Broadband in Australia

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ADSL is rolling out fast…..

- Broadband in Australia is approaching 100,000 customers at the end of 2000/2001.
- Already 435 exchanges have been ADSL-enabled, with up to another 600 expected by June 2002.
- During the remainder of 2001/2002 financial year coverage and capacity will continue to expand, to exceed an estimated ADSL coverage of 80% of all premises by June 2002.

DSL/ULL availability

- ULL is now available across the country
  - 7 companies other than Telstra operating broadband networks, with many more under development
- DSL: there are 14 SPs other than Telstra offering DSL services to residential customers, and far more than this to business customers
- Telstra uses several platforms to deliver broadband services - HFC covers about 2.5m homes, DSL 7.5m homes and satellite covers all.

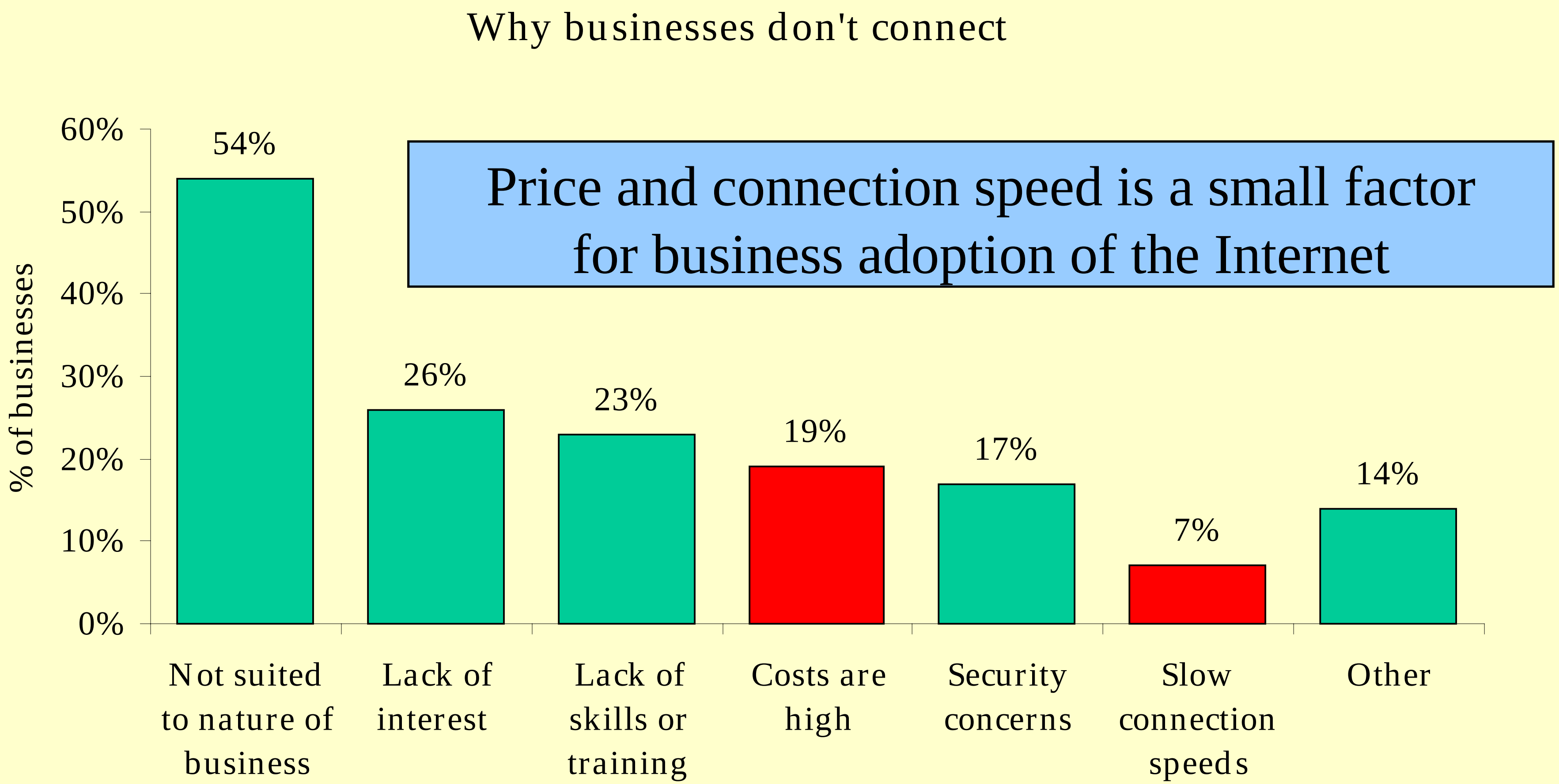
DSL not universal solution

- DSL cannot be used in about 10-15% of urban situations (copper not suitable)
  - microwave is a potential fill in technology
  - but Telstra has been excluded from big cities
- Rural and remote customers are covered by a subsidised satellite service
  - which now offers always on, untimed calls
- Cable modem service available since 1997, but targeted at residential, not small business, who are now taking up ADSL.

Factors determining take-up

- Price has not been seen as a key issue
  - but dial-up PSTN access has been comparatively underpriced
- Small businesses have not been early adopters because of lack of modern business processes
- Applications have been lacking
- This is changing fast - Telstra forecasts that broadband will be very big over the next 6 to 12 months

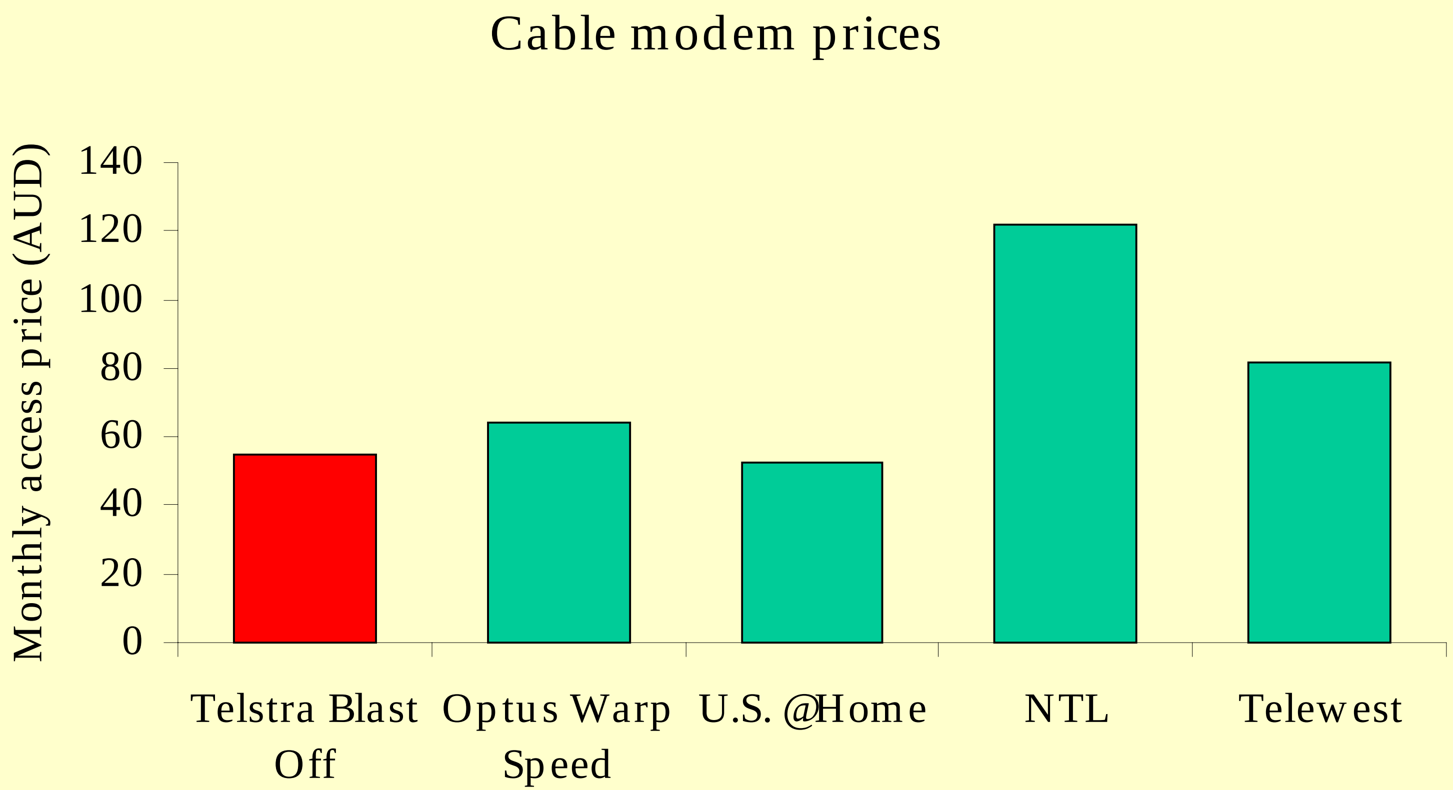
Demand Drivers



Source: ABS, Cat. 8129 (2000)

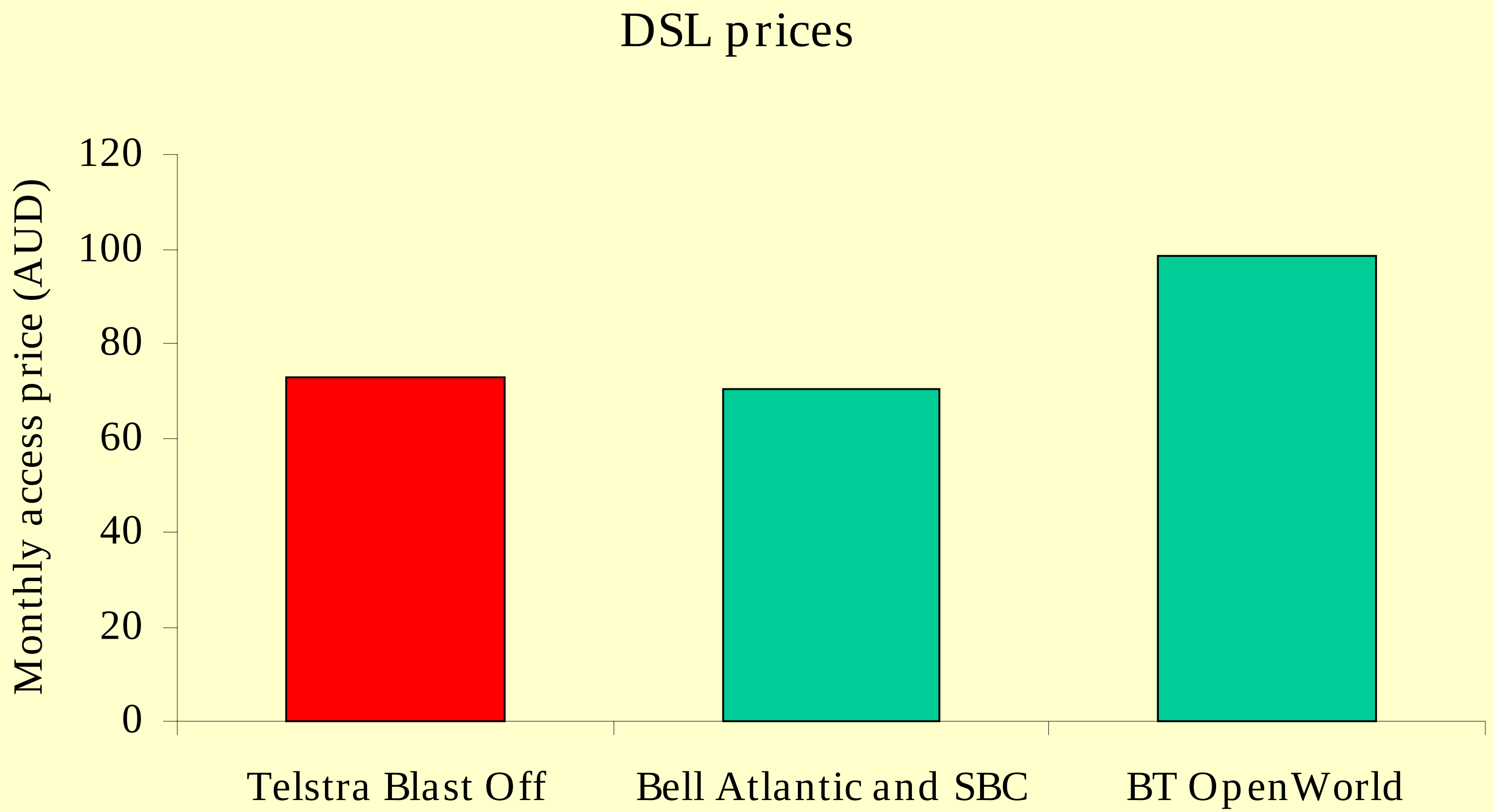
Telstra

Not an issue of broadband price



Australian cable modem access prices are low

Not an issue of broadband price



Australian DSL access prices are comparatively low

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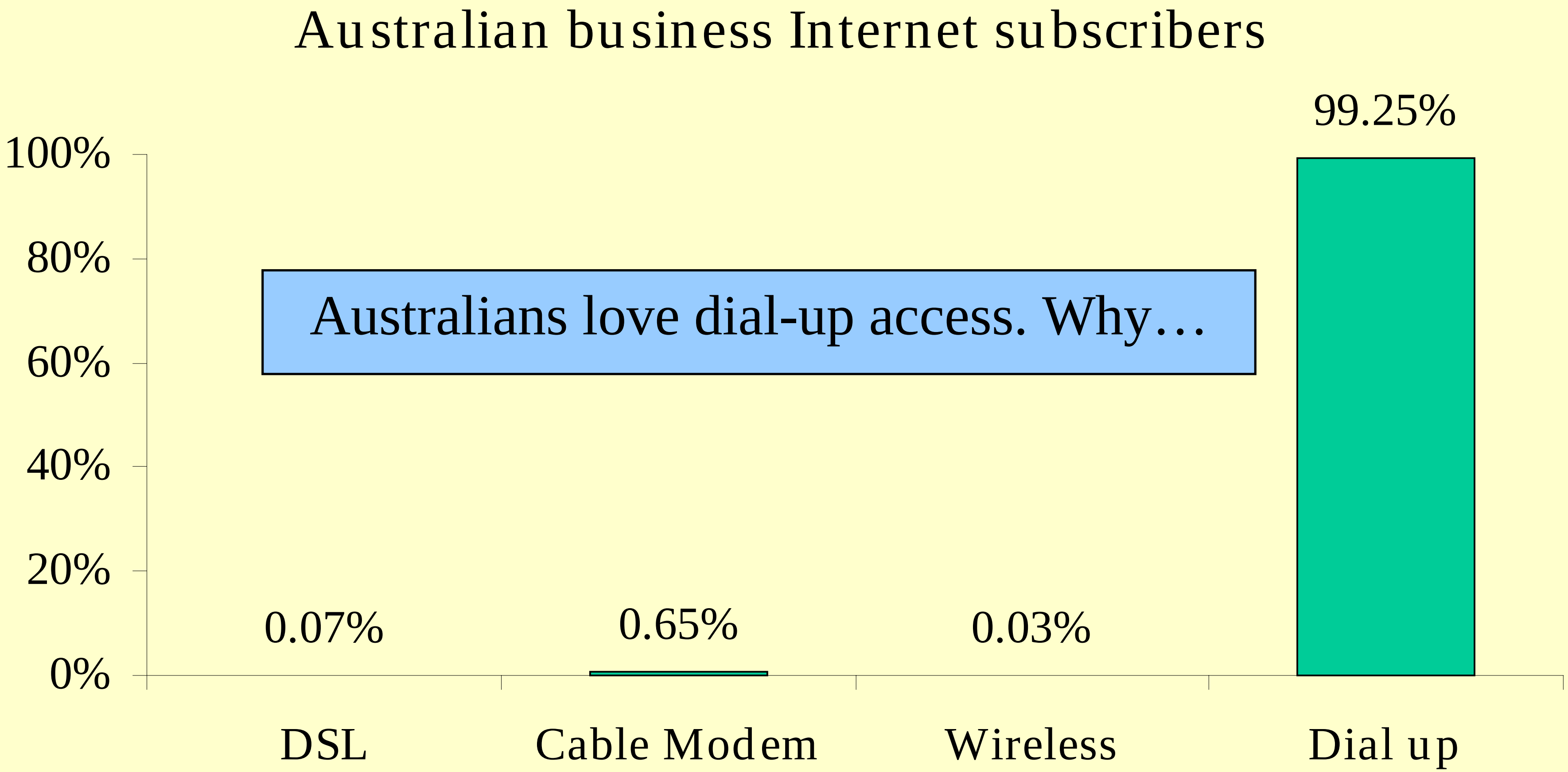
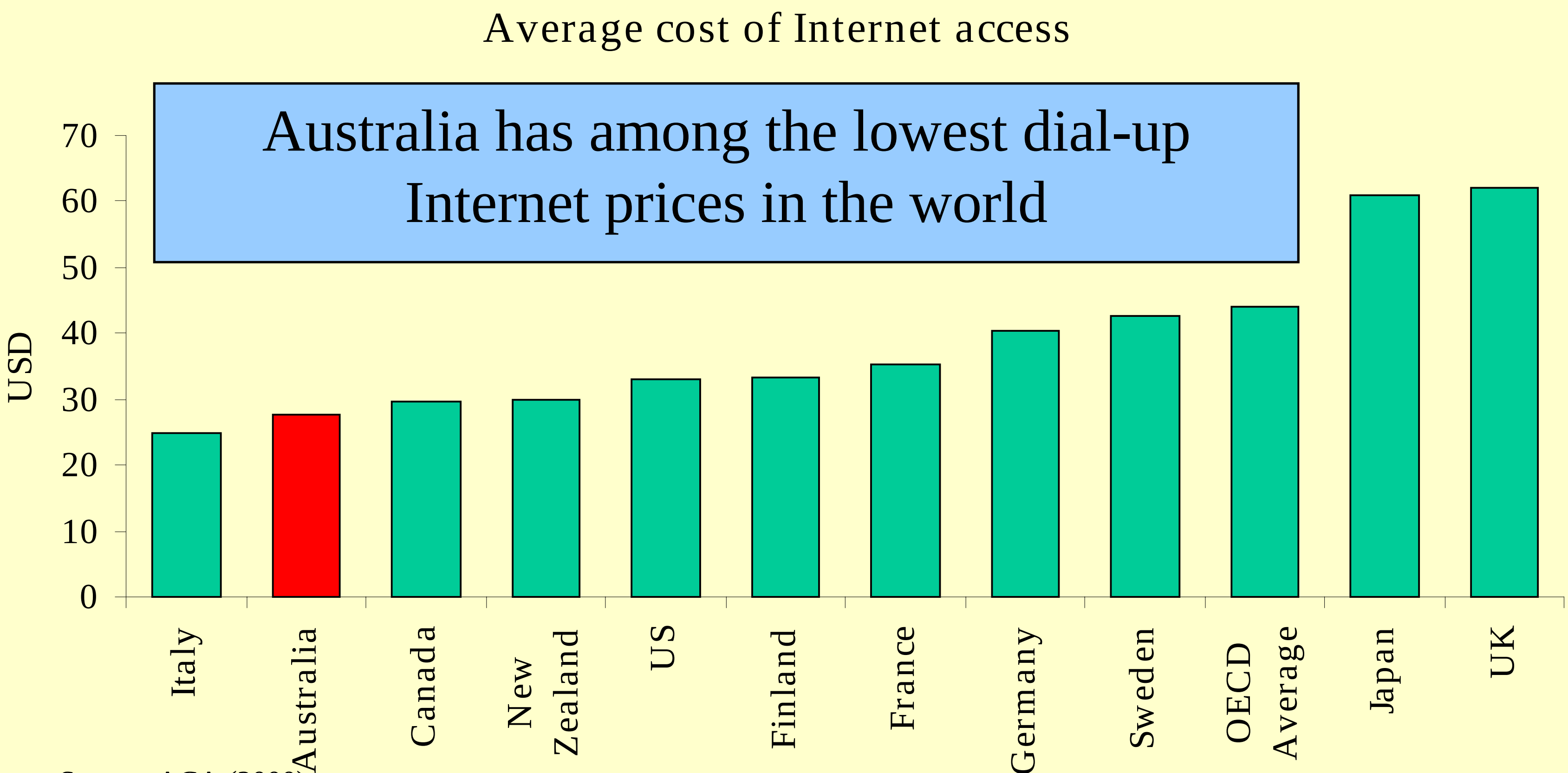
Access Alternatives



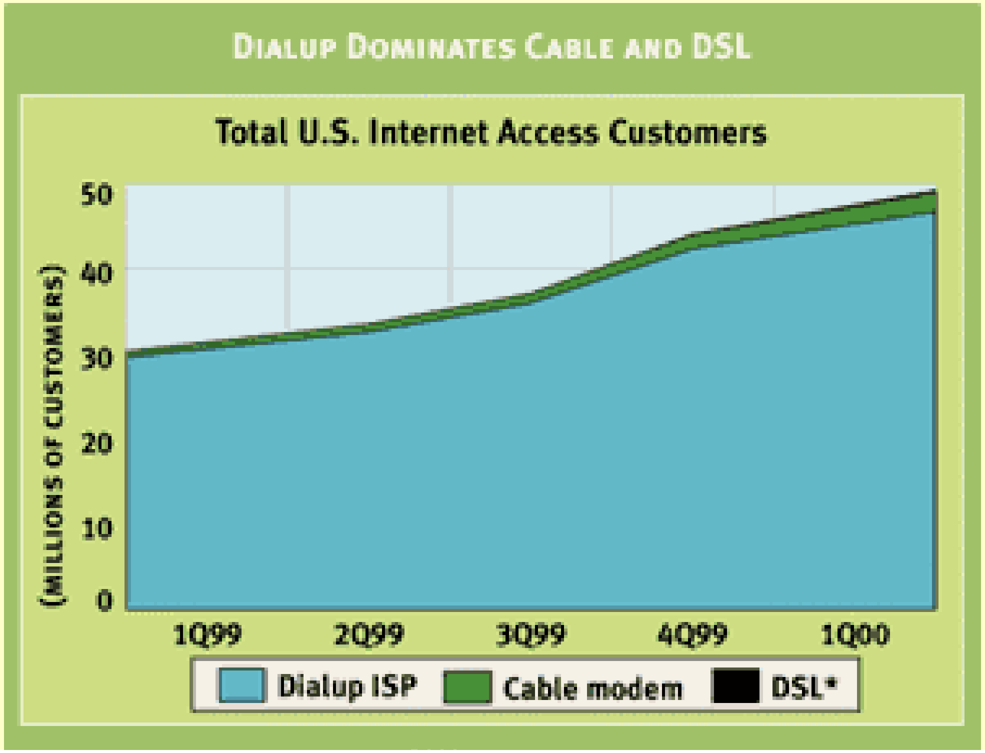
Australians love dial-up



Source: ACA (2000)

Telstra

So do Americans



Source: Telecommunications Reports International in *The Standard*, 2000.
In millions. * Excludes dialup service provided by phone companies.

Dominance of dial-up also apparent in the US

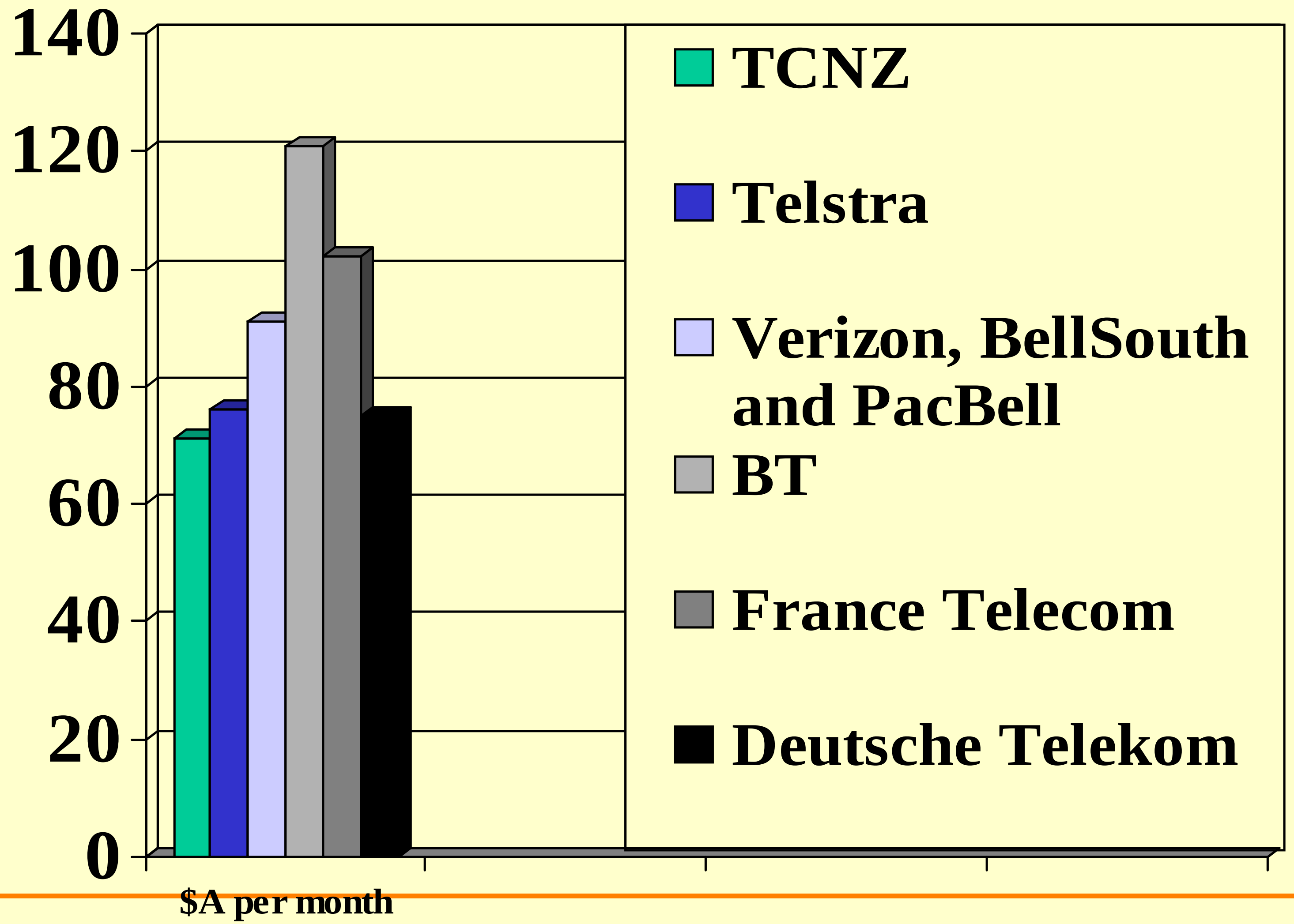
International comparisons

- Broadband penetration is comparable to other countries when you take into account the US's head start and the different demographics in Australia (ie lower residential disposable income).
- Broadband take-up in the US is about 8m (2/3 of this is cable modem penetration)
- Germany leads the EU with 400,000 (mainly ISDN); the UK is in ninth position with 30,000 DSL subscribers (plus 20,000 cable)
- Japan has only 16,000 DSL subscribers, but 625,000 cable subscribers
- Korea has about 1.4m DSL services, while Singapore has a reported broadband take up of 250,000 (100,000 are DSL)

International comparisons: “one size does not fit all”

- A range of factors make meaningful international comparisons of take up and price of services very difficult
- Telstra is working on a new methodology which attempts to take account of a range of factors, including:
  - variations in costs and prices over time
  - technology used; quality of service differences
  - geographic differences and line density between countries
  - differences in targeted plans offered to residential and business
  - bandwidth availability and reliability of service
  - value added benefits (ie value/price trade off)
  - usage patterns and customer behaviour
  - exchange rates vs Purchasing Price Parity (PPP)

Effective monthly ADSL charge



Major issues

- We need to scale up the broadband infrastructure in Australia as quickly as possible, to meet rapidly growing demand
- Business and Government need to develop the applications which will stimulate demand and deliver the services that people want
  - eg eHealth initiative

Regulation may harm consumers...

- The linking of the ULL and ADSL timetables by the ACCC slowed down broadband rollout in Australia
- Competitors had incentives to delay the ULL self-regulatory process until they were ready to compete in broadband access
- Unlike in many other countries, Australia is having to manage both ADSL rollout and ULL rollout at the same time.

Way forward

- Current regulation of the telco sector needs to be reviewed in the light of Australia's overall information economy objectives
  - the market should be allowed to develop efficiently, without unnecessary technological or policy restrictions
- Government and Business sectors must take a lead in developing services and applications which will stimulate demand.
- Service providers need to aggressively market to meet that demand.