF20 we might have a E&T certificates session to formulate policy relating to the ease of access requirement of t-Infrastructures.

## ***National and International Grid Education and Training Policy***

This document covers the third and fourth Education and Training Working Group sessions at OGF19. The minutes for these sessions contain only a high level summary of the discussions on the topic of Policy. The detail of this discussion is available as a draft document at

<https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/NationalAndInternationalGridEducationTrainingPolicy>

### **Participants**

This was a two-part session, in the first part there were the following participants:

Malcolm Atkinson – NeSC  
Charles Bacon – Globus & University of Chicago  
Ben Clifford – University of Chicago, OSG Education  
Morganne Artacho – NeSC  
David Fergusson – NeSC  
Rüdiger Berlich – Forschungszentrum Karlsruhe  
Kathryn Cassidy – Trinity College Dublin  
Killian Schwarz – GSI  
Steve Brewer – OMII Europe  
Hsin-Yen Chen – ASGC Taiwan  
Jerry Perez – Texas Tech university  
Lennart Johnsson – University of Houston & KTH  
Marc-Elia Begin – CERN  
Stephanie McLean – Renaissance Computing Institute (RENCI)

For the second session we additionally had the following participants

Christos Kanellopoulos – GRNET S.A.  
Dhivakaran Muruganantham – LBNL/ESnet  
Alison Clark

However, we lost the following:

Charles Bacon  
Jerry Perez  
Marc-Elia Begin

### **Regional Reports**

We began this session with a review of recent training and education activities in the different regions which were broken into the following groupings:

- \* USA
- \* Asia, Australasia, Antarctica & Africa
- \* Europe.

## **USA**

Open Science Grid run a Summer Grid Workshop, the syllabus of which is available at <https://twiki.grid.iu.edu/twiki/bin/view/SummerGridWorkshop/SummerGridSyllabus2006>

The workshop consists of 3 hour modules with lectures and hands-on sessions. OSG are reusing some of the materials for subsequent summer schools and also for shorter schools and courses in other places, e.g. they recently ran a short course in Argentina. The 2006 school was on an Island in Texas.

## **Asia, Australasia, Antarctica & Africa**

We had no representatives from Australasia, Antarctica and Africa and only one from Asia. Hsin-Yen Chen gave a brief overview of training and education activities in Taiwan. They use EGEE training materials and are starting a new education program. They are looking for conferences and symposiums at which they can organise Grid training.

## **Europe**

The ICEAGE project was described with a brief overview of the work packages and activities. Further details are available at the ICEAGE webpage <http://www.iceage-eu.org/>

We then went on to look at summerschools in Europe, the ISSGC (<http://www.iceage-eu.org/issgc07/index.cfm>) and GridKa (<http://gks07.fzk.de/>) were described and there was a brief mention of the CERN school of computing, SEE-CE summer school, CoreGrid school, etc. There are also to be 'application' schools covering a particular application or user group, for example there will be a Biomed school in Italy in May in conjunction with the BioInfoGrid and Embrace projects which will teach bioinformaticists to develop grid applications. There will also be a software engineering school some time, but there were no details of this.

The e-IRG Education and Training Task Force (ETTF) was also mentioned with a review of time lines, deliverables, scope, etc. The e-IRG works on defining policy for e-Infrastructures in Europe. The ETTF will work closely with the OGF ET-WG to align European policy with world-wide policies where possible.

While on the topic of summerschools, Rüdiger Berlich posed the question of which is better; local on-site training or summerschools. In general people seem to think that a summerschool is more ideal, but that it is not suited to all circumstances (e.g. in industry it might be harder to get 1-2 weeks off for training, and not all students or academics have the time or money to go to summer school).

## **Policy Document**

Next we worked on OGF ET-WG policy document. This should ideally be the same as the e-IRG policy document perhaps with some differences due to the European focus of the e-IRG.

The document should be 7-10 pages for main body with a number of appendices containing more detail. A good draft is needed by May, with intermediate drafts before then. Editors volunteered for most sections, however, we do want people from different regions and we have no Asian volunteers yet.

**ACTION ALL : Identify possible volunteers for Policy Document section editors, in particular we need some Asian input. Send details of possible volunteers to Kathryn.Cassidy@cs.tcd.ie.**

## Notes

While the scope was considered to exclude pre-college education (K-12 or second level), there were some interesting examples of projects involving schools which are being worked on by some of the participants of the session. The following were mentioned:

- I2U2 - interactions in understanding the universe is a project bring physics experiments such as CMS, LIGO, etc. to schools. Ben Clifford is involved in this project.
- climateprediction.net in UK has been very successful in involving secondary schools in distributed climate analysis.
- In North Carolina the Durham school of science and maths is a pre-college school which is looking at building its own grid

The future work section will be populated by everyone as we go along.

The "Suggested Strategy & policy" (item 8) was not assigned any editors as Malcolm hopes to get people from e-IRG to work on this.

**ACTION Malcolm Atkinson : Get input into the Suggested Strategy & Policy section of the Policy Document from e-IRG.**

## Future Work

We hope to have a number of draft documents ready by OGF20

- Glossary as an informational document draft
- Draft ET policy document
- Draft of an IPR policy recommendations
- Draft of a t-Infrastructure pooling policy
- Draft of the curriculum for Grid Computing for Professional Engineers
- Draft recommendation for engaging industry in Grid Computing E&T

The following sessions were suggested for OGF20.

- Agree t-Infrastructure Authentication & Authorisation policies (David Fergusson\*, Roberto Barbera, Ben Clifford, Lisa Childers, Steven Newhouse, ...)
- Session to review ET policy document (Malcolm Atkinson\*, Wolfgang Gentzch, ...)
- Meeting with industry on how to engage them in E&T (Rüdiger Berlich\*) in the industry days of the conference
- Review of IPR policy recommendations (David Fergusson\*, Boon Low, Kathryn Cassidy, ...)
- Review of Glossary (Kathryn Cassidy\* & Morgane Artacho)

**ACTION David Fergusson, Malcolm Atkinson, Rüdiger Berlich, Kathryn Cassidy : write proposals for OGF20 sessions**

Note that at the time of circulating these minutes the deadline for session requests has already passed and a session requests slightly different to those above have been sent in. The details of these sessions can still be modified however.



Note that OGF20 will be shorter because it is co-hosted with the EGEE user forum, so we may not get all of the sessions which we request. It might be possible to arrange additional off-site meetings during the EGEE user forum if the participants are able to attend.

We discussed the working method going forward and it was agreed that documents will be sent via email but all work-in-progress should be kept in the wiki. We agreed to schedule two telephone conferences between now and OGF20 to ensure that the work above is progressing. The times will be staggered so that they suit different time zones better. Exact dates to be decided, Kathryn Cassidy and Morgane Artacho will contact people to find suitable times and then inform everyone.

**ACTION Kathryn Cassidy, Morganne Artacho : Schedule conference calls.**

It was suggested that we should have an Arts and Humanities view for the policy document, but no volunteers were found for this yet.

**ACTION ALL : Identify possible volunteers to provide an Arts and Humanities view on ET Policy**

Christos Kornelopoulos volunteered to be involved in harmonisation policy.

## ***Education & Training Content***

This document covers the fifth Education and Training Working Group session at OGF19. The minutes for this session contain only a high level summary of the discussions on the topic of Content. The detail of this discussion is available in the wiki in the draft documents:

<https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Definitions> and

<https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Curriculum>

## **Participants**

Rüdiger Berlich – Forschungszentrum Karlsruhe

Kilian Schwarz – GSI

Morgane Artacho – NeSC

Kathryn Cassidy – Trinity College Dublin

Steve Brewer – OMII Europe

Ben Clifford – University of Chicago, OSG Education

Merry Rabb – Sass ISP

David Fergusson – NeSC

Malcolm Atkinson – NeSC

## **Glossary**

We reviewed some of the terms in the glossary and made some modifications. In particular we looked at broadening the definition of some terms which had too academic a focus and thus excluded industry.

The amended terms have been added to the glossary in the ET-WG wiki at

<https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Definitions>

## **Curriculum**

We then went on to look at the issue of curriculum again, but this time focussing on the Grid-certified engineer curriculum rather than an academic curriculum.

The wiki curriculum page has now been modified to contain a list of different curricula, see

<https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Curriculum> This list will be extended to look at different types of course, and perhaps as commonalities are found we may be able to merge some or all of these.

## **Future Work**

The documents mentioned above need to be further edited. This is already an action point above.

## ***Education & Training Frameworks***

This document covers the sixth Education and Training Working Group session at OGF19. The minutes for this session contain only a high level summary of the discussions on the topic of Frameworks. The detail of this discussion is available as a draft document at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/EngagingIndustryInGridComputingET>

### **Participants**

Rüdiger Berlich – Forschungszentrum Karlsruhe  
Kilian Schwarz – GSI  
Kathryn Cassidy – Trinity College Dublin  
Morgane Artacho – NeSC  
Ben Clifford – University of Chicago, OSG Education  
Malcolm Atkinson – NeSC  
David Fergusson – NeSC  
Stephenie McLean – RENCi

### **Draft Recommendation for Engaging Industry**

We attempted to define a draft Recommendation for engaging industry in Grid Computing E&T. This document is now available in the wiki at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/EngagingIndustryInGridComputingET>

We looked at the issue of how to go about launching a Certified Grid Engineer program and how to involve industry in this process. It was agreed that at OGF20 we would invite potential industry partners to a session to discuss this and an informational document would be produced to that end.

These potential industry partners will include

- Training Companies
- Testing/Examination Companies
- Accreditation Organisations
- Potential employers of certified Grid professionals (Banks, Blue-chips, etc.).

We hope to create two levels of certification, a Certified Grid Technician and a Certified Grid Engineer, with a clear migration path from Technician to Engineer.

### **Future Work**

A draft of the document which will be sent to potential industry partners is now available in the wiki at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/EngagingIndustryInGridComputingET>

We need to continue to edit this document in time for it to be circulated before OGF20.

**ACTION ALL : Continue to edit the Draft Document on Engaging Industry in GC ET**

**ACTION ALL : Identify possible Industry Partners to approach**

It was agreed that we needed further information on the commercial training market in the various regions. European and US participants of OGF ET-WG sessions need to provide input.

**ACTION ALL : try to get input on the certification market in the European and USA regions.**

In Asia the following people volunteered as they have contacts in particular countries

- Japan – Kilian Schwarz, David Fergusson, Malcolm Atkinson
- Taiwan, Korea – David Fergusson, Malcolm Atkinson
- China – Malcolm Atkinson

**ACTION Kilian Schwarz, David Fergusson, Malcolm Atkinson : Try to get input on the certification market in these regions.**

## ***Actions List***

- 1) ALL : Review definitions of terms and add more at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Definitions>  
Kathryn Cassidy : Cull additional terms from Draft Documents
- 2) ALL : Review Draft curricula at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Curriculum>
- 3) ALL : Review the descriptions of your own courses, add information on other courses at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/ExistingCourses>
- 4) ALL : Review and edit draft IPR document at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/IPRForGridEducationTraining>
- 5) David Fergusson, Rüdiger Berlich: Industry viewpoint on IPR and repository issues
- 6) ALL : Review draft policy document at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/PoliciesForCooperationOnTInfrastructure>
- 7) ALL : Add to current practice document at <https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/TInfrastructureExperiences>
- 8) ALL : Identify possible volunteers for Policy Document section editors, in particular we need some Asian input. Send details of possible volunteers to Kathryn.Cassidy@cs.tcd.ie.
- 9) Malcolm Atkinson : Get input into the Suggested Strategy & Policy section of the Policy Document from e-IRG.
- 10) David Fergusson, Malcolm Atkinson, Rüdiger Berlich, Kathryn Cassidy : write proposals for OGF20 sessions
- 11) Kathryn Cassidy, Morganne Artacho : Schedule conference calls.
- 12) ALL : Identify possible volunteers to provide an Arts and Humanities view on ET Policy
- 13) ALL : Continue to edit the Draft Document on Engaging Industry in GC ET
- 14) ALL : Identify possible Industry Partners to approach
- 15) ALL : try to get input on the certification market in the European and USA regions.
- 16) Kilian Schwarz, David Fergusson, Malcolm Atkinson : Try to get input on the certification market in these regions.