Introduction/Administration

The Education and Training Community Group held four sessions at OGF22:
1. Towards Professional Grid Certification: draft document review & presentation to industry stakeholders
2. National and International Education & Training Policy: draft document review
3. Managing IPR for educational repositories: draft document review
4. t-Infrastructure Experiences: draft document review

We began the first session with a brief recap of the Education and Training Community Group's (ET-CG) history and progress so far led by Malcolm Atkinson, and went on to identify a number of challenges which are listed below. It was agreed that we would return to these issues in the wrap-up session at the end of the day and identify actions to deal with them.

Challenges
- For all documents we need to encourage and include input from outside of Europe, for example, Asia and North America, as our current examples are European-oriented.
- We need to assign a lead editor to the task of developing the curricula document. We have captured our current understandings for application domain scientists (e-Science) through the Curricula Development Workshop held in Brussels in mid-February, and we need to build on this.
- We must assign a new editor for the existing courses list.
- The Training and Education Requirements document needs a new lead editor (David Fergusson indicated that he would be willing to work on this as he is already writing a similar document).
- The gap analysis document also requires a new lead editor (as it is related to the Training and Education Requirements document David Fergusson indicated that he could probably also work on this).
- It was agreed that the best practice vocabulary list would be submitted as an information document for publication in addition to the four documents being presented at OGF22.
- In general the point was made that we need to be clear about the scope of our activities, we should set limits and state them clearly with respect to Grid and e-Science education. We should attempt to identify what is required in order for any proposals which the ET-CG makes to be taken up and succeed, and we should not attempt to tackle tasks which are simply to large for us.
- OGF have requested that a short summary will be written for each session and uploaded to the OGF22 schedule page (http://www.ogf.org/gf/event_schedule/index.php?event_id=9) in order to make the results of the sessions to be more visible.

Session 1: Professional Grid Certification

Kathryn Cassidy presented the current version of the Professional Grid Certification Document to the ET-CG. In general there was support for the idea of progressing with this document and the group hopes to be in a position to submit it to the OGF editorial process soon.

Participants
Andronico, Giuseppe - INFN Sezione di Catania
Atkinson, Malcolm - e-Science Institute
Cassidy, Kathryn - Trinity College Dublin
Corcho, Oscar - Universidad Politécnica de Madrid
Fergusson, David - NeSC
Fox, Geoffrey - Indiana University
Templeton, Daniel - Sun Microsystems
Vander Meer, Elizabeth - National e-Science Centre Edinburgh

Document revisions
The proposed edits to each section are listed below.

General comments
- Geoffrey Fox, head of the OGF Community Affairs area under which the ET-CG falls, made a general comment pertaining to the entire document: we need to make it clear that OGF is NOT a certifying body. This should be done immediately at the beginning and stated throughout. It was agreed that we add a disclaimer after the Copyright notice to include this information.
- Geoffrey Fox also made the point that it must be stated at the beginning of the document that no certification or training programs are being endorsed by OGF, this is merely an information document.

Status of This Document
- expand "ET-CG" to "Education and Training Community Group"

Abstract
- The abstract must be edited, to include a summary of the document.
- The abstract should also clearly identify the target audience for the document.

Introduction and Goals – Comments
- Convert the multiple viewpoints identified in the second paragraph (students, employers, trainers, certification authorities) into separate bullet points to make the text clearer.
- In paragraph 2 the phrase "all major players" are mentioned but it is not made clear who these are, it was agreed that a stakeholders section should be added which clarified this.
- Final paragraph in this section: This statement should be moved to Section 2, Scope and Definitions.
- Goals (of the document) are not clearly articulated here, they should be added.

Scope and Definitions
- Reiterate that OGF does not provide certification and also be specific about what market is being targeted here.
- Geoffrey Fox noted that the term "Grid" used throughout the document would not be well understood in the US, and suggested "CyberInfrastructure" but others argued that the term "Grid" was better understood by Industry, the intended audience of this

document. We should clarify our use of these terms with reference to the Glossary document.

Idea Outline
- The example of the Linux Professional Institute is introduced here and it is proposed that we could use this as a model for a similar institute for the grid world. However, it was agreed that we should not be pushing one particular model here and instead this information should be moved to the Sustainability or Structure section.
- Malcolm Atkinson pointed out that there are two phases we can identify to do with creation of professional grid certification: convincing people that certification needs to exist, and what attainments are expected, and that we are currently at the first stage. We should therefore argue here that accreditation bodies and representatives of employers, as well as students, should meet to thrash out the details of a certification.

Structure of Certificates
- David Fergusson raised the question of how this certification differs from BCS or other certification programmes (charted status). Malcolm Atkinson replied to this, explaining that BCS, for example, has a large spectrum of certifications and could take the certification proposed here and add it to their spectrum. This should be explained in the Structure of Certificates section.
- The last sentence in the section needs to be revised and should be moved to Section 2 on Scope.
- The migration path mentioned needs to be expanded.
- The comment regarding academic institutions should be deleted as it is outside the scope for a professional certification.

Accreditation
- This section needs to be re-written and the last sentence deleted.
- The section should not talk about OGF's role, instead it should recommend that certifications should be accredited by some suitable body.

OGF's Role
- It was agreed that this section be removed and instead the limits of OGF's involvement in the Certification process be made right at the start of the document and reiterated where required throughout.

The Grid Professional Institute
- It was pointed out that creating or endorsing the creation of such an institute is outside the scope of OGF. This section should be renamed and rewritten so that it focusses on sustainability issues.
- A number of possible models could be suggested here including existing professional bodies, or a model based on that of the Linux Professional Institute.

Types of Contributors
- Change this heading to "Stakeholders" and move it to the beginning of the document
- Move the last sentence to the start of the section and add a full stop after "contribute" (deleting "to a Grid Professional Institute").

Future Work
- Add to the last sentence a statement about the value of the ET-CG as providing a neutral forum for discussion.
- Paragraph 2 states that the OGF ET-CG will be involved in drawing up questions but this is not possible. This should be modified to simply indicate that these are necessary next steps.

Open Questions
- This information should be moved to future work.

Contributors
- We need a clear and comprehensive list of all authors and contributors here.
- People who participated in sessions where this document was discussed should all be listed as contributors.

Actions
- Geoffrey Fox suggested using TeraGrid (HPC University) as a resource, and Malcolm Atkionson agreed that he should contact them (asking for clarification of their remit).

Session 2: National and International Grid Education and Training Policy

Malcolm Atkinson presented the current version of the Policy for Supporting Grid Education and Training Document to the ET-CG. It was agreed that the document needs some minor revisions, however, there was support for the idea of progressing with this document and the group hopes to be in a position to submit it to the OGF editorial process soon.

Participants
Andronico, Giuseppe - INFN Sezione di Catania
Atkinson, Malcolm - e-Science Institute
Cassidy, Kathryn - Trinity College Dublin
Corcho, Oscar - Universidad Politécnica de Madrid
Fergusson, David - NeSC
Templeton, Daniel - Sun Microsystems
Vander Meer, Elizabeth - National e-Science Centre Edinburgh

Document Revisions
General comments
- More headings should be added to the document to make the structure clearer.
- In general the need to get more input from other continents was raised, as the current text is quite Europe-focused. Asian and American input would be useful.
- It is necessary to review the document to de-emphasise research as a goal of education

Status of This Document
- expand "ET-CG" to "Education and Training Community Group"

Abstract
- abstract needs to be modified to clearly identify the target audience for the document (governments, educational institutions, funders of educational institutions, etc).

Goals
- add a goals section at the start of all of our docs and identify Target Audience.

Introduction
- The introduction should acknowledge the lack of input from outside of Europe and encourage participation from other countries.

Definitions
- The existing definitions in this section are probably not actually required as the ET-CG Glossary (https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Definitions) is to be published and can therefore be referenced here instead.
- Some of the terminology used should be clarified as regards its usage in this document, for example the terms e-Infrastructure and Grid are used relatively interchangeably and this should be explained, or an alternative term chosen.
- The term CyberInfrastructures which is used in the US is not used in this document, it should be added, or its omission should be explained and whatever term is being used should be defined in terms that US readers will recognised.
- Some acronyms should be expanded and disambiguated throughout the document.

Existing Education Machinery
- The phrase "A number of EU Member States provide Masters courses and Summer Schools on grid education" needs to be changed to "A number of Institutions in EU Member States..."

Policies
- Sentences like "so students do not crash systems" need to be rephrased.

Contributors
- We need a clear and comprehensive list of all authors and contributors here.
- People who participated in sessions where this document was discussed should all be listed as contributors.

Actions
- Make a request on the mailing list for input from continents other than Europe, in particular it was noted that Government publications from regions outside of Europe which describe the skills-shortage crises in the the area of distributed systems would be useful references.
- It was suggested that we contact Satoshi Matsuoka as a source for such documents for the Asian area

Curriculum Development Workshop Report

Elizabeth vander Meer then presented a report of the activities the recent Curriculum Development Workshop jointly organised by the OGF Education and Training Community Group (ET-CG), The ICEAGE project and the e-Infrastructures Reflection Group (e-IRG) Education and Training Task Force (ETTF) in Brussels earlier this year.

It was agreed that this was a valuable document but that it would require significantly more work before it could be proposed as an actual curriculum. To that end a further workshop was suggested to be co-located with OGF23 in Barcelona in June 2008.

Document Revisions

- It had been suggested by some members of the Curriculum Development Workshop that English competency should be a required prerequisite of any International e-Science curriculum, but this was controversial. At the ET-CG session participants were asked for their experiences in Education outside of English-speaking countries and the consensus was that English was not required for Grid Education in most countries and so it was agreed that English competency could not be expected as a prerequisite.
- It was agreed that it should be mentioned early on in the document that not all components of the proposed curriculum were required core elements, and that what aspects would be taught would vary depending on the discipline of the students.
- A request had been made at the workshop for participants to provide examples of how the topics in the curriculum would be taught to students from different disciplines. Some participants of the ET-CG session also volunteered to help collect such examples. These need to be added.

Actions

- Further examples of how the topics in the curriculum could be taught in different disciplines are needed, we could request these from members of the ET-CG.
- It was agreed that a further workshop would be valuable, and it was suggested that we could co-locate this with OGF23 in Barcelona.

Session 3: IPR for Grid Education and Training

David Fergusson presented the current version of the IPR for Grid Education and Training Document to the ET-CG. It was agreed that the document needs some refinement and will be revised based on these discussions. In general, however, there was support for the idea of progressing with this document and the group hopes to be in a position to submit it to the OGF editorial process soon.

Participants

Atkinson, Malcolm - e-Science Institute
Cassidy, Kathryn - Trinity College Dublin
Corcho, Oscar - Universidad Politécnica de Madrid
Fergusson, David - NeSC
Kitmitto, Kamie - The University of Manchester

Prokosch, Thomas - GUP, Joh. Kepler University Linz
Vander Meer, Elizabeth - National e-Science Centre Edinburgh

Document Revisions

General Comments
● The document is quite EU and UK centric and it was agreed that this should be made clear early in the document, along with a request for input from other continents.
● Some inconsistency in the use of the term "author" was noted and it was agreed that this needed to be reviewed and changed to "copyright holder" where appropriate. Similarly the terms used for users who deposit and download materials should be reviewed.
● It was also suggested that a special note should be added about the IPR issues which pertain to medical data and how these differ from those of other educational materials.
● We should make an effort throughout the document that this is an informational document intended to spark discussion, currently we are presenting one solution, but we should make sure that it is clear that this is just one solution and encourage others to contribute their ideas.

Status of This Document
● expand "ET-CG" to "Education and Training Community Group"

Abstract
● The abstract must be edited, to include a summary of the document.
● The abstract should also clearly identify the target audience for the document.

Introduction
● An introductory section should be added
● The introduction should emphasise creativity and sharing
● Indicate that this is a first version and we would appreciate comments and input for later versions, and that we particularly want input from countries outside of Europe.
● Point out that IPR issues relating to digital repositories are relatively legally untested as of yet which may make people conservative. If we build a framework it serves as a basis to educate people and allows them to be comfortable about what they can or can't do legally.

Motivation for Sharing Materials
● A section on the motivation and need for sharing of training and education materials should be added
● Explain the rationale for sharing educational materials: experience shows us that in most institutions there is not enough expertise to teach both breadth and depth and also e-Science is already inherently collaborative.
● Describes some specific examples of problems due to IPR restrictions, e.g. the EGEE software licence does not allow modification and re-distribution and is thus restrictive if applied to documentation and training materials (preventing even translations). We may not want to name EGEE.

Goals
● A Goals section is required to define the goals of this document

- Should include the goal of encouraging others to think about this and produce their own innovative solutions, etc.

IPR and the Reuse of Educational Content
- We should explicitly describe the scenario where a user downloads, modifies and re-uploads materials to the digital repository in order to update materials for new software versions or new contexts.

Collaborative works
- A section should be added which deals specifically with IPR issues for collaboratively produced works.
- For collaboratively produced works, e.g. those which are modified and republished, who is the copyright holder?
- Successive compositions make it harder to cite works.

Recommendations
- Add a recommendation that repositories should allow materials to be searched by license type to to be searched with a license type filter so that users can easily ensure that they only use material under a license such as Creative Commons, for example, which allows republishing.
- Add a recommendation that repositories should provide a FAQ or short explanation of the potential issues for depositors. This would explain common problems which might arise when depositing materials. For example the author may not be aware that their institute holds the copyright for materials that they have produced, similarly, they may not realize that their inclusion of a portion of material from another source could pose problems if that material is used under fair dealing terms as this would not allow them to republish that material in a digital repository.
- Add a recommendation for a simple way to remove materials and derivative works in case of disputes.
- Change "the depositor should have to agree to this licence" in the current third recommendation to say "the depositor should have to explicitly agree to this licence"
- Note in the current fourth recommendation the importance of metadata where an author is not identified in the materials themselves which is often the case.
- Add a recommendation for all metadata to be based on international standards such as Dublin Core, etc. in order to facilitate querying, harvesting, federation, etc.

Contributors
- We need a clear and comprehensive list of all authors and contributors here.
- People who participated in sessions where this document was discussed should all be listed as contributors.

Actions
No specific actions were identified aside from the edits to the document mentioned above, however, it might be useful to add the functionality of the new recommendations to existing Digital Repositories such as the ICEAGE repository.

Session 4: t-Infrastructure Experiences

Giuseppe Andronico presented the current version of the t-Infrastructure Experiences Document to the ET-CG. It was agreed that the document needs some refinement and will be revised based on these discussions. In general, however, there was support for the idea of progressing with this document and the group hopes to be in a position to submit it to the OGF editorial process soon.

Participants
Andronico, Giuseppe - INFN Sezione di Catania
Atkinson, Malcolm - e-Science Institute
Cassidy, Kathryn - Trinity College Dublin
Fergusson, David - NeSC
Kishimoto, Hiro - Fujitsu
Prokosch, Thomas - GUP, Joh. Kepler University Linz
Vander Meer, Elizabeth - National e-Science Centre Edinburgh

Document Revisions

Middleware and vendor specific sections
- While the sections on GILDA, GENIUS and P-GRADE were written by representatives of those infrastructures, some of the other infrastructure descriptions were developed from notes captured at previous ET-CG sessions. It was proposed that representatives of middlwares or vendors whose t-Infrastructures are covered in the document but but who were not present at the session should be contacted directly and given a chance to review the descriptions of their t-Infrastructures.
- It was also suggested that Platform Computing be encouraged to add something on the Platform t-Infrastructures as this would give us two industry participants.

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Abstract
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- The abstract should also clearly identify the target audience for the document.

Goals
- A Goals section is required to define the goals of this document

Contributors
- We need a clear and comprehensive list of all authors and contributors here.
- People who participated in sessions where this document was discussed should all be listed as contributors.

Actions
- Contact representatives of the middlewares described in the document and ask them to review their sections

- Contact a representative from Platform Computing (Bernhard Schott was suggested) and ask if Platform would like to contribute something to the document

Wrap-up Session

Documents for submission to the OGF editorial process
The following documents are to be submitted to the OGF editorial process before OGF23:
1. The IPR for Grid Education and Training document at https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/IPRForGridEducationTraining
2. The Policy for Supporting Grid Education and Training document at https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/NationalAndInternationalGridEducationTrainingPolicy
3. The Towards Professional Grid Certification document at https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/TowardsProfessionalGridCertification
4. The t-Infrastructure Experiences document at https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/TInfrastructureExperiences
5. The Glossary document at https://forge.gridforum.org/sf/wiki/do/viewPage/projects.et-cg/wiki/Definitions

It was suggested that we should submit one document first (e.g. the IPR or t-Infrastructure documents) and then see if we learn from the process in order to make the process of submitting later documents go more smoothly.

The documents will be sent to the ET-CG mailing list for a two-week consensus-forming period before being submitted.

Decisions and Actions

Request input from N. America and Asia via the mailing list to all documents. In particular for the description of the Crisis in Education and Training described in the Policy document.	Elizabeth vander Meer, All
Upload Short Summaries to the OGF22 schedule page.	Kathryn Cassidy
Malcolm Atkinson was assigned as the lead editor of the Curricula Document.	Malcolm Atkinson
The existing courses list was not assigned a new editor, this should be done.	All
David Fergusson was assigned as the lead editor of the Training Requirements and the Gap Analysis documents.	David Fergusson
The Training Requiments document may be changed to the Training and Education Requirements document.	David Fergusson

Kathryn Cassidy to inform the previous editor Anitha Orhi that David Fergusson has taken on this task.	Kathryn Cassidy
It was agreed that we would spend some time at OGF23 reexamining the groups future and rechartering.	All
We will investigate the possibility of co-hosting another Curriculum Development Workshop with OGF23 in Barcelona.	All
Malcolm Atkinson will contact inactive co-chairs to see if they still want to be involved.	Malcolm Atkinson
Malcolm Atkinson will contact Rosa Badia to see if she is able to help coordinate activities for OGF23 in Barcelona	Malcolm Atkinson
Kathryn Cassidy should be listed as the group's secretary on the Group's main webpage.	Kathryn Cassidy
Some of these actions will require changes to the charter so these will need to be agreed on the mailing list.	All
The Glossary document needs the following terms added 1. A generic term to encompass Grid, e-Infrastructure, etc. 2. Terms to describe different people and their roles in Grid Education (users, learners, teachers, trainers, etc.)	Kathryn Cassidy
Roberto Barbera to contact representatives of the middlewares described in the document and ask them to review their sections.	Roberto Barbera
Roberto Barbera to contact a representative from Platform Computing (Bernhard Schott was suggested) and ask if Platform would like to contribute something to the document.	Roberto Barbera
Examples of how the topics in the curriculum could be taught in different disciplines should be requested from members via the mailing list.	Elizabeth vander Meer, All
Contact TeraGrid's HPC University and see if they are interested in being involved	Malcolm Atkinson

OGF23 Session Planning
It was proposed that we should request between four and six sessions at OGF23 as follows:

Session 1
● Status review
● Training Requirements document review

Session 2
● Curricula document review
● This may take two session slots if we are unable to hold a separate workshop colocated with OGF23.

Session 3
- Rechartering session
- Decide if the group should keep going
- Determine whether the same people still want to be involved
- Identify whether there are different fora for us to continue this work
- Determine the goals and next steps for the group

Session 4
- Sessions to review the comments from the editorial process
- This may require more than one session depending on the amount of feedback we receive on the documents in the editorial process.