Investigating Options for NBN Pricing

National Broadband Network Summit
8 December 2009

John de Ridder
www.deridder.com.au

Outline of talk

1. The task
2. Goldilocks pricing
3. National average pricing
4. Implications for ISPs
5. Key messages

1. The task

- The task is to develop Goldilocks prices
  - High enough to recoup investment
  - Low enough to be affordable
- Evolutionary perspectives:
  - Business models
  - Technology
  - Economics
- These changes require a new approach

Evolution of business models

Resale, PSTN interconnection
Disrupted by
Mobiles and VoIP

1990s

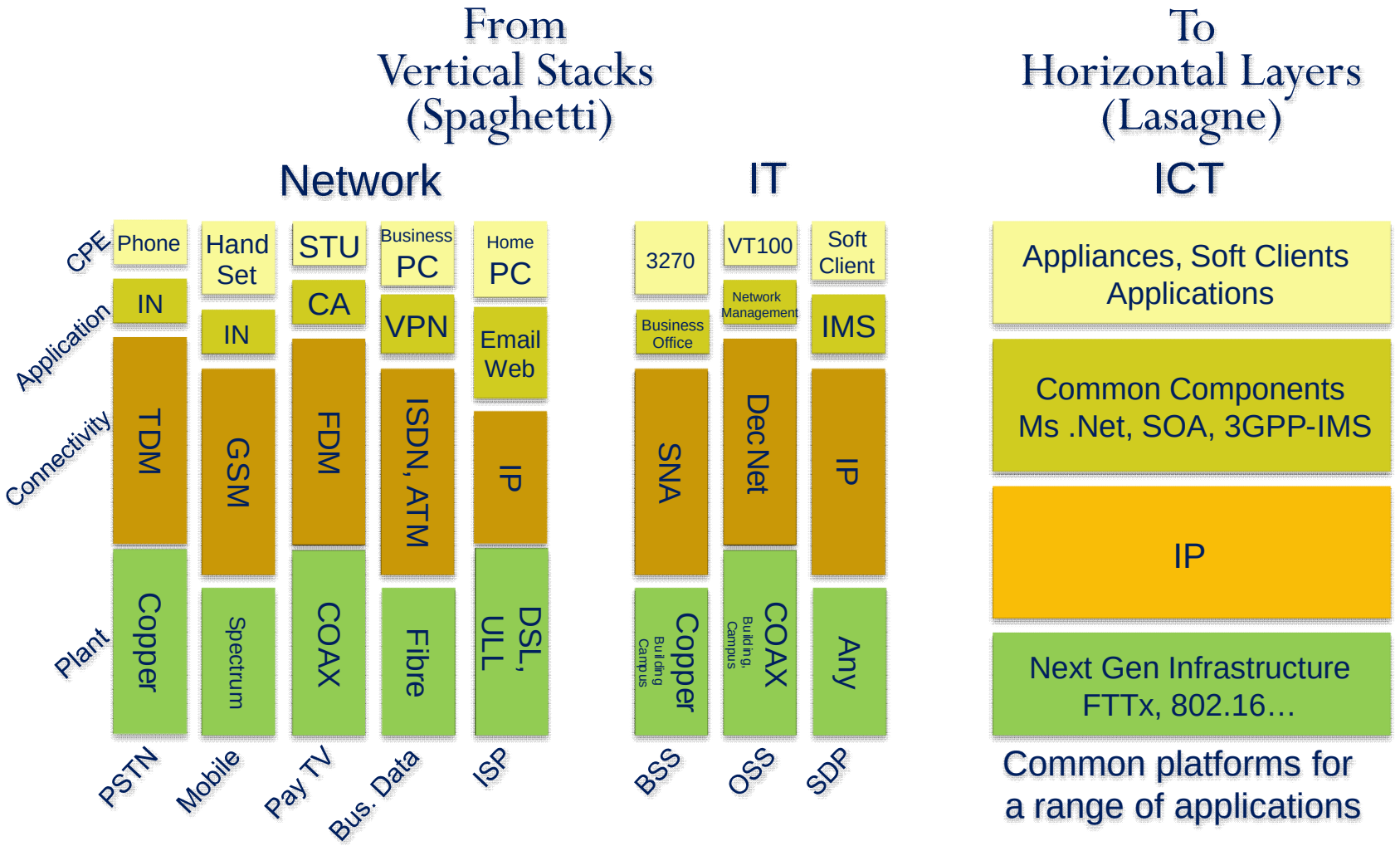
ULLS and LSS
Disrupted by
CAPEX strike and NBN

2000+

Applications
Disrupted by
Non-telco players

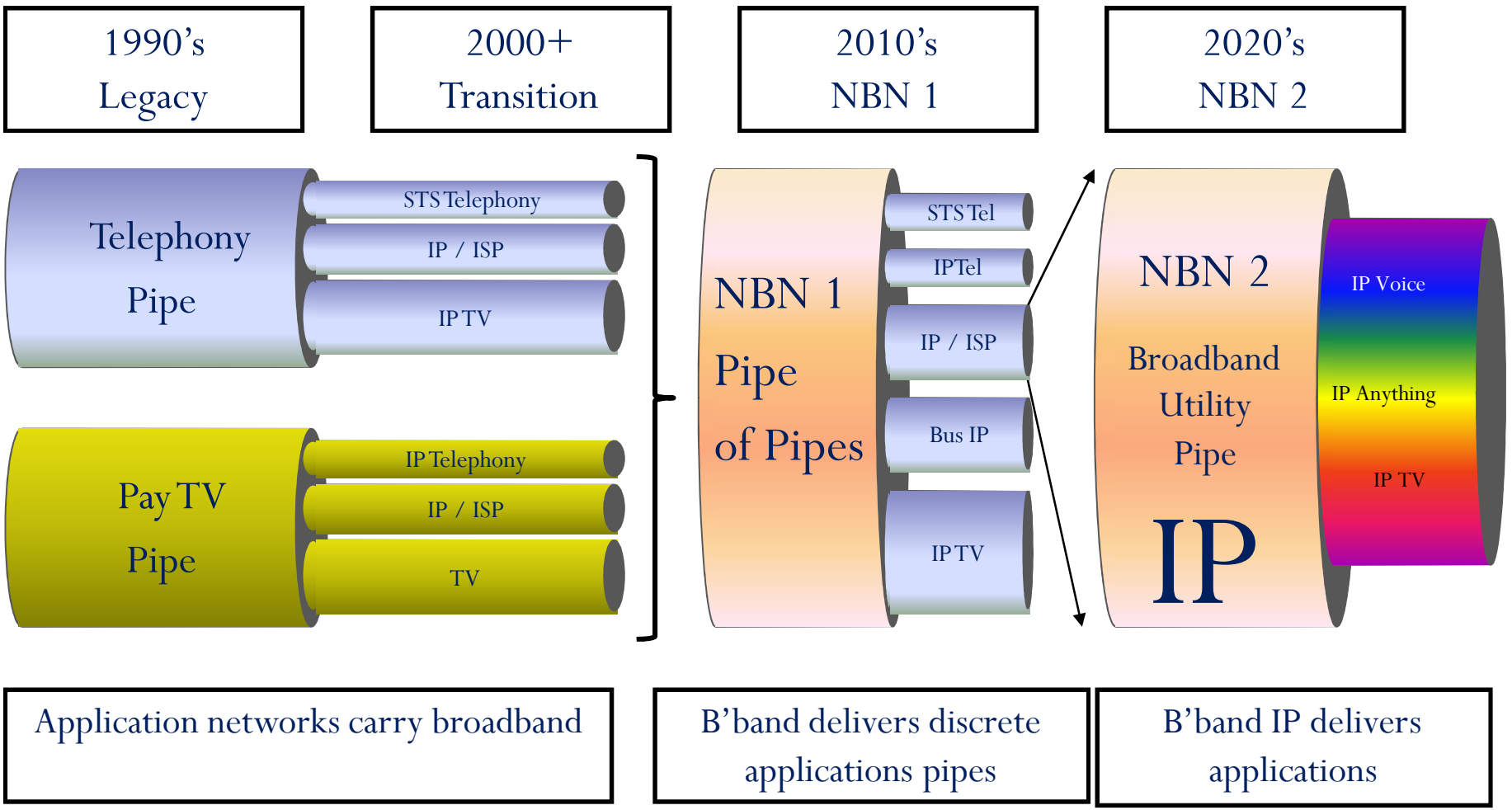
2010+

Evolution of technology



From purpose built to a network for any purpose

From legacy pipes to a utility pipe



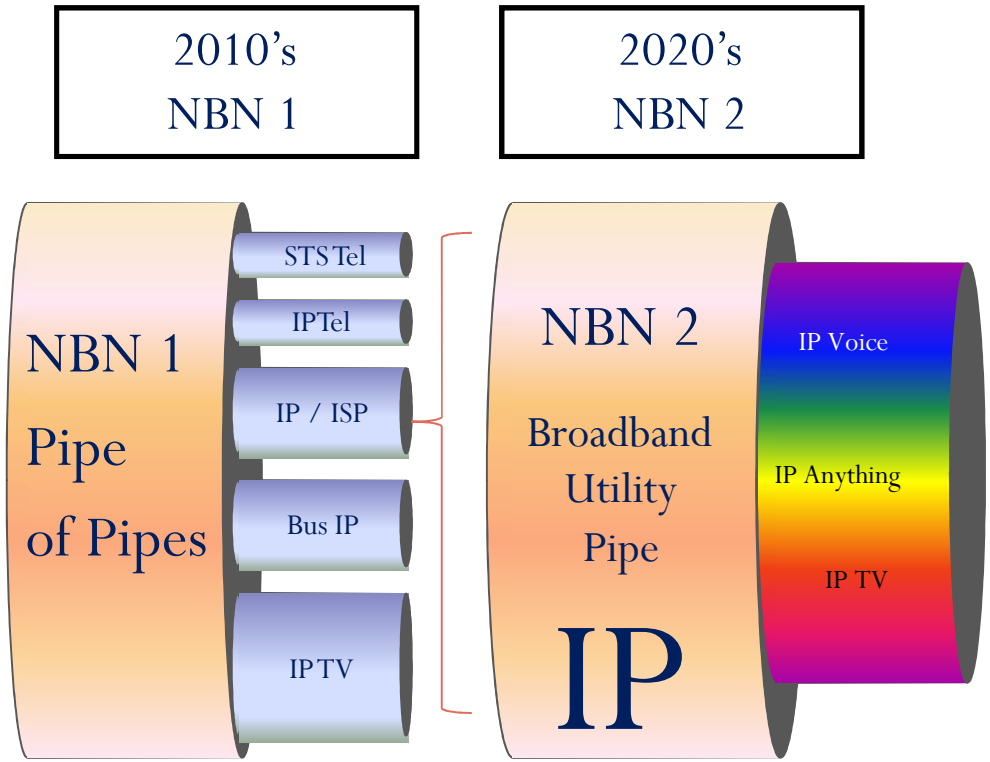
Port pricing on the pipe

IP/ISP port focus today

All ports morph into the IP/ISP pipe in NBN 2

But pricing must help migration to NBN 2

TV is a special case – for the moment

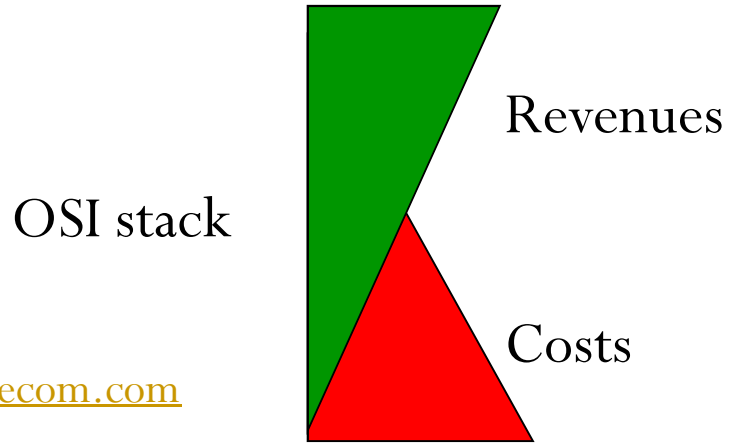


B'band delivers discrete applications pipes

B'band IP delivers applications

Evolution - economics

- Historically, all networks (incl. mobiles) cross-subsidised access from calls; but that is less possible with delayering
- With IP, customers can take services from anyone!
  - *"Carriers face a core problem: They have been unable to peg long-term profitability onto the Internet services they provide and enable. Even as the demand for bandwidth continues to grow, the revenue-per-bit that they make continues to drop at an alarming rate that could, according to some analysts, discourage future investments"* [1]



[1] Michael Morisy, 30 April 2009, www.SearchTelecom.com

Economics - continued

- Can a $43bn access network be funded?
  - *"I don't understand how you can get someone in Chatswood to pay an extra 50 bucks a month for the same product and make them happy about it."* [1]
  - *"$43bn in today's dollars cannot be recovered from customers or investors (but) is ultimately going to have to be subsidised by the taxpayer"* [2]
- Access is the only NBN product, so access must pay for itself (or get govt. subsidies?)

[1] iiNet CFO David Buckingham August 2008
[2] iiNet CEO, Michael Malone, CeBIT 12 May, 2009

Task - recapitulation

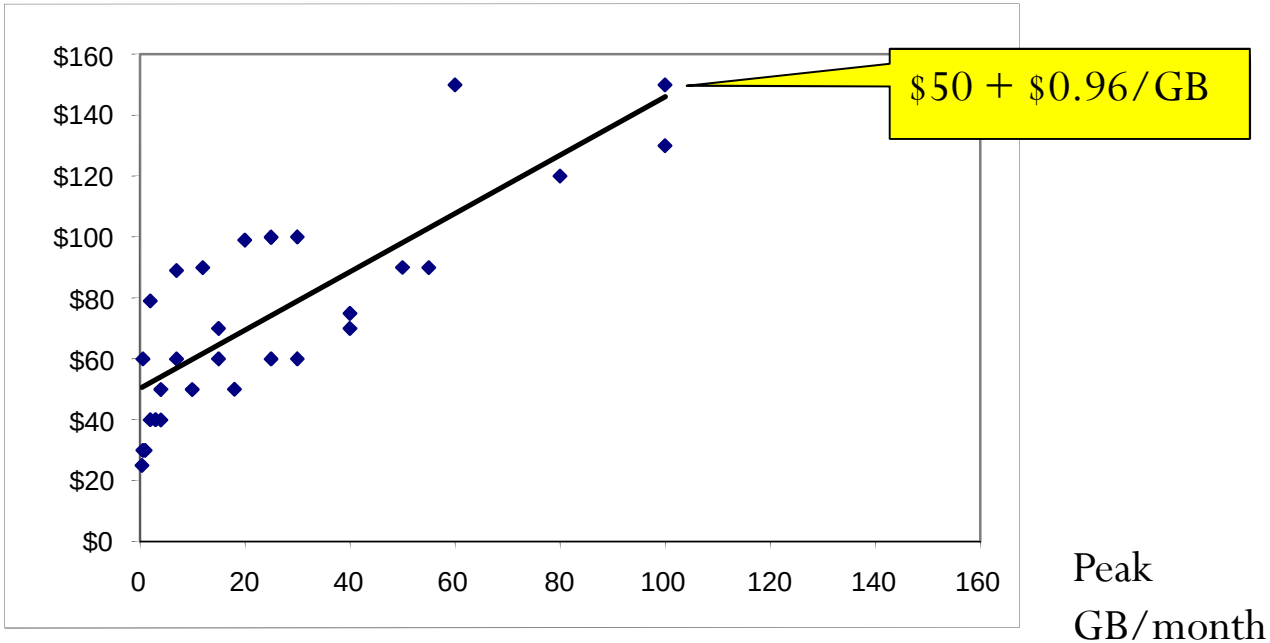
- Access network owners cannot rely on old business models to recoup investments
- Vertical integration helps less as control of access does not give control of revenues
- Access must pay for itself – and be affordable
- Pricing must aid the migration to NBN 2

2. Goldilocks pricing

- No single price point for cost recovery works:
  - If it is too low, there is no business case
  - If it is too high, it will not be affordable
- To be "just right" pricing must solve both
- Structure of pricing is important too
  - It must encourage both **adoption** and **use**

Retail ADSL2+ plans at Sept. 2008

BigPond, Optus, iiNet, TPG and Internode

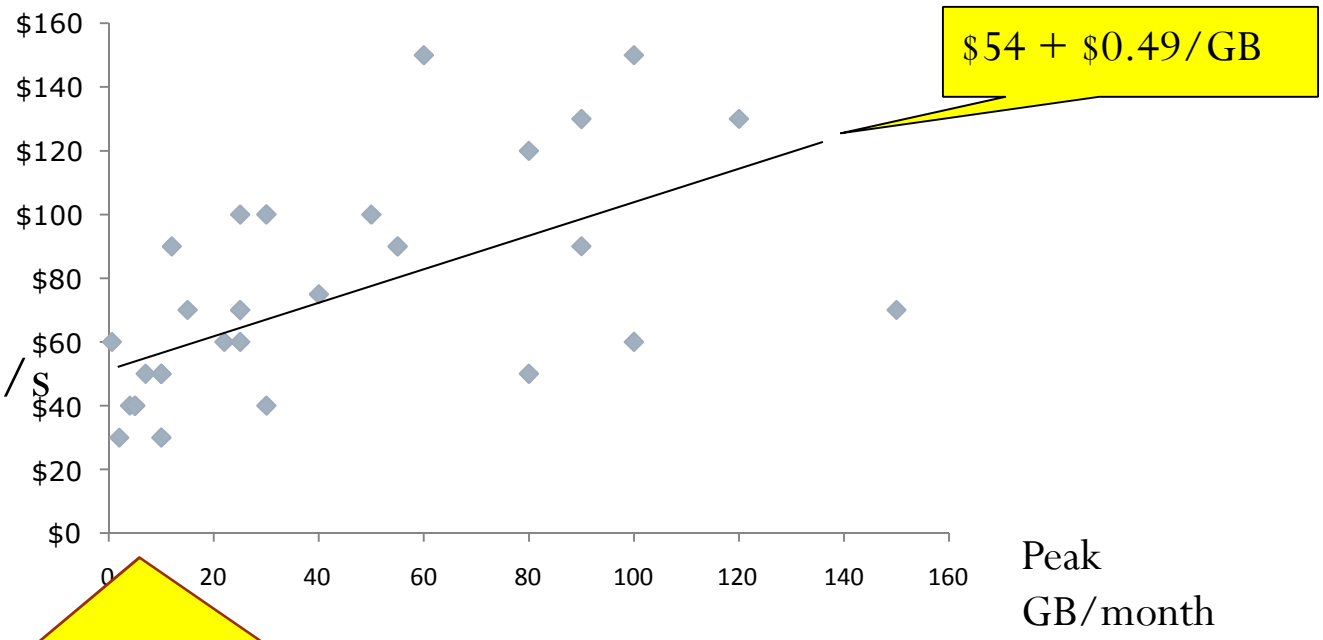


The "best fit" line through retail plans shows the implicit charge for data caps as $0.96 cents/GB.

Retail ADSL2+ plans at Sept. 2009

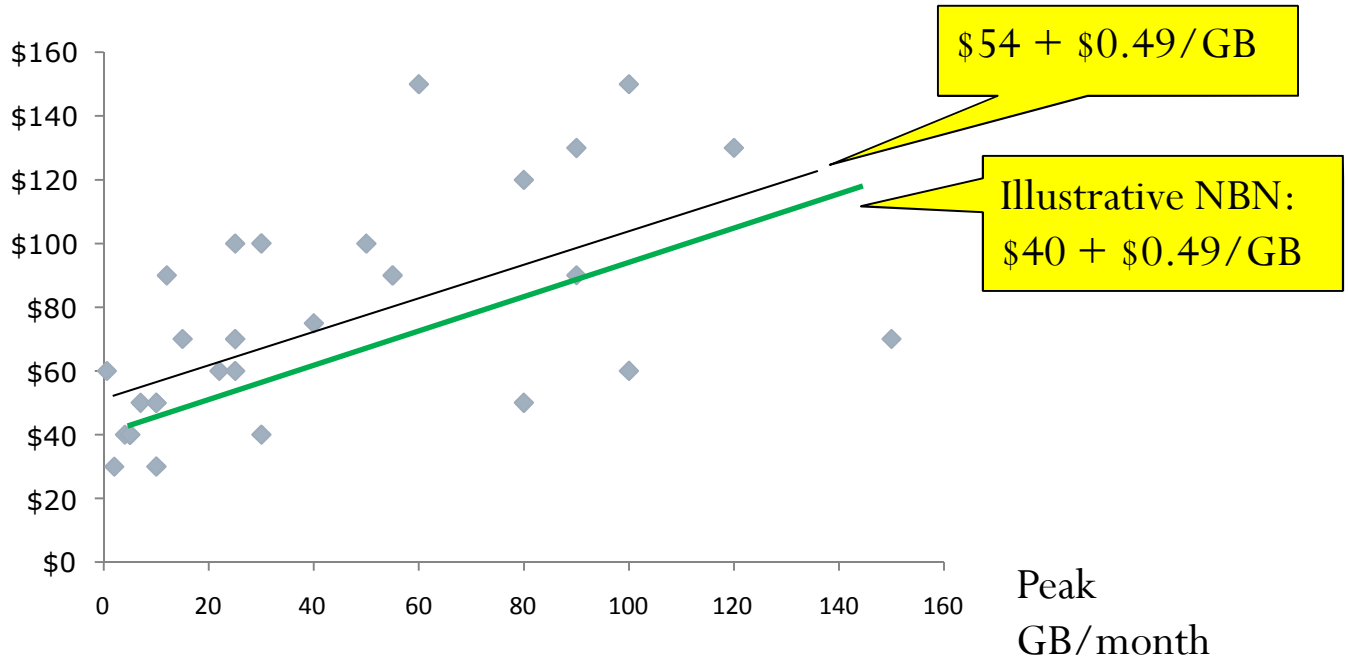
ADSL2+ **coverage** is high but less than 25% B'band users have **adopted** > 8Mb/s

The GB tariff dropped 50% over a year!



Use is low: 4.5GB pm av download (ABS 8153.0 June Q 2009)
0.49 x 4.5GB = $2.20 + $54 = $56.20 av bill versus
iiNet and Telstra B'band ARPU $54 and $57.70 pm

NBN ISP port pricing (illustrative)

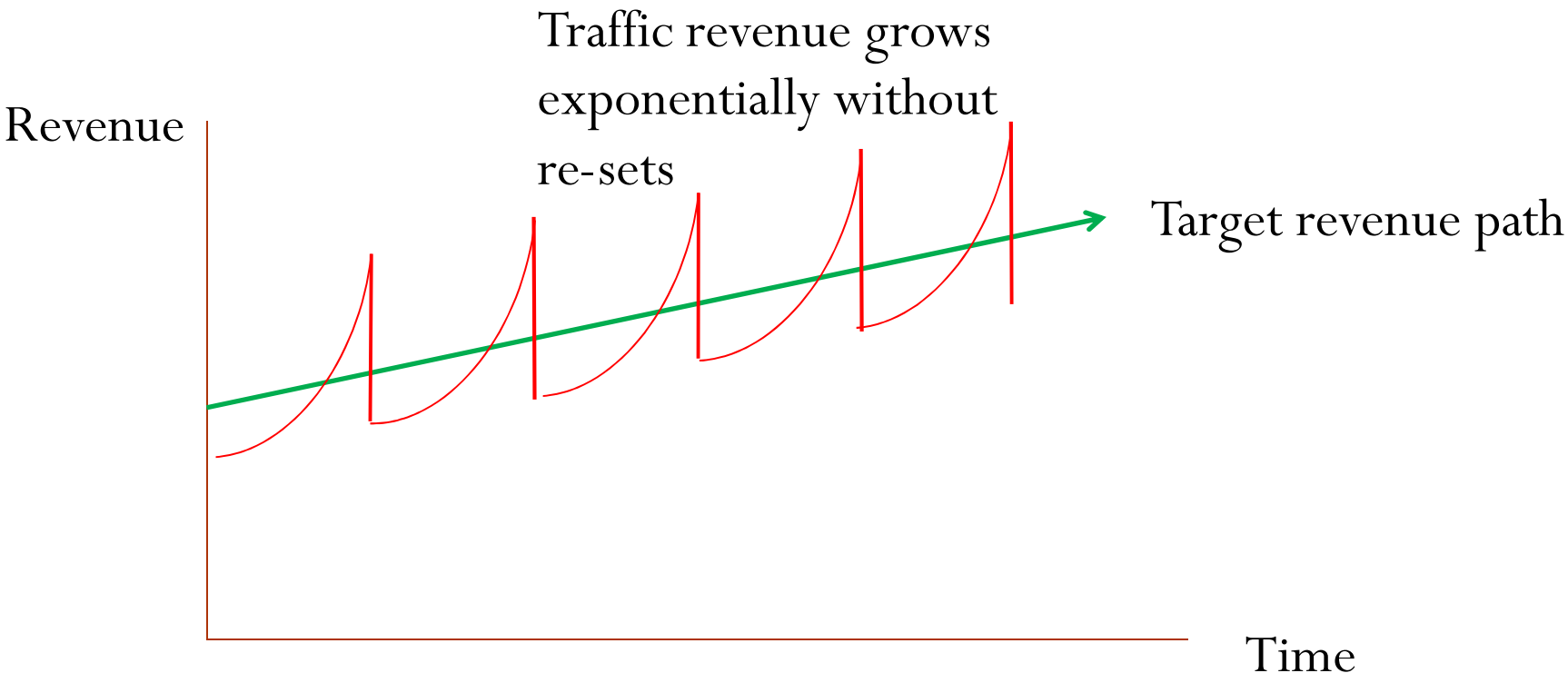


This two-part wholesale price does not pre-empt retail plan designs

It allows all plans to operate at full speed and so exploit NBN

It is robust to services delivered (helping migration to NBN 2)

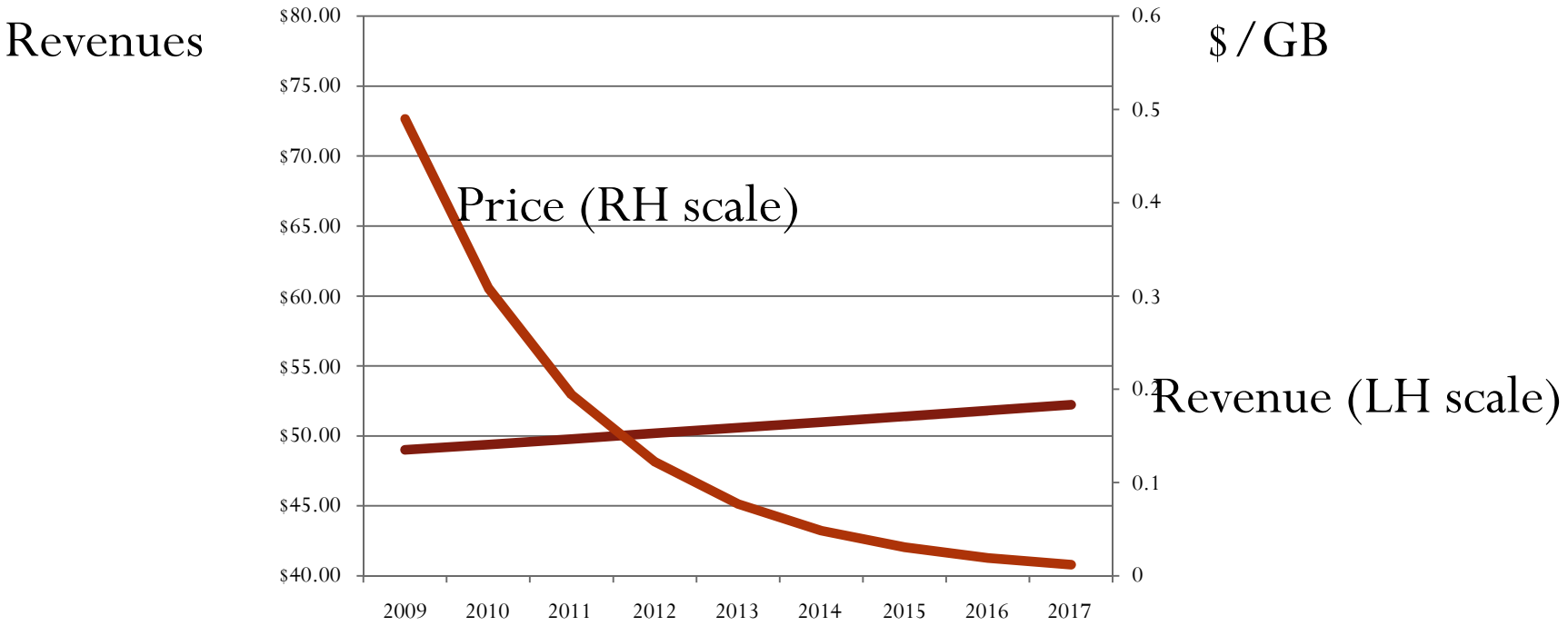
Volume tariff reduced periodically



A self-funding model: as data grows, so does the capacity to augment the network to meet demand (ie price/GB falls a little less to fund expansion)

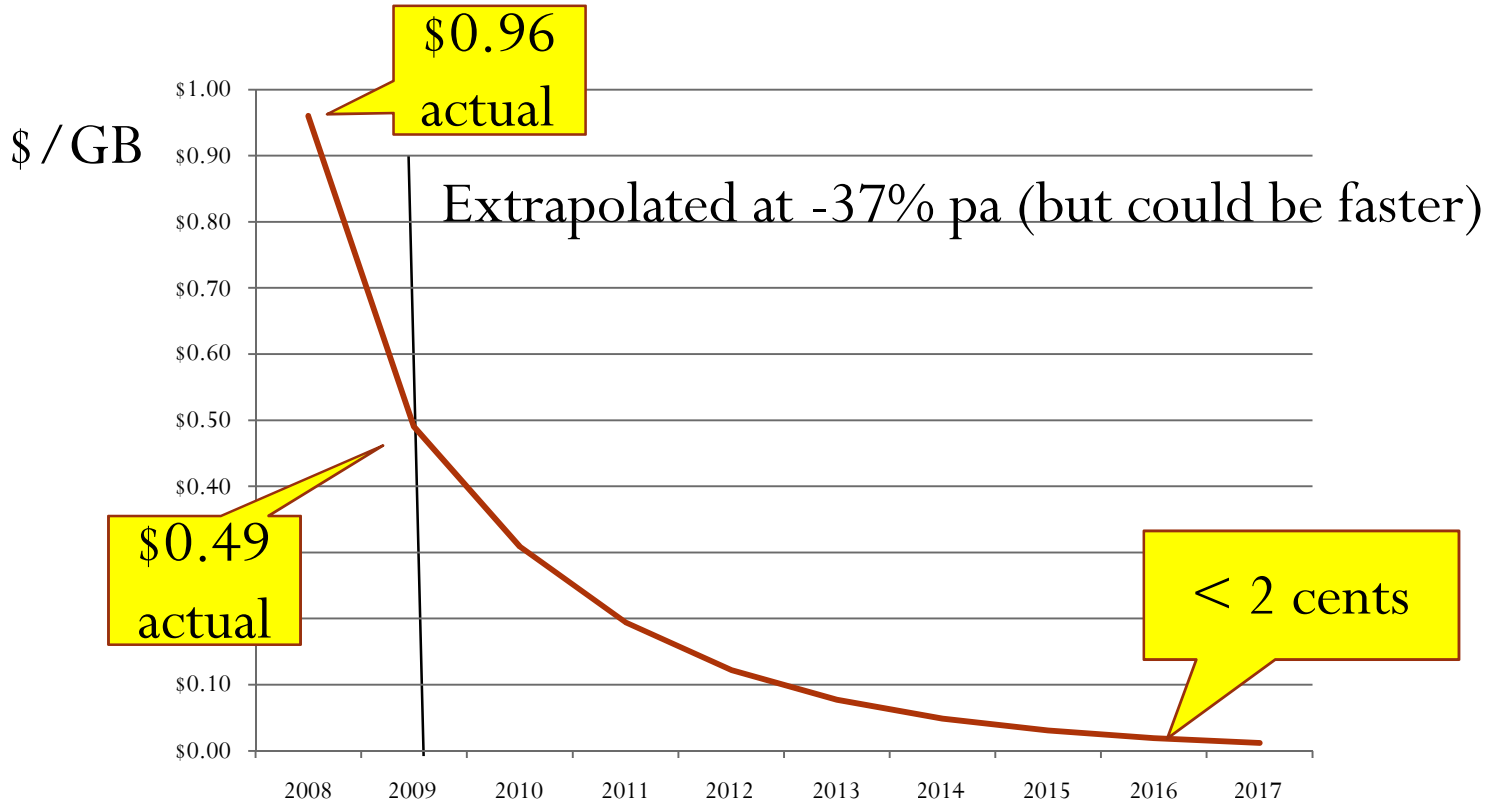
Price/GB trajectory - illustrative

If data grows 60% pa, the GB charge has to drop 37% pa to limit growth in wholesale traffic revenue.



If data doubles annually, the $/GB can halve annually to keep revenue constant.

What does this mean for NBN 2?



At 2 cents/GB, IPTV port can folded into single IP/ISP port
[20Mb/s * 3 hours/day * 2 cents/GB = $16 pm]

3. National average pricing

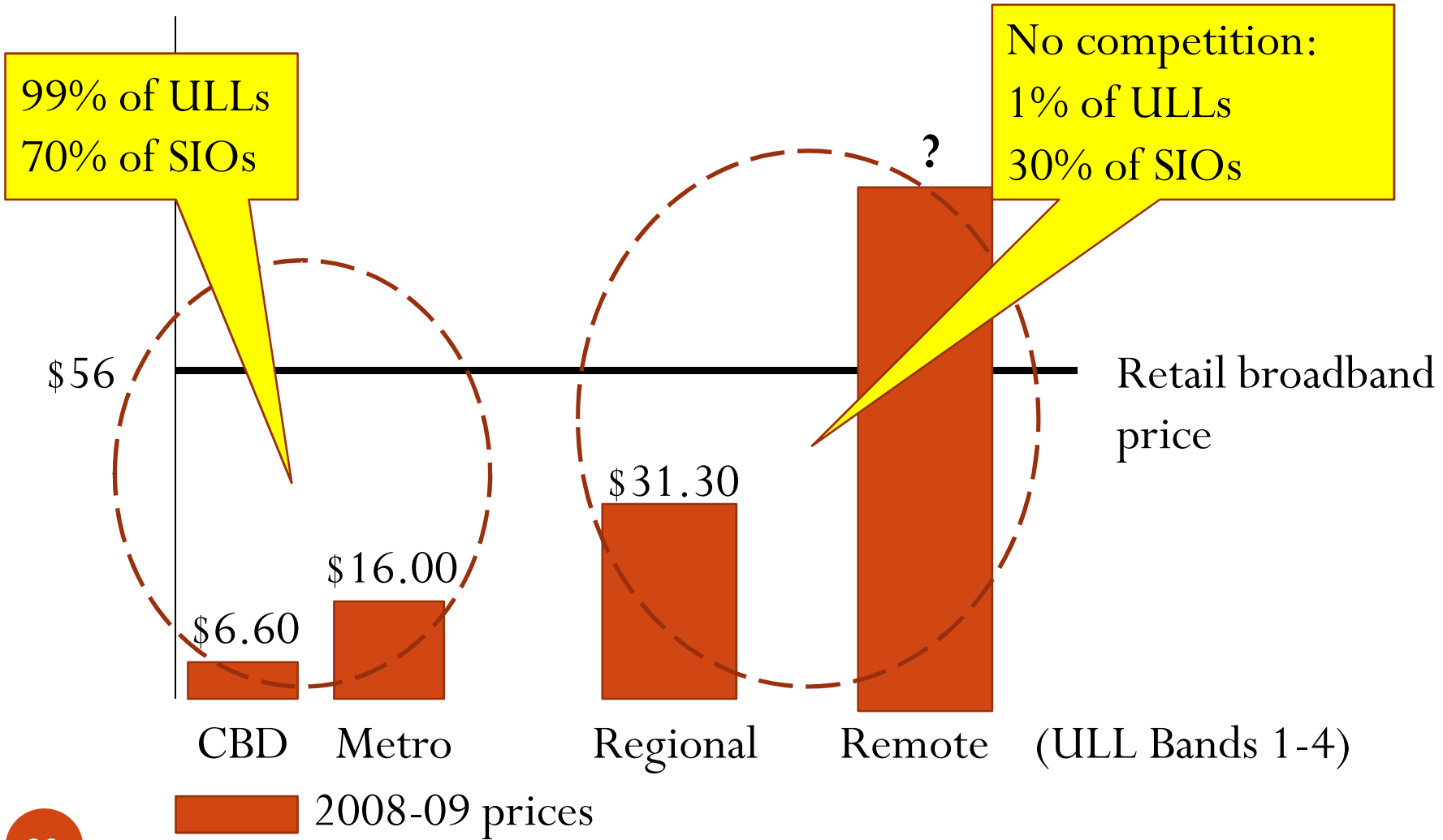
- For retail and (?) wholesale access pricing
- The Goldilocks task much harder if uniform pricing competes with by-pass
- But there is a simple solution

Geographic uniform pricing

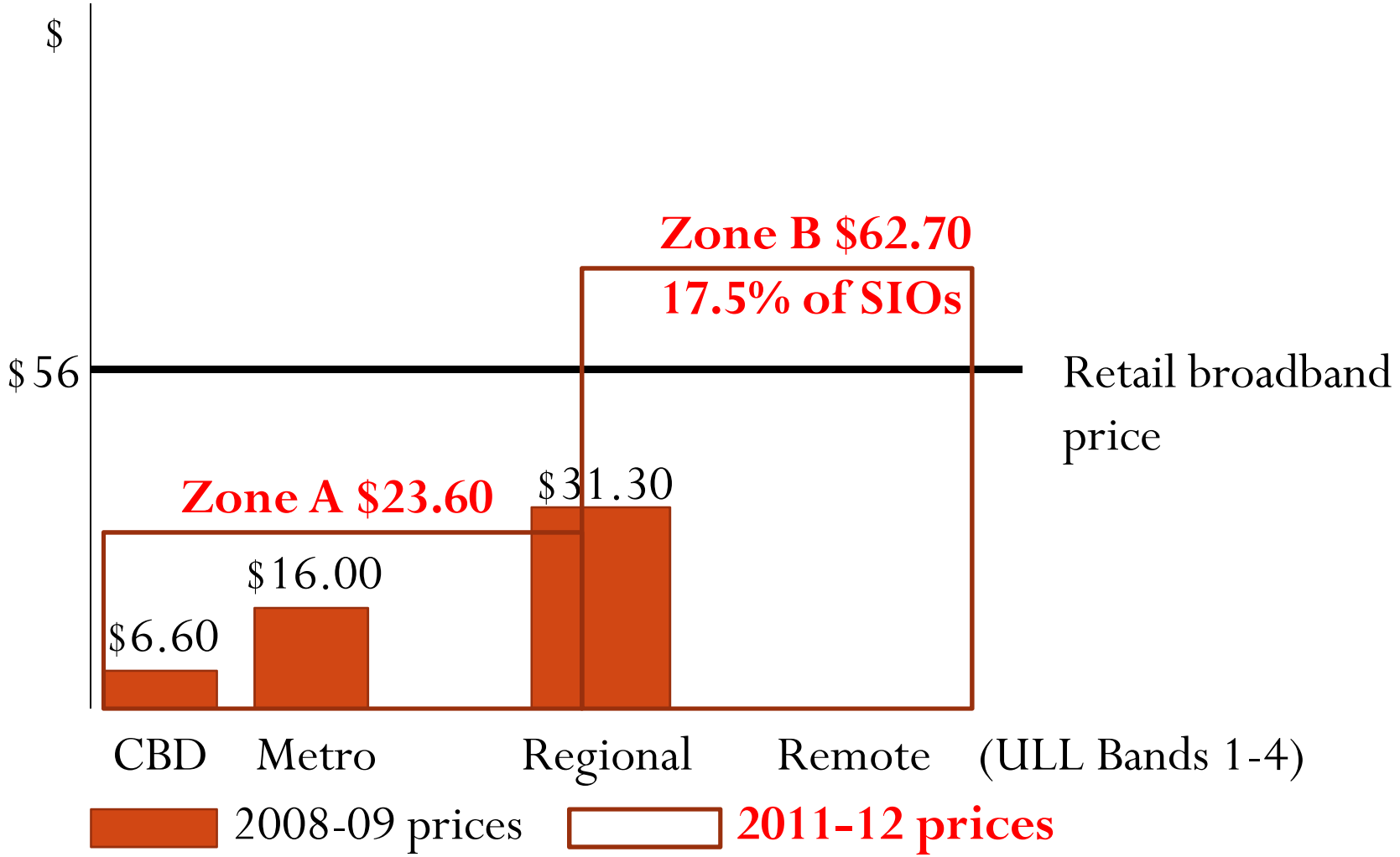
- Broad political support for uniform retail prices
- Minister wants uniform NBN access prices too:
  - "(my) *ambition is that there will be the same wholesale price for every household for the same speed across wireless, satellite and fibre…this will be a cross-subsidy; one wholesale price across the country*" [1]
- The NBN will replace ULL but if pricing is de-averaged as with ULL, there will be no retail service in the bush!
- The ACCC is moving toward average pricing

[1] Minster, Senator Stephen Conroy, Tamworth, October 2009

De-averaged ULL pricing

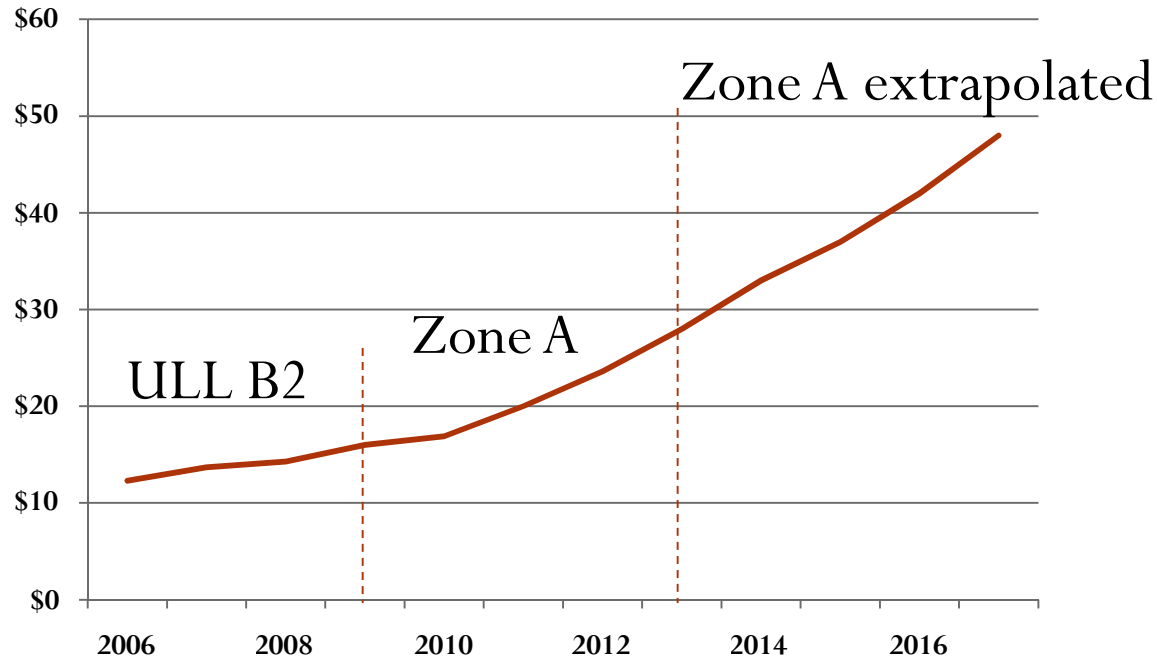


The ACCC moving toward averaging



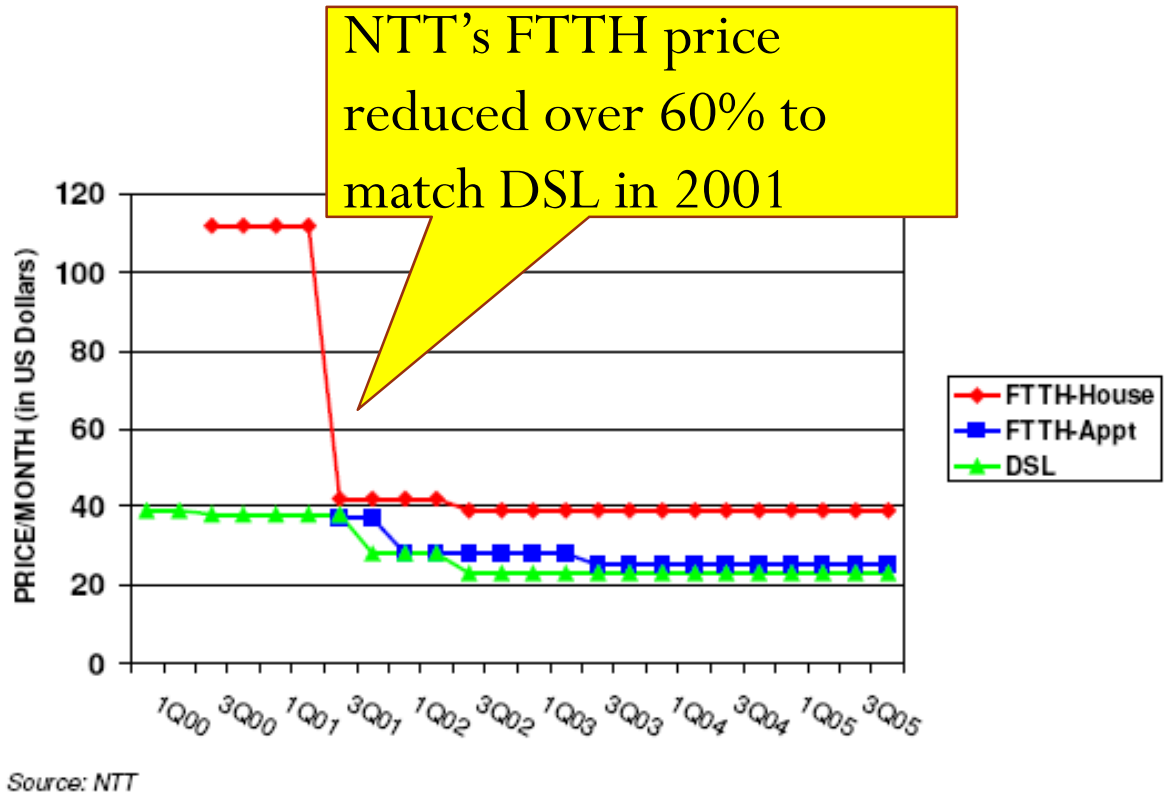
But is it moving fast enough?

ULL has to reach parity with the NBN – over $70?



ULL (ADSL2+) provides the same services as the IP/ISP ($40), STS ($20?) and IPTV (>$20) ports charged for separately on the NBN

If not, NBN migration compromised

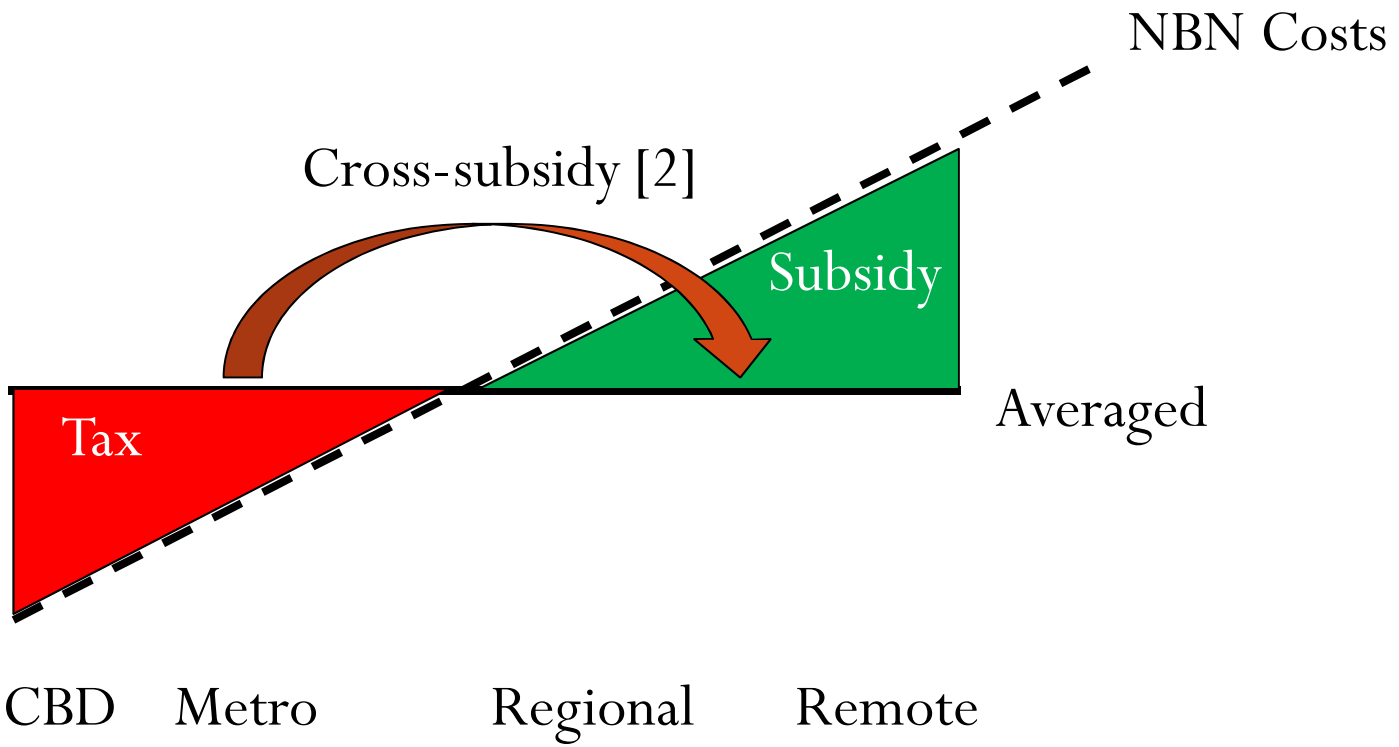


Source: NTT

Even if the NBN does not have to compete directly with DSL, lack of parity will tempt ISPs to delay the NBN

Cross-subsidy supports averaging

In the presence of by-pass, an "excise tax" [1] must be levied on **all** (including DSL, HFC - and mobile?) broadband access.



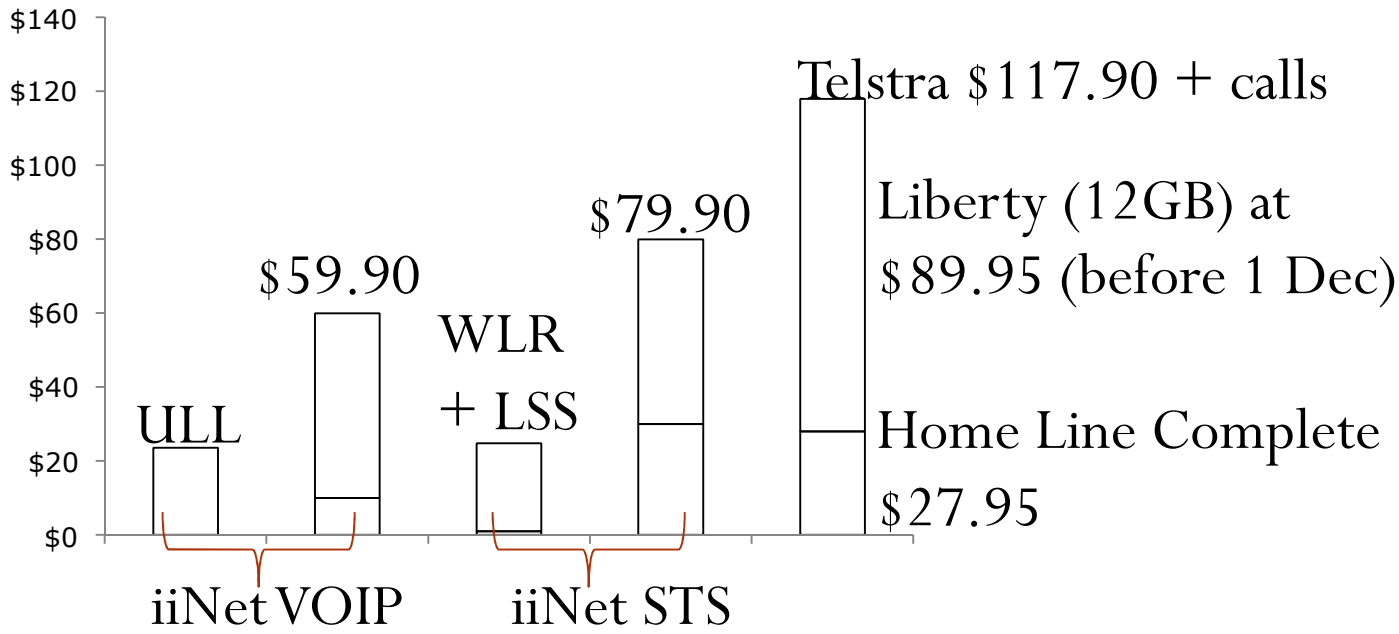
[1] Laffont & Tirole, Competition in Telecommunications (pp 118-129)
[2] Bigger with a national NBN than a commercial access network

4. Implications for ISPs

- Access prices will inevitably be higher
- Margins will have to fall

LSS more attractive than ULL

Wholesale prices at 2012 [1]



Margins over Telstra inputs will reverse:

iiNet VOIP 61% (now 73%) and

iiNet STS 69% (now 65%)

> 60%

[1] ACCC, Draft Decision, August 2009

From >60% to <30% ?

Electricity distribution, 2009-10 [1]

	Country Energy	Energy Australia	Integral Energy		Table/Row
Energy price, $/MWh	57	61	65	A	8.2
Av. Residential usage	5.6	5.6	5.6	B	9.1
Energy cost/customer, $	319	342	364	C	A*B
Distribution cost/cust $	740	405	518	D	G-F-E-C
Retail cost/customer, $	102	105	105	E	8.2
Retail margin, $	61	45	52	F	5% * G
Total retail bill, $/customer	1225	896	1039	G	9.1
Margin on w'sale input	13.6%	16.7%	15.1%		(G-C-D)/G

NZ bitstream allowed 31% [2]

Illustrative NBN pricing allows 25% [3]

[1] IPART Final Report and Determination, June 2007

[2] $54 - $10 for ISP cost less 15% for marketing, divided by $54

[3] $56 less $40 less $2 data, divided by $56

What does it take to be an ISP?

- Provides CPE (?)
- Backhaul, National and International Connectivity
- IP Address Allocation (simpler than telephone number allocation)
- Customer Relationship Management and Billing
  - Help desk / trouble reporting
  - Activation / Churn
  - Credit Management
- Bundling and Pricing
- Obligations on a CSP

So, move up the stack as iiNet is doing by "*rapidly Growing the 'honey pot' of content to the PC*" (August 2009)

5. Key messages

- With de-layering, access must pay for itself
- Goldilocks pricing
  - Leaves room for retail plan innovation
  - Provides self funding for growth
  - Enables transition to NBN 2
  - Encourages maximum adoption
  - Encourages maximum use of full speed NBN
- National averaging needs cross-subsidy
- ISP margins for access will decline

Questions?

John de Ridder
Telecoms Economist
www.deridder.com.au

Tel: 0409 804 278
deridder@bigpond.com.au