CROWDSOURCING: New directions in outsourcing

Dr Carl Adams, University of Portsmouth
BCS Hampshire Branch presentation, Tuesday 8 December 2009

Based on Presentation at IFIP 8.2 Conference in Portugal June 2009
(and selection of Journal papers by Carl Adams and Prof. Isabel Ramos, University of Minho)
CROWDSOURCING: New directions in outsourcing

(EXTEND INNOVATION CAPABILITIES)

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Structure of panel session

- Background – what was and is crowdsourcing?
- Crowdsourcing Innovation
- Some examples
  - Practice sessions
- The potential (and for SMEs)
- Support mechanisms
- Some critical comments (problems and issues)
- The future of crowdsourcing

- Discussions
First some practical ... how many sweets?

- Two boxes of sweets, one chocs the other jellies ...
- Guess how many sweets in each box and put answers on piece of paper
- The closest guess wins the box of sweets
- Testing out the ‘wisdom of crowds’
Background – what was and is crowdsourcing?

- “Crowdsourcing is a neologism for the act of taking a task traditionally performed by an employee or contractor, and outsourcing it to an undefined, generally large group of people or community in the form of an open call.” (from From Wikipedia ... http://en.wikipedia.org/wiki/Crowdsourcing, accessed 16/06/09)

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..... Wikipedia a good example of crowdsourcing
Jeff Howe, a US journalist, presented the term “crowdsourcing” for the first time in 2006 in a paper published by Wired Magazine "The Rise of Crowdsourcing"
Background – what was and is crowdsourcing?


Different types of crowdsourcing …

- Surowiecki (2004) suggests 3 types of problems that crowds can address …
  - Cognition
  - Coordination
  - Cooperation

- Similarities to other fields
  - (e.g. biology and swarm ‘intelligence’)

- But relatively early days
Background – what was and is crowdsourcing?

Several examples …..

- Rob McEwen’s “Goldcorp Challenge”
- Launched in March 2000
- All information on 55,000-acre gold mining property revealed (400MBs of data) revealed to general public – i.e. their core IP
- $1/2 Million prize money given to competition to identify where the gold is
- Contestants identified 110 targets for gold
- Over 80% new targets yielding substantial quantities of gold
- $100 million company > $9 billion company
Background – what was and is crowdsourcing?

Several examples from Computing domain .....

- Lynux

- Internet protocols – Requests for Comments (RFCs)
Some current examples ...

**The Galaxy Zoo project: (see http://galaxyzoo.org/)**
from the astronomy and cosmology domain – classifying galaxies; launched in July 2007 was able to classify 1m; within 24 hours of launch, the site was receiving 70,000 classifications an hour

**‘uTest’: (see http://www.utest.com/)**
formed in late 2007- now claims to be the world's largest marketplace for software testing services with a global community of over 18,000 testers from more than 150 countries

**Innocentive: (see http://innocentive.com) **
spin-off of Eli Lilly, a pharmaceutical company; started as a broker for Lilly, then it opened up to challenges from other pharmaceuticals, and nowadays accepts challenges of other industrial sectors.
Practice sessions

Results of “Guess how many sweets in each box”....
.... The winners are .....
Practice sessions

Results of “Guess how many sweets in each box”....

Other (possible) Crowdsourcing tasks

Lego brick toys:

1) Design a Lego brick toy using the least amount of bricks but appealing to the most amount of people

2) Choosing the best design
Practice sessions

Questions after the sessions:

- **1)** What are the motivations for participating in the activity?
  - What is the initiating company perspective?
  - What are the crowdsourcing suppliers’ perspectives?

- **2)** Would it work?
  - What are the benefits and costs?
  - What are the business models?
Background – crowdsourcing innovation

- New web-based business model that harnesses the creative solutions of a distributed network of individuals through what amounts to an open call for proposals.

- This strategy can be applied in two ways:
  - by internally identifying business problems and needs for innovation felt by individuals, teams and organizational units (seekers) that are then made available to a community of internal and external specialists motivated to provide their knowledge and skills to address those problems.
  - by placing the company’s innovation challenges to a brokering service that can find the right people to present the solutions (solvers).
The potential for SMEs

- Globalisation theories and practice indicate a smaller number of larger, multinational corporations, supported by a wider number of suppliers.
- There is a need for innovation and much innovation takes place in SMEs.
- Tapping into a Vast resource of human capital
  - Virtual communities, SN communities are huge – 200+M is 10 times larger than the largest physical city communities.
The potential for SMEs

- Sustainable growth and development of SMEs are largely contingent on an environment that fosters entrepreneurship, competition, and innovation;

- SMEs which have proved themselves to be the engines of economic growth, and the principle sources of new employment;

- SMEs’ show a key ability to exploit new technologies, and to respond quickly to changing market needs.
The potential for SMEs

- Implementing an internal process may be too expensive!
- May not be feasible due to lack of resources, expertise, short-term focus!
- Innovation for MSME may sometimes mean differently than for large companies;
- The open innovation strategy may be more feasible than close innovation... but many difficulties will arise.
- Outsourcing part or the whole innovation process?
The benefits of intermediaries/brokers

- Access to a vast knowledge community;
- Easier access to information and support to the several activities of the ideation and demonstration phases of innovation;
- Contractual risks are transferred to the broker;
- Risks of technology transfer may be reduced.
Some well-known intermediaries/brokers
Support mechanisms

The internet and evolving expertise and user practice

- As with digital natives vs digital immigrants ... we are heading towards (digital) content provider natives and immigrants. For the ‘young’ it is normal to contribute to Youtube etc

- Collaborative structures emerging as the norm in the information revolution

- Virtual communities, collaboration tools, content free structures, customer practice (e.g. feedback mechanisms, participation the norm)
Some critical comments (problems and issues)

- DoI theories indicate differences between early and later adopters
  - will crowdsourcing be a long term business model?
- Still need some incentives, there is no long term business without income
- There are challenges in parcelling up the tasks and collating the responses
  - these are non-trivial technically and need to be tied into incentive mechanisms

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The future of crowdsourcing?

One way forward

- The evolution of Crowdsourcing intermediaries - effectively re-intermediation of the value and supply/demand chains

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The future of crowdsourcing?

One way forward

- IPR based incentive mechanisms, micro-payment and microIP mechanisms — sharing IPR will increase the volume and value of innovation
The future of crowdsourcing?

One way forward

- The emergence of new organisational structures – a new dimension in virtual transient organisations
  - Temporal-transient crowds (TTCs) /outsourcing groups
  - Micro IP systems for TTCs?

- And different flavours characterised by incentives and motivations
  (e.g. philanthropy crowds, supply crowds, marketing crowds … others)
Discussions …

Over to the audience

□ .... Any Questions?