

The Predictive Enterprise: Creating Transparency and Making Decisions

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IIR Business Intelligence Forum 5

The Predictive Enterprise

- Pervasive Business Intelligence
 - ▶ Metrics driving performance
- Data as the basis for Predictive Models
 - ▶ From sales data to the attention stream
- Agility and a Culture of Experimentation
 - ▶ The perfect product, or a permanent beta?
- Network Collective Intelligence
 - ▶ What is the relevance of "Web2.0" to the enterprise?
- Consider
 - ▶ Impact on structure of organization
 - ▶ Communication, including mobile

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1986	1996	2006
	Read-only web "Consumer", "User" (Increase barrier of exit)	Read-write web "Producer" (Lower barrier of entry)
	Pretest and validate	Launch and learn
	Taxonomy (controlled)	"Tagsonomy"
	Static Navigation spatial: link	Navigation temporal (time as ordering parameter)
Broadcast email, newsletters <i>Target</i>	Discovery based on hyperlinks (expression of author's attention and control). <i>Search</i>	Discovery based on social relations (trust, reputation), and metadata by other humans. RSS. <i>Discover</i>
Push advertising: Supply driven.		Pull: Demand driven.
Pay for space	Pay for presentment	Pay for click, for action.

Examples

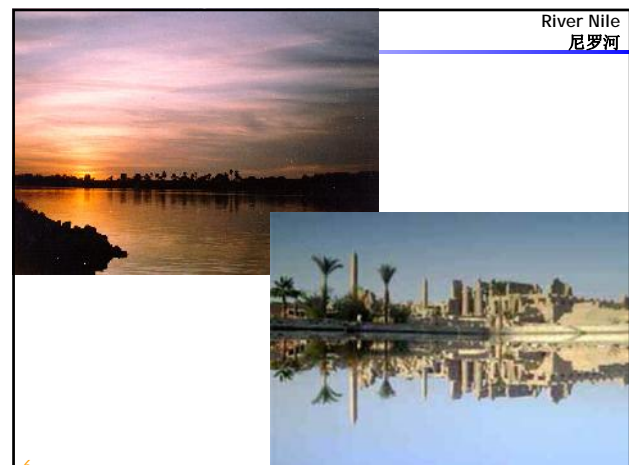
- Money economy → Intention economy
→ Attention economy
 - ▶ Information economy → Recommendation economy: Platform economy
 - ▶ Use attention stream: Attensa
 - ▶ Use context: Cleverset
- Algorithmic search → Social search
 - ▶ People answer questions: Google Answers, MSN, Yahoo
 - ▶ Use info in files on your computer to determine relevance: Illumio
- Discovery → Social discovery
 - ▶ Head → Long tail
 - ▶ URLs: Del.icio.us
 - ▶ Photos: Flickr
- Paying a few experts to create content
→ User generated content
 - ▶ Implicit data + explicit data: Metadata
 - ▶ Examples: Music, Tags
 - ▶ Add socio-, psycho-, demographics: Nugg.ad
 - ▶ Currencies (itunes vs Spiralfrog)
- Global → Local
 - ▶ WLAN: Jambo.net
 - ▶ Mobile: Sociallight

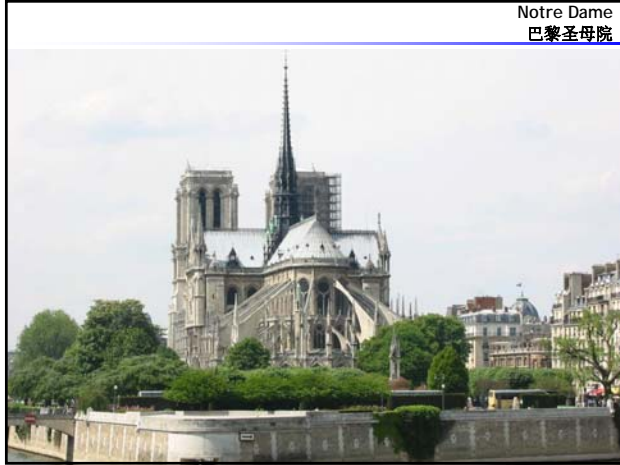
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Increasing communication

0. Business metrics and data collection
 - ▶ An Iterative process
1. Data Analysis
 - ▶ Data mining: Description, prediction
2. Architectures of Experimentation
 - ▶ A/B test, active learning, survey design...
3. Architectures of Participation
 - ▶ Remember, share, discover
 - ▶ Empower and incentivize people to contribute
 - ▶ Self-expression
4. Architectures of Interaction

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Notre Dame
巴黎圣母院

From Faith to Data 从盲从到数据

- The Era of Faith
盲从时代
 - ▶ Massive investments into cathedrals etc.
巨额投资建设大教堂
 - ▶ Unclear ROI (Return on Investment)
投资收益 (ROI) 不明确
 - ▶ No feedback, or Long feedback cycle
反馈周期相当漫长
- The Era of Data
数据时代
 - ▶ Massive investments into measuring, networking, storing
大量投资于传感、网络、存储
 - ▶ ROI measurable
投资收益率可测
 - ▶ Short feedback cycle
反馈周期很短
 - ▶ Experiments
试验

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Characteristics of our Era 当前时代特征

- What do we do with data?
拿数据怎么办?

too much of it... 数据太多了...

what does it mean? 这意味着什么?

DATA DATA DATA

how can I act on it... 怎么用数据?

will it integrate with my systems?... 能否与我的系统整合?

*Opportunities and challenges for marketers, publishers, agencies...
给市场人员、出版机构、广告公司带来机遇与挑战*

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Turning behavior into data 将行为转换为数据

- Search
搜索
 - ▶ "I search, therefore I am"
"我搜故我在"
- Online dating
网上约会
 - ▶ Revealed preferences
揭示出的偏好
- Music
音乐

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Everything can and will become data 任何东西都能够且一定会变成数据

人类的其它数据来源

- ▶ Movement
移动
 - Mobile phones
手机
- ▶ Identity of person
个人身份识别
 - DNA analysis
DNA分析
 - Available data:
现有数据:
30,000 genes
30,000个基因
1 billion base pairs
10亿碱基对
- ▶ Brain activity
大脑活动
 - Neuromarketing
神经市场营销
 - fMRI analysis of response to stimuli
大脑皮层对刺激反映的fMRI分析
- ▶ RFIDs (Radio frequency identifiers)
RFIDs (射频标识器, 即电子标签)

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RFIDs and e-business 电子标签技术和电子商务

- **UNIQUE IDENTIFIERS FOR PHYSICAL OBJECTS**
任何物体的身份识别
- **Facts**
基本数字
 - ▶ Price: 2 cent
价格: 2美分
 - ▶ Size: 2mm
大小: 2毫米
- **Opportunities**
机会
 - ▶ **Supply chain**
供应链
 - Wal-Mart: \$ 8 billion savings expected per year by using RFIDs
沃尔玛: 初步估算每年节省80亿美元
 - Know where stuff is
知道货物放在何处
 - Shipping screw-ups: 1 in 20
运输途中差错: 概率1/20
 - ▶ **Market research**
市场研究
 - ▶ **Dynamic pricing**
动态定价
- **Fears**
担心
 - ▶ Loss of privacy
隐私泄露
 - ▶ Dictatorship
独裁专政
- **Reality**
现实
 - ▶ It will happen: Big business
总会发生: 大公司
 - ▶ Need: Understand pros and cons and make conscious decisions
需要: 了解并采取主动决策
- **Compare to web sites**
比较网站

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Storage is free 免费存储

每GB的成本 Cost per Gigabyte

硬盘存储容量 Hard Drive Capacity Shipped

- **Dramatic drop in price**
价格大幅下降
- **Exponential increase in storage**
存储量呈指数增长

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Why now? 为什么现在发生?

- **Data collected implicitly: Dramatic growth over time**
隐秘采集数据: 随时间推移急剧增长
- **Data collected explicitly: Amount constant over time**
公开采集数据: 随时间推移变化不大

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Why now? 为什么现在发生?

- **Malthus's Law of Information:**
马尔萨斯信息定律:
 - ▶ **New information content is doubling every year**
新信息内容每年翻一番
 - ▶ **Time spent on information consumption is constant**
而信息消费时间几乎不变

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Why now? 为什么现在发生?

Communication
通信

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Large e-business company: Amount of data created per year 大型电子商务公司年均数据产量

- ▶ Customer
消费者
- ▶ Orders
订单
- ▶ Session aggregates
访问总计
- ▶ Clicks
点击

Amount of data
数据量

- ▶ 100 MB
- ▶ 10 GB
- ▶ 1 TB
- ▶ 100 TB

- **Level**
层次
- **New data per year**
每年新数据量

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The iterative process of modeling and decision making 建模的反复循环

- 1. Re-Define (重新) 定义**
 - Objectives and benchmarks (目标和基准)
- 2. Measure 测量**
 - Collect, store, manage the data (收集、储存和管理数据)
- 3. Describe 描述**
 - Exploratory data analysis (探测性的数据分析)
- 4. Predict and evaluate 预测和评估**
 - Probabilistic models (概率模型)
- 5. Decide, act, and evaluate 决策, 行为和评估**

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1. Define Objectives 定义目标

- Stock price (股票价格)
- Profit (利润)
 - Trade-off (此消彼长) ←
- Number of items sold (销售数量)
 - Trade-off (此消彼长) ←
- Number of visits (访问量)
- Rate of conversion (行动转化率)
 - Trade-off (此消彼长) ←
- Customer acquisition (赢得消费者)
- Customer retention (留住消费者)
- Customer satisfaction (消费者满意度)

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2. Measure 测量

- Customer Behavior (消费者行为)**
- Customer-Company Interactions (消费者-公司互动)**
- Company Behavior (公司行为)**

- Orders (订单)
- Overall use of the site (网站的综合利用)
 - Buying vs selling (购买 vs. 出售)
 - Searching vs browsing (搜索 vs. 浏览)
 - Engagement: Reviews, etc. (写评论、排行榜等)
- Customer service contacts (消费者服务联系)
 - E-mail, phone (电子邮件, 电话)
- Surveys (调查问卷)
 - Satisfaction (满意度)
 - Intentions / Goals / Modalities (意图/目标/模式)
- Customer service response (消费者服务回复)
 - Resolution (解决方案) (Free replacement, refund 免费退换, 退款)
- Number of items returned in a search (搜索结果)
- Web page generation time (页面生成所需的时间)
- Actual delivery date vs promised date (交货日期 vs. 允诺日期)
- E-mail campaigns and responses (电子邮件广告和回应)

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Why is it hard? 为什么这么难?

- Even simple behavioral analysis requires significant infrastructure (即使简单的行为分析也需要复杂的基础建设)

Reporting → Behavioral analysis and predictive modeling
 报告 → 行为分析和预测模型

Cost center → Profit center
 成本中心 → 盈利中心

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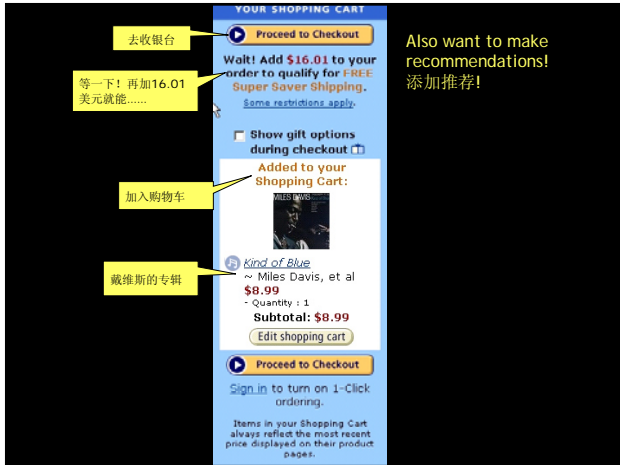
Increasing communication: 4 levels

- 1. Data Analysis**
 - Data mining: Description, prediction
- 2. Architectures of Experimentation**
 - A/B test, active learning, survey design...
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 - Remember, share, discover
 - Empower and incentivize people to contribute
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- 4. Architectures of Interaction**

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Amazon.com product page for 'Kind of Blue' by Miles Davis. The 'Add to Shopping Cart' button is circled in red.

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**Result: Right vs Left
对比结果：左还是右**

- Metrics 衡量标准
 - Conversion rate: Percentage of visits placing an order
转化率：百分之几的人访问页面并购买
 - Order size: Number of additional (from the second page) items put in cart
订单大小：（从第二页起）新购多少商品
- Result 结果
 - "Your Shopping Cart" on right is about 1% better than on left
"Your Shopping Cart" 置于右侧比置于左侧的效果提高1%
- Some details 细节

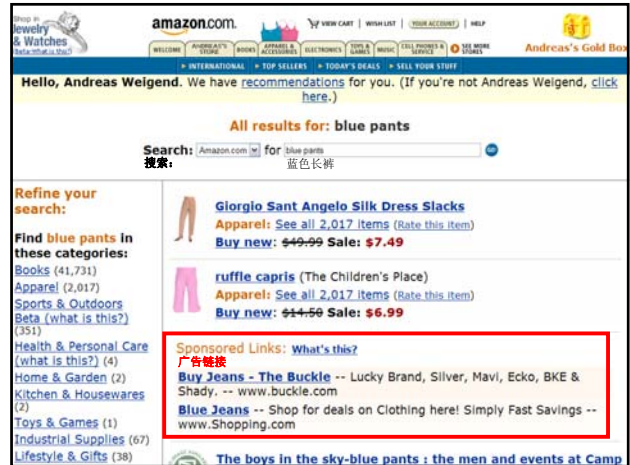
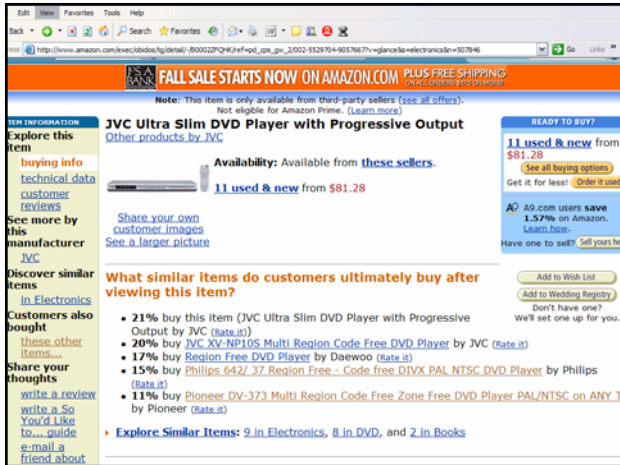
All customers 所有消费者	Existing customers 现有消费者
Cart-adds from 2 nd page: 从第二页起新购商品数量: +0.6%	Cart-adds from 2 nd page: 从第二页起新购商品数量: +0.8%
Wishlist-adds: 选择礼物清单: +1.4%	DVD Cart-adds: 新购DVD: +0.8%
DVD (\$): +1.1%	DVD (\$): +1.0%

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**Guiding the customer to the ultimate purchase
引导客户最终购买**

What similar items do customers ultimately buy after viewing this item?

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Long-term Effects 长期影响

- ▶ Displaying Google's "sponsored links" within Amazon.com's site?
在亚马逊网站上显示Google的“友情链接”？
 - Initial effect positive...
初始效果是积极的...
 - ...but how to model whether this helps or hurts the company in the long run?
...但是怎样模拟这给公司带来的长期影响是好是坏？
- ▶ Offer free shipping
提供免费送货
 - Competitors quickly adopt, how to model the overall game?
竞争对手很快就会跟进，怎样模拟整个博弈过程？
- ▶ Pricing, Promotions...
定价，促销...
- ▶ Role of price comparison engines (shopping.com, etc.)?
一些价格比较搜索引擎（如shopping.com）的角色是什么？

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Survey 调查问卷

- ▶ "... Please let us know what you plan to do at Amazon.com today"
"...请告诉我今天你计划在亚马逊网站上做什么”
- Free responses, hand-coded into non-exclusive categories
自愿回复，将回复进行分类编码，归入非一些非互斥的类型
- ▶ Multiple assignments possible
可能回复多种可能
- ▶ Average: 1.2 categories per response
平均：每个回复涵盖1.2个种类
 - Number of responses: 1023
回复数量：1023
 - Response rate: 3.1%
回复率：3.1%
 - Date: February 11-12, 2003
日期：2003年二月11-12日

amazon.com.
Let Us Know!

So that we can improve our customers' shopping experience, please let us know what you plan to do at Amazon.com today:

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Why do People Visit? 为何访问网站

35%	Research: Response indicates having a target or topic for which customer wants to gather information in depth ("looking for books about Chile")
31%	Browse: Looks at items casually at a more general level than Research ("looking at music/books", without further specification)
16%	Buy: Response indicates intent to buy in this visit ("buy a book")
10%	Complain: Complains about some feature of the site
9%	Post-buy: Mentions checking order status, other account activities
7%	Community: Mentions usage of some feature of community, like reviews
7%	Price: Mentions getting information about price for specific items
2.9%	Goldbox: Mentions Goldbox activity
2.2%	Gift: Indicates looking for a gift for someone else
2.0%	Sell: Mentions a selling activity
1.4%	Personalization: Mentions personalization feature (e.g., recommendations)
0.8%	Used: Mentions finding or transacting a used item

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Stated vs Revealed Preferences 自认的偏好与实际的偏好

- ▶ Obtain insights by combining individual survey response with click analysis:
结合个人调查问卷的回复与点击情况分析，得出一些结论

Look at those who ended up buying something:
最终购物的网民中

☺ Only about one-half of those making a purchase indicated that they wanted to buy something in this visit
只有1/2事先称计划购物

Look at those who said they wanted to buy something:
最初想来购物的网民中

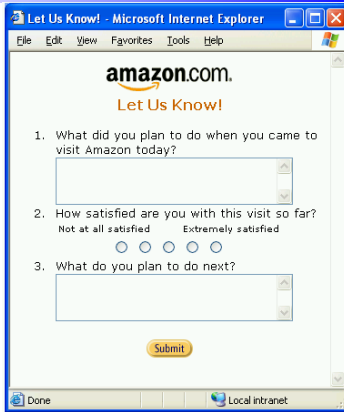
☹ Only about one-third of those indicating intent to buy ended up making a purchase in that visit
只有1/3最终完成购物

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Customer Satisfaction 客户满意度

- Relate satisfaction rating to: 把满意度评价与下列两项联系起来:
 - Visit intent (from survey) 访问意图 (来源于调查问卷)
 - Actions (from clickstream) 行动 (从其点击行为看)
- Intermediate goal 中期目标
 - Predict satisfaction 预测满意度
- Ultimate goal 最终目标
 - Increase satisfaction 提高满意度

Number of responses: 6117
 回复的数量: 6117
 Dates: March 15-24, 2003
 日期: 2003年3月15-24日




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Increasing communication: 4 levels

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Flickr




Would you like to comment?

Tags: Quentin Lee, alex, Aug06, L.A.

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Money Economy → Intention Economy → Attention Economy



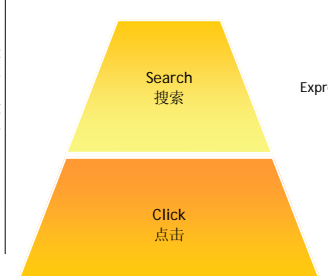
Click 点击

Only able to click on links given by site.
只能点击网站链接

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From intention to attention

Amount of specificity increases 针对性愈加明显



Search 搜索

Express intention. Doesn't depend on result.
表达意图。独立于结果

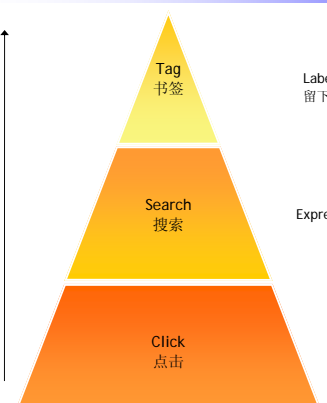
Click 点击

Only able to click on links given by site.
只能点击网站链接

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From intention to attention

Amount of specificity increases 针对性愈加明显



Tag 书签

Label item. To remember, share, discover.
留下标签。记忆、共享

Search 搜索

Express intention. Doesn't depend on result.
表达意图。独立于结果

Click 点击

Only able to click on links given by site.
只能点击网站链接

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Discovery 探索发现

- Tags are *distilled attention*, a pure form of attention.
- You are what you tag.
书签展示真我
- You are what you are tagged as / who you are tagged by.
书签决定你的存在

Follow a tag and discover a topic
探索别的网友如何使用书签

Follow a user and discover what he is interested in
探索该网友的兴趣爱好

Discover other users who have tagged the page
探索给同一网站贴上书签的其他网友

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What is happening now? 新世界

- Empower millions of users to contribute
上百万网民共同参与
- del.icio.us: tag web pages
网页书签
- flickr.com: tag photos
照片书签
- 43things.com: tag your goals
目标书签

One-to-many 一对多 → Many-to-one 多对一 → Many-to-many 多对多

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Metadata matter (music)

Example: MoodLogic (acquired by AllMediaGuide)

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Levels of Analysis and Actionability 分析和行动的层次

- D. Network of customers 客户网络**
 - Model: Apply social network research
模型: 社会网络研究的应用
 - Action: Discounts, better service
行动: 打折, 改善服务
- C. Customer 客户**
 - Model: Demographics, behavior
模型: 人口统计, 行为特征
 - Action: Personalization-based marketing
行动: 个性化营销
- B. Visit 访问**
 - Model: Intention, situation, mode
模型: 意图, 情境, 方式
 - Action: Session-based marketing
行动: 基于情境的营销
- A. Page 网页**
 - Model: Content
模型: 内容
 - Action: Show ads
行动: 播放广告

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Network of Books 书籍网络

Source: Valdis Krebs
 based on Customers who Bought Also Bought 买这本书的人也会买这本

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Who is checking me out?

60

What blogs are linking to weigend.com?

Technorati Search for <http://www.weigend.com> in blog posts

Technorati Tools

Become a member! Organize your favorite blogs, add your photo and more.

Claim your blog Ping us

Technorati Mini View constantly updated "conversation" in a mini window on your desktop.

Browser buttons Browser plugins Developer Center

Andreas S. WEIGEND, PhD
 Rank: 80,579 (52 links from 34 blogs)
 URL: <http://www.weigend.com>
 Updated: 115 days ago

70 links to this URL sorted by freshness

Media-Blog
 8 days ago in Media-Blog - 13 blogs link here
 der ehrenamtlich arbeitenden Bürger-Journalisten = Blogger bedienen. Hätten die lieber mal den Erfinder des AAL-Prinzips (Andere Arbeiten Lassen) **Andreas Weigend** als Berater gebucht: er kennt die zahlreichen Formen von User Generated Content bzw. das Streben der Unternehmen, diesen

Media-Trends und Stolpergefahr: Wenn Verleger...

illumio

Find: Answers Contacts Files

Dashboard My Requests Recommendations

Recommendations

From All Groups

From: Shani Higgins
 search: fidel castro

Jul 28
 From: David Teten
 search: google, advords, yahoo, "project..."

Jul 28
 From: David Teten
 search: confection, candy, CVS, Rite Aid...

Aug 09
 From: John anderson
 search: statiscally improbabl...

Dismiss All

Answers

from: **john anderson**
anderson_john@gsb.stanford.edu

Search: People who know about: statistically improbable phrases, SIP, search engine

Started: 16-Aug-06 10:24:38

Message: Hi - I'm researching serach engine logic, and would love to connect with someone who knows technical details behind amazon.com's "SIP" or "Statistically Improbable Phrases" logic and if there are other libraries available of similar types of logic

Current Status: You have responded to this request. [Report Abuse](#)

Responses: Requested 1 response, Received: 1

Match Info: illumio made this recommendation based on documents containing: "statiscally improbabl phrases", "search engine", "SIP", "search engine".

Chris Anderson's blog: LongTail.com (Aug 16 2006 entry)

The Long Tail: How to say Long Tail in Japanese (and Chinese and...)

Getting Started Latest headlines

The Long Tail
 A public diary on themes around my book

Subscribe to this author's feed (RSS)

Long Tail comment elsewhere...

How the Long Tail actually reduces choice? Nick Carr notes a NYT column that suggests that if all content is "unbundled" and forced to fend for itself, the cultural products subsidized by commercial junk may go away. Carr writes: "It's not a sure thing, in other words, that an à la carte menu will end up giving us the widest possible array of choices. Rather than promoting the creation of a "long tail" of diverse products, unbundling may end up pushing even more economic rewards to the "hits," squeezing out a lot of the good stuff." My take: unless he's referring to the number of medicine album trade that

« The Long Tail of idiosy and masturbation | Main | What do people really want in music? »

August 16, 2006

HOW TO SAY "LONG TAIL" IN JAPANESE (AND CHINESE AND...)

ロングテール。
 Pronounced "Rongu tee-ru."

(Thanks to Kevin Kelleher for the pronunciation correction, and YF Juan for the further correction in the comments)

UPDATE: Other languages:
 In Chinese it's: 长尾

Now available! Amazon Barnes & Nobles Also available as an audiobook.

RHAPSODY TOTAL INVENTORY: 735,000 songs

AMAZON.COM TOTAL INVENTORY: 2.3 million books

NETFLIX TOTAL INVENTORY: 25,000 DVDs

typical Wal-Mart store: 30,000 songs

typical Barnes & Nobles store: 134,000 books

typical Blockbuster store: 3,000 DVDs

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

TOTAL SALES: 22% (Rhapsody), 57% (Amazon), 20% (Netflix)

product not available in offline retail stores

Source: Chris Anderson WIRED, Oct 2004

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.

Source: Chris Anderson WIRED, Oct 2004

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Average number of plays per month on Rhapsody vs. Titles ranked by popularity

Platform: eBay feedback (ratings, reputation system)

gadgetuniverse's feedback

Feedback 1 - 25 of 4094

Feedback Help | Flag

Leave feedback for gadgetuniverse

If you are gadgetuniverse: Respond to comments

gadgetuniverse was the Seller & gadgetuniverse was the Buyer &

Left by	Date	Item#	S/B
fourxslady (1)	Dec-04-01 20:36:08 PST	1671681788	S
softdesk (11)	Dec-04-01 19:27:26 PST	1688492994	S
softdesk (11)	Dec-04-01 19:26:19 PST	1202831548	S
softdesk (11)	Dec-04-01 19:25:09 PST	1658492476	S
tonjo3 (65)	Dec-04-01 17:55:24 PST	1302374560	S
cueta234065 (2)	Dec-04-01 17:31:13 PST	1300241058	S
cueta234066 (2)	Dec-04-01 17:31:13 PST	1666217454	S
jennifer2716 (41)	Dec-04-01 17:24:05 PST	1666176914	S
navarone242601.com (187)	Dec-04-01 14:26:08 PST	1029092676	S
chlo2y law (4)	Dec-04-01 14:06:09 PST	1658990086	S

Computational Finance 1999
 by Yasser S. Abu-Mostafa (Editor), Blake Lilliaro (Editor), Andrew W. Lo (Editor), Andreas S. Weigend (Editor)

List Price: \$52.00
 Price: \$52.00 & This item ships for FREE with Super Saver Shipping. See Details.

Availability: Usually ships within 24 hours

10 used & new from \$20.00
 Edition: Paperback

2 of 6 people found the following review helpful:
Review: This is a great book!!, September 17, 2000
 Reviewer: A reader from New York, NY, USA
 Finally, an insightful, easy-to-read collection that bridges the gap between lofty academics and down-to-earth practitioners!

Was this review helpful to you? Yes No

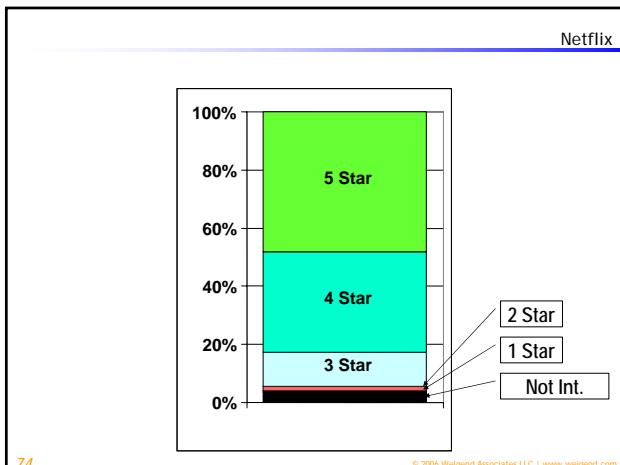
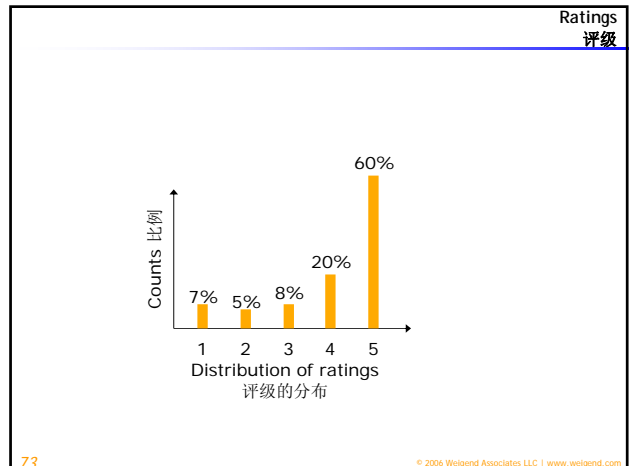
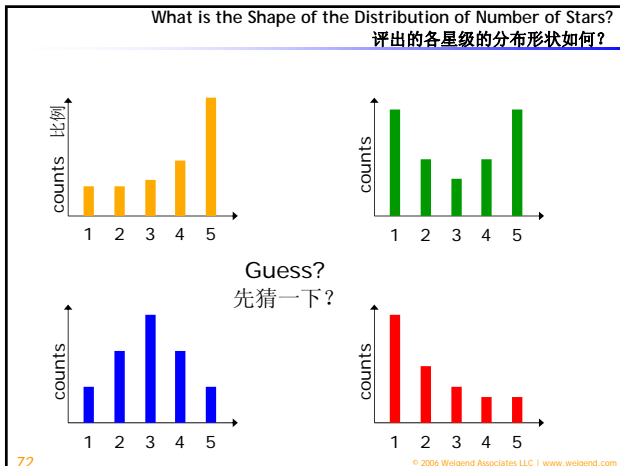
6 of 10 people found the following review helpful:
Review: Great book, June 19, 2000
 Reviewer: A reader from Boston, MA

Annotations:
 - Green box: Helpfulness of review (by other customers) 有用评论 (其他网友意见)
 - Red box: Rating (1... 5 stars) 评级 (1-5星)
 - Blue box: Review 评论

Platform: Amazon reviews

- Ratings 评级
 - ▶ When customer writes review, is asked to rate the item by giving it between 1 and 5 stars 当一个消费者写评论时, 他同时也被要求给相关商品评级 (1-5星)
 - ▶ Amazon.com has more than 5M of such ratings 亚马逊网站有500多万个这样的评级
- Fields 内容
 - ▶ Rater ID (obfuscated) 评级人身份
 - ▶ Date (when rating was submitted) 日期 (评级是什么时候递交的)
 - ▶ Item 商品
 - Product ID (ASIN) 商品编号
 - Our Price, List Price 我们的价格, 报价
 - Product Group 产品类别
 - ▶ Rating of item 被评级商品
 - Number of stars (e.g., ★★★★★ given by this Rater to this Item) 几星级 (例如, ★★★★★ 该评级人对该商品的评级)
 - ▶ Helpfulness of review 有用的评论
 - Feedback from customers who found this Review "helpful" / "not helpful", computed from: 发现这条评论的消费者认为“有帮助”或者“没有帮助”通过下面实现:
 Was this review helpful to you? Yes No
 这条评论对您有用吗?

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Make customer feedback trivially easy 获取消费者反馈易如反掌

- ▶ Capture context automatically 自动捕获内容

Suggestion Box
 Your comments can help make our site better for everyone. If you've found something incorrect, broken, or frustrating on this page, let us know so that we can improve it. Please note that we are unable to respond directly to suggestions made via this form.

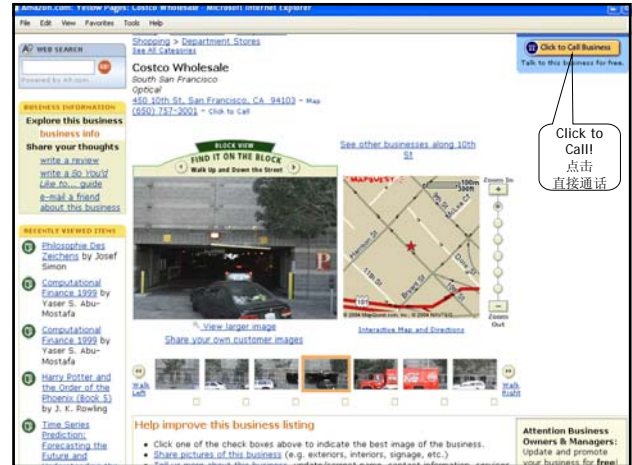
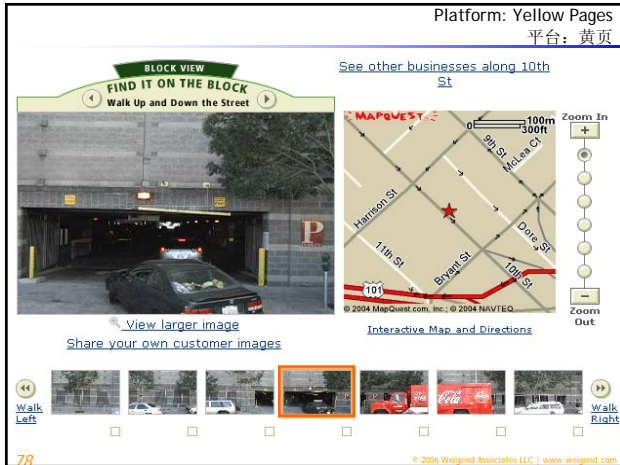
If you need help with an order, please contact Customer Service.

Please mark as many of the following boxes that apply:

- Product information is missing important details.
- Product information is incorrect. Propose corrections using our [Online Catalog Update Form](#).
- The page contains typographical errors.
- The page takes too long to load.
- The page has a software bug in it.
- Content violates Amazon.com's policy on offensive language.
- Product offered violates Amazon.com's policy on items that can be listed for sale.


Comments or Examples:
 Examples: Missing information such as dimensions and model number, typos, inaccuracies, etc.
 I went to the bathroom and came back, and the page was still loading!!

Submit



Platforms

- Enabling others
- Example: Amazon's "Mechanical Turk" (www.mturk.com)
- Application: CastingWords.com



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Increasing communication: 4 levels

1. Data Analysis
 - ▶ Data mining: Description, prediction
2. Architectures of Experimentation
 - ▶ A/B test, active learning, survey design...
3. Architectures of Participation
 - ▶ Remember, share, discover
 - ▶ Empower and incentivize people to contribute
 - ▶ Self-expression
4. Architectures of Interaction

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The Attention Economy: Universal sets the exchange rate: 90 secs = 99 cents

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About Us

SpiralFrog is a new online music destination, offering ad-supported legal downloads of audio and video content licensed from the catalogs of the world's major and independent record labels.

SpiralFrog will be a secure environment where music lovers can satisfy their unyielding passion and thirst for music, entertainment, and information. Our site will be as multifaceted, smart, and current as the audience we hope to attract. An audience that we believe is the driving force behind the way music is created, discovered, and consumed today.

Headquartered in New York City, the SpiralFrog website will debut in December 2006.

Management Team

- Board of Directors
- Press Room

RSS

For more information about the Spiral Frog web site, please type in your email address below:

aweigend@stanford.edu

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To learn more...

www.web2.0-kongress.de

- 10. - 12. October 2006
- Offenbach
- Talk to me or Sabine Schuetze here!

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