

Centre for Telecommunications
Information Networking



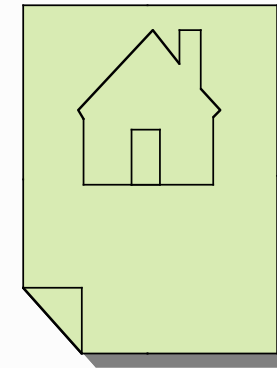
Telecommunications & New Wireless Technologies - Australia's Place in the World

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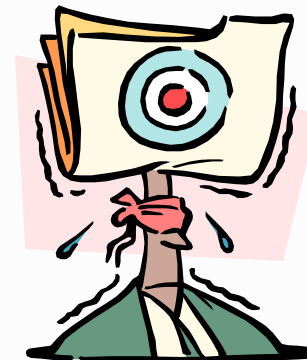
Summary

- Introduction
- Australian Industry
 - Policy & regulation
 - Carriers & competition
 - Industry and R&D
- Wireless Internet
 - A perspective
- M.Net - a New Venture
- Summary / Conclusions



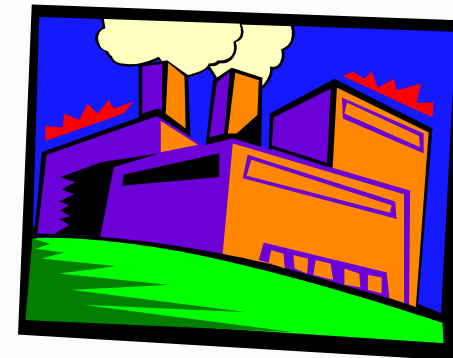
Introduction

- 1990's Deregulation
 - 1991 with Optus and Vodafone
 - 1997 with over 30 carriers
 - The internet and the “.com”
 - Spectrum auction fever
 - Market boom until April 2000!
- 2001 Industry “correction”
 - Stock market flight!
 - New carriers in trouble
 - One.Tel
 - Suppliers in trouble
 - Nortel
 - Lucent



Australian industry - issues

- Policy and regulation
 - Convergence of broadcasting and telecoms
 - Industry reform - Productivity Commission report
 - Telstra and rural telecoms
 - Telstra and competition
 - Broadband & role of Telstra/Government
- Industry & R&D
 - OS buy outs of IP
 - Radiata
 - Collapse of new carriers
 - One.Tel, Heartland
 - Massive layoffs of staff
 - New ICT Centre of Excellence in 2002!



Wireless and Internet



"If you wish to be successful, promise everything, deliver nothing"
Napoleon

Wireless Intrnet : what is it?



Telephone?

Playstation?

Organizer?

Music player?

Wallet?

Computer?

Electronic pet?



Radio?

Fashion accessory?



GPS terminal?



Directory?

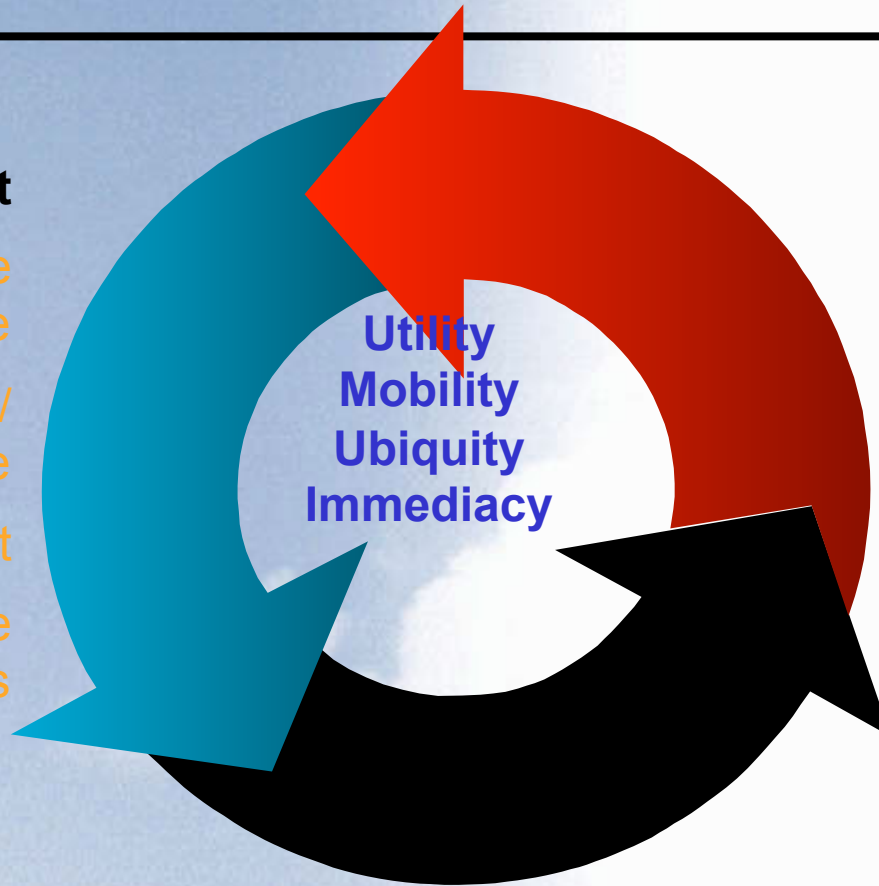
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Mobile Business Drivers



Applications/Content

Anywhere, anytime commerce
Cost reduction/self-service
Entertainment
Bridging the supply chain gaps



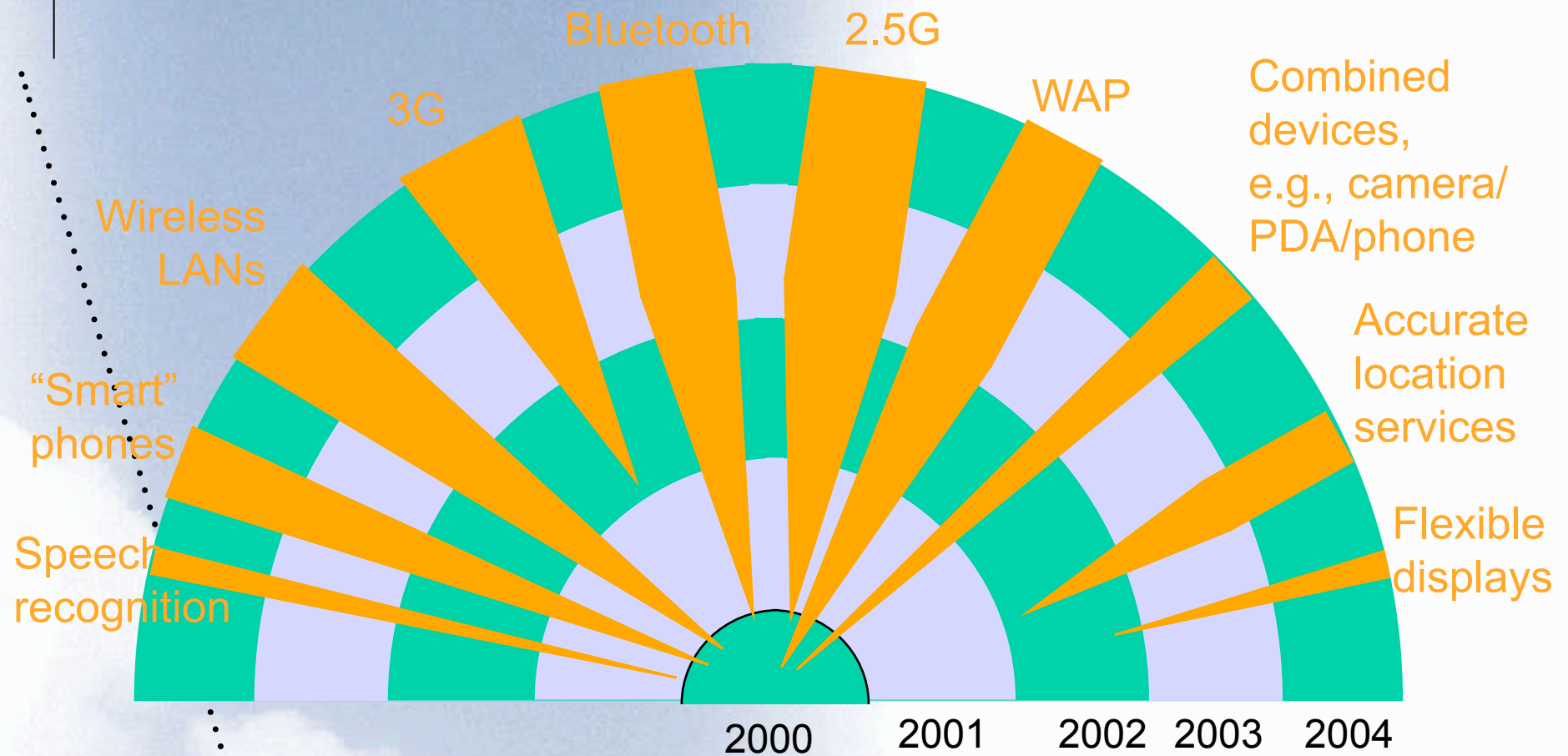
Technical

New technology:
WAP, bluetooth,
location sensing ...
Device costs, £35 chip
sets by 2005
Better networks:
UMTS, GPRS ...

Device / Network Availability

1 billion phones by 2003 globally
12.8 million cellular users by 2004 (Au)
8.9 million PC connected to Internet by 2004 (Au)

Mobile Technology



Personal Devices and Applications



- Consumer behaviour
- Payment preferences
- Trust
- Cost of service
- Fashion
- Laws and ethics

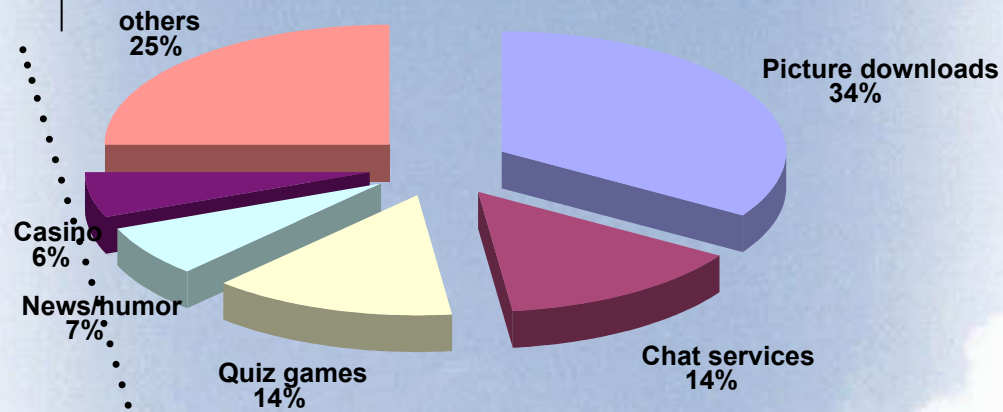


- Teenagers — *Higher advertising tolerance, entertainment, fashion, fun, peer group drivers, music, price sensitive ...*
- Mobile professionals — *Low advertising tolerance, price insensitive, efficiency and ubiquity-oriented, complex applications ...*
- Adult consumers — *"Useful" applications, lower advertising tolerance ...*
- Vertical niches — *e.g., sports fans ...*

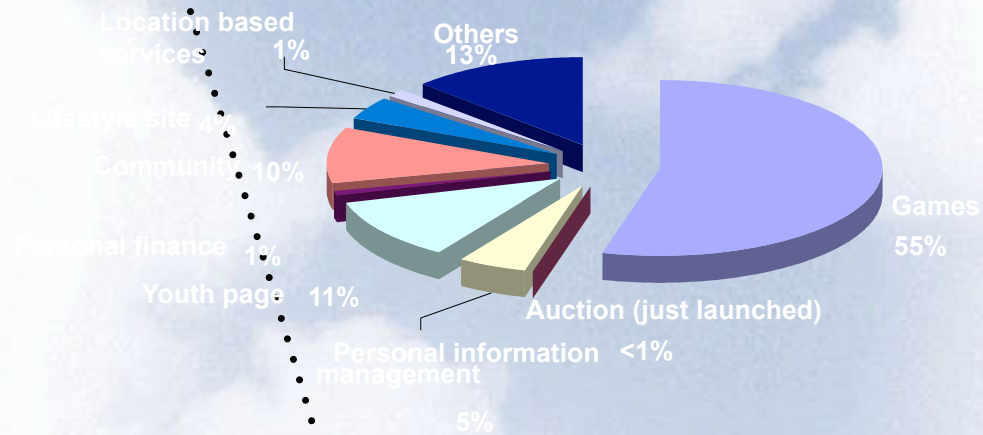
WAP for?



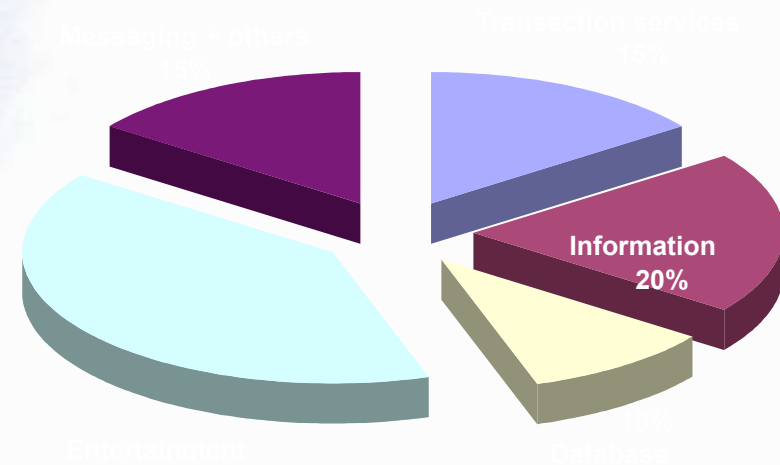
Korea Carrier 1



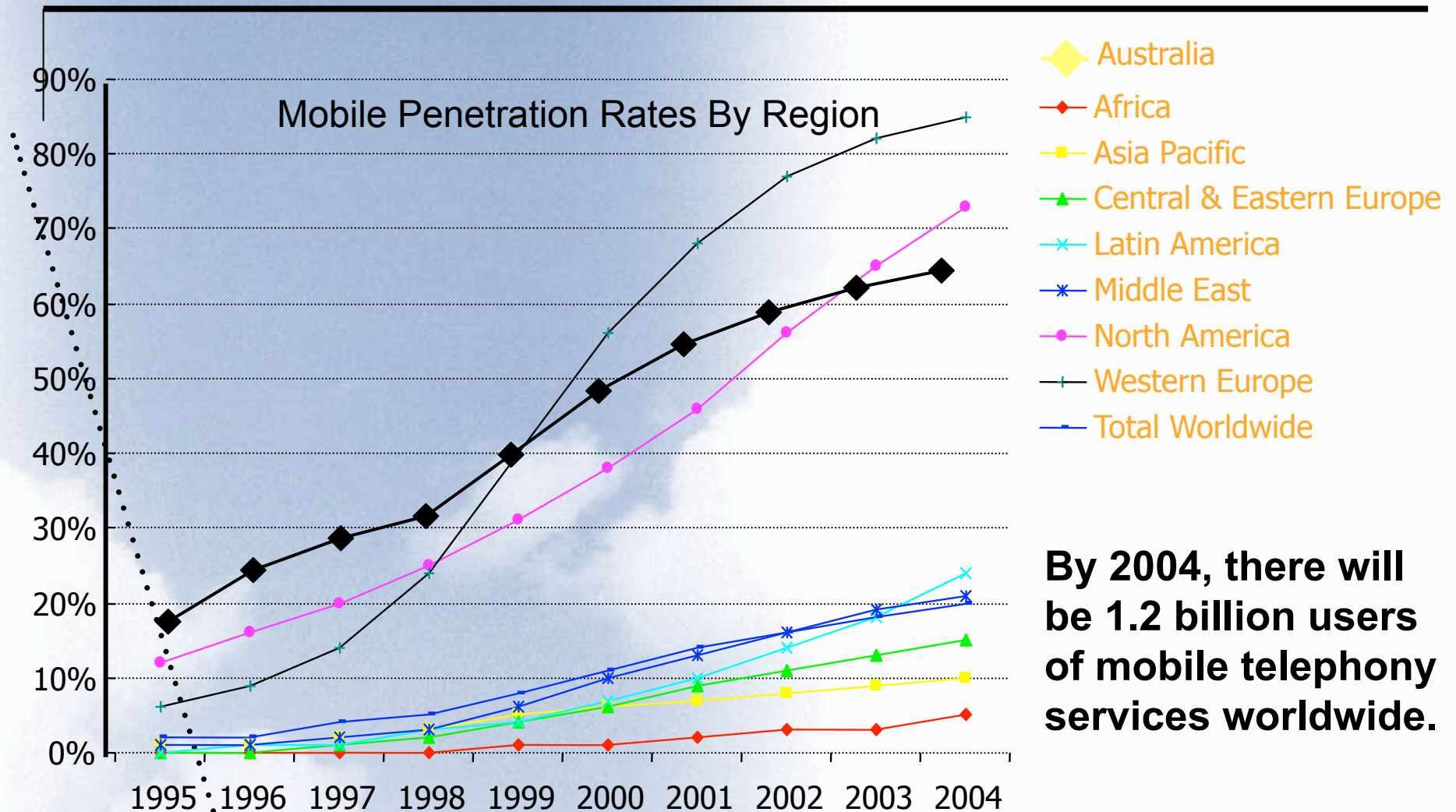
Korea : Carrier 2



Japan: i-mode



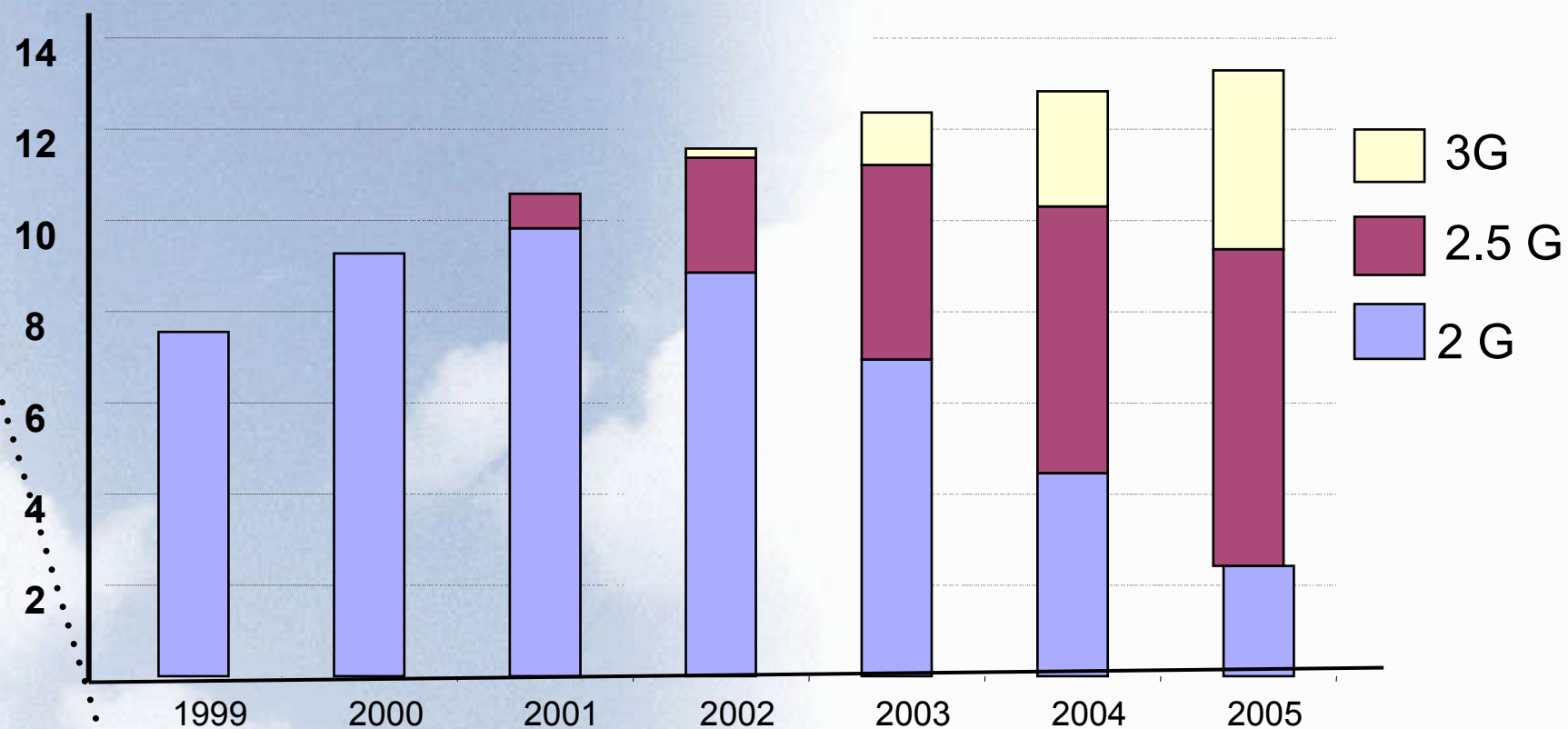
Mobile in Australia:



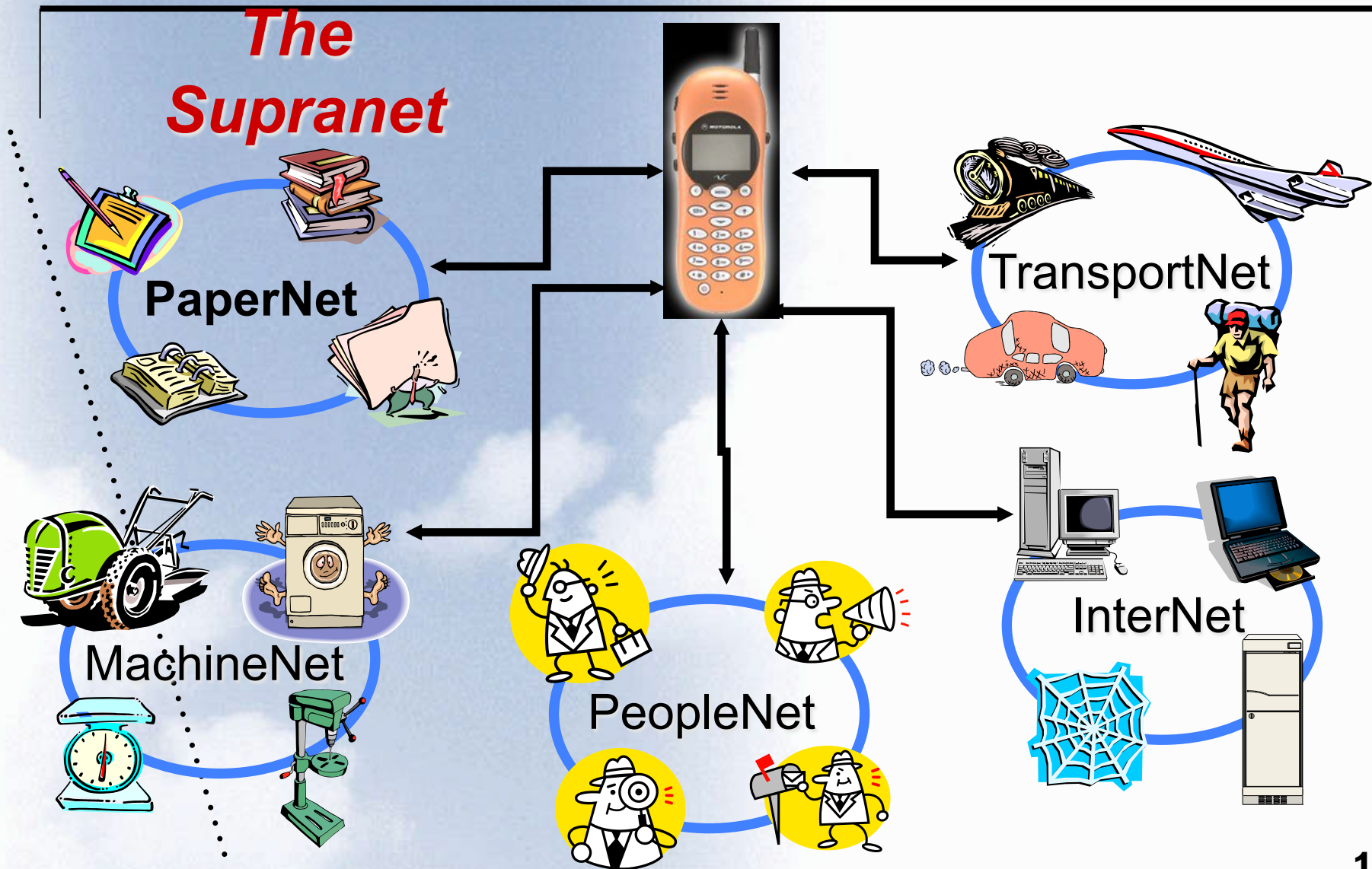
By 2004, there will be 1.2 billion users of mobile telephony services worldwide.

Australia cellular subscriber forecast:

million users



The New Application Reality





m.Net venture

Snapshot - the m.Net project

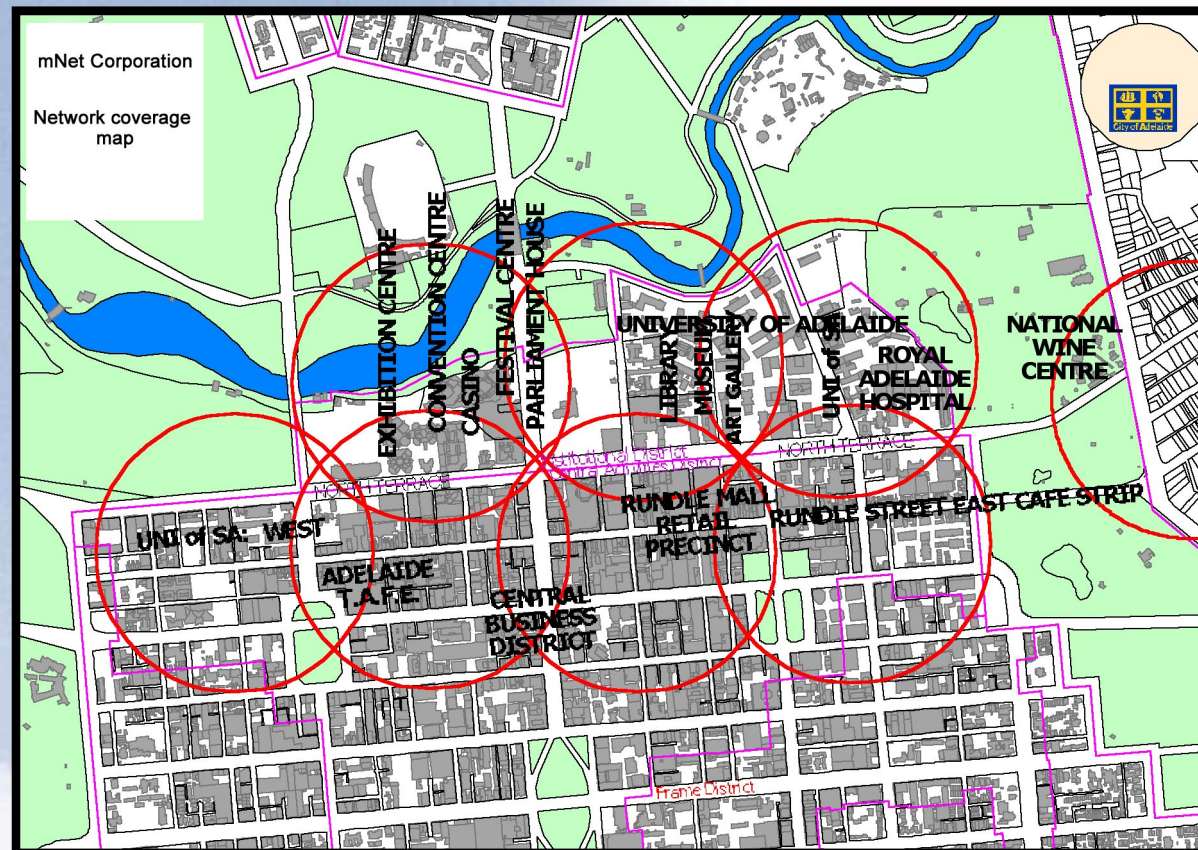
Wireless Internet Test Bed

- 19 participants in joint venture including 3 Universities, Telstra, Alcatel, Compaq, Cisco, AirNet, Chimo etc
- \$9.23 million in funding over 3 years from the Australian Government to establish wireless communication networks.
- To be used as a platform for research into new technology and the development of mobile applications.
- The network is part of a \$35 million project to make Australian companies key players in the next wave of the Internet.



m.Net Environment

Network Coverage



Conclusion

- Industry at a cross roads
 - Convergence happening
 - Industry recovery by end 2002
 - Australian potential with ICT Centre
- Wireless internet
 - Inevitable trend
 - Timing of technologies (eg 3G) uncertain
 - Business models changing



Opportunity!