5th Global Symposium for Regulators (Geneva, 2004)

Licensing in an era of convergence

Presentations

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Developments in the ICT Sector

Trends in Telecommunication Reform 2004-2005

Global Symposium for Regulators
8-10 December

Doreen Bogdan-Martin
Head, Regulatory Reform Unit
Telecommunication Development Bureau (BDT)

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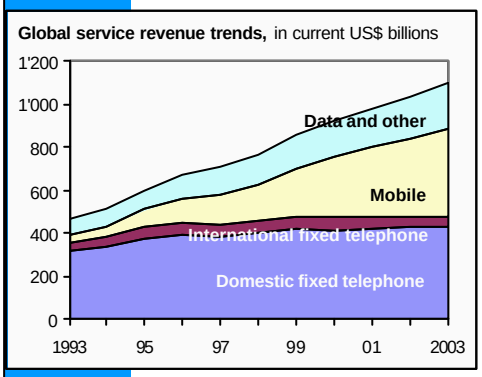
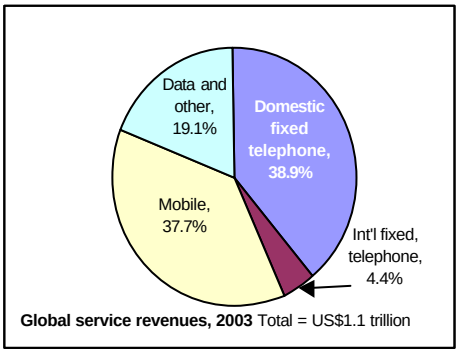
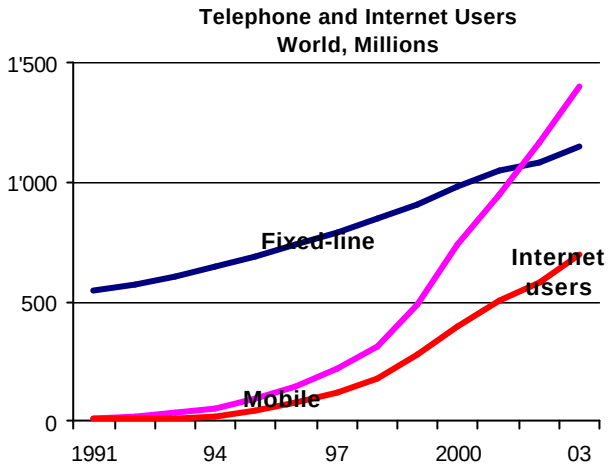
Revenues from public switched telephone, cellular mobile and other telecommunication networks worldwide, 1993-2003 and 2003, in current USD billions





Source: ITU World Telecommunication Indicators Database

ICT Users Worldwide 1991–mid 2004



Source: ITU World Telecommunication Indicators Database

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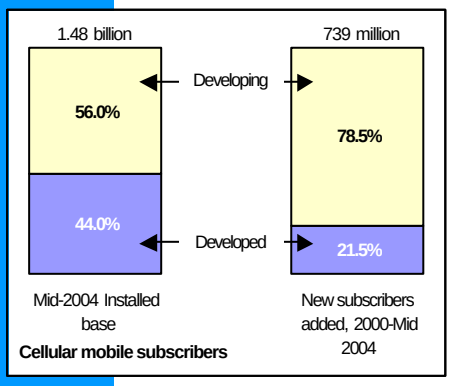
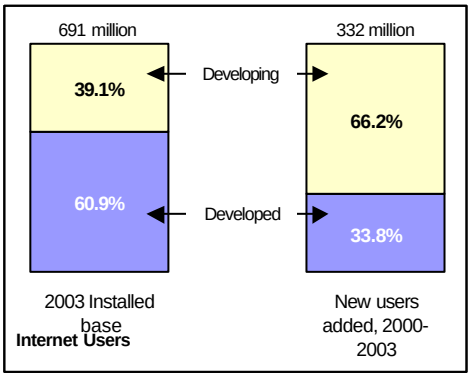
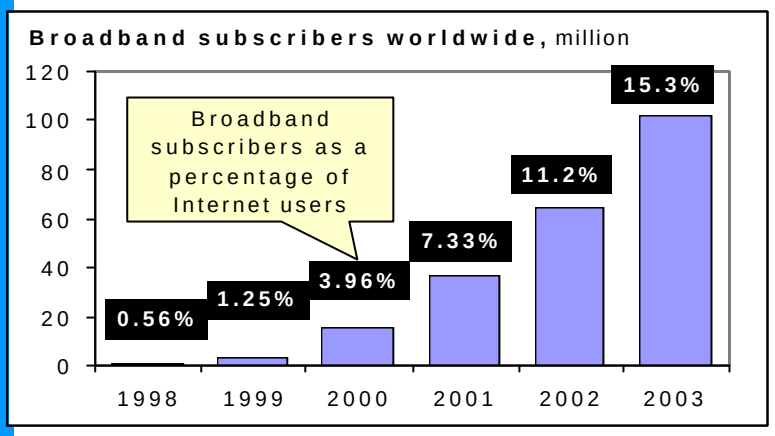
Cellular mobile users **m**id-2004 and mobile users added 2000-mid 2004; number of Internet users 2003, and new Internet users added, 2000-2003





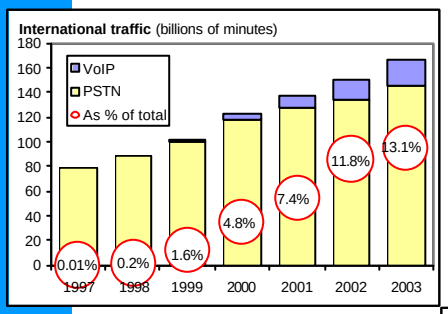
Source: ITU World Telecommunication Indicators Database

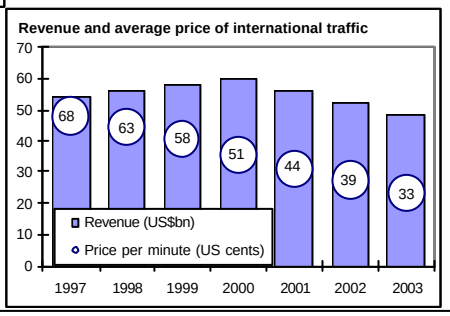
102 million broadband subscribers by end 2003



Source: ITU Internet Reports 2004 "The Portable Internet"

Trends in international voice traffic on public switched telephone networks (PSTN) and Voice over IP (VoIP) 1997-2003





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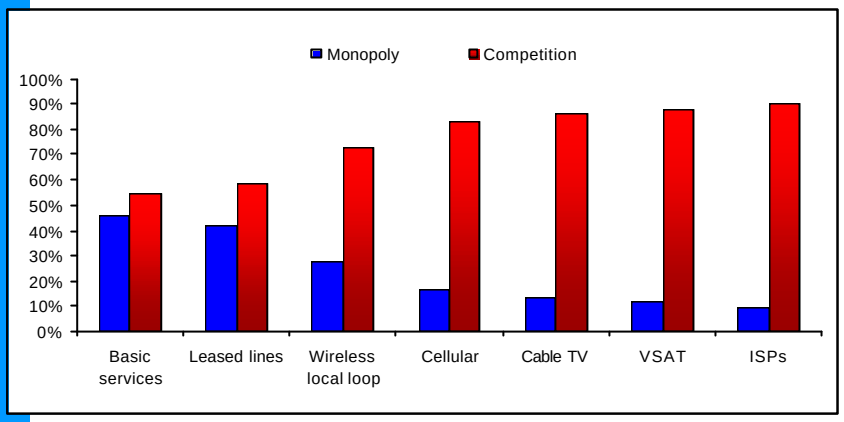
The legal status of competition in different *global* telecommunication market segments in 2004



Source: ITU World Telecommunication Regulatory Database

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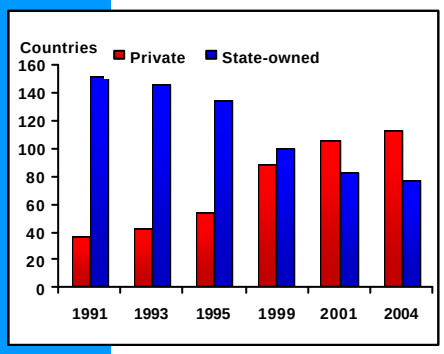
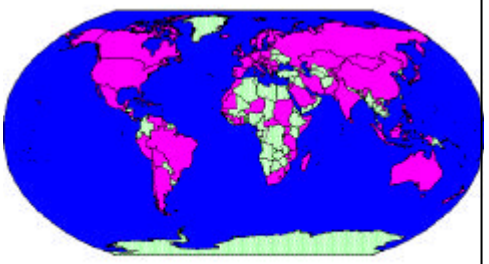
Ownership Status of the Incumbent Operator

from 1991 to 2004

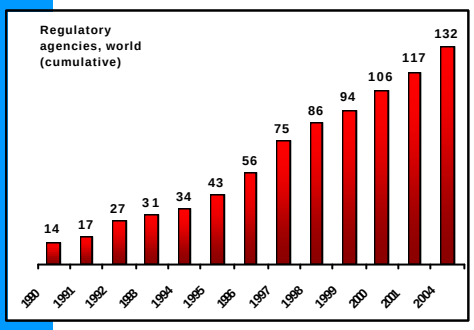


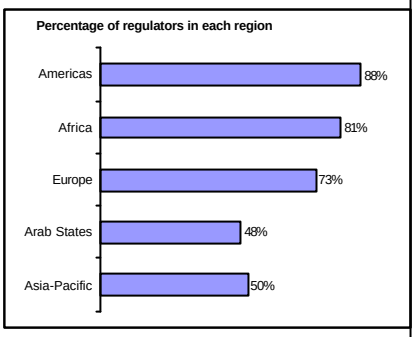


partly or fully private incumbent operators, 2004

Source: ITU World Telecommunication Regulatory Database

Trends: National Regulatory Authorities Worldwide and Percentage per Region



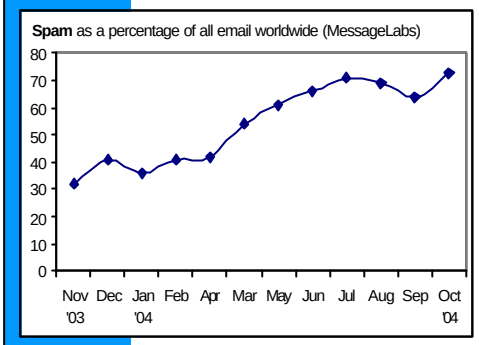


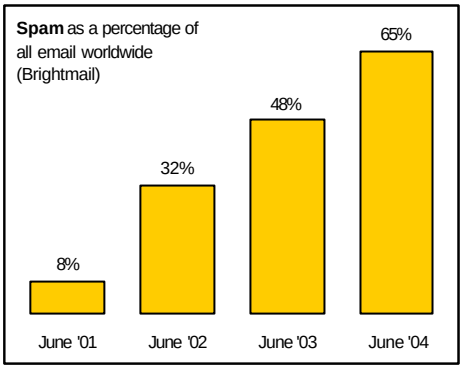
Source: ITU World Telecommunication Regulatory Database.

Other Regulatory Trends

- Freeing spectrum for use by ever growing numbers of wireless devices
- Authorizing greater use of VoIP
- Considering regulation of VoIP
- Combating Spam

Spam Growth





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Trends in Telecommunication Reform 2004/05

Chapter 1: DEVELOPMENTS IN THE ICT SECTOR
Chapter 2: WHY LICENSE?
Chapter 3: OPTIONS FOR TELECOMMUNICATION LICENSING
Chapter 4: LICENCE FEE PRACTICES: HISTORICAL PERSPECTIVES AND NEW TRENDS
Chapter 5: LICENSING APPROACHES IN AN ERA OF CONVERGENCE
Chapter 6: CONVERGENCE AND SPECTRUM LICENSING
Chapter 7: TRANSITIONING REGULATION FROM OLD TO NEW
Chapter 8: A NEW ERA IN LICENSING

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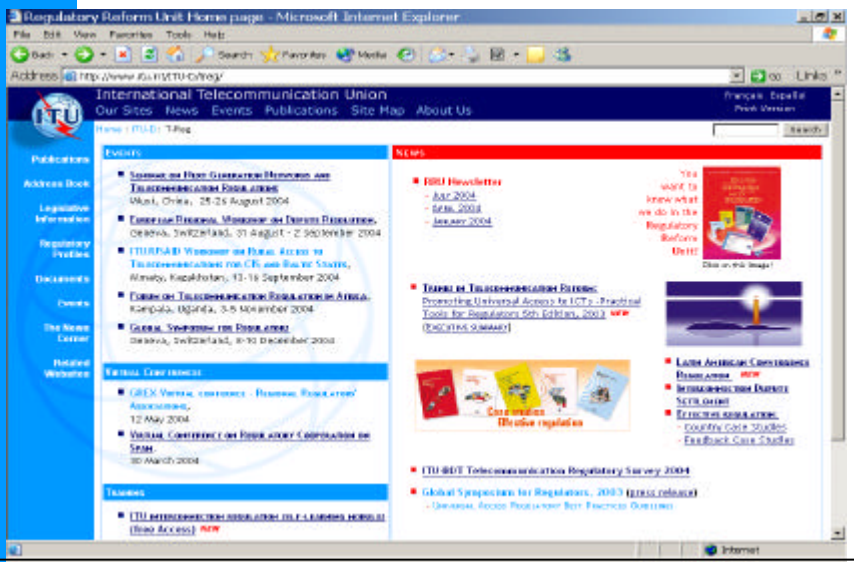
http://www.itu.int/ITU-D/treg/



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Options for Telecommunication Licensing

Eric Lie
Telecommunication Development Bureau, ITU

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Why License?

- Goals of Licensing
  - Allocation of scarce resources, regulatory certainty, establishing a framework for privatisation and competition, etc
- The Evolution of Licensing
  - From monopoly to competition
  - Licensing in the era of convergence
- Is Licensing Necessary?
  - Non-spectrum related licences
    - e.g. ISP licensing
  - Spectrum related licences
    - A “Spectrum Commons” Approach

Licensing Approaches

- **Individual Licensing**
  - Customized and detailed document
  - Often granted through a selection process
  - Used typically to assign scarce resources and to control market entry and the structure of the market
- **General Authorizations and Class Licensing**
  - Sets out regulations of general application to the class of services licensed
  - Typically requires notification or registration
- **Open Entry**
  - No licensing process or qualification requirements

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Licensing Classifications

- **Technology and Serviced-Based Categories**
  - e.g. Local, domestic long distance, mobile, etc.
- **Generic Classifications**
  - Facilities-based and service-based licensing
    - e.g. Carrier Licensing in Australia, FBO and SBO licensing in Singapore
  - Other generic classifications
    - e.g Multimedia Communications Services in Brazil, Unified Access Licensing in India.
- **A Single Classification**
  - e.g EU Authorisation Directive, Unified Licensing in India

Licensing Service Areas

- National or Regional Service Areas
  - Economies of scale vs. ease of market entry
- Universal Access and Rural Licensing
  - Packaging different regions and services
  - "Starting small" - focusing on SMEs
    - e.g. South Africa's "Under-Services Area Licence"
  - Lowering licensing and regulatory hurdles
- Cross-border Licensing
  - Common licensing guidelines
    - e.g. Guidelines on licensing for COMESA countries
  - A "One-Stop Shop"
    - e.g. Satellite licensing by the ERO

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Awarding Licences

- "First-come, first-served"
  - Applied only where demand is low
- "Beauty Contests"
  - Ability to take into account non-economic, subjective factors
- Lotteries
- Auctions
  - Used increasingly as a market-based mechanism to award licences with mixed results
- Combined or Hybrid Methods

Thank you

http://www.itu.int/itu-d/treg

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License Fee Practices - Historical Practices and Future Trends

Lynne Dorward
President, LADCOMM

Topics Discussed in Chapter 4

- Licence Fee Structures
- Licence Duration and Renewal
- Licence Fees Past and Present
- Mechanisms for Setting Fees
- Fees, Policy Objectives and Operator Profitability
- Socio Economic Benefits of Lower Licence Fees
- Factors to Bear in Mind

Licence Fee Structures

There are two principal categories of licence fees.

One time or non recurring fees

- Generally paid in a lump sum when licence is granted
- Three basic forms:
  - Market set fees (comparative evaluations)
  - Floor prices/minimum bids (auctions)
  - Spectrum evacuation fees (if wireless)

Annual or recurring fees

- Licence payments in regular intervals typically over the entire term of the licence
- Forms of recurring fees
  - Revenue based
  - Cost recovery
  - Spectrum usage
  - Additional contributions

Licence Duration and Renewal

Licence duration and renewal impacts perceived value.

- Licence term is critical when significant long term investments are needed (e.g.,3G, national fixed line)
- Over the last five years, typical duration has been 15 – 20 years
- Renewals and renewal procedures tend to vary by service or technology and are not always clearly defined; some examples:
  - Renewals often in 5 to 10 year blocks
  - Prior to renewal, review to determine compliance history
  - May be subject of public consultation
  - Need to provide advance notice of intention to renew
- In order to achieve greater service concessions, some regulators reduce licence renewal fees
- Recently, some regulators have permitted licence extensions to deal with technology delays (when licences are not technology neutral)
  - 3G initial terms extended to allow for delays in equipment availability
  - 2G terms extended to permit greater time to migrate to 3G
- **In general, this is an area requiring greater focus and transparency**

Licence Fees Past and Present

There have been significant fluctuations in licence fees over the last 5 years.

- Fluctuations primarily attributable to:
  - Rapidly changing expectations for 3G
  - Popping of the bubble in capital markets
  - Use of varying licensing approaches
- Most of licences in past 5 years have been mobile wireless as fixed line has migrated to general authorizations or class licences
- For the most part, fee setting attempts have been less successful with fixed line licences

Mechanisms for Setting Fees

Two principal mechanisms: auctions and government determined fees

- Pros and cons to both mechanisms and often the subject of heated debate
- Auctions typically viewed as most efficient way to ensure that licence fees reflect economic value of the licence
  - Requires careful design and, for the most part, the use of external advisors
- Strong policy arguments for establishing low licence fees and/or payment concessions
  - Fees may consist of spectrum charges plus administrative
- When setting licence fees, mechanism depends on type of licence:
  - Spectrum used on an exclusive basis
  - Non exclusive spectrum

Fees, Policy Objectives and Operator Profitability

Licence fees can be used as a policy instrument.

- Easier for regulators to use licence fees as a policy instrument in early market development stage
- Setting lower licence fees may facilitate:
  - Commitments from entrants on issues of social or economic concern
  - Lower barriers to entry resulting in increased competition
- Most important regulatory levers in encouraging new entrants are:
  - Low initial licence fees
  - Stability of recurring licence fees
  - Lessening impact of infrastructure costs through facilities and infrastructure sharing
  - In mobile, mandatory national roaming
  - Level of competition

Socio Economic Benefits of Lower Licence Fees

The social and economic benefits of lower licence fees are indisputable.

- Lower fees allow operators to invest more resources in infrastructure and service innovations; also result in lower prices for consumers
- Lower fees are often combined with other licence obligations
- Need to analyse trade off between fees and other considerations
  - Revenue factors are always capped by market demand
  - Higher licence fees affect business case viability by increasing cost of supply
  - At the same time, excessive socio-economic mandates impact ability to pay fees, viability of business case

Factors to Bear in Mind

Licensing practices and fees have become an extremely critical aspect of a country's regulatory regime.

- Ensure that licence applicants/bidders meet basic qualifications
- Take an incremental approach to licensing especially with new technologies
- Ensure that the regulatory framework is complete before rushing to licence
- Limit possibilities for anti-competitive behaviour
- Licence fees, while critical, cannot be viewed in isolation
- **An overall understanding of the various factors and their impact on market demand and supply costs will contribute to successful licensing initiatives**

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Licensing Approaches in an Era of Convergence

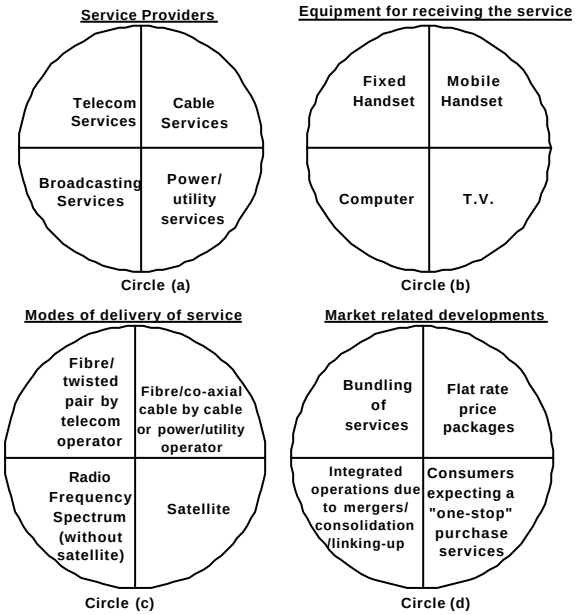
Dr. D.P.S. Seth
Member TRAI, India

Background

- **Before sector reform**,
  - In the era of government-owned telecommunication networks, most countries had an integrated monopoly operator offering different services with what in effect amounted to a single license.
- **Today, following the introduction of sector reform and licenses for specific services**
  - Governments and regulators seek to implement similar licensing rights, but in a competitive telecommunication market whose scope has expanded substantially and will continue to do so

Same technological and market forces that are driving market liberalization are also now leading policy-makers to recognize the changes brought on by convergence

Different aspects of convergence



Convergence is simultaneously a technological, market and regulatory trend

Impact of convergence on licensing Practices

- **Recognizing the need for Flexibility**
- **Adopting a new licensing framework**
  - **Competition**
  - **Licensing and non-licensing issues**
  - **Scarce resources**

Converged licensing options

- **Technology Neutral licensing**
  - Licensee retains the ability to choose which technology and equipment it will use to provide the licensed service
  - Provides a fair and predictable regulatory regime flexible enough to embrace technological and market developments.
  - Many countries -- including Australia, Bangladesh, the EU member states, India, Jamaica, and Malaysia -- have adopted technology-neutral licensing regimes.

  .
- **Service Neutral licensing**
  - Effectiveness of technology-neutral licensing approaches can be limited, not only by spectrum allocation practices but also by licences that require operators to offer specific services.
  - Service neutrality empowers operators to offer a variety of different services and applications, tailored to fluctuations in market demand.
  - Many countries -- including Australia,, EU, Japan Singapore and Malaysia -- have adopted service-neutral licensing regimes.

Forms of Converged licensing

Country	Licensing Regime
Australia	Carrier licence and carriage service providers
European Union	General authorisation regime
India	Unified licensing
Japan	Simple registration/ notification
Kenya, Malaysia, Mauritius, Tanzania	Converged licensing regime
Mali, Uganda	Converged licence for National Operators
Singapore	Facility-based and service-based licensing

Converged licensing objectives

- Encourage the growth of new applications and services.
- Simplify existing licensing procedures to ease market entry and operations.
- Create a set of stand-alone regulations so that issues such as interconnection, quality of service, universal access/service, and spectrum and number allocations can be addressed comprehensively.
- Ensure regulatory flexibility to address market and technological developments.
- Ensure efficient utilization of network resources, so that individual networks may be used to provide a broad range of ICT services.
- ·Encourage market entry by a full range of operators, including large scale and micro entrepreneurs.
- Ensure that the transition to a converged licensing regime fosters a level playing field among all competitors.

Unified Licensing in India

- **Based on TRAI recommendations Government decided to implement Unified Licensing on 11.11.2003**

- **Unified Licensing to be implemented in two steps:**
  - **First Unified Access Services License which has already been implemented.**
  - **Unified Licensing for all Telecom Services including Broadcasting services, to be implemented through a consultative process**
    - **Three consultation papers and several consultation meetings.**

Unified Licensing Regime-
Salient features of TRAI's recommendations

Framework of Unified Licence : Four categories of licenses:

- **Unified License**
  - **All inclusive license.**
  - **Key new aspects in line with NTP'99 :**

    a) Internet telephony

    b) Telecom services by broadcasting and cable operators.

- **Licensing through Authorisation**
  - **No entry fee or revenue share license fee.**
  - **Includes provision of passive infrastructure and bandwidth services, Radio Paging, PMRTS and Internet Services but not general internet telephony.**

Unified Licensing Regime-
Salient features of TRAI's recommendations

Framework of Unified Licence (Cont'd) :

- **Class License**
  - **No entry fee; Revenue share license fee same as Unified License.**
  - **Includes:**

    a) Niche operators

    b) All services other than under 'Licensing through Authorisation', which do not have both way connectivity with Public network e.g. VSAT.

- **All Stand Alone Broadcasting and Cable licenses (as at present).**

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Licensing in the Era of Convergence - Transitioning Regulation from Old to New

Sofie Maddens Toscano
Senior Regulatory and Policy Advisor

Introduction

- The rapid development of the (tele-) communications sector and recent technological advances have brought about new challenges for regulators globally
  - No one solution exists as the ultimate regulatory response to convergence, just as no one definition of convergence exists
  - The crucial policy decisions facing countries around the world relate to ensuring efficient markets and an optimal use of resources given the administrative, legal, cultural and social framework of the country
  - Regulators around the world are looking at creating dynamic and responsive policies and regulatory frameworks that address the issues raised by convergence in a proactive and flexible manner

Factors Determining Future Licensing (1)

- **Degree of Evolution of the Market**
  - Status of the Incumbent
  - Level of Competition already in the Market
  - Accommodation (or not) of Convergence and of New Services and Technologies

Factors Determining Future Licensing (2)

- **Vision of the Market**
  - Government Policy
  - International and Regional Trends and Commitments
- **Legal, Institutional and Administrative Framework**
  - Stakeholder Interests
  - General Acceptance of Proposals

Key Transitional Issues (1)

- **Licensing issues**
  - **Licensing Approach**
    - Licensing Model
    - Mapping of Existing License Categories
    - Form of License
  - **Speed of Transition**
  - **Treatment of New and Existing Licensees**
  - **Public Policy Objectives (Universal Access/Service)**
  - **Accommodating Technological Development**

Key Transitional Issues (2)

- **Regulatory Issues**
  - **Quality of Service**
  - **Interconnection Issues**
    - Who may/must interconnect?
    - Nature of Interconnection
    - Market Segments
    - Access to Infrastructure
  - **Scarce Resources**
    - Spectrum
    - Numbering

Key Transitional Issues (3)

- **Institutional Issues**
  - Convergence (or not) of Regulator
  - Need for Capacity Building
  - Decision Making Process and Stakeholder Consultation
  - Sanctions and Enforcement Issues

Thank you for your attention!!

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Licensing in an Era of Convergence: Notes on Spectrum Licensing

Dale N. Hatfield
Adjunct Professor

Notes on Licensing

- A Quick Review:
  - Traditional licensing and its rationale
  - Potential negative effects of licensing – discourages competitive entry and new investment through
    - Increased costs
    - Bureaucratic delays
    - Increased opportunities for arbitrary actions or corruption
  - Rethinking licensing in view of technological and marketplace changes

Notes on Licensing

- Spectrum Related Licenses
  - Importance of spectrum to economic and social development and to the safety of life and property and to national defense
  - Interference concerns
    - Improper design (e.g., spurious signals)
    - Proximity (frequency and place)
    - Improper operation
  - Wireless licensing in response to concerns
  - Reducing licensing requirements/restrictions in view of technological and other developments

Notes on Licensing

- Management of the Spectrum Resource
  - Still primarily an engineering oriented, centralized, “command and control” system exercised through network licensing requirements focused on eliminating or minimizing interference
  - Pressures on the spectrum resource due to growth in users, uses and capacity requirements compounded by rapid technological and marketplace changes

Notes on Licensing

- Management of the Spectrum Resource (Continued)
  - Criticisms of the traditional command and control system of spectrum management
    - Excessive rigidity – administrative scarcity
    - Stifles technical and service innovation
    - Lacks positive incentives for efficient use of the resource
    - Creates barriers to voluntary and involuntary sharing of the resource
    - Erects barriers to other beneficial transactions

Notes on Licensing

- Proposals for Reforming the Traditional System
  - Move more toward the use of market-place forces in the management of the resource
    - Property-like, exclusive rights
    - Flexibility of use
    - Spectrum trading
    - Examples – Australia, Guatemala, and New Zealand and, partially, the U.S.

Notes on Licensing

- Proposals for Reforming the Traditional System (Continued)
  - Move towards an unlicensed, spectrum commons approach
    - No exclusive rights – anyone can use certain blocks of spectrum subject only to certain basic rules (e.g., maximum power) and for any lawful purpose using any technology
    - Examples of the commons approach
    - Immense success of unlicensed equipment/service market (e.g., Wi-Fi) for internal WLANs, public hot-spots, and Wireless Internet Service Providers (WISPs)

Notes on Licensing

- Closing Thoughts
  - Advantages and disadvantages of licensed and unlicensed approaches to spectrum management are summarized in Trends 2004/2005
  - Examples of the successful use of unlicensed spectrum to provide Internet access are now widespread
  - Merits of combining unlicensed spectrum with the idea of providing Internet access on an unlicensed or minimally licensed basis
  - Notion of a “Universal Access Provider” in rural, low income, unserved or underserved areas as proposed my Prof. Michael Best in Trends 2003/2004

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Towards a New Era in Spectrum management

Dr. Chris Doyle
Senior Research Fellow

Traditional Approach: Multidimensional Licensing

- Service
  - Public voice telephony, VANS, broadcasting
- Technology
  - Cellular, fixed, wireless, satellite
- Geography
  - Local, regional, national
- Temporal
  - Duration
- Spatial
  - Land, maritime, aeronautical

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Neutrality in Spectrum Management

- The ideal
  - Any technology, providing any service in any frequency band
- The reality – constraints
  - Interference
  - Economics
  - Institutions

Spectrum Neutral Technologies

- Software Defined Radios
- Wi-Max
- Ultra-Wide Band Technology

Transitioning Towards Neutrality

- Licence exempt bands e.g. 2.4GHz band WiFi in some countries
- Reforms promoting greater use of market incentives such as spectrum pricing and spectrum trading
  - Australia
  - Guatemala
  - New Zealand
  - United Kingdom

Spectrum Flexibility, 3G and Wireless Broadband

- What is spectrum flexibility?
- Why 3G?
- Should flexibility apply to TDD and FDD spectrum allocations?
- Flexibility in Singapore and the United States

Spectrum Neutrality and Developing Countries

- Spectrum scarcity is often less of an issue
- To accommodate growth in new services and help promote access to broadband services, greater flexibility in spectrum management is likely to be help

Spectrum Neutrality: The Future

- Increase use of spectrum and liberalisation requires greater flexibility
- Flexibility can accommodate convergence and allow for more innovation
- Flexibility can co-exist with market incentives to promote more efficient use of spectrum
- Developing countries are especially likely to benefit by allowing greater flexibility in spectrum use

ITU GSR Spam session

Tackling the spam problem

Dr Bob Horton
Acting Chairman
Australian Communications Authority

Spam is damaging

- Spam has no social value
  - Spammers make big profits
  - But impose enormous costs on others
- Spam is undermining confidence in email
  - Risks doing the same for new mobile services

All nations have a role to play

- All nations are:
  - sources of spam to a small extent; and
  - victims to a significant extent
- No single, central solution: spam is a distributed problem that requires a distributed response
- All nations need to:
  - 1. take action against spam sources;
  - 2. educate and empower consumers and industry;
  - 3. join international efforts

Take action against spam sources

- Spam sources:
  - Actual spammers
  - open proxies, open relays, virus-infected machines
- Action:
  - Laws and action by regulators
  - ISP, mobile operator and e-marketer action
  - Educate, empower and motivate consumers
  - Technological solutions
  - International cooperation

Empower consumers and industry

- Educate spam victims to turn the tables & undermine spammers' business case:
  - filter out spam
  - protect themselves from viruses and other Internet security risks
  - don't respond to spam

International cooperation

- Regulators and industry can:
  - Share information and experience about proven, effective anti-spam practices
  - Share intelligence about spammers
  - Cooperate technically
    - eg. closing down zombies and open relays reported through the CERT network
- ITU, OECD, APEC, EC can coordinate.

International Telecommunication Union

An ITU-T Vision on SPAM

Telecommunication Standardization Bureau

Richard Hill
Counsellor, ITU-T Study Group 2

ITU-D Global Symposium for Regulators
Geneva, 8-10 December 2004

Overview

- Information about ITU
- High-level directives
- Understanding the problem
- Towards a standards-based solution
- Some existing ITU-T foundational standards
- Some additional ITU Resources
- Conclusion

About ITU…

What is ITU?

- International treaty organization founded in 1865 to facilitate international interconnection of telegraphy
- Unique partnership of industry and governments
- Three sectors:
  - Development (aid to developing countries)
  - Radio (radio spectrum and satellite slot allocations)
  - Standardization (formerly CCITT, for example modem standards) (now called ITU-T; secretariat is called TSB)
- In ITU-T industry and government work together to develop mutually agreed non-binding Recommendations

ITU-T membership

- *Member States:* ***189***
- *Sector Members:* ***162*** *ROAs*
  171 *SIOs*
  47 *others (including ISOC, regional, International organizations, etc.)*
- *Associates* ***84***
- *New applicants:* *2003:* ***55***
  2002: ***47***
  2001: ***75***
  2000: ***66***

Most active ITU-T sector members

ROAs

- France Telecom
- Telekom. Polska
- China Telecom. Corp.
- BT
- Deutche Telekom
- KDDI
- Bharat Sanchar Nigam
- Telenor ASA
- AT&T
- NTT DoCoMo
- Telecom Italia
- TeliaSonera
- Belgacom

SIOs

- NTT
- Cisco
- Nortel
- ETRI
- Huawei
- Siemens
- L. M. Ericsson
- ZTE
- Alcatel
- Infineon
- Lucent
- NEC
- Fujitsu

What is ITU's Situation (1/3)

ITU-T Approval and publication times

	before 1988	1989-1993	1993-1996	1997-2000	2001-2004
Approval time	4 years	2 years	18 months	9 months (exceptional case: 5 months)	2-9 months
Publication time	2-4 years	2 years	1-1.5 year	6-12 months	3-9 months

Notes:

1. Pre-published Recommendations, available on ITU-T Website, from a few days to four weeks after approval of the text.
2. Recs in force, pre-published, superseded/obsolete: available on ITU-T Website.
3. Forms of publication: paper, CD-ROM, electronic bookshop, online, etc.
4. FREE ONLINE ACCESS SINCE JANUARY 2001 (one free access per member, 3 free downloads for public)
5. "Approval time" counted between "determination/consent" and final approval

What is ITU's Situation (2/3)

- ITU-T is a dynamic, well-respected industry-government partnership (650 Sector Members)
- Examples of ITU-T Recommendations:
  - G.723.1 & G.729 - Speech coding for Voice over IP and other applications
  - H.323 - Packet based multimedia communication systems - the protocols behind Voice over IP, along with:
    - H.245 - Control protocol for multimedia communications
    - H.248 - Gateway control protocol (developed jointly with IETF)
  - X.509 – Public Key Infrastructure (encryption)
  - V.90 - 56kbit/s PSTN modems - providing ubiquitous worldwide Internet access
  - G.99x series - xDSL Recommendations for broadband access

What is ITU's Situation (3/3)
ITU-T–Electronic Publishing

- All Recommendations available online
- Key databases (for example, telephone country codes) available online
- Working documents available online

See http://www.itu.int/ITU-T/

ITU-T positioning

Intergovernment

ITU-T

Task Force

IETF

NGOs

ISO,IEC,
IEEE, ETSI, ECMA
TTC, Committee T1,
ARIB, TIA, SCTE

Forums & Consortia

1394TA	3GPP	3GPP2	AIM	AMF	AMI-C
AOEMA	AOW	ATMF	BINTERMS	Bluetooth	Cable Modems
CBOP	CDG	CIF	CII	CommerceNet	CommerceNet J
COS	CTFJ	DHF	DISA	DOPG	DSLF
ECE	ECHONET	ECOM	ECTF	EDIFICE	EEMA
EIDX	EMA	EMF	ERTICO	EWOS	FCIA
FCIA-J	FIPA	FRF	FSAN	GSM Assoc.	HNF
Home API	HomePNA	HRFWG	IDB Forum	IFIP	IFSA
IMTC	IMWA	IrDA	ITS America	ITS UK	JAVA
JCTEA	JECALS	JEDIC	JEMA	JICSAP	JIMM
JMF	LONMARK	MCPC	MDG.org	MITF	MMCF
Mobile Web	MOPA	MPLSF	MSForum	MWIF	OASIS
ODVA	OIF	OMG	OSGi	PCCA	PCISIG
PCMCIA	PHS MoU	PICMG	POF	Salutation	SCF
SDR	SSIPG	STA	TINA-C	TMForum	TOG
TSC	UMTS	USBIF	UWCC	W3C	WAP
WDF	Web 3D	WfMC	WIN Forum	WLIF	XTP Forum

Cooperation

- A.4 – Communication with forums/consortia
- A.5 – Organizations qualified for referencing
- A.6 – Communication with SDOs
- MoUs
  - MoU between IEC, ISO, ITU and UN/ECE Concerning Standardization in the Field of Electronic Business, 24 March 2000
  - MoU between ITU and ETSI, 14 June 2000

Members for Rec. A.4, A.5 and A.6 Forums/SDOs

A.4	A.5	A.6
ASN.1 Consortium	ARIB (Association of Radio Industries and Businesses)	ARIB
ATM Forum	ATM Forum	Committee T1
DSL Forum	Committee T1	CCSA
ETIS (e-and telecommunication info. services)	CCSA	ECMA
FRF (Frame Relay Forum)	DSL Forum	ETSI
IMTC (Multimedia)	ECMA Standardizing Information & Communication Systems	IEEE
IPDR Organization	ETSI (European Telecommunications Standards Institute)	JCTEA
IPv6 Forum	FRF	NIST
MPLS (Multi Protocol Label Switching) Forum	IEEE (Institute of Electrical and Electronics Engineers)	SCTE
MSF (Multiservice Switching Forum)	ISOC/IETF (Internet Society/Internet Engineering Task Force)	TIA
OASIS	JCTEA (Japan Cable Television Engineering Association)	TTA
OIF (Optical Internetworking Forum)	MPLS Forum	TTC
OMG (Object Management Group)	NIST (National Institute of Standards and Technology)	
SDL Forum Society	OASIS	
TM Forum (Tele Management Forum)	OIF	
W3C (World Wide Web Consortium)	OMG	
	SCTE (Society of Cable Telecommunications Engineers)	
	TIA (Telecommunications Industry Association)	
	TM Forum	
	TTA (Telecommunications Technology Association)	
	TTC (Telecommunication Technology Committee)	
	W3C	

How does ITU-T Develop Recommendations?

- Consensus of Sector Members and Member States
- Work typically driven by Sector Members
- Open (for members), transparent, bottom-up process
- Sensitive to national sovereignty: will only cover matters not considered to be national
- Recommendations are not binding, but tend to be followed because they represent a true consensus

Approval methods

- TAP – traditional approval process(Res. 1)
  - Determination at physical meeting
  - Approval at physical meeting
  - Text available before approval meeting
- AAP – alternative approval process (Rec. A.8)
  - Consent at physical meeting
  - Last call period
  - Approval if no substantive comments
  - Additional review or revert to SG or TAP
- Non-normative texts approved at Study Group level
  - e.g. Appendices, Supplements, Handbooks

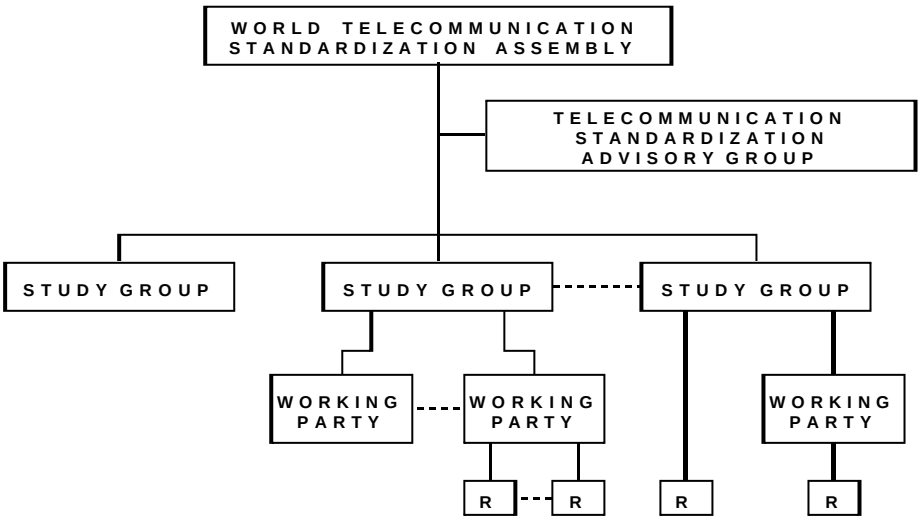
Approval time for ITU-T Recommendations

- Before 1988 — 4 years
- 1989-1993 — 2 years
- 1993-1996 — 18 months
- 1997-2000 — 9 months (5 months in exceptional circumstances)
- 2000 ➔ — Minimum 4 weeks (AAP)
  Average 8 weeks (AAP)
  9 months (TAP – regulatory matters)

AAP = Alternative Approval Procedure

TAP = Traditional Approval Procedure

ITU-T structure



R = RAPPORTEUR GROUP

ITU-T Study Groups

www.itu.int/ITU-T/

- **SG 2** **Operational aspects of service provision, networks and performance**
- **SG 3** Tariff and accounting principles including related telecommunications economic and policy issues
- **SG 4** Telecommunication management, including TMN
- **SG 5** Protection against electromagnetic environment effects
- **SG 6** Outside plant
- **SG 9** Integrated broadband cable networks and television and sound transmission
- **SG 11** Signalling requirements and protocols
- **SG 12** End-to-end transmission performance of networks and terminals
- **SG 13** Multi-protocol and IP-based networks and their internetworking
- **SG 15** Optical and other transport networks
- **SG 16** Multimedia services, systems and terminals
- **SG 17** **Data networks and telecommunication software**
- **SSG** Special Study Group "IMT-2000 and beyond"
- **TSAG** Telecommunication Standardization Advisory Group

ITU-T Study Group 17

- Lead Study Group for Communication System Security
  - Coordination/prioritization of security efforts
  - Development of core security Recommendations
  - Manage the ITU-T Security Project
  - Maintain Compendia on Security-related Recommendations and Security Definitions
  - Network / Protocol perspective
- Existing Recommendations include
  - Security architecture, model, frameworks, and protocols for open systems (X.800- & X.270-series)
  - Trusted Third Party Services (X.842/X.843)
  - Public-key and attribute certificate frameworks (X.509)
  - Security architecture for end-to-end communications (X.805)

ITU-T Study Group 2

- Lead SG on Service Definition, Numbering, Routing and Global Mobility → Users' perspective
  - principles of service provision, definition and operational requirements of service emulation;
  - numbering, naming, addressing requirements and resource assignment
  - routing and interworking requirements;
    - **human factors**
    - operational aspects
  - networks and associated performance requirements
  - interworking between traditional and evolving telecommunication networks;
- Existing Recommendations include
  - E.408 (ex-E.sec.1): *Telecommunication networks security requirements* >>
  - E.409 (ex-E.sec.2)*: Incident organization and security incident handling* >>
  - *Handbook on IP Policy* (under development) >>

High level directives

ITU Plenipotentiary Conference 2002

Resolution 130 - Strengthening the role of ITU in information and communication network security

resolves

1 to review ITU's current activities in information and communication network security;

2 to intensify work within existing ITU study groups in order to:

a) reach a common understanding on the importance of information and communication network security by studying standards on technologies, products and services with a view to developing recommendations, as appropriate;

b) seek ways to enhance exchange of technical information in the field of information and communication network security, and promote cooperation among appropriate entities;

c) report on the result of these studies annually to the ITU Council.

world summit on the information society
Geneva 2003 - Tunis 2005

- Two Phases:
  - Geneva, 10–12 December 2003
  - Tunis, 16–18 November 2005
- Website www.itu.int/wsis/
- Phase 1 Output Documents:
  - *Declaration of Principles*
  - *Plan of Action*
  - *URL:* >> http://www.itu.int/wsis/documents/doc_multi.asp?lang=en&id=1161|1160

world summit on the information society
Geneva 2003 - Tunis 2005

Declaration of Principles

- Build confidence and security in the use of ICTs (Sec.5, pg.5, para.35, 36, 37)
  - Strengthening the trust framework
  - Prevention of cybercrime/misuse of ICT
  - Fight SPAM (unsolicited electronic messages)

world summit on the information society
Geneva 2003 - Tunis 2005

Plan of Action (Action Line C5)

- Cooperation of all stakeholders (gov'ts, civil society, private sector)
- Guidelines, legislation, share good practices
- User education (privacy, etc)
- National legal instruments for formal recognition of electronic documents (e.g. authentication)
- Strengthen real-time incident handling and response
- Development of secure and reliable applications
- Contributions to the intergov'l agencies working groups (e.g. ITU)

ITU World Telecommunication Standardization Assembly 2004

Resolution 50 – Cybersecurity

resolves

1 that ITU-T evaluate existing and evolving new Recommendations, and especially signalling and communications protocol Recommendations, with respect to their robustness of design and potential for exploitation by malicious parties to interfere destructively with their deployment in the global information and communication infrastructure;

2 that ITU-T continue to raise awareness, within its area of operation and influence, of the need to defend information and communication systems against the threat of cyberattack, and continue to promote cooperation among appropriate entities in order to enhance exchange of technical information in the field of information and communication network security,

The report of the WTSA Cybersecurity Symposium is at:
http://www.itu.int/md/meetingdoc.asp?type=sitems&lang=e&parent=T01-WTSA-C-0088

ITU World Telecommunication Standardization Assembly 2004

Resolution 51 – Combating spam

Instructs the Director of TSB, in cooperation with the Directors of the other Bureaux and the Secretary-General

to prepare urgently a report to the Council on relevant ITU and other international initiatives for countering spam, and to propose possible follow-up actions for consideration by the Council,

ITU World Telecommunication Standardization Assembly 2004

Resolution 52 – Countering spam by technical means

Instructs the relevant study groups

in cooperation with the Internet Engineering Task Force (IETF) and other relevant groups, to develop, as a matter of urgency, technical Recommendations, including required definitions, on countering spam, as appropriate, and to report regularly to the Telecommunication Standardization Advisory Group on their progress

Understanding the problem

A Taxonomy…

- General Guidance/Architecture
  - Network perspective (→ *SG 17*)
  - Users' perspective (→ *SG 2*)
- System/Application-Specific (→ *SGs 4, 9, 11, 13, 15, 16, SSG*)
  - Secure Infrastructure
  - End-to-end security

Vulnerabilities, Threats and Risks

- **Vulnerability:** something to be exploited…
  - threat model (e.g. SS7)
  - design (e.g. Ambiguities in BGP4 parameters)
  - implementation (e.g. SNMP & ASN.1)
  - configuration (e.g. 802.11b – WiFi)
- **Threat:** *people* willing to exploit a vulnerability (hackers, criminals, terrorists, etc)
- **Risk:** the *consequences* of such an exploitation (data loss, fraud, loss of public confidence, etc)
- While *threats* change over time, security *vulnerabilities* exist throughout the life of a protocol

  → *Risks* must be continuously reassessed !!!

SPAM: a security risk

(among other things…)

- Security vulnerabilities…
  - Threat analysis
  - Implementation
  - Configuration
- … combined with a security threat (abusive e-mailers, virus creators, etc)
- … produces a security risk: SPAM

A comprehensive approach to combating SPAM

- Strong legislation
- Development of technical measures
- Establishment of industry partnerships
- Education
- International cooperation

Towards a standards-based solution

What to do?

- Pragmatism
- Learned-lessons for a comprehensive framework
  - X.400
  - SMTP
- Foundational standards
  - Protocol requirements
    → *Standardizers & Implementors*
  - Best practices → *Users' perspective*
- New or revised standards
- Transitional measures
- Clarify role of different players: ICT industry; governments; users (merchants; ISPs; private persons)

Lessons Learned

- Security considerations are a must!
- Understand SMTP vulnerabilities; e.g.
  - Lack of authentication mechanisms, that is positive identification of the sender (Eric Allman, creator of sendmail, *et alii;* and June 2004 US Federal Trade Commission Report to Congress *National Do Not Email Registry*)
  - No mechanism for an inbound host to selectively refuse a message (J.Postel, RFC706, 1975)
- Consider solutions already available in other frameworks
  → *e.g. ITU-T Rec. X.400 & X.500*
- Collect the best of existing Best Practices
- Players: all

A way forward

- Pragmatic, multi-pronged approach
- Educate users for safe use of existing systems
- Identify relevant existing or new Foundational Standards
  - *¡¡¡ **Standards**: a technical specification developed in an **open** environment, through a **consensus-based** decision process !!!*
- Standardizers & Implementors: agree on Foundational standards; agree on specific Standards
- Governments: identify actions that can help solve the problem (executive and legislative actions)
- Implementors: closely apply the agreed Standards
- Users and User Groups: strive to adhere to defined standards and disseminate Best Practices

Roles of Government

- Judicial
  - Enforce existing national legislation to curb abuses and ensure protection of consumer's rights
  - Frameworks for cooperation across jurisdictions
- Legislative
  - Create new or adapt existing national legislation to curb abuses and ensure protection of consumer's rights
- Executive
  - Public education initiatives
  - X.509 Public key Infrastructure / Digital Signature
    → Example: Spanish government
    http://www.cert.fnmt.es/ >>
  - Joint activity between regulators:
    - Sharing skills, knowledge, experience
    - Where legislation exists, joint enforcement
  - Multilateral frameworks for international cooperation (*ITU BDT: drafting group of 6 countries; Dec.2004*)

Roles of Industry

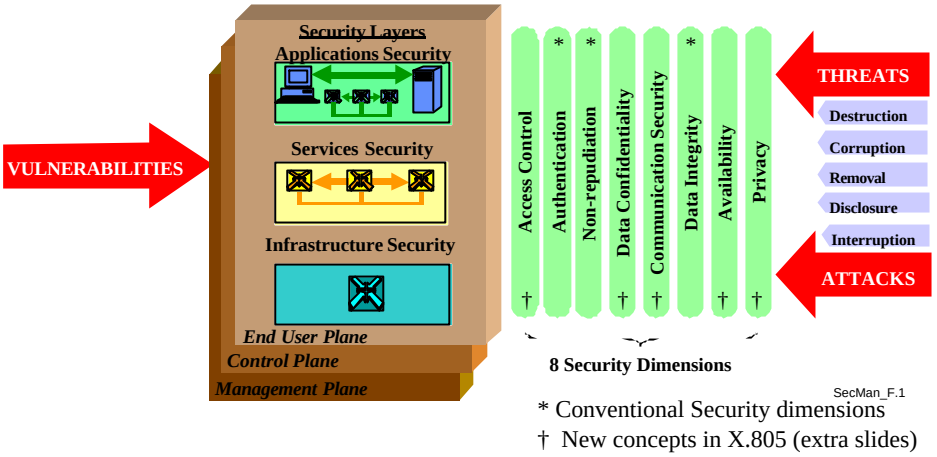
- Agree standards
  - For authentication mechanisms (in SMTP, or on top of it, or in successor protocol)
  - For subject field headers (e.g. "ADV:")
  - For meta-tags to describe message content
  - To communicate opt-in and/or opt-out lists
  - etc.
- Recognize that the problem is more than just Spam…

Roles of Users

- Flock together
  - Share experiences
  - Develop Best Practices
  - Participate in the debate, contribute to the "next steps" → influence the standardizers
  - Learn about secure practices
- Recognize that the problem is more than just Spam…
  - Irrelevant information & information overload
  - Need of change in paradigm / practices:
    - (Opt-in) distribution channels (RSS)
    - Electronic collaboration tools / distributed workspaces
    - Instant messaging

Some existing ITU-T foundational standards

X.805 - Security Architecture for End-to-End Communications



* Conventional Security dimensions

† New concepts in X.805 (extra slides)

- Vulnerabilities can exist in each Layer, Plane and Dimension
- 72 Security Perspectives (3 Layers ✖ 3 Planes ✖ 8 Dimensions)

X.400 – Message handling system and service overview

- Not widely implemented, but basic principles might be worth reusing (done for X.435 and IETF EDI standards)
- Defines Message Handling System (MHS) elements of service for
  - User Agent (UA)-to-UA [Mail Client]
  - Message Transfer Agent (MTA)-to-MTA,
  - UA-to-MTA, and
  - UA-to-Message Storage (MS) [Mail Server]
- Application Layer security services:
  - confidentiality,
  - integrity,
  - authentication,
  - non-repudiation and
  - access control

X.509 – OSI / The Directory: Public-key and attribute certificate frameworks

- 1st edition in 1988; 5th in preparation
- Written to satisfy multiple needs
- Extensibility allows organizations to enhance as needed
- Good cooperation between ITU, ISO, and IETF
- In products such as securing browser traffic and signing executable code
- Laws enabling electronic/digital signature
- Widely implemented, and imitated (e.g. LDAP)

Some additional ITU Resources

ITU Resources

- ITU-T Recommendations
  http://www.itu.int/rec/recommendation.asp?type=series&parent=T-REC >>
- ITU Activities on Countering Spam
  http://www.itu.int/osg/spu/spam/ >>
- ITU SPU newslog on Spam
  http://www.itu.int/osg/spu/newslog/categories/spam/ >>
- Virtual Conference on Regulatory Cooperation on Spam (30/Mar/2004)
  http://www.itu.int/ITU-D/treg/Events/Seminars/Virtual-events/Spam/ >>
- Cybersecurity Symposium (4 October 2004)

Conclusions

Conclusions: Problem recognition

- The social problems and network congestion caused by Internet SPAM are well recognized
- In the future, as the line between Internet appliances and telecommunications devices blur, there are opportunities for even greater misuse
- Action is needed, but the problem is complex

Conclusions: Key factors for success and challenges

- Understand existing vulnerabilities
- Take advantage of lessons learned and adopt a pragmatic, multi-pronged approach:
  - patches & fixes for the short-term
  - look for a mid- & long-term solution
- Develop a set of global and compatible open, consensus-based Standards, in particular for authentication
- Solutions need to consider national sovereignty & cost aspects
- Partnership between all players
- Rethink paradigms & practices to minimize information overload

ITU BDT Regulatory Reform Unit Activities On Spam Presented to 5th Global Symposium for Regulators Geneva, Switzerland 9 December 2004

Presented by Susan Schorr, Regulatory Officer

Regulatory Reform Unit

Telecommunication Development Bureau

First G-REX Virtual Conference 30 March 2004 Recognized:

- Spam is a serious global problem
- Requires a global solution
- Need to ensure regulators are talking to right people in each country
- Countries can share ideas and knowledge on practices
- A variety of cooperative actions identified

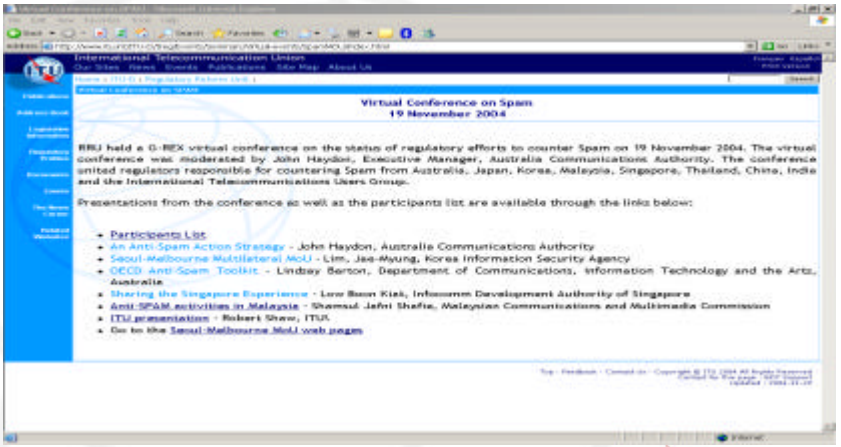
March 2004 G-REX Virtual Conference Cooperative Actions Identified

- Establishment of working links among regulators
- Sharing technical expertise, commercial intelligence, educational strategies and material
- Support for technical enforcement partnerships
- Enforcement and regulatory policy co-development

2004 ITU World Regulatory Survey Questions on Spam

- 2004 Survey included questions requesting 189 ITU Member States to:
  - Identify if anti-spam legislation exists, and if so, provide URL link
  - Identify in each country who is responsible for combating spam

19 November 2004 G-REX Virtual Conference on Spam



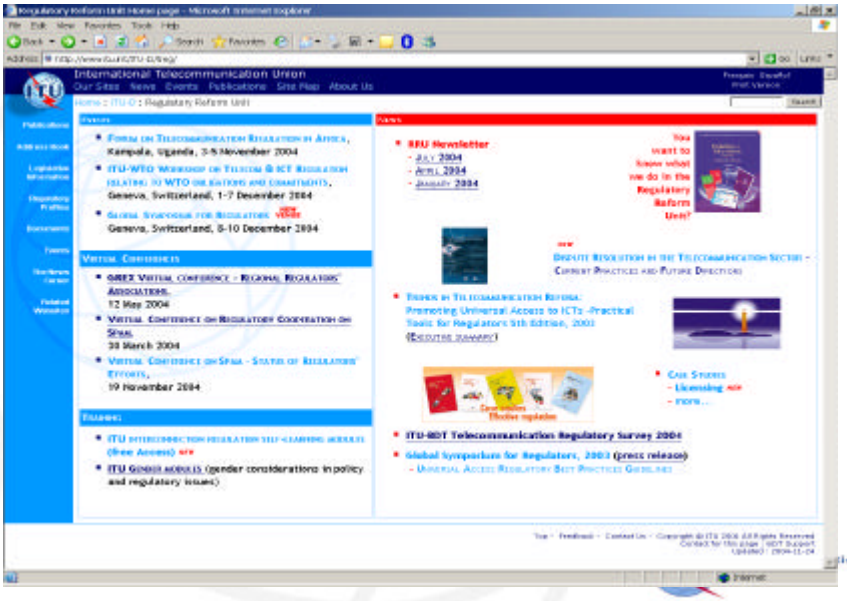
G-REX Regulators' Hotline Spam Questions

- **What government entity is taking care of this problem in your country (Agency, Commission and/or Ministry of Telecommunications and/or Information Technology and/or Competition Promotion, Ministry of Commerce)?**
- **What legal initiatives have been undertaken to crackdown on this practice?**
- **Which technological measures are most used by users and ISPs in your country to avoid the negative effects of spam?**
- **Do you have statistics on the negative effects that this practice has produced at the company and personal level, as well as ISPs in your country? These statistics can be expressed in terms of economic losses (in USD), lost man-hours, damage to databases, etc.**

How to register for G-REX

- G-REX is a service for regulators and policy makers and welcomes contributions in English, French and Spanish. Any regulator or policy maker interested in registering for G-REX is invited to do so at http://www.itu.int/ITU-D/grex/register.asp.
- Registrations from email addresses not affiliated with a regulatory body or policy maker should be confirmed with request on organization's letter head

http://www.itu.int/ITU-D/treg/



Thank You

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OECD Anti-Spam Toolkit

Tom Dale
Chair
OECD Task Force on Spam

Geneva 9 Dec 2004

The OECD

- 30 member countries
- Cooperation for economic and social development
- Research, analysis, publications
- International frameworks eg privacy
- Commitment to outreach
- www.oecd.org

OECD Task Force on Spam

- First meeting 22 October 2004
- Includes OECD member governments, business and civil society
- Main focus is international cooperation
- Series of projects to be delivered over next two years

Anti-spam Toolkit

- A strategic information source
- A source of practical information for policymakers and regulators
- A state-of-play information source on some aspects of spam
- Most importantly : A resource for all countries, OECD and non-OECD.

Anti-spam Toolkit : Elements

1. Anti-spam Regulation
2. International enforcement/cooperation
3. Industry-led initiatives
4. Existing & emerging technologies
5. Education & awareness-raising
6. Cooperative partnerships

Anti-spam Toolkit

- Still a work in progress.
- Will complement other anti-spam and e-security initiatives eg model legislation
- National anti-spam frameworks remain a fundamental building block.

Other Task Force Work

- Liaison with anti-spam regulators
- Spam metrics
- Coordination and cooperation with ITU, APEC & other anti-spam initiatives

THANK YOU

Tom.dale@dcita.gov.au

ITU GSR 2004

Spam - Sharing The Singapore Experience

Presented by Muhammad Hanafiah
muhd_hanafiah@ida.gov.sg

Infocomm Development Authority of Singapore

9 Dec 2004

iDA SINGAPORE

1/ **Spam Situation in Singapore**

iDA SINGAPORE

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Spam Situation in Singapore

The Facts: IDA Survey on Unsolicited E-mails (2003)

- **IDA commissioned a survey on unsolicited e-mails in Oct 2003 involving 1,005 e-mail users from 1,549 households**
- **Almost all e-mail users have received spam (94%) with spam accounted for almost 1 out of every 3 e-mails received**
- **Productivity loss due to handling spam by e-mail users in Singapore is estimated at S$23 million per year**
- **Time spent on handling spam accounts for 17% of all time spent on e-mails (6.6 mins per day for each spam recipient)**
- **On average, spam from overseas-based companies formed about 77% of the total spam received**

iDA

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Spam Situation in Singapore

- **25 May 2004 – Multi-pronged Spam Control Approach announced**
  - Legislation
  - Industry Self-Regulation
  - Public Education
  - International Co-operation

iDA

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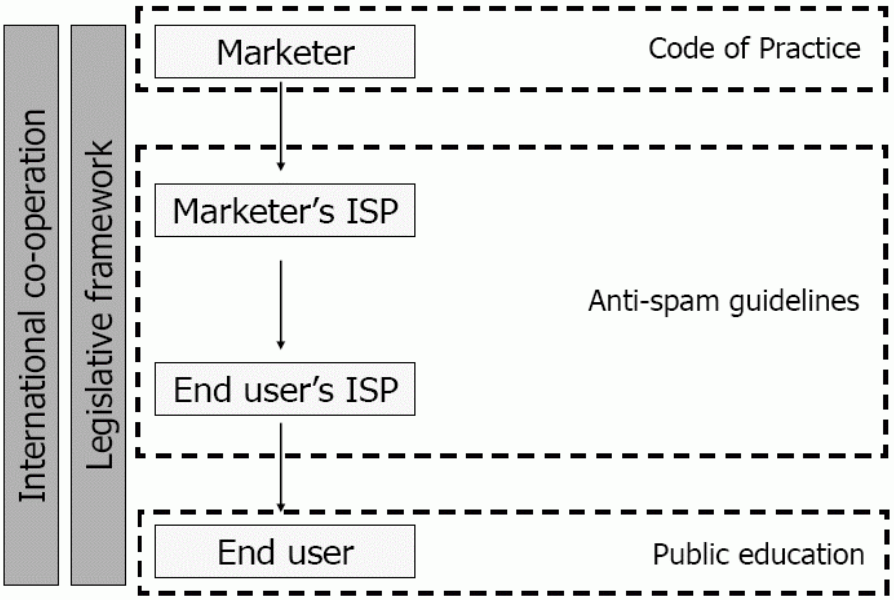
Multi-pronged approach



www.ida.gov.sg

Spam Situation in Singapore

- **Public Consultation on the Legislative Framework for Spam Control**
  - Ended on 26 July 2004
  - 60 responses from the public
  - Respondents include ISPs, consumer protection groups, individuals, academics…etc
  - Almost all in favour of legislation to control spam
  - A variety of views on the details
    - e.g. Bulk vs non-Bulk, amount of damages, guidelines for 'legitimate spam'…etc (details in a later slide)

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2 / **Elements of Spam Control Legislation**

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Balance is the Key Element

- Main Purpose of Legislation is to curb indiscriminate form of email spam
  - E.g. spammers who sent out millions of emails harvested from the Internet
- A balance approach is needed to take into consideration both the interests of consumers and email marketers
  - Businesses should not be deprived of using emails to reach out to their customers
  - Consumers should be able to choose between receiving or not receiving spam
- Email users should understand that legislation is not the 'silver bullet' to end all spam
  - Normal precautionary measures used in the handling of emails and spam control technology should also be adopted

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Hybrid Approach

- **Opt-In for**
  - Sending of emails using dictionary attacks or use of email address harvesting software
- **Opt-Out for**
  - Sending of other unsolicited commercial emails that comply with a set of stated rules including
    - ADV label
    - Unsubscribe facility
    - Correct subject title
    - …others

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Something For Everyone

- **For consumers and businesses**
  - Increases transparency & accountability of e-mail marketing on what is permitted / not permitted
  - Empowers consumers & businesses who receive spam to decide how to deal with unsolicited commercial e-mail
- **For ISPs**
  - Gives ISPs (and indirectly, their subscribers) a right of legal recourse against spammers who spam indiscriminately
- **For marketers**
  - Will not stifle legitimate online marketing and e-commerce
  - Creates a level playing field for legitimate marketers

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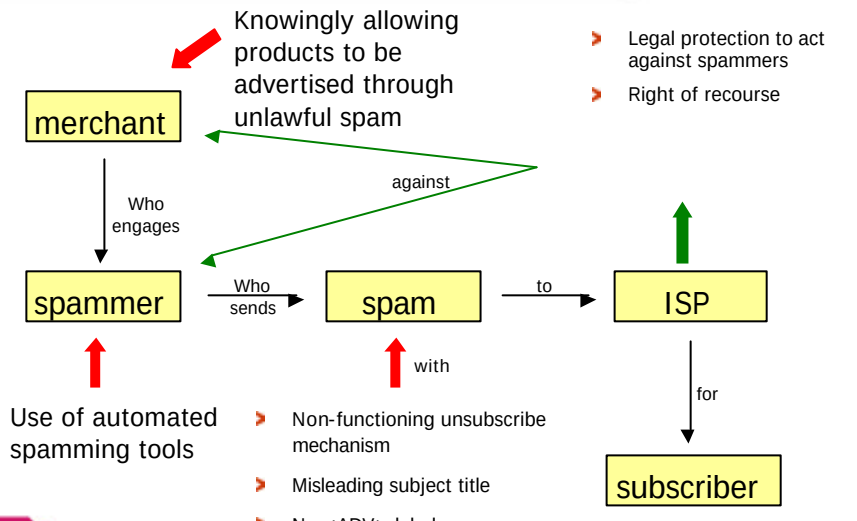
… by increasing transparency, accountability & …



- Legal protection to act against spammers
- Right of recourse

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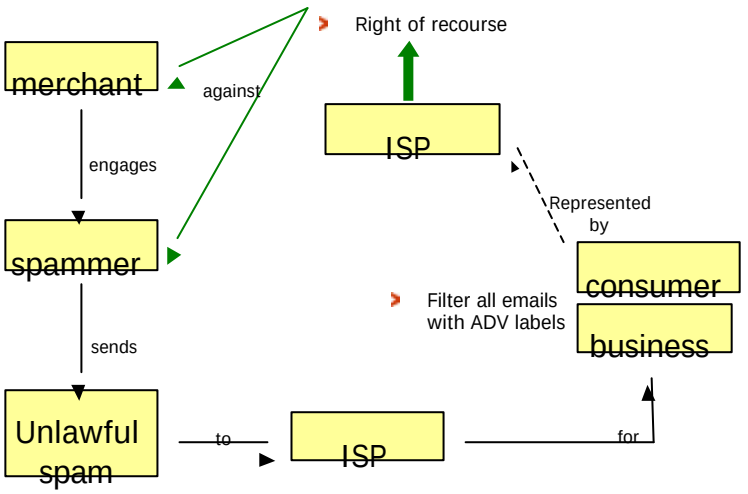
… empowering the user



- Right of recourse
- Filter all emails with ADV labels

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Tricky Issues Include

- Bulk versus non-Bulk
  - Should bulk requirement be imposed? If not, would personal unsolicited commercial emails e.g. emails among friends be affected? If so, what should be the bulk requirement?
- Statutory Damages?
  - Should a pre-established range of damages be imposed as proving of damages for spam related incidents is difficult?
- Guidelines?
  - What kind of guidelines to impose on legitimate email marketers so that they can still communicate with their customers?
- Exceptions?
  - Should there be any exceptions, perhaps for the Government?

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3/ Industry Self-Regulation

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Industry Self-Regulation

- Efforts by ISPs

  Major Internet Service Providers (ISPs), under the facilitation of IDA, have come together to set up anti-spam guidelines. These guidelines serve as guiding principles to be adopted jointly by the ISPs to help reduce e-mail spam for their subscribers.

- Efforts by DMAS (Direct Marketing Association of Singapore)

  The DMAS has launched an E-mail Marketing Code of Practice for its members. It will also be setting up a Consumer Communications Preference Programme to be launched before the end of this year that will allow e-mail users to register their preference not to receive unsolicited commercial e-mail.

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4/ Public Education

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Public Education

- 42% of e-mail users in Singapore are unaware of how they can protect their e-mails against spam

- National Anti-Spam Website (www.antispam.org.sg)
- IDA Anti-spam Awareness Drive
- SiTF Anti-spam Initiative
- Public Education Efforts by CASE and SBF

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5/ International Cooperation

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What Could We All Do?

- Spammers would relocate to territories without spam control regime
  - Crucial for countries to implement regime, either in the form of legislation or industry self-regulation
- Spam is a relatively 'new' issue for legislative control
  - Legal framework needs time to evolve, cases have to be tested in court to highlight any inadequacies in the legislation
- Sharing of information & approaches
  - Information sharing among countries to shorten the learning curve in implementing spam control regime

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Conclusion and Summary

- No silver bullet for spam
- Multi-prong approach is needed
  - Legislation
  - Public education
  - Industry-self regulation
  - International cooperation

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Suruhanjaya Komunikasi dan Multimedia Malaysia
Malaysian Communications and Multimedia Commission

Anti-SPAM Activities in Malaysia - Current Situation, Regulatory Environment and Future Developments

ITU Global Symposium for Regulators
8 - 10 December 2004
Geneva, Switzerland

Suruhanjaya Komunikasi dan Multimedia Malaysia
Malaysian Communications and Multimedia Commission

Agenda

1. SPAM in Malaysia: The Current Situation
2. The Malaysian Approach:
   a. Regulatory Environment
   b. International and Regional Cooperation
3. A Call for Action: Future Developments

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1. SPAM in Malaysia: The Current Situation

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SPAM in Malaysia: The Current Situation

According to Malaysia's National ICT Security Emergency Response Center (NISER), the top 10 originating countries of SPAM in Malaysia are:

- USA - 59.09%
- China - 5.56%
- Korea - 4.46%
- Canada -3.33%
- Japan - 2.12%

Taiwan - 2.09%
UK – 1.66%
France – 1.60%
Germany - 1.30%
Local – 3.15%

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The Malaysian Approach

1. Report of public discussion paper published on 18 February 2004

2. Developed multi-prong action-plans to combat SPAM based on:
   a. Self-Regulation
   b. Management by Service Providers
   c. International cooperation
   d. Legislative recourse

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Self-Regulation

1. Awareness/Education - nation-wide awareness program targeting business and consumer end-users
2. Setting up a SPAM portal (www.mcmc.gov.my/mcmc.what_we_do/ins/faq.asp)
3. Promotion of technology-based solutions
4. Development of an IASP sub-code benchmark on SPAM for the Consumer Forum (IASP and Mobile)

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Industry – Regulator Cooperation

The establishment of Information Sharing Forum (ISF):

1. ISPs and relevant stakeholders from private and public bodies
2. Working towards guidelines/ best practices, “whitelist” of IPs and “blacklist” of known spammers and IPs
3. Developing Anti-SPAM Toolkit (Q1 2005) with:
   a) Technical guidelines/ solutions; and
   b) Compendium of best practices.

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Industry – Regulator Cooperation (cont.)

4. Monitoring of International Blocklist Servers (eg. Spamhaus, etc.)

5. Sharing of information, eg. Malaysian IASPs informed about list of local IPs listed by Anti-SPAM Coordination Team of Internet Society of China as sending SPAM.

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Management by Service Providers

1. Enforcement of subscription contract between Service Providers and customers

2. Service Provider's obligations under the Content Code and General Consumer Code

3. Sub-codes:
   - Internet Service Providers on SPAM; and
   - Mobile Operators on SMS SPAM

3. Promotion of technology-based solutions

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Legislative Recourse

1. Malaysia has no specific anti-SPAM legislation
2. Presently relying on Section 233 of the Communications and Multimedia Act 1998 (CMA)
3. But yet to be tested
4. Monitoring developments of anti-SPAM laws in other jurisdictions, eg. "**Opt-In**" and "**Opt-Out**" regimes

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International Cooperation

1. Malaysia feels there is an urgent need for a coordinated approach by the global community – both private and public bodies

2. Information sharing, technical solutions and study of legal provisions of each country

3. Bilateral and regional cooperation a good starting point
   eg. Asean Telecommunication Regulators Council (ATRC) recently established a WG on anti-SPAM activities

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ASEAN Regional Cooperation

1. At recent 10th ATRC Meeting in July 2004, ASEAN regulators agreed to cooperate on anti-SPAM activities

2. In line with the Singapore Declaration – An Action Agenda - adopted at the 3rd ASEAN TELMIN in September 2003, Singapore

3. Ministers called for the acceleration of the development and security of the ASEAN Information Infrastructure

4. Established Working Group on Anti-SPAM Activities (led by Malaysia)

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ASEAN Regional Cooperation (cont.)

1. Areas for cooperation include:
   a. Establishing working level links between members;
   b. Exchange of skills and sharing of:
      - Policies and strategies;
      - Technical expertise;
      - Educational strategies and information; and
      - Knowledge and information about known sources of SPAM
   c. Engaging with other international/ regional fora towards cooperation in fighting SPAM.

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ASEAN Regional Cooperation (cont.)

2. Members believe this will facilitate cooperation between industry and anti-SPAM groups within ASEAN

3. Cooperation to be further strengthened by establishing bilateral arrangements

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Future Developments

1. Anti-SPAM Toolkit to be made available in Q1 2005
2. Continuing and sustaining awareness and educational programs
3. Promotion of technology solutions and positive use of the Internet
4. Bilateral arrangements with other countries
5. Enforcement - Section 233 of the CMA
6. Continue monitoring need for Anti-SPAM legislation

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Call-for-Action: Industry (ISPs)

1. Minimize/eradicate SPAM received through gateways
2. Offer solutions to users/customers
3. Educate users and customers
4. Ensure that spammers are blocked from using local network infrastructure to SPAM
5. Cooperate with Regulator and other ISPs
6. Promote technical approach to counter SPAM

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Call-For-Action: Consumers and End-users

1. Cultivate responsible use of e-mail addresses
2. Adopt technology solutions - anti-SPAM, anti-spy ware software
3. Exercise rights - lodge complaints to the relevant organizations , eg. MCMC's online complaint reporting on SPAM, IASPs

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Call-For-Action: Companies & Organisations

1. Adopt technology solutions
2. Ensure email policy is in place and adhered to
3. Exercise rights - lodge complaints
4. Educate employees on the usage of corporate or organizational e-mail accounts

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The Regulator's Role

1. Continue to work together with
   a. Industry
   b. Global community - international and regional fora especially other regulators; and
   c. Other relevant organizations and parties
2. Build and sustain awareness and education
3. Act quickly upon complaints received
4. Promote technical solutions

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Thank You

Information and Network Security Department,
antispam-ins@cmc.gov.my
Monitoring & Enforcement Division,
Malaysian Communications and Multimedia Commission,
MALAYSIA
www.mcmc.gov.my

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Documents of the Global Symposium for Regulators (GSR)

8 – 10 December 2004 – Geneva, Switzerland

Document

Telecommunications Regulation Toolkit

Mostafa Terrab, World Bank & Mr. Hank Intven, Partner, McCarthy Tétrault Llp

Not available

****

Pas disponible

****

No disponible

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ITU activities on countering spam

2004 Global Symposium for Regulators
Break Out Session on Spam

Geneva, Switzerland

9 December 2004

Claudia Sarrocco

Strategy and Policy Unit

International Telecommunication Union

ITU Activities on Countering Spam

- ITU WSIS thematic meeting on countering spam (July '04)
- Anti-Spam Laws and Authorities website (regularly updated information is available at http://www.itu.int/osg/spu/spam/law.html)
- Virtual conferences on anti-spam regulatory development
- Workshop on Cybersecurity in conjunction with the WTSA.

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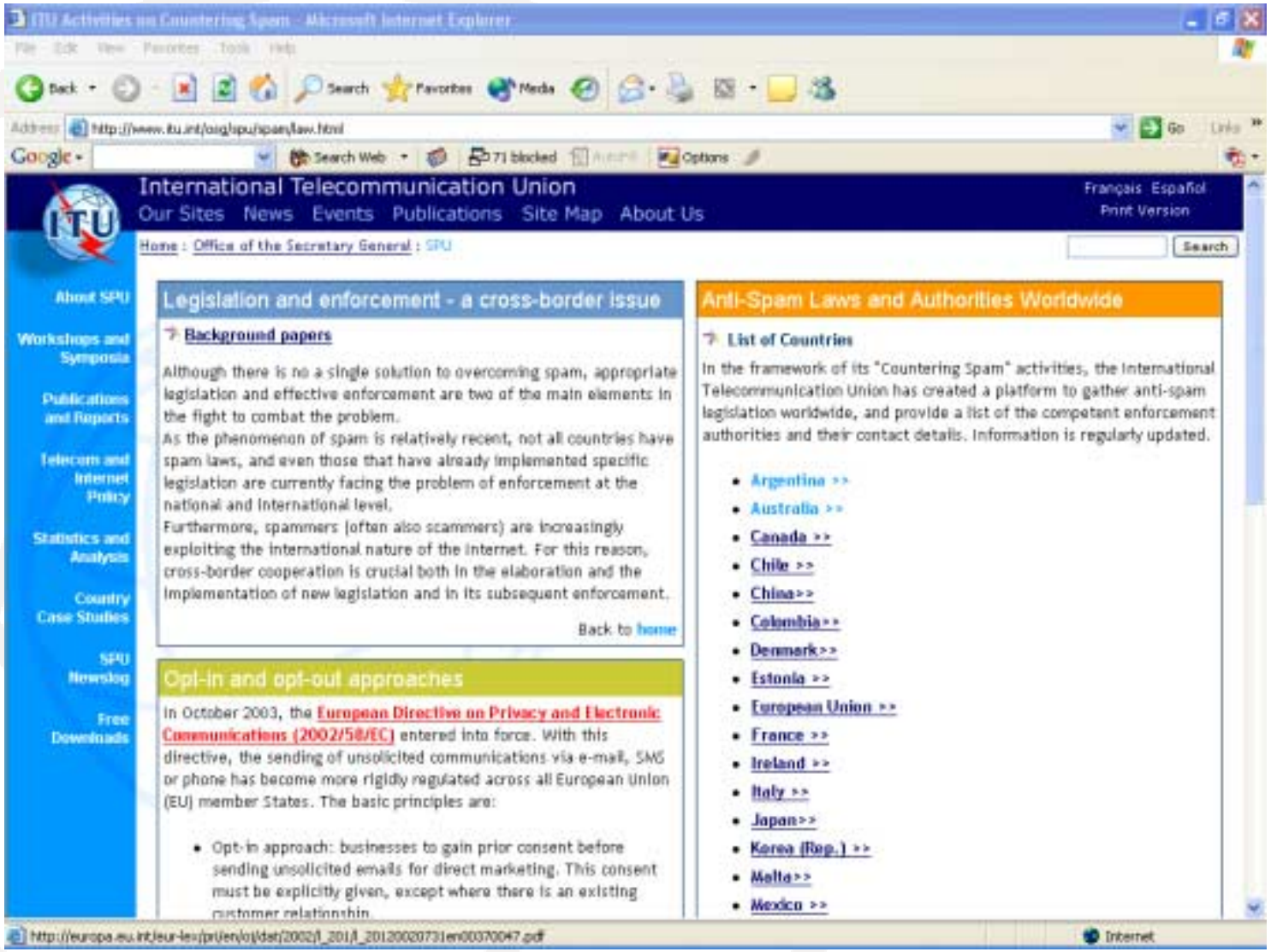
ITU WSIS thematic meeting on countering spam (July ’04)

- Spam is an cross-sectoral problem, therefore different stakeholders need to be involved in different countries. A network of authorities dealing with spam still does not exist.
- There is no unique solution to spam. A multi-layered approach is necessary
- International cooperation, on both technical (standardization) and policy (legislation and enforcement) sides has been recognized as a key element to solving the problem.
- Developing countries are also dealing with the problem of spam, which has even more dramatic consequences on Internet access than in developed economies.

International Telecommunication Union

Anti-spam laws and authorities



http://www.itu.int/osg/spu/spam/law.html

Relevant legislation in place - international cooperation agreements

Contact points

Peru - Microsoft Internet Explorer

Peru - Ministry of Transport and Communications, Viceministerio de Comunicaciones

Peru does not have a specific law dealing with spam emails. The fraudulent aspects of unsolicited messages are currently covered by specific provisions of the Criminal Code dealing with *Delitos informáticos* (cyber crimes), which include manipulation of personal banking data, utilization of false identity for sending emails, and others. To better face the new challenges posed by the cyber crimes, in 2002 a Multisectorial Commission has been created to implement the UNGA Resolution 55/63 on "Combating the Criminal Misuse of Information Technologies".

In 2004 a project of law to regulate spam was submitted to the Peruvian Congress. Under the proposed text sending unsolicited messages for commercial purposes without the authorization of the recipient will be illegal, and any violation criminally sanctioned.

Spam Authority	Policy maker: **Viceministerio de Comunicaciones (MTC)** Enforcement: to be determined
Contact points	**Peruvian Multisectorial Commission** to Implem Resolution 55/63 on "Combating the Criminal M Information Technologies Contacts: Carlos A. Romero, Chairman, Peruvi Commission. Tel +511 433-7956; Fax +511-433- **Enforcement**: under study
Relevant legislation in place	There are not specific provisions forbidding spa however the Criminal Code sanctions misleading behaviors linked to spam and its content. - For manipulation of personal banking data, mi cards and Automatic Teller Machines: **Criminal** - For E-mail false identity: **Criminal Code** Artic - Data manipulation and/or falsification: **Crimi** 427 - Unauthorized access to telematic and compute services. **Criminal Code** Article 207 - A
News and information	Peru: Los Delitos Informáticos (spanish only) Spam situation in Peru - Presentation at the 2nd Workshop on Spam - Busan, Korea - 8-9 Septem

France - Microsoft Internet Explorer

France - Direction du Développement des Médias and Commission Nationale de l'Informatique et des Libertés (CNIL)

The Direction du Développement des Médias (DDM) - under the authority of the Office of the French Prime Minister - is in charge of regulatory reform in the field of communication and online services. The DDM provides several documents and information regarding anti-spam legislation and activities, and in July 2003 established a Contact Group to fight spam.

The competent enforcement agency is the Commission Nationale de l'Informatique et des Libertés (CNIL), an independent administrative agency which enforces the Data Protection Act enacted in 1978 and other related laws. In July 2002 the Commission created a Spam Mailbox, a reporting mechanism for spam emails, to help combat this scourge.

Another body involved in the fight against spam is the Générale de la Consommation, de la Concurrence et de la Répression des Fraudes (DGCCRF), which deals with fraud and scams perpetrated through spam messages. However, thus far, the DGCCRF has not taken any concrete action in this area.

Enforcement Authority	Commission Nationale de l'Informatique et des Libertés (CNIL) **Regime**: Opt-In
Contact persons	• Anne Sophie Nerbonne, Division des affaires economiques CNIL 21 r 21 Guillaume 75007 PARIS Ph.: +33(0)1 53 73 22 70
Relevant legislation in place	**Laws** • Loi 78-17 du 6 janvier 1978 relative à l'informatique, aux fichiers et aux libertés. • Loi pour la confiance dans l'économie numérique, Décision n° 2004-496 DC du 10 juin 2004 • Convention 108 • Directive européenne 2002/58/CE du 12 juillet 2002

Links

- ITU Activities on countering spam: www.itu.int/spam
- Anti-spam laws and authorities worldwide (ongoing): http://www.itu.int/osg/spu/spam/law.html
- Telecom regulators network: http://www.itu.int/ITU-D/treg/
- World Summit on the Information Society: www.itu.int/wsis

International Telecommunication Union

Thank you

Claudia Sarrocco
<claudia.sarrocco@itu.int>

International Telecommunication Union

Creating national and regional IXPs

Russell Southwood
Balancing Act
http://www.balancingact-africa.com
Russell@balancingact-africa.com

The starting point

- The starting point: AfrISPA's policy statement - the Halfway Proposition
- US$400m a year in foreign exchange exported from Africa to foreign carriers to carry internet traffic from one African country to another

Crude cost comparisons

Local (single city)	US$60 pm per 64 kbps
National (long distance)	US300 pm per 64 kbps
International (equivalent distance)	US$1000 pm per 64 kbps

- Cost of transporting local traffic is 17 times lower than international traffic.
- Impact of monopoly pricing structure

The growth of local IXPs

- Arguments: reduction in operating costs; reduction in end-user costs; increase in local hosting and service.
- Mantra: Keep local traffic local
- Currently ten IXPs: .SA, .MZ, .ZW, .EG, .KE, .NG (Ibadan), .RW .TZ,.UG & .CD
- Coming soon: .GH AfrISPA road map for 10+ IXPs over next 2-3 years

balancing act

The next step: Regional Exchange Points

- Connecting up the IXPs to exchange inter-continental traffic and creating regional traffic to be peered internationally
- Background to the debates: earlier proposal for PAVIX
- IDRC study: Two options - PAVIX revisited and regional carrier/s
- Regulatory issues (VSAT in SA) now overcome: competition framework

balancing act

African internet exchange - the birth of regional carriers?

- Meeting at iWeek in Jo'burg in September 2003. Decision to issue a Request For Service from IXPs from six countries (Kenya, Nigeria, Mozambique, South Africa, Tanzania, Uganda) through AfrISPA
- Considerable interest from potential regional carriers: Three bidders (UK/Israeli, American and South African) Two apptd. Announcement v shortly
- Likely to be meshed VSAT network. Little or no inter-country fibre: beginning to change

balancing act

Wither the Revolution?
Wireless Networks for Cost Effective Broadband

Global Symposium for Regulators

Geneva, Switzerland

9 December 2004

Michael L. Best
michael.best@
inta.gatech.edu

Key to Connectivity

1. Low-cost technologies - especially terrestrial wireless
2. Supportive public policy
3. Micro and small enterprises

…. supporting the democratization of both *use* and *provision*….

How They Stack Up

	802.11b	802.16	corDECT
Pt-to-pt max	20 Km	50 Km	
Pt-to-multipoint	1 Km	13 Km	25 Km
Bandwidth	11 Mbps shared	70 Mbps shared	70 Kbps exclus.
Unlicensed?	Yes	Yes	No
Advantages	Popular, cheap	Good range, speed	Cheap, proven in rural areas
Disadvantages	Short range, inefficient use of spectrum	Still emerging	Requires license

The Difference a Year Can Make

	802.11g	802.16	corDECT
Pt-to-pt max	20 Km	50 Km	
Pt-to-multipoint	1 Km	30 Km	35 Km
Bandwidth	54 Mbps (plus)	70 Mbps shared	100/200 Kbps
Unlicensed?	Yes	Yes	No
Advantages	Super popular, cheap	Good range, speed	Cheap, proven in rural areas
Disadvantages	Short range, inefficient use of spectrum	First generation shipping	Requires license

The SARI Village Information Centers

- Working in Madurai District, Tamil Nadu, South India
- Provide Internet via WLAN, PC, and application suite to villages - many that are off the phone grid
- 80 connections in over 50 villages
- Each village information center is locally owned and operated (franchise model)

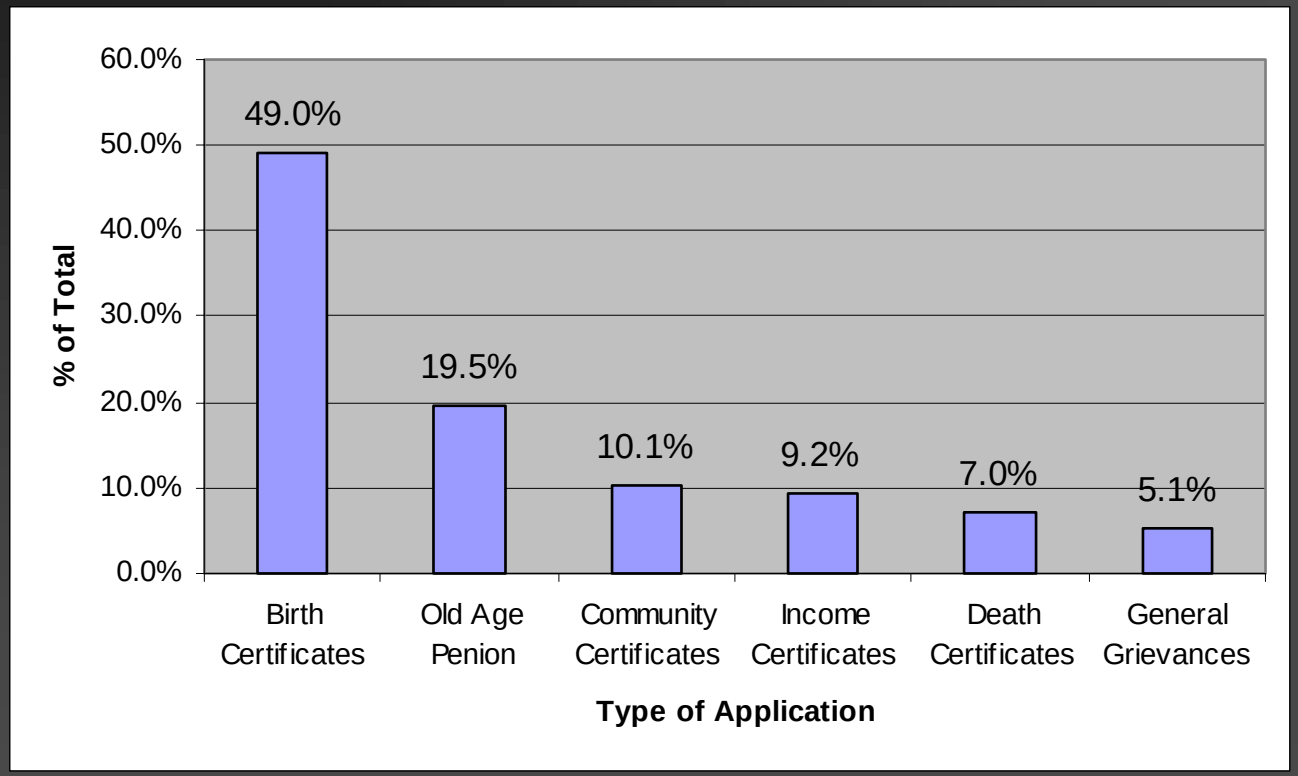
Connected Villages

- Padinetankudi
- Karungalakudi
- Keelavalavu
- Vellalur
- Urranganpatti
- Thaniamangalam
- Alagarkovil
- Neaythanpatti
- T.Ulagpitchanpatti
- Sengarampatti
- Othakadai
- Attapatti
- Kottampatti
- Chittampatti
- Pudhutamaraipatti
- Pulimalaipatti
- Mankulam
- Karpuooravahini
- A.Vellalapatti
- Navinipatti
- Kelaiyur
- Kallampatti
- Arittapatti
- Narasingampatti
- Therkutheru
- Kottakudi
- T.Vellalapatti
- Thiruvadhavur
- Arasappanpatti
- Vellaripatti
- Andipattipudur
- Thumbaipatti
- Melur- Kalanjiyam Tr Centre
- Palayasukkampatti
- Kuthappanpatti
- Kidaripatti
- Kattayampatti
- Pullipatti

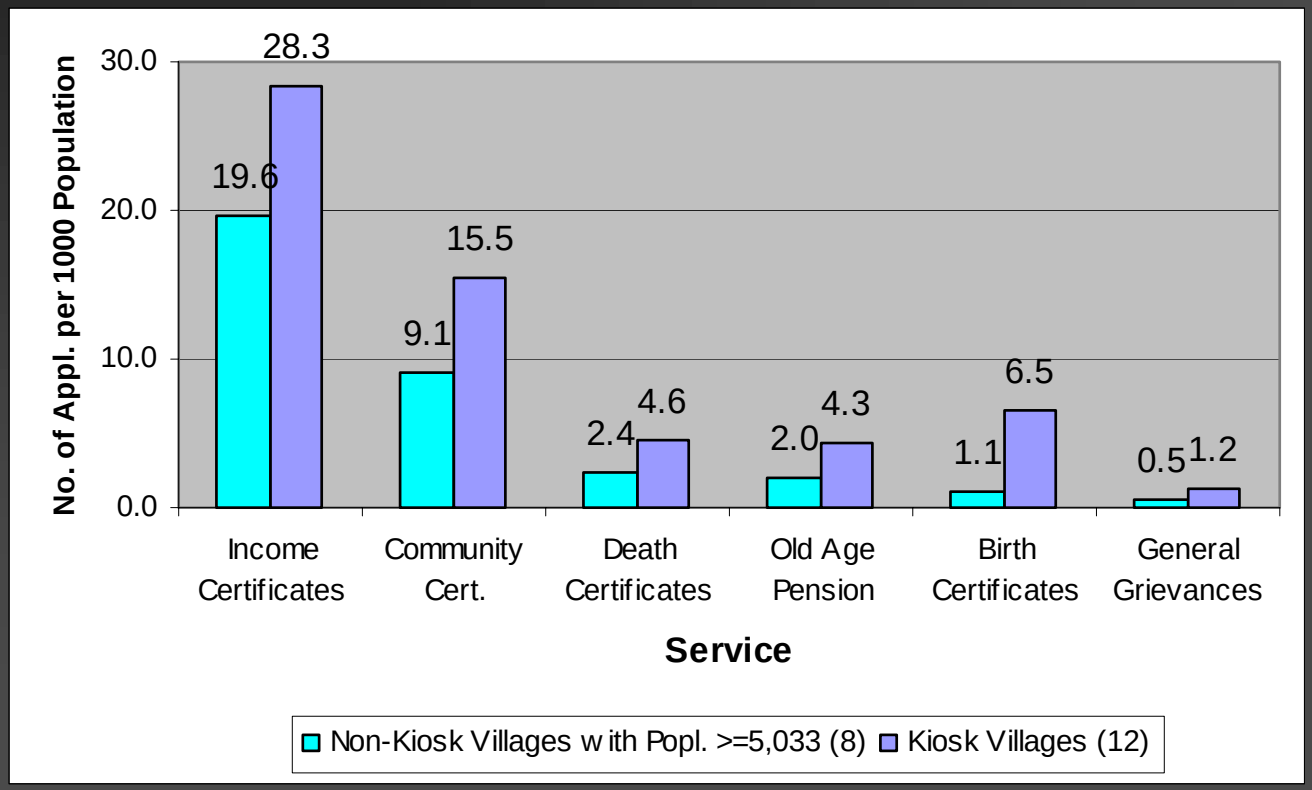
Immediate Impacts: Tele-agriculture

Immediate Impacts: Sometimes Just for Fun!

E-gov Types of Services



E-Government Services: Internet vs Non-Internet Villages



Consumer Welfare Results

Government Service	**Cost and time estimate *without* e-government**	**Cost and time estimate *with* e-government**	**Savings in Cost and time with e-government**
Birth Certificates	Rs. 60 to 250, 3-7 days	Rs. 35, 2-3 days	Rs. 25 to 215, 1-4 days
Death Certificates	Rs. 60 to 250, 3-7 days	Rs. 35, 2-3 days	Rs. 25 to 215, 1-4 days
Old Age Pensions	Rs. 25, one day in visiting the Taluk office	Rs. 10, No visit required	Rs. 15, one day

Political Liberties Model: The Punch Line

E-government services lead to an increase of 4.950 and 2.925 times the average number of applications received for birth certificates and old age pensions respectively, when compared to that when the village has no Internet kiosk, keeping other factors constant….

Wither the Revolution?
Wireless Networks for Cost Effective Broadband

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Michael L. Best
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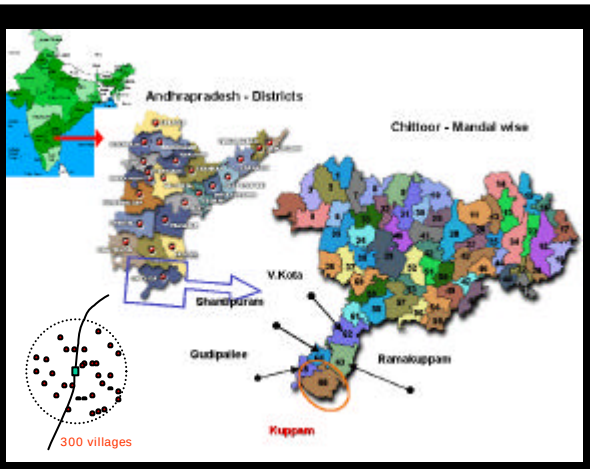
- How can they stand up and be counted?
- How will they get access to resources and education?
- How will they be able to compete?
- How will they bridge the distance with their urban brethren or those in the developed world?

These are the different faces of the 5 billion people in the developing world who are not yet connected

What do they need?

- Technology
- Sustainable business model and
- an Organization which thinks and acts Rural

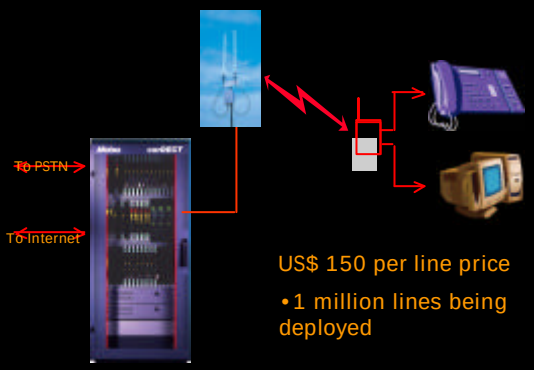


Wireless systems can connect most of these villages

- Technologies are continually evolving
- Costs keep going down
- Bit rates keep increasing

- In India, fibre connectivity to most county towns *(talukas)* provided by State-owned incumbent
  - Fibre has capability for infinite bandwidth
- 85% of villages lie within 20 Km radius of *talukas*
  - Typically 300 villages in 30 Km radius

Technology



US$ 150 per line price

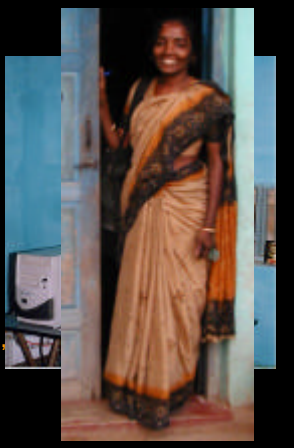
- 1 million lines being deployed

- With exchange and tower in the Town, gives wide geographical coverage of up to 35 Km radius
- Works at even 55ºC, with low power requirement (1 KW) and extremely low start-up costs

- Jointly developed by the Indian Institute of Technology, Madras and Midas Communication Technologies
- Provides simultaneous toll-quality voice & dedicated Internet connectivity of up to 100/200 Kbps for each and every user
- Always-ON Internet – a unique feature that supports the use of the Internet regardless of time and place
- Enables a wide range of services suited for rural needs at bandwidths of even 64 Kbps

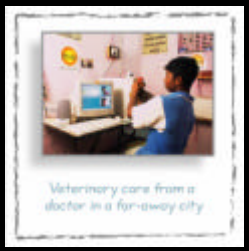
Business Model

- Rural Service Provider
  - n-Logue Communications – The organization that thinks and acts rural
  - Recruits kiosk operators, provides on-site training and technical support and helps in maintenance, upgradation, etc.
  - Enables setting up of the kiosk infrastructure
    - including multimedia PC with web camera, printer, power back-up, software etc. at a cost of just US$ 1000
  - Partners with the Government, NGOs, private enterprises, educational institutions, hospitals to offer various services through the kiosk



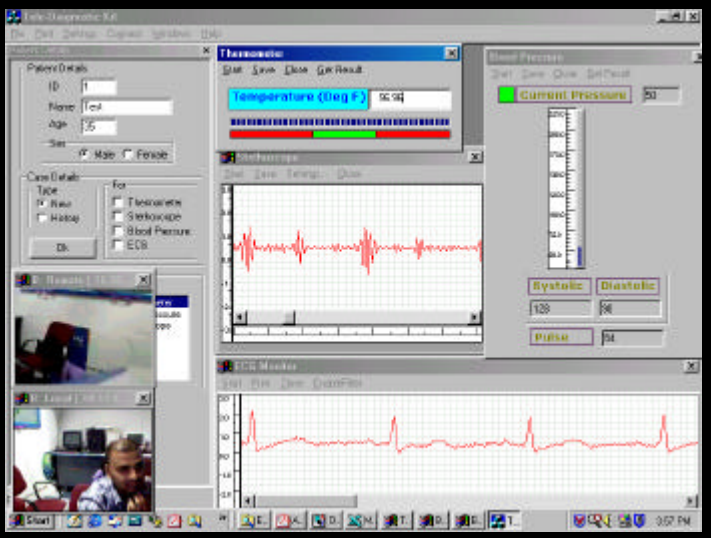
Business Model

- Local entrepreneur
  - Should have studied up to grade 10 with no prior computer training
  - Should have ability to effectively communicate and network in the community
  - Provides telephony, Internet access and various services to the local community
  - Channels information needs of community to application and content providers
  - Needs to earn US$ 75 p.m. providing
    - computer education, photography, DTP, typing, email, voice/video mail, e-Governance and other services



Services offered at kiosks through multiparty video conferencing

distance education, e-Governance, telemedicine, veterinary care, agricultural support etc.

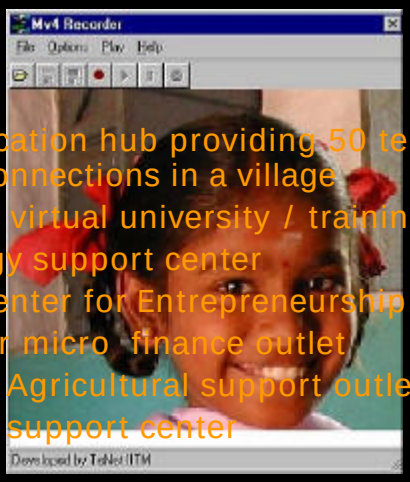


Medical diagnostic kit consisting of BP, temperature & ECG measurement and stethoscope at just US$ 200

Rural ATM at just US$ 200 with fingerprint authentication

Office Pack 200 with Indian languages

In the future, a kiosk can be a



- Communication hub providing 50 telephone and Internet connections in a village
- Center for virtual university / training center
- Technology support center
- Support center for Entrepreneurship
- Banking or micro finance outlet
- Trading & Agricultural support outlet
- A medical support center

and more...

It can bring smiles and prosperity

Is this replicable in other developing economies?

- Replicable
  - Business as drivers for connectivity
  - Aggregation of demand where incomes are low
  - Technology designed for specific conditions
- Not necessarily replicable
  - Specific technologies and business models that has worked in India

In summary

- Technologies can impact lives provided there is a big enough vision behind it
- To achieve the dream of truly connecting the rural populace
  - Finance, Commerce, Training & Information are key
  - Driving education, health and entrepreneurship is the means
  - Large number of innovative technologies and applications catering specifically to rural areas need to be developed

5ème Colloque mondial des régulateurs
Session V

Genève, 9 décembre 2004

Quelles actions des pouvoirs publics en faveur du large bande et de l'Internet ?

Audrey Baudrier
Présidente de la CE1 de l'UIT-D
Rapporteur Q7-1/1, Accès-service universels

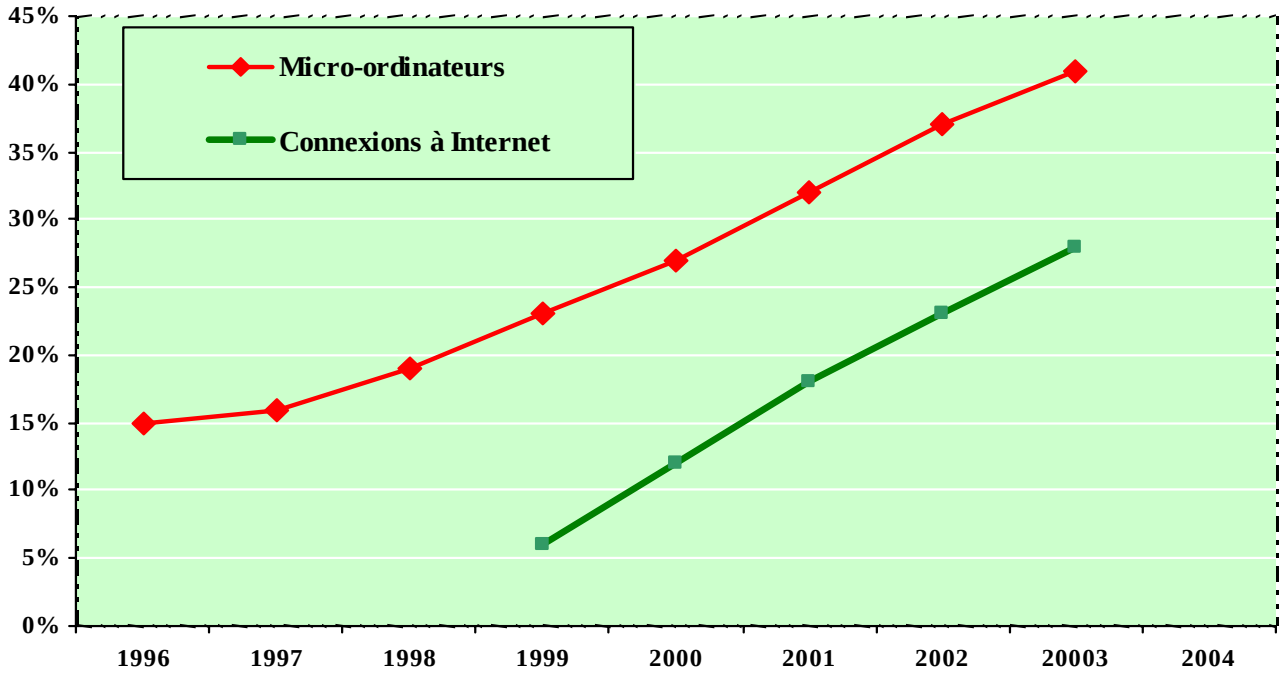
Plan de la présentation

- ***Le contexte de l'intervention publique et le haut débit en France***
- ***L'action des pouvoirs publics en faveur du large bande et l'Internet***
- ***Conclusion***

Le contexte de l'intervention publique

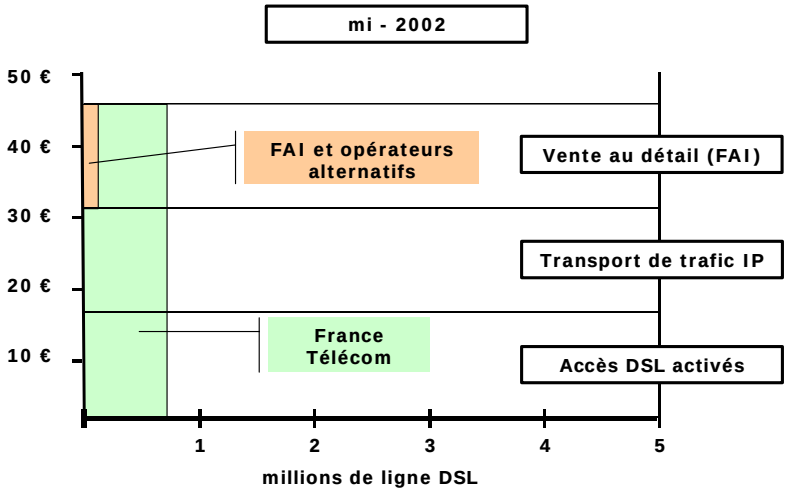
et le haut débit en France

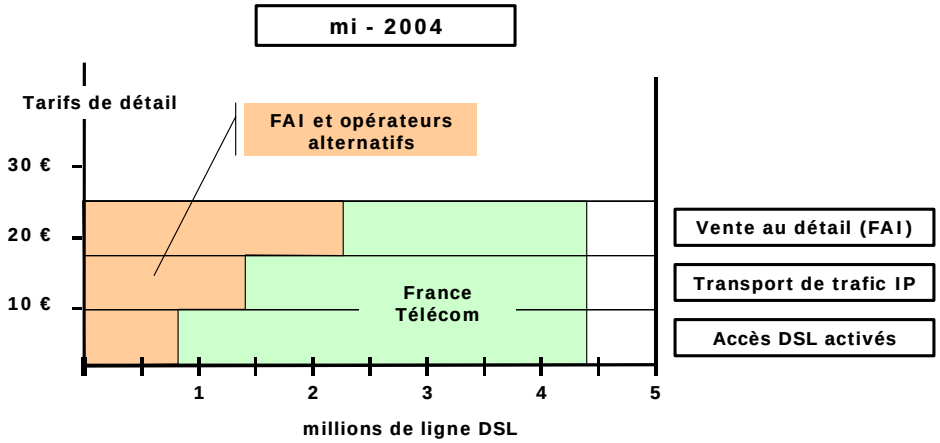
Les entreprises et une partie des ménages perçoivent désormais le haut débit comme indispensable



Internet est couramment utilisé par un foyer sur trois ; le nombre d'ordinateurs a triplé en cinq ans ; le haut débit est un outil de productivité et d'accès aux marchés pour les entreprises.

La concurrence a dynamisé le marché et permis à la France de rattraper son retard





Le développement du dégroupage de la boucle locale a dynamisé le marché français depuis fin 2002.

En deux ans, les tarifs ont été divisés par deux, et le nombre d'abonnés multiplié par trois.

La France est un des pays les plus innovants en Europe : ADSL 2+, TV/DSL, VoIP, visiophonie.

La France est au 2ème rang européen et au 6ème rang mondial pour le nombre de lignes DSL.

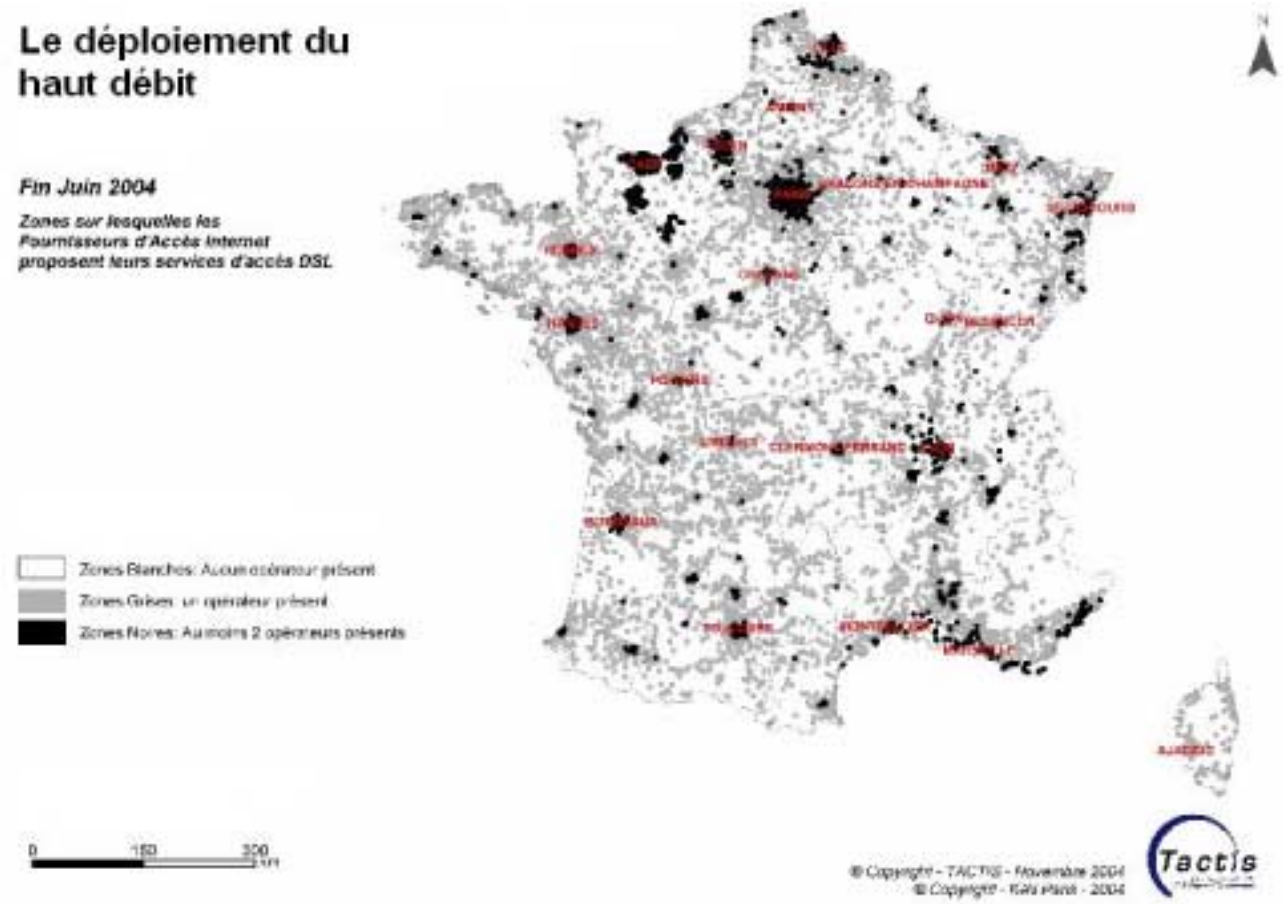
Un marché de masse avec des offres innovantes à des tarifs abordables

- **Le nombre d'abonnés est en forte progression**
  - ✓ **5,1 millions d'abonnés haut débit**
    - **425 000 abonnés au Câble**
    - **4,7 millions d'abonnés à l'ADSL**
  - ✓ **8,5 % de la population**

- **La concurrence se développe**
  - ✓ **Les FAI alternatifs représentent 50% du marché de détail de l'accès haut débit DSL**
  - ✓ **Les offres de services se diversifient (voix, TV, vidéo à la demande)**

- **Les tarifs baissent de manière importante**
  - ✓ **De nouveaux modes de tarification au volume apparaissent**

Le développement du haut débit n'est cependant pas uniforme sur le territoire national

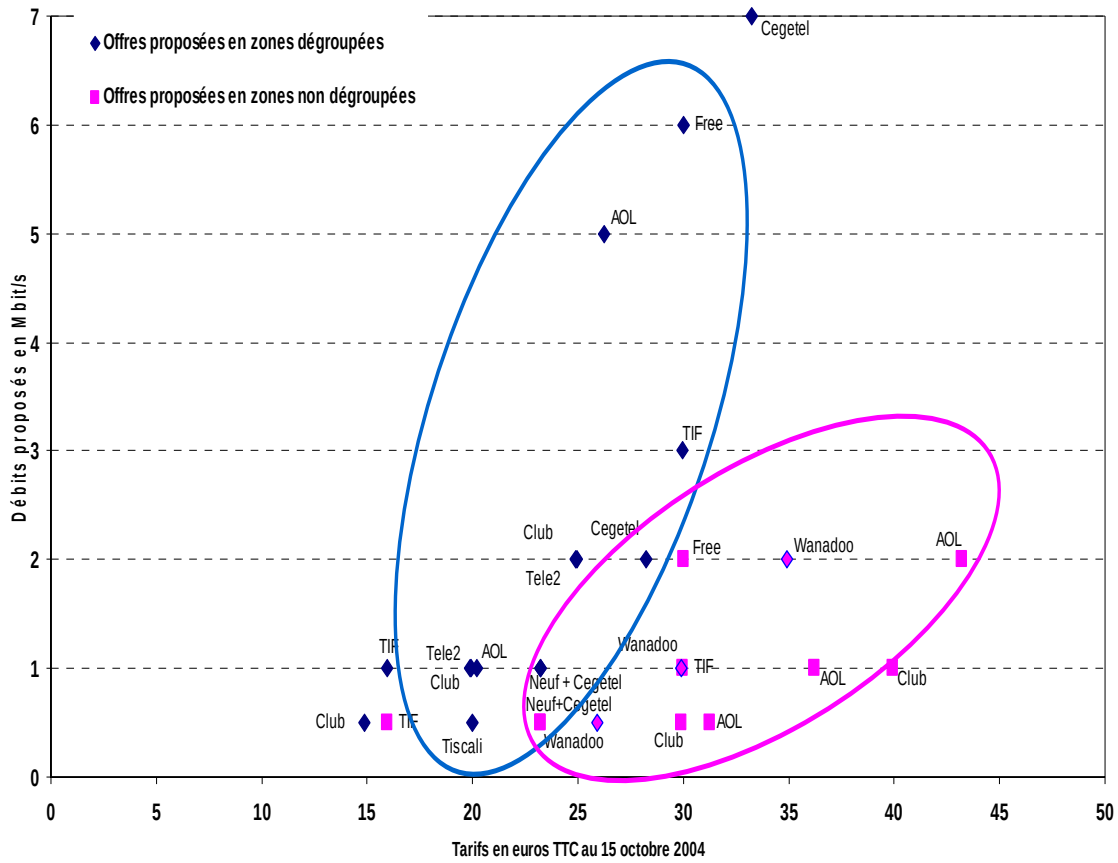


Environ 50 % des ménages et des entreprises sont situés en zones concurrentielles.

Les zones grises où France Télécom est le seul opérateur à avoir déployé ses réseaux haut débit couvrent 40 % de la population.

Enfin, les zones blanches, où aucune offre DSL n'est disponible, concernent 10 % de la population.

En revanche, les disparités entre zones concurrentielles et zones grises se creusent



Dans les zones grises, le fonctionnement local du marché est moins dynamique qu'en zones concurrentielles.

Les différences sont encore plus sensibles sur le marché professionnel que sur le marché résidentiel, où des disparités importantes existent (tarifs, fonctionnalités, triple play)

L’action des pouvoirs publics en faveur du large bande et de l’Internet

L'intervention des pouvoirs publiques se focalisent sur trois points

- ***La résorption des zones blanches***
- ***La compétitivité et l'attractivité des zones grises***
- ***L'anticipation des nouveaux usages et des offres innovantes***

Les obstacles à la concurrence sont d'ordre technique et opérationnel

- ***Au niveau de la collecte nationale, les FAI sont entièrement dépendants des choix techniques de France Telecom, en termes de débit et de qualité de service***

- ***Il est donc nécessaire de :***
  - ✓ ***limiter au maximum l'utilisation du réseau de FT pour accroître la capillarité des réseaux des opérateurs alternatifs et donc développer la concurrence en infrastructures***
  - ✓ ***mettre en place des conditions opérationnelles et tarifaires pour assurer la réplicabilité technique des offres de FT par les opérateurs alternatifs***

- ***Le dégroupage est l'offre à l'autonomie technique la plus complète pour les opérateurs alternatifs, car elle n'utilise le réseau de FT que sur le segment reliant l'abonné au répartiteur***

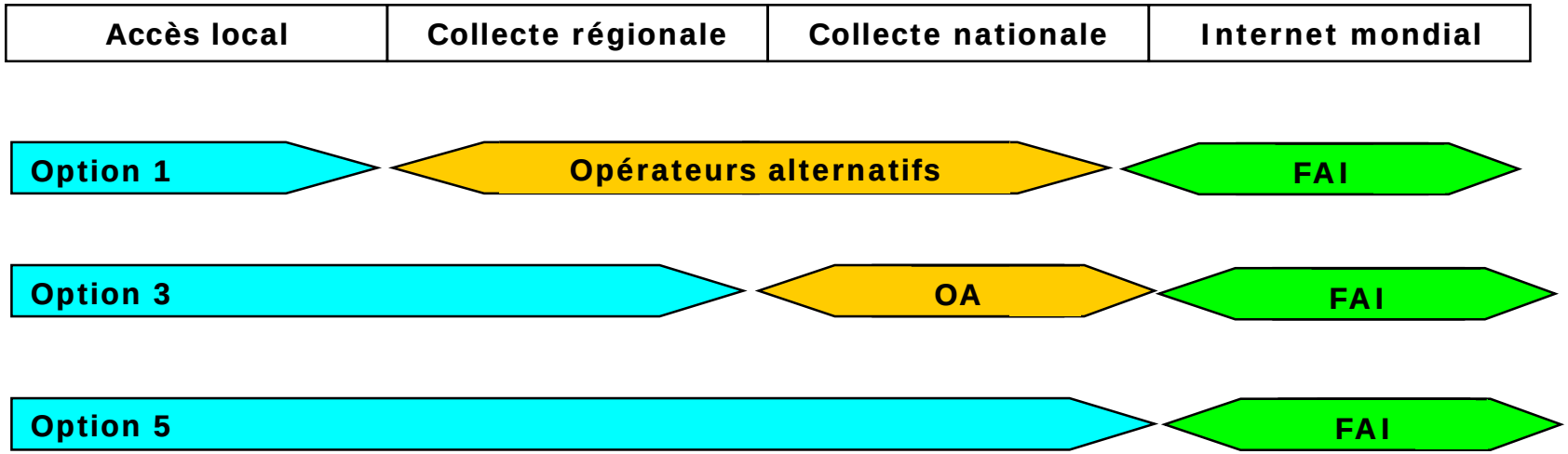
Le régulateur a pris des décisions structurantes

- ***Au niveau du dégroupage de la boucle locale (option 1) :***
  - ✓ *Offre d'accès à la paire de cuivre de France Telecom (dégroupage partiel ou total) ;*
  - ✓ *L'opérateur a le contrôle du service final*
  - ✓ ***Intervention réglementaire : offre de référence de France Telecom ; l'ART peut imposer des modifications***

- ***Au niveau de l'offre d'accès large bande livrée au niveau régional « ADSL Connect ATM » dite option 3 :***
  - ✓ *Offre intermédiaire entre la revente et le dégroupage de la boucle locale*
  - ✓ *Le trafic est livré par France Telecom à un point régional*
  - ✓ ***Intervention réglementaire : les tarifs doivent être orientés vers les coûts et l'offre doit être non discriminatoire***

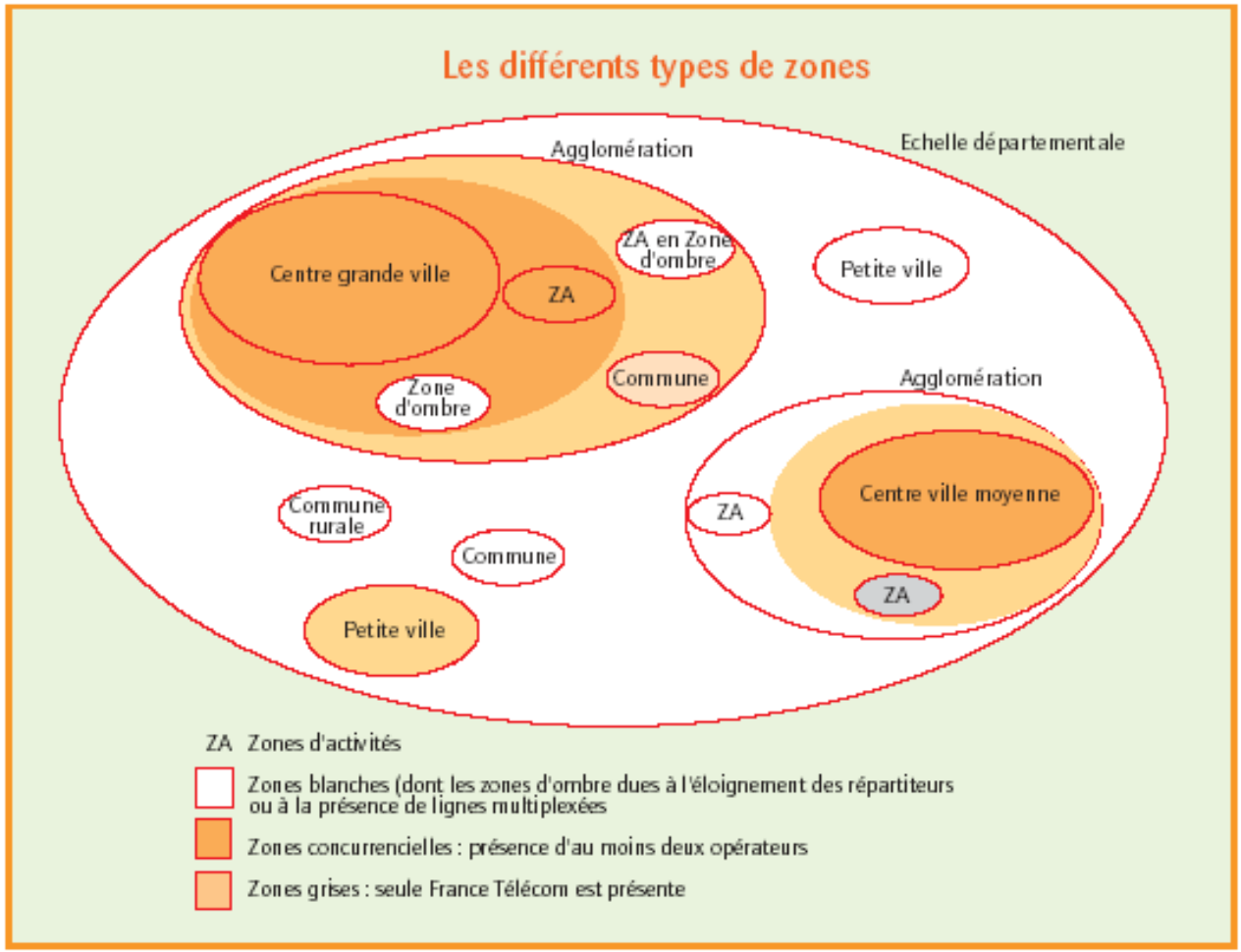
- ***Au niveau de l'offre d'accès large bande livrée au niveau national ou régional « IP ADSL » dite option 5 :***
  - ✓ *Offre pour des opérateurs et des FAIs qui ne veulent pas investir dans l'infrastructure*
  - ✓ *Le trafic est livré par France Telecom jusqu'à un point national ou régional de collecte*
  - ✓ ***Intervention réglementaire : suspension du contrôle tarifaire ex ante pour un an***

Une régulation ciblée des marchés de gros…



Complémentarité du dégroupage et des offres de gros au niveau régional
Investissements importants dans le réseau de collecte

… pour palier les disparités de couverture…



… et développer la concurrence.

- **Lever les obstacles techniques et opérationnels**
  - ✓ Accroître la capillarité des réseaux des opérateurs alternatifs
  - ✓ Mettre en place des conditions opérationnelles et tarifaires (orientation vers les coûts et offre de référence non discriminatoire)

- **Garantir un espace économique suffisant**
  - ✓ Maintenir un équilibre économique entre les différentes offres de gros pour inciter les opérateurs à investir dans les infrastructures

- **Accompagner les collectivités territoriales**
  - ✓ Mettre à disposition des opérateurs des infrastructures mutualisables pour encourager la concurrence, sans intervenir sur le marché de détail
  - ✓ Créer le chaînon manquant entre la boucle locale et les artères régionales en proposant aux opérateurs une offre de gros aujourd'hui inexistante ou moins adaptée
  - ✓ Privilégier les délégations de service public aux marchés publics de services (compatibilité des aides publics au regard du régime des aides d'Etat)
  - ✓ Donner des points de repères pour la conduite de projets

Conclusion

La question du haut débit ne se réduit pas à la seule question des infrastructures, il est vecteur de services

- ***Qui sont les publics visés ?***
- ***Comment prendre en compte leurs pratiques et leurs besoins ?***
- ***Quelles sont les solutions techniques, économiques et réglementaires adaptées au contexte de pays différents ?***

CONSTAT :
Besoin de comparer les situations de pays différents

PROPOSITION :
Nécessité de réfléchir à la définition d'une nouvelle question d'étude dans le cadre de la préparation de la CMDT-06

Merci de votre attention

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HOW TO COMBAT SPAM

Report of Chairman

Session 1 : Situation analysis

The first panel session gave attention to a situation analysis of experiences with SPAM. ITU staff gave a summary of progress since the last regulators forum, and this included the conclusions of a WSIS Thematic Meeting and a virtual conference in advance of GSR 2004. Also briefly reported was the basis of anti- SPAM legislation in some 30 countries. Technical aspects of SPAM control were discussed at WTSA2004 with two resolutions for further work.

A SPAM Task Force has been set up in the OECD, and its key current project is to complete a tool kit which should assist significantly in national efforts to develop legislative and other strategies to combat spam.

An analysis of potentially useful structures for wider international cooperation based on the ACA (Australia)/ KISA (Korea) MOU was given, leading to the observation that there is not necessarily a need for extensive and comprehensive arrangements, and legislation does not need to be in place in advance of an agreement. Also, each nation could only enforce its own laws. The analysis concluded with an invitation to any other agency to peruse the widened MOU and participate if they felt it appropriate to their circumstances.

The IDA Singapore reported on its consultative process prior to adopting a proposed multi-pronged solution which involves a hybrid opt in (for indiscriminate spammers)/ opt out (for genuine and responsible businesses) system. Complaints would be to ISPs in the first instance, with enforcement against both spammers and merchants, and possible exceptions for Government communications to citizens. Industry self-regulation was also envisaged as a prominent feature.

MCMC (Malaysia) does not rely on a specific anti-SPAM law, but a section of Telecommunications Law which refers to improper use of the network (eg. intent to annoy, abuse, harass at any electronic address). Again a public discussion paper preceded developments. Self regulation is heavily depended on, and a Consumer Code provides a bench mark – adherence with it is a licence condition. The MCMC representative also noted that ASEAN will establish a group to consider SPAM matters, and hopes to learn from OECD, ITU etc.

Updates on the environment in the USA, Saudi Arabia, and Brunei were offered from the audience.

Session 2: Where to from here?

The second discussion panel focussed on questions such as the baseline needs of regulators, cooperative action, and the role of parties involved, and the ITU.

It was advanced that legal certainty in the market place would be a good starting point for implementation of a multi-pronged approach. The need for legislation that

includes enforcement capability was questioned by a number of developing countries, given that they were not the source of spam, whilst other developing countries recognised a need for some legal basis for local ISPs to take action.

There was a common recognition in developing countries of the need for technical support, and cooperative assistance with consumer information and industry guidance.

The Chairman summarised discussions as follows :

- A multi-pronged approach to dealing with SPAM was appropriate,
- Some level of legislation was relevant for all countries but its form and extent would depend on the circumstances and degree of enforcement necessary,
- Cooperation could include action on complaints from one regulator to another, together with appropriate sharing of information,
- Cooperation should also involve industry (direct marketers and ISPs), other forums and regional groupings as necessary,
- Public education and the concerns of civil society were important elements of a strategy,
- It was essential to have international cooperation arrangements in place, and
- The ITU offered the only "family gathering" which accounted for all developing and developed countries and was well placed to raise awareness.

A living model for international cooperation was needed urgently, and this could be developed as a special focus at the next GSR, perhaps with a virtual conference in the lead up. If the latter was held prior to WSIS then it might produce the basis for input to WSIS deliberations. The form of cooperative model was not specified at this stage.

A couple of interventions reflected on the fact that some potentially useful representative opinions were not present at the meeting. However, the Chair would summarise the conclusions above as those of a group of interested and concerned regulators at the meeting who saw the need for some pragmatic and positive action amongst regulators on what is a distressing problem for the citizens of the Internet.

Dr Bob Horton
Chairman, SPAM Breakout Sessions.

Breakout Session Summary
Promotion of Cost-Effective Broadband and Internet Services
Moderator: Dato V. Danapalan, Chairman, MCMC
Global Symposium for Regulators (GSR) 9 December, 2004

Good morning. I am happy to report to you that our breakout session addressed a broad range of issues on the promotion of cost effective broadband access. Thanks to the good contributions of the presenters, panelists and delegates, the session focused on very timely and weighty issues, of concern to both developed and developing economies. I offer the following Chairman's summary on behalf of all those who participated.

I would like to begin by summarizing the major themes and issues that came out of the breakout session:

- While recognizing that national broadband strategies will need to be country specific, there was a general agreement among participants on the value of cost effective broadband infrastructure and access to all economies and societies around the globe;
- The group discussed how advances made over the past few years in low-cost technologies can improve local access to broadband services, particularly in developing countries;
- There was discussion of broadband connectivity issues on multiple levels, from local and national, through regional and international;
- The group heard from several countries that have concentrated not only on efforts to promote the supply of broadband services but also on efforts to stimulate demand and acceptance of those services and of multimedia applications.
- There was a discussion of challenges posed by affordability of broadband access in many countries.

The overall context of the discussion – which came through in the presentations and panelist remarks, as well as from the audience questions – is that broadband access will be a vital tool in the future to improve the lives and well-being of citizens in all countries. This consensus provided the starting point for the rest of the discussion, which moved to a substantive and often detailed discussion of how to best achieve the goal of bridging the digital divide among citizens – both within and between countries.

As much of the discussions and debate sought to address issues rather than seek convergence, it is important that I report on the highlights of the various presentations and discussions.

Presenters Sudhalakshmi and Michael Best reported on the advances over the past year in both the take-up of low-cost wireless access technologies, and in the quality of those technologies themselves. They indicated that technologies such as corDECT and 802.11 (Wi-Fi), are being used successfully to link rural communities in many countries, including India. In this regard, the session also noted that Wi-Max has the potential for future applications. Mr. Best indicated that a franchise model of "micro" enterprise in India could provide a sustainable business model for local entrepreneurs at revenues of some $3-5 a day. The key is

to involve local ownership and tailor marketing to local needs. In addition, content applications should be developed to generate traffic that will use e-government, agricultural, tele-medicine and rural banking services. State support for development of community Internet centers may be provided, but in the case of India, a forward-looking bank provided funding as a way to broaden its distribution of banking services, including ATM access. These sustainable, tailored business models were seen as vital to providing broadband access in remote or rural areas.

Presenter Audrey Baudrier noted that in France, the broadband market is vibrant and innovative, but it does not reach the entire population or the full geographic extent of the country. Government policy has been tailored to be appropriate for further development in the zones where broadband service is not subject to competition or not available at all. She noted in particular that the regulator focuses its intervention on the wholesale markets to incite alternative operators to invest in infrastructure and to offer cost-effective services. The regulator also makes a strong effort to involve local communities and private operators in the implementation of projects. As Chairperson of ITU-D Study Group 1, Ms. Baudrier stressed the importance of comparing the situations of different countries and invited the GSR participants to join in the work of the ITU-D study groups to define a new question on Broadband in view of WTDC-06.

Presenter Russell Southwood discussed the experience of many African countries, which have faced the issue of having to procure expensive international Internet bandwidth even to complete Internet links within the same city. He discussed an initiative to build national and regional Internet exchange points (IXPs) within African nations, allowing local traffic to remain local. This will lower the cost of backbone bandwidth and, by decreasing latency, allow many new applications to be rolled out in developing countries that were not previously possible with limited local bandwidth. He stressed that, lower costs and increased quality of service will then ultimately benefit consumers in these countries, he suggested.

Contributions from the audience underlined the need to address the larger issue of affordability, including the need to directly address the current practice of having to purchase whole-circuit backbone access on international routes. Several contributions, emphasized the critical nature of the cost disparities that confront developing countries and urging international action to make broadband access more affordable. The World Bank representative urged advocacy on this issue, noting that developed countries have vastly greater purchasing power to obtain Internet access than citizens in developing economies do.

Other audience members and panelists added that the issue of high rates for facility access was not just international in scope, but also included the need for incumbents to reduce costs for leased lines on a national basis. Several contributors pointed out that flat-rated services appear to be vital in a broadband environment but that current rates in many countries remain high for consumers. Panelist Jose Alfredo Rizek Vidal of the Dominican Republic noted that national regulators should ensure that their own regulations set the proper environment for broadband development before they address regional and international initiatives. He emphasized the need for a partnership between the private and public sectors.

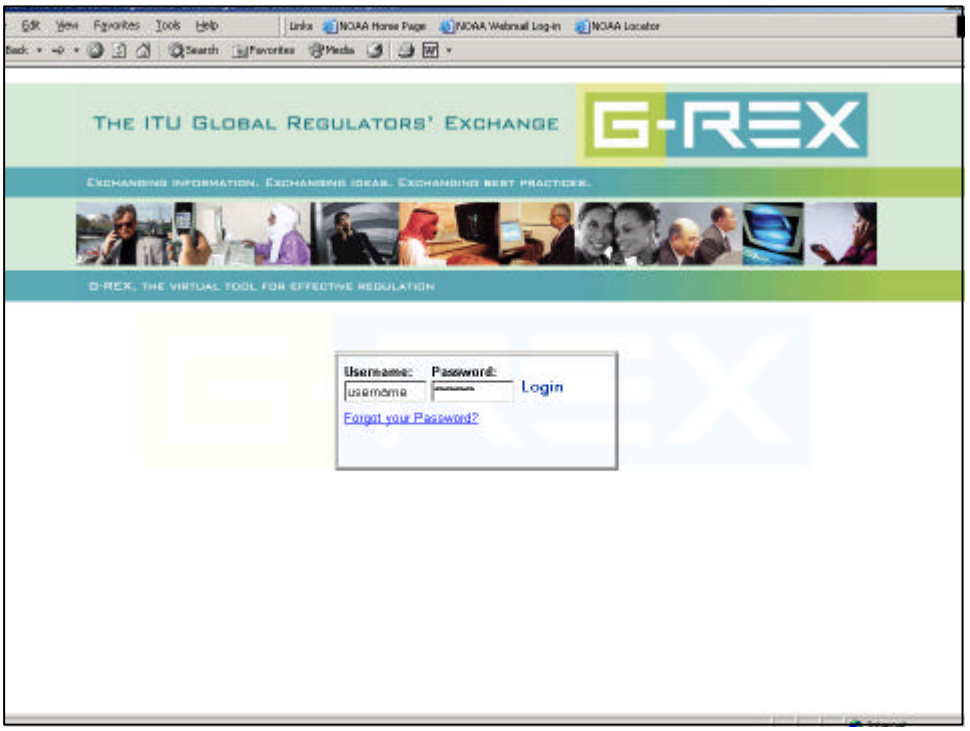
Also on the international level, panelist Ahmed Toumi presented an initiative, dubbed the Global Broadband Satellite Infrastructure Initiative, to develop global, open standards for low-cost broadband access to satellites. The initiative would involve harmonizing spectrum use and creating common standards in order to create a global market for equipment manufacturing. It would also call for harmonizing regulatory frameworks, based on common principles such as the promotion of competition. In response to a question from the audience, Mr. Toumi affirmed that the initiative would reinforce, not interfere with, national regulators' ability to set rules for satellite access in their countries.

Panelists Leong Keng Thai of Singapore and Alaa Fahmy of Egypt discussed their countries' experiences in promoting the take-up of Internet services and broadband access. A series of carefully planned initiatives in Egypt focused not only on free Internet access on the supply side, but also low-cost purchases of computers, on the demand side. Balancing of these initiatives was successful in increasing Internet usage in the country, and Egypt has now turned to a broadband access initiative as well. On the demand side, this initiative is promoting a "laptop for every professional" – both to boost computer purchases and to provide a market for Wi-Fi and Wi-Max installations. Mr. Leong noted that his country, with a small land area, has less difficulty than most others in providing access to broadband infrastructure. The key to obtaining ubiquitous use, then, is to stimulate demand through promotion, education and establishing the government itself as an "anchor tenant" through the provision of e-government services.

Finally, the discussion turned to the issue of whether spectrum should be considered a scarce resource. Presenter Michael Best noted that in many rural areas, spectrum should be widely available, and even in densely populated areas, recent advances in cognitive radios and other technologies mean that there are greater opportunities for spectrum sharing and reuse. The meeting noted that these new technologies may be initially confusing and destabilizing, but they ultimately will free regulators up to explore new spectrum management techniques that will maximize spectrum use. Other contributors questioned the conclusion that spectrum was no longer a scarce resource, particularly in certain bands. For example, GSM equipment is manufactured to use either 900 MHz or 1800 MHz and in those bands, technical scarcity is still a reality in many countries.

As you will note, the discussion during the breakout session involved a broad debate on broadband access. I am confident that the delegates who attended the session benefited from the rich presentations and discussions and take away ideas which will no doubt help with their national initiatives.

I thank you, Madame Chairperson, for the privilege of moderating this discussion and presenting this summary for the attention of the GSR.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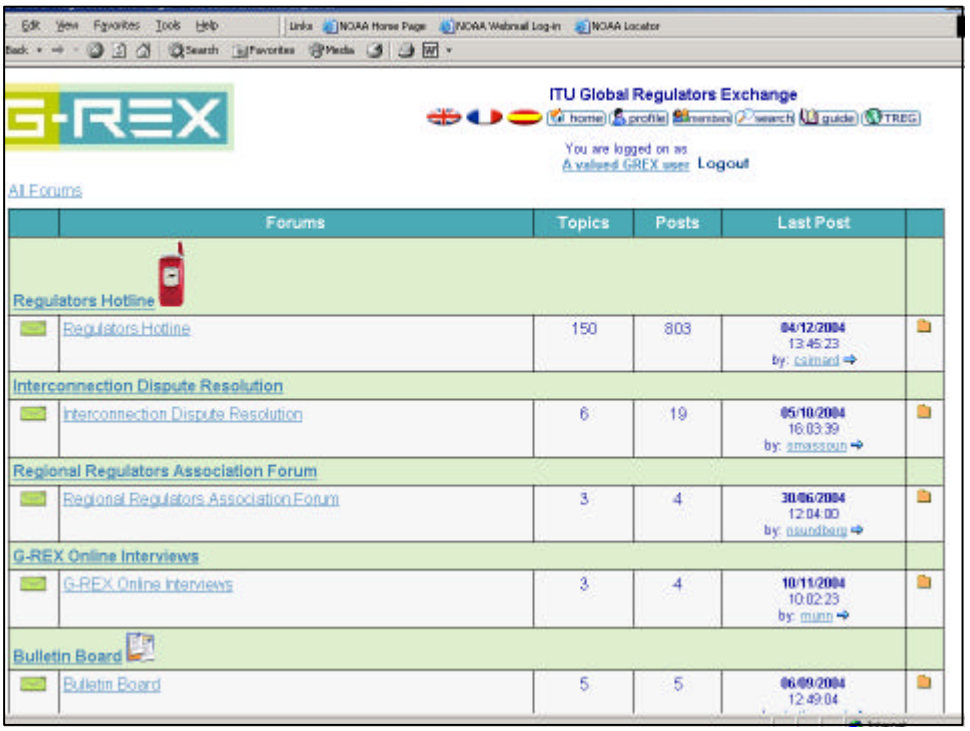
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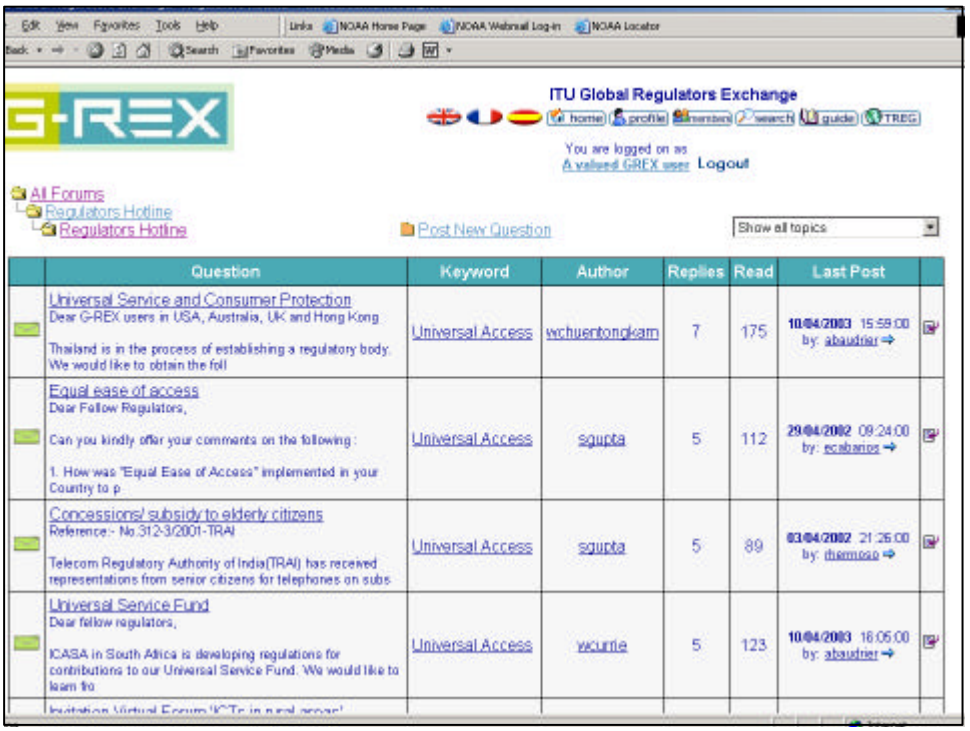
	Question	Keyword	Author	Replies	Read	Last Post
	Push-To-Talk over Cellular (POC) regulation Dear Colleagues Can any one guide if there is any regulator has regulation regarding Push-To-Talk over Cellular (POC) regulation. Best Regards,	New technologies	sdweik	0	8	01/12/2004 15:33:09 by: sdweik
	Telecommunications Strategic Plans Dear Regulators, Within the context of a study conducting by Telecommunications Authority of Turkey, we would like to have your strategic plans on	Other	hkaracabey	1	2	02/12/2004 08:44:14 by: esanroman
	MVNO Dear Regulators, We are conducting a study in Turkey regarding the authorization of MVNOs. In this context, we need some information on the practic	Legislation	hkaracabey	0	0	01/12/2004 15:31:12 by: hkaracabey
	Value Added Services in European Countries Dear Regulators, We are trying to authorize value added services in Turkey. Therefore, we would like to know licensing models and	New technologies	hkaracabey	0	0	01/12/2004 15:29:46 by: hkaracabey



ITU Global Regulators Exchange

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Regulators Hotline

Post New Question

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	Question	Keyword	Author	Replies	Read	Last Post
	Universal Service and Consumer Protection Dear G-REX users in USA, Australia, UK and Hong Kong Thailand is in the process of establishing a regulatory body. We would like to obtain the foll	Universal Access	wchuentongkam	7	175	10/04/2003 15:59:00 by: abaudrier
	Equal ease of access Dear Fellow Regulators, Can you kindly offer your comments on the following : 1. How was "Equal Ease of Access" implemented in your Country to p	Universal Access	sgupta	5	112	29/04/2002 09:24:00 by: ecabanos
	Concessions/ subsidy to elderly citizens Reference:- No.312-3/2001-TRAI Telecom Regulatory Authority of India(TRAI) has received representations from senior citizens for telephones on subs	Universal Access	sgupta	5	89	03/04/2002 21:26:00 by: rhernoso
	Universal Service Fund Dear fellow regulators, ICASA in South Africa is developing regulations for contributions to our Universal Service Fund. We would like to learn fro	Universal Access	wcurrie	5	123	10/04/2003 16:05:00 by: abaudrier

How to register for G-REX

- **G-REX is a service for regulators and policy makers and welcomes contributions in English, French and Spanish. Any regulator or policy maker interested in registering for G-REX is invited to do so at http://www.itu.int/ITU-D/grex/register.asp.**
- **Registrations from email addresses not affiliated with a regulatory body or policy maker should be confirmed with request on organization's letter head**

GLOBAL SYMPOSIUM FOR REGULATORS

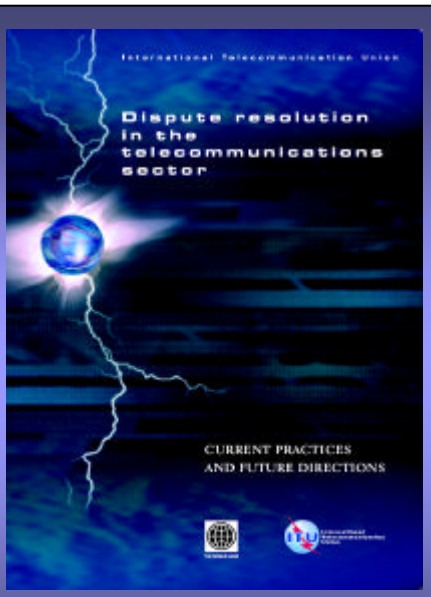
Licensing in the Era of Convergence

The Way Forward

Geneva

10 December 2004

David Satola
Senior Counsel
dsatola@worldbank .org



available at:

http://www.itu.int/ITU-D/treg/Case_Studies/Disp-Resolution/ITU_WB_Dispute_Res-E.pdf

…and forthcoming in bound format in the World Bank "Working Paper" series

Outcome of Study

- Convergence → Issues → Disputes
- Lack of effective identification and resolution mechanisms → inefficiencies
- Effective resolution → shapes markets

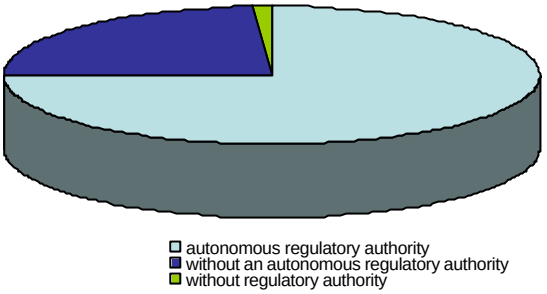
→ Overcome lack of local precedent through global knowledge sharing

Feasibility Study
Searchable Web-Based Multilingual Database of Decisions

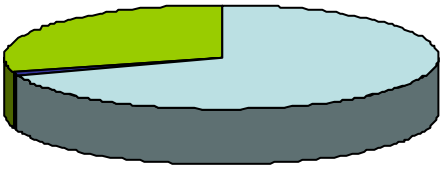
PPIAF

- Categorize Decisions
- Analyze needs, incentives to contribute & use
- Technical features (incl. search and language)
- Business model (costs and funding sources)
- Legal issues (IPRs, reconciling legal traditions)

Regulatory Authorities

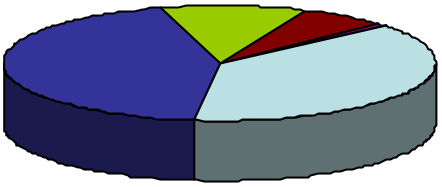


Website Availability



Access to Decisions

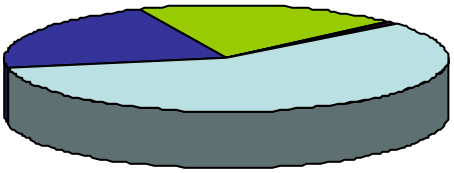
131 countries



- Publication of dispute resolution decisions (38%)
- No publication (44%)
- No information: language limitations (11%)
- No information: technical problems (7%)
- No information: other limitations (1%)

Published Decisions by Region

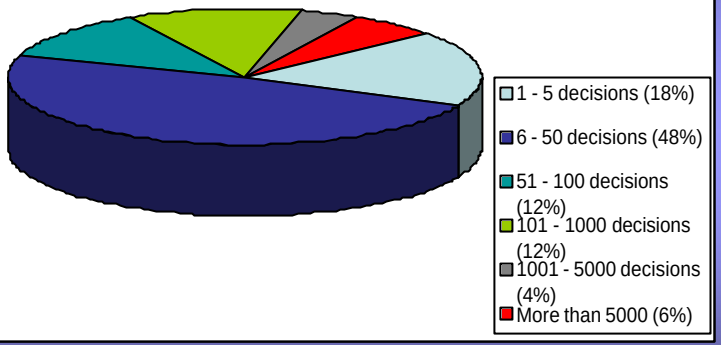
38,000 decisions



- North America (58,3%)
- Europe (21,4%)
- Central and South America (19,2%)
- Africa (0,5%)
- Asia (0,4%)
- Oceania (0,2%)

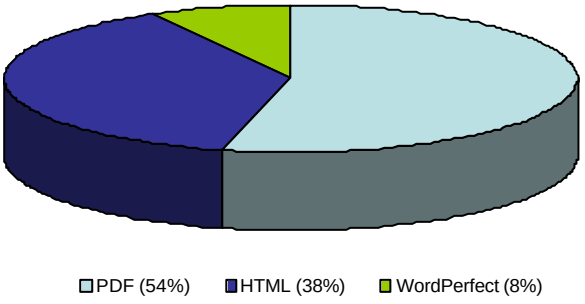
Number of Published Decisions

(50 countries)



Format of Published Decisions

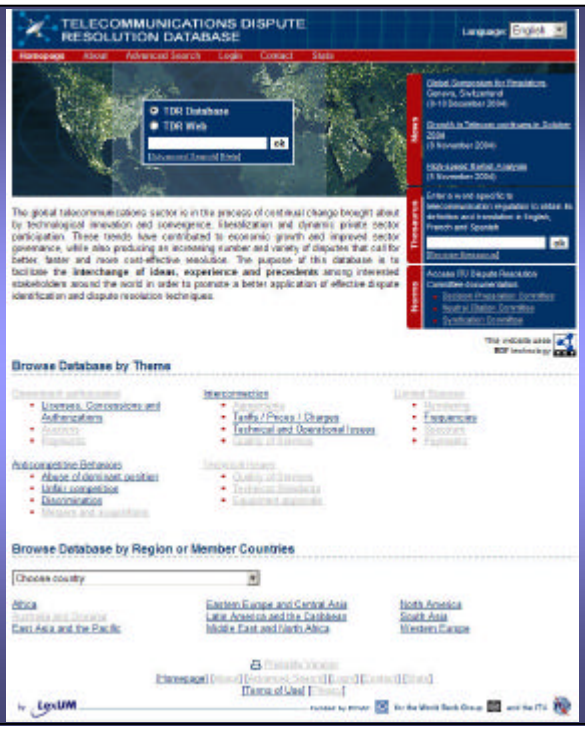
(50 countries)



Distributed/Hybrid Database

- Decisions from all ITU members' Regulatory Authorities
- Global web search engine
- Database local search engine (direct access)
- Multi-Lingual facility
- Chronological and topical access
- Distant and central content management possibilities

http://itu.lexum.umontreal.ca/



Capacity Building & Support

- Increase the number of publishing countries by:
  - Providing support services
  - Favour peer pressure
- Improve the technical skills with capacity building
- Help to integrate content within the database

Standardization will enhance usability

- Common Taxonomy
- uniformity of documents presentation / structure
- Defining syndication norms
- Neutral citation

Comments on the database are welcome and can be directed to:

https://lists.lexum.umontreal.ca/mailman/listinfo/tdr-database

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