INTUG

Ubiquitous networks and services

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INTUG content

- about INTUG
- fixed networks
- broadband
- wireless
- ubiquity
- conclusions



INTUG what is INTUG?

- members
 - national associations
 - corporations
 - individuals
- activities
 - ITU and WTO
 - OECD
 - APEC TEL, CITEL
 and the European Union



INTUG our aims

- real and effective competition
- genuine choice for users
- lower prices
- higher quality
- more innovative services
- constructive co-operation with
 - international bodies
 - governments
 - regulators



INTUG priorities

- 1. open access to global mobile networks
- 2. regulatory best practice
- 3. liberalization
- 4. universal access
- 5. broadband
- 6. leased lines
- 7. IP telephony
- 8. numbering



INTUG fixed networks

- sharp decline of voice revenues:
 - cheaper technologies
 - competition
- growth of monthly subscriptions:
 - broadband
 - voice telephony
 - entertainment and services
- competition with cable television networks

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INTUG economies of scale

- Korea
 - 11M lines since end of 2002
 - of which 2M are now VDSL (20-50Mbps)
- Japan
 - 15M lines + 400,000 per month
 - JPY 4,000 per month for 45Mbps
- China
 - 11M ADSL at end of 2003 +11M in 2004
 - 2M cable modems
 - 1M BWA 3.5GHz
- India
 - aiming for an initial 10M lines
 - truly massive content industry



INTUG wireless LANs

- offices and campuses
- homes (broadband + Wi-Fi):
 - Internet access
 - telephony
 - video on demand
 - gaming
 - new consumer electronics
- hot spots



INTUG wireless networks

- GSM and CDMA for voice
- CDMA upgraded to data services
 - Japan, Korea & USA \$35 per month
 - 300kbits/s to 2Mbits/s
- GSM struggling to upgrade to GPRS/EDGE/3G
 - very little revenue generated
 - expensive handsets
 - data revenue mostly SMS



INTUG handsets

- very strong manufacturing brand names
- fierce competition
- ubiquitous cameras
- further capabilities:
 - Bluetooth?
 - Wi-Fi?
 - DAB/DVB?
- manufacturers need volume
- disappointment of PDA market
 - what lessons from that?



INTUG mobile content alternatives

- against declining voice revenues, there should be a growth in content and services
- satellite broadcasting
- terrestrial transmissions:
 - Digital Audio Broadcasting
 - Digital Video Broadcasting
- terrestrial broadband plus:
 - Wi-Fi hot spots
 - Wi-Max and Fixed Wireless Access

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INTUG fixed-to-mobile rates

- notoriously expensive to call to mobiles with CPP
- heavy regulatory action to reduce the prices, but taken far too long
- looking increasingly expensive compared with VoIP
- too expensive to be included in monthly flat fee subscriptions for triple play

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INTUG classes of telephony

- fixed on copper and fibre networks
- limited mobility:
 - CMDA/WLL
 - PAS
- mobile GSM or CDMA
- multi-mode handsets
- "nomadic" VoIP with PDA, laptop or PC plus a few special phones
- unification in service offerings



INTUG financial markets

- have strange and changing views of telecommunications
- hyped the dot.com boom
- favoured mobile over fixed:
 - but now only believe in ARPU
- favoured broadband over long-distance
- always looking for new businesses that:
 - take revenues away from existing operators
 - that generate additional spending by
 - individuals
 - businesses



INTUG conclusions

- financial markets want winners
- so far convergence has only losers
- mobile operators insist they are different/special but still voice+SMS
- fixed operators are once again growing with broadband

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ubiquitous services have real added value for users

INTUG thank you

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