

International gateway regulation

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Apia, April 26, 2013



Why is this a regulatory issue?

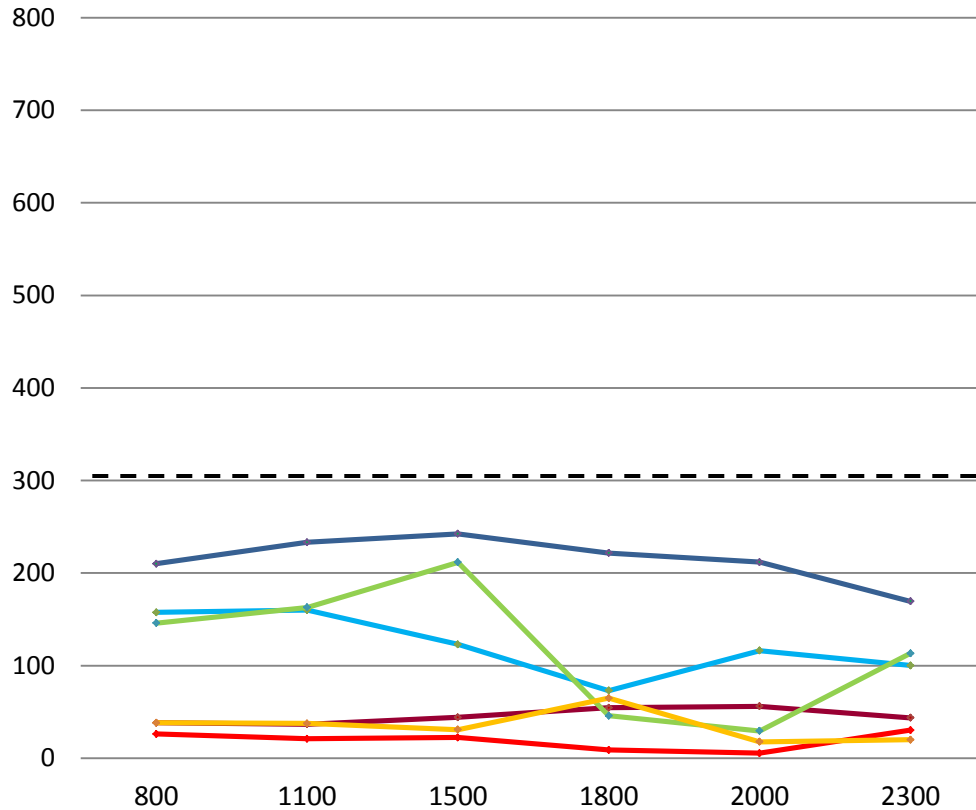
- If the answers to one or both questions are positive, it is:
 - Is the international gateway (and associated elements) a monopoly, giving rise to market power?
 - Is it likely to allow the extension of market power to workably competitive markets?

Issue increasing in importance

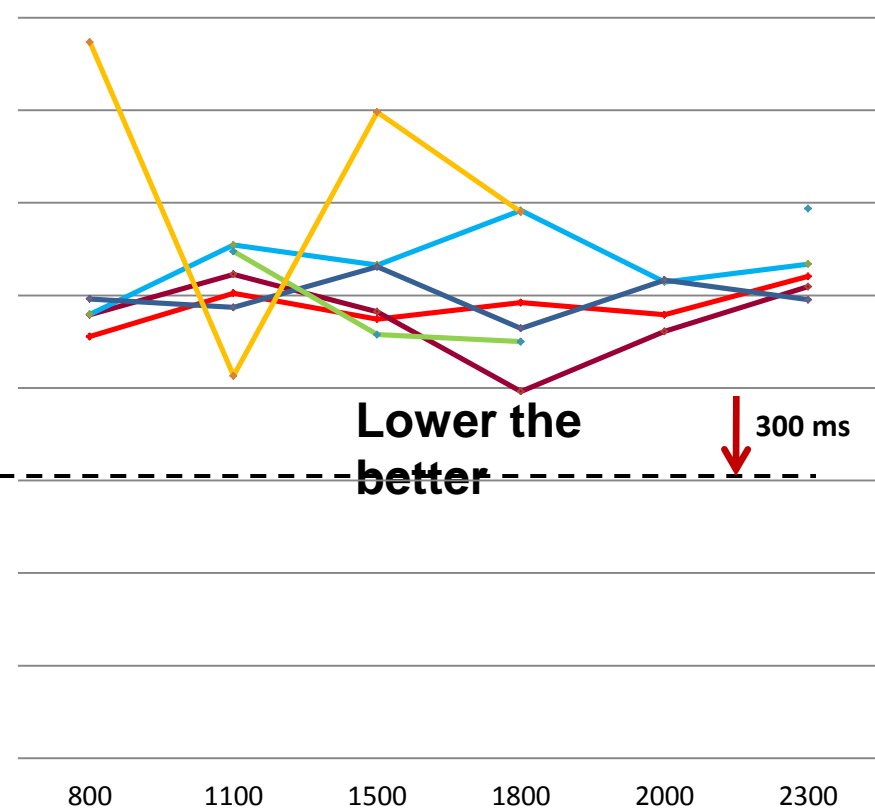
- In countries with significant expatriate populations, international gateway is important
- As Internet use increases, importance of international connectivity increases
 - Especially the case in countries where content that is most used comes from outside borders

RTT: ISP Domain vs. International

ISP Domain (ms)



International Domain (ms)



Lower the
better

300 ms

BASIS OF REGULATION

Essential or bottleneck facilities

- ICT Regulation Toolkit states they “are network elements or services that are provided exclusively or predominantly by a monopolist and are critical inputs to retail service. Also, it is not feasible, either economically or technologically, for retail competitors to duplicate the essential facility or develop a substitute for it.”
- “where facilities cannot practicably be duplicated by would-be competitors, those in possession of them must allow them to be shared on fair terms. It is illegal restraint of trade to foreclose the scarce facility.” -- *Hecht v. Pro-Football, Inc.*, 570 F.2d 982, 992 (D.C. Cir. 1977)

Possible essential facilities

- Cable landing station
- Undersea cable, privately owned/consortium owned
- Domestic link from urban center to cable landing station

- Satellite connectivity not conducive to monopoly, unless artificially created by law
 - But must always be examined when determining whether cable facilities are essential

Is satellite a substitute for fiber cable?

- Is latency a key performance indicator?
 - Geostationary satellites affected by varying degrees of latency depending on distance from equator and number of hops
 - Lower-orbit satellites may be reasonable substitutes
- Is reliability a key indicator?
 - Cables are affected by outage risks, as are satellites
 - Ideal solutions include redundancy paths involving multiple media
- May be necessary to engage in formal assessment if relevant to regulatory determination of essential facility status

Price setting

- Regulatory action to set prices should be a last resort, especially in dynamic and opaque international bandwidth markets characterized by discounting practices
 - Regulating bandwidth prices is not advisable except in special circumstances
 - Regulating pricing of CLS elements makes more sense since they more easily fit the essential facilities category and are totally within national jurisdiction
- Satellite prices could be a useful marker for commercial arrangements

Cable landing stations (CLS)

- Usually considered essential facilities
 - But Hong Kong OFCA differs
 - Discontinued regulation of dominant operator's CLS in 2002 after finding the market competitive
 - Has set apart land for new cable stations and will facilitate approvals
 - Also provides “one-stop” facilitation for laying cables to connect CLS to urban center
 - Provides information on existing seven CLS so that commercial agreements can be reached
 - Appears to be relying on competitive pressures created by “build-or-buy” options reinforced by reductions in transaction costs to regulate price

HK solution may not be most appropriate for PICs

- Large population
- Heavy data use
- Intensely competitive market segments, including CLS
- Eight cables already in place; connected through 7 CLS owned by 5 operators

But elements of HK solution such as reducing transaction costs through the creation of a “one-stop shop” and making coastal land available should still be adopted

Next-best solution to competition (may not be feasible in many PICs)

- Encourage multiple cables or consortium cable to be landed at national CLS
- Enforce co-location at CLS, setting cost-based rental rates
- Permit “build-or-buy” for the domestic link
- Leave bandwidth prices beyond the above unregulated

Third-best solution (probably what will be realistic for many PICs)

- Reference Interconnection Offer (RIA)
 - Depending on legal provisions, a declaration of essential-facility status or that of a dominant operator within a CLS market may be necessary, depending on the law
 - Costs may be calculated using either cost methodology or benchmarks
 - If cable has been subsidized, differences in opinion re cost of capital
 - Ensure time-bound schedules are set and enforced
 - Example of CLS RIO
 - <http://www.tatacommunications.com/downloads/providers/cls/cls-rio-vs-b-mumbai.pdf>

Indian example

- India has many cables and cable landing stations, but international telecom carriers complained to TRAI that prices were too high
 - In contrast with HK, high concentration in CLS market with top two operators holding 93% of market
- Following public consultation, TRAI issued “International Telecommunication Cable Landing Stations Access Facilitation Charges & Co-location Charges Regulations, 2012 (No. 27 of 2012) in December 2012
- Tata (60% market share in CLS) obtained a stay order in January 2013; order is thus not in effect, subject to conclusion of appeals

Illustrative: Annual capacity charges in INR

	Prices prior to order	Prices in challenged order
STM-1		36,000
STM-4		93,000
STM-16	12,500,000	240,000
STM-64	34,000,000	625,000

STM-16 and STM-64 prices reduced to about 2% of previous; suggests radical changes in cost methodologies

ADDITIONAL RESOURCES

- Mauritius IPLC determination:
http://www.icta.mu/documents/IPLC_tariff.pdf (no cost model available on website but described in Esselaar, S., Gillwald, A., & Sutherland, E. (2007). *The regulation of undersea cables and landing stations*, p. 10
<http://link.wits.ac.za/papers/esselaar-et-al-2007-undersea-cables.pdf>)
- Fiji cable capacity determination of 2010:
<http://www.fintel.com.fj/userfiles/file/FINTEL%20Landing%20Station%20Determination%2004-06-10%20.pdf>

- Hong Kong China OFCA, *Landing of submarine cables in Hong Kong.*

[http://www.ofca.gov.hk/en/industry focus/telecommunications/facility based/infrastructures/submarine cables/index.html](http://www.ofca.gov.hk/en/industry_focus/telecommunications/facility_based/infrastructures/submarine_cables/index.html)

- India. TRAI. (2012). Consultation Paper on Access Facilitation Charges and Co-location Charges at Cable Landing Stations http://www.trai.gov.in/WriteReaddata/ConsultationPaper/Document/Consultation_paper_on_CLS.pdf
- India. TRAI. (2012). The International Telecommunication Cable Landing Stations Access Facilitation Charges and Co-location Charges Regulations, 2012 (No. 27 of 2012) <http://www.trai.gov.in/content/RegulationUser.aspx?id=0&qid=0>

STATUS IN PACIFIC

Country	Competition status	Connected to	Managed/Owned by	Ownership structure	RIO
Fiji	Competition	Southern Cross Cable Network	FINTEL	Owned by Government of Fiji (51 percent) and ATH (49 percent)	Not available publicly. See :http://www.fintel.com.fj/pages.cfm/services/other-services/southern-cross-capacity.html
FSM	Monopoly	HANTRU-1	FSMTC	FSM Telecommunications Corporation is a public corporation established under Title 21 of the Code of the Federated States of Micronesia	No
Marshall Islands	Monopoly	HANTRU-1	NTA	NTA completed its privatization process in November 1991. On December 31, 2002, number of shares issued, out of 360,000 total shares available were 275,382 (208,075 government and 67,307 private). The total number of non-government shareholders is 604.	No

Country	Competition status	Connected to	Managed/Owned by	Ownership structure	RIO
PNG	Competition	(1) PPC-1 PIPE in Madang (2) APNG 2 at Ela Beach	Telikom PNG	Government owned and controlled	Not available publicly. See: http://www.telikompng.com.pg/index.php/wholesale
Samoa	Competition	SAS (Samoa - American Samoa)	BlueSky	25% of Bluesky Samoa's shares are owned by the UTOS, while the other 75% are owned by BlueSky Communications and other investors from Samoa and American Samoa.	Not available publicly.
Tonga	Competition	Fiji-Tonga	Tonga Cable Limited	TCL is 80% owned by Tonga government and 20% owned by TCC	Draft RIO available