Mashups and Wisdom of the Crowd

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Mash-ups

- It uses and combines data, presentation or functionality from two or more sources to create new services.
- It produces enriched results that were not necessarily the original reason for producing the data or functionality.
- Characterized by combination, visualization and aggregation.

Mash-ups: Present State of Art

- Web applications have published APIs.
- Contributed in the evolution of social software.
- Tools are usually simple enough to be used by end-users.

Mash-ups: Types

- Data mashups
- Consumer mashups
- Business mashups

Mash-ups: Technologies

- SOAP
- REST
- RSS
- ATOM
- Service providers APIs

Wisdom of the Crowd

- Taking into account the collective opinion of a group of individuals rather than a single expert.
- Examples in practice:
  - Wikipedia where millions of people contribute to the collective wisdom.
  - Newsvine where a group of non-experts determine what news is important.

WoC: Studies

- Group versus individual performance. Are n + 1 heads better than one? - Hill, G. W. (1982)
  - Group performance vs individual.
  - Group performance vs most competent individual in the aggregate.

WoC: Studies cont...

- Group performance vs pooled responses of the aggregate.
- Group performance vs mathematical models of performance.

Crowd-Sourcing

- It is the act of outsourcing tasks, traditionally performed in-house, to a large group of people or a community (a crowd).
- Makes use of ‘the wisdom of the crowd’.

Crowd-Sourcing: Benefits

- Lowers cost and improves efficiency.
- Payment is by results or even omitted.
- The organization can tap a wider range of talent.
- Organizations gain first-hand insight on their customers' desires.
- The community earns a sense of ownership through contribution and collaboration.

How it differs

- Traditional outsourcing: A task is outsourced to a specific body.
- Open source development: A cooperative activity initiated and voluntarily undertaken by members of the public.

Recommender Systems

- A information filtering system that attempts to recommend information items that are likely to be of interest to the user.
- Compares a user profile to some reference characteristics to predict a users likes.
- Approaches:
  - Content-based approach
  - Collaborative filtering approach.

Case Studies

Threadless

Crowd does:

- Produces concept designs
- Selects designs
- Indicates willingness to purchase
- Provides feedback and training
- Carries (almost) all risk

Threadless cont…

Company does:

- Pays for successful designs ($2000)
- Pipeline for submission, rating, selection, manufacturing and distribution
- Promotes good designers
- Goals and dreams

Apple (AppStore)

Product flaw: No software!

Like threadless, outsources risks in production to crowd, in return for:

- Marketing, distribution and payments
- SDKs (reduced contribution cost)
- Decent prob. of local fame (intrinsic motivation)
- Small (overestimated) prob. of getting rich (extrinsic motivation)

Flickr

- System needs tags for images
- Purely intrinsicly motivated task
- For whom?
  - Self or public
- Why?
  - Communication or retrieval

Game Mechanics

ESP game

- Players agree on tags for images

Peekaboom

- Players locate tags in images

reCAPTCHA

- Human error correction for OCR
- Database with unknown scanned words
- Captcha with one unknown word and one previously tagged
- Spammers need to do research

Task Markets

- An emerging general solution for online paid labor
- Competetive market
- Quick and easy tasks
- Small payments

Task Markets cont…

- More payment = More work done
- Any non-insulting payment = Constant quality
- Intrinsic > Extrinsic = Higher quality
- Percieved work value > Payment
- Normal quality control is applicable

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