Communications report
2009–10 series
Report 4—
Changing business models in the Australian communication and media sectors: Challenges and response strategies
Canberra
Purple Building
Benjamin Offices
Chan Street
Belconnen ACT
PO Box 78
Belconnen ACT 2616
T +61 2 6219 5555
F +61 2 6219 5353

Melbourne
Level 44
Melbourne Central Tower
360 Elizabeth Street
Melbourne VIC
PO Box 13112
Law Courts
Melbourne VIC 8010
T +61 3 9963 6800
F +61 3 9963 6899

Sydney
Level 15 Tower 1
Darling Park
201 Sussex Street
Sydney NSW
PO Box Q500
Queen Victoria Building
NSW 1230
T +61 2 9334 7700
1800 226 667
F +61 2 9334 7799

© Commonwealth of Australia 2011
This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced
by any process without prior written permission from the Commonwealth. Requests and inquiries concerning reproduction
and rights should be addressed to the Manager, Editorial Services, Australian Communications and Media Authority,
PO Box 13112 Law Courts, Melbourne Vic 8010.
Published by the Australian Communications and Media Authority
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Summary</td>
<td>3</td>
</tr>
<tr>
<td><strong>Fixed-line service providers: Challenges and responses</strong></td>
<td>5</td>
</tr>
<tr>
<td>Overview of challenges</td>
<td>5</td>
</tr>
<tr>
<td>Other factors affecting PSTN revenue</td>
<td>6</td>
</tr>
<tr>
<td>Emerging voice service providers</td>
<td>7</td>
</tr>
<tr>
<td>Strategies in defence of voice revenue</td>
<td>7</td>
</tr>
<tr>
<td><strong>Mobile service providers: Challenges and responses</strong></td>
<td>9</td>
</tr>
<tr>
<td>Overview of challenges</td>
<td>9</td>
</tr>
<tr>
<td>Increasing use of data services</td>
<td>9</td>
</tr>
<tr>
<td>Mobile applications</td>
<td>11</td>
</tr>
<tr>
<td><strong>Internet service providers: Challenges and responses</strong></td>
<td>13</td>
</tr>
<tr>
<td>Overview of challenges</td>
<td>13</td>
</tr>
<tr>
<td>Service bundling</td>
<td>13</td>
</tr>
<tr>
<td><strong>Television broadcasters: Challenges and responses</strong></td>
<td>15</td>
</tr>
<tr>
<td>Overview of challenges</td>
<td>15</td>
</tr>
<tr>
<td>Increase in digital television content</td>
<td>15</td>
</tr>
<tr>
<td>New content delivery platforms</td>
<td>16</td>
</tr>
<tr>
<td>ISP content service offerings</td>
<td>17</td>
</tr>
<tr>
<td><strong>Radio broadcasters: Challenges and responses</strong></td>
<td>19</td>
</tr>
<tr>
<td>Overview of challenges</td>
<td>19</td>
</tr>
<tr>
<td>New distribution formats for radio content</td>
<td>19</td>
</tr>
<tr>
<td>Digital radio</td>
<td>20</td>
</tr>
<tr>
<td><strong>Print news media: Challenges and responses</strong></td>
<td>22</td>
</tr>
<tr>
<td>Overview of challenges</td>
<td>22</td>
</tr>
<tr>
<td>Trends in online and offline newspaper readership</td>
<td>23</td>
</tr>
<tr>
<td>Strategies to increase revenues from online newspaper readership</td>
<td>25</td>
</tr>
<tr>
<td>Consumer willingness to pay</td>
<td>27</td>
</tr>
</tbody>
</table>
Introduction

This report is the last in a series of four research reports to be published under the ACMA’s communications report series. Other reports in this series include:

> Report 1—Australia in the digital economy: The shift to the online environment
> Report 2—Take-up and use of voice services by Australian consumers
> Report 3—Australian consumer satisfaction with communications services.

This suite of reports is designed to complement the ACMA Communications report 2009–10 which is produced in fulfilment of reporting obligations under section 105 of the Telecommunications Act 1997 (the Act). The Act requires the ACMA to report on the performance of carriers and carriage service providers with particular reference to consumer benefits, consumer satisfaction and quality of service.

These four reports also form part of the ACMA’s ongoing research and reporting program (Research at the ACMA: research program overview 2010–11), which is available on the ACMA website.

The communications report series seeks to inform ACMA stakeholders about convergence and the digital economy and their impact on communications and media services.

The term ‘digital economy’ covers the global network of economic and social activities that are enabled by digital information and communications technologies such as the internet, mobile and sensor networks.¹

As an evidence-based regulator, the ACMA has an interest in monitoring and understanding the developing digital economy and its impact on the industries that it regulates, particularly in relation to:

> regulating for the citizen in an IP-based media and communications environment where usage of voice over internet protocol (VoIP), mobile communications and the internet continues to grow, which in turn provides challenges for safeguards, such as access to the emergency call service and online security
> voice regulation, where continued growth in VoIP usage and the number of people identifying mobile phones as their main form of communication poses challenges when it comes to applying regulatory requirements that are based on traditional fixed-line voice services
> supporting consumers making informed decisions in an environment of ongoing network, device and service innovation
> regulating content in an environment where content is increasingly available on multiple platforms including the internet, mobile and traditional broadcasting networks.

This report presents an overview of some of the major challenges confronting the communications and media sector in Australia arising from the emerging digital economy and ongoing convergence of networks, services and consumer access devices.

This report also examines industry responses to these challenges both here in Australia and overseas.

¹ Department of Broadband, Communications and the Digital Economy, Australia’s Digital Economy: Future Direction, 14 July 2009.
The ACMA has prepared this report using a range of information and data including:

> ACMA data including the ACMA annual industry data request
> publicly available industry reports and media coverage of industry developments
> consumer survey data including Nielsen Online (relating to web traffic trends in Australia) and Roy Morgan Single Source in relation to changing newspaper readership.
Summary

The internet and digital communications more broadly, have empowered citizens and consumers by providing them with more flexibility in their use of voice and media services, enabling people to 'mix and match' services to suit their lifestyle needs.

The internet in particular has changed the way Australians communicate and access content, removing geographical barriers and allowing new forms of communications and information sharing to emerge, such as social networking and user generated content.

The internet has also presented challenges for many businesses in the traditional communications and media sectors because consumers can now access cheaper communications alternatives and more diverse content.

Challenges to established market operators have also emerged as a result of network and device convergence, which has facilitated the blurring of boundaries between communications and media services, allowing increasing cross-sectoral forays in terms of service provision.

In meeting these challenges, communications and media providers within Australia and globally are adopting a number of initiatives which seek to protect existing revenue streams and also enable diversification into other services.

Within the communications sector, these response strategies have typically tended to include:

- bundling of voice and content services, such as IPTV, to existing broadband subscribers
- expansion of data download quotas to broadband subscribers to facilitate increased consumption of data services
- more generous mobile caps and pricing packages to facilitate the development of the mobile content service market
- handset and handset application innovations, as evidenced by the emergence of the next generation of wireless devices such as smartphones
- offering further incentives to customers on the condition of retaining existing traditional fixed-line telephone service.

Within the broadcasting and print newspaper sectors—both faced with increased audience and readership fragmentation—these strategies have tended to focus on a number of initiatives including:

- development of online distribution channels to increase the profile of content and services in the face of growing online participation
- attempting to monetise content on the internet, through the introduction of pay-per view or subscription services to select 'premium' content
- meeting audience demand for flexibility in content viewing and content format—typified by the emergence of catch-up viewing formats
- development of video content specifically for the next generation of new consumer tools, such as smartphones and other wireless devices
- development of new content sources, where consumers are able to access a greater variety of content nationally and globally, such as with digital television, digital radio, IPTV and internet radio.

In addition, established communications and media players today are increasingly faced with new market entrants, which are able to draw on their market presence in a
particular sector to move into areas not traditionally in their domain. Companies such as Google are utilising market presence in their traditional areas of operation to package and provide a broader suite of services to customers. Voice and content services, for example, are an increasing part of these new service offerings. As consumers are presented with opportunities to bypass traditional communications and media options, additional pressure is likely to be placed on established revenue streams.
Fixed-line service providers: Challenges and responses

Overview of challenges

Operators of public switched telephone networks (PSTN) around the world are experiencing commercial challenges largely due to the following factors:

- increasing competition arising from market deregulation
- the declining cost of technology
- continuing technological innovation
- the convergence of networks and consumer devices.

Analysis of the PSTN market in Australia over recent years has shown falls in PSTN subscriber numbers, revenues and call volumes. This decline can be attributed to a number of factors including increased reliance on mobile telephony and bundling of alternative voice services such as VoIP to customers. Figure 1 provides an overview of the significant growth in mobile services (voice and data) since June 2000, contrasted against the steady but more gradual decline in fixed-line telephone services in Australia since 2004.

At June 2010, there were approximately 26 million mobile services (both voice and data) in operation in Australia, an increase of seven per cent since June 2009 and 225 per cent since June 2000. At the same time, there were approximately 10.59 million fixed-line telephone services in operation, a decline of one per cent since June 2010 and 9.5 per cent less than the peak number of fixed-line telephone services of 11.7 million at June 2004.

Recent growth in mobile services has been driven by the increasing take-up of mobile broadband services where customers are connected to the internet via a datacard or dongle connected to a computer. For example, at June 2010, there were approximately 3.5 million mobile broadband services in operation, an increase of 71 per cent since June 2009. The number of mobile telephone services increased by only one per cent in the same period (from 22.2 million to 22.5 million).

The growing importance of mobile networks is demonstrated by the financial results of Australia’s two largest telecommunications carriers, Telstra and Optus. Telstra reported that the number of its PSTN lines had decreased by 358,000 over the year to June 2010 and it estimated as many as 12 per cent of households are now ‘mobile only’ for voice, up from around eight per cent a year ago.

In 2008–09, Telstra’s financial results showed that for the first time, revenue from mobile services (mobile voice and data services combined) exceeded revenue from traditional PSTN services. This trend continued in 2009–10, with PSTN revenue declining by eight per cent ($504 million) and mobile revenue increasing by six per cent to reach $7.3 billion over the year. Optus also recorded strong growth in mobile service revenue, increasing by 11 per cent (reaching $1.42 billion).

---

2 ABS, 8153.0–Internet Activity, Australia, June 2010.
5 Telstra Corporation Limited, Financial Results for the Year ended 30 June 2010, 12 August 2010.
Figure 1 Number of fixed-line telephone and mobile services in operation

The decline in Telstra’s PSTN revenue base has largely been a result of alternative service offerings in the market and changing consumer voice-call behaviour, as evidenced by declines in PSTN services and call volumes (on local, national and international calls). The largest falls have been for local and national calls, with Telstra results showing these call types declined by 15 per cent and 10 per cent respectively over the 2009–10 reporting period. Conversely, Telstra indicated mobile voice minutes had increased by five per cent over the same period.7

Other factors affecting PSTN revenue

Increasing use of mobile services is not the only factor driving down PSTN revenue and connections. Other market developments include:

> providers investing in alternative infrastructure and networks such as local loop unbundling

> increased take-up of VoIP services as part of bundled broadband service offerings

> increased use of alternative communications including email, instant messaging, social networking and micro-blogging sites and applications.

Telstra’s competitors in the voice and internet service market have played an active role in pushing alternative voice services to customers through investment in communications infrastructure and the bundling of voice and data services to subscribers in order to expand their market share.

The development of alternative communications infrastructure is evidenced by the growth in local loop unbundling (unconditioned local loop – (ULL))8 which has continued to grow during 2009–10, increasing by 19 per cent.9 In addition, at June 2010, more than half of the internet service providers (ISPs) in operation in Australia were offering a fixed-line home voice connection as part of a bundled package.10

Source: The ACMA annual data request to industry.

---

8 Use of unconditioned communications over copper wire pairs between the boundary of a telecommunications network at a customer’s premises and a point of connection with a service provider usually other than the owner of the unconditioned network.
10 ABS, 8153.0–Internet Activity, Australia, June 2010, September 2010.
The development of alternative communications infrastructure, in conjunction with ISPs bundling VoIP services, has seen a significant surge in the use of VoIP-based voice services in Australia. The number of persons in Australia using a home VoIP service increased by 16 per cent during 2009–10, reaching an estimated 2.9 million persons aged 14 years and over at June 2010. Approximately 500,000 of these were estimated to be accessing VoIP services via a home phone, as an alternative to the traditional PSTN based voice service.11

Some of the VoIP providers listed on the Australian Securities Exchange have reported significant increases in their VoIP consumer base. For example, iiNet has reported an increase in its VoIP customers of 36 per cent over the 2009–10 period. At June 2010, iiNet reported having 163,100 VoIP subscribers compared to 120,000 at June 2009.12 New communications players entering the VoIP voice market are likely to boost VoIP usage over the coming years, particularly with the proposed rollout of the National Broadband Network and the shift of competition from infrastructure provision to services and customer applications.

Emerging voice service providers
Even outside established communications players, alternatives to traditional voice services are emerging, placing further pressure on traditional voice revenue streams. For example, global online search engine provider, Google, has used its overwhelming online market presence (approximately 121 million persons using Google services across the US, UK and Australia at June 2010) to launch a voice service, Google Voice, in the US market through its Gmail inbox service.13 This allows Gmail account holders to make calls from their computers to traditional telephones services. The bundling of voice and content services by online search engine players is evidence of the increasing cross-sectoral activity which is being enabled by network and service convergence. Google’s plans to launch the Google Voice service internationally have direct implications for the Australian voice market.14

Given the presently high numbers of Australians accessing Google services (9.6 million during June 2010 alone)15 and the increasing tendency for Australians to be users of multiple communications,16 it is likely that similar service offerings within Australia will attract considerable interest. ACMA research indicates that at November 2009, 18 per cent of adult internet users (persons aged 18 years and over) were estimated to use online communications (VoIP, instant messaging and social networking) as their main form of communications, while a further 16 per cent indicated they used online communications and voice communications equally—a potential feeder group for any expansion of the services offered by players such as Google.17

Strategies in defence of voice revenue
In response to these market developments and the decline in both PSTN connections and revenue, communications service providers are continuing to differentiate

---

13 Nielsen Online, June 2010.
15 Nielsen Online, June 2010.
16 Nielsen Online, June 2010.
17 ACMA-commissioned research, April 2010.
offerings by bundling fixed-line services with other communications services and by introducing innovative consumer access devices.

For example Telstra has launched two new products the T-Hub and the T-Box, both of which require a fixed-line telephone service. The T-Hub integrates smartphone functionality into the traditional home telephone and allows consumers to make voice calls, send SMS and access a range of internet sites. The T-Box is an online television service bundled with a fixed-line and broadband connection.

Optus is moving consumers from less profitable re-sale services to the Optus hybrid fibre coaxial (HFC) network, where 86 per cent of customers have a bundled product, and by providing services through ULL. The majority of Optus customers were on-net (own network) at June 2010.18

Other ULL providers are also bundling voice services with ADSL, with approximately a third of all ISPs offering a naked DSL19 service to customers at June 2010.20

Operators are also investing in mobile services by increasing network capacity and introducing competitively priced plans to reduce customer churn.21

19 Naked DSL is a digital subscriber line (DSL) without a PSTN (analog telephony) service—or the associated dial tone. A stand-alone DSL internet service is provided on the local loop.
20 ABS, 8153.0–Internet Activity, Australia, June 2010, September 2009.
21 When applied to a customer base, churn refers to the proportion of customers or subscribers who discontinue their service during a certain time period divided by the total number of subscribers. This rate of attrition is often associated with subscribers switching providers.
Mobile service providers: Challenges and responses

Overview of challenges
Mobile network operators, like their fixed-line telephone counterparts, are faced with declining returns on traditional mobile voice services. However, this has been a spur for further expansion into data and content services. Operators have sought to upgrade their networks and consumer access devices to support a growing array of mobile data and content services and changing consumer preferences (in terms of increased demand for mobility, reflecting changing lifestyle needs).

However, the challenge of shifting customers to higher-value data and content services remains a core focus, with the industry coming up with more innovative strategies to drive demand for these services.

To date, mobile operators appear to be making a successful transition to a broader service-based business model, with mobile data revenues bolstering mobile carrier bottom lines. It can be argued that the mobile sector in Australia is an example of a traditional communications sector successfully meeting the challenge of convergence, as it increasingly seeks to deliver triple-play services (voice, data and video) to customers.

As a consequence, and in contrast to the fixed-voice market, the mobile market continues to experience significant revenue growth, primarily driven by the increased use of data and mobile broadband services by consumers and businesses.

Over the past couple of years, mobile operators have also implemented a number of strategies to address the impacts on their bottom line from declining voice revenue, largely as a consequence of falls in unit prices for voice minutes. These strategies include:

- providing broadband internet access to mobile handsets and other customer devices such as laptops and smartphones
- introducing competitive capped plans with increased voice minutes and data allowances
- providing access to popular content and services on handsets
- increasing the coverage and capability of networks.

Increasing use of data services
One of the major drivers of revenue for the mobile sector during the 2009–10 reporting period was the increased demand for mobile data and mobile broadband services. As outlined earlier, the ACMA reports that at June 2010, there were 25.99 million mobile services (data and voice) in operation in Australia, up from the 24.22 million services in operation at June 2009, with net service growth largely a result of the provision of mobile wireless broadband internet services to customers through a dongle or datacard connected to a computer.22 In addition, continued handset innovation, in conjunction with increased mobile network capability, has enabled a rapid growth in handset internet applications. Research undertaken by the Australian Bureau of Statistics (ABS) indicates that at June 2010 there were approximately 6.8 million

---

22 The ACMA, ACMA Communications report 2009–10.
mobile handset internet subscribers in Australia, with 1.2 million of these on a dedicated data subscription.\textsuperscript{23}

Declines in mobile voice revenue have been offset by growth in mobile data service revenue. Financial results for 2009–10 show that all mobile operators have enjoyed significant increases in data revenue. Telstra recorded non-messaging data revenue (handheld devices) increases of 21 per cent,\textsuperscript{24} VHA reported data and non-voice service revenue increases of 43 per cent\textsuperscript{25} and Optus reported that mobile services were a key contributor to growth, with mobile revenue accounting for 63 per cent of total company total revenue during 2009–10.\textsuperscript{26}

As mentioned, most of the revenue increases during the past year were driven by increased subscriber spending on data, and this has increased as consumers upgrade to smartphones and other wireless devices. The traditional handset market appears effectively saturated and it is non-handset or smartphone devices which will drive growth in the mobile industry into the future. Industry analysts have also predicted that consumers will increasingly shift their online activities from traditional workstations and portable computers to an expanding array of next generation devices such as, iPhones, iPads and other types of smartphones.\textsuperscript{27}

Mobile operators are taking advantage of this demand for smartphones and have changed their mix of mobile devices to include a wider range of smartphones for consumers. To support the growing demand for data and smartphones, many operators have introduced competitive capped post-paid packages and regularly increase the included allowances for voice and data customers. These plans for smartphones, including iPhones and iPads, are competitive across providers and in comparison to traditional handset price plans.\textsuperscript{28}

Telstra has seen post-paid subscribers increase by seven per cent over the 2009–10 reporting period, while Optus reports that 90 per cent of new and recontracted post-paid customers select capped plans. The increase in the popularity of capped plans has had a dual effect on operators—a shift in the market share of pre-paid and post-paid services, and a reduction in overall voice revenues (even though mobile call minutes have increased).\textsuperscript{29}

ACMA research shows that approximately 39 per cent of mobile phone users in Australia aged 15 years and over were estimated to be on some form of mobile capped plan at April 2009, with 59 per cent of mobile capped-plan users adopting capped payment options as a result of perceived value for money.\textsuperscript{30} However, in an environment of increasing service complexity, capped plans have caused some confusion among consumers, both in terms of understanding what services and allowances are included under the capped plans and in managing usage within the caps in the face of additional charges where caps are exceeded. This is likely to be particularly relevant for data services, where the consumer awareness of data usage is often limited.

\textsuperscript{23} ABS, 8153.0–Internet Activity, Australia, June 2010, September 2010.
\textsuperscript{24} Telstra, Full Year 2010 Financial Results – CEO/CFO Analyst briefing, 12 August 2010.
\textsuperscript{25} Hutchison Telecom, Half Yearly Report and Accounts, 4 August 2010.
\textsuperscript{26} Singapore Telecommunications Limited And Subsidiary Companies, Management discussion and analysis of financial condition, results of operations and cash flows for the first quarter ended 30 June 2010, August 2010.
\textsuperscript{27} Miro Sandev, Communications Day, Issue 3847, 6 October 2010.
\textsuperscript{28} ExchangeDaily, No 261, 11 March 2010 and No 338, 02 July 2010.
\textsuperscript{29} Telstra, Full Year 2010 Financial Results – CEO/CFO Analyst briefing, 12 August 2010.
\textsuperscript{30} The ACMA, Mobile capped plans: Consumer attitudes and behaviours, May 2010.
ACMA research also shows that the majority of capped-plan users (approximately 58 per cent) exceeded their mobile cap at least once in a 12-month period, with many doing so frequently. In this context, any lack of transparency within mobile capped plans is an issue of concern, as customers may not know how many call minutes, texts and/or data they received for the specified cap amount nor how much of each allowance remains at any point in time during the capped period.

In the recent ACMA report, *Reconnecting the Customer public inquiry: Progress report* (released 9 December 2010), the issue of transparency of capped plans was identified as a key source of complaints by consumers, particularly with ‘soft’ caps. Several submitters reported that consumers were not made aware of higher call or data charges that are triggered when a capped plan is exceeded. This is potentially a significant barrier to building customer trust in future service innovations around capped plans.

Mobile operators are also diversifying their products, for example by offering customers free access to certain content on their mobile handsets. Australians are spending on average six hours and 52 minutes online accessing social networking sites each month. Applications and services which provide access to social networking sites via the mobile phone have become some of the most popular free content provided to customers. As well as providing unlimited access to social networking sites, operators have also launched applications to facilitate accessing social networking sites via handsets. Examples of these include Telstra’s Tribe application, which combines Facebook, Twitter and MySpace in a single location, and Optus’ Motoblur which streams social networking pages to a number of Motorola phones. Other content launched during the reporting period includes Vodafone’s Celebrity Charts and FanCards which provide celebrity and music news to mobile phones respectively.

All mobile network operators are increasing the capability of their networks. Optus has recently acquired 21MHz spectrum and both Telstra and Optus are trialling Long Term Evolution (LTE) technology. VHA is also increasing the coverage and capacity of its mobile network.

**Mobile applications**

Concurrent with the increased worldwide popularity of smartphones and tablet computers, the mobile application market has expanded rapidly, both in Australia and internationally. Research undertaken by Gartner, indicates that the number of mobile application downloads will grow from 2.5 million in 2009 to a predicted 21.6 million in 2013. While the majority of applications downloaded are currently free of charge, worldwide revenue from advertising, or goods sold and delivered through applications, is also increasing, and is forecast to rise by more than 700 per cent in the four years between 2009 ($4.2 million) and 2013 ($29.5 million).

---


32 Most caps currently available are better described as ‘soft caps’, where a minimum amount is paid for the services - usually each month. Many consumers exceed the service quotas for calls, text message and/or data downloads included under the monthly cap and do not fully appreciate the extent of extra charges that then accrue. Some providers do provide a ‘hard cap’, which is a maximum amount chargeable, unless the customer consents to exceeding that amount.


34 The ACMA, *Communications report, 2009–10*.


36 Gartner indicates that worldwide, 82 per cent of applications downloaded in 2010 were free of charge.

In Australia, a report by the Australian Interactive Media Industry Association (AIMIA) indicates that 41 per cent of Australian consumers had installed a mobile application and of those, more than half (56 per cent) had installed more than five apps in the previous six months. The most popular applications downloaded by Australians appear to be games (82 per cent of mobile application users), maps and navigation aids (73 per cent) and news and weather information (70 per cent). Fifty-two per cent of those who had downloaded applications had paid for at least one of those (most commonly games, accounting for 84 per cent of applications purchased by survey respondents).

The Australian banking sector has been quick to adapt their online transaction sites to the mobile format, providing free applications that simplify mobile banking. This has resulted in an increase in customer use of mobile banking applications, and growth in smartphone banking transaction levels. While mobile phone internet banking is still comparatively small compared to the total number of banking customers using internet banking in general, available figures appear to show that it is attracting a growing share of banking transactions in Australia. For example:
> mobile phone internet banking transactions were estimated to account for approximately nine per cent of all monthly online banking transactions for the Commonwealth Bank
> ten per cent of ANZ Bank customers were estimated to use smartphone internet banking services
> St George was reported to have approximately 150,000 active customers who used mobile banking, with these customers conducting more than 280,000 transactions on their mobile devices each month. Mobile phone internet banking customers are estimated to represent approximately six per cent of St George’s total customer base at June 2010.

For the Australian communications industry, the mobile application market presents an additional revenue stream for content providers, handset manufacturers and mobile phone service providers. AIMIA’s study shows that 51 per cent of mobile phone applications were downloaded from an application store related to their mobile manufacturer, while seven per cent were sourced directly from their service provider. Given that 38 per cent of those who had downloaded an application had paid $10 or more for a single application, and with additional earnings to be made from data traffic charges, the mobile application market has the potential to form a significant portion of service provider income as smartphones and tablet computers continue to grow in popularity.

---

40 Derived on the basis of St George reporting 2.7 million customers, see http://westpac2010.reportonline.com.au/aras/st_george_bank/
Internet service providers: Challenges and responses

Overview of challenges

Over the past few years, there has been a distinct change in take-up of internet services in Australia. ABS figures are suggesting that the DSL market is reaching maturity with only a two per cent increase in connections, compared to a significant increase in wireless broadband connections, which increased by 71 per cent in 2009–10. The number of broadband subscribers in Australia reached 8.77 million at June 2010, with market shares shifting significantly—44 per cent of connections being DSL and 36 per cent wireless broadband.41

With a maturing internet access market, the scope for revenue growth from the provision of access services alone is increasingly limited. Largely to increase subscribers numbers, and hence revenue, there has been significant consolidation of the Australian ISP market during the year. Major consolidations during this period have included the acquisition of Westnet, Netscape and AAPT by iiNet and the merger of Soul Telecom and TPG. Through consolidation, ISPs are able to increase their subscriber base, enabling them to utilise economies of scale required to expand into other service offerings, such as content services (IPTV), the provision of competitive alternative infrastructure, including naked DSL and other fixed and wireless voice services.

Service bundling42

Even with consolidation, there is still significant competition in the Australian ISP market and the commercial focus of many ISPs is to continue to reduce customer churn through service bundling and the provision of incentives to improve customer loyalty. The ABS reports that the main services bundled by ISPs at June 2010 (Figure 2) included:

> email content filtering services—offered by 76 per cent of ISPs
> voice services offered via either fixed-line telephone, mobile phone or VoIP—52 per cent, 34 per cent and 55 per cent respectively
> naked DSL—30 per cent
> content services, typified by the provision of subscription or IPTV—four per cent.

According to ACMA research, approximately 52 per cent of adult (persons 18 years and over) home fixed-line telephone consumers in Australia had a bundling arrangement with their communication service provider at April 2010, with typical bundling arrangements including voice and internet services. Fixed-line telephones were most popular service to be bundled, featuring in 95 per cent of bundling arrangements, followed by internet access at 84 per cent and mobile phone services at 48 per cent.43 However, while bundling arrangements are increasingly prevalent among users of communication services, the overarching strategy of many ISPs, like their mobile counterparts, appears to be to shift their customers to the consumption of higher-value content and data services.

41 ABS, 8153.0—Internet Activity, Australia, June 2010, September 2010.
42 Bundling is the practice of marketing two or more products in a single package with one price.
In addition to bundling, ISPs are also increasing the inherent value of their internet packages by introducing truly unlimited plans (rather than plans with ‘soft’ caps, where additional usage is charged at much higher rates) or by increasing data allowances. For example, in August 2010, a number of ISPs introduced much larger data limits (terabyte packages) to meet the increased demand for online content, such as live and catch-up television, music and online gaming.44

ISPs are also developing and offering various content components to their subscribers. Many ISPs are providing unmetered access to specific online content, for example access to iTunes content is unmetered by a number of ISPs and access to premium content, including IPTV services and catch-up television, is also offered by a number of ISPs. During 2009–10, Telstra launched its T-Box service, and the IPTV service, FetchTV was launched which is now offered by iiNet with other ISPs expected to follow to create the scale required to negotiate content with major content providers and owners.45

The provision of wireless broadband services is another avenue for ISPs to increase revenues. Over 2009–10, Market Clarity data shows that the number of ISPs offering wireless broadband has increased from 54 at June 2009 to 161 at June 2010.46 This equates to nearly a third of ISPs offering wireless broadband services, up from only eight per cent in June 2009. This market is likely to continue to grow as wireless networks are upgraded to support new content services.

---

46 Market Clarity Database, June 2010.
Television broadcasters: Challenges and responses

Overview of challenges

As with all media sectors heavily dependent on advertising revenue, the main challenge recently faced by the free-to-air commercial television sector appears to have been a considerable contraction in advertising expenditure, as a result of the decline in general economic conditions brought on by the global financial crisis (GFC). During 2009, free-to-air commercial television advertising expenditure in Australia declined by nearly eight per cent, the second biggest decline in advertising expenditure experienced across television, radio and print media.47

However, in an environment where Australians are watching about the same amount of television as they were five years ago (in 2004, daily viewing was three hours and seven minutes in metropolitan markets, compared with three hours and five minutes in 2009), commercial television broadcasters and public broadcasters have increasingly looked to other digital platforms, including the internet, to expand service offerings.48 This allows them to reach out to younger viewers who are more likely to access content service across multiple platforms and devices, and who are interested in accessing new content not presently available in Australia. In an environment largely dependent on advertising revenue and/or market share, the ability to retain the interest and attention of audiences is critically important.

Although there has been little change in television viewing hours, the choice for consumers in terms of content on television has increased significantly. Consumers are now able to access a wider variety of content through a number of new, digital television channels and via a number of emerging content platforms, such as the internet and mobile phones.

Increase in digital television content

Over the last year there has been a significant increase in the number of digital television channels on both free-to-air and subscription television.

The free-to-air broadcasters have increased their array of digital multi-channels with the launch of six digital-only channels. The ABC launched ABC2 and ABC3; SBS launched SBS2; Channel Nine launched GO!49 and GEM;50 Channel Ten launched ONE; and Channel Seven launched 7TWO.51 Channel 7 launched its third digital channel, 7mate at the end of September 2010, and Channel Ten launched its third digital channel, ELEVEN, on 11 January 2011.52

There have also been a number of new channels launched on subscription television. In November 2009, Foxtel launched Foxtel Next Generation which included a choice of

---

48 Free TV Australia, Your Free TV Australian Newsletter, 2009 Year in Review, November 2009.
30 new channels as well as new navigation features and new record functions. Austrar also launched a number of new high definition channels during the year. At June 2010, there were 2,700 subscription television licences in operation, up from 2,591 at June 2009.

**Launch of HD and PVRs**

Recognising the possible impact of the new free digital channels, Australian subscription television operators have focused on the promotion of their next generation personal video recorders (PVRs) and high definition (HD) channels to encourage existing customers to upgrade to higher value services.

Both subscription operators, Foxtel and Austrar, have reported strong growth in both PVRs and HD channels, with Foxtel reporting that more than 60 per cent of customers subscribed to its PVR service and more than a million to its HD service at the end of June 2010. Austrar also reported strong demand with over 26 per cent of customers subscribing to its PVR service, and 28 per cent of these also subscribing to the HD service.

With the increased take-up of PVRs and the availability of content on multiple platforms, pay TV providers are now innovating the way they advertise. For example, at the beginning of 2010, Foxtel launched its ‘green button’ which viewers can press during a program promotion if they want to record the program on their PVR without having to navigate away from the current program being viewed. This technology can be used by advertisers to offer bespoke interactive advertising opportunities.

**New content delivery platforms**

Australian broadcasters are also utilising new delivery platforms and devices such as the internet, mobile phones—particularly smartphones—and games consoles. These platforms allow operators to launch a range of value added services such as catch-up television, content on demand—and access to television guides. For example, Foxtel has launched a television guide application for iPhones which allows consumers to select and record programs remotely.

Broadcasters are increasingly utilising the internet to provide viewers with a large range of catch-up television offerings.

**ABC**

The ABC appears the most innovative to date with its catch-up television offerings through ABC iView which was launched in July 2008. iView offers selected content from ABC1, ABC2 and ABC3.

The ABC has also developed mobile phone applications offering services for mobiles, including Android, BlackBerry, iPhone and Java applications. It also has a purpose-built mobile website; [http://m.abc.net.au/](http://m.abc.net.au/) and an iPad application.

---

53 Foxtel media release; *FOXTEL Continues Earnings Momentum*, 12 August 2010.
56 Foxtel media release; *FOXTEL Continues Earnings Momentum*, 12 August 2010.
57 Austrar media release; *Austrar H1 2010 Results*, 29 July 2010.
SBS
SBS launched an iPhone application associated with its coverage of the Tour De France in July 2010 and also partnered with YouTube to set up a dedicated Tour de France YouTube channel, which featured specially produced content for the site.60

Commercial free-to-air
Commercial free-to-air broadcasters have also launched websites catering for catch-up television. In early 2010, Yahoo7 launched a new catch-up television website called PLUS7, which provides users with access to shows from Channel Seven and 7TWO.61 Channel Nine, through its partnership with ninemsn, launched a catch-up television website called FIXPlay which contains full-length episodes of programs shown on its channels,62 while Channel Ten also significantly enhanced its existing online offering by launching Watch TV.63 Channel Nine with its association with ninemsn, allows viewers to access Channel Nine programs on their Apple iPhone with the FIXTV application.64

Subscription television operators
Subscription television operators Austar and Foxtel also offer online catch-up services. Foxtel’s download service allows customers to download 600 hours per month of catch-up movies, shows and programs from 38 channels, while Austar’s Anywhere service allows subscribers to download full length programs online.

Broadcasters are also utilising mobile phones as a device for viewers to access content, with Foxtel providing ‘made-for-mobile-programs’ to Telstra mobile subscribers.65

User generated content
The broadcasters are also utilising user-generated content platforms, for example in June 2010, ninemsn announced the launch of a live user-generated content-integrated A Current Affair (ACA) website. The website streams a live broadcast of the program and offers interactive features such as user-generated message board providing a link between the show, the reporters and viewers.66

ISP content service offerings
Potential competition for broadcasters does not only come from traditional television broadcasting licensees. During the year, ISPs have entered the market through either set top boxes (for example Telstra’s T-Box service) and FetchTV, which is offered by a number of ISPs including iiNet and Internode or through PC based services such as TPG IPTV service.

In addition, mobile operators have launched television content on handsets, particularly smartphones, and hardware manufacturers have entered the market with products such as Sony’s BRAVIA internet video. These providers, in some cases, are partnering with broadcasters such as the ABC in an effort to access content. Yahoo7

---

also announced a partnership with Sony Computer Entertainment Australia for catch-up television to be accessed directly through the PlayStation®3 (PS3™) console, allowing viewers access to ABC iView and Yahoo7’s PLUS7. The device also allows viewers to watch, pause and record free-to-air HD television.\footnote{Seven Corporate media release, \textit{PlayStation says Yahoo7 for more Catch-Up TV Entertainment}, 18 August 2010, \url{www.sevencorporate.com.au/default.aspx?page=mediareleases&year=2010&month=8}.}

With content becoming increasingly available through these emerging platforms, consumers are downloading more data, which can be costly. However, many ISPs are now increasing the data limits of their plans, making it a more viable and attractive proposition for consumers to access content on these platforms.
Radio broadcasters: Challenges and responses

Overview of challenges
Traditionally, the radio broadcasting sector in Australia has not featured as prominently in the discussion of convergence and the transition to a digital economy. This is because the impact on this sector may have been less pronounced to date than it has been on communication, television broadcasting or the print media.

However, the main challenge faced by the commercial radio sector, like the commercial television and print media sectors, has been the decline in general economic conditions as a result of the GFC and the consequent contraction in business confidence and reduction in advertising expenditure both in Australia and globally. During 2009, commercial radio revenue in Australia was estimated to have declined by approximately six per cent.68 However, the radio sector has also recognised the opportunity for the delivery of audio content across multiple platforms and devices to meet changing consumer preferences for media consumption, particularly among younger Australians who are increasingly utilising a wide range of wireless devices and accessing video and audio content online.

New distribution formats for radio content
The availability of new technologies and audio formats has led to changes in the way people consume audio content and in turn is acting as a stimulus to the development of new business models and opportunities for the radio and music industry. This year has seen a number of developments that have led to changes in the way Australians receive radio content including online streaming, podcasting of radio programs and the launch of digital radio.

Developments in transmission devices have also led to changes in the way Australians access radio content with radio now accessible via smartphones, MP3 players and desktop and laptop computers.

Mobile phones, particularly smartphones with special applications, have changed the way people listen to the radio with access to analog FM radio now available on most 3G mobile handsets. There are also a number of mobile phone applications offered to smartphone internet users that allow listeners access to radio content via their mobile handsets.

Commercial radio stations such as Mix, TodayFM and Triple M, offer iPhone applications that allow users to access radio broadcasts, view titles of songs played and upcoming songs scheduled to be played on the station. In 2009, ABC launched an application linked to its Unearthed radio program that allows users to stream, download, add to playlists and share music on social networking sites and via email.69 The ABC also offers mobile phone applications for a number of other ABC radio programs.

Examples of generic radio mobile applications available to listeners include:

---

RadioTime, which is available on all smartphones, including Google’s Android phone. According to RadioTime, it is the world’s largest and most complete radio guide offering stations from all over the world.70

AOL (formerly known as American Online) Radio, allows users to access more than 200 radio stations.71

Tuner Internet Radio gives iPhone users access to radio stations.72

Nobex Radio Companion, available to Blackberry and Palm users and gives listeners access to radio stations within the US. A premium subscription allows users to access international radio stations with no advertising.73

Commercial and national radio broadcasters in Australia offer online tools for listeners as well. Most stations offer online users rebroadcast content on their websites, allowing listeners to download content and stream live feeds of radio programs, podcasts. The ABC Radio’s Dig FM is currently the only radio station which utilises new technologies in its broadcast of radio content. The station is both a digital and online station.

Currently there are no Australian radio stations that are purely online. However, there are international examples of dedicated online radio stations such as Last.fm, AccuRadio and radioio. These online stations offer listener’s on-demand, full-length music to download.

The internet also allows listeners to customise their radio experience by allowing the creation of personal playlists to suit individual music preferences. Online radio stations such as play.it allow listeners to customise their music listening. play.it is a radio tool provided by CBS that allows listeners to access more than 140 of CBS Radio’s terrestrial and 20 internet-only radio stations, more than 200 of AOL’s radio stations, and stations listeners have created for themselves.74

Monetisation of radio content is an issue facing the radio and music industry. The radio industry may need to move to subscription-based models, on-demand delivery, and advertising to maximise returns from new formats. Australian radio stations have not yet moved to subscription-based models. Examples of international online subscription radio services include National Football League (NFL) Audio Pass, which is an internet radio subscription service provided by the NFL for live and archived audio broadcasts of NFL games throughout the regular season and playoffs. Payment to access the service is made monthly or per season.75 Internet radio site Last.fm charges a monthly subscription fee for listeners outside the US, UK and Germany to access radio content on the website.76

Digital radio

The introduction of digital radio in Australia in July 2009 in the five state metropolitan capitals resulted in 16 new DAB+ only stations. Radio stations are also broadcasting their analog stations on DAB+, with more than 65 stations on the DAB+ platform across the five states.77

---

71 See http://radio.com/mobile/.
74 See http://play.it.
75 See https://audiopass.nfl.com/nflap/secure/registerform.
76 See www.last.fm/help/faq.
Digital radio provides Australians with new radio broadcast programs not offered on analog radio, high-definition broadcasting of some analog programs and features like program guides and the ability to pause and rewind. According to data released by Digital Radio Plus, time spent listening on DAB+ digital radio platforms in Australia was eight hours and 16 minutes in an average week. Online radio listeners spent an average of five hours and 31 minutes per week listening to online radio. However, the majority of radio listening is still undertaken via traditional analog AM/FM services (Figure 3).

Figure 3 Average time per week spent listening to the radio, by technology type


---

Print news media: Challenges and responses

Overview of challenges

The rapid growth of new digital media and the widespread availability of free news content on the internet, in conjunction with changing consumer patterns of behaviour in how news content is accessed, are evidence of the increasing fragmentation of the news and information market both in Australia and globally.

Consumers in Australia are increasingly opting to access news and information across multiple technologies and devices and from a variety of sources—established news channels (television, radio and print), online specialist news sites, news aggregation services offered by search engine providers such as Google, or informal sources such as citizen journalists distributing content via online social network channels.

Collectively, these developments are sources of growing pressure on traditional print-based news models heavily dependent on the sale of advertising space.

In Australia, and in other international markets such as the United States (US), the internet has seemingly eclipsed both newspapers and radio in terms of how people access their daily news, with the internet just behind mainstream television news sources. In the US, for example, recent research by the Pew Internet & American Life Project shows that 92 per cent of Americans use multiple platforms to access news content on a ‘typical day’, including national and local television, the internet, radio, and local and national newspapers. Pew reports that the internet is now the third most popular source of news in the US behind local and national television news.79

In Australia, approximately six million Australians in any given month accessed news online from the mainstream online new sites, such as the ABC, ninemsn, news.com.au, free of charge.80 The level of patronage of online news in Australia increases when other less-established news sources, such as social networking channels and non-specialist news and information sites, are factored in. In addition, a number of studies conducted in Australia reflect the growing importance of online news to Australians and declining importance of traditional newspapers.

Previous ACMA research shows that the 27 per cent of adult internet users in Australia identified the internet as their most trusted source of news and information, in comparison to 20 per cent for newspapers, 17 per cent for television and 12 per cent of internet users identifying the radio as their most trusted source of news and information.81 More recent research, undertaken as part of the Australian component of the World Internet Project, shows that only 39 per cent of adult internet users in Australia described newspapers as an important or very important source of information, compared to 34 per cent describing them as somewhat important and 27 per cent describing them as not important.82

The obvious attraction of the internet as a source of news information (and other content) is its ability, given network and service provider constraints, to provide almost

80 Nielsen Online, June 2010.
instantaneous access to updated news on a ‘24/7’ basis, at no direct cost, regardless of the location of the source of news. This is a highly pervasive business model to overcome for traditional providers of paid offline news content services, such as newspapers, with their entrenched operating costs. The internet has underpinned a change in attitudes to traditional sources of news, particularly among the more technologically literate younger segments of the population who are seemingly less inclined to identify with traditional print news media than previous generations.

In addition, the role of search engine services in aggregating content (including news content) free of charge to internet users has also been called into question by some players in the news market. These players have publicly identified search engine service providers, such as Google, as major threats to news publishers, due to their ability to aggregate content from news websites.\(^3\)

More recently, the impact of these trends has been reinforced by the slump in general economic conditions brought on by the GFC, which saw a fall in business confidence and expenditure on print and other forms of advertising during 2009. As a result of the GFC, advertising in Australian newspapers declined by just over 14 per cent during 2009. At the same time, there was a general decline in the circulation (as represented by sales of newspapers) of major metropolitan and national newspapers in Australia of three per cent (compared to a two per cent decline in 2008).\(^4\)

**Trends in online and offline newspaper readership**

The circulation of major metropolitan and national newspapers in Australia declined in 2009, with the average daily circulation falling from 2.5 million in 2008 to 2.45 million in 2009.\(^5\) Data from Roy Morgan Single Source also indicates there has been a decrease in the number of Australians reading print newspapers, which includes weekday, weekend and community publications.

Data shows that there has been a decrease in terms of offline weekly newspaper readership by internet users in Australia from 91 per cent of internet users during 2007–08 to 87 per cent during 2009–10. Other major findings from the Roy Morgan Single Source data include:

> readership of weekday newspapers decreased from 60 per cent of internet users in 2007–08 to 53 per cent in 2009–10

> readership of any weekend or weekly newspaper decreased from 71 per cent of internet users in 2007–08 to 64 per cent in 2009–10.

In conjunction with the decrease in newspaper readership, there has been a slight increase in the number of internet users accessing news online, from 12 per cent in 2007–08 to 15 per cent in 2009–10.

Figures 4 and Figure 5 show that internet users recorded a clearer pattern of decreasing readership than non-internet users.

---


Figure 4 Levels of newspapers readership and internet access to news of internet users


Figure 5 Levels of newspapers readership of non-internet users


Data relating to Australian web traffic trends (Figure 6) also reflects the significant number of Australians accessing the main online broadsheets. News and information is one of the top online content categories accessed by internet users in Australia. During June 2010 alone, approximately 6.1 million Australians were estimated to have gone online to access news and current affairs sites from home. The number of Australians accessing the sites identified in Figure 6 ranged from 748,000 persons accessing The Australian newspaper online to 1.7 million accessing ninemsn Nine.
News. In addition, a further 809,000 Australians went offshore and accessed the BBC online during June 2010, demonstrating the potential for the internet to internationalise news and media markets.

Figure 6 Online news sites accessed in Australia during June 2010

Note: Relates to home broadband internet users, two years and over.
Source: Nielsen Online, June 2010.

Strategies to increase revenues from online newspaper readership

The internet has changed the way people access and obtain news content. According to the OECD, internet users across OECD countries reported a large increase in reading online newspapers, with most online readership being more sporadic than traditional print readership. The OECD research also showed that readers of online news tended to obtain news from different sources, mixing and compiling information.86

The declining readership of print newspapers has had an impact on the revenue of the major media companies. In response, publishers are experimenting with new online business approaches to increase revenue flows from the growing traffic to their sites. These tend to centre on the introduction of ‘wall gardens’ were subscriptions and value-added services are offered to content such as restricted access pages and archive services.87

Currently most Australian publications offer free internet access to online news. Fairfax’s The Australian Financial Review is the only Australian print newspaper that offers a subscription to its online publication and is based on a premium content subscription model. Internationally, News Limited’s The Wall Street Journal, one of the

---

87 A walled garden refers to restricted or exclusive content or information provided to users typically on a subscription basis.
world's most popular online subscription newspapers, is estimated to have 1.1 million paying online subscribers.88

Pay-per-view is another way print newspapers have monetised content online. The shift to pay-per-view was announced in 2009 by News Limited Chief Executive Rupert Murdoch and coincided with the announcement of a loss of US$3.4 billion by News Limited. News Limited's The Australian, has developed a freemium model where basic content is free while paying subscribers can access premium content and access to the full-length article.89

The concept of value-added services such as newspaper archives is another way publishers have monetised content. Fairfax provides a service called the News Store which offers searches of Fairfax publications including The Sydney Morning Herald, The Age, Illawarra Mercury, Central Coast Herald and the Newcastle Herald from 1990 to the present for free with a charge applying to view the full-length article.90

Newspaper websites also offer products such as photographs for sale. Fairfax, for example has a site that enables people to purchase photographs from The Sydney Morning Herald, The Age and the Australian Financial Review.91

Devices such as smartphones, e-readers and the iPad, have also led to developments in how people access news. All of Fairfax's major metropolitan newspapers have a mobile application which allows users to access breaking news on their mobile phones. In 2010, Rupert Murdoch announced that the introduction of the Apple iPad would also assist in the pay-per-view model, saying it was a device that would assist in the development of pay walls.92

Commentators have also highlighted that the strength of an application-only based news distribution model is that it will potentially enable greater control of the publication and distribution of news and other content. This places an application-only based news distribution model more in the realm of the traditional newspaper distribution model with rights of access and use limited to the purchaser. The added benefit of this model is that it reduces the capacity to share news content to large numbers of people. At the same time—if this model is adopted—it potentially removes news content from the visibility of internet search engine providers.93

In terms of the present level of consumer adoption of applications based new services in Australia, Nick Leeder, deputy CEO of The Australian, announced in August 2010 that 8,500 people paid $4.99 each in the first month to subscribe to The Australian's iPad application.94

91 See www.fairfaxphotos.com.
93 Gordon Farrer, Murdoch's search for an answer to content theft, The Age, 29 November 2010.
Consumer willingness to pay

The future success of any user pays strategy for online news content is heavily dependent on consumers’ willingness to pay for online news formerly accessed for free and mass adoption of these services. However, on the basis of available evidence relating to Australia, the majority of adult internet users have not demonstrated a willingness to date to pay to access news online.

According to the study CCi Digital Futures 2010: The Internet in Australia, 71 per cent of internet users in Australia aged 18 years and over would not be prepared to pay to read a newspaper online, while just seven per cent reported they would be willing to pay the current price of a newspaper.95 Furthermore, research undertaken by the OECD shows that while online newspaper readership in OECD countries has been historically high, ranging from 77 per cent of internet users in South Korea to 17 per cent in Ireland during 2008 alone, the willingness to pay for online news remained consistently low across OECD countries included in the study.96

While this may change if free online news content is restricted, the likelihood of such a development occurring needs to be considered in the context of major global news players, such as the BBC’s global news service and domestic national and regional news providers such as the ABC within Australia, remaining committed to the provision of free access to online news services and the expansion of those services to take into account emerging digital platforms and consumer devices.

The fact remains that, as Australians are enjoying ever increasing access to diverse sources of news, the traditional newspaper business model will continue to be adversely affected by declining print circulations particularly among younger readers, the shift to classified advertising on the internet, the rise of low-cost alternative online news outlets and citizen journalism, blogging and self-publishing, and changes in the way consumers access news content and relate to traditional print news brands.97

95 Scott Ewing and Julian Thomas, CCi Digital Futures 2010: The Internet in Australia, May 2010.