

Taking Search to New Frontiers

Harry Shum Corporate Vice President Microsoft Corporation WWW 2008

The History of Search

Search Past

Search Present

Technology

Directories

Keywords

- Very manual process
- UI required many clicks
- •Millions of docs in
- Efficient index and serve
- KWs, links determine rank

cataloo

- Index with billions of
- **≥**cExperienced

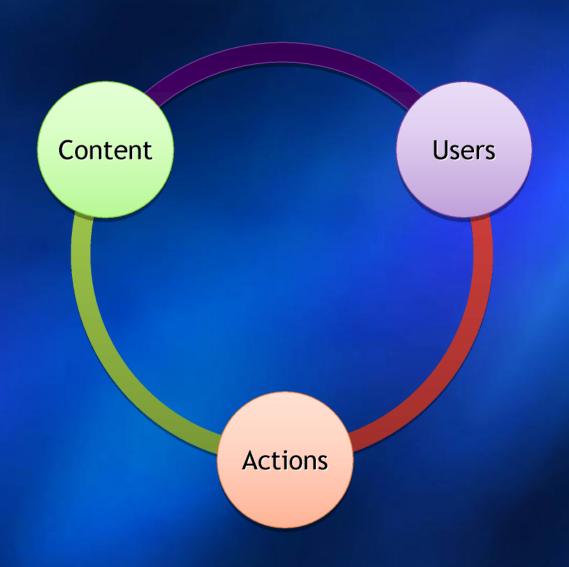
Users

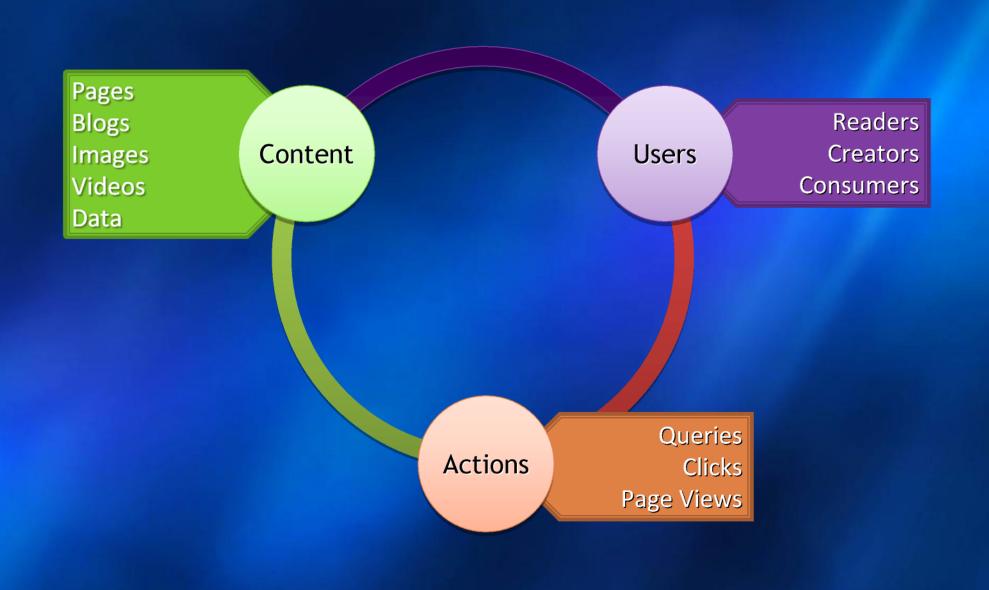
Most users on dial up

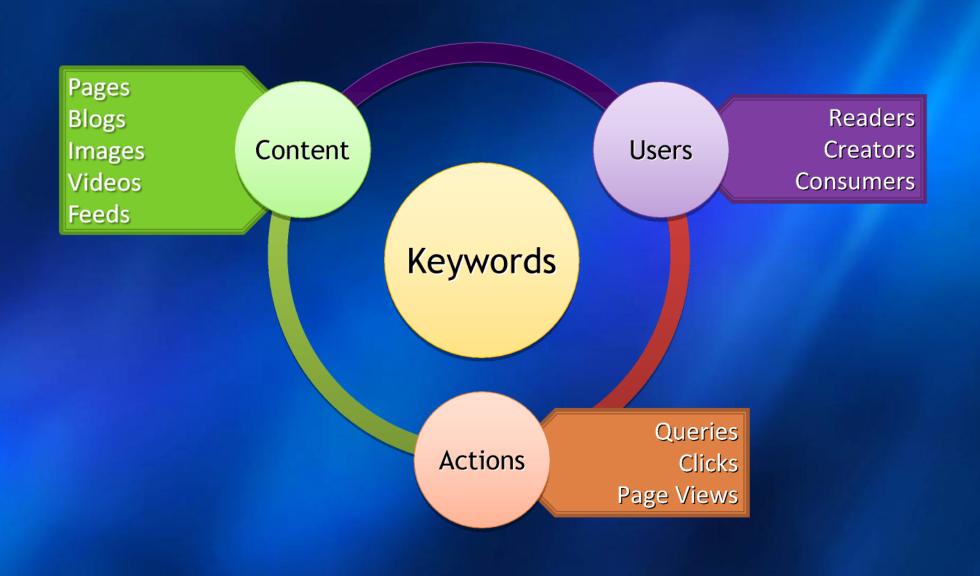
New

- Relatively new to web
- Willingness to wait, try
- Strong mix of broadband
- Average user online 8+ vrs
- Greater set of expectations









Scale



Growth in video



flickr

Growth in commerc

Growth in



facebook

Social web

User participati



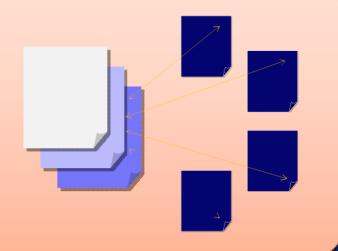


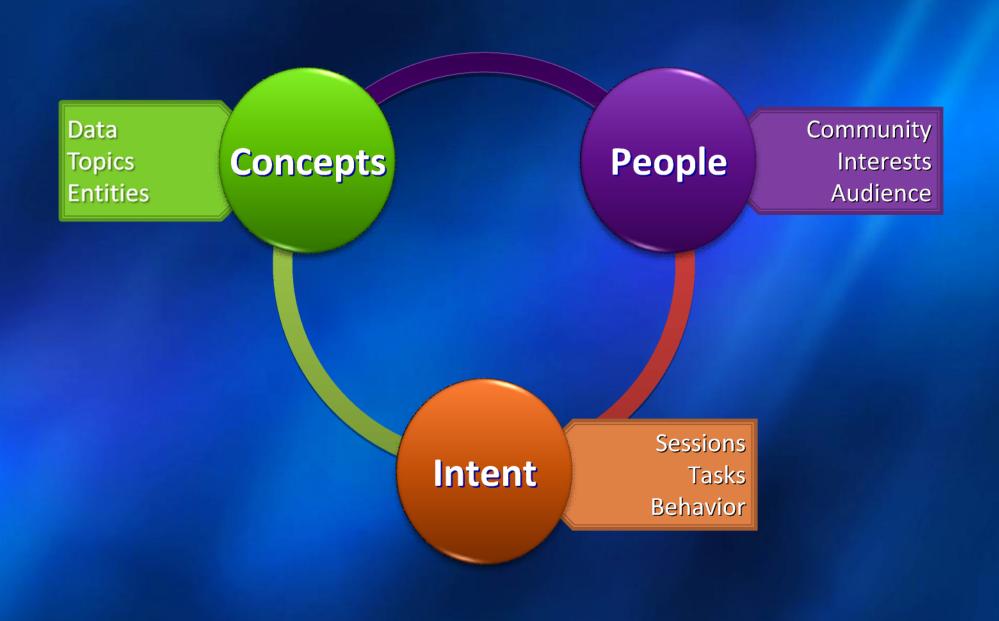
Wisdom of the crowds

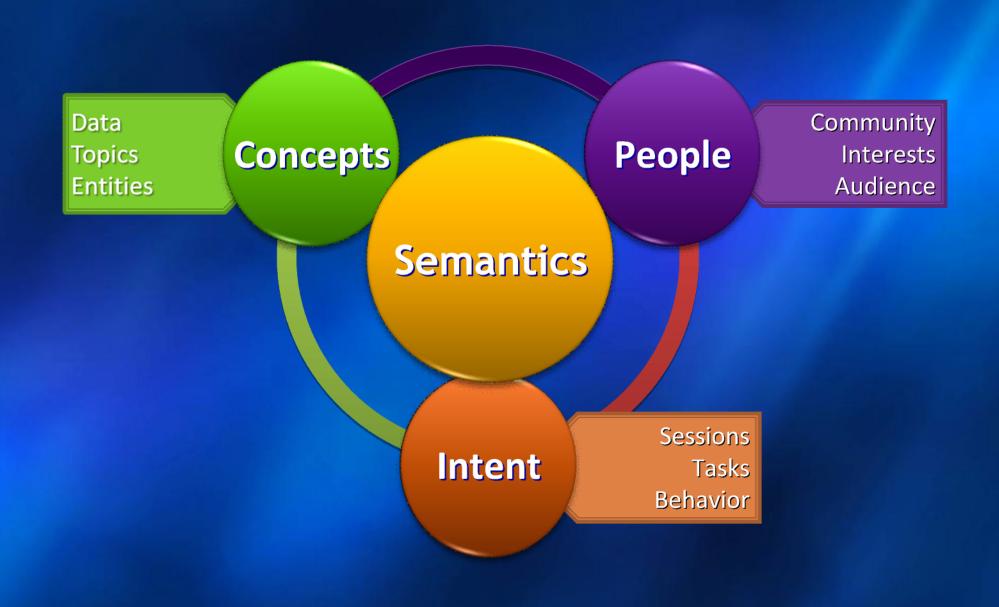
Keywords

40% unanswered queries 50% require refinement

- ueries to sessions
- ction oriented
- hole page relevance



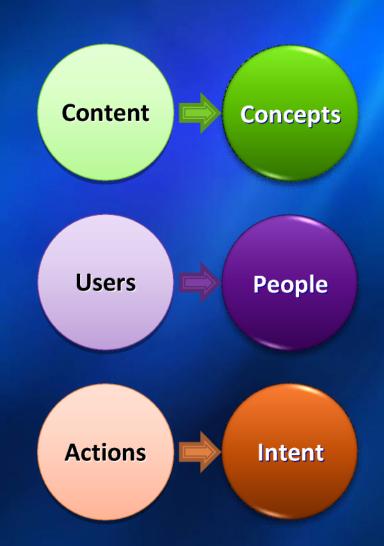


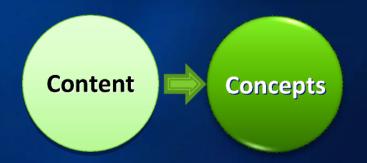


A Practical Approach to Semantics

Understand > Extract > Expose

- Data-driven
- Incremental
- Interactive





Technical Quests

Intra-page Intelligence



Refine by

- Size
- Aspect Ratio
- Style
- Color
- ► Face

Inter-page Intelligence





** Microsoft Zune digital player, 30GB, Brown | s this useful? Yes | No |

\$120 - \$249 Compare prices (11) |

*** Loser reviews (344) |

Zune starts with a digital media player and adds a twist. You can wirelessly share selected full-length sample tracks, playlists, pictures or your homegrown tracks directly from... More...

User reviews at a glance (344)

General Comments | 84% positive |

Ease Of Use | 85% positive |

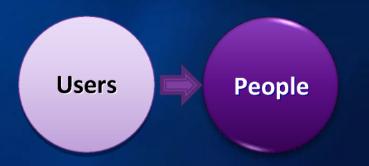
Screen | 90% positive |

Screen | 90% positive |

Video Search

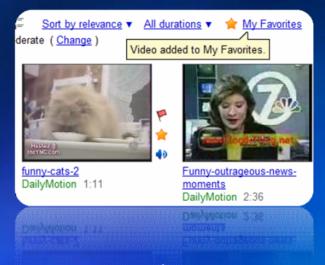
Demo

Researchers: Kit Thambiratnam, Roger Peng Yu, Neema Moraveji, Frank Seide



Technical Quests

Personalization



Community



Collaborative Filtering

Related searches

Brad Pitt Angelina Jolie

Shiloh Nouvel

Brad Pitt Pictures

Brad Pitt Gossip

Jennifer Aniston

Brad Pitt Jennifer Aniston

Brad Pitt Photos

Brad Pitt Movies

Brad Bitt Movies

GREET Photos

Related People

Bill Clinton

George H. W. Bush

John Kerry

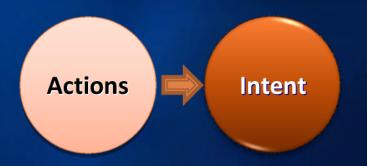
Ronald Reagan

Dick Cheney

Guanxi

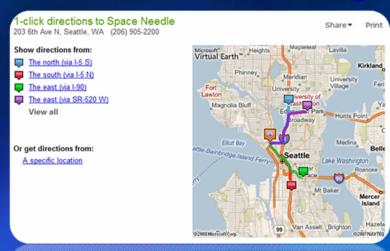
Demo

Researchers: Zaiqing Nie, Yunxiao Ma, Yong Cao, Ruochi Zhang, Bo Zhang, Xin Zou, and Ji-Rong Wen



Technical Quests

Contextual Intelligence



Intent Refinement



Mobile Awareness





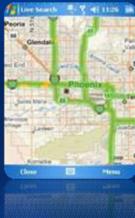
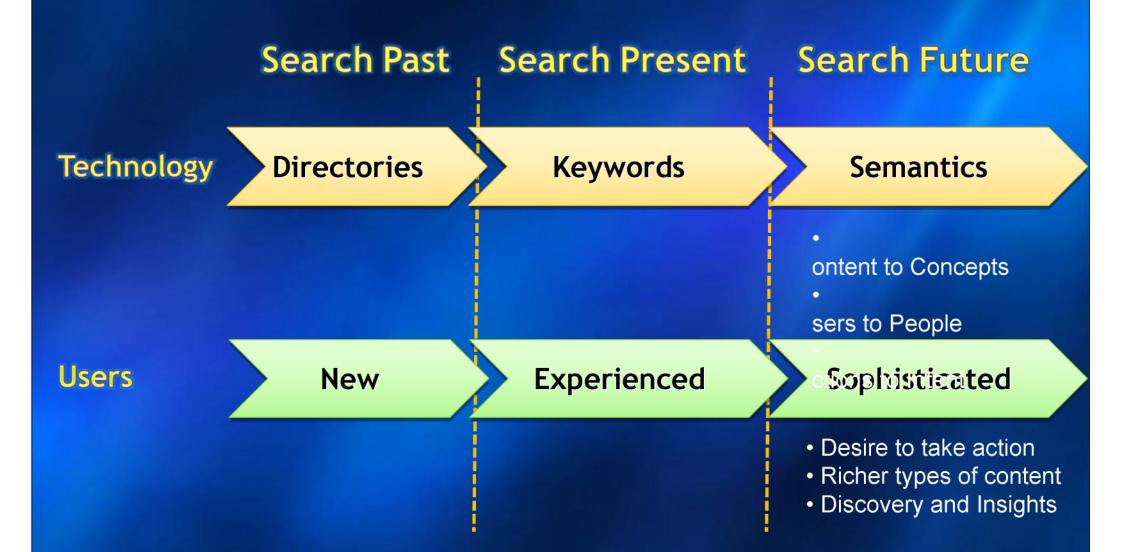


Image Search

Demo

Researchers: Fang Wen, Xiaoou Tang

The Opportunity for Search



Live Search

Demo

Online Ecosystem



QnA

