



What Consumers Want....

Or...be careful what you wish for

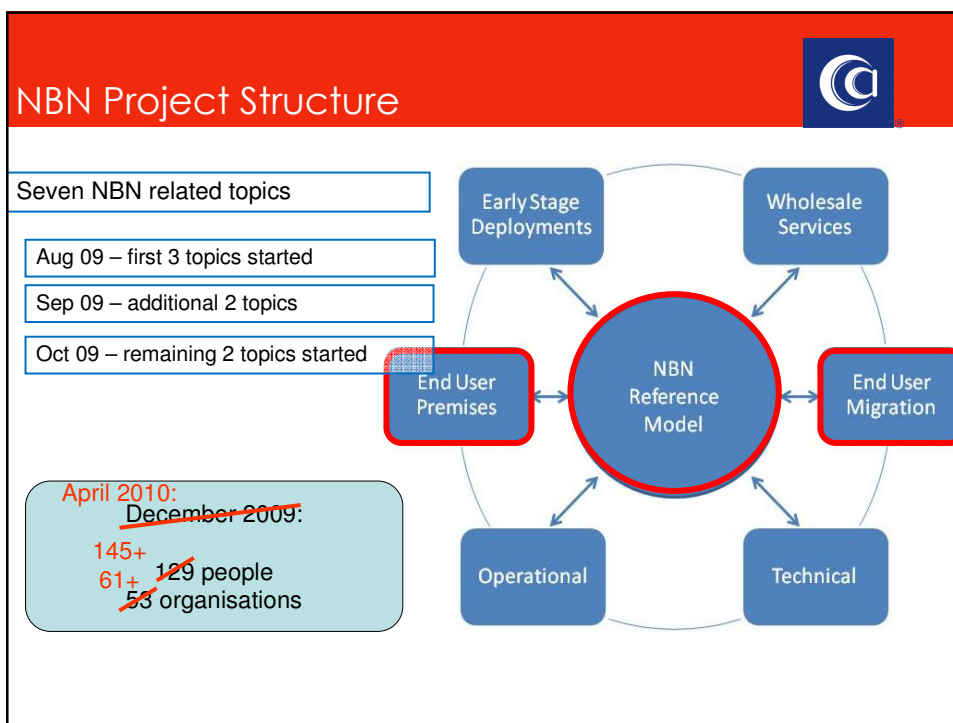
June 2010

Outline



- 4 Key developments in Consumer Broadband
- 2 Challenges
- 1 Observation on ACCAN *What Consumers Want* paper





1.QoS to the Consumer Wholesale Services

The diagram shows the NBN Reference Model at the center, surrounded by 'Early Stage Deployments', 'Wholesale Services', 'End User Migration', 'Technical', 'Operational', and 'End User Premises'.


- Latency
- Traffic Shaping
- QoS queuing
- IPv6
- Performance Metrics
- Data, Voice, Video

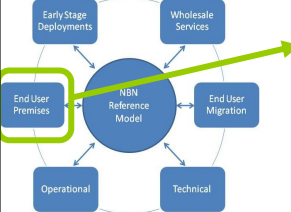
The screenshot shows 'Monitor: CBQoS Statistics - FastEthernet0 Output'. It displays four line graphs for 'Traffic Shaping Current Q Size', 'Traffic Shaping Delayed Bytes', 'Traffic Shaping Dropped Bytes', and 'Traffic Shaping Dropped Packets' over time. To the right, a table provides summary statistics for 'class-default':

| Name | Averag... | Peak(K... |
|---------------------------------|-----------|-----------|
| Traffic Shaping Current Q Size | 171 | 199 |
| Traffic Shaping Delayed Bytes | 200 | 201 |
| Traffic Shaping Dropped Bytes | 88 | 192 |
| Traffic Shaping Dropped Packets | 10 | 22 |

Corporate style Performance Metrics and QoS support direct to the Consumer

2.G.HN Home Networking Standard End User Premises







Premises Installation Practices, Cabling, Technologies

Mar 2010 – Release 1 - Handbook


3 May 2010 – Draft for Comment – Release 2

4 July 2010 – Release 2 – Handbook

- G.HN ratified by ITU-T **last week**
- Adopted by Broadband Forum within days
- Unified home networking over Coax, Phone line and Power wiring
- Unifies Homeplug Alliance, Phonenet, MOCA into single coherent system
- Complementary to wireless
- Supports Gigabit multipoint networks

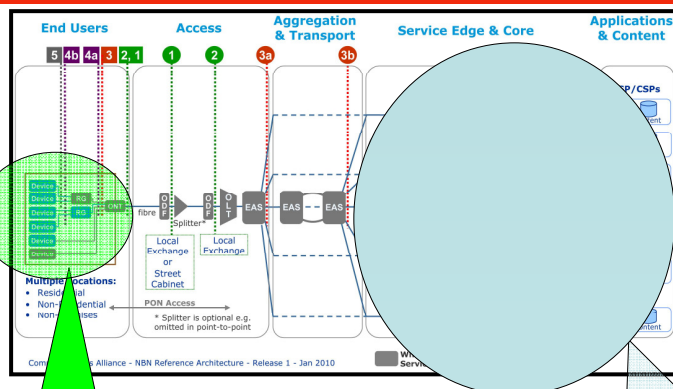
3.WDM PON + 40G/100G Ethernet Architecture



- Initial NBN: GPON – 2500 Mbps↓ / 1250↑ Mbps shared amongst up to 32 locations
- 10GPON ratified: 10 Gbps ↓ / 5 Gbps ↑ shared amongst up to 32 locations **4x**
- WDM-PON Operating, non-standard (Nortel+LG): 10Gbps bidirectional per user **32x**
- Last week** IEEE 802.3 ratified 40Gbps and 100 Gbps Ethernet **4x - 10x**

Over next 10-15 years a well understood path to increase fibre capacity by 500x – 1000x – using initial fibre cables

4.NBN Architecture Encourages Choice & Flexibility



Many Active Services Simultaneously


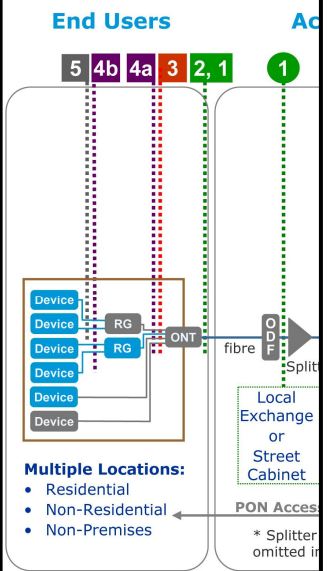
Multiple Simultaneous Service Providers

Outline



- 2 Challenges

1. With Choice Comes Complexity





- Up to 4 ethernet, 2 PSTN ports per residence
- Each port may connect to a different service provider
- Consumer will need to choose providers
- Consumers may need to keep track of which service is with which service provider – on which port
- Services of same technology may not play together


2. Tendency to see the NBN and technology as universal panacea

Raeside Cartoon From Gibbleguts.com

Q: WHAT MASS STORAGE SYSTEM CAN CONTAIN MILLIONS OF BITS OF INFORMATION, WILL NEVER CRASH, COSTS A FRACTION OF TODAY'S P.C.'S, ACCESSIBLE BY EVERY KID AND CAN'T BE CONTROLLED BY BILL GATES?



A:



RAESIDE
© 2009
www.gibbleguts.com

Outline



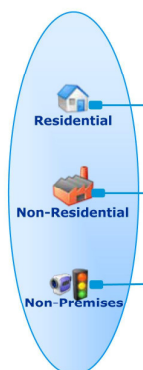
Observation on
ACCAN *What
Consumers Want*
paper



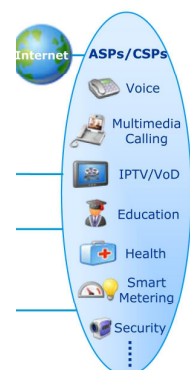
“Broadband” is not the goal



End Users



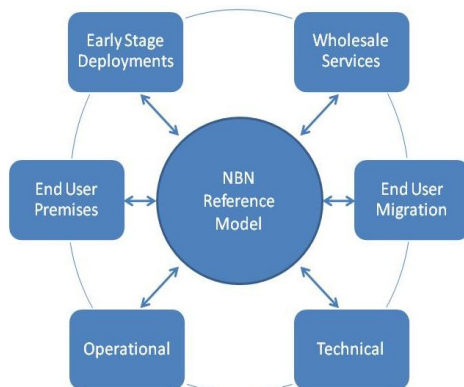
Applications & Content



Communications All

The goal is Services

‘Broadband’ is just a means to achieve them



Thankyou

Paul Brooks
Project Lead
pbrooks@layer10.com.au

<http://www.commsalliance.com.au/Activities/national-broadband-network>