

International  
Telecommunication  
Union



## Convergence: Overview

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## Agenda

- ✓ Convergence of ICT
- ✓ Opportunities & Challenges from Converging ICT
- ✓ Regulatory Implications, Principles & Options
- ✓ Examples & Trends of Legislations & Structure
- ✓ Lessons and Ways Forward

## Convergence of ICT

- Internet services delivered to TV sets via systems like Web TV
- E-mail & WWW access via digital TV decoders & mobile telephones
- Webcasting of radio & TV programming on the Internet
- Internet for data, voice telephony (VOIP), audio & visual images
- Data services over digital broadcasting platforms

Examples



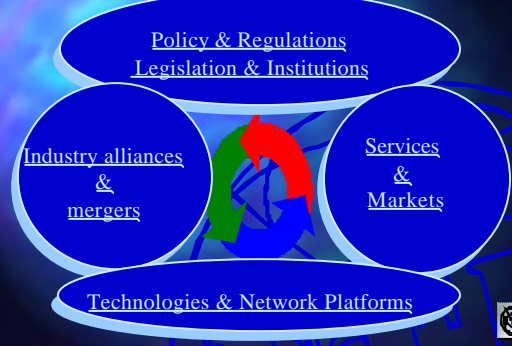
## Paradigm shifts of ICTs

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Distinct – broadcasting, telephony, computer - services	Integrated & new services & consumer devices
Different networks and platforms	Same networks
Different laws & regulators	Converged laws & regulators
At national levels	At global levels



## Convergence in a broader scale



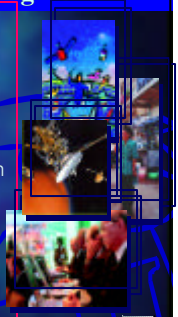
## Opportunities from converged ICT

When putting the right regulatory framework in place:

- ✓ Enrich one's lives, not just the economic dimension – job creations and growth, but the social and cultural ones
- ✓ Expand the overall information markets and be the catalyst for the next stage in the integration of the world economy
- ✓ Create new markets (e.g., Internet for access, content, and backbone infrastructure)
- ✓ Market SMEs globally
- ✓ Increase consumer choice and cultural diversity
- ✓ Increase competition

## Challenges of converging ICT

- increased competition:
- Convergence of not merely technologies but also policy & regulation, legislation & institutions
- Balance between regulated open access (telecom) and free market access (IT);
- Lack of, especially local, content with own language & indigenous culture;
- Borderless & global nature requiring for interoperability & seamless services;
- Growing misuse (spam mails, harmful contents etc.) and cyber-crimes (fraud, hacking, privacy etc.); and
- Increasing uncertainty esp. in markets



## Regulatory implications of convergence

- Multiple or sector-specific regulatory bodies – i.e., regulatory structure
- Market entry and licensing with different traditions and legacies
- Access to networks and contents
- Allocation of radio frequency and other resources for broadcasting, mobile multimedia and voice applications etc.
- Lack of standards supporting interoperability and interconnection of converging networks
- Pricing, accounting, interconnection etc. over the converging networks and services



## Regulatory principles for convergence

- Regulation should be limited, where necessary, to achieve clearly identified objectives: *i.e., not regulation for the sake of regulation*
- The needs of users should be reflected
- Regulatory decisions should be guided by clear, transparent, and predictable frameworks
- Everyone should participate in a converged environment: e.g., scope of universal service
- Independent and effective regulators will be central to a converging environment



## Regulatory options for convergence

1. Build or maintain the existing regulatory model – i.e., structures, bodies, & laws
2. Develop a separate regulatory model for new activities to co-exist with the converged ICTs
3. Progressively introduce a new regulatory model to cover the whole range of existing and new ICT services



## Examples: Regulators from convergence

- Integrating convergent functions in the existing telecom & broadcasting regulators: e.g.,
  - **Australia**: The ACA merging AUSTRAL with SMA
  - **Canada**: The CRTC for both broadcasting & telecom
- New converged regulators extending to computing: e.g.,
  - **Malaysia**: The MCMC as a sole regulator, for telecom, broadcasting & computing
  - **Singapore**: The IDA combining the TIS with ITTA
- Cooperation among regulators: e.g.,
  - **UK**: The OFTEL for telecom, whilst the ITV for content & broadcast messages etc. until the end of 2003 when the converged OFCOM is fully operational after enactment of the Communications Bill;
  - **S.Korea**: The KCC for telecom, whilst the KBC for content & broadcasting;
  - **Hong Kong**: The OFTA for telecom, whilst the BA for content & broadcasting



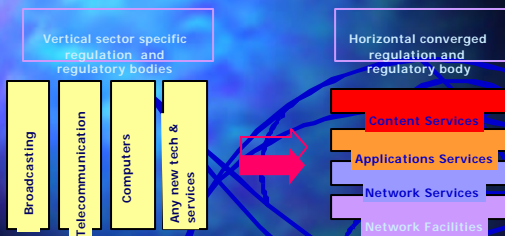
## Tends: Legislation from convergence

- > Over 150 countries have introduced new telecom legislation or modified existing regulations:
  - 1) Amending the existing laws or legislation: e.g., Hong Kong
  - 2) Unifying or converging the relevant elements into the one single law: e.g., Malaysia, India
- > Require some new laws relating to security (e.g., intellectual property, electronic contracts) and cyber crimes (e.g., cyberlaws)

## Examples: Legislation from convergence

- > **China:** The Regulations (1997/8) covered radio, TV & film and provides interim provisions for the management of computer information networks and for the security of computer networks & the Internet.
- > **Hong Kong, China:** The Telecom Ordinance (2000) & Broadcasting Ordinance (2000) were amended respectively to meet the convergence.
- > **Malaysia:** The Communications & Multimedia Act (1998) established a regulatory framework in support of national policy objectives for the industries.
- > **Singapore:** The Electronic Transactions Act (1998) & Regulations (1999) enacts a commercial code to support e-commerce transactions and creates a voluntary licensing scheme for CA respectively; and
- > **India:** The IT ACT (2000) deals with digital signature, e-governance, regulation of CA; The Communication Convergence Bill (2001) drafted and to be passed

## Overall Regulatory Option & Trend



## Lessons & Ways Forward

- ✓ Staff retraining for competence and expertise in fast changing, competitive, and converging ICT/telecommunication sectors
- ✓ Different countries with different economic and geographical conditions will have to shape their regulation in different manners.

## Glossary

- CA: Certification Authority
- ISP: Internet Service Provider
- ACA: Australian Communications Authority
- AUSTEL: Australian Telecommunications Authority
- SMA: Spectrum Management Agency
- CRTC: Canadian Radio-television Commission
- MCMC: Malaysian Communications & Multimedia Commission
- MII: Ministry of Information Industry (China)
- IDA: Infocomm Development Authority of Singapore
- TAS: Telecom Authority of Singapore
- ITTA: IT & Telecom Authority (Singapore)
- KCC: Korea Communications Commission
- KBC: Korea Broadcasting Commission
- OFCOM: Office of Communications (UK)



## More information ?

### ITU website:

- [www.itu.int](http://www.itu.int) for overall ITU activities
- [www.itu.int/treg](http://www.itu.int/treg) for regulatory & policy issues
- [www.itu.int/osg/sec/spu/ni/iptel/workshop/index.html](http://www.itu.int/osg/sec/spu/ni/iptel/workshop/index.html) for detailed case studies in countries
- [www.coe-ofta.oftagov.hk](http://www.coe-ofta.oftagov.hk) for virtual training on policy & regulation

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3. [http://www.comunica.org/w-agera/index.php?bn=wdr\\_convergence](http://www.comunica.org/w-agera/index.php?bn=wdr_convergence)



The End  
Thank you

For more information  
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