

**Broadband: What role for Regulators:
Intervention? Forbearance? Promotion?**

**Dr William Bratton,
Partner, Spectrum Strategy, Singapore**

© Spectrum Strategy Consultants 2005

Broadband access offers significant advantages

Advantages / benefits

- Eroding information differentials across geographies
- Improving access to regional, national and international resources
- Supporting transfer of knowledge and expertise
- Increasing options available to all communities / areas
- Providing a positive impact on productivity of businesses
- Supporting growth of new industries

Policy implications

- Increasingly considered important to support socio-economic and political development
- Should be seen as equal to other forms of infrastructure in development plans
- But requires a co-ordinated / focused policy approach

© Spectrum Strategy Consultants 2005 |

But deployment in developing areas is constrained without regulatory / government support

Broadband access provision

- Little incentive to deploy broadband networks
 - low demand / limited competition / limited funds
- Lack of promoting regulatory framework

Connectivity

- Lack of backbone networks
- Incumbent ownership of existing backbone networks
- Limited international connectivity and local hosting

Demand

- Limited consumer demand
 - high prices / voice emphasis / limited local content
- Limited co-ordination/promotion of broadband benefits

Important to address these constraints to avoid continuance or even reinforcement of the digital divide

© Spectrum Strategy Consultants 2005 |

Therefore, regulators need to take a holistic approach

Regulatory priorities

- Facilitate market entry by all potential broadband providers
 - local and foreign, large and small
- Remove barriers that impede broadband infrastructure investment
- Adopting technology neutral approach and free access to spectrum
- Encourage infrastructure investment, using incentives where needed
- Coordinate with other sectors to access alternative fibre backbones
- Drive broadband demand from government and public service and promote commercial content / application development
- Raise broadband awareness among all key stakeholders
- Develop mechanisms to lower costs end-user terminals

© Spectrum Strategy Consultants 2005 |

In particular, focus should be on network investment

Mechanisms to encourage network investment

Market liberalisation

- Competition drives investment
- Support entry by all interested parties, including foreign
- Focus on wireless access technologies
- Encourage small-scale market operation, esp for rural areas
- Resist “super network” concept
- Need to develop / enforce pro-competition regulations

Regulatory incentives

- Incentivise network deployment by large-scale operators, e.g.
 - extension of licence periods
 - more lucrative licences
 - access to universal access / service funds
 - reduced licence fees
 - tax incentives
- But requires regulatory commitment to enforcement

And an emphasis on wireless provision

The role of wireless technologies

- Wireline broadband access provision may be cost prohibitive
 - limited role of fixed-line wholesale provision (different circumstances / priorities between developing and developed markets)
- Necessary to position wireless access as central to any strategy
 - increasing range of alternative wireless technologies available
- But necessary to co-ordinate with spectrum frequency allocations
 - technology neutrality within spectrum allocations

Policy should also address backbone bottlenecks

Resolving backbone bottlenecks

- Incumbent ownership of backbone networks can constrain competition
 - impose excessive access costs / limit availability of bandwidth and QoS supported / imposing restrictions on points of interconnection
- Costs of duplicating backbone networks can deter market entry
- Regulators have two important functions
 - regulate new entrant access to existing infrastructure
 - appropriate pricing points and terms & conditions
 - encourage new backbone network deployment
 - make alternative infrastructure accessible
 - support access to government land
 - incorporate telecom networks into new infrastructure

In summary, regulated competition with active promotion

Key summary principles

- Focus on market liberalisation and promoting competition
 - encourage network deployment with incentives
 - support small-scale deployment in rural areas
 - develop and enforce asymmetric regulatory regime
- Encourage deployment of wireless broadband access technologies
 - co-ordinated frequency plans and technology neutrality
- Encourage build-out of backbone networks and regulate access to existing networks
- Develop awareness / understanding of broadband
 - e-government / ICT initiatives
 - encourage take-up / diffusion of end-user terminals