It's not just infrastructure: The 3 L's & the Internet in South East Asia

Vanessa.Gray@itu.int

Michael.Minges@itu.int
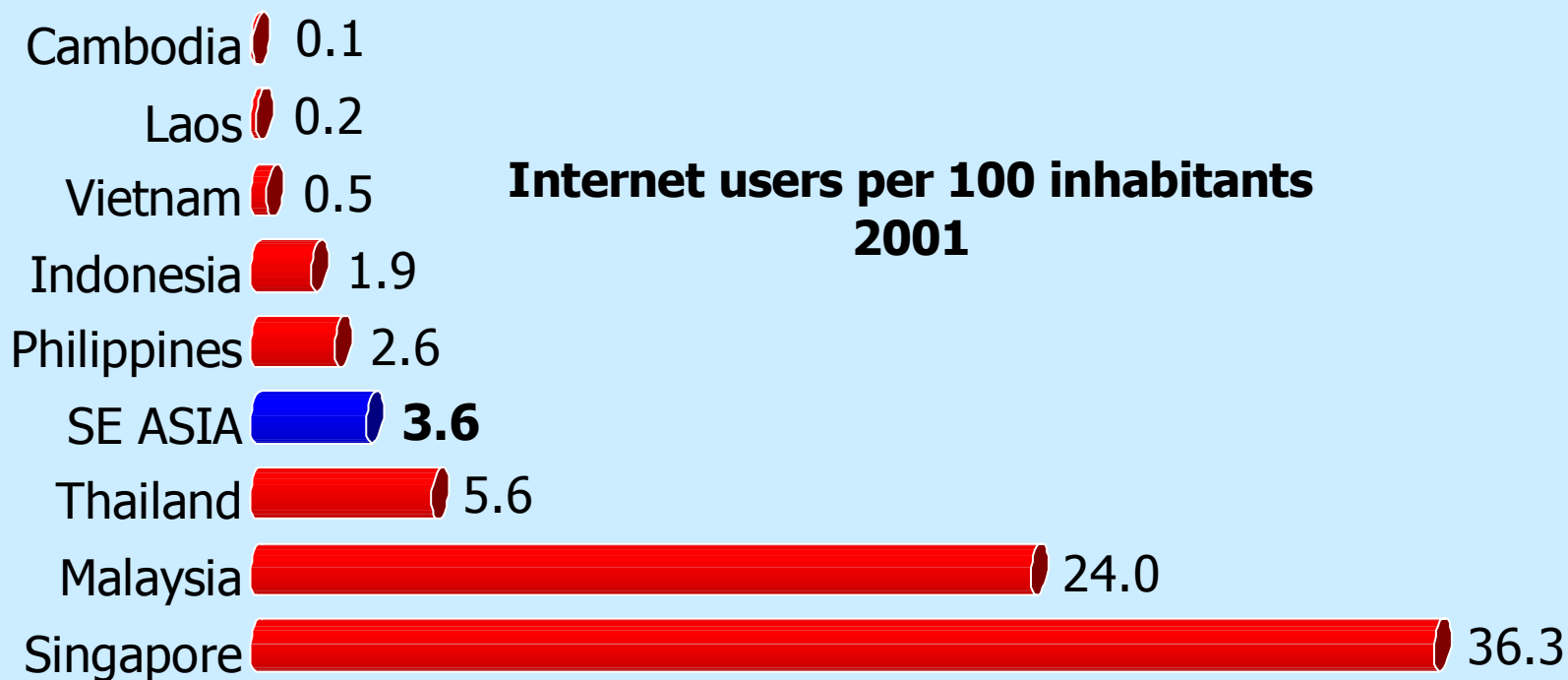
International Telecommunication Union (ITU)

Geneva, Switzerland

South East Asia Digital Divide

Internet users per 100 inhabitants 2001

- Cambodia: 0.1
- Laos: 0.2
- Vietnam: 0.5
- Indonesia: 1.9
- Philippines: 2.6
- **SE ASIA: 3.6**
- Thailand: 5.6
- Malaysia: 24.0
- Singapore: 36.3

Internet use = Infrastructure + Affordability + Human skills
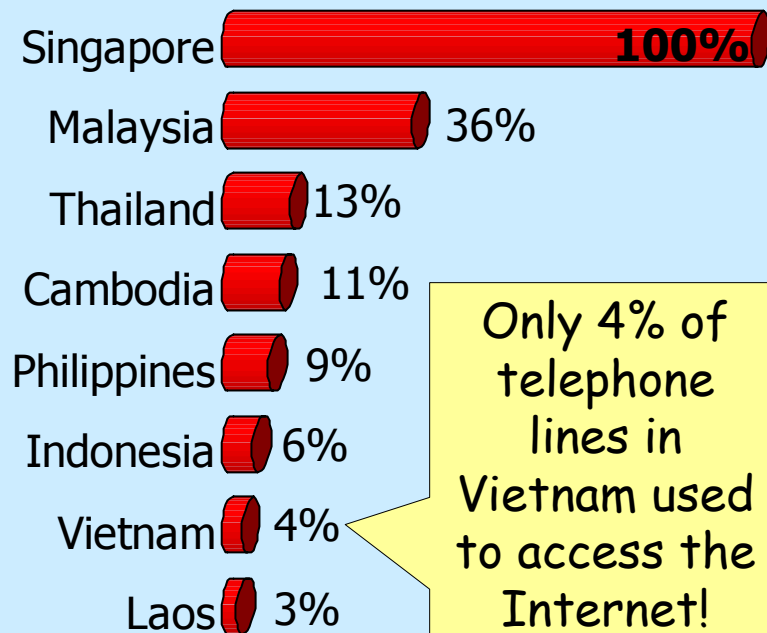
Traditional arguments for Digital Divide

Infrastructure
Internet subscribers as % of telephone lines, 2001

Singapore	**100%**
Malaysia	36%
Thailand	13%
Cambodia	11%
Philippines	9%
Indonesia	6%
Vietnam	4%
Laos	3%

> Only 4% of telephone lines in Vietnam used to access the Internet!

Internet users are not close to level of telephone lines

Affordability
Mobile to Internet price ratio, 2001

Singapore	26
Thailand	14
Malaysia	14
VietNam	11
Philippines	9
Indonesia	9
Laos	4

> It costs 9 times more to use a mobile than the Internet in Indonesia!

Mobile much more expensive than Internet yet there are many more mobile than Internet users

Another variable in the Digital Divide equation
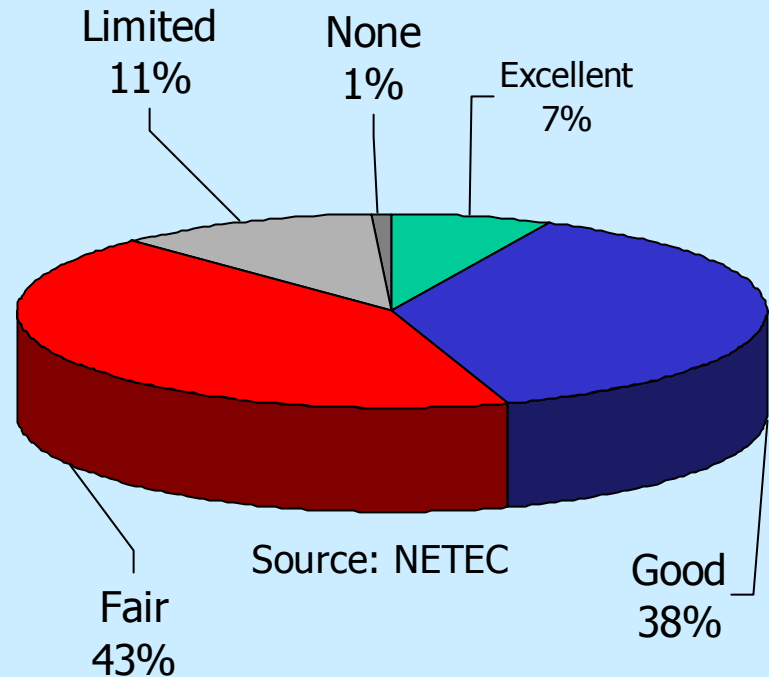
Language

Literacy

Learning

Language

- Bi-lingual
  - Unless people are familiar with a 'popular' language, they cannot leverage on content (software development content, access content, web content)
- Diversity
  - The more diversity, the less relevant single-language content will be and the harder to achieve economies of scale
- Character set
  - Non-Latin alphabets are harder to adapt to computers

Bi-lingual

- If you do not understand some basic English, you will not use the Internet

- ASEAN policy of English will eventually help boost ICT access in the region

- Present advantage to Singapore, Malaysia and Philippines where English is widely understood due to historical reasons
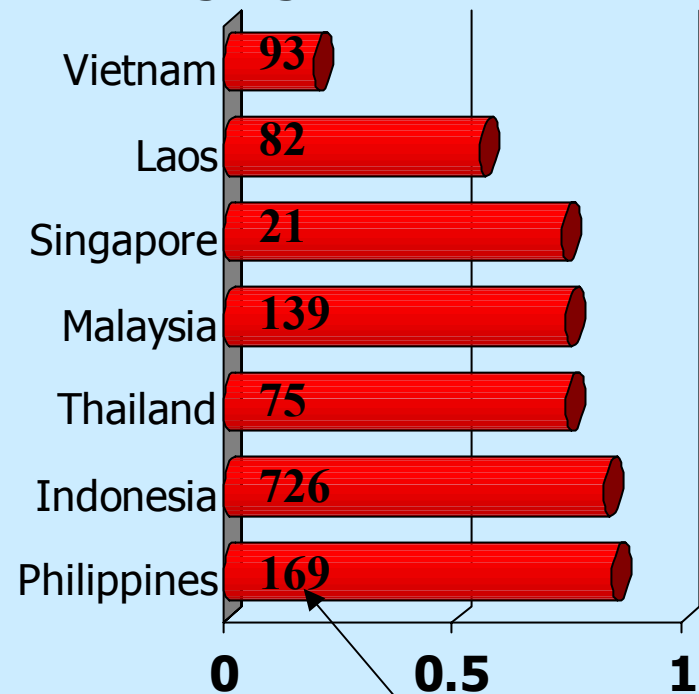
Limited 11%

None 1%

Excellent 7%

Source: NETEC

Good 38%

Fair 43%

English proficiency of Thai Internet User, 2000

Diversity

- The more languages used in a country the less economy of scale in developing Internet content

- Less likely that content will be available for lesser used languages

The higher the value, the less likely it is to find 2 people that speak the same language

Country	Value
Vietnam	93
Laos	82
Singapore	21
Malaysia	139
Thailand	75
Indonesia	726
Philippines	169

0   0.5   1

Source: Ethnologue

Number of languages spoken
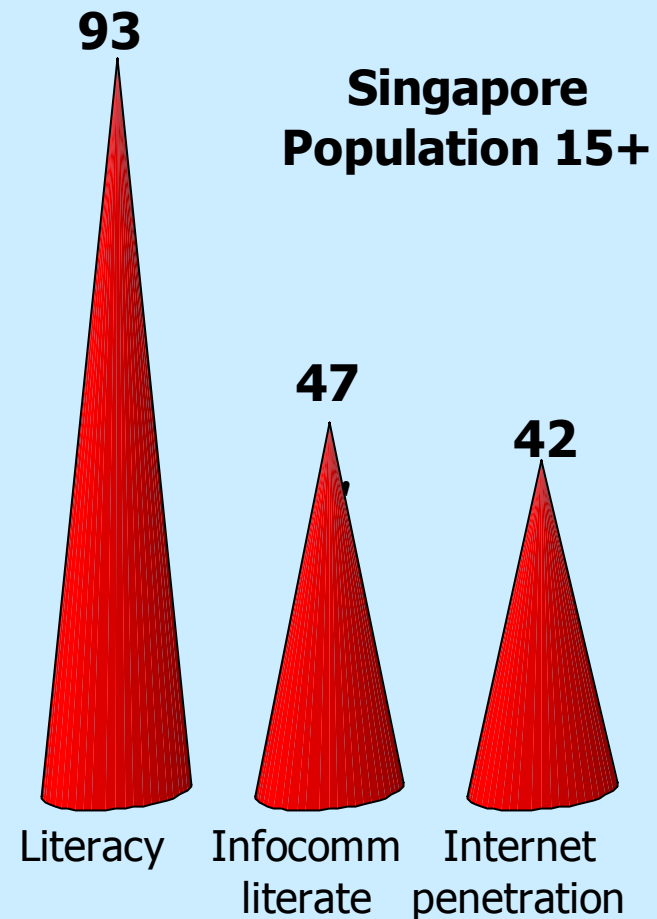
Character set

- Countries with non-Latin alphabets face difficulties adapting to the Internet

- There are some 44 Thai consonants and around 30 vowels requiring almost 90 different letters on the keyboard (compared to 66 for English)

- "There are currently no official standards for keyboard input methods for Lao characters…We cannot overstate the importance of standardizing the Lao Character Set."—UNDP Laos
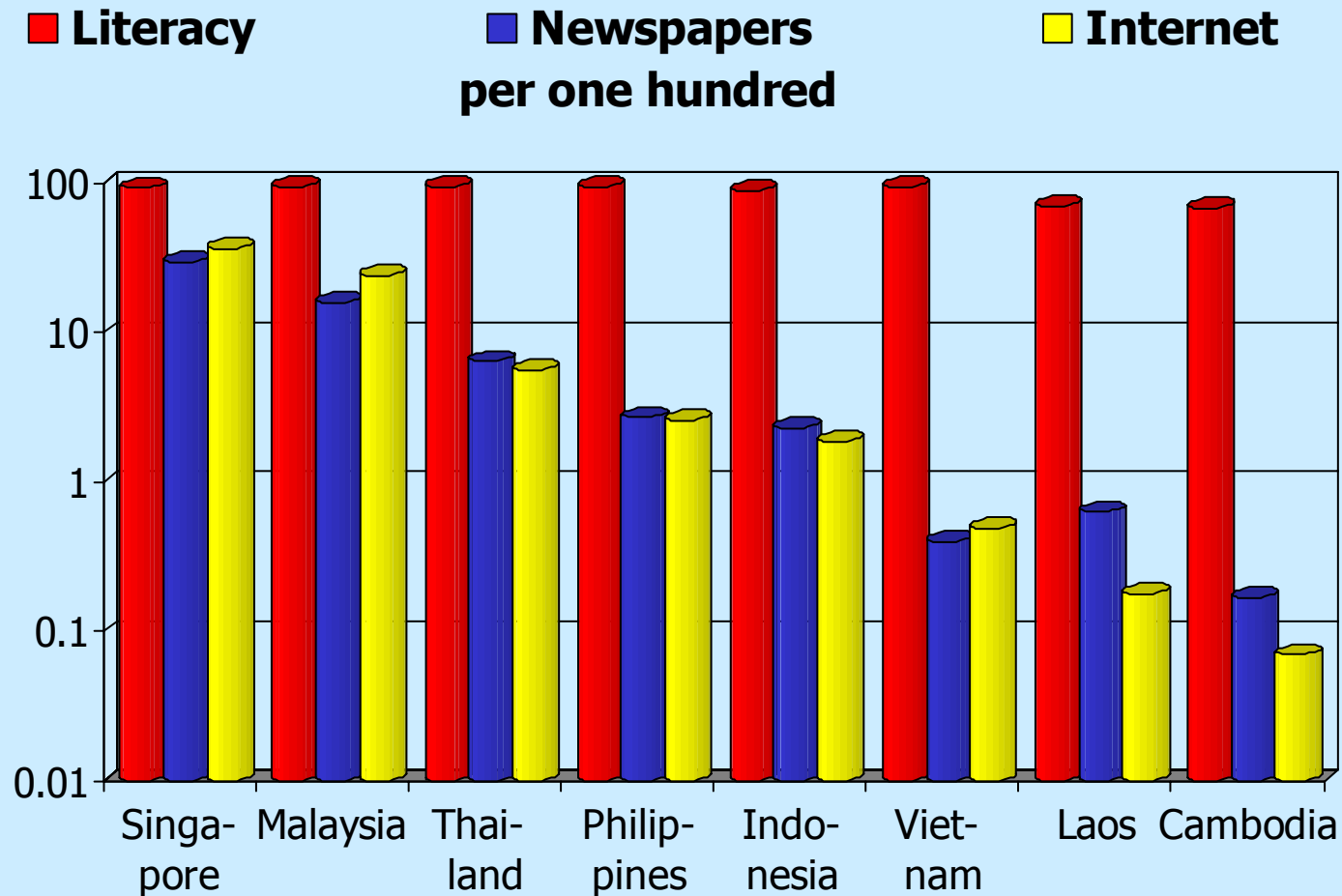

Open Forum of Cambodia

Literacy

- If went by literacy statistics, almost everybody should be using the Internet

- Basic literacy versus computer literacy

- A more reliable proxy for potential Internet users is newspaper circulation

Singapore Population 15+

93

47

42

Literacy Infocomm literate Internet penetration

Source: Statistics Singapore, 2000 Infocomm Literacy Survey

Nice match

Legend: ■ Literacy ■ Newspapers per one hundred ■ Internet

Countries (left to right): Singapore, Malaysia, Thailand, Philippines, Indonesia, Vietnam, Laos, Cambodia

Vertical axis (logarithmic): 0.01, 0.1, 1, 10, 100

Note: Logarithmic scale

Source: ITU adapted from national statistical agencies
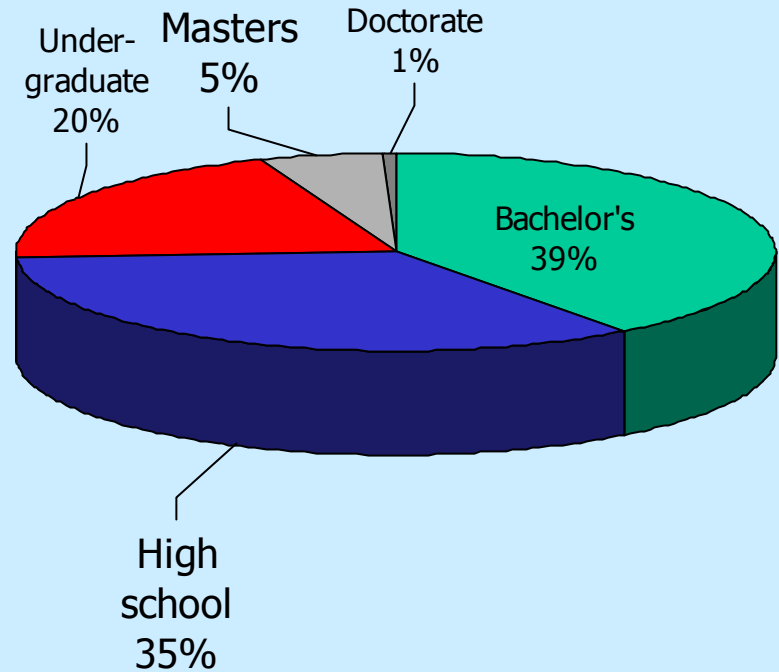
Learning

- Educational attainment is important indicator of Internet potential

- Educational enrolment is important indicator of potential users

Learning

- 65% of Indonesian Internet users have a college degree or are in college

- 50% of Indonesians with college degree are online compared to 0.5% without

- Wiring Indonesian high schools would add another 10 million users (compared to only 2 million)
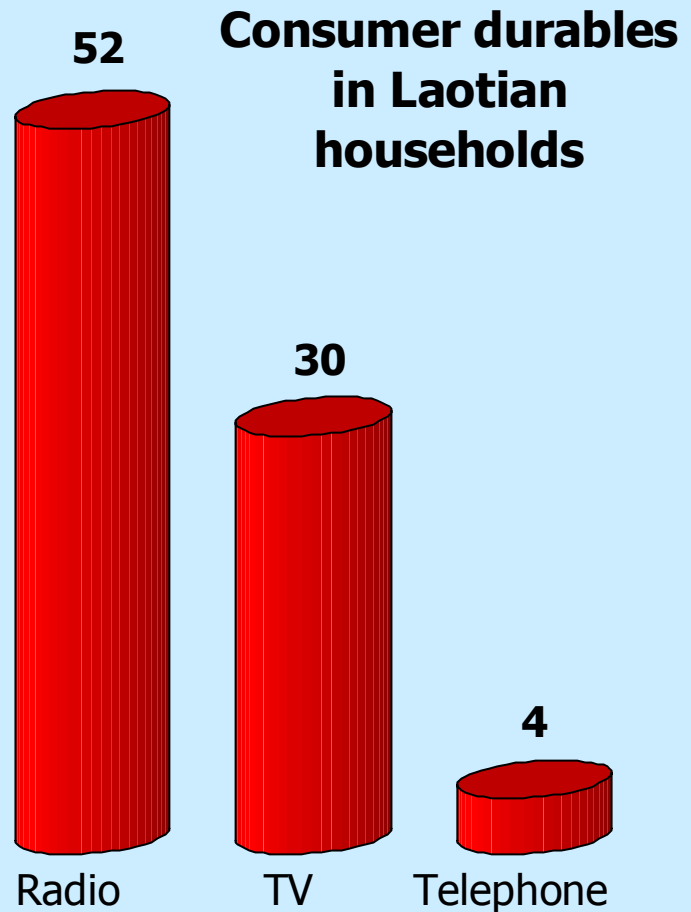
Undergraduate 20% **Masters 5%** **Doctorate 1%**

Bachelor's 39%

High school 35%

Profile of Indonesian Internet User

Source: APJII

A different approach

- Most developing countries have relatively higher levels of broadcast than IT equipment
- Leverage that to obtain information particularly for computer illiterate
- Community Internet radio concept

Consumer durables in Laotian households

52	Radio
30	TV
4	Telephone

Conclusions

- Digital divide is not always about infrastructure or affordability.
- Literacy, language, and learning have a significant impact on Internet use.
- Not everybody has potential to use the Internet in its conventional form (via a PC)

Strategies

- Provide training
- Get schools online
- Use info-mediaries