IPTV in Hong Kong - Current Status and Regulatory Regime

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12 October 2006
What is IPTV?

• From the “network” perspective
  – Conveyance of video signals over broadband network via
    o The Internet
    o A “managed network”
      o A new platform complementary to existing satellite, cable and terrestrial systems

• From the “service” perspective
  – A broadband digital “triple play” service offering video, Internet access and voice services
  – Pay TV service to registered subscribers
ITU IPTV Focus Group is still considering the definition of IPTV

Some definitions proposed to the ITU

- **Alliance for Telecommunications Industry Solutions (USA)**
  - IPTV is defined as the secure and reliable delivery to subscribers of entertainment video and related services that employs the IP protocol to transport the audio, video and control signals

- **British Telecom (UK)**
  - An IPTV service is defined as the secure delivery of streamed visual content over a managed IP network to a customer for display on a television or similar device
No consensus on the definition, but IPTV seems to take the following generic form:

- Transmission of video signal over the Internet or managed (wireline and wireless) broadband networks using Internet Protocol.
IPTV via Internet

- Conveniently and easily accessible from different locations in the world
- Low set up cost
- Large potential viewer base
- Picture quality depending on bandwidth
- Suitable for viewing on smaller displays only
- No guarantee on QoS
- Difficult to maintain subscription service
IPTV via Managed Networks

- IPTV via managed networks (mobile and wireline)
  - High initial network infrastructure cost, operating cost in bill management, CPE maintenance, etc.
  - Various transmission medium, e.g. fixed networks, 3G, HSDPA, etc
  - Picture quality comparable to that of conventional TV
  - Suitable for viewing on common TV screen
  - Smaller display for mobile reception
  - Guaranteed QoS, network reliability, network security, etc
  - Better access control facilitating subscription based service
IPTV’s Presence in Hong Kong

- IPTV services in Hong Kong
  - Over fixed networks
  - Over mobile networks
  - Over Internet
- General scene on broadcasting and telecommunications in Hong Kong
Hong Kong - General Facts

- A small territory of about 1000 km$^2$
- 7 million people
- 2.3 million households
- GDP in 2005 is US$ 177.2 billion
- Broadcasting sector contributes 0.4% to GDP
- Telecom sector contributes 3.3% to GDP
Fixed services

- Fully liberalised since 2003
- No pre-set limit on number of licences
- 5 active operators
- 3.8 million telephone lines
- 1.7 million broadband subscribers
  - 24% broadband population penetration
- More than 76% of households have a choice of more than two broadband networks
**Mobile services**

- No pre-set number of operators subject to frequency constraint
- Ten 2G networks
  - 3 GSM, 6 PCS, 1 CDMA
- 9 million mobile users
- 130% population penetration
- Four 3G (WCDMA) networks
  - 2.5G, 2.75G, 3G and 3.5G customers: 23% of all mobile users
  - 3G and 3.5G customers: 11% of all mobile users
Broadcasting Services

- 2 free-to-air (UHF band) broadcasters
  - 4 programming channels
    - Virtually universal coverage
    - Digital terrestrial services in 2007 with plan to shut down analogue services in 2012

- 4 pay-TV operators
  - Coaxial cable, satellite, fixed line (including IPTV)
  - Over 1.4 million subscribers
  - Nearly 300 programming channels

- Out of the 4 pay TV operators, 3 provide IPTV services
  - Services launched in end 2003
  - 700,000 subscribers
  - 30% household penetration
  - Nearly 200 Programming channels
Mobile TV

- Emerging technologies for transmitting digital multimedia services for reception by mobile phones / handheld devices
- Some mobile TV technologies enable provision of IPTV service
- Strong interest worldwide to launch commercial mobile TV services including IPTV
- Promising commercial prospects due to convenience and mobility
- Market acceptability is uncertain
- We will consult the industry on mobile TV
  - Regulatory framework and licensing regime
  - Frequency bands
  - Allocation method
Mobile operators are allowed to provide IPTV services over their networks

- No separate broadcasting licence is required for provision of IPTV over mobile networks under the existing legislation
- All mobile operators are providing IPTV services
  - All 2.5G/2.75G/3G/3.5G customers (about 2 million) are capable of accessing IPTV services
  - Typical applications: Internet access, streaming video, etc
- Attractive service packages, e.g.
  - 100 minutes 3G/3.5G streaming video airtime for monthly rental of US$3.8
  - Complimentary unlimited viewing of selected channels for its subscribers
IPTV Service over Fixed Networks

- Fixed network operators are allowed to convey IPTV services
- IPTV services over fixed networks require a separate broadcasting licence
- Three IPTV services over fixed networks employing different network configurations
  - ADSL + ATM/Ethernet
  - Metro Ethernet
  - Ethernet over fibre backbone
IPTV Service over Internet

- IPTV on Internet
  - No broadcasting licence is required
  - Access providers require a telecom licence
  - Internet access via Wi-Fi hot spots
    - Class licence for provision of wireless LAN
    - Technical requirements on output power & others
    - No licence fee, registration only
    - Frequency bands: 2.4 GHz & 5 GHz
    - Over 740 registered Wi-Fi hot spots in Hong Kong for broadband Internet access
  - Internet access via fixed networks
    - Public Non-exclusive Telecommunications Service licence
    - 184 Internet services providers
    - No limit on licences
    - Annual licence fee: US$96
    - Interconnection charge paid to fixed operators: 15.4 US cents per hour
Why IPTV Grows so Fast In Hong Kong?

- Good investment environment in Hong Kong
- Regulatory approaches facilitating the development of a good mobile and fixed broadband infrastructure
- Separate conveyance and programme content regulatory frameworks
  - Technology neutrality
Investment Environment in Hong Kong

- High GDP per capita: US$25,546
- Population ready to embrace new technologies
- A capital for regional headquarters/offices
- A regional centre for financial services, logistics, tourism and professional services
- Geographic location, infrastructure, rule of law, clean government, simple and low tax regime (16% of revenue), free flow of information, talents, entrepreneurship, etc.
- Society is moving to a knowledge-based and high value-added economy
Regulatory Approaches

- Facilitating the development of a good broadband infrastructure
- Liberalization and competition
- Light-handed approach that relies on market forces
- Regulatory intervention unless the market fails
- Fully privatised telecom industry
- No foreign ownership restriction in telecom licensee
- Low entry and exit barriers
Separate Regulatory Frameworks (1)

- Separate regulatory frameworks on
  - Conveyance
    - Regulated under the Telecommunications Ordinance
    - Telecommunications Authority is an independent statutory body established under the Telecommunications Ordinance
    - Licence for conveyance of IPTV is issued by the Telecommunications Authority
      - Carrier licence
      - No pre-set limit on number of licence
      - Simple application procedures
Separate Regulatory Frameworks (2)

- Programme content
  - Regulated under the Broadcasting Ordinance
  - Broadcasting Authority is an independent statutory body established under the Broadcasting Authority Ordinance
    - Licence issued by Chief Executive in Council upon the recommendation of the Broadcasting Authority
  - TV programme services are regulated under the same category of licence in a consistent manner
    - Categorised based on their characteristics and pervasiveness
    - Four types of television programme services
    - IPTV service over fixed network is categorised as domestic pay TV programme service
  - IPTV provided over the Internet is exempted from the licensing requirement under the Broadcasting Ordinance
    - Content needs to comply with the Control of Obscene and Indecent Articles Ordinance
Separate regulatory frameworks facilitates the development of IPTV

- Applicants approach the right licensing authority for appropriate licence
- No dispute on who have the right to provide IPTV services
- Licensees clearly know under what regulation their services will be subject to
- No need to spend time on amending or creating legislation
Separate Regulatory Frameworks (4)

- Technology neutrality
  - Allowing changes to regulation of conveyance and programme content to occur at a different pace in the era of convergence
  - TV programme service providers do not need to invest in network rollout
Unified Regulator

- Convergence takes place at multi-levels
  - Mobile-fixed convergence
  - Telecom-broadcasting convergence

- Regulatory regime and institutional framework will remain
  - conducive to the development of new services
  - encouraging innovation and entrepreneurship
  - safeguard the public interest

- Consultation on the establishment of a unified regulator - Communications Authority
  - Merger of the regulation of telecom and broadcasting
Thank you and see you at
ITU TELECOM
WORLD 2006 in Hong Kong
4-8 December 2006
http://www.itu.int/WORLD2006/