Facilitating Accidental Innovation
Through Manufactured Serendipity

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Every project you've seen tonight →

Was built on...

AN ACCIDENT
Meet Horace
Where Did All Our Ideas Go?
Groupthink via Homophily

Rigid Hierarchy

Motivation Problems

Information Hoarding

Reputation Differences

Conflicting Incentives

Trust Issues

Status Inequality
waiting for godot
samuel beckett

a tragicomedy in two acts
Serendipity in the wild

- Pandora
- Netflix
- Quora
- paper.li
- ChatRoulette
Radical Innovation?
A web application that facilitates radical innovation by manufacturing serendipity
Roadmap

- Our methods and design principles
- Current implementation
- How we applied our design principles
- Implications

Image: http://www.flickr.com/photos/brainfarts/97676505/lightbox/
Methods

- Secondary research
- Primary research
  - 18 interviews
  - 6 organizations
- Concept generation
- Interface development
- Software development
- User experience testing

Image: http://www.innovationcreation.us/
User needs assessment: Common themes

Ideation

Motivation
Concept Generation and Prototyping

Description:
A system that challenges assumptions about how things are done, with features & attributes:
- Streaming, data, and software
- Synthetic environments

Questions:
- How would a detergent without packaging look like?
- Or deliberately black out a portion of an idea to create thought:
  "A document network system that does [XXX] with collaboration filtering."

Welcome Julian:
Questions I've Posted: In progress
Questions I've Answered: Status
Post Another
View other Co. Questions

Welcome to the ACME Serendipity Machine!
With the Serendipity Machine, you can help your fellow employees discover innovative ideas and solutions.

Learn progress towards the next level right now!
Learn more:
Add additional information sources.

Have a burning challenge you need help with?
Learn how to post challenges:
Or, get started now!

Questions From the Organization
Where in the world is Carmen Sandiego?

Serenity Engine (SE): Determines:
- Who to send it to
- Other topic it matches
- When to send

Who does it send to:
- Personal profile
- On similar topics

Challenge Sent:
- 5-12 people
- Based on research
Current Implementation:
How smartSparq manufactures serendipity

[Diagram showing the process:]
1. Challenge
2. Personalized sparqs
3. Responses
4. Feedback

Organizational repositories

Serendipity MACHINE

Serendipitous respondents!
smartSparq in Action

smartSparq Video
Technical Architecture

smartSparq Serendipity Seeker
(User + Web Browser)

smartSparq Web Front End
(HTML + CSS + JavaScript)

smartSparq Middleware Platform
Google App Engine

smartSparq Web + Middle Tier
(Python + GAE datastore)

Serendipity Machine RESTful API
(Apache Tomcat)

Serendipity Machine
(Apache Hadoop + Mahout)
A Tale of Two Insights

Ideation

Motivation
“There are lots of great ideas, and if you take one of them and evaluate it without looking at the other ideas [...] it may not be a great idea. All you have to do is make that one connection. This guy has one part, this gal has the other part, let’s get these two in touch and let them have a chance to recraft it with the combined ideas and then we’ll evaluate it [...] it’s making the initial connection”

Service Innovation Team Manager [13]
Ideation

Design decisions
1. Smart routing
2. Sparqs
1) d \[ \rightarrow \top \]
2) \top \[ \rightarrow \]
3) d \[ \rightarrow \top \]
4) ch \[ \rightarrow \]
5) ch \[ \rightarrow \top \]
6) d \[ \rightarrow \] sim

1. Select top from [6]
   - apps who wrote themes
   - champions

Return top -> General fishbowl

\[ d \rightarrow \text{document} \]
\[ \top \rightarrow \text{term} \]
\[ \text{top} \rightarrow \text{topic} \]
\[ \text{sim} \rightarrow \text{similarity} \]
\[ \text{ch} \rightarrow \text{challenge} \]
Hey! You’ve been specially selected to help with a new challenge!

Three others have responded so far. Be next to submit a great answer.

⚠️ Successfully complete just 2 more challenges and improve your rank to: “Contributor” level

To get started, please review steps 1 and 2:

1. Look at the following words as they might help you better answer the challenge:

   - Mobility
   - Independence
   - Handwriting
   - Energy

   ✨ what’s this?
Motivation

Design decisions
1. Anonymity
2. Recommendations
3. Leaderboards
"...people have ideas and they want to do something new that will revolutionize something and they have a sense of ownership. You can’t underestimate the power of that ownership connection."

Head of Grassroots Innovation [11]

"It has more to do with the emotional connection that you make and feel passionate about something and just want it for your company. I think that is more encouragement than any reward."

Service Innovation Team Manager [13]
Anonymity

Image: Matt Westervelt
# Recommendations

**RELATED INFORMATION TO THIS CHALLENGE**

**PEOPLE:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goldilocks Powell</td>
<td><a href="mailto:goldi@acme.com">goldi@acme.com</a></td>
<td>(123) 123-1234</td>
</tr>
<tr>
<td>Bear Withme</td>
<td><a href="mailto:bear@acme.com">bear@acme.com</a></td>
<td>(123) 123-1234</td>
</tr>
<tr>
<td>Wolf Johnson</td>
<td><a href="mailto:wolf@acme.com">wolf@acme.com</a></td>
<td>(123) 123-1234</td>
</tr>
</tbody>
</table>

**DOCUMENTS:**

**From the Acme Wiki:**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. In porta, tortor sed dignissim ultrices, neque cui viverra mauris, non vehicula massa mauris a augue. Donec eu orare nisi.

**From the Acme Intranet:**


**From the Acme Yammer Feed:**

Goldilocks

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Bear Withme

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Leaderboard

Here’s your current company rank:

- Sultan of Serendipity (2 person)
- Genius (5 people)
- Expert (35 people)
- Discoverer (109 people)
- Contributor (You and 276 other people)
- Novice (298 people)
- Starter (39 people people)

Here’s your current department rank:

- Ken: Expert
- Jim: Contributor
- You: Contributor
UX Testing
Positive feedback and acceptance

“I think this tool would fill a need for a lot of larger organizations”
Research Scientist [1]

“If you connect areas that are not related [using smartSparq], you may bring more disruptive ideas”
Manager, Technology Strategy Team [12]
Implications
The Future Looks Smarter and Sparqlier

- Partner with an organization
- Potential use cases
  - Extend to customers and suppliers
  - Open Source community
  - Academic environment
Thanks!

Scan now with your smartphone QR-code reader!

smart sparq