

The Other Billion

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I would like to dedicate my talk to Professor Suguru Yamaguchi, FIRST Board Member in 2011-2013, who passed away recently.

Would you like to be without
the Internet access?

How many Internet users today?

We call them "The First Billion."

Internet Users

3.4 Billion Internet Users in 2015

[source: InternetWorldStats.com]

How many new Internet users by 2020s?

We call them "The Other Billion."

5~6 billion Internet users in 2020s with
2~4 billion new Internet users.

Internet & Computer History – 1940s

- Birth of Computer
ENIAC,....
- Memex

Internet & Computer History – 1950s

- Mainframe Computer
One computer per organization

Internet & Computer History – 1960s

- Computer Network Research
UK, USA, France
- Minicomputers

Internet & Computer History – 1970s

- Computer Networks for Research Community
- Personal Computers
- Research on Worm at Xerox PARC

Internet & Computer History – 1980s

- Global Proliferation of the Internet
30~40 countries with the Internet
- One Million Internet Users
- Morris Worm → CERT

Internet & Computer History – 1990s

- WWW with Browser (Mosaic)
- Commercialization
- P2P
- Wireless and Optical Networks

Internet & Computer History – 2000s

- Smartphone
- One Billion Internet Users
- SQL Slammer Worm

Internet & Computer History – 2000s

- Internet: Global Critical Social Infrastructure

How can we build proper infrastructure for “The Other Billion” in the coming decades?

2020s – 5~6 Billion Internet Users

Challenge – How to facilitate new Internet users (The Other Billion) as well as current users?

They are mostly in Asia and Africa.

New Internet Users (The Other Billion)

Many of new Internet users have only one access device – a smartphone.

Remark: People tend to spend up to 10% of their annual income on Internet access devices; smartphone, tablet, computer,..

How can we develop good social infrastructure for new users?

- Local language support
- Local content
- Accessibility
- Reasonable charge
- Security

What would happen if we don't work on "The Other Billion"?

- Digital Divide may get worse.

Asia's Role

Can Asia have a leading role along USA and Europe to develop good Internet environment for The Global South?

Epilogue: AfricaCERT

- 2008 Africa Asia Forum on Network Research and Engineering (AAF)
- 2009~ Joint programs (CERT Instructor Training course,.....) at AfNOG, AfriNIC, and Africa Internet Summit supported by AAF, APCERT, JPCERT,.....
- 2012 AfricaCERT

Safe Internet

Challenge of developing acceptable cybersecurity infrastructure for all countries

References

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Google, Google.org.

Indian Government, Digital India, 2015.

IGF, Connecting the Next Billion, 2015.

Mary Meeker, Internet Trends, KPCB, 2015.

UN, Sustainable Development Goals, 2015.

Appendix 1:

APCERT

1998 APSIRC Working Group under APNG

2003 APCERT

Appendix 2: IGF – Next Billion Program

Policy Option

1. Deploying infrastructure
 2. Increasing usability
 3. Enabling users
 4. Ensuring affordability
 5. Creating enabling environment
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- A. Emphasizing local and regional specificities
 - B. Demonstrating contribution to UN SDGs
 - C. Building strategic alliance with key players and initiatives