

National Broadband Network (NBN) - a way forward

***Presentation to the
Communications Policy Research Forum
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Remember!

Bismarck is supposed to have said that:

**"the making of neither policy nor sausages,
should be watched"**

Summary

- Background
- Policy of early 2008 - NBN1
- Observations of the Expert Panel
- Government NBN Policy of April 7th - NBN2
- Current issues
- Conclusions
- References

Background

- **Australia & broadband**
 - OECD and (dam) statistics!
- **Previous landscape**
 - Broadband not a problem
 - Government and the ACCC - Telstra deal of 2005
 - The Australian Broadband Guarantee
 - The OPEL contract and 'underserved areas'
- **The election debate**
 - Gov: WiMax and urban fibre - 98% coverage - \$0.9billion
 - Opp: Optical fibre - 98% coverage - \$4.7 billion!
- **The NBN1 policy!**

NBN Policy of 2008/09 - NBN1

- Public - private partnership
- Public Tender
 - \$4.7 billion - 'to help'
 - The tender 'process'
- Expert panel
 - Patricia Scott, Ken Henry, John Wiley, Tony Saw, Rod Tucker, Reg Coutts, Tony Mitchell
- The 'public debate' - not really!
 - Telstra and the CCC
 - Network information
 - Finance and the GFC
 - Cost estimates!
- Outcome
 - No suitable tender
 - NBN2 based on 'a way forward' offered by the panel
 - \$43 billion!

Observations of the Expert Panel

- The GFC constrained all the bids considered
 - Note: Telstra was excluded
- Multiple technology approaches
 - FTTP feasible to reach 90% of households (& business)
 - Broadband wireless and advanced satellite for the 10% of households
- FTTN not the way forward!
 - Unlikely cost effective evolution to FTTP
 - Compensation risk re Telstra
- Backhaul a key “bottleneck” for regional BB
- Established evidence basis for a way forward

Key Aspects of NBN2

- FTTP architecture - 90% of households (& workplaces)
 - Mandated for “green fields” from July 2010 - stalled!
 - Communications Alliance activities
 - Tasmania
- Backhaul network
 - A\$250 budget (initial) and initial links
- Broadband wireless - 10% of households
 - Terrestrial wireless
 - 3rd Generation satellite
- Regulatory change
 - To transform the sector
 - Started with ‘duct information’ requirements
 - Industry structure review
- Other Aspects
 - New public wholesale company (NBNCo)

Implementation study?

Service Concept - the “NGN” Concept

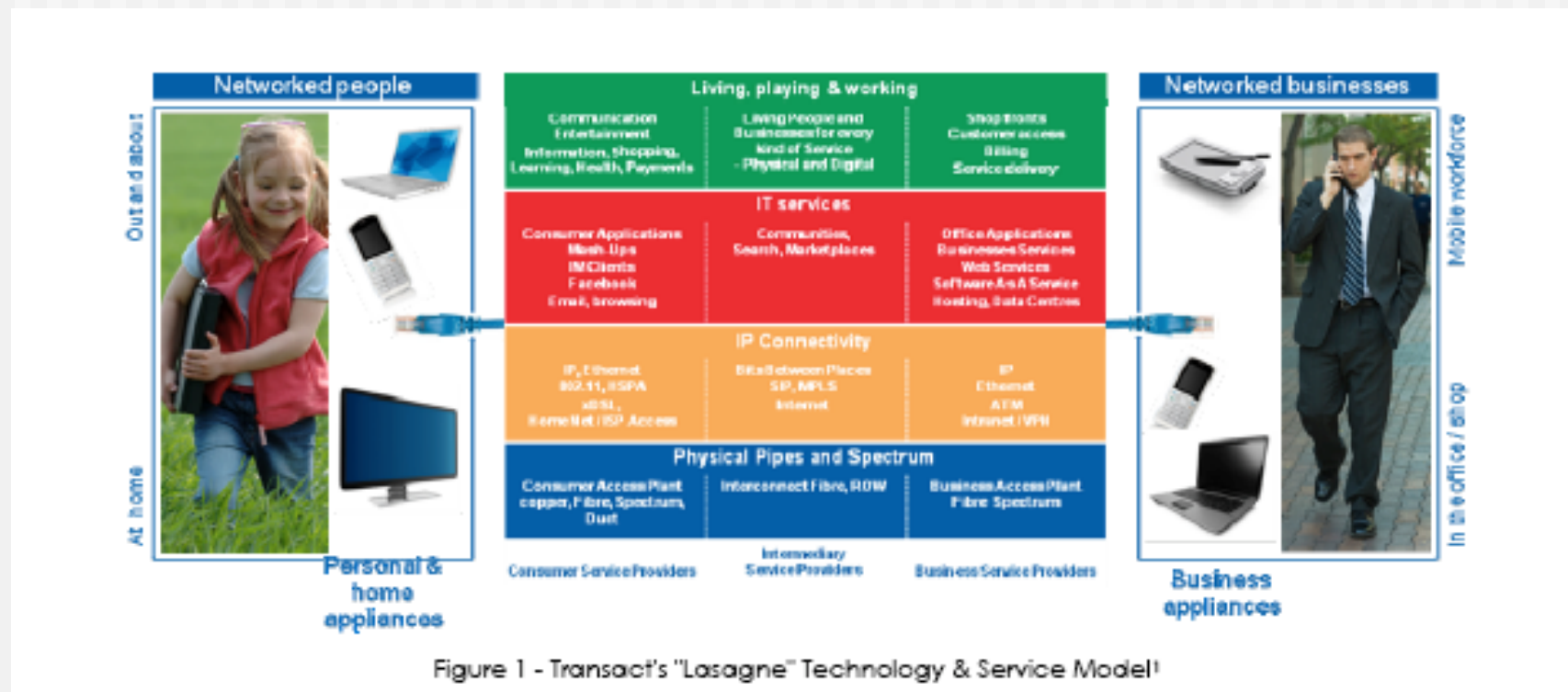


Figure 1 - Transact's "Lasagne" Technology & Service Model

Source: Communications Alliance NBN Discussion Paper (2009)

NBN - Defining the 'wholesale model'



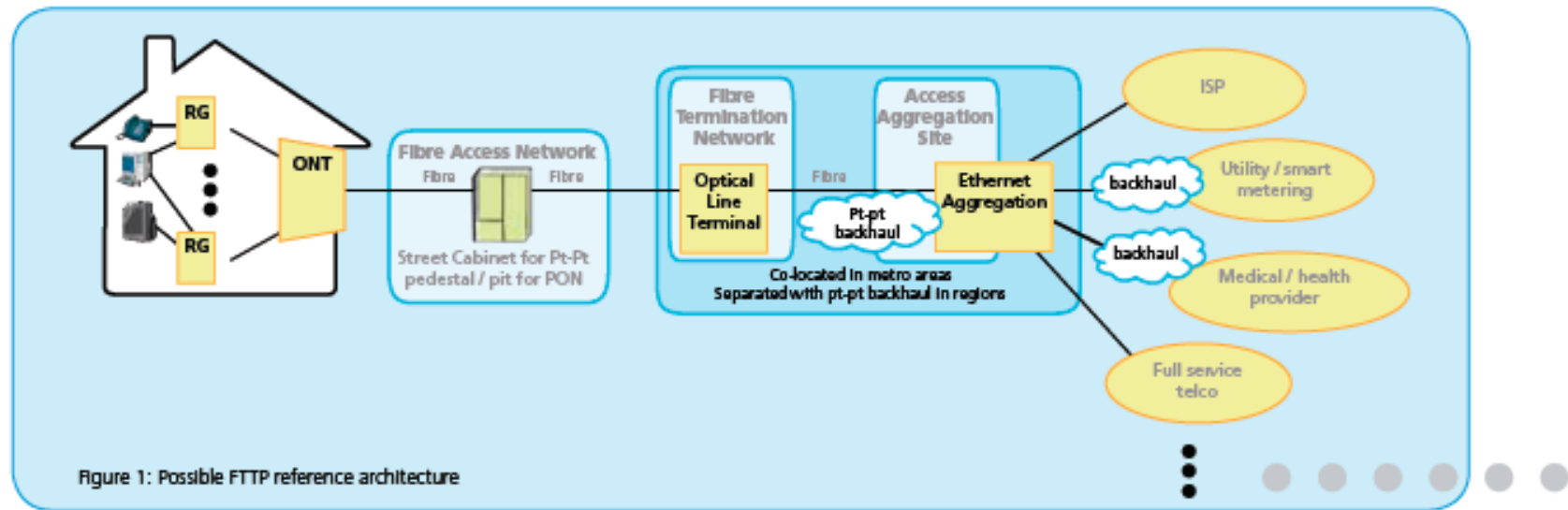
Layer 2/3 issue!

Source: Communications Alliance Discussion Paper (June 2009)

FTTP Network Architecture?

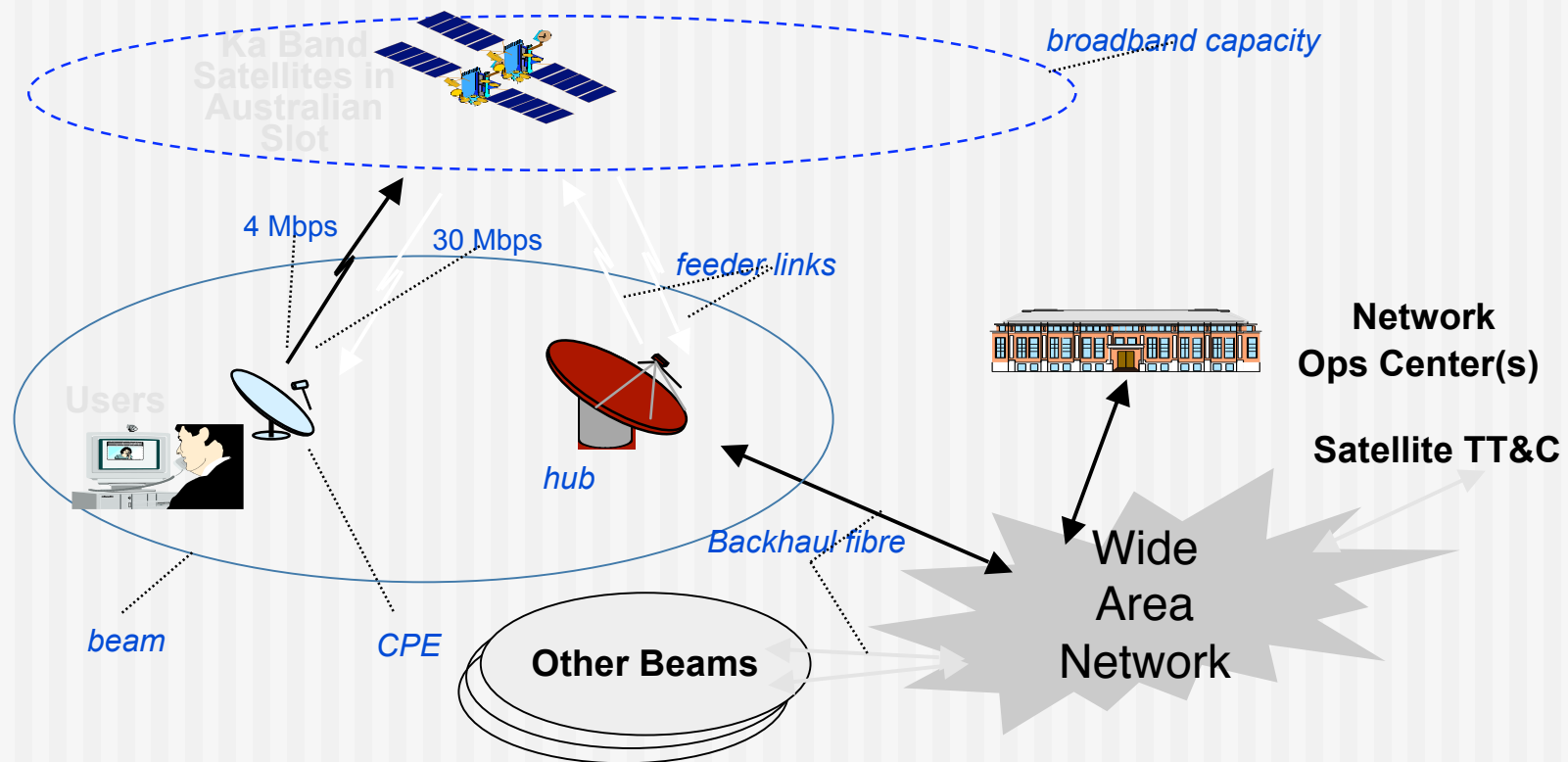
Reference architecture

From the Service Provider To The Home



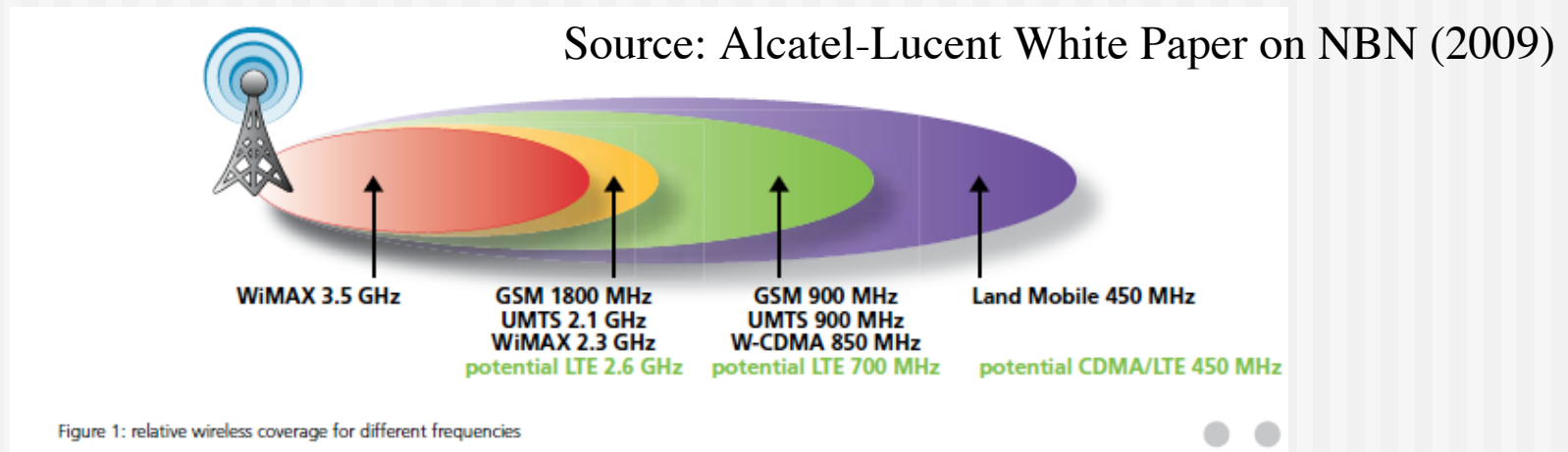
Source: Alcatel-Lucent White Paper on NBN (2009)

Broadband Satellite?



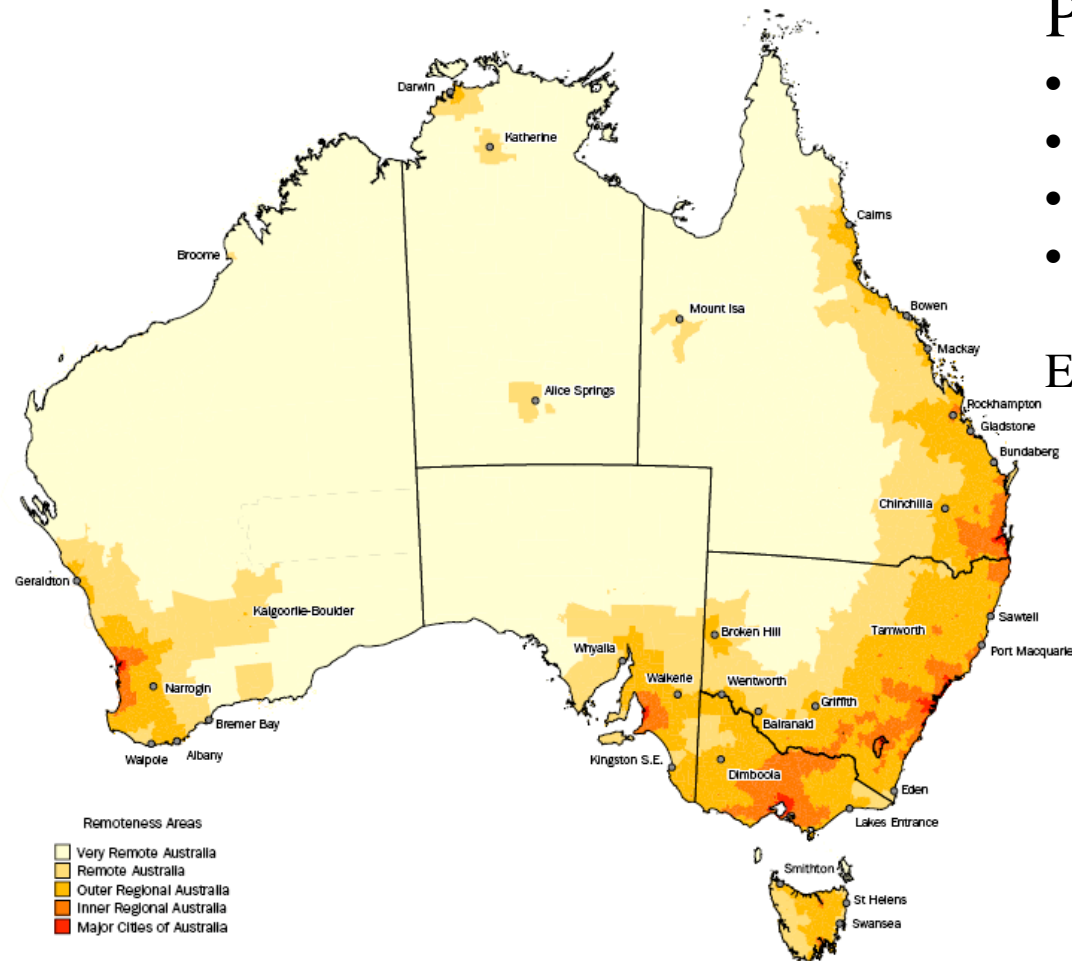
Current Ku band (IPStar) to future Ka band

Role of 'Advanced' Wireless?



- **Wireless part of the NBN? - Unlikely!**
 - Competitive and access to the NBN
 - Distinction between mobile and fixed carriers?
- **Satellite part of the NBN? - YES!**
 - Interim solution - yes but difficult issue!
- **Backhaul 'network' crucial**
 - National network with > 25 'equivalent' POIs

National Backhaul *Network?*



Principles

- network NOT just links
- high availability (redundancy)
- > 25 'equivalent' POIs
- part of NBN Co - cross subsidy!

Enable uniform whole sale pricing!

All major centres
'equivalent!'

Conclusions

- Some progress - 'uncertain optimism'
 - Tasmania - started
 - NBN Co - getting established
 - NBN architecture - active development by the Communications Alliance
 - Legislation - the senate
 - Backhaul 'links'
 - Initial links decided
 - Tender?
- 10% issue - 'a lot of activity below the surface'
 - Satellite - a 'damaged brand'
 - An interim solution possible
 - Backhaul 'network' needed
- International perspective on NBN2
 - Investment interest
 - Active discussions!

References

- **Ovum reports**
 - Comparative Costs for Fibre to the Node and Fibre to the Home Rollouts in Australia. Report to the ACCC, August 2007
- **BSG Reports (UK)**
 - The costs of deploying fibre-based next-generation broadband infrastructure, September 2008
 - Models for efficient and effective public interventions in next-generation broadband access networks, June 2008
- **Cairo report (UK)**
 - The Next Phase of Broadband UK: Action now for long term competitiveness, September 2008
- **Ofcom report (Aus)**
 - Delivering super-fast broadband in the UK, September 2008
- **Network Strategies reports(NZ)**
 - Broadband strategy options for New Zealand, Parts 1 & 2, September 2008
- **WIK Report (Europe)**
 - The Economics of Next Generation Access, September 2008
- **Observations of the panel**
 - DBCDE Web site April 7th 2009