Web 2.0

http://www.oreillynet.com/lpt/a/6228
Dot-com Bust

- Fall 2001
- Party is over
  - Job market crashed
  - CS enrollment down 40%
  - No more instant wealthy techies
But

• Web more important then ever
• Exciting apps & sites
  • housing maps
  • Wikipedia
  • flickr, mappr, YouTube
  • 37signals
Bubbles and Shakeouts

- Common in technological revolutions
  - Railroads
  - Automobiles
Party is just Starting

- Technology takes off after the bubble
- Technology takes time to
  - Mature
  - Integrate into society
  - Understand its use
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**Web 2.0 Meme Map**

- Flickr, del.icio.us: Tagging, not taxonomy
- PageRank, eBay reputation, Amazon reviews: user as contributor
- Blogs: Participation, not publishing
- BitTorrent: Radical Decentralization
- Gmail, Google Maps and AJAX: Rich User Experiences
- Google AdSense: customer self-service enabling the long tail
- Wikipedia: Radical Trust

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**Strategic Positioning:**
- The Web as Platform

**User Positioning:**
- You control your own data

**Core Competencies:**
- Services, not packaged software
- Architecture of Participation
- Cost-effective scalability
- Remixable data source and data transformations
- Software above the level of a single device
- Harnessing collective intelligence

**Play**
- The Long Tail
- Data as the "Intel Inside"
- The perpetual beta
- Software that gets better the more people use it
- Hackability
- The Right to Remix "Some rights reserved"
- Emergent: User behavior not predetermined
- Granular Addressability of content

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Trust your users
Small Pieces Loosely Joined (web as components)
Rich User Experience
Web 2.0 Principles

• Long Tail
• Web as Platform
• Harnessing Collective Intelligence
• Data, data, data
• End of software release cycle
• Lightweight Programming Models
• Software above the level of a single device
• Rich User Experiences
Why can’t we rent Indian movies at Blockbuster?
Stores

- Limited space
- Overhead
- Cater to main stream
The Long Tail

ANATOMY OF THE LONG TAIL
Online services carry far more inventory than traditional retailers. Rhapsody, for example, offers 19 times as many songs as Wal-Mart's stock of 39,000 tunes. The appetite for Rhapsody's more obscure tunes (charted below in yellow) makes up the so-called Long Tail. Meanwhile, even as consumers flock to mainstream books, music, and films (right), there is real demand for niche fare found only online.

THE NEW GROWTH MARKET:
OBSCURE PRODUCTS YOU CAN'T GET ANYWHERE BUT ONLINE

Sources: Erik Brynjolfsson and Jeffrey Hu, MIT, and Michael Smith, Carnegie Mellon; Barnes & Noble; Netflix; RealNetworks
Beyond bricks and mortar there are two main retail models – one that gets halfway down the Long Tail and another that goes all the way. The first is the familiar hybrid model of Amazon and Netflix, companies that sell physical goods online. Digital catalogs allow them to offer unlimited selection along with search, reviews, and recommendations, while the cost savings of massive warehouses and no walk-in customers greatly expands the number of products they can sell profitably.

Pushing this even further are pure digital services, such as iTunes, which offer the additional savings of delivering their digital goods online at virtually no marginal cost. Since an extra database entry and a few megabytes of storage on a server cost effectively nothing, these retailers have no economic reason not to carry everything available.
Web as Platform

• Netscape vs. Google
• DoubleClick vs. AdSense
• Akamai vs. BitTorrent
Leverage customer-self service to

Reach out to entire web, not just a few
A service gets better the more people use it
Wisdom of Crowds

- Wikipedia
- eBay
- Amazon
- Cloudmark - collaborative spam filtering
Its the Data, stupid

- Google
- Amazon reviews
- eBay profiles
- Sxip Identity 2.0

Race is on to own certain classes of core data
End of Software Release

• Microsoft - upgrade every 2-3 years
• Google - new features almost daily
• Flickr - new builds every 1/2 hour
End of Software Release

Operations must become a core competency

- Googles - efficient sys administration
- Dynamic languages
  - Perl, Python, PHP, Ruby
- For systems requiring constant change
End of Software Release

Users must be treated as co-developers

Short feedback loop
Lightweight Systems

Design for hackability and remixability

• RSS, REST, Google maps
• Hurricane Information Maps
Go beyond single device

PC, Mac, Linux, PDA, Cell Phones, MP3 players

☆ iTunes
Rich User Experiences

- Flash
- OpenLaszlo
- AJAX
References

- Images in presentation from The Long Tail