

**INTUG**

First Tuesday, Jo'burg 1 iii 2005  
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# IP telephony

## a global user perspective

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# INTUG contents

- about INTUG
- closing the digital divide
- challenges to policymakers
- challenges to operators:
  - fixed
  - mobile
- conclusions

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# INTUG what is INTUG?

- members:
  - national associations  
in South Africa it is **CUASA**
  - corporations
  - individuals
- activities:
  - ITU and WTO
  - OECD
  - APEC TEL, CITES  
and the European Union

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# 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

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# INTUG closing the digital divide

- lower costs, so more affordable telephony (e.g., Bhutan is using Voice over Wi-Fi)
- in many developing countries incumbent operators are denying, delaying and degrading VoIP
- some governments support this, trying to retain foreign currency revenues
- other governments use competitive telecommunications markets to:
  - attract Foreign Direct Investment (FDI)
  - improve national competitiveness
  - improve communications with their nationals living abroad



# INTUG VoIP in Africa

VoIP is an important technology that has the potential to transform telephony in Africa. Entry of IP telephony service providers whether legal or illegal in domestic markets has facilitated the acceleration of pace of market liberalisation and the introduction of competition in the long-distance and international service markets.

The general approach evidenced in Africa of prohibition is at best, short sighted, and at worst, a serious threat to innovation, eventual competition and overall consumer welfare.

Tracy Cohen and Russell Southwood  
CTO report, funded by UK DfID



# INTUG challenges to security

- emergency services:
  - access to
  - provision of location information
- law enforcement authorities:
  - provision for wire tapping
  - data preservation
  - data retention
- denial of service attacks
- viruses, worms, trojans and other malware
- SPIT - SPam over Internet Telephony
- VOMIT - Voice over Misconfigured Internet Telephony



# INTUG challenges for policy makers

- declining cost of basic telephony
- increasing range and richness of services
- blurring of traditional distinctions
- change undermines:
  - the regulatory regime
  - the established operators
  - fixed opinions
  - mechanisms to fund universal service

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# INTUG challenges for regulators

- assignment of telephone numbers:
  - geographic and/or non-geographic
  - “nomadic” national and cross-border
- quality of service:
  - defining
  - measuring
- anti-competitive effects of bundling
- definition:
  - one service or many?
  - how to distinguish types?
- access for the disabled to VoIP services

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# INTUG challenges for fixed carriers

- low (economic) barriers to entry
- new carriers with lower cost structures
- loss of traditional revenues
- perceptions of the financial markets:
  - they do not like declining revenues
- additionally, in developing countries:
  - lack of resources, skills and capital
  - “grey market” eroding their profit margins
  - bundling with broadband and video is not financially significant



# INTUG VoIP as an application

- instant messaging (ICQ, Yahoo, etc)
- Skype:
  - is not a service
  - can reach 2,000,000 concurrent users
  - shows on-line status of “buddies”
  - can be embedded in a PDA
- games consoles with voice (and Wi-Fi):
  - Nintendo DS
  - Sony PSP

# INTUG developed countries

- incumbents challenged by cheap VoIP
- obvious retail response is to bundle, to conceal per minute rates:
  - “all you can eat” national calls
  - DSL plus “telephony” (plus video, etc.)
  - but excluding fixed-to-mobile
- in-bound numbers in other cities/countries
- enormous benefits from economies of scale:
  - free on-net calls
  - Metcalf’s law

# INTUG Japan

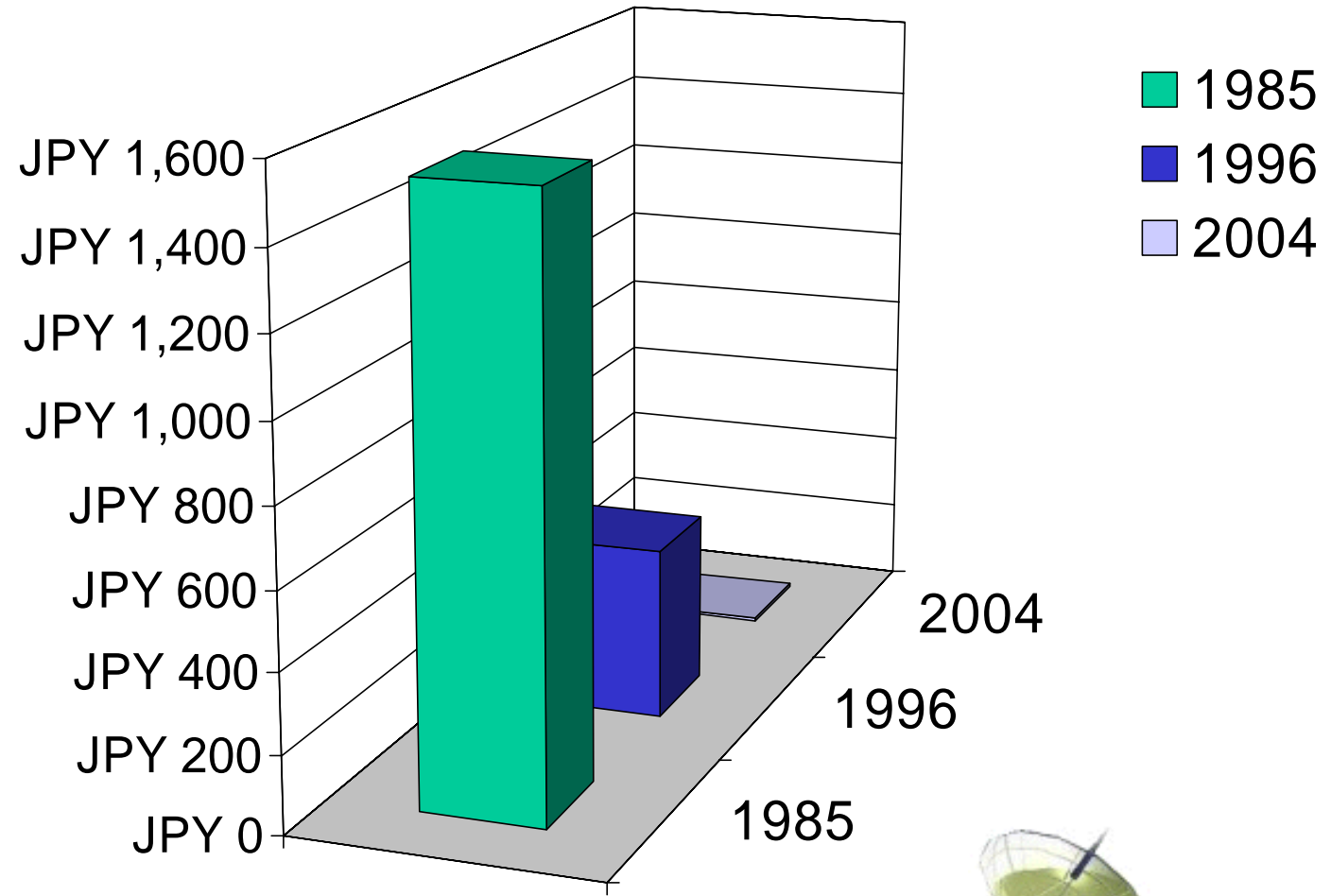
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- BBphone launched in August 2002
  - now has > 4 million lines
  - significant factor in consumer selection of broadband supplier
  - free on-net calls
  - ¥ 7.5 for 3 minute call to PSTN in USA
- NTT launched VoIP in February 2003
- some operators peering VoIP August 2003
- ministry has:
  - defined 4 classes of QoS
  - special 050 number range

# INTUG call from Japan to the USA

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ZAR 1 = JPY 17



# INTUG United States of America

- Vonage (unlimited calls within USA and Canada):
  - area codes available in most states
  - US\$ 24.99 per month residential
  - US\$ 49.99 per month small business
- Broadvoice:
  - Unlimited world US\$ 24.95 per month (35 countries, to fixed not mobile)
  - also numbers for United Kingdom
- light regulation, but:
  - contribution to universal service fund
  - engineered to allow wire-tapping
  - access to emergency services
  - but rates are not regulated



# INTUG challenges for 3GSM operators

- Arun Sarin (CEO, Vodafone) thinks VoIP is 3-5 years away from mobile
- VoIP “prices” make fixed-to-mobile look yet more expensive:
  - for many, the only itemised call charges
- can MNOs move to a “flat fee” model?
  - for subscription customers?
  - for pre-paid customers?
- VoIP over EDGE or UMTS?
  - not with per Megabyte charges
  - unnecessary with flat rate voice fees





# INTUG IP-VPN

- regulation in most countries is:
  - antiquated and silent on IP, MPLS, etc.
- thus very unclear what is (not) permitted
- problems of integration with mobile
- corporate users need to ensure:
  - dial-in access from fixed and mobile networks
  - IP access from DSL, cable modem, etc
  - break-out to PSTN and the Internet
  - binding Service Level Agreements
  - MPLS interconnection

# INTUG what users want?

- much cheaper telephony
- more advanced services
- a comprehensible range of options:
  - prices
  - features
  - quality
  - security
- real competition rather than regulatory gamesmanship

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# INTUG conclusions

- VoIP and IP Telephony offer real benefits:
  - for users/consumers
  - for established operators
  - for policy makers
- policy aims should be:
  - competitive market structures
  - incentives to provide better and cheaper services
- need to avoid regulatory arbitrage

# INTUG thank you

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