Information is power: Building an intelligent interface to the new Information World

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Introduction
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- Sharing knowledge, becoming informed
Information and knowledge
Information and knowledge
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KNOWLEDGE

INFORMATION
Information and knowledge

KNOWLEDGE

CHANNEL

INFORMATION
The Digital Divide

KNOWLEDGE

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Knowledge

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Knowledge

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Information
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Language and the Internet
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- The world’s languages
  - 6-7,000 languages are spoken in the world.
  - ~400 languages are spoken by 1,000,000 or more people, 90% of the world’s population. Perhaps 100 are understood well by 90%.
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• Language on the Internet
  - One language dominates (~70% of web pages). 12 languages account for ~98% of all web pages.
  - Even some communities that share a language other than English use English for email and chat.
The Linguistic Digital Divide and machine translation
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KNOWLEDGE

LANGUAGE

INFORMATION

INFORMACIÓN  정보  INFORMATIE  INFORMAZIONE  INFORMATION  INFORMAÇÃO  AUSKUNFT  信息
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and machine translation

• Statistical machine translation: system learns to translate between languages
The Linguistic Digital Divide and machine translation

- **Statistical machine translation**: system learns to translate between languages
- **Rudimentary translations edited by native speakers**
  - Original English text
    - *How can people protect themselves against cholera?*
  - Initial translation into Swahili entered on Wiki
    - *Watu wanaweza kujinga vipi dhidi ya maradhi ya kipindupindu?*
  - Translation as edited by Swahili speaker on Wiki
    - *Watu wanaweza kujinga vipi dhidi ya na maradhi ya kipindupindu?*
Information sources and quality of information
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MEDIA
Information sources and quality of information
Information sources and quality of information
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“KNOWLEDGE”
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  - Frame a topic
Information access and becoming informed
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- Access to information does not equate with being informed
Information access and becoming informed

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• 50% of Americans believed that Iraq’s government was behind the 9/11 attacks
Trustworthiness of sources

• “Political struggles” are no longer about control over “scarce information,” but about “the creation and destruction of credibility” (US DoD, 2004)

• In the context of this “information war,” could users benefit from automatic tools to evaluate believability of claims and trustworthiness of sources?
Evaluating information: believability and trustworthiness
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• A database of
  - Claims, keeping track of their **believability**, a function of the trustworthiness and convergence of their sources
  - Sources (including anonymous sources), keeping track of their **trustworthiness**, a function of the believability of their claims

• Examples
  - “The US National Hurricane Center said maximum sustained winds had increased to nearly 120 km/h - making it [Hurricane Beta] a Category One hurricane.” (BBC News)
  - “these extremists want to end American and Western influence in the broader Middle East, because we stand for democracy and peace and stand in the way of their ambitions.” (G.W. Bush, Oct 6, 2005)
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The Information Customs tool: identify “polarizing” words, distinguish clusters of writers on a given topic
President Bush Outlines Iraqi Threat

UAVS for missions targeting the United States. And, of course, sophisticated delivery systems aren't required for a chemical or biological attack; all that might be required are a small container and one terrorist or Iraqi intelligence operative to deliver it.

And that is the source of our urgent concern about Saddam Hussein's links to international terrorist groups. Over the years, Iraq has provided safe haven to terrorists such as Abu Nidal, whose terror organization carried out more than 90 terrorist attacks in 20 countries that killed or injured nearly 900 people, including 12 Americans. Iraq has also provided safe haven to Abu Abbas, who was responsible for seizing the Achille Lauro and killing an American passenger. And we know that Iraq is continuing to finance terror and gives assistance to groups that use terrorism to undermine Middle East peace.

We know that Iraq and the al Qaeda terrorist network share a common enemy -- the United States of America. We know that Iraq and al Qaeda have had high-level contacts that go back a decade. Some al Qaeda leaders who fled Afghanistan went to Iraq. These include one very senior al Qaeda leader who received medical treatment in Baghdad this year, and who has been associated with planning for chemical and biological attacks. We've learned that Iraq has trained al Qaeda members in bomb-making and poisons and deadly gases. And we know that after September the 11th, Saddam Hussein's regime gleefully celebrated the terror of terror. Alliance with terrorists could all this without leaving any fingerprints.

Iraq could decide on any given day to provide a biological or individual terrorists. Alliance with terrorists could all this without leaving any fingerprints.

Some have argued that confronting the threat from Iraq could detract from the war against terror. To the contrary; confronting the threat in Iraq is far less risky. Saddam Hussein is as dangerous to regime itself as terrorists. Saddam Hussein is an ally of terror. If we do not remove him, or remove his terror network, Saddam Hussein and his terror networks would be free to use that network to conduct attacks against the United States, just as Iraq has used its terror network to support terrorists in other parts of the world. Saddam Hussein and his terror network would be free to provide training and support for terrorists in other parts of the world.

terror cells and outlaw regimes building weapons of mass destruction are different faces of the same evil. Our security requires that we confront both. And the United States military is capable of

One Context: Immoral Muslims who are ministers of evil, hate freedom and America, and favor chaos.
Another Context: Organizations who use violence as a means of enforcing a radical political agenda.

One Context: A clear attack on our freedom that strikes fear in us all. Such an attack must be addressed with force to protect our great nation.
Another Context: An unwarranted source of danger or unpleasantness, often by exploiting a vulnerability.
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