Digital Divide? Technologies rule ...

Globalization via "technoscapes" of grassroots power

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Presentation at SCALE 3X, Los Angeles
02/12/2005, Saturday
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Hail Technology !

- "Without technology, globalization could not exist." – Talalay (2000)

- Technology causes globalization and vice versa – Ngai-Ling Sum (2000)

- Potential to penetrate the 'core' and the 'periphery' – Toffler (1980)

Un-globalization ...

- Reasons:
  - The Digital Divide
  - Political-Economy

The Digital Divide

1. Technological and Informational Divides between developed and developing countries.

3. Effective employment of technology vs. Inability to employ technology; Lack of resources/awareness

5. Language, Culture -- Resistance to Technology

7. Global vs. Local: 429 million people
   (6% of world pop.) vs. 41% of 6% being N. American

The State and the Market!

- Exploiting technology to suit political and economic agenda

- E.g.:- Blocking of websites, news portals; Censorship of search engines

Events ...

- China blocks Google Search Engine - China has blocked access to popular U.S. Internet search engine Google amid government calls to tighten media controls ahead of a major Communist Party congress. - Beijing, September 03, 2002

- Germany investigates online Hitler auction: German prosecutors are investigating U.S. Internet company Yahoo! over the suspected online auction of copies of Hitler's book "Mein Kampf," which is banned in the country. -CNN.com, November 27, 2000

More Events …

- China blocks press freedom site: Press freedom pressure group Reporters Sans Frontieres (RSF) has reported this week that its web site has been blocked in China. It is suspected that the blocking follows a press release issued by the group regarding the extended imprisonment of cyber-dissident Liu Di who disappeared in 2002. - The Register, UK, April 24, 2003

More Events ...

- American women's lifestyle site iVillage.com is among the 2,000 blocked by the Saudi Government, according to a Harvard Law School study. Most of the blacklisted sites were sexually explicit or about religion. But also caught in the net were sites about women, health, drugs and pop culture – BBC, July 31, 2002.

- China Re-Blocks News Sites: Less than a week after Chinese censors unblocked the sites of The Washington Post, the Los Angeles Times, the San Francisco Chronicle and the BBC, the sites were re-blocked on Saturday. -Wired News, Beijing September 26, 2001

Whither Power?

- Institutionalization (Mueller) - 206.124.64.253? www.pepsi.com?

- Commercialization (Talalay, Schiller) - Homepage of PCs set to MSN/Netscape etc.

- Code ? : East Coast vs. West Coast (Lessig) "Regulability" of the Internet and new communication technology

Alternative grassroots: *technoscapes* of power

P2P (Peer-to-Peer)

Peer-to-peer computing is the sharing of computer resources and services by direct exchange between systems (Example: Napster, distributed computing techniques)

FLOSS (Free/Libre/Open-Source Software)

- Open Code, community programmers
- GNU Project: Gnu's Not Unix; Richard Stallman
- Open Source Initiative (OSI), Free Software Foundation (FSF)

Research Questions

- Are there power shifts from centers of politics and commerce to those of technology?

- Is community-building of technology closing the digital divide?

- Do grassroots movements of technology development engender homogeneity or heterogeneity? Informational Imperialism?

Proprietary Software vs. Open Source

- Copyright vs. Copyleft
- Microsoft Windows vs. Linux
- Consumerism vs. Community-building

Digital Divide: Technology & Information

- Inability of developing countries to invest in infrastructure and development: h/w & s/w

- Lack of adequate representation of the developing countries - in content published by them and for them.

- Technological ⇔ Informational

- Dependency on the West

- Digital Divide widens

India: The Country

- Population: greater than 1 billion (73.2% rural, 26.8% urban)

- 18 official languages, 1600 minor languages and dialects

India Pre-FLOSS

- Barriers to technology usage and growth: high cost factor,language, cultural and utility differences

- Rampant Piracy

- Stagnant in technology development and deployment

- No incentive or resources to develop indigenous technology

- Exporters of intellectual capital to the West (Immigration + Outsourcing)

Enter FLOSS ...

- The grassroots grow deeper and wider in the subcontinent. (62 ilugs, voluntary organizations, reaching remote places)

- The Times of India: IBM has launched a desktop computer pre-loaded with the Linux operating system.

- ZDNet India: Linux-based handhelds mark India's entry into hardware.

- Government of India announces a "Linux India Initiative"; adopting it in all govermment activities- Road Transport Office as pioneer.

Meanwhile …

- November 11, 2002 - www.gatesfoundation.org: The William and Melinda Gates Foundation grants $100 million for an HIV/AIDs initiative in India.

- November 12, 2002 - MSN news: Microsoft establishes a $400 million fund for various development projects in India

- November 12, 2002 - Financial Express: Bill Gates announces an additional $20 million to spread computer education in Indian schools. And somewhere in there, Microsoft also became the commercial investor in the Media Lab Asia project, investing $1 million, bringing the total to $421 mil.

The Microsoft Charisma

- Nov 13, 2002 - The Register, UK: That means that Linux is more than four times worse than AIDS to Billg and his happy Redmond family.

- Nov 13, 2002 - Rediff News: Bill Gates coaxed Indian engineers on Wednesday to use his firm's proprietary software, as he dismissed threats to his Windows system from rival Linux in the battle over network computing.

- Nov 13, 2002 - The Financial Express: Gates "ducked a couple of Linux-related questions" before "replying to a pointed questions on Linux" with a dig at Sun. "There is a visible shift in UNIX space from Sun platforms to Linux. In fact, it is Sun which is losing market share to Linux."

Power shift

- Copyright to Copyleft (engenders creativity, not commodity)

- Governments adopt OSS globally

- Community-building of technology

Cultural Divide

- Western metaphors of icons of files and folders, and sometimes, the utility of the applications.

- Cultural and Ideological shifts -- Changing work ethic, working on US time, outsourcing, assuming alias Western names, developing a Western accent, dialogue modalities

Jihad vs. McWorld

- With the narrowing of technological, informational and cultural divides accelerated by technology, would there be tribal factions or McDonaldization?

FLOSS advances in India

- Linux compatibility with popular Microsoft, IBM and Sun software, -- customizing not only languages, icons, file names, fonts etc. but also applications and interfaces for installation. (ILUG – Delhi)

- ILUG, Chennai has built TSCII to edit TSC files, while offering its set of Tamil fonts and an html editor.

- Current localization efforts involve language teams working on 10 different Indian languages (http://indlinux.org/lang/)

Creating the OS for India: Indlinux

- "Localisation of Linux to support Indian Languages"- IndLinux group at the Indian Institute of Technology (M).

- Internet kiosks across the countryside require local language software for effective use by the marginalized literate population of our country.

- In India, an overwhelming majority of the population does not know English. Affordable native language software will play a crucial role in taking the benefits of the "Information Revolution" to the marginalized sections of society and for appropriate social use of Information Technology.

- Font creation; vowel modification, cursor position problem.

- Developing an OS better than developing an application; "Linux is robust, stable and free."

Paradigm Shifts

- Ongoing transformations in notions and centers of power from the state and market to that of technology

- New and old technologies have so far caused the digital divide to widen. Decentralized grassroots technology closing the divides

- Grassroots movements that build *technoscapes* are simultaneously homogenous and heterogeneous.

The twain meet: Multi-directional and multi-level plural flows

- East and West
- Top and Bottom
- Global and Local
- Homogeneity and heterogeneity
- Technology and culture

Done !

- Questions ?
- Comments ?
- Suggestions ?

Thank you!