

The Regulator's Role in Facilitating Broadband Development

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Where Does Hong Kong Stand?

- Broadband population penetration 24%
- Broadband household penetration 65%
- Broadband network household coverage
 - DSL network of incumbent 98%
 - Cable modem network >90%
 - Fibre networks of new entrants 71%
- Number of 3G mobile networks 4
- IPTV household penetration 25%

Broadband in OECD Countries

Top four countries in terms of broadband population penetration (end-2005)

	End-2005	End-2004
Iceland	26.7%	18.2%
Korea	25.4%	24.8%
Netherlands	25.3%	19.0%
Denmark	25.0%	19.0%

Source: OECD website

Regulator's Role in Broadband Development

- To create a regulatory environment conducive to investment, comprising
 - Market liberalisation
 - Clear, transparent and predictable regulatory framework
 - Level playing field

- Market liberalisation
 - Lowering regulatory entry barriers
- Clear, transparent and predictable regulatory framework
 - Setting out regulation as clearly as possible
 - Publishing full reasons for decisions
 - Conducting full consultation before change
- Level playing field
 - Protection against anti-competitive conduct
 - Regulation not favouring or discriminating against technologies or classes of operators

Regulatory Reviews in Hong Kong

- Local (domestic) fixed network market liberalised in stages since July 1995
- Market fully liberalised from January 2003
- A series of regulatory reviews conducted since 2004 to update regulation in face of technological and market developments since liberalisation

- Benefits of regulation to be weighed against costs of regulation
- Regulation is to achieve some desirable public policy objectives, for example,
 - Access to quality services at competitive prices
 - Public interest protection
- These public policy objectives are best achieved by market forces

- Sector specific *ex ante* regulation to take the place of market forces before market becomes effective
- Once the market becomes effective, *ex ante* regulation may be withdrawn
- Fair competition is to be safeguarded by *ex post* enforcement of competition law
- Sector specific *ex ante* regulation is to deal with market failures only

- Dominance of incumbent operator may exist during transition to fully competitive market
 - Control of essential facilities (e.g. local loops in last mile) by incumbent
 - Market entry barriers due to sunk cost or economy of scale
 - New entrants may face difficulties in market expansion due to network effect, customer switching costs, established position or exclusionary behaviours of incumbent
 - Etc.

- Hong Kong has applied *ex ante* regulation to market during transition phase
 - Asymmetric tariff regulation on incumbent
 - Type II interconnection (equivalent in effect to “unbundling of local loops”)
- The *ex ante* regulation had helped competition to develop steadily to what it is today
- As the market became more competitive, Hong Kong reviewed benefits against costs of the *ex ante* regulation

- Having considered in 2004
 - Extent of competition in the market
 - Market share of new entrants
 - Network coverage of new entrants
 - Emergence of bypassing technologies
- Decided to
 - Terminate asymmetric tariff regulation from January 2005
 - Set timetable for phasing out mandatory Type II interconnection by end-June 2008 (except where incumbent local loops are “essential facilities”)

Regulatory Environment for NGN

- More emphasis of market led *ex post* regulation than prescriptive rule-based *ex ante* regulation
- *Ex ante* regulation to address market failures only
- Is public policy objective achievable through market alone?
- If not, consider *ex ante* regulation if benefits of regulation outweigh costs

Regulation at Core and Access Layers

Applications (VoIP, IPTV, data, Multimedia)
Control
Core (Transport)
Access (fibre, HFC, wireless, 3G, satellite, power line)

- Multiple access networks expected
- No market entry barrier at transport layer
- Unlikely to have need for regulated access to access and transport layers in the Hong Kong environment

Regulation at Control and Applications Layers

Applications (VoIP, IPTV, data, multimedia)
Control
Core (Transport)
Access (fibre, HFC, wireless, 3G, satellite, power line)

- Intelligence moved to network edges
- Enabling separation of services provision from network operation
- Opportunities for independent providers of content, applications and services

- Desirable public policy objective of achieving a thriving market for content, applications and services over the NGN infrastructure
- “Open access” preferred to “walled garden” to achieve this desirable public policy objective
- Should “open access” at regulated prices to NGN infrastructure at control and applications layers be mandated by regulation?

- “Open access” may be achieved by unrestricted access to the public Internet
- Infrastructure providers should not block delivery of applications on the public Internet on a “best effort” basis
 - Competition law
 - Licence obligations
 - Customer choice in the market
- Infrastructure providers may supply differentiated quality of transmission service to generate new revenue

- Service providers may seek guaranteed quality of service to end-customers
- There is scope for commercial agreement between “open access” seekers and providers
- Thus no need to rush to regulation of NGN
- Regulator to monitor market and identify any durable bottlenecks obstructing development of an effective market
- Proportionate regulation to address market failure

Regulatory Approach of Future Communications Authority

- Quotations from consultation paper issued by Government for the merger of the telecommunications and broadcasting regulators:
- *“First, we are aware of a general paradigm shift from active regulation based on detailed rules to a more relaxed approach with emphasis on fair competition.”*

- *“Second, new services will emerge and disruptive technologies will bring challenges to the regulatory regime. Operators will experiment with or bring in new services to test their technical and commercial viability. Some of these services may cause problems under the regulatory regime but such problems may be transitory. The regulator must be mindful of the risk of stifling innovation and investment by premature intervention, and risk of regulatory creep if the regulatory ambit is to be continuously extended.”*



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Thank You

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