



Incorporating Social Software into Agile Distributed Development Environments

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Outline

- Distributed Agile Development
- Social Software overview
- Tool Support for Collaborative Sw Development
- Discussion on Social Software in DAD



Distributed Agile Development

- Agile development
 - Time-boxed short releases of working software
 - High level of collaboration and communication (collocated)
 - Self-organization and regular adaptation to changing circumstances
- Distributed Agile Development - DAD
 - Aims at gaining the benefit of agile development also in distributed settings
- So why DAD? What's special?
 - Blending together agility and distribution is not as easy as just relaxing the collocation constraint from the Agile Manifesto...



Agile vs. Distributed Sw Development

Some Agile practices

- Regular informal communication
- ~~Flexible requirements~~
- ~~Informal agreement~~



Some DSD characteristics

- Reduction of formal & informal communication
- Stable requirements
- Controlled processes





Social Software

- General definition encompassing a set of tools and applications that enable group interaction and computer-mediated communication
 - Has a focus on the creation of online communities (not only business-oriented as for Groupware)
 - Includes everything from classic email to 3D virtual worlds
- Sometimes expressed as Web 2.0
 - Can be misleading
 - Comprises only the latest form of social software excluding old Web 1.0 collaborative apps



Web 2.0

Principles

- Interaction
 - (Web-based) Rich user interfaces
- Participation
 - User generated content
- Collaboration
 - Social network effects

Applications

- Get better the more people use it
- Consume and remix data from multiple sources while providing their own data and services
- Create network effects through an "architecture of participation"


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Popular Web 2.0 Software: Blogs

- More interaction among writers and readers
- Blogosphere

 **WORDPRESS**

 **Blogger**

 **MOVABLE TYPE™**
Publishing Platform



The screenshot shows the 'Official Google Blog' with the headline 'A fresh take on the browser'. The article discusses the launch of Google Chrome and the 'launch early and iterate' philosophy. The right sidebar includes a search bar, a 'Site Feed' button, an 'Archives' section, and a 'Recent posts from more Google blogs' section with links to 'Help Center', 'Videos Made By You', 'Call for Submissions', and 'YourTutor Blog'.


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Wikis


- Collaborative authoring
- No distinction between writers and readers

 **MoinMoinWiki**

 **MediaWiki**




The screenshot shows the 'Ubuntu Team Wiki' page. It features the Ubuntu logo, navigation tabs (Ubuntu, Community, Support, Partners, Wiki, Planet), and a search bar. The main content area welcomes visitors to the Ubuntu Team Wiki, explaining its purpose as a place for the community to discuss ideas and store team-related information. It includes a list of links for 'Resources and Teams' such as 'Software Developers', 'Quality Assurance and Packaging', 'Marketing and Advocacy', 'Support and Documentation', 'Training', 'Accessibility', 'Artwork', 'Localisation and International Users', 'Community', 'Contribution', 'Community Councils and Boards', 'Events', and 'Releases'.



Collaborative


Tagging

- Personal way of organizing information
- Tight feedback loop

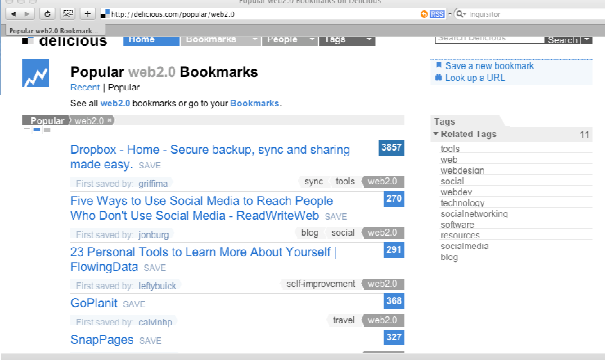



del.icio.us

your bookmarks



citeulike



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Social Networking

- Digital identity through public profiles





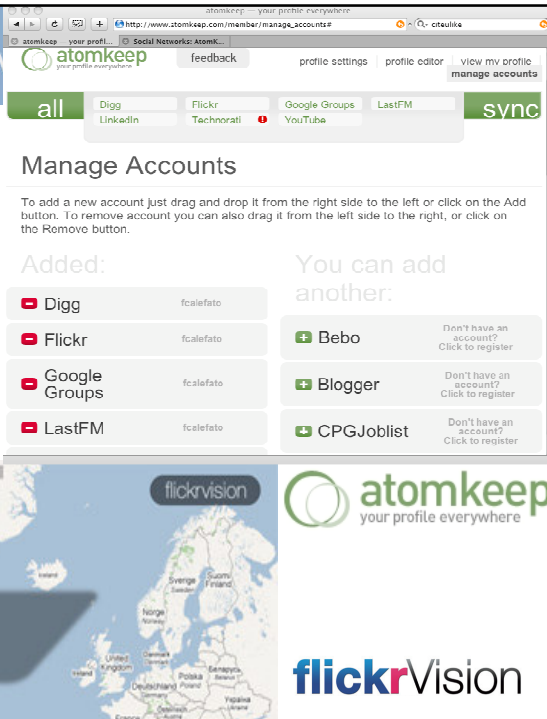






Collaborative Development

Mashups

- Single access point for different data and services





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Tool support for Collaborative Sw Development

- Tools are the key to enable distributed team work
- Most used tools for building software include:
 - Software Configuration Management (e.g., CVS, SVN)
 - Bug & Issue tracking systems (e.g., Bugzilla, Jira)
 - Build and release management (e.g., make, CruiseControl)
 - Knowledge Center / Document Repository (FAQ, guidelines, howto)
 - Communication tools (email, IM, tele-/video-conference)

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Collaborative Development Environments (CDE)

- Integrate tools need by teams to manage software development projects
- Initially born to manage OSS projects
- Nowadays have come a critical infrastructure for distributed development projects in general
- More and more used also to support agile development


Prof. Filippo Lanubile



Tools available in CDE

- Asynchronous communication
 - Mailing list, forum, news, blog
- Synchronous communication
 - IRC, IM
- Software Configuration Management (SCM)
 - CVS, SVN
- Web-based documents repository
 - Howtos, guidelines, FAQ
 - Wiki
- Web-/FTP-server for release download
- Task management (to do list)
- Bug/Issue tracking system

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SourceForge

<http://sourceforge.net/>

SourceForge.net: Personal Page for Filippo Lanubile - Mozilla Firefox

File Modifica Visualizza Cronologia Segnalibri Strumenti 2

http://sourceforge.net/my/

WELCOME, lanubile | Log out - We remember you | My Favorites

Create Participate Evaluate

Projects Services **My SF.net** Help

Search Advanced

SF.net > My Page > Summary Printable version

Personal Page for Filippo Lanubile

My Personal Page | Diary & Notes | Account Options | My Projects | Purchased | Reputation | Monitoring | Mailings | Donations | Subscriptions | Tasks | Tracker

The My SF.net pages, accessible using the navbar above, provide direct access to a variety of information related to your account. As of 2005-03, Tracker (Bug Reports, Support Requests, Feature Requests, etc.) and Task data have been moved to separate pages.

My Projects

IBIS - Internet Based Inspection System

To remove yourself from a project, click the Trash Can icon. Admins must have their project admin flag dropped first.

See a full list of your Active, Pending, Rejected and Deleted projects

How can I join an existing project?

[Register a new project](#)

Buy and Sell Services on SourceForge.net

SourceForge.net is introducing a new feature that will let you buy or sell services for Open Source projects right from the site. Get an insider's look at this exciting new development. [Learn more >](#)

My Bookmarks

You currently do not have any bookmarks saved.

[Add a custom bookmark](#)

Complete



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Tigris.org

<http://www.tigris.org/>

Tigris.org: Open Source Software Engineering - Mozilla Firefox

File Modifica Visualizza Cronologia Segnalibri Strumenti 2

http://www.tigris.org/

CollabNet Enterprise Edition

My pages Projects Community openCollabNet

Subversion for distributed teams Webinar

Submerged The Blog

Search

Advanced search

Powered by **COLLABNET**

How do I...

Get release notes for CollabNet 4.5.1?

Get help?

Category	Featured projects
scm	Subversion, Subclipse, TortoiseSVN, RapidSVN
issuetrack	Scarab
requirements	xmlbasedsrs
design	ArgoUML
techcomm	SubEtha, eyebrowse, midgard, cowiki
construction	antelope, scons, framework, build-interceptor, propel, phing
testing	maxq, aut

CollabNet will update this site to the latest patch 5 of CollabNet release of CollabNet Enterprise Edition (v4.5.1). This site will be unavailable for 5 minutes On Sunday, 5/20/07 9:30 pm PDT. Please Contact the Support Hot Line at 800-211-3047 (650-228-2562 International) with any questions regarding the patch update.

Tigris.org Community Scope

- Tigris.org is a mid-sized open source community focused on building better tools for collaborative software development.
- You will not find thousands of unrelated projects here: every project fits into the Tigris mission.
- You will not find dead projects here: every project is welcomed into the community with a commitment to see it through and active developers cycle among related projects.
- Tigris.org is hosted by CollabNet, but the Tigris mission is one for the entire open source movement and one that has attracted senior open source developers from many organizations.

The Tigris Mission: Building Open Source Software Engineering Tools

Tigris.org provides information resources for software

Site announcements

May 2, 2007 - [Subclipse 1.2.1 Released](#)

Apr 28, 2007 - [SubEtha 1.0.2 released](#)

Mar 12, 2007 - [Scarab 0.21 released](#)

Mar 1, 2007 - [SubEthaSMTP 1.2 released](#)

Feb 20, 2007 - [ArgoUML 0.24](#)

Feb 13, 2007 - [Subclipse 1.2.0](#)

Jan 14, 2007 - [Anti-spam improvements](#)

Nov 19, 2006 - [SubEtha 1.0](#)

Nov 10, 2006 - [Oracle Chooses Current](#)

Oct 28, 2006 - [OpenPavilion Project Launched](#)

Oct 28, 2006 - [Jury 0.8](#)

Oct 13, 2006 - [Let the Tigris community hear about your project](#)

Oct 13, 2006 - [SubEtha 0.9 and SubEthaSMTP 1.1](#)

Sep 19, 2006 - [Subclipse 1.1.6](#)

Sep 16, 2006 - [TortoiseSVN 1.4.0](#)

Sep 10, 2006 - [Subversion 1.4.0](#)

http://www.collab.net/patches/dkdpb0902.html



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GForge

<http://gforge.org/>

Colab CDE: Benvenuto - Mozilla Firefox

File Modifica Visualizza Cronologia Segnalibri Strumenti 1

http://gforge.org

FORGE Accedi | Nuovo account

Software/Gruppo Ricerca

» HOMEPAGE PAGINA PERSONALE STRUTTURA DEL PROGETTO FRAMMENTI DI CODICE PROGETTI IN CERCA DI AIUTO

GForge helps you manage the entire development life cycle

GForge has tools to help your team collaborate, like message forums and mailing lists; tools to create and control access to Source Code Management repositories like CVS and Subversion. GForge automatically creates a repository and controls access to it depending on the role settings of the project.

[Major Feature List](#)



Additional Tools:

Completato

Ad

Download
Unlimited Users
FORGE
Advanced Server

Create Test Project | Download

Getting GForge

Download:
 GForge4.5 (official tarball)
 GForge 4.5.16 FC3 vmware.zip (500MB)
 GForge 4.5.3 VMWare Image by Reinhard Spieser
 GForge Debian Packages by Christian Bayle

Cool Tools To Use:
 GForge CLI *
 Tortoise CVS Client *
 Tortoise SVN Client *
 Windows SSH Tools *
 * optional

Colab CDE



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Collab CDE

<http://cde.di.uniba.it/>

Colab CDE: Benvenuto - Mozilla Firefox

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http://cde.di.uniba.it/

Colab CDE Software/Gruppo Ricerca

Home Pagina Personale Mappa progetti Frammenti di codice Progetti in cerca di aiuto Amministrazione Reporting

Collaborative Development Environment

Collab CDE e' l'ambiente di sviluppo collaborativo (Collaborative Development Environment) che ospita i progetti software gestiti da personale del **COLLAB**, il laboratorio di ricerca per la collaborazione in rete del **Dipartimento di Informatica dell'Universita' degli Studi di Bari**.

Collab CDE offre un accesso web ai principali strumenti collaborativi utilizzati nei progetti software open source:

- Forum
- Tracker per la gestione dei bug e delle richieste di feature
- Gestione attivita' mediante To Do list
- Pubblicazione web della documentazione
- Sondaggi
- Notizie
- Source code management (CVS o Subversion)
- Upload/download dei release file

Per partecipare

Collab CDE si rivolge principalmente alle seguenti categorie di utenti/sviluppatori:

Statistiche Collab CDE

Progetti ospitati: **17**
 Utenti registrati: **49**

Progetti più scaricati

(619) LiveJabber
 (295) JabberPresence
 (34) eConference
 (22) EPBCS
 (21) JBSkype
 (15) PDF-Via-Skype
 (2) PmWiki_Plugins
 [Altri]

Utenti più valutati

Statistiche non disponibili

Più attivi questa settimana

(100.0%) LiveJabber
 (66.7%) PmWiki_Plugins
 (33.3%) JabberPresence
 [Altri]

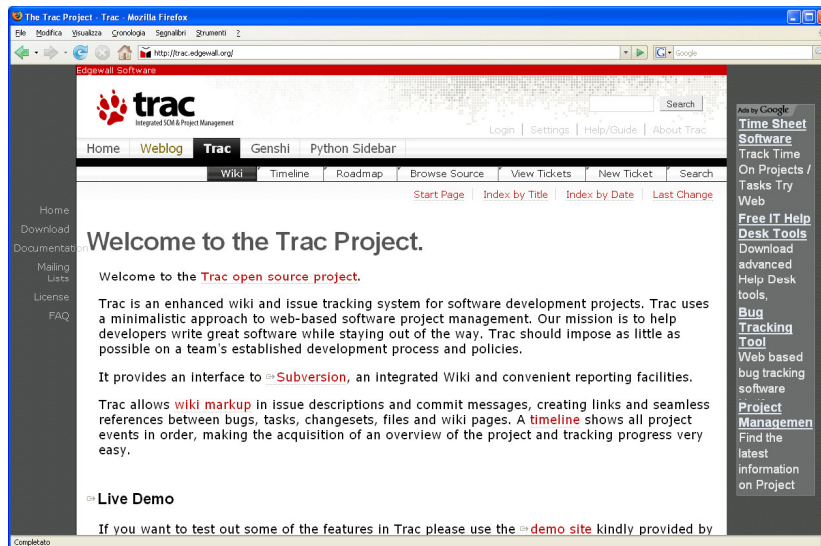
Recently Registered Projects

(05/02) RCP Streaming Feature



Trac

<http://trac.edgewall.org/>

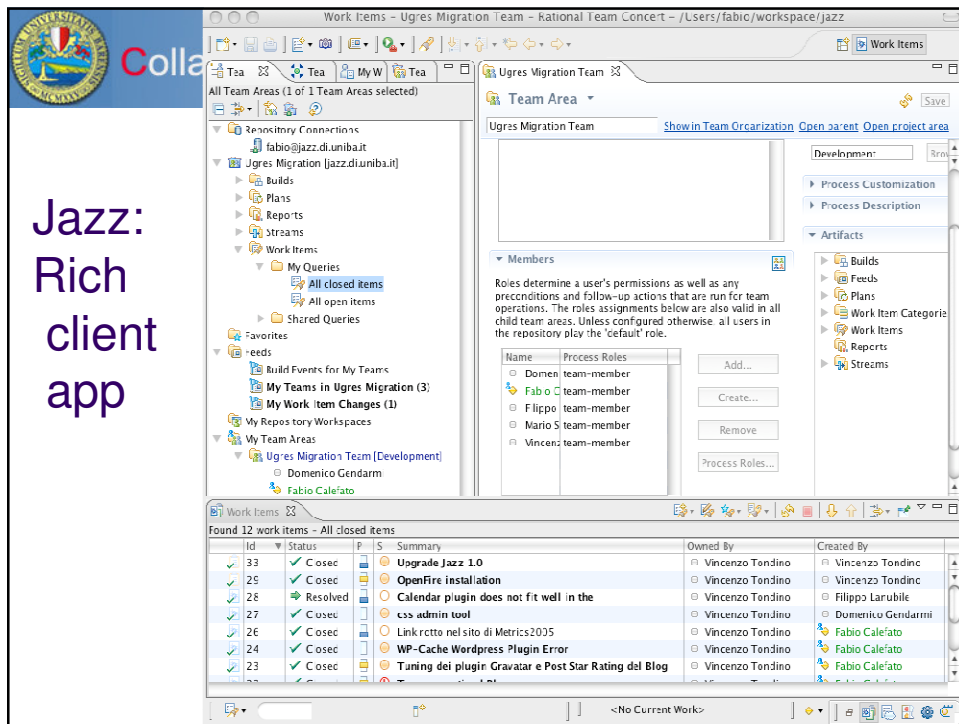


Jazz

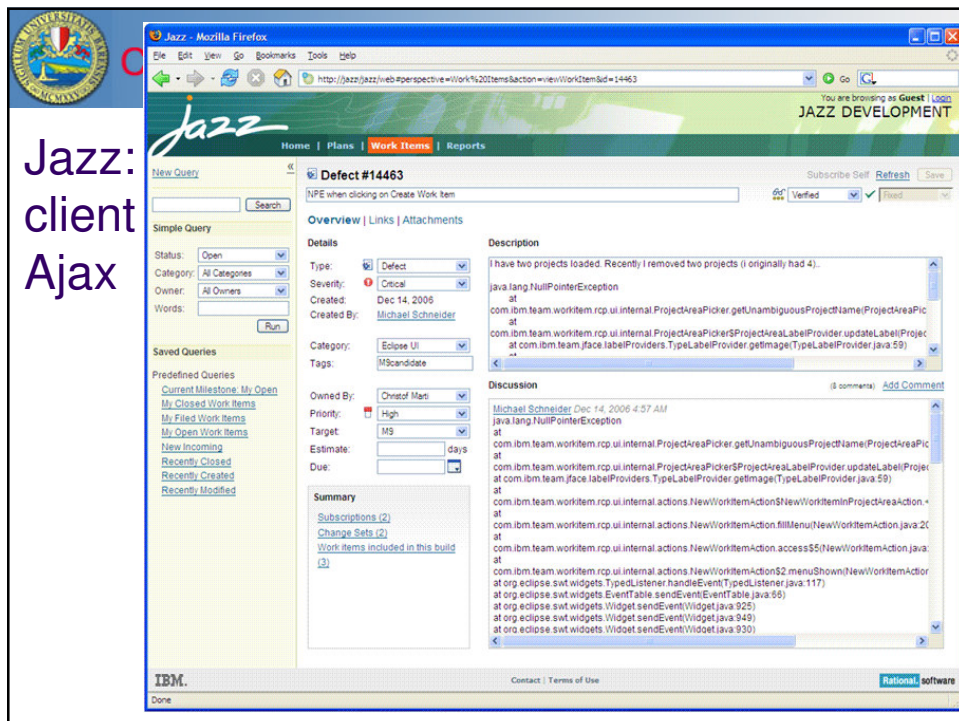
<http://jazz.net/>

- Collaborative platform that aim at integrating team activities within a software lifecycle
- Characteristics
 - Extensible (plugin)
 - Scalable (team of teams)
 - Interoperable (API)
- Built upon the experience of the Eclipse dev team
 - Built-in dev process: Eclipse Way
 - Supports the definition of custom processes

Jazz: Rich client app



Jazz: client Ajax





Challenges of DAD

- Surveyed most recent paper on DAD topic from
 1. XP 2008
 - A keynote on using social computing to organize (collocated) sw development
 2. Agile 2008
 - A number of experience reports from practitioners on challenges encountered
 - No or limited focus on generalizing lessons learned
 3. ICGSE 2008
 - Paasivaara et al., *"Distributed Agile Development: Using Scrum in a Large Project"*
 - Sureshandra et al., *"Adopting Agile in Distributed Development"*
 - Cristal et al., *"Usage of SCRUM Practices within a Global Company"*

	Study description	Project Measures	Agile Methodology	Challenges	Lessons learned
Paasivaara et al.,	Industrial case study (interviews)	•1 project •2 sites (Norway, Malaysia) •1,5 year	Distributed SCRUM of SCRUMS	•Videoconference issues, both technical (low bandwidth) and conversational (slowness and silence) •Rqmts often misunderstood	•Multiple communication mode are needed
Sureshandra et al.,	Industrial experience report (Wipro)	•90 projects •? Sites (India, ...) •3 years	Distributed SCRUM	•N.A.	•Dedicated videoconferencing equipment •Photo-chart of team members at sites •Transition to distributed agile should be stepwise
Cristal et al.	Industrial experience report	•2 projects •2/3 sites (US, S. America, Asia) •1+ year	Distributed SCRUM of SCRUMS	• Communication issues •Inappropriate team organization and task assignment •Lack rqmts documentation	•Document and share SCRUM meetings minutes •Less document does not mean less valuable •Global taskboard



Our goal

- Investigate how the incorporation of **Web 2.0 apps** (i.e., more recent social software other than IM, conferencing, email, etc.) into **CDEs** can improve **communication & knowledge sharing** for **DAD teams**



Balancing Practices for Distributed Agile Development

- Improve communication
 - Blogs to enhance informal communication
- Facilitate knowledge sharing
 - Wikis to ease up documentation efforts
 - Tagging of code & artifacts to facilitate tracing and retrieval
- Build team trust and culture
 - Social networks profiles as an incentive to preserve digital identities



E.g. Twitter for developers?

- Yammer.com
 - A private Twitter for co-workers
 - “What Are You Working On?”
- Twitterclipse
 - Eclipse plugin under development
 - Could automatically tell others developers what you are working on (much like Mylin does)



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Social Software in DAD: Challenges

- Fun factor
 - User participation in general scenarios is non-compulsory
- Critical mass
 - Social benefits come only when a large base of user is reached
- Collaboration as side effect
 - Active participation mainly rely on individual benefits

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Thanks for your attention!

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