Patterns of Sustained Collaborative Creativity Across Open Computerization Movements

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Overview

• Three emerging Computerization Movements
  – Open source software, computer games, and scientific grid computing
  – CM intersections
    • OSS-CG, OSS-SGC, CG-SGC, OSS-CG-SGC
• Observations and discussion
Computerization movements

- **Social movement theory**: Blumer, Zald, Gerlach
- **CM studies**: Kling and Iacono, Elliott and Scacchi
- **Computing world dynamics**: Kling and Gerson, Scacchi
- **Socio-technical interaction networks**: Kling, McKim, Lamb, Sawyer, Scacchi, et al.
Three emerging CMs

- Open source software
- Computer games
- Scientific grid computing  
  *(Cyberinfrastructure)*
CM drivers

• Structural patterns
• Participants beliefs in action
• Organizational centers
• Collaborative work practices within innovation processes that intersect or segment one another
  – Innovations add to, or redistribute access to, computing or workplace resources
  – Innovation processes animate and provide emergent force to computerization movements
Routine innovation processes as collaborative creativity

- **Development**—inventing and discovering, reinventing, and standardizing software development
- **Use**—acquiring software systems and skills, while also tailoring of software system features to support software system use
- **Maintenance**—debugging, enhancing, restructuring (refactoring), tuning, or migrating to new versions of software systems being actively maintained
Open Source Software
WHEN YOU PROGRAM OPEN SOURCE, YOU'RE PROGRAMMING COMMUNISM

A REMINDER
from
YOUR FRIENDS AT MICROSOFT
**Project News**

**Stellarium 0.8.0 released**
05/03/06 05:19 - Stellarium
Stellarium, a desktop planetarium for your computer, reaches version 0.8.0. It is the result of 7 months of active development of the developers team.
Read More »

**ClamWin Free Antivirus 0.88.1 released** 04/07/06 07:34

**Portable FileZilla 2.2.19a Released** 04/07/06 07:34

**IMP render farm 0.65 released** 04/07/06 07:33

Project news archive »

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**Software Categories**

- Clustering
- Database
- Desktop
- Development
- Enterprise
- Financial
- Games
- Hardware
- Multimedia
- Networking
- Security
- SysAdmin
- VoIP

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**Sponsored Downloads**

**SourceForge® Enterprise**
Unify your distributed development teams and improve efficiency. Bring the power of...
OSS Developer - Social Network
Developers are nodes / Projects are links
24 Developers
5 Projects
2 Linchpin Developers
1 Cluster
Welcome to the Summer of Code 2006 site. We are no longer accepting applications from students or mentoring organizations. Students can view previously submitted applications and respond to mentor comments via the student home page. Accepted student projects will be announced on code.google.com/soc/ on May 23, 2006. You can talk to us in the Summer-Discuss-2006 group or via IRC in #summer-discuss on SlashNET.

If you're feeling nostalgic, you can still access the Summer of Code 2005 site.
Computer Games
The Layman's Guide to Making Mods

If you are thinking about making a mod (for any game) and are not sure what you need to know, how to go about it, or simply want to avoid the most obvious mistakes then read on. The pages linked to below contain some excellent advice, and possibly comments on stuff that hadn't occured to you.

- /My Team Your Team – Introduction and disclaimer for all those, "what's all this my team your team crap?" readers.
- /Why Are You Making A Mod – Sometimes the reason a mod fails is the reason you started it in the first place.
- /Building a Team – Building up your mod team.
- /Despotism Or Communism – Some thoughts on team structure.
- /Working as a Team – The day to day life of a team.
- /Asset Management – How to manage the assets of your mod (code, textures, models, etc).
- /Distributed Development – Find out how hard and unpleasant distributed development can be.
- /Effective Testing – How to get the most out of testing your mod.
- Releasing A Mod
- /Supporting Your Mod – Easing the burden of mod support.
- /Mod Death – What happens when a mod or mod team self destruct and how to cope.

Thoughts on Mod Making

Several of the Unreal Wiki's contributors have experience in creating successful mods. Reading their accounts of their work and their advice is recommended.

- Mychael/Mod Startups – Making your idea a reality.
- Mychael/Modding Etiquette – How to make people like your mod.
- Jb – an analysis of the ChaosUT mod's history
- Piglet/Finishing Things – How to actually finish your mods, that said it's more how to start so that you can finish.
- A Bug's Life
- GODZ Inception – a journal of how GODZ started.
- Making Mods/General Mod Optimization – Common mistakes and ignored settings which often lead to lower performance – and how to fix/use them.
"DIAD"mikoyzzi2z : vote de_target
"Codex Rapide N90 Calibre FT 1.2" AMVE Sorry mikoyzzi2z, that map isn't on the server.
"DIAD"Walmart start bot : who
The French Democracy
A film by koulamata

Click here to play...

About
This is a movie about the recent French riots in suburb. It is fully subtitled in English (sorry for my English, I had some training to do). I hope you will enjoy this movies and have a better understand of what is happening in my country!
Scientific Grid Computing
(Cyberinfrastructure)
Petascale Acquisition Forum, Mar 24, '06

NSF Invites Prospective Proposing Institutions and Vendors to a Discussion of Plans for a Petascale HPC Acquisition

As indicated in the President’s FY 2007 Budget Request, NSF is planning for the acquisition of a petascale high-performance computing (HPC) system. Subject to the availability of funds, NSF expects to begin funding the resulting multi-year acquisition project in FY07. The petascale HPC system to be acquired will permit science and engineering communities to address some of their most computationally challenging research needs.

HPC system vendors and potential resource provider organizations (organizations who, either separately or in collaboration with others, wish to propose to manage the development, deployment, and operation of a petascale system on behalf of the science and engineering research community) are invited to meet with each other and with NSF staff to discuss the time-line and strategy for this petascale system acquisition on Friday, March 24, 2006, from 9:00a.m. - 11:00a.m., at the National Science Foundation, 4201 Wilson Blvd., Arlington, VA, 22230. Those interested in attending this meeting should send email with their name and affiliation to HPC-Input@nsf.gov, no later than March, 20, 2006. Space is limited so please register early.
ATLAS Experiment for the Large Hadron Collider, http://atlasexperiment.org/.
Data Intensive Science University Network (DISUN), http://www.disun.org/.
Folding@Home, http://folding.stanford.edu/.
International Virtual Data Grid Laboratory (iVDGL), http://www.ivdgl.org/.
Open Science Grid (OSG), http://www.opensciencegrid.org/.
Welcome

The Open Science Grid is a US grid computing infrastructure that supports scientific computing via an open collaboration of science researchers, software developers and computing, storage and network providers.

The OSG Consortium builds and operates the OSG, bringing resources and researchers from universities and national laboratories together and cooperating with other national and international infrastructures to give scientists from many fields access to shared resources worldwide.

Credits, clockwise from top left: ATLAS Collaboration; LIGO Laboratory; SDSS Collaboration; copyright CERN; Fermilab; STAR Collaboration

Latest News

View presentations:

- OSG One Grid one grid among many
- OSG and its Interoperation with the EGEE
- Service-Oriented Science: Scaling eScience Impact
- CMS Plans & Strategy for Physics Analysis on the Grid
- CMS Computing Using the Worldwide LHC Computing Grids

The 5th Annual PKI R&D Workshop took place April 4-6, 2006. View presentations by Doug Olson and Michael Helm.

Paul Avery's Presentation at the
Intersecting CMs

OSS and Computer Games

• If developing software is rewarding, and playing games is fun, then developing game software should be fun and rewarding.

• Game *modding* is a primary venue for innovative OSS game development

• Game *mods* sell games, and help their developers get jobs in the game industry.

• --> Likely to persist as a shared segment of both the OSS and Computer Game worlds
Welcome to the Software Map. The Software map will help you quickly navigate around the thousands of projects hosted on SourceForge.net. To use the Software Map, simply click on one of the popular Topics displayed. Once you’re browsing a particular topic, you’ll be able to easily filter, sort and search your project list.
Intersecting CMs

OSS and Scientific Grid Computing

• *Globus*, the key middleware component for SGC, is OSS

• GC depends on:
  – Open grid service integration (OGSI)
  – Open grid service architecture (OGSA)
  – Globus standardization and open source
  – To enable innovative configuration and integration of virtual organizations from their open application service interfaces

• --> Likely to be assimilated within Scientific Grid Computing world
Welcome to the Globus Toolkit Homepage

The Globus Toolkit is an open source software toolkit used for building grids. It is being developed by the Globus Alliance and many others all over the world. A growing number of projects and companies are using the Globus Toolkit to unlock the potential of grids for their cause. Learn more...

Globus Toolkit Headlines (Archive, Events)

05.11.2006  Globus used in avian flu research  Learn more...
05.11.2006  PHENIX Data Fly With GridFTP  Learn more...
04.19.2006  GT 4.0.2 is now available for download  Learn more...
04.18.2006  GlobusWORLD 2006 call for participation is available  Learn more...
04.17.2006  Puerto Rican University Deploys Grid Testbed  Learn more...

About the Globus Toolkit

- What is the Globus Toolkit?
- How do I cite Globus?
- Success Stories
- Current Release Schedule
- Globus Toolkit in the Press

Who's Involved

- Globus Toolkit Team
- Latest Stable Release: 4.0.2
- Related Software
- Development Releases
- Software Archive
- Licenses
- Advisories
- Quality Assurance
- CVS & Developer tools

Globus Toolkit Downloads

- Latest Stable Release: 4.0.x
- Development Documentation
- Documentation Archive
- Presentations & Tutorials

Globus Toolkit Documentation

Support for the Globus Toolkit

- Support overview
- Bugzilla
- Mailing lists
- Training

Globus Toolkit Technology Pages

- Common Runtime Components
- Security
Intersecting CMs

Computer Games and Cyberinfrastructure

• Game grids for massively multiplayer online games (MMOG)
• New Sony PlayStation 3 (Fall 2006) to utilize grid services
• Enables new class of innovative game play experiences and virtual (game-based) economies (i.e., games + EBay) for game developers to create
• Represents new, innovative venue for government R&D (and Education) investments
• --> Likely to be assimilated into Computer Game world
Accelerate the Particle

Play Game

(may take a few moments to load)

Game created by CERN

Research at CERN that garnered a Nobel Prize in 1984: Carlo Rubbia and Simon Van der Meer for the discovery of the "W and Z particles, communicators of the weak interaction."
Fully-Meshed Architecture of the Butterfly Grid

- Game Server
- Game Server
- Daemon Server
- Gateway Server
- Database Server

Emergent Game Technologies
Intersecting CMs

OSS, Computer Games, Cyberinfrastructure

• Smallest, least-populated sub-world
• Linking three independent CMs/subworlds
• Very few projects, modest social network, unable to instigate network externalities
• Denotes an interesting “boundary case”, as is potential to stimulate or support innovative apps
  --> May be the social locale giving rise to the Web 3.0
Observations

• Prior studies treated CMs as independent, rather than segmented, polycentric, networked, heterogeneous, and intersecting

• Some intersecting CMs are assimilated into the larger/dominant CM

• Other intersecting CMs have the potential to emerge as their own sub-world

• Other intersections may be so fragile and marginal as to merit study on their own.
Observations

• How open a CM is determined by the *innovation frontier* it supports or creates
• The recurring emergence of creative collaborative work is inherent when CMs intersect one another.
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