Arab Region
Internet Issues

PREPARATORY MEETING OF THE ARAB REGION
FOR THE WORLD TELECOMMUNICATION
DEVELOPMENT CONFERENCE
Alexandria (Egypt)
17-19 October 2000
Topics

• Internet from the top
• Commercial opportunities and challenges
• Policy and regulatory issues
• Mobile Internet
• Strategies
Top level support for Internet

“We firmly believe that technology adoption ... is essential to the growth and stability of the Jordanian economy and society.”

—King Abdullah II of Jordan

Syria is planning to expand access to the Internet and wants it to be available to every household in the country.

—President Bashar al-Assad of Syria

Challenge: Translate top-level vision to concrete action
Commercial opportunities and challenges

- Opportunities
  - Dial-up traffic
  - Leased lines
  - Other Internet services

- Challenges
  - Transition to IP-based network
  - IP telephony
Internet dial-up

Telephone traffic in Sweden, Millions of minutes

Internet dial-up
International calls
Internet as % of total traffic

1999 revenue:
US$ 235 m +25%
US$ 258 m -11%
Transition in Singapore

- **Access**
  - SingNet
  - SingTel Magix
  - mysingtel
  - e-ideas

- **Infrastructure**
  - NCS Media Hub
  - Consumer Connect
  - SingTel IX
  - ID.Safe

- **Content**
  - Lycos Asia
  - SESAMi.com

### Singapore Telecom

**Share of revenue (%)**

<table>
<thead>
<tr>
<th>Year</th>
<th>International</th>
<th>Data</th>
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<tbody>
<tr>
<td>1995</td>
<td>34</td>
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<td>1997</td>
<td>34</td>
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<td>22</td>
<td>98</td>
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<tr>
<td>1999</td>
<td>10</td>
<td>99</td>
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</tbody>
</table>

Source: Singapore Telecom.
The Internet Way

- Technical, financial & social challenge to circuit switched international telephone traffic
- Anyone can be a telco
  - So isn’t that good for universal access?
IP Telephony: Threat or opportunity?

- “I think that’s the best way to do it. If you can’t beat them, join them.” — Egypt Minister of Communications and IT

- “Offering Net2Phone's services to our customers demonstrates our ability to provide ... low-cost telecommunications ... utilizing the utmost in high technology.” — OmanTel

Source: The Economist, May 2nd 1998
Networks Must Converge

“... evolving Swisscom’s fixed-line networks away from the current circuit-switched infrastructure toward a packet-based infrastructure ... The core of the infrastructure of this next generation network will be based on IP technology.”
Policy and Regulatory issues

• Pricing
• Content
• Domain name
• ISP market
• Internet Telephony
• Universal access
Pricing

Internet access prices, 30 hours per month, US$, Sep. 2000

<table>
<thead>
<tr>
<th>Country</th>
<th>0</th>
<th>20</th>
<th>40</th>
<th>60</th>
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<td>Arab Avg.</td>
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<td></td>
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<td></td>
<td></td>
<td>$20</td>
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<td></td>
<td></td>
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Free local calls?  Nation-wide Internet dialling?
Free Internet access?
Content

• Many Arab countries restrict access to content
• Promote ‘family’ access plans
• Work with industry and community

• Few Arab governments active in developing local content
• Most users know English

<table>
<thead>
<tr>
<th>Language</th>
<th>Population</th>
<th>% Online</th>
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<tbody>
<tr>
<td>Mandarin</td>
<td>885</td>
<td>2%</td>
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<tr>
<td>Spanish</td>
<td>382</td>
<td>6%</td>
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<tr>
<td>English</td>
<td>322</td>
<td>54%</td>
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<tr>
<td>Bengali</td>
<td>189</td>
<td>0%</td>
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<tr>
<td>Arabic</td>
<td>182</td>
<td>2%</td>
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<tr>
<td>Portuguese</td>
<td>175</td>
<td>4%</td>
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<tr>
<td>Russian</td>
<td>170</td>
<td>20%</td>
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<tr>
<td>Japanese</td>
<td>170</td>
<td>22%</td>
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<tr>
<td>German</td>
<td>125</td>
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## Domains

<table>
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<th>Country</th>
<th>Registrar</th>
<th>Fee (US$)</th>
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<tbody>
<tr>
<td>Oman (.om)</td>
<td>OmanTel</td>
<td>100</td>
</tr>
<tr>
<td>Libya (.ly)</td>
<td>Alshaeeen company</td>
<td>100</td>
</tr>
<tr>
<td>Jordan (.jo)</td>
<td>NIC</td>
<td>70</td>
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<tr>
<td>UAE (.ae)</td>
<td>ETISALAT</td>
<td>70</td>
</tr>
<tr>
<td>USA (.com)</td>
<td>Network Solutions</td>
<td>40</td>
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<td>Leb. (.lb)</td>
<td>American University</td>
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<tr>
<td>Saudi Arabia (.sa)</td>
<td>KACST</td>
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ISP policy

- How many?
  - Number of ISPs does not necessarily equate to high Internet access

- How much?
  - License fees, other fees

- How to?
  - Can ISPs provide own domestic and international infrastructure?
  - National and international connectivity issues
RECOMMENDATION D.50

International Internet connection
(Montreal, 2000)

recommends

that administrations involved in the provision of international Internet connections negotiate and agree to bilateral commercial arrangements enabling direct international Internet connections that take into account the possible need for compensation between them for the value of elements such as traffic flow, number of routes, geographical coverage and cost of international transmission amongst others.
Digital divide in the Arab region

Internet users as % of population

UAE: 17%
KWT, QAT, SAU, TUN, ARAB, MAR: 1%
LBY, COM, DZA, SDN: 0%

All developing countries
Universal access

- Many cannot afford individual access to Internet
- Providing public access to Internet via community centres, cyber cafes, schools, etc.
- Tunisia Public INTERnet (Publinet)
  - 50% of investment cost met by government; rest from low interest loans
  - > 100

Source: ATI (www.ati.tn)
Mobile Internet

- Mobile emerging as viable platform to access Internet
- 2G: SMS, WAP, GPRS
- 3G: To launch next year

<table>
<thead>
<tr>
<th>Arab region Millions</th>
<th>3.9</th>
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<tbody>
<tr>
<td>Personal Computers</td>
<td>2.6</td>
</tr>
<tr>
<td>Mobile Phones</td>
<td></td>
</tr>
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</table>
Mobile browser or mobile dial-up?

i-mode in Japan

Wireless web access from Palm Pilot

Singapore
Strategies

• Transition to IP-based network
• Understanding IP Telephony
• Internet application development
• Regulatory & policy advice
• Comparative experience (case study)
• Universal access models