Search Technologies in the Critical Path of the Next Generation Internet

Dag Johansen

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(1) Search in the Critical Path

- Search has become the portal; the *interface* to large-scale Internet and enterprise data.
- The good news: destination and speciality sites emerging.

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(2) Also in Enterprise Critical Path

– **Search embedded** in a lot of business-critical applications:
  
  - Business intelligence.
  - Surveillance and security.
  - Fraud detection.
  - Quality management.
  - e-commerce.
  - Recommendation systems.
  - ........

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Example: Rakuten

“eBay of Japan”

Handling Extreme Query Volumes While Keeping the Catalog Up-to-date

✓ Handling 500 updates per second.
✓ Extreme performance requirements with 2,000 QPS during normal traffic, peak level of 3,000 QPS in real-time scenario.
✓ Generates $12M of transactions per day through search.

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(3) What is Search then?

- Naive interface hides extremely complex technology:
  - 0,2 second query response time.
  - 10+ Billion documents.
  - x00 millions of users.

- Extra functionality locks in users:
  - E-mail.
  - Storage.
  - Social networks.
  - "Office" applications and widgets.

→ “Battle of the consumers.”

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(4) (Some) Implications

- Technological:
  - Pervasive; embedded and in the critical path.
  - Evolving technology: context-sensitive, personalized information provisioning.

- Economical:
  - Room for a whole separate industry.
  - Vital for digital marketplaces - changing advertising ecosystem.

- Ethical and legal:
  - Preservation of privacy.

- Social and cultural:
  - Users socially activated – impact on trends, customs and authorities.
  - Users swayed by the taste of others – conformity.
  - Consumers provided free services – user locking.
  - Anglofication?

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(5) Summary

– Extreme scale information access mastered through search technologies.

– Search technologies is in the critical path between *intent* and *content*.

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Thank you – questions?

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