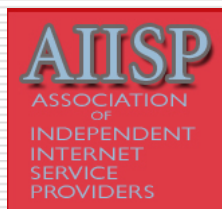


# AN ISP PERSPECTIVE ON INTERNET GOVERNANCE

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# WHO IS THE AIISP

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- Association of Eight independent ISPs
  - Key AIISP objectives and activities:
    - Create fair and balanced competition
    - Lobby government and regulatory agencies to ensure fair trade and an enabling environment
    - Represent collective interests during incumbent negotiations
    - Foster and protect confidence of consumers in order to stimulate Internet growth
    - Advance local, regional and international Internet related issues (Internet education, training, governance, etc.)
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# Internet Governance? – No Simple Definition and Scope

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- ❑ A system of IP address allocation
  - ❑ Operation and management of root layers of DNS
  - ❑ Quality of Service Standards for Packet Flow and Routing
  - ❑ Cooperative activities between stakeholders (security, peering, etc.)
  - ❑ User Community Issues (spam, privacy, intellectual property, multilingualism, adult content, gaming etc.)
  - ❑ Social Development Issues (Equal Access, Infrastructure, MDG, Digital Divide)
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# Key Drivers for AIISP's IG Perspective

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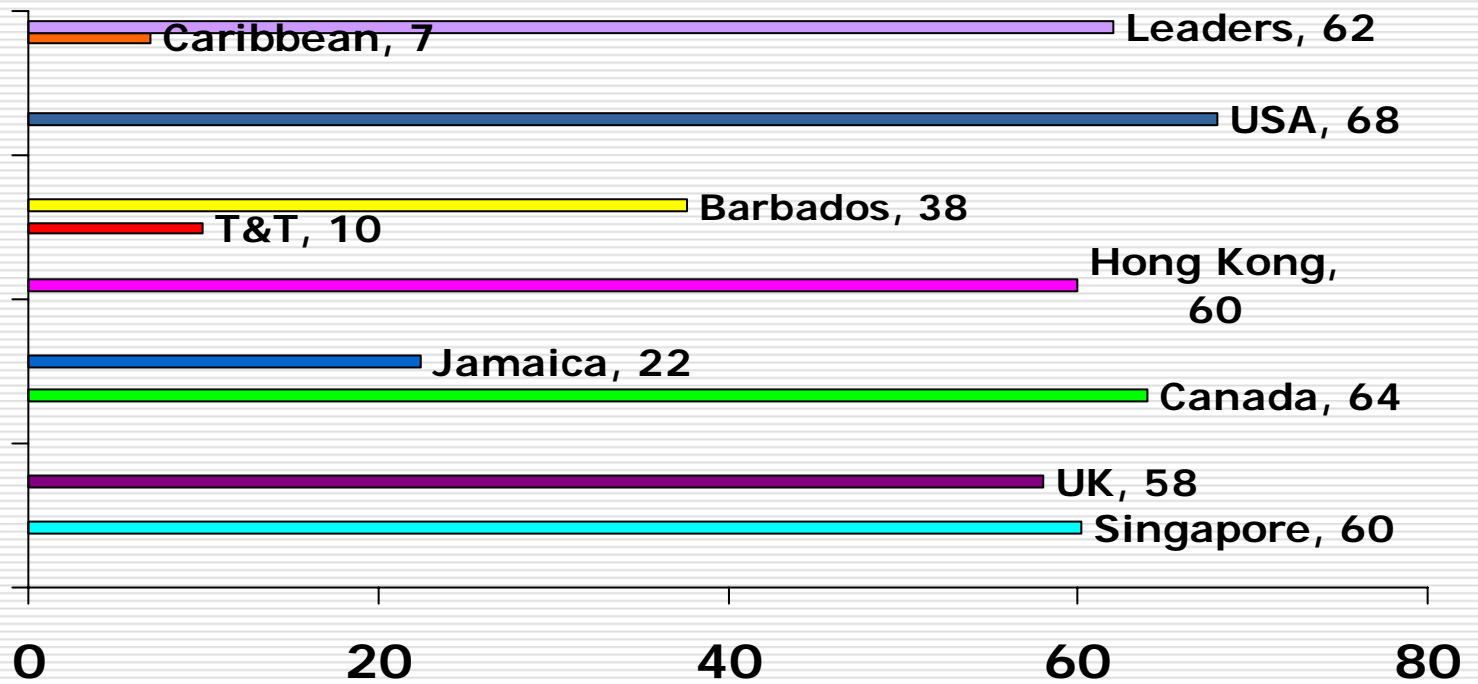
- Commercial
    - How can an IT start-up develop into a sustainable, profitable and growing business
  - Regulatory – interconnection and backbone access
    - Landscape must encourage and protect new entrants from anti-competitive practices – local loop and off island
  - Technological
    - Un-restricted / regulated access to new technologies (hands off approach to WIFI, unlicensed bands)
  - Social Development – Salient value proposition of Internet goodness – driving demand to increase penetration
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# Where are we now??

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## 2005 Internet Usage Rates - % of Population





# Internet Governance??

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- We need an Internet to Govern
    - Small aggregate numbers
    - 2.7M users in Caribbean region inclusive of Spanish, Dutch and French speaking islands
    - 900M world users
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# New Paradigm is Required

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- ❑ Building Internet infrastructure should be likened to building a highway
  - Rationalized due to economic linkages
  - Facilitates trade and commerce
  - Enhances public safety
- ❑ Internet as a basic commodity not a luxury good (like food, water, electricity – a developmental indicator)
- ❑ Internet access included in building codes, housing development plans, city plans
- ❑ Is it more efficient to build mass transit or to invest in the infrastructure that enables telecommuting?
- ❑ If gas is subsidized, why not subsidize Internet access?
- ❑ Does the Caribbean pipeline project include fiber?
- ❑ Public / Private partnerships should be fostered to evaluate and implement



# Sample Public / Private Sector Partnerships to Grow Internet

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Singapore	Singapore One implemented a nationwide broadband network – Core network of ATM switches for multimedia delivery (Started in 1996-98) > US \$10M / PC Reuse schemes for families earning < US \$2,000 per month
Australia	Subsidy of US \$3,300 for remote “bush” access to Internet – pays for dish, etc.
USA	E-rate Program (launched in 1998) – national government subsidy of US \$2.25 Billion for needy schools and libraries to fund 20-90% of Internet infrastructure (computers, access, etc.)
European Union / UK	UK will use EU aid money to pay half the cost of service providers providing Internet access services to poor, ‘blackspot” areas such as Wales

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# \$100 PC – Myth or Reality

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- AMD has a blueprint for a US \$185 machine – min. purchase of 1000 users
  - Intel plans a US \$199 machine
  - Microsoft has a XP starter kit
  - Region requires a collaborative approach to bulk negotiating and buying
  - Regional assembly projects (economies of scale)
  - Markets for such low cost machines should not be confined to Brazil and India
  - Caribbean must aggressively participate
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# The Regulatory Access Question

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- ❑ ISPs ride on top of PSTN for narrowband and wired broadband
  - ❑ Data / Internet often takes back seat to mobile / voice
  - ❑ Local Loop Access
    - Equal Access to facilities on timely basis
    - Affordable toll-free access for narrowband
    - Unbundled and Wholesale DSL
    - Unbundled and Wholesale Cable
  - ❑ International Access
    - Satellite
    - Fiber (Americas 2, New Cables via St. Croix, Venezuela, major regional NOCs)
    - Existing cable heads should be unbundled
    - New entrants encouraged and / or subsidized
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# International Fiber Issues

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- ❑ International transport costs > Internet port charges
  - ❑ Peering is scant or non-existent – should be mandated
  - ❑ Strong international content demand drives up costs (hotmail, google, CNN, foreign webhosts)
  - ❑ “Sender Keeps All” IP settlement paradigm creates imbalance – global carriers benefit
  - ❑ Local traffic subsidizes costly international traffic (leased lines are still distance based)
  - ❑ Regional traffic hubs / secure data centers / meet-me-rooms should be established to mitigate international transport costs and encourage foreign hosting at regional exchanges (AM2, GC, ARCOS)
  - ❑ Extensive ISP traffic research commissioned
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# Comparative Bandwidth Prices

Source: Bandwidthmarket.com 6/05		Bandwidth Market - Lowest Price in \$US				
		Mbps	Internet Access	Private Circuit to USA*	Internet Access \$/Mbs	Private Circuit \$/Mbs
Trinidad & Tobago	Port of Spain	1.544	\$ 12,540	\$ 32,677	\$ 8,122	\$ 21,164
Trinidad & Tobago	Port of Spain	44.736	\$ 130,000	NA	\$ 2,906	NA
<b>DS3 Capacity</b>						
Argentina	Buenos Aires	44.736	\$ 22,500	\$ 35,000	\$ 503	\$ 782
Brazil	Sao Paulo	44.736	\$ 15,000	\$ 28,000	\$ 335	\$ 626
Chile	Santiago	44.736	\$ 46,883	\$ 35,000	\$ 1,048	\$ 782
Malaysia	Kuala Lumpur	44.736	NA	\$ 18,000		\$ 402
Peru	Lima	44.736	\$ 82,717	\$ 57,000	\$ 1,849	\$ 1,274
Singapore	Singapore	44.736	NA	\$ 18,500		\$ 414
Taiwan	Taipei	44.736	\$ 26,842	\$ 18,500	\$ 600	\$ 414
Venezuela	Caracas	44.736	\$ 82,717	\$ 37,500	\$ 1,849	\$ 838
Average			\$ 46,110	\$ 30,938	\$ 1,031	\$ 692

<b>STM-1 Capacity</b>						
Argentina	Buenos Aires	155.52	NA	\$ 126,000	NM	\$ 810
Brazil	Sao Paulo	155.52	NA	\$ 72,000	NM	\$ 463
Chile	Santiago	155.52	NA	\$ 126,000	NM	\$ 810
Peru	Lima	155.52	NA	\$ 126,000	NM	\$ 810
Venezuela	Caracas	155.52	NA	\$ 126,000	NM	\$ 810
Average				\$ 115,200		\$ 741



# AIISP IG Recommendations

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- Foster Pro-competitive regulatory framework
    - Equal access, non-discrimination, parity, unbundling, well-defined dispute settlement process
    - Light touch regulations of Internet services (fees, filings, spectrum)
  - Encourage Public / Private sector partnerships to facilitate infrastructure build-out (access and CPE) and Internet awareness campaigns
  - Adopt a regionally coordinated approach to IG issues
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# AIISP IG Recommendations –

## Cont'd

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- Establish regional Internet Governance Task Force or Secretariat
    - Traffic research
    - Peering policy
    - Wholesale PC purchasing and / or regional assembly
    - Secure Regional Internet Exchange Nodes & Data Centers
    - Harmonized eCommerce and Cyber Laws
    - Optical link connectivity options
  - Understand that IG is not the end, but the means to stated developmental goals
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# Thank You

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