Communities of Creation: Managing distributed and collaborative innovation

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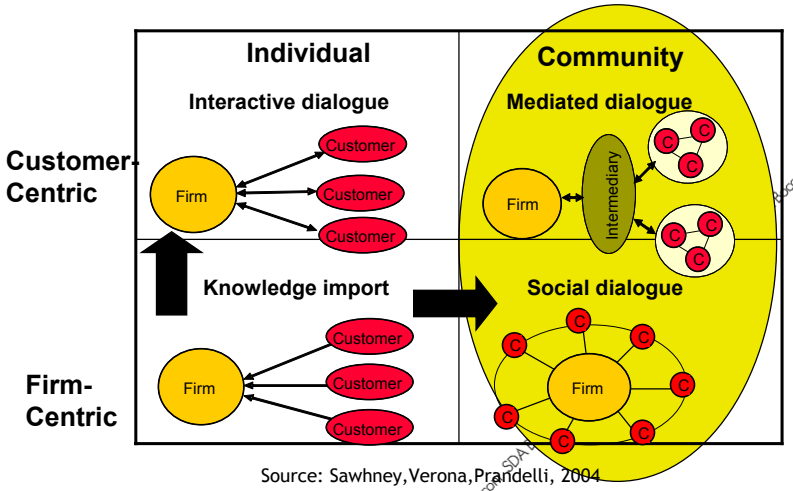
Why collaborative innovation is relevant

- Virtual customer environments have become a flexible and effective tool to interact with customers and partners and co-produce value with them (Nambisan, 2002)
- Such an ability has a direct impact on the firm's capacity to generate value both:
  - in the short term, through a better interaction with the customer and an implementation of a customer marketing policy (Peppers, Rogers, Dorf, 1999);
  - in the long run, through the creation of new products that may be better targeted to the served market (Sawhney and Prandelli, 2000).

A taxonomy of collaboration mechanisms with and among customers



Source: Sawhney,Verona,Prandelli, 2004

Virtual communities enable a new model for managing distributed innovation: the Community of Creation

The community of creation is a new governance mechanism for managing distributed innovation.

When the locus of innovation is internal to the boundaries of the firm, innovation is managed through a hierarchical governance mechanism. Traditional R&D departments epitomize it.

ICTs have dramatically enabled a new market-based mechanism for managing distributed innovation: the open source model. It favors creativity, but the absence of coordination can make it unstable.

Communities of creation are permeable systems with ever changing boundaries, offering a **compromise between too much structure and complete chaos**.

Communities of Creation: how do they work

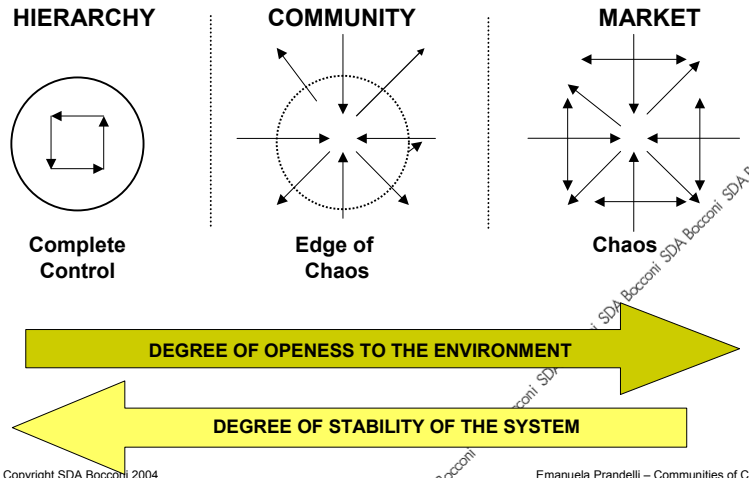
The community of creation relies on **extended participation** and **distributed content production.**

Within the community, explicit as well as tacit knowledge can be shared, because participants build up a common **context of experience.**

This model implies **specific rules for membership**

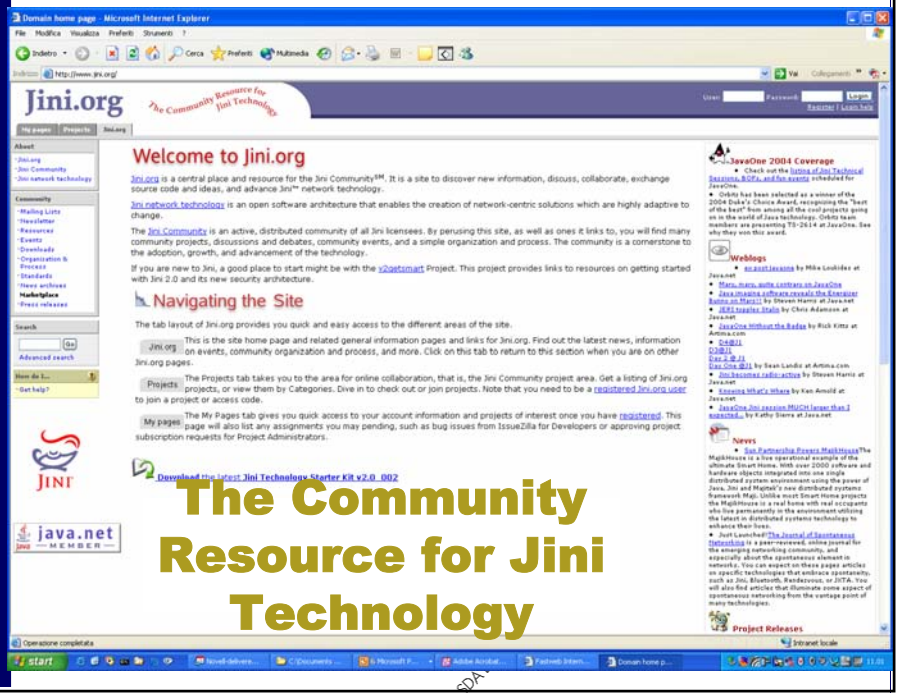
It needs a sponsor as well as a system for managing intellectual property rights that allow members to extract rents from the **intellectual property** they contribute to create.

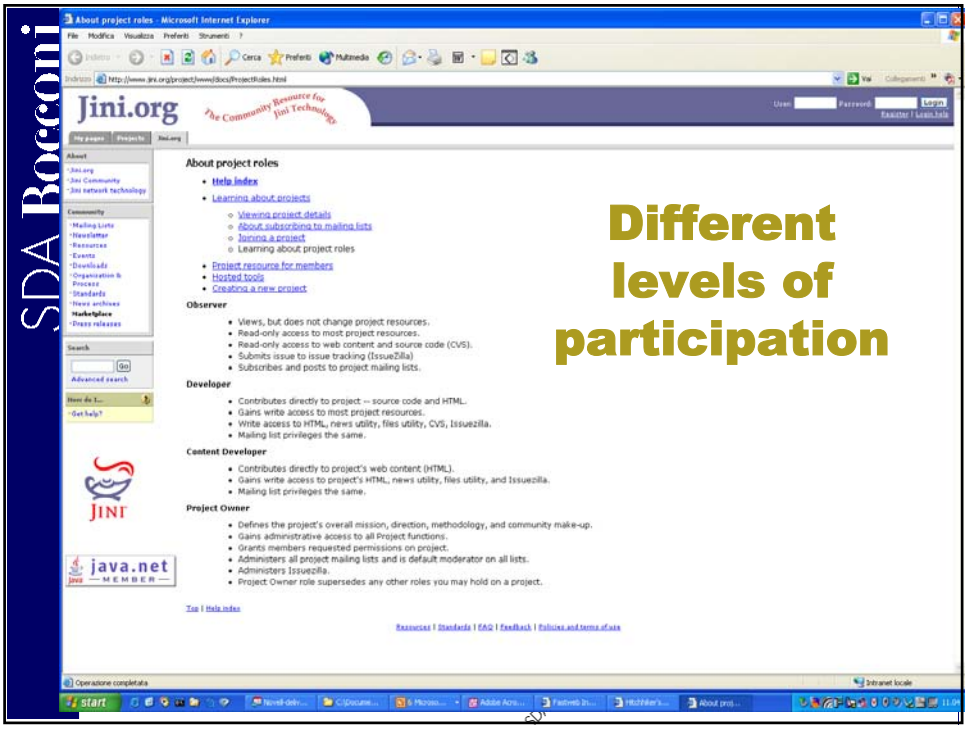
Governance of collaborative innovation: Communities of creation



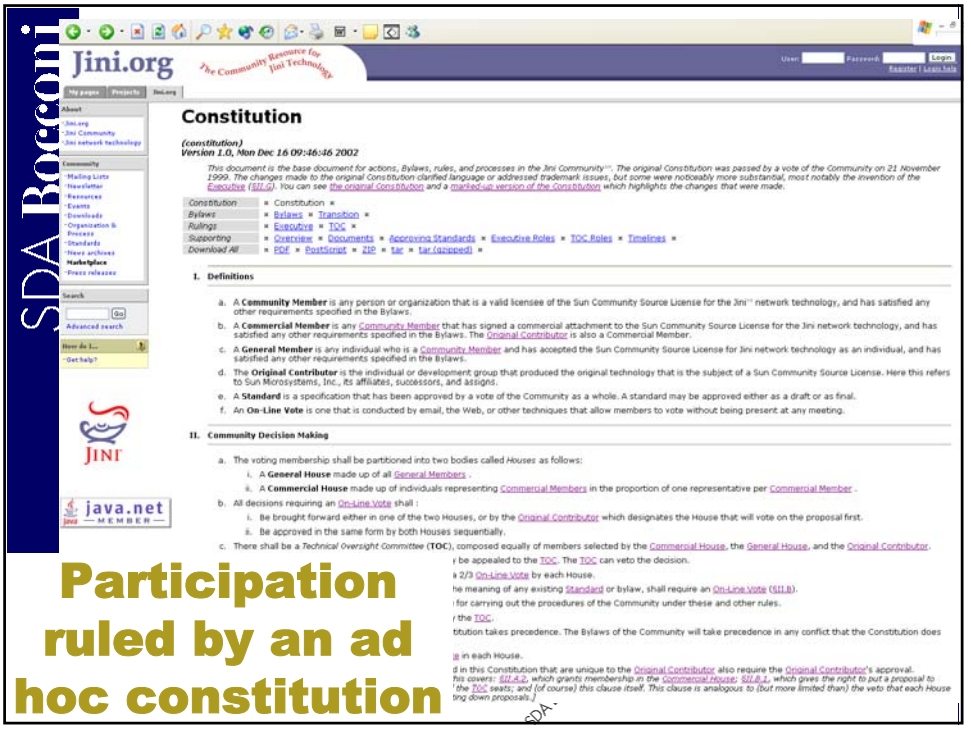
The Community of Creation model

Advantages shared with the proprietary model	Advantages shared with the open source model
Protection for intellectual property	Open platform with published and specified interfaces
Structured innovation within a single responsible organization	Higher quality and more rapid innovation
Clear understanding of "who knows what"	Self-organizing and emerging structure
Control over compatibility	Flexibility of schedules and priorities

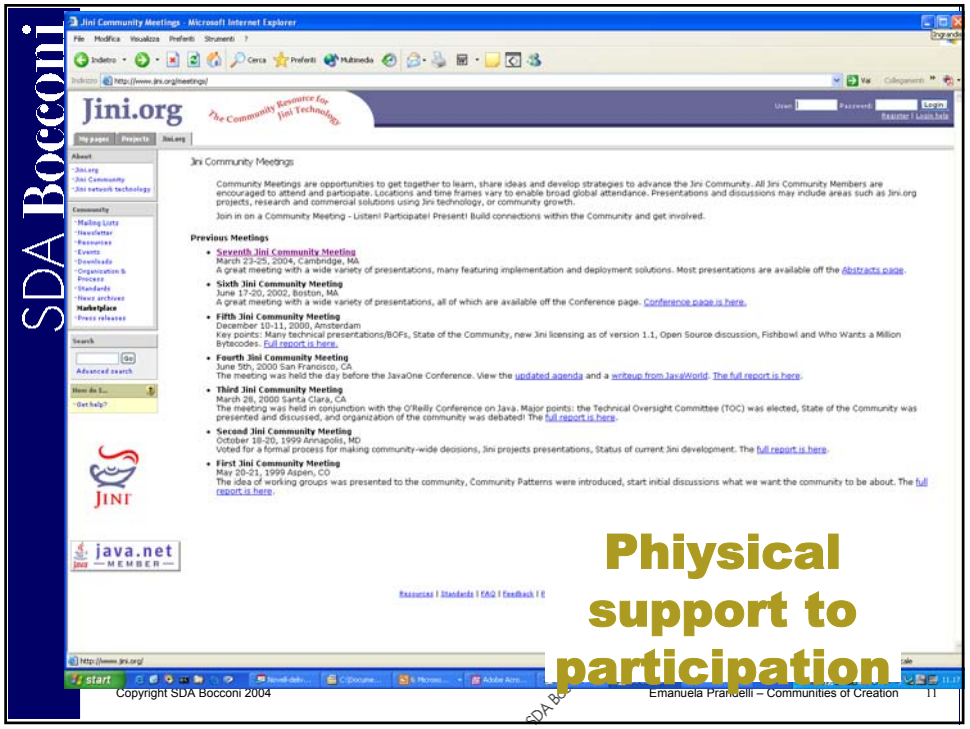


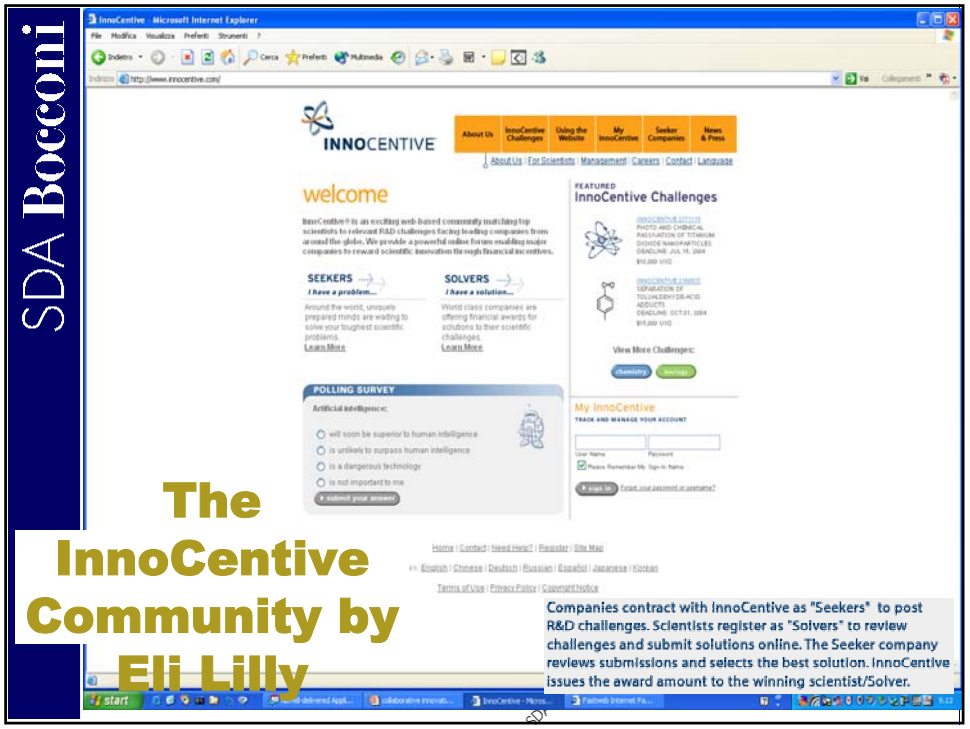


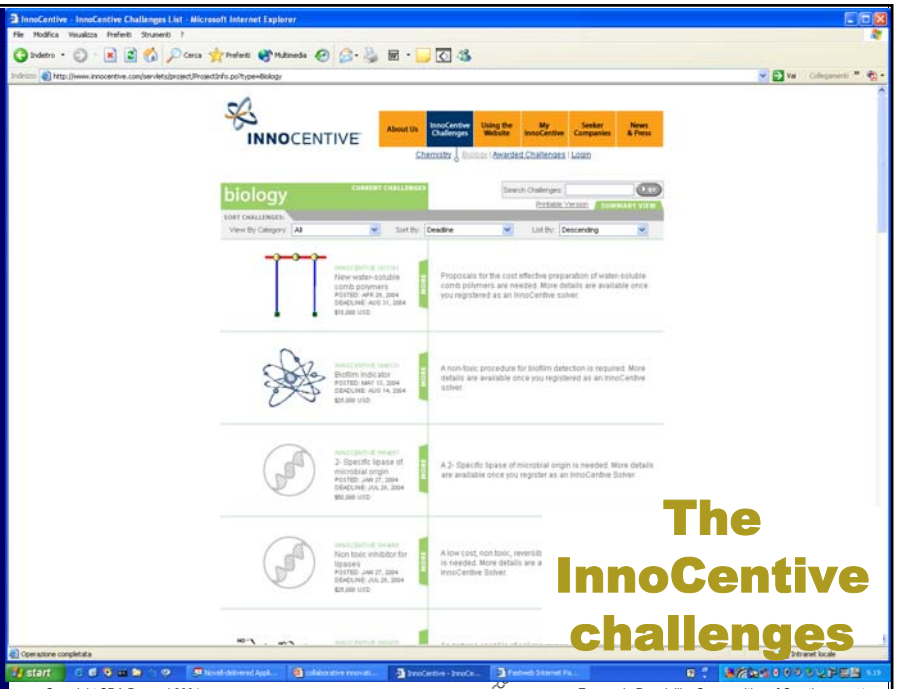
Different levels of participation



Participation ruled by an ad hoc constitution


Jini Community Meetings - Microsoft Internet Explorer
Jini.org
The Community Resource for Jini Technology
Jini Community Meetings
Community Meetings are opportunities to get together to learn, share ideas and develop strategies to advance the Jini Community. All Jini Community Members are encouraged to attend and participate. Locations and time frames vary to enable broad global attendance. Presentations and discussions may include areas such as Jini.org projects, research and commercial solutions using Jini technology, or community growth.
Join in on a Community Meeting - Listen! Participate! Present! Build connections within the Community and get involved.
Previous Meetings
Seventh Jini Community Meeting
March 23-25, 2004, Cambridge, MA
A great meeting with a wide variety of presentations, many featuring implementation and deployment solutions. Most presentations are available off the Abstracts page.
Sixth Jini Community Meeting
June 17-20, 2002, Boston, MA
A great meeting with a wide variety of presentations, all of which are available off the Conference page. Conference page is here.
Fifth Jini Community Meeting
December 10-11, 2000, Amsterdam
Key points: Many technical presentations/BOFs, State of the Community, new Jini licensing as of version 1.1, Open Source discussion, Fishbowl and Who Wants a Million Bytecodes. Full report is here.
Fourth Jini Community Meeting
June 5th, 2000 San Francisco, CA
The meeting was held the day before the JavaOne Conference. View the updated agenda and a writeup from JavaWorld. The full report is here.
Third Jini Community Meeting
March 28, 2000 Santa Clara, CA
The meeting was held in conjunction with the O'Reilly Conference on Java. Major points: the Technical Oversight Committee (TOC) was elected, State of the Community was presented and discussed, and organization of the community was debated! The full report is here.
Second Jini Community Meeting
October 18-20, 1999 Annapolis, MD
Voted for a formal process for making community-wide decisions, Jini projects presentations, Status of current Jini development. The full report is here.
First Jini Community Meeting
May 20-21, 1999 Aspen, CO
The idea of working groups was presented to the community, Community Patterns were introduced, start initial discussions what we want the community to be about. The full report is here.
java.net MEMBER
Phiysical support to participation


InnoCentive - Microsoft Internet Explorer
INNOCENTIVE
About Us
InnoCentive Challenges
Using the Website
My InnoCentive
Seeker Companies
News & Press
welcome
FEATURED
InnoCentive Challenges
SEEKERS
I have a problem...
SOLVERS
I have a solution...
POLLING SURVEY
Artificial intelligence:
My InnoCentive
The InnoCentive Community by Eli Lilly
Companies contract with InnoCentive as "Seekers" to post R&D challenges. Scientists register as "Solvers" to review challenges and submit solutions online. The Seeker company reviews submissions and selects the best solution. InnoCentive issues the award amount to the winning scientist/Solver.



An example of application

- A seeker company wanted to improve the process of manufacturing a chemical called 4-(4-hydroxyphenyl) butanoic acid.
- After devoting 12 man-months of work to the problem, the company had only developed a five-steps process that needed expensive starting materials and produced low yields. Its goal was to devise a two-step process that had a starting cost of less than 100$ per kilogram and produced a better yield.
- The company posted the problem on InnoCentive's site in June 2001.
- It soon received several submissions, including a promising approach suggested by Werner Mueller, a retired senior scientist from Hoechst Celanese. In November, Mueller's fifth submission was accepted by the seeker company, and he was awarded $25,000 by InnoCentive.
- In less than five months, one scientist had solved a problem that had eluded a team of researchers at a leading company.

Source: Sawhney, Prandelli, Verona, 2003

The InnoCentive community: some figures

- More than 12,000 scientists from 105 Countries had registered, and more than half of them are from outside the United States
- Over 3,000 project rooms opened
- Awards ranging from $2,000 to $100,000
- Scientists who participate include retired researchers, university professors, researchers working for independent clinical research organization and even scientists working for non-competing pharmaceutical firms

Lessons for managers

Key questions	Lessons for managers
What level of control should the sponsor company maintain?	• Needs to pull individual organizations into a circle of shared concerns, then allow them to self-organize • Needs to coordinate individual schedules and priorities • Needs to establish responsibilities to ensure alignment
How can property rights be managed?	• Intellectual property has to be protected in the community • Rights have to be directly proportional to responsibilities
What incentives favor a direct involvement in the long run?	• Business model encouraging /rewarding individual invention • To preserve the quality of innovation, the community needs to be "gated"
How can the community evolve and keep stability?	• Preserving and renewing the balance between continuous innovation and internal cohesion, openness and closeness • Tolerance for diversity and redundancy
What level of support should the sponsor provide?	• The sponsor needs to fund support for the community • On the long run, physical support is required • Services should be tiered, depending on the intensity of individual members' involvement

In brief ….. the requirements for a virtual community supporting collaborative innovation

- Natural structure, but clear **participation rules**, often defined by the same members;
- **Spontaneous** subscription from members (everyone can contribute), based on **self-signalling** mechanisms
- **Centralized coordination** activities to support the constant **animation** of interpersonal communication;
- Feeding up **shared languages** and a collective identity;
- **Social control** mechanisms (mutual trust among members);
- **Incentives** for favouring participation (pay-off sharing *)*: not just members … fans
- Rules to manage **intellectual property rights**.