e-ASEAN Task Force Meeting
Siem Reap, Cambodia
6 July 2001

ASEAN Internet:
ITU Case Studies

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International Telecommunication Union

- UN agency for telecommunications
- 189 member states; 650+ other companies & organizations
- Based in Geneva, Switzerland. Asian regional offices in Bangkok and Jakarta
- Telecom Development Bureau responsible for promoting telecom in developing countries

www.itu.int
ITU Internet Studies

• Reasons
  – Improve market information
  – Examine factors influencing / restricting Internet diffusion
  – Recommendations

• First round
• Other case studies

Web site: www.itu.int/ti/casestudies
Internet Case Study

Contents

• Country Overview
• Telecom sector
• Media sector
• Internet market
• Use in government, health, education and business
• Recommendations
Status of ASEAN studies

<table>
<thead>
<tr>
<th>Country</th>
<th>Field work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>July 2000 (April 2001)</td>
</tr>
<tr>
<td>Malaysia</td>
<td>March 2001 (September 2001)</td>
</tr>
<tr>
<td>Indonesia</td>
<td>May 2001 (September 2001)</td>
</tr>
<tr>
<td>Vietnam</td>
<td>May 2001 (September 2001)</td>
</tr>
<tr>
<td>Cambodia</td>
<td>July 2001 (September 2001)</td>
</tr>
<tr>
<td>Thailand</td>
<td>August 2001 (December 2001)</td>
</tr>
<tr>
<td>Laos</td>
<td>October 2001 (December 2001)</td>
</tr>
<tr>
<td>Philippines</td>
<td>November 2001 (December 2001)</td>
</tr>
</tbody>
</table>

*Note: Brunei and Myanmar dependent on resources.*
The e-city: Singapore

- First study completed
- Model for other countries
- Universal access: All telephone subscribers (almost all households) have ‘free’ Internet access (only pay telephone usage charge)
- One of most broadband countries on earth
- Sophisticated application development
- Converged regulator and high level support for ICT
- Good market information from regulator, national statistical agency and research firms
Wealth & Internet

PPP per capita, US$

R² = 0.8264

Singapore

Malaysia

Indonesia

Vietnam

Internet penetration

$1,000

$10,000
## Soft factors

<table>
<thead>
<tr>
<th>Country</th>
<th>Adult literacy rate (%)</th>
<th>Secondary school enrolment (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>91.8</td>
<td>75.6</td>
</tr>
<tr>
<td>Malaysia</td>
<td>86.4</td>
<td>64.0</td>
</tr>
<tr>
<td>Vietnam</td>
<td>92.9</td>
<td>55.1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>85.7</td>
<td>56.1</td>
</tr>
</tbody>
</table>

# Languages

<table>
<thead>
<tr>
<th>Country</th>
<th>Official languages / main languages</th>
<th>Number of languages</th>
</tr>
</thead>
</table>
| Singapore | Chinese: 59%  
Malay: 14%  
Tamil: 3%  
English: 23% (71% literacy)                                                                 | 26                  |
| Malaysia  | Malay: 66%  
Chinese: 25%  
Tamil: 7%  
English literacy:  
Peninsular Malaysia 54%, Sarawak 28%, Sabah 29%                                                                 | 54                  |
| Vietnam   | Vietnamese: 87%                                                                                       | 87                  |
| Indonesia | Indonesian: 85% (15% mother tongue)  
Javanese: 42%  
Sudanese: 14%                                                                                      | >250                |

Infrastructure comparisons
## Internet comparisons

<table>
<thead>
<tr>
<th></th>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Singapore</th>
<th>Vietnam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of ISPs</td>
<td>60</td>
<td>7</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Internet penetration</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Broadband</td>
<td>Cable ADSL trial</td>
<td>ADSL trial</td>
<td>Cable &amp; ADSL</td>
<td>ADSL trial</td>
</tr>
<tr>
<td>Int’l bandwidth per subscriber</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
## Regulatory comparisons

<table>
<thead>
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<th></th>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Singapore</th>
<th>Vietnam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>No restrictions</td>
<td>No restrictions</td>
<td>100 symbolic sites blocked</td>
<td>Firewall</td>
</tr>
<tr>
<td>VoIP</td>
<td></td>
<td></td>
<td>Allowed with license</td>
<td>National trial</td>
</tr>
<tr>
<td>Market entry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Mobile comparisons
Tariff comparisons

Dial-up Internet access per hour, US$, July 2001

Singapore  Malaysia  Indonesia  Vietnam

Phone usage  ISP usage

0.35  0.16  0.84  0.48
0.24  0.78

Source: ITU adapted from ISP data.
Framework comparison

- Pervasiveness
- Sophistication
- Organizational
- Connectivity
- Dispersion
- Absorption

- Singapore
- Malaysia
- Indonesia
### Market research

<table>
<thead>
<tr>
<th></th>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Singapore</th>
<th>Vietnam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statistical agency</strong></td>
<td>Statistics Indonesia</td>
<td>Department of Statistics</td>
<td>Statistics Singapore</td>
<td>General Statistical Office</td>
</tr>
<tr>
<td><strong>ICT Statistics?</strong></td>
<td>No</td>
<td>Yes (2000 Census)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Telecom regulator</strong></td>
<td>POSTEL</td>
<td>CMC</td>
<td>IDA</td>
<td>DGPT</td>
</tr>
<tr>
<td><strong>ICT statistics?</strong></td>
<td>No</td>
<td>A few</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Interesting things
Conclusions

- Digital divide is not an infrastructure problem but an affordability and awareness problem
- Universal access policies are, in general, non-existent, insufficient, and not clear
- Lack of market research
- Shortage of relevant content / applications is a major barrier to benefits of ICT for development
- Governments are not as committed as they should be; need to promote ‘killer application’
The End