The Other Billion

2016-06-16
Kilnam Chon
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

Asia Internet History, InternetHistory.asia.
Connect The World, connecttheworld.one.org.
Cyber Commons, CyberCommons.net.
Facebook/Internet.org.
Google, Google.org.
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

A. Emphasizing local and regional specificities
B. Demonstrating contribution to UN SDGs
C. Building strategic alliance with key players and initiatives