



# Strategic Communication: Needs and Opportunities

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**As a public interest company, MITRE works in partnership with the government to address issues of critical national importance.**





# MITRE SC Initiative Objectives

- **Partner with government to advance strategic communication**
  - Increase awareness
  - Engage sponsors across government
  - Identify sponsor capabilities and needs
  - Provide a systems perspective of SC
- **Act as an integrating agent and “honest broker” across:**
  - government (e.g., PD, PA, IO, PSYOP, IC)
  - industry (e.g., data, media, polling, focus groups)
  - academia (e.g., influence networks, culture analyses)
  - FFRDCs (e.g., IDA, RAND)
  - NGOs
- **Build capability and credibility – staff, data, innovative methods/tools**
  - Social/behavioral scientists (~50 PhDs, ~60 Masters), many publications
  - Human terrain analysis, modeling, country studies, advising
  - Automated media analysis, influence network analysis
- **Influence MITRE’s research and create/shape MITRE’s work program**



## Definition

**Strategic Communication is a proactive, sustained, and coherent set of activities for**

- ***Understanding* global attitudes and cultures,**
- ***Advising* policymakers, diplomats, and military leaders on public opinion implications of policy choices,**
- ***Engaging* in a dialogue of ideas between people and institutions through programs that support the national interest,**
- ***Influencing* attitudes and behavior through communication strategies, and**
- ***Measuring* the impact of activities**

*2007 DSB Summer Study*

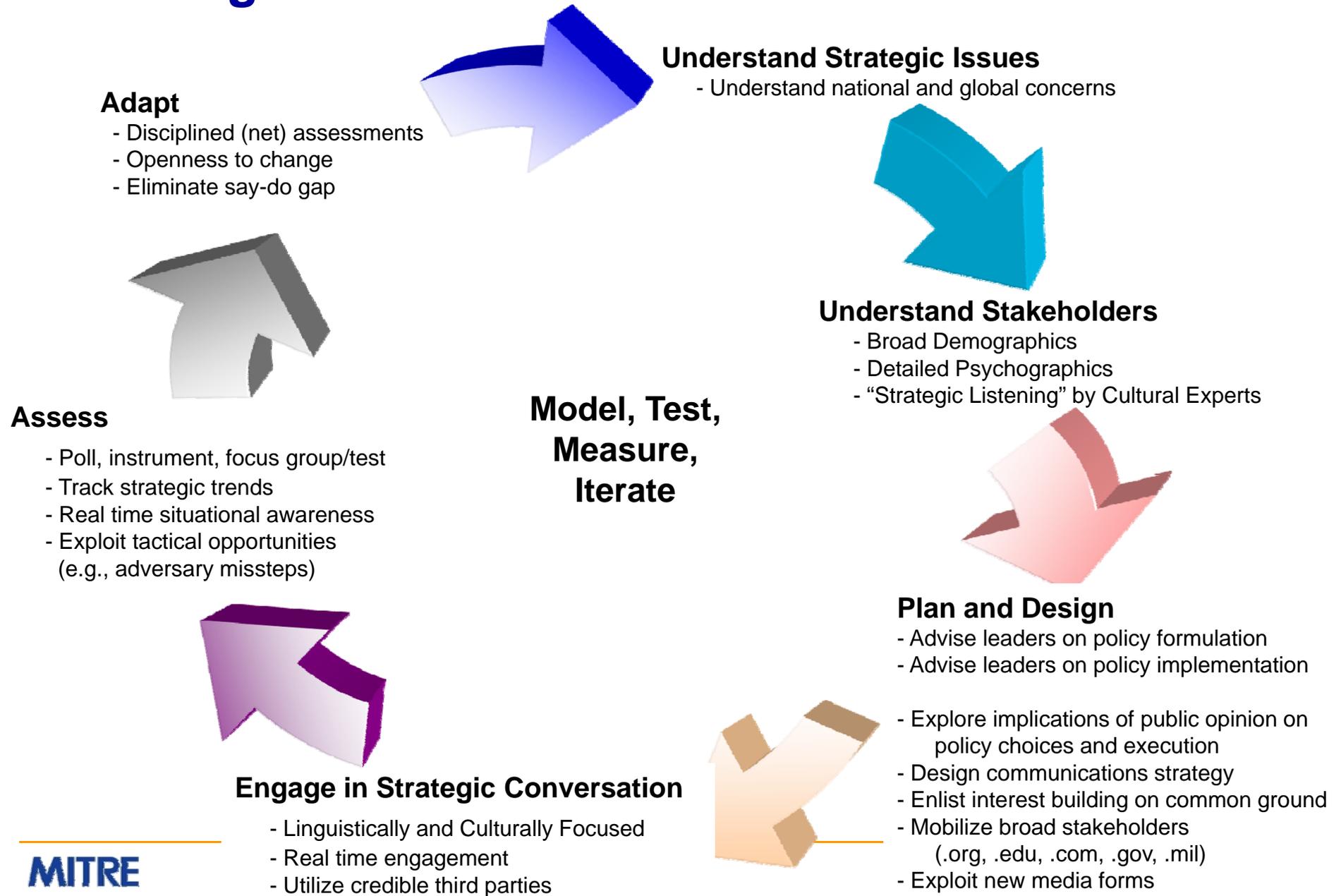
*Source: <http://www.acq.osd.mil/dsb/reports.htm#2008>*



# Strategic Communication Cycle



# Strategic Communication Process: Detailed

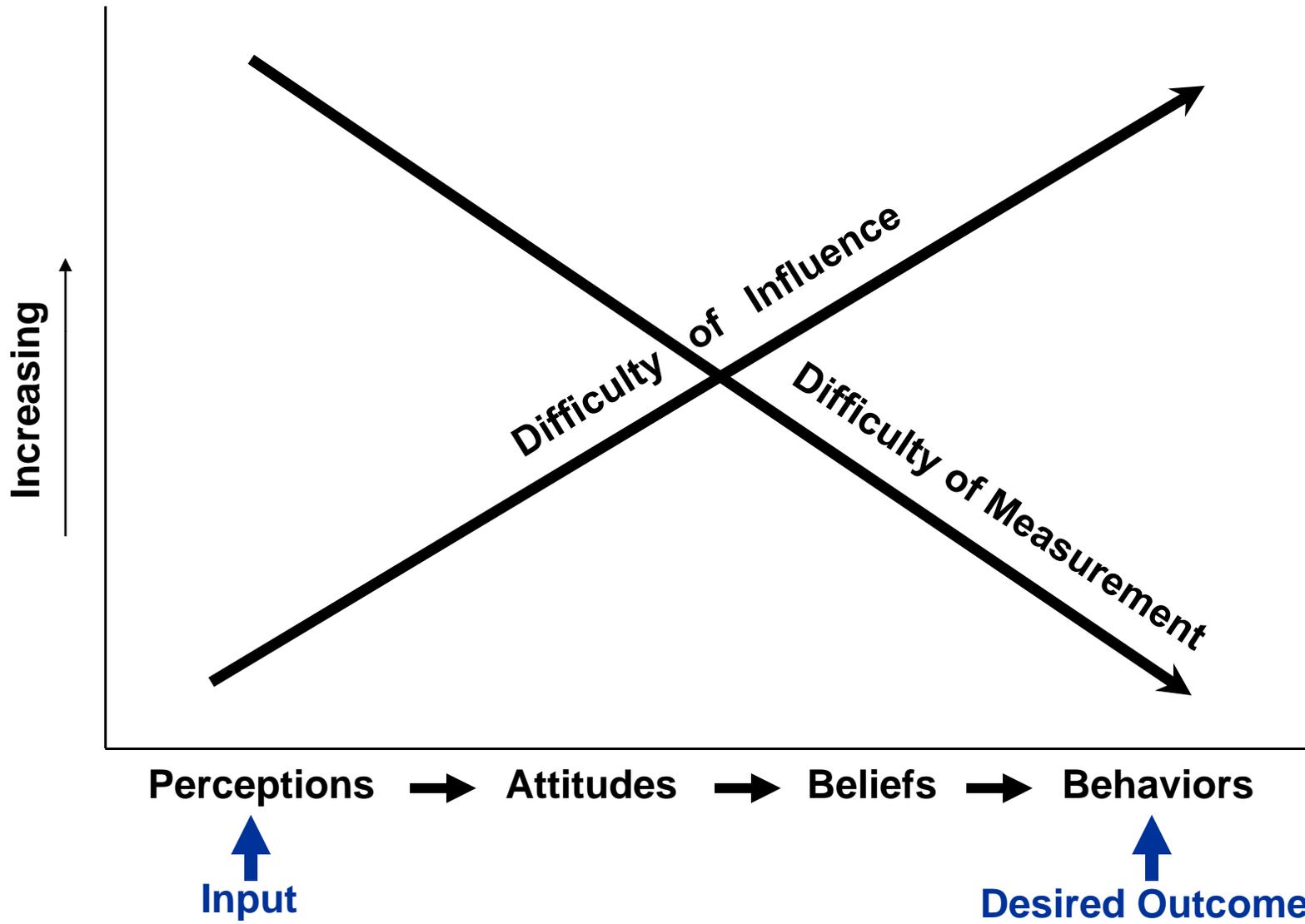




# Recent Events Emphasize Importance

- **SecDef Public addresses on importance of Public Diplomacy, “War of Ideas”**
- **2008 Defense Science Board Report on Strategic Communication**
- **Smith-Thornberry Amendment (H.A. 5) to the 2009 Defense Authorization bill (H.R. 5658)**
  - **Center for Strategic Communication**
  - **Establish Leadership and Interagency Coordination**
  - **Invest Resources**

# Strategic Communication



# The Power of Visible Deeds

Highlight Violation of Sacred Values

**CNN.com. WORLD**

**Furious Jordanians take to streets**

**Web posting claims al Qaeda in Iraq responsible for hotel attacks**

Friday, November 11, 2005; Posted: 2:56 a.m. EST

[Gallery: Images of the bombs' aftermath](#)  
[Journalist: Everyone in 'shock'](#)

[Amanpour: A 'matter of time'](#)

**Acts of terror**

AMMAN, Jordan (CNN) -- Calling the al Qaeda in Iraq leader a "lowlife," Jordanians on Thursday flooded the nation's capital in bitter protest of the triple suicide bombings that shook the city a day earlier and killed at least 56 people, most of Arab descent.



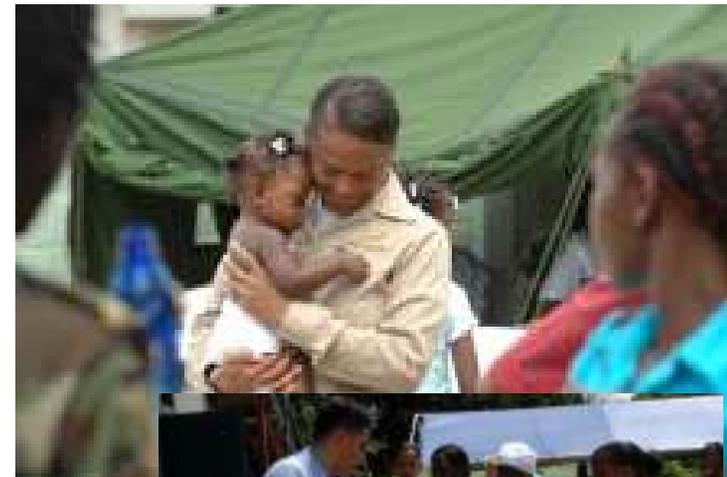
Do Good and  
Spread Good News



USNS Comfort



Humanitarian Mission



Source: [www.southcom.mil](http://www.southcom.mil)

# Strategic Communication Guidelines

Adm James G. Stavridis, USSOUTHCOM

- Tell the truth
- Have a good message
- Understand the audience
- Pull the trigger promptly
- Think at the strategic level
- Organize operations
- Measure results
- Adjust fire
- Add spice
- Steady pressure
- Accept defeat and move on
- Know when you win



Source: Joint Forces Quarterly, Issue 46, 3<sup>rd</sup> Quarter, p. 4-7. [ndupress.nduedu](http://ndupress.nduedu)

# Strategic Communication Gap Analysis

<b>FUNCTION</b>	<b>NEEDS</b>	<b>CURRENT CAPABILITY</b>	<b>R &amp; D GAP MITRE Expertise</b>
Strategy & Audience Analysis	<ul style="list-style-type: none"> <li>Stakeholder analysis</li> <li>Demographics/Psychographics</li> <li>“Strategic Listening” by Cultural Experts</li> </ul>	<ul style="list-style-type: none"> <li>Limited NGO Polling (e.g., Pew Global)</li> <li>Delayed reporting (not real-time)</li> </ul>	<ul style="list-style-type: none"> <li>Internet trend analysis</li> <li>Social influence network tools</li> <li>Psychographic modeling and simulation</li> </ul>
Media Analysis	<ul style="list-style-type: none"> <li>Global situational awareness</li> <li>Communications modalities</li> <li>Media (traditional and Internet) Branding and Rating Trends</li> </ul>	<ul style="list-style-type: none"> <li>Limited awareness of both media an internet use and audiences</li> <li>No influence-net intel</li> </ul>	<ul style="list-style-type: none"> <li>Machine Translation</li> <li>Spoken Conversation Analysis</li> <li>Argument/Sentiment/Bias Detection</li> </ul>
Media Design and Distribution	<ul style="list-style-type: none"> <li>Design media strategy</li> <li>Identify/build common ground</li> <li>Mobilize broad stakeholders (.org, .edu, .com, .gov, .mil)</li> <li>Exploit new media forms</li> </ul>	<ul style="list-style-type: none"> <li>Human expertise</li> <li>Manual message formulation</li> </ul>	<ul style="list-style-type: none"> <li>Multilinguality</li> <li>Rapid Mashups, Web 2.0</li> <li>Intelligent media campaign modeling and planning tools</li> <li>Micro-targeted distribution</li> </ul>
Strategic Engagement	<ul style="list-style-type: none"> <li>Linguistically and Culturally Focused</li> <li>Real time engagement</li> <li>Identify/Use credible third parties</li> <li>Exploit tactical opportunities (e.g., adversary missteps)</li> </ul>	<ul style="list-style-type: none"> <li>Conventional programming</li> <li>Limited real-time reaction teams</li> </ul>	<ul style="list-style-type: none"> <li>Spoken Language Translation</li> <li>Social Media (e.g., YouTube, Flickr, delicious, Second Life)</li> <li>Detection and countermeasures for viral messages</li> <li>Train/equip “digital diplomats”</li> </ul>
Assessment	<ul style="list-style-type: none"> <li>Poll, instrument, focus group/test</li> <li>Track strategic trends</li> <li>Real time situational awareness</li> <li>Net assess/replan of campaign</li> </ul>	<ul style="list-style-type: none"> <li>Infrequent and high level audience polling by third parties</li> <li>Limited awareness</li> </ul>	<ul style="list-style-type: none"> <li>On line instrumentation</li> <li>Net assessment model/analysis</li> </ul>



# MITRE's Team: Some Internal Efforts

- **Media Analysis**
  - Clipper - Foreign Language Browsing (Holland)
  - Analysis of Rhetoric (Ferro)
  - Audio Hot Spotting (Hu)
  - Cross Language Auto Speech Recog (CLASR) (Henderson)
  - Cultural Symbology for Counter Insurgency (Stech)
  - Sentiment Analysis (Prange, Lorber)
- **Intelligence Analysis**
  - Phase Change Behavior Analysis (Hughes/Booker)
  - Ops-Intel Team Sensemaking for Non-Traditional Warfare (Stech)
  - Intentions, Motivations, and Unconventional Weapons (Abbott, Egeth, Lorber)
- **Social Sciences Tiger Team**
  - Cultural Operations Research / Human Terrain (Friedland)



# Example: Social Indicator Analysis Method (SIAM)

Dr. Ray D'Amore

## Problem

- Loss of sensors, costly collection

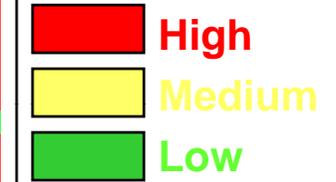
## Solution

- Social Interest ==**  
**Concept + Information Volume +**  
**Time + Location + Source**

## Y2K Results

CNTRY	Finance	Energy	Trans.	Telecomm	Z-Ave
argentina	1.476278	2.434932	0.8366	1.9553	1.67579
bermuda	0.888375	-0.06594	1.9661	0.1754	0.740966
bolivia	-0.65204	-0.55287	-0.6155	-0.6380	-0.61458
brazil	1.869995	0.27763	0.7220	1.5664	1.109025
chile	1.242407	0.065475	1.9946	0.8680	1.042629
colombia	-0.5338	-0.38638	-0.4981	-0.5096	-0.48196
costa_rica	-0.39694	-0.29373	-0.4429	-0.2979	-0.35789
ecuador	-0.6348	-0.54902	-0.6117	-0.6289	-0.60608
el_salvador	-0.6304	-0.52669	-0.5945	-0.6204	-0.59299
guatemala	-0.65019	-0.54851	-0.6130	-0.6366	-0.61208
guyana	-0.65496	-0.55555	-0.6146	-0.6410	-0.61652
honduras	-0.65361	-0.55464	-0.6161	-0.6409	-0.61632
mexico	1.656809	2.306324	1.1496	2.0101	1.780716
nicaragua	-0.60775	-0.52549	-0.5961	-0.6028	-0.58303
panama	-0.64749	-0.54845	-0.6090	-0.6352	-0.61004
paraguay	-0.64199	-0.54268	-0.6052	-0.6190	-0.60222
peru	-0.42739	-0.31945	-0.4733	-0.3972	-0.40431
puerto_rico	-0.65496	-0.55555	-0.6162	-0.6401	-0.6167
uruguay	0.987168	1.667379	1.2754	1.2915	1.305344
venezuela	-0.33471	-0.2268	-0.4382	-0.3592	-0.33974

## Inferred Risk



## Value

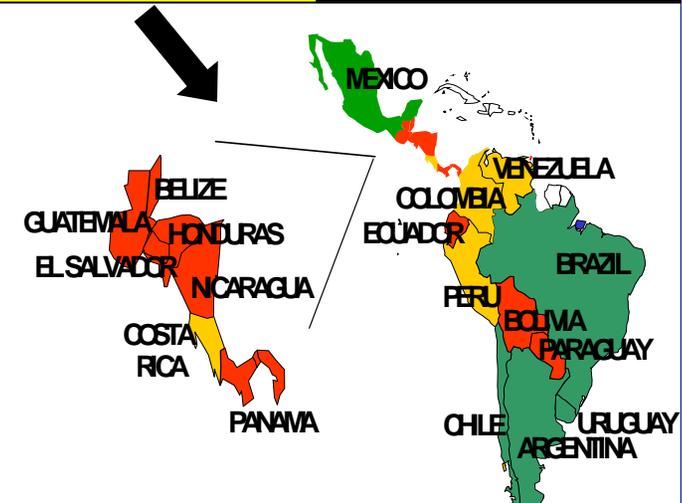
Gartner: 330 Question Survey

Performed Quarterly, 600 People Involved  
 1500+ Companies, 3 Calls/Company  
 11 Universities Provide Analysis

Department of State: 260 Posts, Reporting bias

## SIAM:

New Domain: 1 Day  
 Quarterly Analysis: 2 Days  
 Download Time: 1-2 Days for Current Data  
 Results Analysis and Fine tuning: 2 Days



Source: Publically released Invited Talk. In Zaihrayeu, I. (ed.). 2004. Workshop on Peer-to-Peer Knowledge Management, August 22, 2004. Royal Sonesta Hotel, Cambridge, MA.

<http://ftp.informatik.rwth-aachen.de/Publications/CEUR-WS/Vol-108/1568938662.pdf>





# Knowledge Portfolio Study of Sentiment Analysis

## Objective

- **Identify state-of-the-art approaches used in HLT and Social Science to characterize sentiment embodied in linguistic utterances**

## Motivation

- Analysts rely on accurate and insightful understanding of linguistic utterances.
- Properly identifying, understanding and interpreting sentiment in utterances is currently an analyst intensive activity using highly variable techniques and approaches.
- This KP will significantly broaden MITRE's foundation from which to provide advice to our sponsors seeking to significantly enhance their internal operational state-of-the-art and state-of-the-practice in Sentiment Analysis

## Approach/Activities

- Form Interdepartmental Team of Social/Behavioral and HLT Researchers.
- Survey research literature and commercial marketplace, determining:
  1. The depth/breadth/variety of empirical measures that have been defined and are being applied;
  2. The availability of research prototype systems;
  3. The capabilities of commercial products for sentiment analysis.
- Document findings in final report.

## Dimensions of Sentiment Analysis

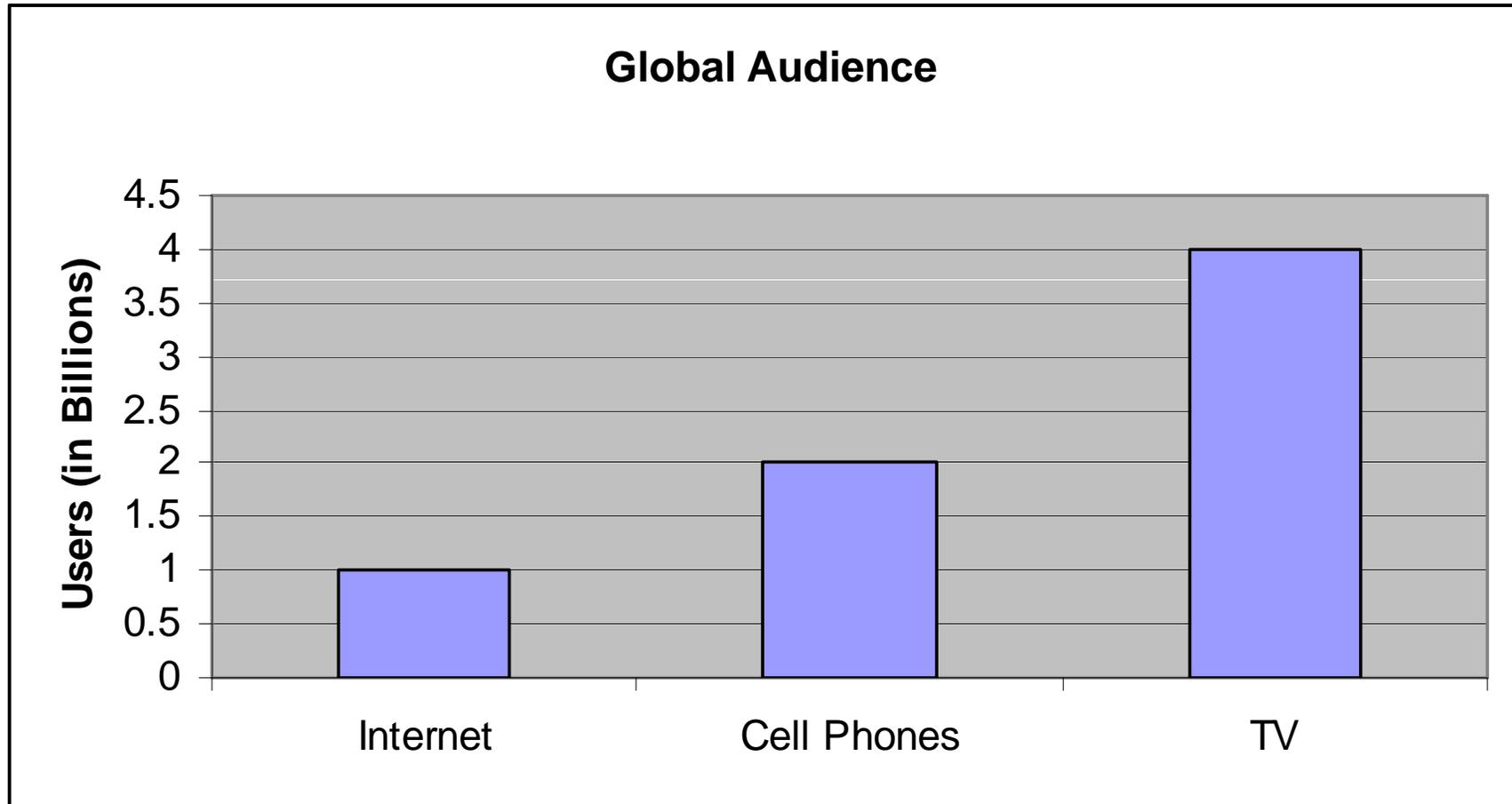
- Sentiment is really a combination of “attitude,” “opinion,” “belief,” “point of view” and “the emotional feeling” that is conveyed towards various topics as part of a linguistic utterance.
- HLT approaches focus on the linguistic characteristics, choice of words, the direction and strength of the actual utterance.
- Social/behavioral approaches focus more on the psychological, social and cultural aspects that form the basis for interpreting the utterance.
- Focus of this KP will be on integrating both and identifying opportunities for MITRE/G060 work. **MITRE**

# Global Media Trends

From: Maybury. M. "New Media" book chapter. In Heil, A. (ed.)  
*Local Voices/Global Perspectives: Challenges Ahead for U.S. International Media.*  
Washington D.C.: Public Diplomacy Council. p.107-116.

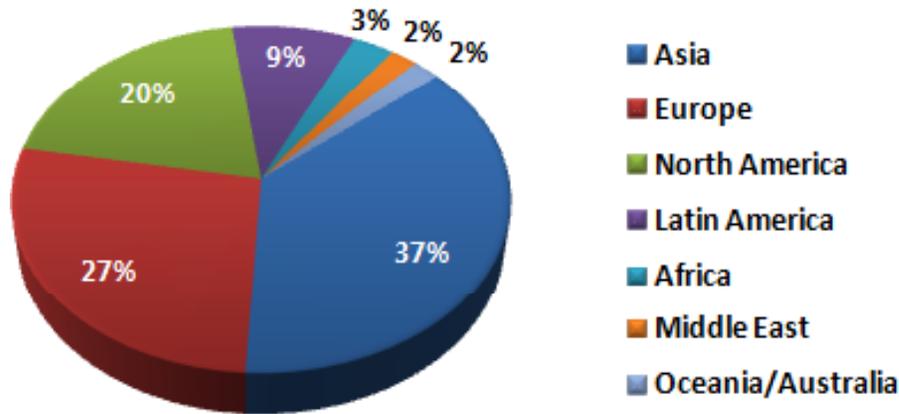
- Significant reduction in audience sizes for traditional media (e.g., 2-3% annual national newspaper circulation reduction)
- Displacement of traditional broadcast or subscription platforms (e.g., shift from cable viewers to on-line news reporting such as from CNN cable news to CNN.com or ABC new to abcnews.com)
- Emergence of new interactive providers (e.g., news.google.com)
- Shift from centralized to distributed production and broadcast
  - Rise of citizen reporting
- Increase in diversity
  - Digital distribution platforms (e.g., YouTube, wikis, blogs, podcasts)
  - Mobile platforms (e.g., cell phone web surfing, podcasts, mobile TV)
- Continued success of both subscription as well as advertising business models
  - Audience micro-segmentation, e.g., magazines, newspapers and websites focused at increasingly specific demographics
  - Micro-tracking of advertising revenue in digital media
- Rise of regional and/or socio-cultural focused broadcasters (e.g., pan-Arab Al Jazeera)
- Proliferation of new technologies and information services

# Audience



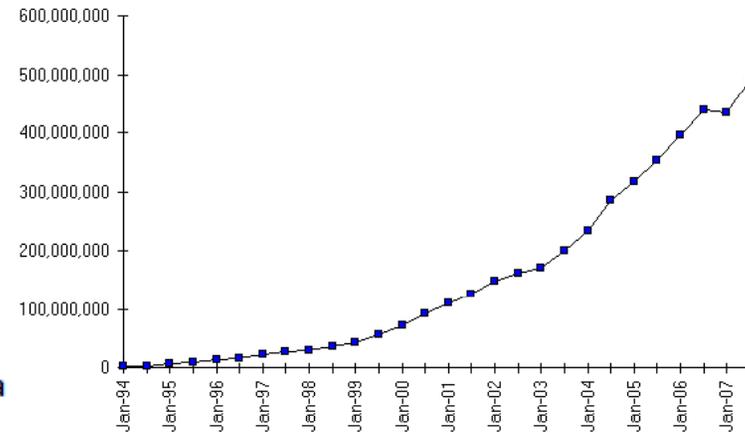
# Internet

## World Internet Users



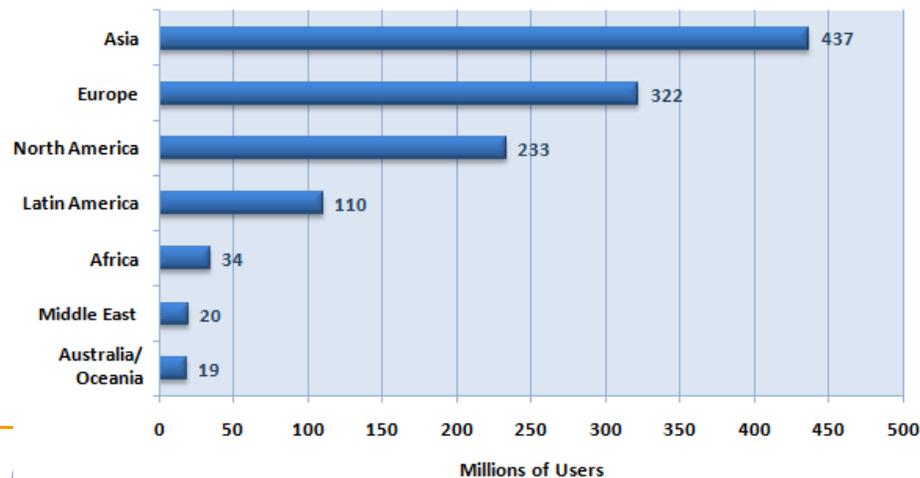
Copyright © June 2007, www.internetworldstats.com

## Internet Domain Survey Host Count



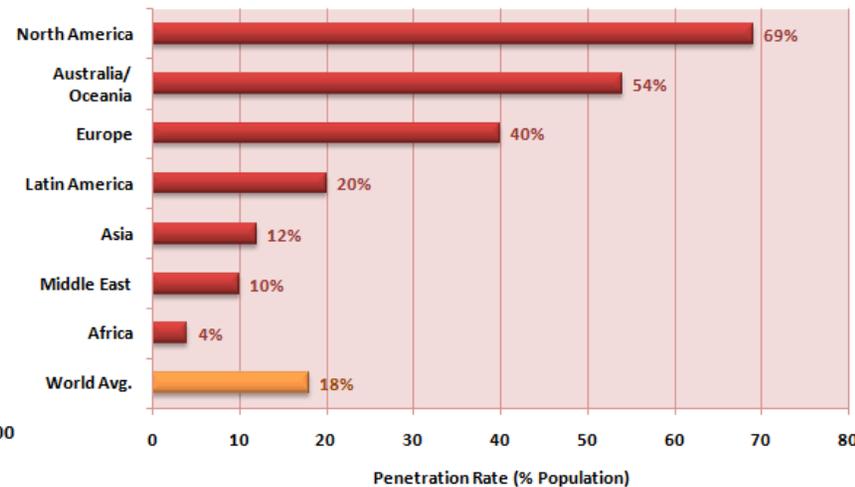
Source: Internet Systems Consortium (www.isc.org)

## Internet Usage by World Region



Copyright © 2007, www.internetworldstats.com

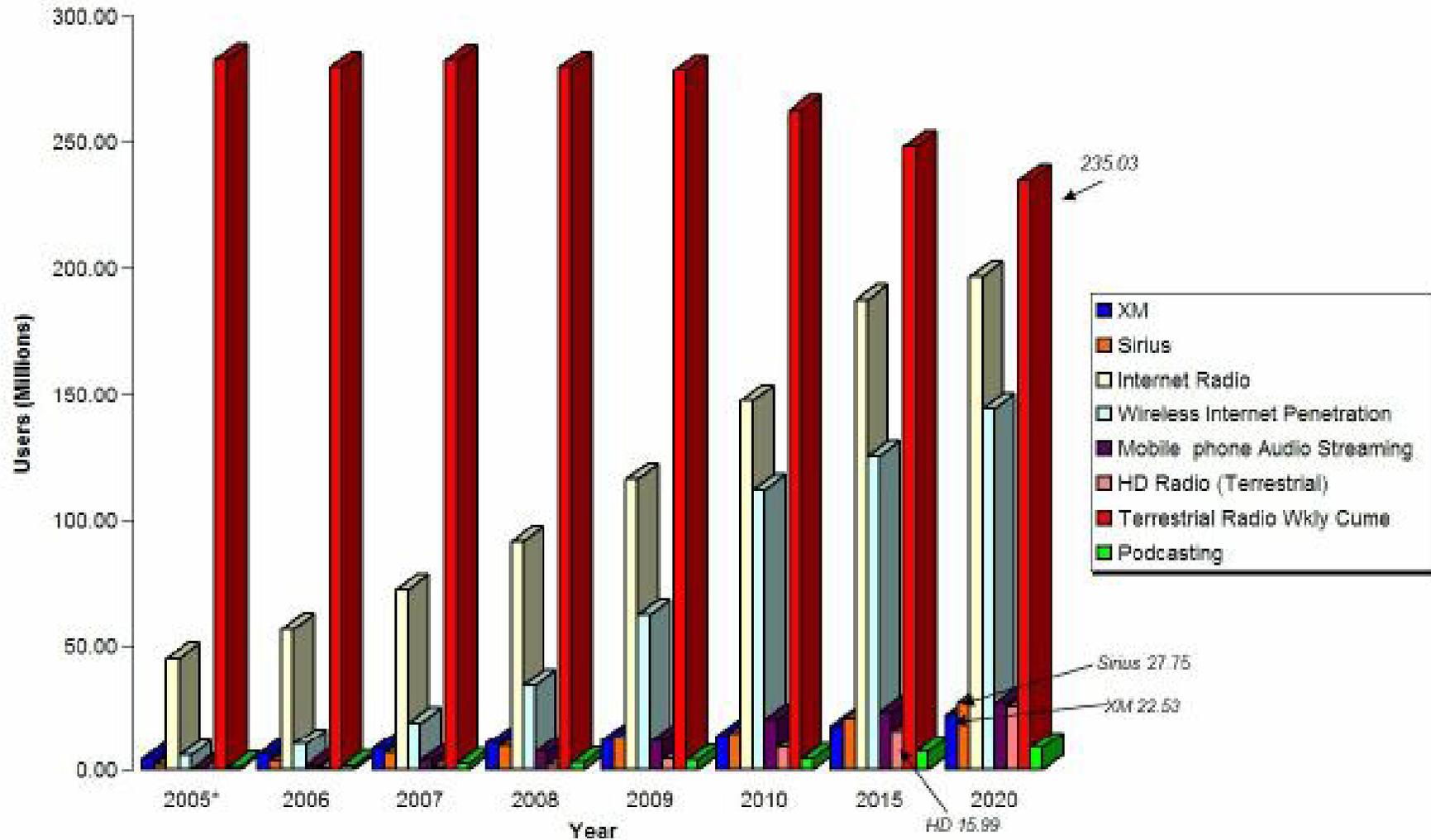
## Internet Penetration by World Region



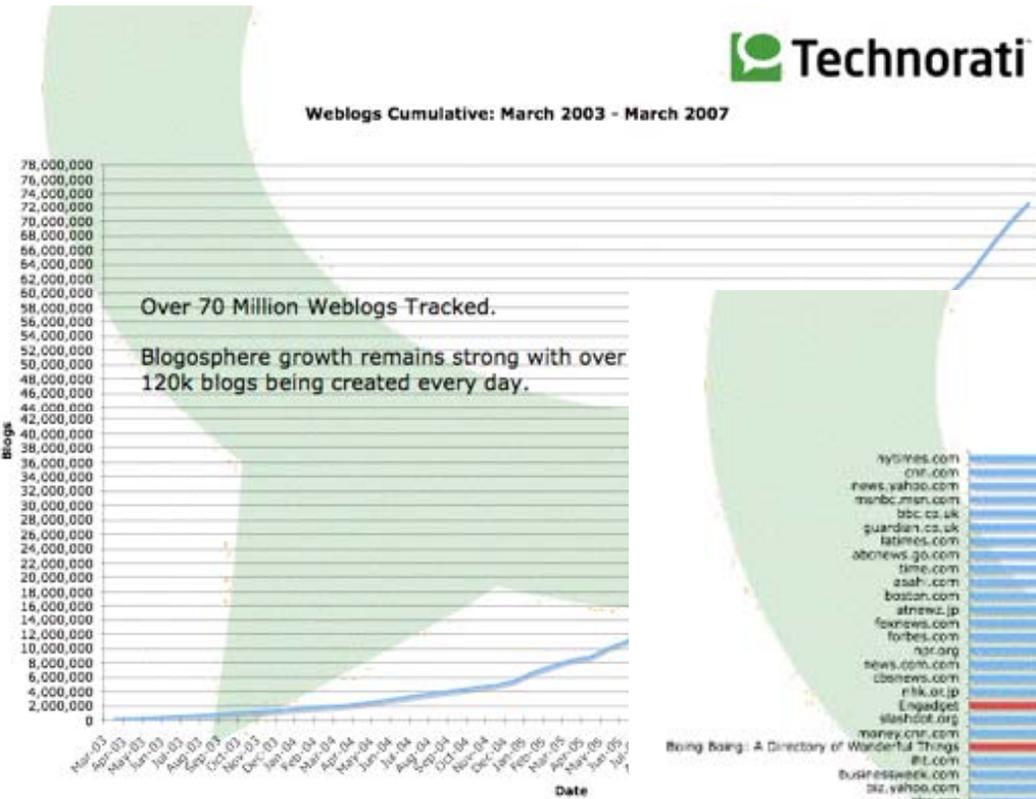
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# Digital Media

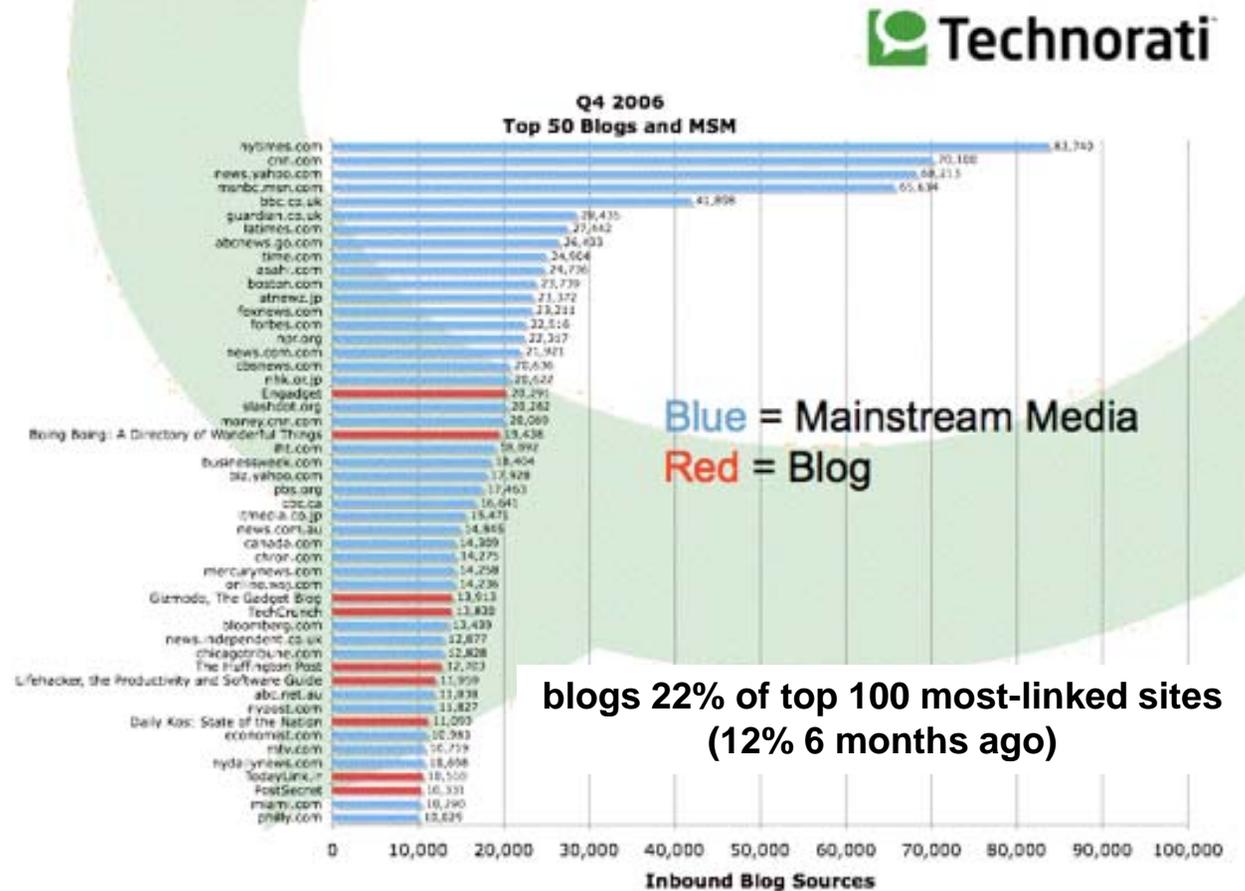
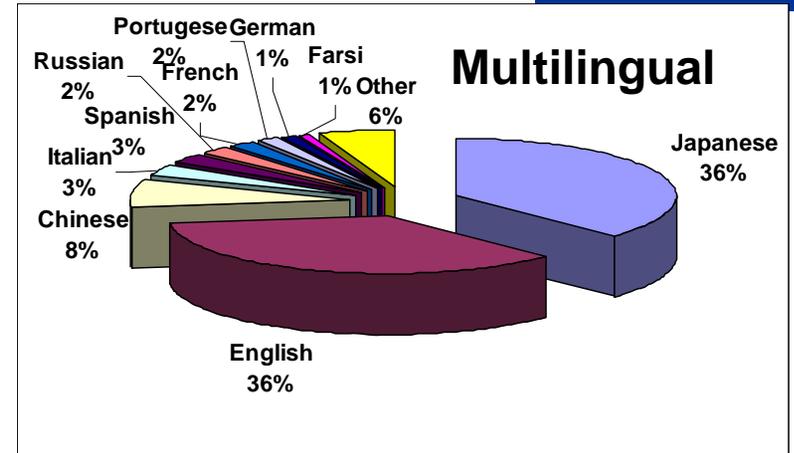
Digital Media Growth Projections 2005-2020



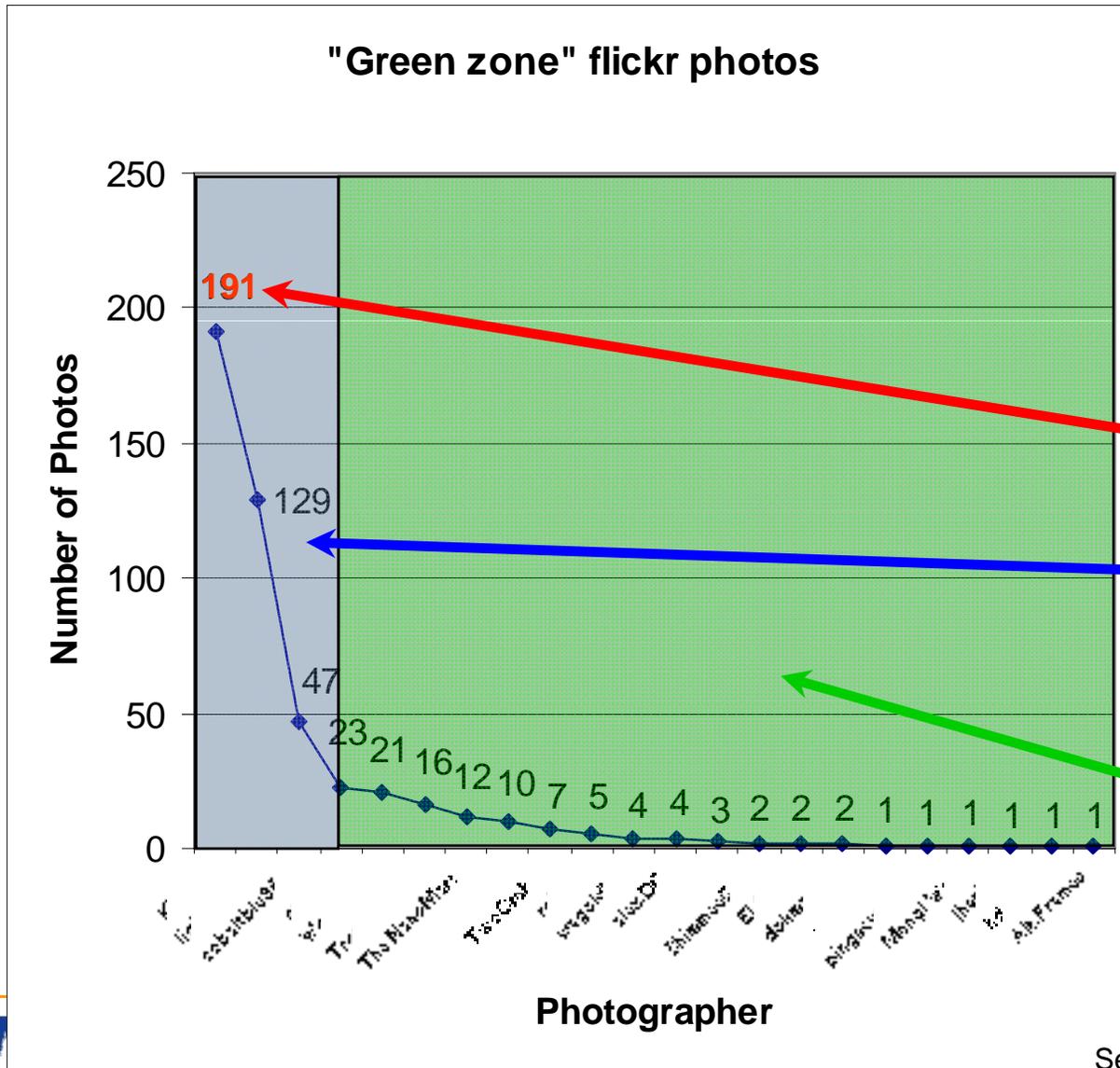
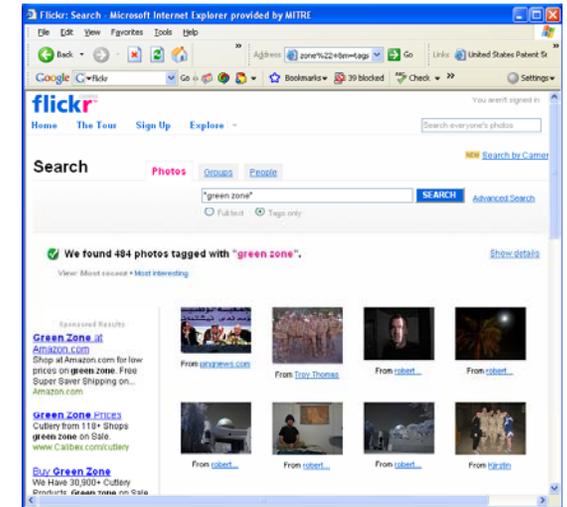
# Blogs and Media



Source: technorati.com



# “Long Tail”, Power Law in Social Media



- 22 photographers of 482 images, averaging 22 photos each
- Top photographer provided 40% content
- Top 18% (4/22) of contributors provide 80% of content (20/80 rule)
- 80% of photographers (18/22) below average



## Viral Ideas

- An *infective* idea rapidly propagates, passed on by recipients. Like traditional infections, idea propagation rates can be influenced by structure, in this case by such elements as social structure and/or media structure.
- An *affective* idea is aimed not only at rationale appeal but also at emotional effects such as surprise, disgust, or fear.



# Globalization Consequences

- **Death of censorship, surprise**
- **Death of distance**
- **Death of time**
- **Global personal coverage**
- **Trust challenges**
- **Birth of new media forms**
- **Emergence of agile adversaries**
- **Globalization and Regionalism**



# Implications for Strategic Communication

- ***Production*** - Content appealing to hearts and minds and also universal values
- ***Dissemination*** – Credibility, heterogeneous media, customization
- ***Context*** - political, social, and historical framing of information that may arise from distant, unvetted, and real time sources
- ***Tracking*** –track audience attention, attitudes and reactions in real time to both friendly and adversarial media
- ***Targeting*** – understand the technical infrastructure and influence networks that support media
- ***Interdiction*** - disrupt, refute or discredit media networks that undermine universal values