



Astro-CG in OGF and liaison with IVOA

Coordination of DCI-related activities within the Astronomical Community

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Astro-CG main motivation



- Astro-CG charter approved by GFSG (Grid Forum Steering Group) in August 2012
- Final version of the charter available at
 - <http://www.ogf.org/OGF36/materials/2534/Astro-CG-Charter-v3.0-approved.pdf>
- Astro-CG aims at becoming the natural framework where entities dealing with e-Infrastructures of different nature and operating within the A&A community distributed worldwide can
 - Meet and exchange experiences
 - Share common issues
 - Collaborate looking for possible common solutions
 - Provide interoperability paths between different e-Infrastructures and the underlying technologies
- Definition of services and interfaces enabling the integration of e-Infrastructures and of their related resources used by astronomers for their scientific production



Astro-CG Topics



- Standardization/interoperability of distributed e-Infrastructures of different nature (Grids, Cloud Computing, the VObs, etc.)
- Implementation reports on Grids and public/private Clouds
- Reports on DCI-based (Grid and Cloud) applications, including access to remote file systems and databases
- Workflow (Pipeline) systems: workflow languages, workflow management, workflow builders, etc.
- Virtualization techniques
- Requirements on DCIs and data infrastructures by projects and research groups which develop and use astronomical applications and workflows
- Definition of services and interfaces enabling the requested interoperability between e-Infrastructures of different nature and able to hide the complexity of the underlying technologies
- Data preservation, the A&A legacy software and their integration in modern computing/data e-Infrastructures



Liaison group with IVOA in Astro-CG



- **Main Goal: Interoperability between computing e-Infrastructures (DCIs) and data e-Infrastructures (DDIs)**
- The creation of a liaison group between IVOA and OGF was considered by the IVOA Executive Committee in March 2010 and approved in May 2011.
- Promotion, discussion and analysis of aspects connected to the use of DCIs in support of astronomical data provided through the VObs data e-Infrastructure and data processing environments.
- Issue met by the liaison group that impact IVOA standards shall be reported to the GWS (Grid/Web Service) Working Group.
- The Astro-CG activity is regularly reported at the GWS sessions during the IVOA Interoperability meetings.
- The IVOA liaison group is configured as a component of Astro-CG. Sessions dedicated to interactions between the VObs and DCIs (both Grids and Clouds) may be jointly organized at IVOA Interoperability meetings and OGF workshops.



Astro-CG potential strength



- Strength elements empowering Astro-CG
 - its worldwide geographical coverage
 - its mission
 - Sharing of expertise and knowledge
 - Sharing of common issues
 - Collaboration in investigating innovative technological solutions
 - Collaboration in identifying interoperability paths between different e-Infrastructures and the underlying technologies
 - Definition of services and interfaces enabling the integration of e-Infrastructures and of their related resources
 - Understanding and overcoming issues and limitations that hamper the exploitation of DCIs and their related technologies
 - **the liaison group with IVOA (GWS WG)**



The biggest issue



- **Feedback from Community is missing almost at all**
- Possible reasons:
 - Too few resources invested in the coordination effort
 - Poor understanding of what end users really need
 - Poor scientific/technological offer (not suitable for our end users)
 - Our end users don't see a real and immediate return for their work
 - Not suitable technology or lack of customized tools and services
 - Lack of an effective training and dissemination activity
 - Information flow of poor quality or not efficient
 - Lack of resources (funds)
 - Attendance of international fora and workshops is increasingly costly: travel costs, expensive fees, etc.
 - People need to optimize expenses by reducing travels



So, what can we do?



- Collaboration tools are very important to open new communication channels, but they alone don't suffice
 - Dedicated mailing lists
 - Thematic web pages
 - Web-based collaboration tools
- More man-power has to be invested in time-consuming coordination activities
 - Establish direct contacts with individual projects and research groups to study their specific needs
 - Promote inter-projects communication channels and thematic topics to be jointly discussed
 - Specialize astro meetings (workshops and sessions within larger events such as OGFs and EGI fora) to focus on specific technological theme(s)
 - Organize training and dissemination events whenever appropriate



IVOA and OGF



- A tighter synergy between computation and data access cannot be further postponed
- An efficient exploitation of data through powerful computing-intensive technologies and the data preservation is the future
- IVOA/GWS and OGF/Astro-CG cannot continue to operate in isolation
- The VObs needs DCIs and their technological solutions
- DCIs need the VObs, its data, its geographical coverage, its pervasiveness



IVOA and OGF



- Now...
 - the Astro-CG operates within OGF and reports to IVOA/GWS
 - the GWS operates within IVOA
- but...does this mechanism really ensure the necessary effectiveness?
- what about a joint, unique GWS/Astro-CG group which operates both in IVOA and OGF?
 - ...with enough man power to really carry out the challenging tasks identified in the previous slide



IVOA and OGF



- The Astro-CG as it is now has to be empowered
 - One (or more) Astro-CG members for each geographical region where the VObs is present could be one initial step forward in the right direction
 - and mixed GWS/Astro-CG members could be even better
- Last but not least...meetings
 - Increase audio and video conferences to cut down costs and allow people to constantly ensure their attendance
 - Exploit OGFs and IVOA interops for F2F meeting



In conclusion



- The aim of this presentation is to simply propose possible solutions for some issues that hamper an effective coordination of the astro community for what concerns new data processing techniques and data management
 - It would be important to deepen the discussion and try to adopt some mitigation actions either:
 - At the next OGF37, Charlotte (US), March 2013
- or
 - At the next IVOA Interop, Spring 2013