

Delivering Unconditioned Local Loop and Wholesale – DSL Products

Presentation to the NZ Commerce Commission

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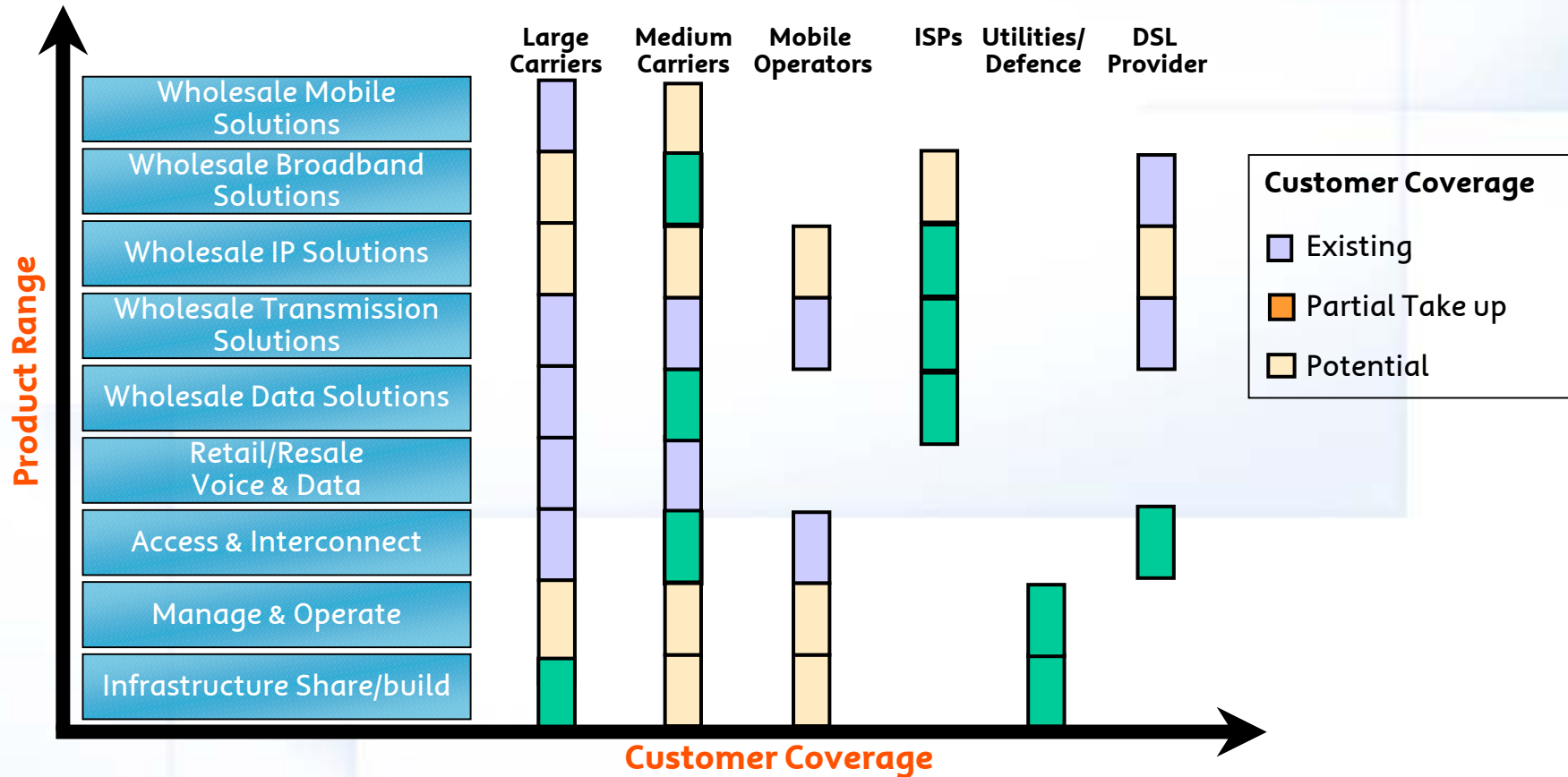
Agenda

1. Wholesale is a successful business for Telstra
2. How is ULL being used in Australia?
3. ULL Technical Issues
4. Wholesale DSL Product Offerings
5. Investment issues arising from unbundling
6. Next Generation Network (NGN)

(1) Wholesale is a successful business for Telstra

- \$2.6 billion revenue 2003/03 or 12% of Telstra total revenue
- We're taking innovative approaches to our business including further development of our on-line services to make daily business transactions with Telstra Wholesale quick and seamless
- Product, operational, account management and marketing improvements are also being implemented
- We offer customers a real choice of build or buy network solutions or a combination

Telstra Wholesale provides a growing range of products to a diverse customer set..

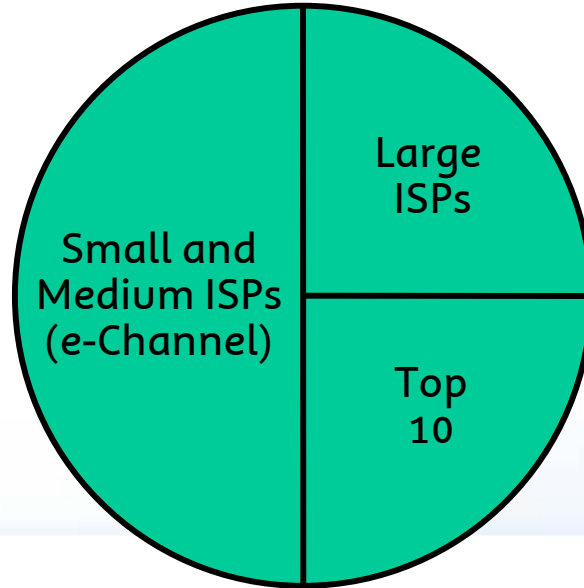


..and is a channel to the majority of industry ISPs

TW Broadband – From Marketing Agnostics to Evangelists

2002

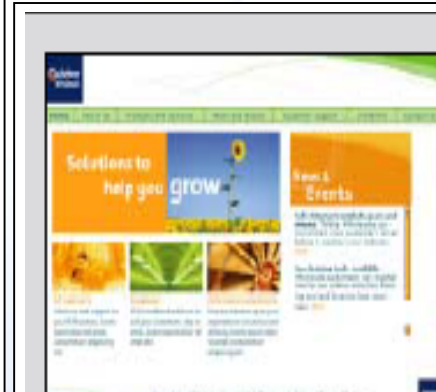
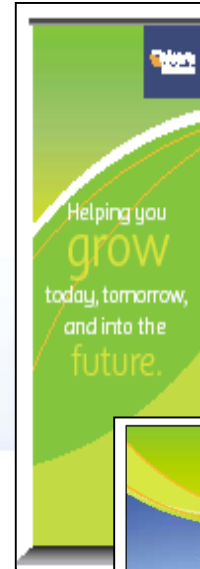
2003 →



Customer Segmentation Approach



Customer User Forums



Customised Market Development Programs



General Market Stimulation



Ongoing development of innovative solutions that meet customer needs and fully exploit demand

Enhanced Product Range

- 512/512 service
- Multiple domain names
- Service Level Guarantees
- Ethernet ISP interface

Innovate New Solutions

- VISIP in a box
- Safe Internet & Hosting
- Content Enablement Platforms
- Wireless LAN/ Broadband

Drive Network Uptake

- Minimux
- Transpositions
- ISDN
- ADSL Demand Register

Web based services reduce activation times, costs and increase efficiency

Order transformation

- Overall Telstra Wholesale operations now process 73% of all orders online, a significant change from 23% in 00/01
- Broadband provides a further opportunity to move from existing online systems towards implementing Business to Business (B2B) capabilities
- B2B capabilities are scheduled to commence in the new year (2004)

Operational support

Service Performance

At Telstra Wholesale we assess and measure our service performance in the following areas:

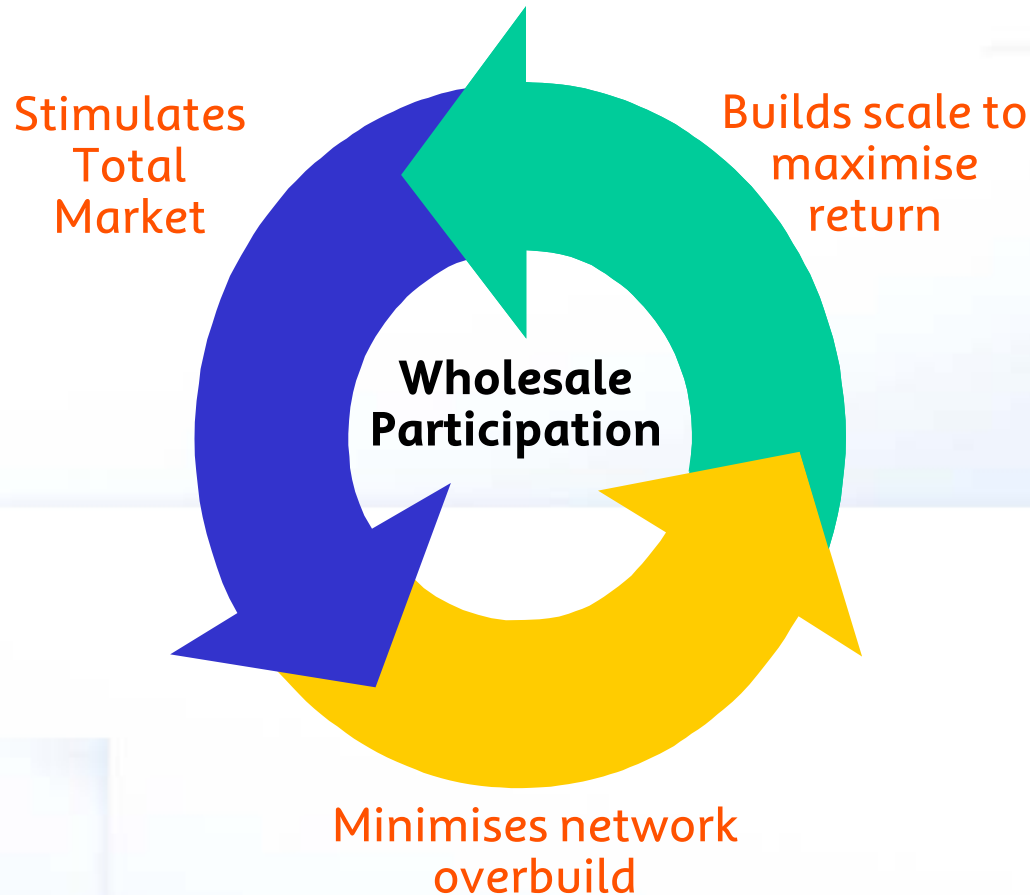
Customer satisfaction provides information on how well we measure up to our customers' expectations, what our customers have told us about our performance and how we're responding to that information.

Basic Access performance looks at the initial provisioning and repair of fixed line services.

Customer Transfer measures the timeliness of our performance in transferring customers between service providers.

Billing performance measures look at the timeliness of our billing and billing dispute resolution processes.

Wholesale participation benefits both Telstra and broadband industry



Why offer Broadband via Telstra Wholesale?

Wholesale is an equally valuable channel for Telstra

Lower ARPU but lower cost channel

Drives returns to scale to maximise return on investment

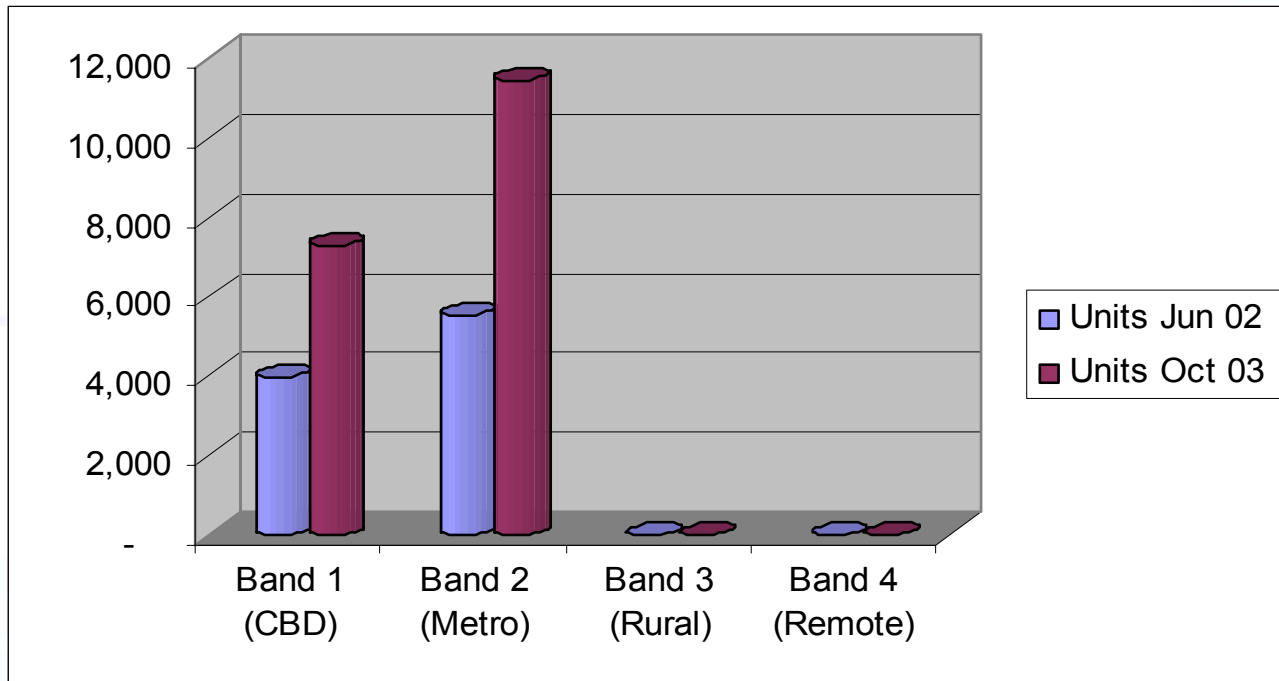
Market stimulation & competition benefits all

(2) How is ULL being used in Australia?

- Complements wholesale DSL offerings where our customers are able to use the reach and reliability of the Telstra network to provide broadband access to end users
- Part of the overall wholesale culture in Australia where we endeavour to offer our customers the best build/buy combination for their business and that includes having access to “last mile” access
- Growth rate of ULL accelerating – 100% p.a.
- ULL used in CBDs by competitors to connect customers not otherwise economic/feasible to connect to own CBD networks

ULL Services In Operation in Australia

	Band 1 (CBD)	Band 2 (Metro)	Band 3 (Rural)	Band 4 (Remote)	Total
Units Jun 02	3,965	5,535	0	0	9,500
Units Oct 03	7,269	11,434	0	0	18,703



ULL Continued

- No residential ULL SIOs to date
- There are 120 different Points of Interconnect (POI) locations (out of 5,000)
- The 120 POIs give a potential access to 20% of the installed PSTN base in Australia
- Carriers have been using ULL primarily to offer high speed data services to business in competition to Telstra's existing DDN, wideband frame, etc
- TW are starting to notice that ULL is being used to offer data and also multiple voice services over xDSL on the ULL, but only in the business market

(3) ULL Technical Issues

Co-location:

- Regulated under the Telco Act 1997 and Facilities Access Code in Australia
- To date no Telstra exchanges suffer from having insufficient space for access seekers to co-locate or co-mingle
- There may be a need on occasion to remove some non-functioning equipment to make space but this is an exception

Interference:

- Telstra along with the industry has developed a set of business rules in the form of the ACIF Network Deployment Rules to manage such technical issues in Australia

(3) ULL Technical Issues Cont'd....

OSS:

- In hindsight was unnecessarily complex and gold plated
- Systems built by industry consensus and perceived requirements which proved unnecessary in practice
- In light of that experience NZ can learn and develop a leaner platform as did Telstra in relation to spectrum sharing by leveraging off existing platforms
- We have realised significant efficiency gains and OSS has been the platform for increased wholesale business
- Wider application beyond ULL

(3) ULL Technical Issues Cont'd....

Improving the local loop and DSL capability:

- Due to the continued growth and take up of DSL Telstra continues to upgrade its copper and exchanges to enable access for all end customers utilising Telstra's network either through the wholesale or retail channel

Forecasting:

- Over-optimistic forecasts did occur in Australia
- Only real impact in the OSS area

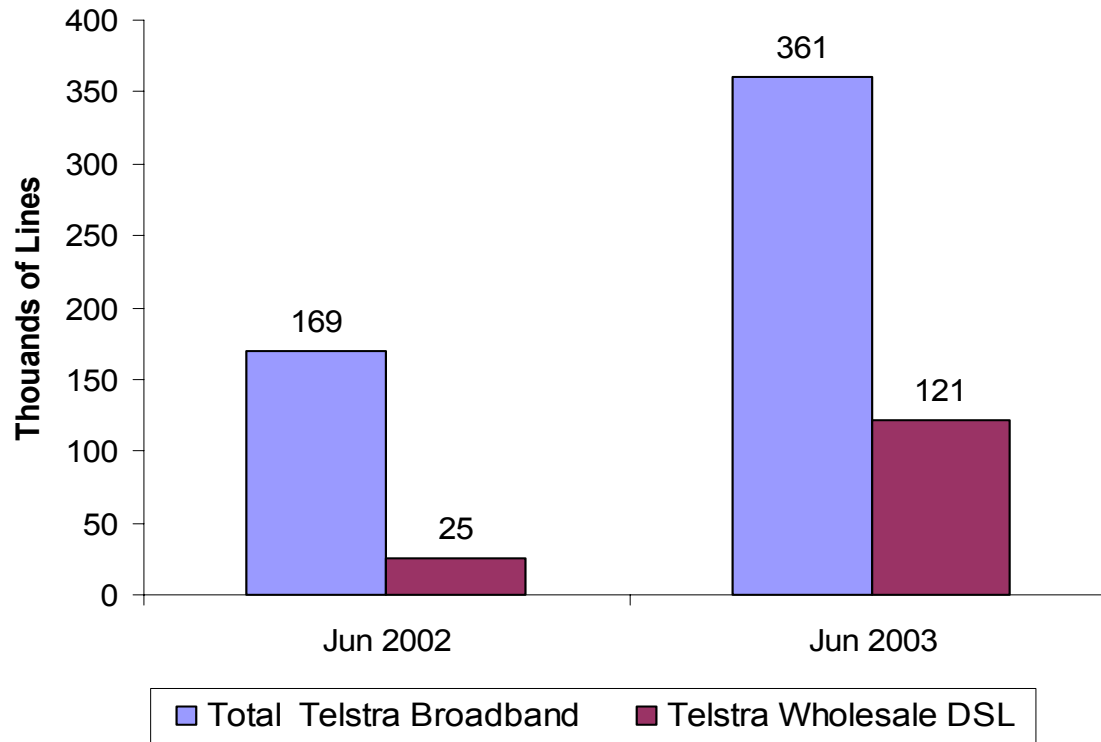
(4) Wholesale DSL Product Offerings

Telstra Wholesale has the following core product offerings which are used as a medium to supply DSL to Australian broadband consumers:

- ULLS;
- Spectrum Sharing;
- Layer 1 SHDSL;
- Layer 2 DSL (Business Grade);
- Layer 2 DSL (TP);
- Layer 3 DSL

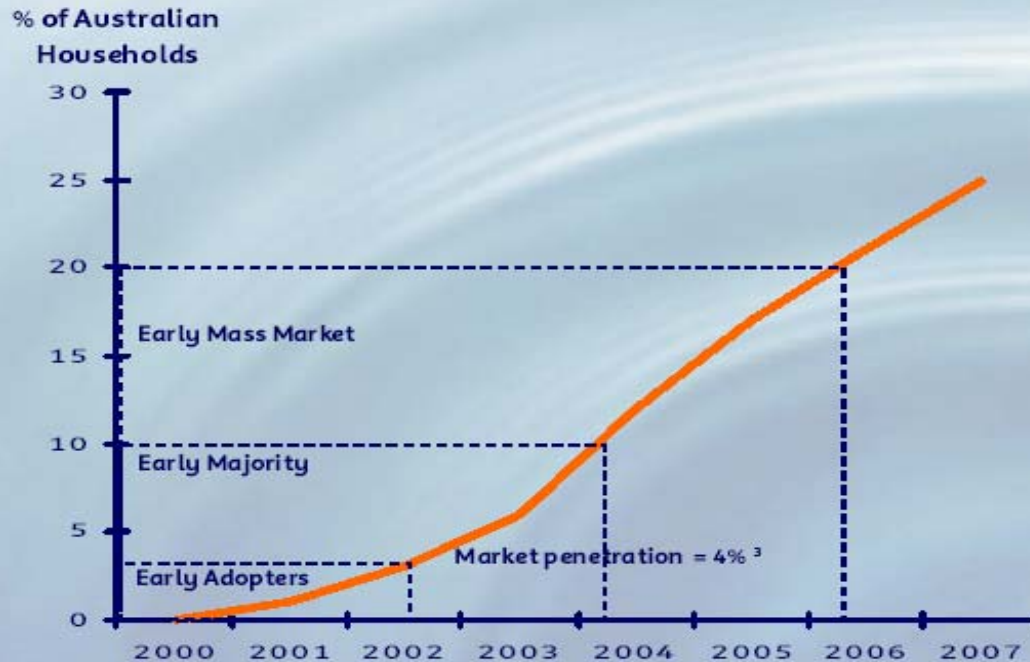
Our Layer 2 DSL offerings followed regulatory pressure in Australia following the issue of a competition notice by the ACCC in September 2001 – now this suite of products is a key engine for broadband growth in Australia and our wholesale business

Telstra Broadband Growth



The Broadband market is at a 'Tipping Point'

Australian Broadband Penetration ^{1,2}

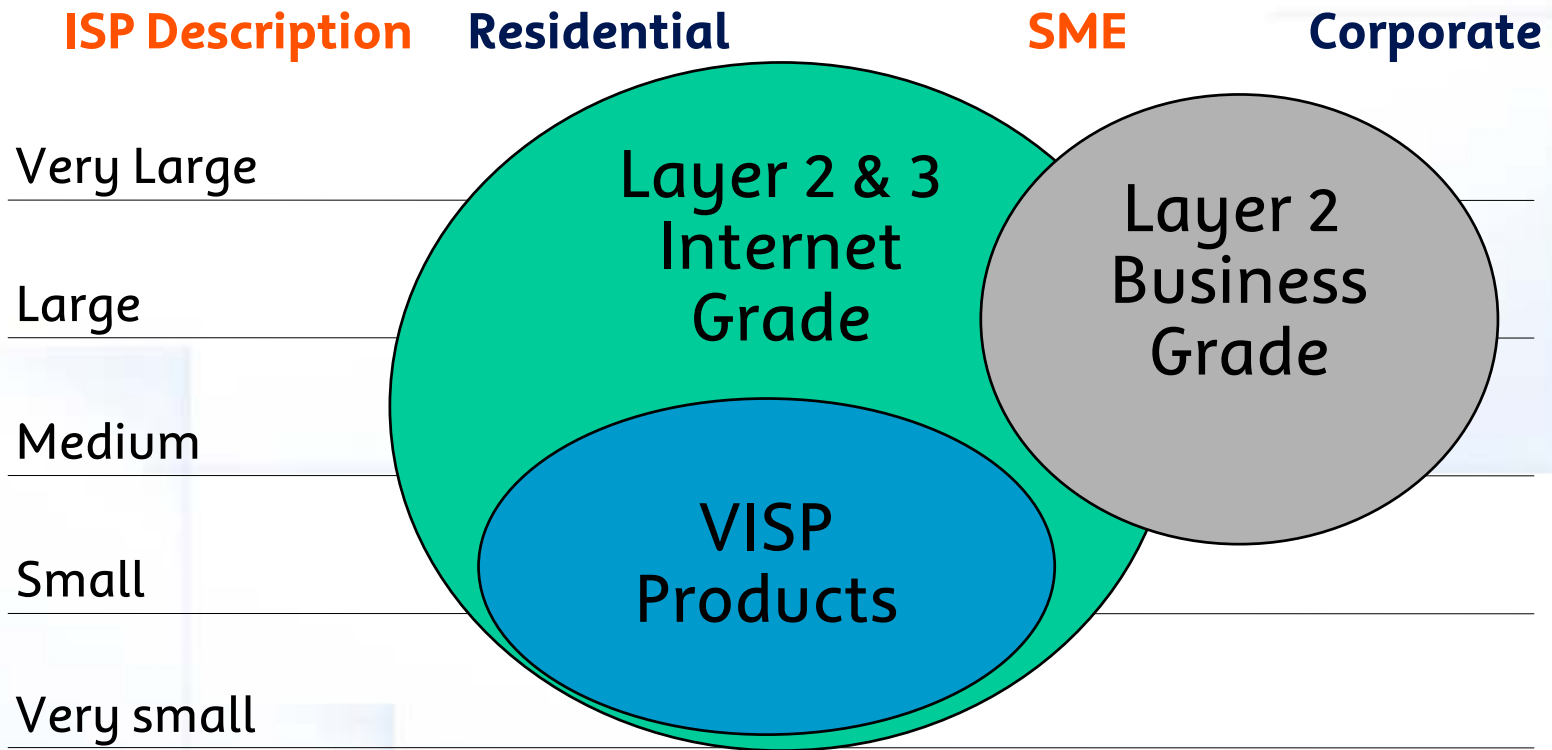


Sources:
 (1) IDC Australia, 2003
 (2) Accenture: Lighting the next Broadband Revolution 2003
 (3) December 2002

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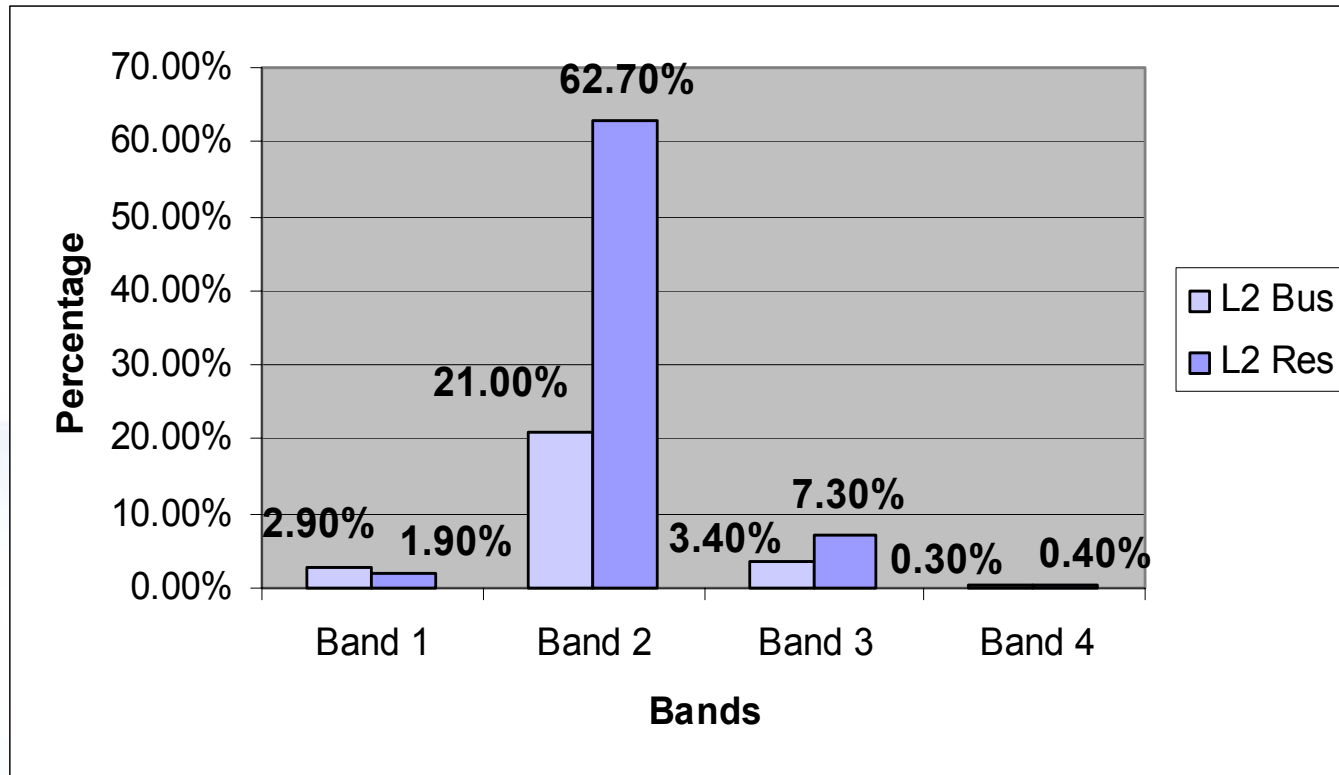
BIGFOND™

Wholesale products that meet the diversity of our customers and their end user segments



Telstra Wholesale Layer 2 DSL SIOs

OCTOBER 2003



Note: Graph above shows percentage break down by band and by customer segment (bus/res) of usage of Telstra Wholesale Layer 2 DSL Services. Total Layer 2 SIOs = 106,002 (100%).

This represents growth of over 400% from June 2002, with large proportion of the growth being in the residential metro grouping.

Wholesale x DSL

- Reaches more than 75% of the Australian population or around 7 million premises
- Telstra has more than 1000 ADSL – enabled exchanges. *From August through to September this year, 32 new DSL exchanges were activated.*
- Today TW sells 60% of new DSL connections
- *Wholesale DSL connections have increased by more than 400% in less than 12 months*

Expected Growth

- Telstra expects DSL connections to reach 1,000,000 by 2005 with wholesale DSL connections representing more than half that figure
- It is expect that by contrast take up on ULL and increasingly Spectrum Sharing Service (SSS) will be slower
- Key advantage of SSS/ULLS is there can be differentiation of DSL products and speeds in the market ie: TW's DSL offering has specified bit rates but ULL and SSS acquirers can and do offer a greater range of speed offerings in the market place
- Different geographic distribution to ULL, which shows complimentary nature

Dedicated front of house facilities also help manage scale

Dedicated Broadband Customer Support

- Ordering and Billing
 - Dedicated Broadband Call Centre
 - Delivery Escalation Group established
- Service Assurance
 - Broadband Help Desk
 - 7x24 Fault reporting
 - 7x24 Escalation service

Streamlined Customer Transfer Process

- Launched on 14 April 2003
- 24 customers formally signed up (as at 8/7/2003)

B2B and FoH initiatives drive customer retention and industry growth

Positioning – Broadband & Data Access

	TW DSL Layer 3		TW DSL Layer 2	TW DSL Data	TW DSL Layer 1		DAR	SSS	ULL
	FlexStream	Comm'Stream	Wholesale ADSL L2TP	BroadBandXpress	BizLink	HDSL Link			
Asymmetrical	●		●	●				●	●
Symmetrical		●	●	●	●	●	●		●
Grade	Internet	Internet	Internet	Data	PSTN	PSTN	Data	Build	Build
Relative Cost	Low	Low	Low	Medium	Low	Low	Medium	Low	Low
Wholesale Market :									
- ISP	●	●	●				●		
- CSP	●	●	●	●	●	●	●	●	
- Data Network Builder					●	●	●	●	●
End User Market :									
- Residential	●							●	
- SME	●	●	●	●	●	●		●	●
- Large Business							●		
- Corporate		●	●	●	●	●	●	●	●
Service Assurance									
- Standard	●	●	●	●	●	●		●	●
- Enhanced							●		
Build / Buy Product									
- Build								●	●
- Buy	●	●	●	●	●	●	●		
Applications									
- High Speed	●	●	●	●	●	●	●		●
File/Data Transfer	●	●	●	●	●	●			
- Fast Internet	●		●						
- Two way Video		●		●					
- Supports telephony	●	●	●	●					
- VPNs			●						
- Gaming	●	●							
- LAN/PABX connection.					●	●			●
- Voice applications									●

(5) Investment issues arising from unbundling

- The declaration of ULL has had no negative impact on investment by Telstra on its network in Australia
- Part of the terms of supply of the ULL service for example give Telstra the flexibility to modernise its network and meet changing customer demands and replace copper when it reaches the end of its life
- Have to provide notice to access seekers
- Telstra obliged to provide access to cabinet – entrants not stranded at exchange
- Also, we have not observed any detriment in Australia in terms of the willingness of competitors to invest in competing technology eg: TransAct in Canberra, Neighbourhood Cable in Victoria and Bright in WA where extensive competitor networks are being rolled out

(5) Investment issues arising from unbundling cont'd...

- In addition, Transact acquires ULLS from TW to supplement its own network in areas where all the basic infrastructure is underground
- Presence of ULL and DSL has not stopped network build by competitors

(6) Next Generation Network (NGN)

- Telstra is seeking an incremental approach to fundamentally new technology such as FTTH and Digitalisation of the HFC Network
- However, unbundling is about access to an extensive copper network put in place in a monopoly era
- Telstra considers NGN is a global industry based issue
- Telstra's investment and participation in NGN is not affected by the existence of unbundling – if Telstra does not invest in NGN, new entrants will (using Telstra's copper)

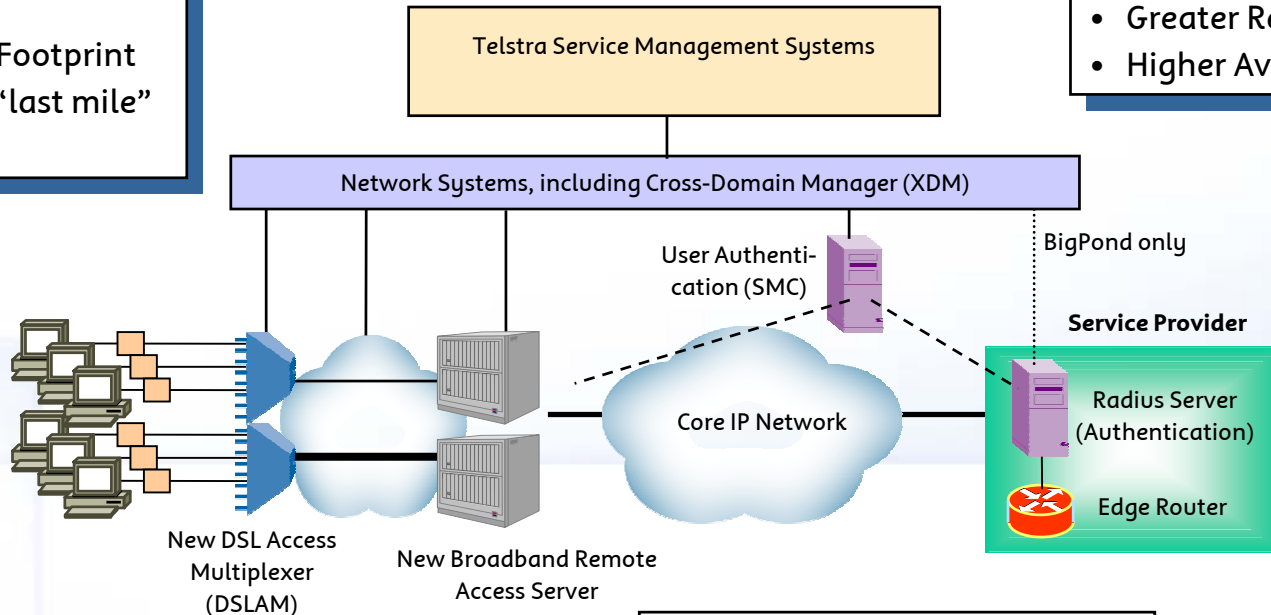
(6) Next Generation Network (NGN) cont'd

- NGN is as much about cost saving and technical efficiencies, which an efficient operator moves to regardless of unbundling or competition in the CAN
- Telstra has had to react to steps by new entrants using SHDSL which has expedited Telstra's actions towards NGN
- Wholesale is a dimension of NGN – shares risk of new technology

Key Network Improvements

Coverage

- Increased Footprint
- Extended “last mile”
- More PoPs



Better Service

- Simplify & Strengthen
- Performance Management
- Greater Redundancy
- Higher Availability

Lower Cost

- Price per Port
- Lower Activation Costs
- Economies of Scale

New Network Features

- Increased Bandwidth
- Scalability
- “One Network”