

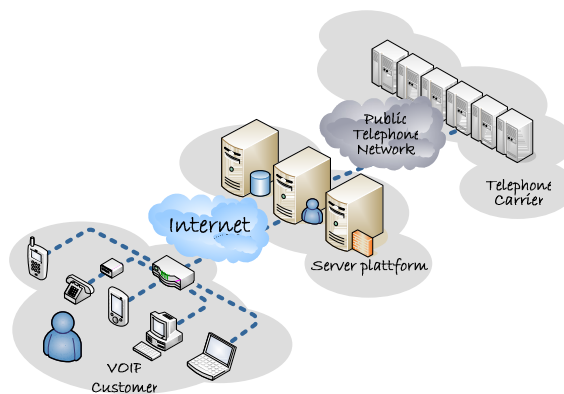
VoIP:

A catalyst for change in Australia's
telecoms industry?



icn-ict

What is VoIP?



icn-ict

VoIP: a global perspective

- “France Telecom issued a profits warning and is to cut 17,000 jobs”
 - ... Revenue from traditional fixed line calls is being eaten away by the increasing popularity of cheaper calls routed through broadband internet connections...” – Didier Lombard CEO [FT 14/2/06]
- “BT Plays down threat from internet telephony”.
 - The difference between VoIP pricing and other pricing [in the UK] is by no means comparable to that in other countries... continued decline in traditional telephony, which now accounts for only 15% of BT total revenues...” – Ben Verwaayen BT Chief Executive [FT 9/2/06]



icn-ict

VoIP: a global perspective

OECD Communications Outlook 2005 [August 2005]

- “VoIP represents a significant threat to the fixed-line revenues of traditional carriers, especially for international calls”.
- “Average saving delivered by VoIP in OECD 80%...”

Nokia says: “Internet voice is going mobile”

- “Nokia threw its weight behind internet telephony in a move that could divert large volumes of traffic from cellular networks and put pressure on mobile voice tariffs.” [Jorma Ollila, CEO Nokia – FT 13/2/06]



icn-ict

VoIP: a global perspective

“... Competition was played out in areas of role and market specialisation where the most lucrative or most exposed areas of the telco market were cherry-picked....”

“... [Telco's] still view voice as a future backbone of revenues when the reality is that when VoIP is priced at real cost within a larger network it will cease to be the backbone application of the industry.” Geoff Huston
SRIS APNIC 3/3/06 Communications Day



icn-ict

VoIP vs Telco business model

- Incumbent revenues:
 - 19% fixed line voice
 - 15% access (for voice)
 - 17% mobile voiceVoice contributes 51% of revenues
Voice contribution to total margin: ~ 65%(est)
- “Australia 7th and 8th out of 30 in terms of most expensive telecoms spend for business and residential subscribers.” [OECD Telecoms Outlook 2005]
- ISP business.
 - Customers are not prepared to pay the true cost of internet access.
- Do traditional telco's cross-subsidize IP access from voice margins?



icn-ict

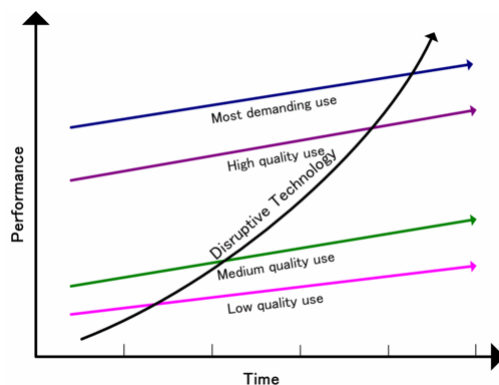
VoIP vs Telco business model

- VoIP:
 - Application that works above the network layer.
 - Piggy backs Telco fixed infrastructure.
 - Same voice wholesale rates as Telcos.
 - No legacy network or back office systems.
 - Low barrier to entry: low cost facilities – scalable – feature rich.
 - No geographic presence required.
- Conclusion: VoIP offers challengers an arbitrage opportunity to attract voice revenues without major infrastructure costs.



icn-ict

Is VoIP a disruptive technology?



icn-ict

Is VoIP a disruptive technology?

- Low-end disruption. Therefore, we expect to see the following:
 - Price competition to gain market share.
 - Initially, lower performance (but improving with time).
 - Innovation to improve performance (& margin) and features.
 - ‘Word of mouth’ dynamic network effects.



icn-ict

VoIP in Australia

VoIP in Australia is growing....

- Broadband penetration
 - 600,000 broadband subscribers [OECD, Jun 2003]
 - 2,600,000 broadband subs [ACCC, Sept 2005]
- Australian VoIP providers
 - 63 VoIP providers of 25 in July 05
[www.ozinternetphones.com]
- Number of VoIP users?
 - 200,000 to 600,000 ?



icn-ict



ATUG VoIP survey

Survey issued in February 2006 set out to measure customer opinions on VoIP.

- Web based survey ~ 100 questions.
- Sampled from 2,500 ATUG and 19,000 engine customers
- 784 individual and 285 business respondents (to date).
- Minitab statistical software and analysis.



icn-ict



Survey: Individual Respondents

	Individuals
Respondents	784
Average Age	44.3 years
University Education	72%
Pay TV	32%
Average Telephone Spend	\$132
ADSL	64%
Cable	31%
Median IP Speed	256k-2Mbps
VoIP at Home and Work	9%



icn-ict

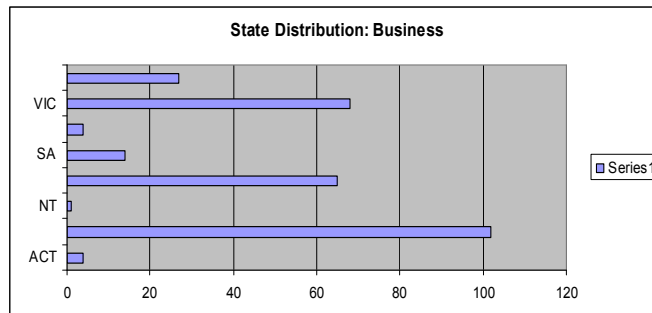
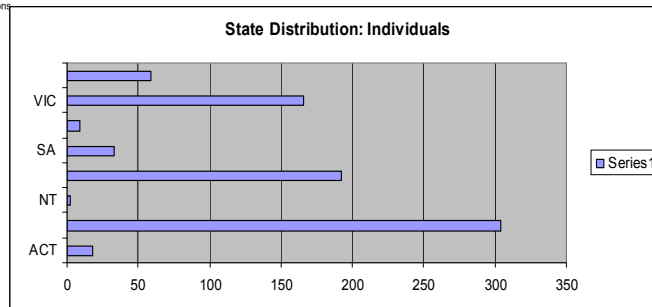
Survey: Business Respondents

	Business
Respondents	285
Business <20 employees	85%
Average Telephone Spend	\$310
ADSL	67%
Cable	30%
Median IP Speed	256k-2Mbps
VoIP at Home and Work	44%



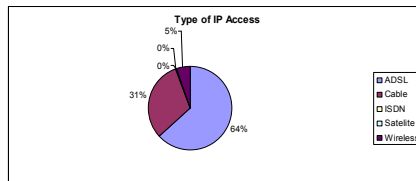
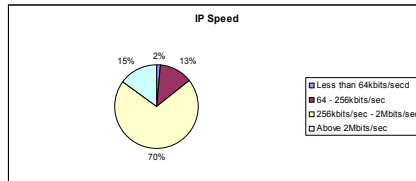
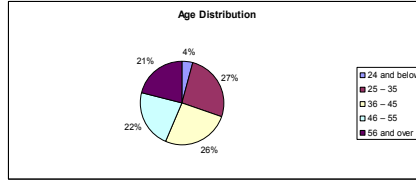
icn-ict

Respondents from all over Australia

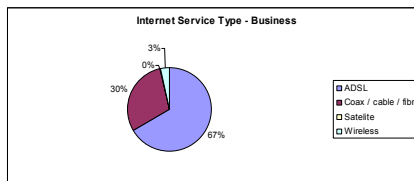
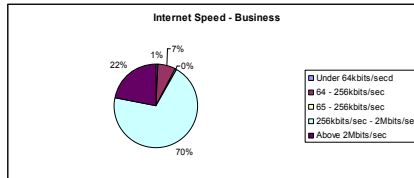
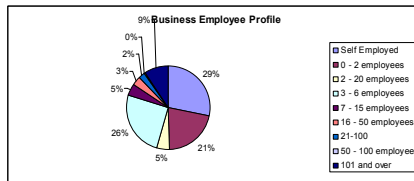


icn-ict

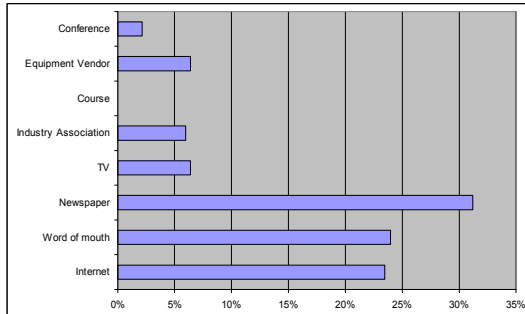
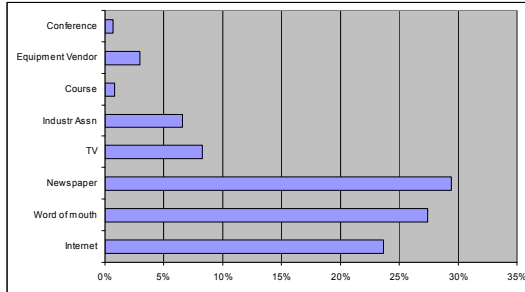
Individuals



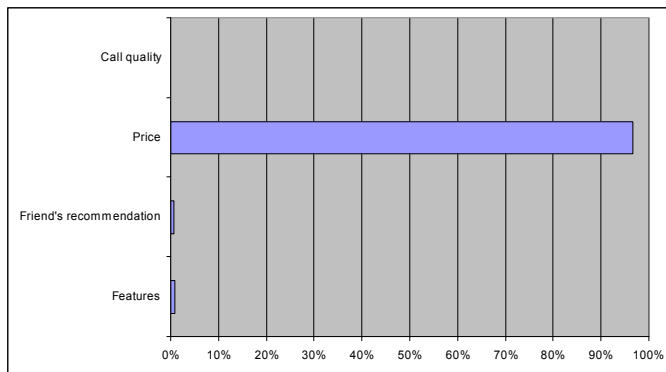
Business



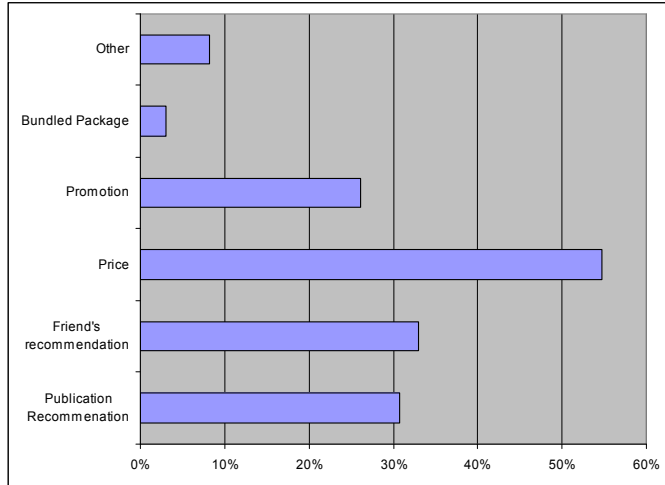
Where did you first hear of VoIP?



Why choose VoIP: Individuals

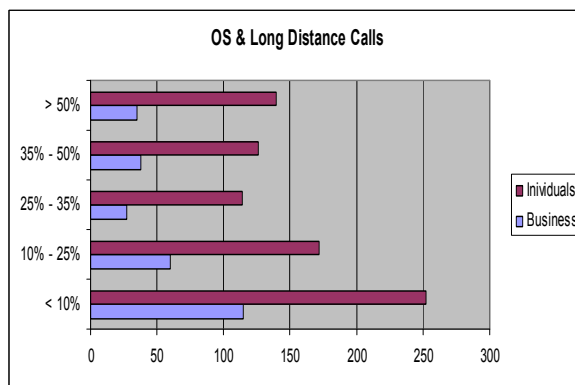
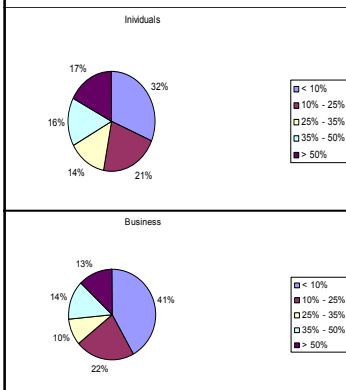


Why choose VoIP: Business



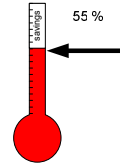
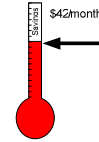
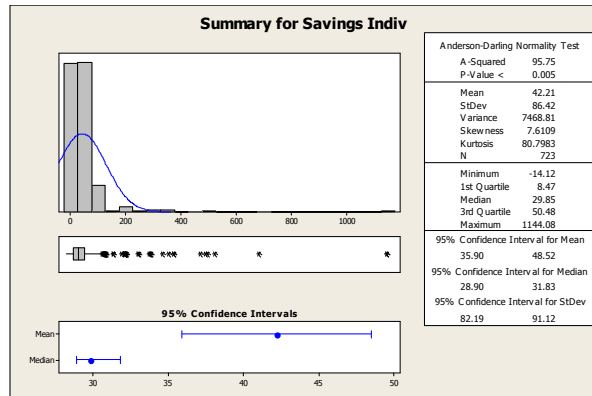
icn-ict

International and Long Distance calls



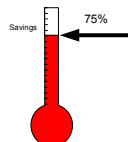
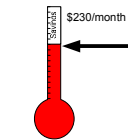
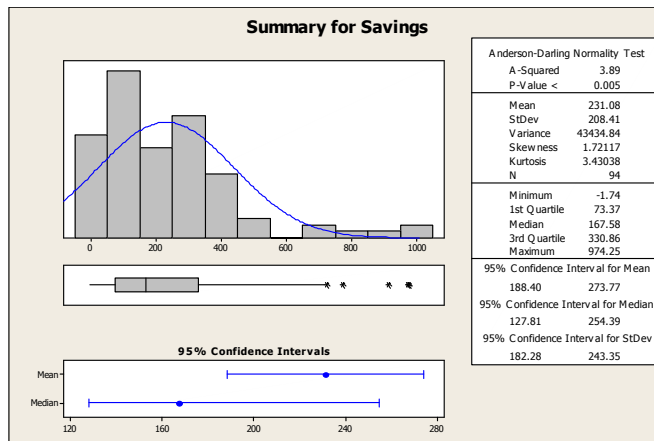
icn-ict

Savings: Individual



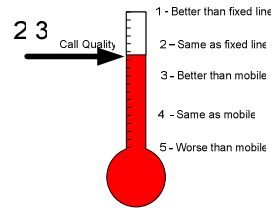
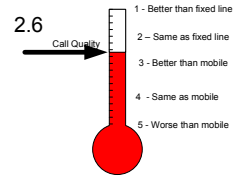
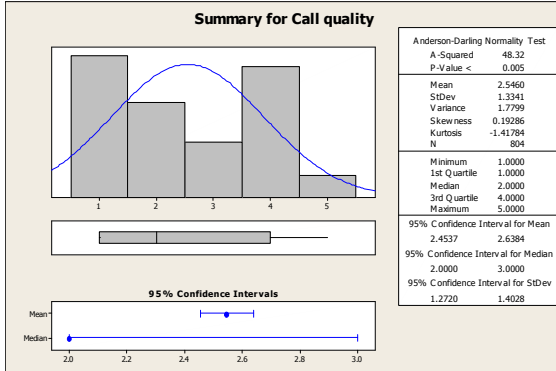
icn-ict

Savings: Business



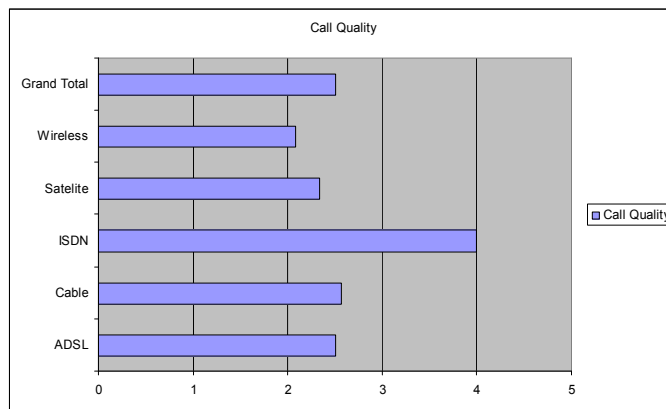
icn-ict

Call quality



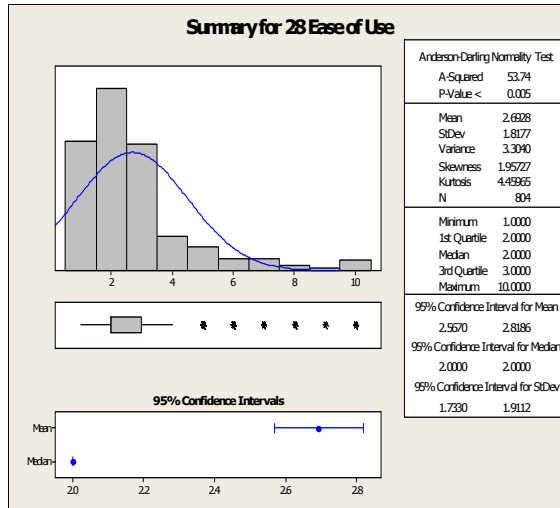
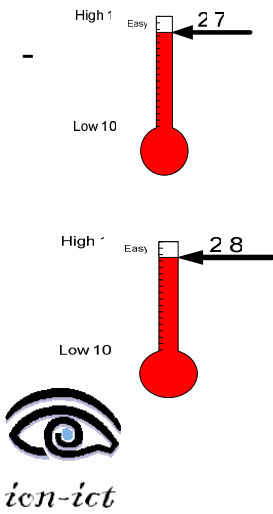
icn-ict

ISP vs Call Quality



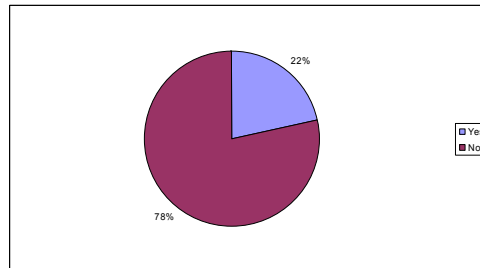
icn-ict

Ease of use

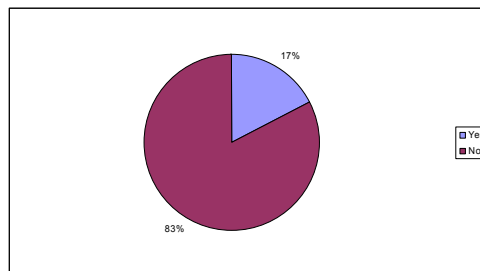


Use extra features?

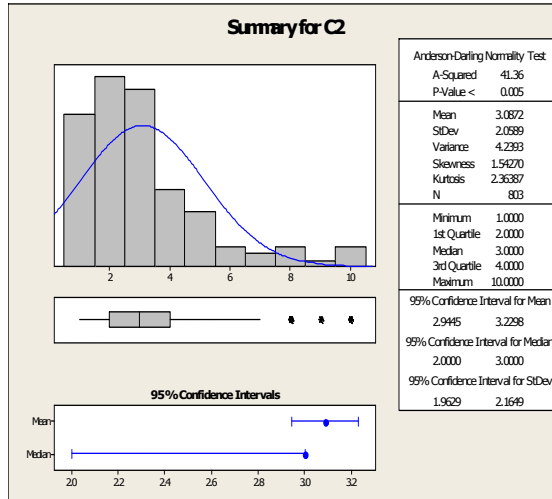
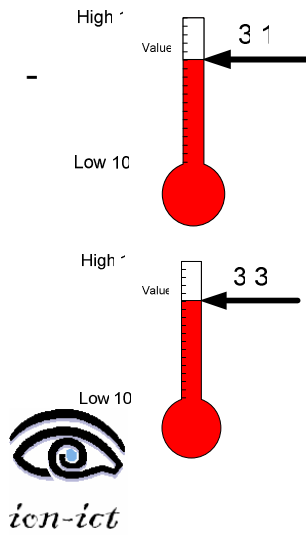
Individuals



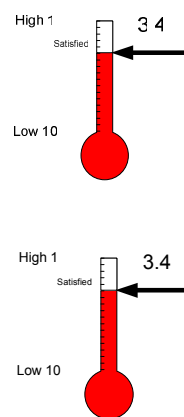
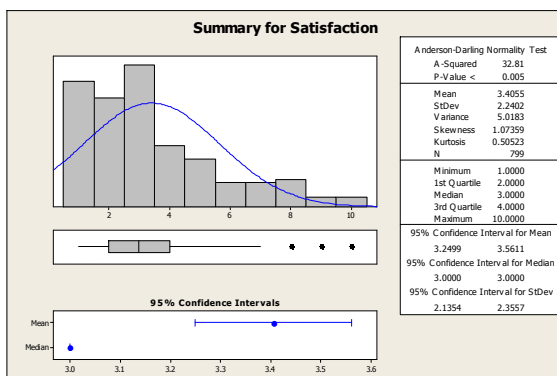
Business



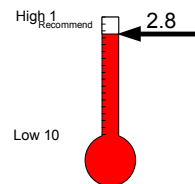
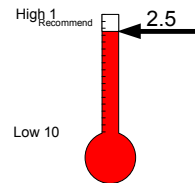
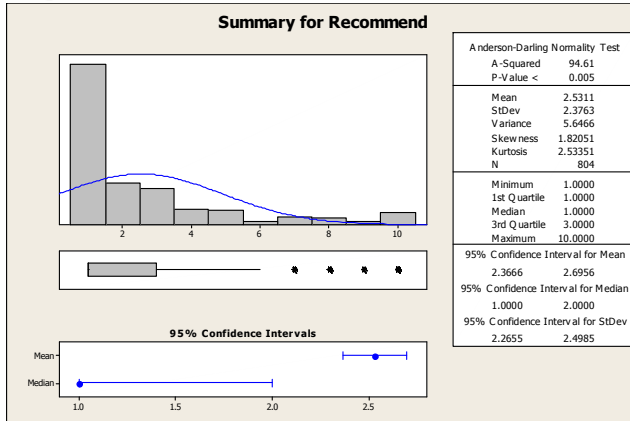
Value for money



Satisfied with VoIP service?

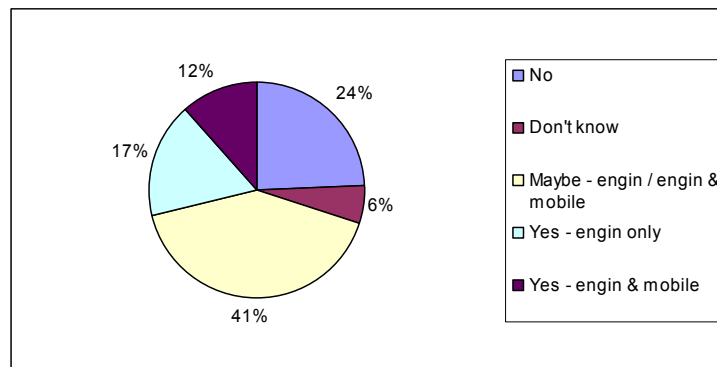


Would you recommend?



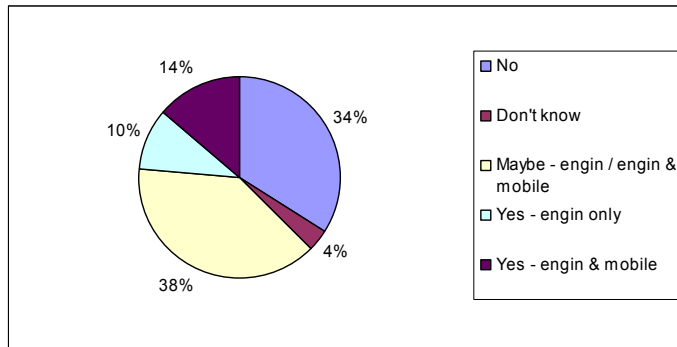
icn-ict

Would you give up your fixed line and only use VoIP? :Individual



icn-ict

Would you give up your fixed line and only use VoIP? : Business



icn-ict

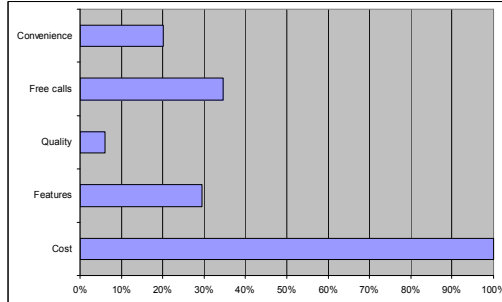
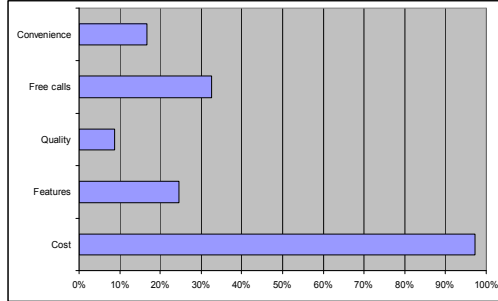
Summary of results

	Individual	Business
Savings	55%	75%
	\$42 / month	\$230 / month
Efficiency		
Ease of use	2.7	2.8
Use extra features	22%	17%
Call quality	2.6	2.3
Value for money	3.1	3.3
Give up your phone for VOIP?	29% already have 41% maybe will	24% already have 38% maybe will
Satisfied?	3.4	3.4
Recommend?	2.5	2.8



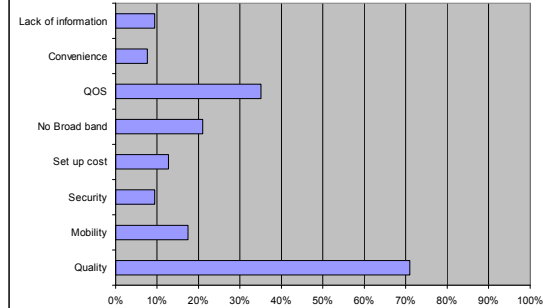
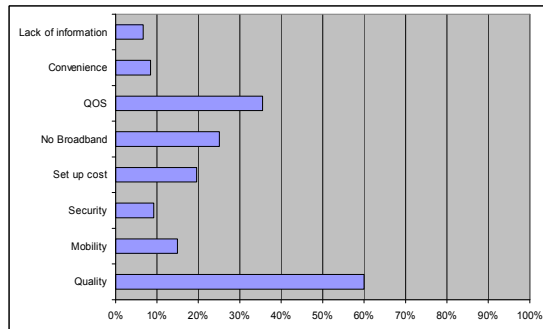
icn-ict

VoIP: Strengths



icn-ict

VoIP: Weaknesses



icn-ict

VoIP Myths revealed

Myth	Reality	Measure
VOIP only offers marginal savings over PSTN.	VOIP offers substantial savings.	Saving of 55% for individual to 75% for business.
VOIP is too complicated for widespread use.	New hardware and features make VOIP easy for anyone to use.	Customers rate ease of use at 2.7.
VOIP has poor voice quality.	VOIP is now a broadband voice service that offers high voice quality.	Customers rate VOIP call quality as better than a mobile phone.
VOIP will never replace the fixed line phone	VOIP is a real alternative to the traditional phone	29% of individuals and 24% of businesses already have



icn-ict

VoIP in Australia: what changes can we expect

- Traditional carriers/ISPs/mobile:
 - Price pressure of voice traffic (mobile & fixed)
 - Performance standards for broadband (latency / contention ratios / speed)
 - Industry qos peering / transit policy and guidelines
 - ‘death’ of the fixed line POT
- VoIP operators:
 - Position VOIP as easy to use, convenient and mobile
 - Differentiate on the basis of brand, quality and customer service.
 - VOIP peering, interconnection and settlement systems
 - VOIP directories



icn-ict

Conclusions

- “VoIP is not about the destruction of old technology, it is about enhancing services via broadband” Ben Verwaayen British Telecom Chief Executive
- VoIP will continue to pressure traditional telcos on price and performance.
- The future will see VOIP as an ubiquitous for both fixed and mobile voice services.
- VoIP offers its customers a high quality, high value alternative to traditional fixed voice services now.



icon-ict