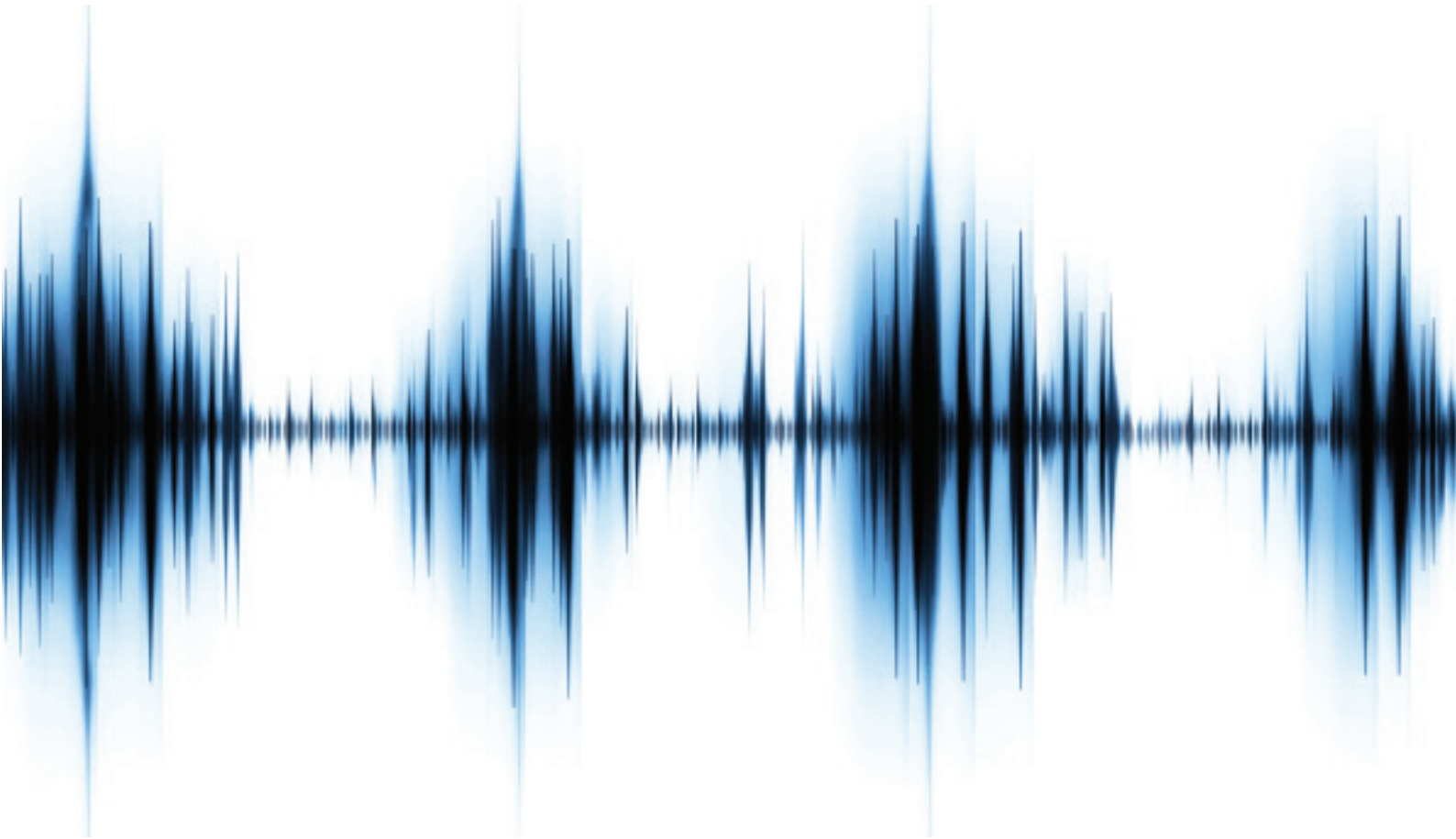
White Noise

An overview of current issues facing the Australian communications sector



Baker & McKenzie

Foreword

Welcome to the inaugural edition of *White Noise: an overview of current issues facing the Australian communications sector.*

The Australian communications sector is moving through a time of major change. Over the last few years, we have seen fundamental shifts in retail demand and consumption habits. We believe these trends will continue and intensify throughout 2013 and 2014. The outcome of the recent Federal election may also result in major changes to Australia's national broadband network project. This project will have a significant and ongoing impact on the shape of the communications industry in Australia.

In these changing times, this work is intended to produce a single, concise and accessible snapshot of the key trends in the near to medium term. We include analysis of both the macro consumer and commercial pressures as well as an overview of key legal and regulatory developments.

Once we started this first edition, we quickly realised we had more than enough material to fill several volumes. To keep true to our original objective, we have focused on what we perceive as macro issues and trends, while acknowledging there is much important detail and nuance that space does not permit to be fully examined.

We hope it is of use to both those within the industry and those working with it. We welcome feedback and suggestions, which we will endeavour to include in the next edition.

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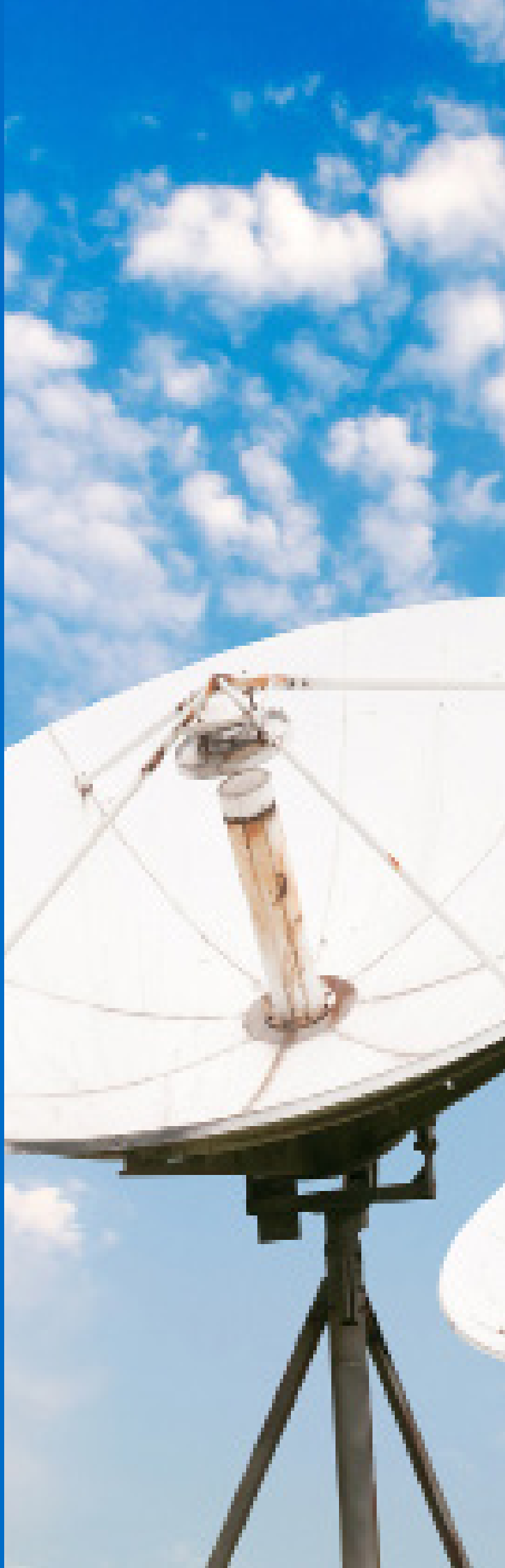


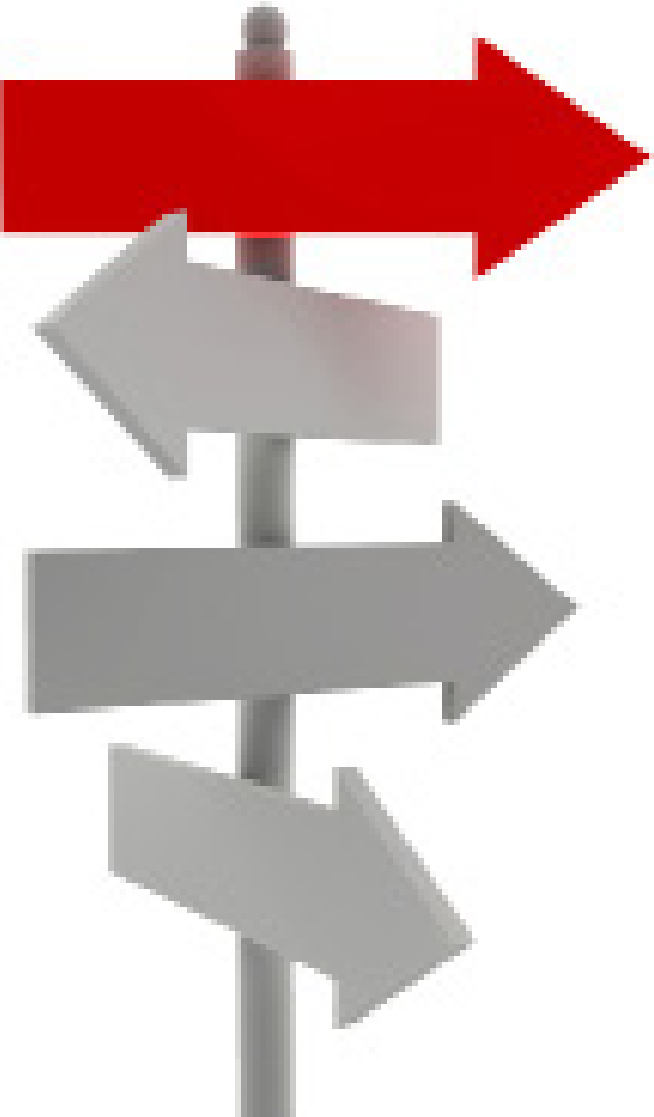
Introduction: The communications industry is at a crossroads.

The communications industry is both mature and concentrated, with three or four scale competitors dominating market share and revenues. In the mobile space, market shares are established. As a result, we may expect to see previously aggressive price offerings normalise over the near term.[1] However, in the lower end of the mobile market (for example, the pre-paid mobile market), continuing strong price competition is expected.

At the same time, government regulation and policy is having a profound impact on the industry, including the fixed line and ISP markets. A key part of the former Labor government's communications policy is the National Broadband Network (NBN). The ongoing shape of this project is likely to change significantly as a result of the Federal election in September 2013. This project is affecting the behaviour of market participants. For example, in anticipation of the NBN rollout, players are positioning themselves to capture market share and scale to remain competitive. However, the ongoing shape of this project is likely to change significantly following the outcome of the recent election (September 2013). The NBN also has other equally important effects on the industry.

Overall, we see several broad, macro trends affecting the communications sector that have developed over the past few years. These include the following:

- Rapid take-up and market penetration of converged devices such as smartphones and tablets, offering mobile content and data services. This has resulted in strong growth in demand for fixed and mobile data services. Consumers demand the "data cocoon", whereby the user is enfolded in and constantly connected with "always on" data services.
- This has exacerbated the long-term decline in fixed-line (PSTN) voice services and calling volumes. For fixed-line operators, this has been partly offset by an increase in fixed-line broadband connections and revenues.
- However, due to the intensifying competition and generally poor macroeconomic conditions, wireless revenue growth has slowed or, in some cases, declined in recent times.



- Cloud computing is a continuing and significant growth area. The uptake of cloud computing will increase as broadband penetration increases and the NBN comes online.
- The proliferation of small cells (microcell) networks that carry the increase in data traffic, will ease the load on cellular networks.
- Finally, there has been an ongoing rationalisation and streamlining of distribution networks and branding, which we see as crucial to remaining competitive in this environment.

Key trends for the next 12 months

We believe these trends are likely to continue in the near term.

In particular, growth in consumer demand for services and applications is likely to accelerate over the coming period, both in the fixed and wireless markets. Simultaneously, carriage services and consumer devices will continue to converge, while applications and data move into the cloud.

Moving forward, quality of service, branding and distribution strategies will become key, as operators seek to highlight points of differentiation in a saturated market. Ongoing shifts in consumer demand and government intervention will also rapidly shift the competitive landscape over the near term. Service providers are expected to have a strong focus on customer retention strategies.

Developments over the near term will be heavily influenced by the outcome of the recent Federal election, and include the following:

Chapter	Key issue	Anticipated market trends
Regulatory Reform (Chapter 2)	Macro regulatory reforms	■ A range of significant policy issues associated with network security remain under consideration and may still be the subject of government action following the election. These include data retention by carriers and Internet service providers, web mail interception and access issues, positive reform and consolidation of lawful interception powers, and mandatory rules regarding local information infrastructure in light of cybersecurity concerns. ■ Amendments to the Privacy Act will become law in 2014. Those changes substantially expand the coverage of the Act and generally impose a much more extensive and onerous privacy regime on the industry. ■ Under the revised Telecommunications Consumer Protection Code C628:2012, service providers have a range of new and expanded obligations that apply to their dealings with consumers.
The NBN (Chapter 3)	Market consolidation	Consolidation of the telecommunications carrier market that took place in 2012 is likely to continue in 2013-2014 as smaller organisations look for scale in the face of the NBN rollout.
	Aggregation	We expect fierce competition to develop in the aggregation market, in which larger operators will resupply NBN-based services to new entrants. During the initial stages of market development, we expect this competition to be expressed through innovative price and service offerings amongst the aggregators.
	New entrants	In the early stages of the NBN, we believe new entrants will attempt to gain market share with fresh NBN-based offerings. This will likely include organisations with an established brand and distribution base but who are not currently operating in the telecommunications industry. However, over the long term, we envisage an oligopolistic retail market emerging with market shares concentrated amongst those operators most successful in managing their cost base, branding and distribution strategies.

Chapter	Key issue	Anticipated market trends
Competition (Chapter 4)	Fixed broadband	Carriers will continue to battle for market share through aggressive price and service offerings (including content). This will become particularly intense during the initial rollout of the NBN. Fixed-line carriers and service providers will see their margins affected as Telstra's ubiquitous copper is migrated to the NBN network. Data margins may erode as a result of this competition. We believe it may take some time for this market to stabilise.
	The cloud	The accelerating flow of business and personal data into the cloud will continue. As cloud-based offerings increase and offshore cloud operators continue to expand operations in the Australian market, competition will increase and service providers will experience more challenging market conditions.
	Long haul transmission	We see a renewed interest in both domestic and international long-haul transmission assets over the near term.
	Mobile	The demand for mobile data services will intensify as will competition in this space. This will include demand for high-volume-low-revenue, machine-to-machine services (for example, tracking devices). The digital dividend spectrum auction earlier in 2013 was a key event for the industry. Notwithstanding their need for 4G-capable spectrum, some carriers did not purchase the maximum allotment and others, like Vodafone, chose to rely on their existing spectrum holdings and technology upgrades.
	Branding and distribution strategy	We believe participants will aggressively work to ensure their distribution networks are effective and streamlined.
Business trends (Chapter 5)	M&A activity	We expect to see further market consolidation (including through mergers and acquisitions), as service providers seek to achieve scale and vertical integration. We believe only scale participants will be able to compete effectively at a national level in a NBN world.
	New revenue streams	Businesses will continue to attempt to generate new sources of revenue. In particular, carriers and service providers will continue to create new revenue streams by selling premium products (for example, service applications).

We explain, in more detail below, some of the macro trends affecting the industry in the near-to-medium term.

The great data thirst

The communications industry has conventionally been structured into distinct delivery platforms. Carriers and broadcasters operated separate, siloed networks and technologies for fixed and mobile voice services, data and media services.

In recent years, this model has come under significant pressure. Together with cost pressures, competition has forced service providers to transform their business models to create new revenue streams and reduce costs. At the same time, technological developments have made transmission facilities increasingly interchangeable and created innovative services using existing infrastructure.

As a result, once-distinct devices (such as televisions, mobile phones and computers) and platforms (such as fixed and mobile data services) are converging so as to support non-traditional services and applications.[2]

The increased accessibility and portability of these devices has fuelled the seemingly inexhaustible demand for communication services, particularly in the mobile space and fixed-line broadband (supporting Wi-Fi) connections. This has resulted in near-constant growth in fixed and wireless data services, while at the same time voice revenues (particularly fixed or PSTN) are flat or declining.

However, while demand continues to grow in this sector, a highly competitive environment and general macroeconomic conditions have placed downward pressure on margins.

We see these trends as placing significant capacity pressure on three key aspects of traditional infrastructure, namely:

- local access networks, such as the fixed line and wireless data services;
- storage capacity for the huge amounts of data being generated, which is now forcing its way into the cloud; and
- available transmission capacity for this data, particularly terrestrial and undersea cable projects.

Taking each of these in turn.

Local Access Networks

Both fixed and wireless access networks are coming under strain as data usage rates soar. The Australian copper local access network (PSTN), owned and operated by Telstra, is ageing and is not designed for use as broadband infrastructure.

The NBN

Under the former Labor government's model, NBN Co intended to to replace the PSTN with the NBN. Although this network is described as "national," it was designed to be a collection of 121 local access networks and smaller fixed wireless and satellite networks. If it proceeds in its current form, this government-funded project essentially amounts to a renationalisation and (largely) a replacement of the existing Telstra copper network with fibre optic cable to the premises.

This was intended to occur through Telstra decommissioning the existing "last mile" networks and the introduction of a high-speed fixed, FTTP network. Existing fixed-line carriers would no longer compete by selling service over the Telstra copper network, but instead would resell services over the NBN.

After several years of regulatory activity, the former government's legal and regulatory framework for the NBN is largely in place. One key piece that remains unsettled is NBN's special access undertaking (SAU), an undertaking covering a range of key issues including terms of access, regulatory oversight and NBN Co's ability to increase prices. The latest SAU has been rejected by the ACCC and the ACCC has announced its intention to issue a formal variation notice to NBN Co in early August 2013 (this is further discussed in Chapter 3).

Legal Corner

Carrier Licensing

The Telecommunications Act requires persons who supply carriage services to the public using a network unit (such as a local access network), to hold a carrier licence. The ACMA has granted a few hundred carrier licences to carriers including Telstra, Vodafone and Optus, and about 200 of these licences are currently active.[3]

Persons who operate or resell carriage services over network units (that is, service providers) must adhere to the service provider rules in the telecommunications legislation. See Chapter 2.

In September 2013, the former Labor government lost office and a Coalition government was installed. The Coalition came to power with a broadband plan (announced in April 2013) which will make significant changes to the NBN technology deployed and the regulatory framework. The Coalition's plan starts with a review of the cost benefit of the proposed deployment.

Key elements of the new government's plan include deployment of fibre to the curb (not the home) and removal of the prohibition on delivery of competitive services. We discuss the NBN project further in Chapter 3.

Wireless and Public Wi-Fi

Depending on how it is now implemented, the NBN will solve many of the capacity constraints which currently exist in the existing copper networks that have (by necessity) been pressed into service as data connections. However, this is unlikely to slow the demand for wireless data, which also continues to grow at a rapid rate.

Until the recent spectrum auctions, national wireless carriers were spectrum constrained, particularly in relation to the spectrum necessary for the latest 4G technology. In Chapter 5, we describe in more detail the spectrum auctions held in April-May 2013, in which Telstra, Optus and TPG acquired substantial spectrum holdings with national coverage.

Because available spectrum is limited and finite, carriers must either acquire more spectrum, or find nontraditional ways to deploy mobile infrastructure more effectively. One way to achieve this is to deploy base stations on a shared basis (such as through the Optus-Vodafone 3G infrastructure joint venture). Another alternative is to deploy public Wi-Fi networks. Wi-Fi networks use small cell radio technology, with lower range and capacity capabilities than a traditional cellular network.

These networks have been available for some time in commercial environments and public areas such as airports and shopping centres. Deployment of public access networks will continue to expand with many users relying on intermittent access to public access points as a substitute for more expensive mobile services.

Technical Corner

What is Wi-Fi network?

A typical Public Wi-Fi network architecture consists of one or more wireless access points, usually connected to a fixed data circuit.
Wi-Fi can be open or closed, in which case the user must provide authentication such as a password. Public Wi-Fi networks generally operate on the IEEE 802.11 specification.

As discussed in Chapter 5, a key factor affecting mobile device revenue growth will be cost-effective access to spectrum.

Cloud Computing

The increased demand

for "always on" data services has led to a boom in the data centre services industry. We have seen a persistent trend towards shifting data and applications into remote storage, which continues to accelerate today. As a result, the cloud computing industry is in a significant expansive phase.[4]

This growth is anticipated to continue as new products come online in the next few years and data transfer rates grow. The sheer amount of data now being stored requires professional external storage providers. For example, the NSW government has recently awarded a major data outsourcing agreement to Metronode, under which that company will take control of data previously stored in many different locations.

Similarly, companies including Hewlett Packard, Dell, Amazon, Equinix, Telstra, Nextgen/ Metronode and NextDC have all recently announced plans to build new data centres in Australia. As a result, benchmark profitability is projected to increase.[5]

As the market grows and matures, we expect to see consolidation and potentially other corporate activity (such as IPOs), as participants seek to acquire scale.

Data security and latency concerns are generally considered as being the main risk factors with using cloud services. Relevantly, recent privacy reform to take effect in 2014 has increased the penalties for the misuse of personal information including fines of up to A$1.7 million for serious and repeated privacy breaches by corporations. The ongoing challenge for the industry will be to address and mitigate these concerns, particularly in relation to sensitive sectors such as health, finance and government.

Technical Corner

Cloud Delivery Models

Cloud delivery models include the following, or a combination of them:[6]

- Public cloud - where customers use cloud infrastructure which is shared via the internet with the public. It provides a cost efficient service but contains fundamental data security risks.
- Private cloud - customers are given exclusive use of identified infrastructure and services, with reduced potential for cost savings compared to the public cloud model but offers customized service and potentially increases security.
- Community cloud - involves a private cloud that is shared by several customers with similar requirements (e.g. various agencies of the same government.

Transmission Capacity Growth

Finally, the consumer trends mentioned above have also increased demand for high speed, low latency domestic and international data transfer services. As the world's largest island, Australia has an ongoing requirement for sustainable undersea cable projects. These cables carry the bulk of the nation's domestic voice and data traffic.

Existing operators continue to focus on upgrading and enhancing existing cables. At the same time, there has been a renewed emphasis on new cable projects linking Australia to Southeast Asia and within Asia.

As a result, there have been a number of new projects announced in recent times. These include the Australia-Singapore Cable project (sponsored by Nextgen); the "APX East" and "APX West" projects by SubPartners (a consortium involving Mr Bevan Slattery); the Tasman Global Access project jointly sponsored by Vodafone, Telstra and Telecom NZ and, most recently, the Trident Consortium project.

Historically, undersea cables were operated by a consortium of carriers with the off-take (transmission capacity) supplied back to the venturers. By contrast, it is now common to see private investment models, under which entities with construction expertise will obtain private funding to construct the cable and once constructed, sell cable capacity to carriers and business.

In most cases, the key to the success (or failure) of these new projects is funding and, in particular, obtaining pre-construction commitment from carriers to purchase capacity. This can be challenging as carriers are generally reluctant to provide the necessary capital without a guarantee that the cable will be built. In addition, at an operational level, regulatory and compliance issues can also be considerable. Undersea cables require various permits, licences and consents, all of which are time-consuming and generally delay construction and increase costs.

Despite these issues, we expect interest in submarine cables to continue into the near term, as data traffic across both fixed and wireless networks increase.

Regulation of Communications

It is against this context that the Australian communications industry is regulated. We explore the regulatory framework further in Chapter 2.

Legal/technical Corner

Some of the many project issues and challenges with submarine cable projects include the following:

Construction issues

The design, installation and supply of undersea cabling is complex and requires highly specialised skills. Accordingly, the market to provide these services is small and concentrated.

Regulatory and compliance issues

- Landing permits and consents: Undersea cables are typically laid through international and territorial waters, and of course come ashore on sovereign land. Permits and consents are required from the governments of countries through whose territorial waters the system runs or lands.
- Local planning consents: Consents will be required from local planning authorities authorising the construction of the beach manhole cable landing station.
- Cable Crossing Agreements: The sea floor is littered with other cable systems. Agreements must be drafted with operators of other cables that cross the project's proposed route.
- Carrier licences: The provision of carriage services to the public (once the cable comes ashore) typically requires the operator of the network to hold a local carrier licence.

Project timeline

In our experience, acquisition of these permits and licences can take a considerable amount of time and, unless properly managed, may risk delaying the project's construction phase and revenue flow.

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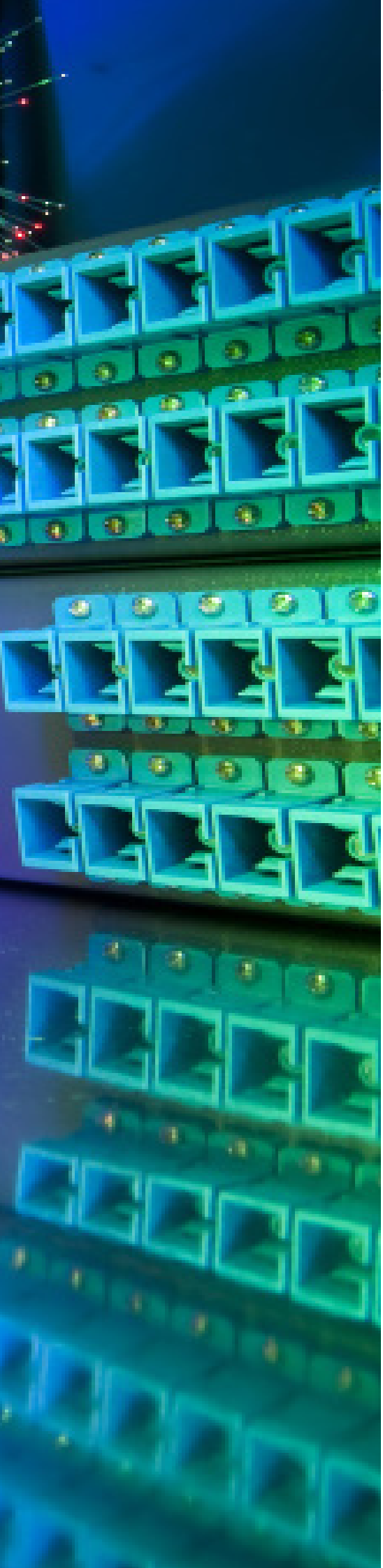
Regulation of Communications



The Australian communications industry is highly regulated and this regulatory environment is complex.

In Australia, the regulatory arrangements introduced in 1991 established a general carrier duopoly and a three-mobile-carrier market. The legislation was intended to nurture facilities-based competition so that the post-1997 regime could be light-handed. In 1997, the Telecommunications Act removed all legislative barriers to entry and established an industry-specific access regime and anticompetitive conduct framework.

Since that time, the industry has generally been regulated in silos and the regulatory focus has been on the carriage of communications services and access to Telstra's PSTN. The federal government has recently stated that the industry's outdated regulatory and policy framework is inhibiting competition and growth in the sector.

In 2010, this concern led to extensive modifications to the telecommunications access regime, effective nationalisation of the last mile services by the creation of NBN Co and the introduction of a new regulatory regime designed to protect NBN Co from the infrastructure competition in order to allow NBN Co to offer a single access price across Australia. We describe this NBN-specific regulatory framework in Chapter 3.

Also, the advent of cloud computing and convergence has resulted in increased regulatory focus on issues associated with the delivery of content provided over these services.

There are a range of different interests that drive and shape regulatory change. In this chapter, we discuss a variety of proposed changes by reference to four of these drivers, being:

- "Personal" interests: in order for the online environment to operate effectively there must be public confidence in the handling of personal information and respect for privacy.
- "Government" interests: in order to enforce the law, some information carried or stored by the network and online services must be accessible to government.
- "Rights holders" interests: the unauthorised copying of proprietary copyright material is causing significant losses to content owners.
- "Free Trade" interests: in order to maximise the benefits of free trade to the Australian economy, the regulatory environment must align with that of Australia's major trading partners.

We examine each of these drivers in more detail below.

Brief history of telecommunications regulation in Australia

Telecommunications in Australia began in 1854 with the installation of a telegraph line from Melbourne City to Williamstown. Development then progressed rapidly in the period leading up to Federation, with each colony passing legislation modelled on UK statutes.

In 1901, section 51(v) of the Australian Constitution gave the (then) new Federal Government power over all "postal, telegraphic, telephonic and other like services", with the latter encompassing future developments such as radio, television and the internet. The colonial networks were transferred to the Commonwealth and became the responsibility of the Postmaster-General (PMG), a federal Minister overseeing the PMG's department that managed all domestic telephone, telegraph and postal services.

In 1975, the PMG was disaggregated into the Australia Telecommunications Commission (trading as Telecom Australia) and the Australian Postal Commission (trading as Australia Post). Telecom Australia (later to be known as Telstra) continued to enjoy a virtual monopoly over the provision of many telecommunications services for the next 20 years.

The industry has since been reformed in two main ways:

- the migration of the former national monopoly provider (Telecom) from a department of State, to a statutory authority, to a statutory corporation, and then finally a fully privatised entity; and
- the gradual removal of the monopoly position of Telecom and the introduction of competition into the industry.

As mentioned above, the current regulatory environment emerged with the Telecommunications Act, which provided for open entry of carriers and carriage service providers. More details of the legislative framework are set out in the Annexure at the end of this publication.

Because of the concentrated nature of the communications industry, competition and access issues are specifically regulated by the *Competition and Consumer Act 2010* (Cth). The terms of access to "bottleneck" services (that are "declared" by the ACCC) are regulated by Access Determinations.

Access determinations can have a major impact on carrier revenues. For example, the ACCC has determined that the price charged by carriers for mobile terminating access services must drop from $0.06 per minute in 2012 to A$0.048 per minute from 1 January 2013, and subsequently to A$0.036 per minute from 1 January 2014 to 30 June 2014.[7]

Some regulatory bodies

Australian Communications and Media Authority

The ACMA is a statutory authority that falls within the ambit of the Department of Broadband, Communications and Media Authority (DBCDE). The ACMA has oversight of the broadcasting, internet, radio communications and telecommunications industries.

The ACMA is responsible for administering technical regulation and other non-competition aspects of the industry. The ACMA licenses Australia's telecommunications carriers and regulates fixed-line and mobile telecommunications. The ACMA's responsibilities include:

- supporting the development of codes of practice for the industry and monitoring compliance;
- monitoring the performance of carriage service providers;

Legal Corner

The communications industry is primarily regulated by the *Telecommunications Act 1997* (Cth) and the *Telecommunications (Consumer Protection and Service Standards) Act 1999* (Cth) (together, the "Telecommunications Acts").

The Telecommunications Acts apply to persons who own network units (usually a line or radio communications equipment) that are used to supply carriage services to the public (carriers) and those who supply carriage or content services (service providers).

- setting and enforcing industry and technical standards and monitoring industry performance numbering;
- advising consumers on their rights and safeguards; and
- managing the delivery of services to people with communication impairment.

Australian Competition and Consumer Commission

The ACCC has special powers under the *Competition and Consumer Act 2010* (Cth) to promote competition within the Australian telecommunications industry and ensure consumers' interests are protected. The ACCC administers the telecommunications access regime, provisions for controlling anticompetitive conduct and price control arrangements.

Telecommunications Industry Ombudsman

The Telecommunications Industry Ombudsman (TIO) was established in 1993 and performs the role of providing a fast, free and fair dispute resolution service for small businesses and residential customers who have a complaint about their telephone/Internet service within Australia. The TIO is independent of telecommunications companies, consumer groups and government.

Communications Alliance

The Communications Alliance (CA) is the peak industry body in the Australian telecommunications industry. The primary mission of the CA is to promote the growth of the Australian communications industry and the protection of consumer interests by fostering the highest standards of business ethics and behaviour through industry self-regulation.

Personal interests

Privacy laws

Personal interests are often the subject of privacy regulation.

The Privacy Act was recently significantly amended. Those amendments come into effect on 12 March 2014.

Australia has had a privacy regime since 1988, but unlike many other jurisdictions, the powers of the Privacy Commissioner have been relatively limited. As a result, there has historically been limited domestic enforcement action or litigation in respect of breaches of privacy.

> "This is the most significant change to Australia's privacy law since the Privacy Act was introduced in 1988."
>
> Nicola Roxon

The changes also introduce a new definition of personal information, which covers information about an identified individual and an individual who is "reasonably identifiable". The extensive amendments impose more onerous obligations on regulated persons to ensure that appropriate systems and procedures are in place in order to ensure compliance with the APPs.

Some of the key changes include:

- specifying mandatory information to be included in a privacy policy including details of how an individual may complain about a breach of the APPs and disclosure if information is to be held offshore, including where it is likely to be held;
- limitations on the circumstances in which personal information may be used for direct marketing. Broadly, any use of personal information for direct marketing must be for use of a kind that the data subject would "reasonably expect" or for which consent has been obtained and the organisation must have a simple means by which the data subject can request not to receive direct marketing communications from the organisation;
- restrictions on the disclosure of data overseas, including providing access offshore to data stored in Australia and the imposition of liability (subject to certain exemptions) on Australian business, for the actions of offshore recipients of data such as data centres in the event they breach the APPs; and
- significantly greater enforcement powers for the Information Commissioner to promote compliance with privacy obligations, including by accepting enforceable undertakings or commencing court action.

The Information Commissioner's office recently released guidance on the application of the new privacy principles and the Information Commissioner's new powers.[9]

Businesses are preparing now and beginning to review their policies and practices to ensure they are compliant with the new regime when it comes into effect. This is timely in light of ongoing scrutiny by regulators. For example, on 3 May 2013, the ACMA issued a formal warning to Southern Cross Telco Pty Ltd (Southern Cross) for failing to comply with a provision of the TCP Code that requires a customer's information to be protected from unauthorised use or disclosure, and dealt with by the supplier in compliance with all applicable privacy laws. Southern Cross admitted to incorrectly emailing invoices to over 1,000 individuals who were not the account holder.

Legal Corner

The Privacy Act regulates how personal information is handled by the public and private sectors.[8] The amendments introduce a single set of Australian Privacy Principles (APPs) applicable to the public and private sectors regulating the collection, use, handling and disclosure of personal information.

In light of the proposed amendments to the privacy laws, we recommend that businesses:

- update their privacy policy;
- conduct an audit of privacy procedures, including an assessment of the types of personal information held;
- include in the audit a review of consumer collateral, as the proposed laws will give consumers increased rights and businesses must inform consumers of their rights. This will be particularly relevant in respect of direct marketing and where data offshoring is used; and
- implement training to educate management and staff on their obligations under the proposed privacy law amendments.

Proposals for mandatory data breach notification

A related development is the proposed data breach notification scheme. In 2008, the Australian Law Reform Commission (ALRC) released a report that recommended the introduction of mandatory data breach notification rules.

In October 2012, the attorney-general's department released a discussion paper that proposed a mandatory scheme for notifying these breaches and in June 2013, the *Privacy Amendment (Privacy Alerts) Bill 2013* was introduced into the House of Representatives.

The Bill did not reach the Senate before it was adjourned before the election (September 2013). If passed into law, the Bill will require mandatory notification of data breaches (including when data are lost but not taken) to the data subjects, affected persons and the regulator. The obligation will arise where the risk of "serious harm" is not remote.

Government

The regulatory dilemma - the Convergence Review 2012

Developing an effective scheme to regulate the converged environment continues to be a thorny issue.

On 30 March 2012, the former Labor government's Convergence Review Committee (the Committee) provided its Final Report to (then) Communications Minister Stephen Conroy (Final Report).

On 30 November 2012, the former Labor government released its initial response to the Committee's findings, dealing with issues such as the television broadcasting licence fees, Australian content requirements and the removal of the existing 75 percent audience reach rule.

The Final Report proposed to fundamentally change all aspects of regulation of broadcast media (including free to air and subscription television and radio), online media and internet content (including internet TV and IPTV and including censorship classification of all forms of media), print media and its online corollaries, and other news and commentary services provided in or into Australia. Key recommendations of the Report are as follows:

- **Technology neutral:** The abolition of technology-specific licensing of content delivery services, such as for television broadcasting or subscription television
- **Oversight:** Uniform oversight of changes in control and compliance with community standards for media services regardless of delivery platform
- **News and Australian content:** Special regulation to apply to media organisations with significant market shares to meet community standards in news reporting and provide support for Australian content
- **Spectrum licensing:** A uniform spectrum licensing system that does not distinguish between broadcasting and non-broadcasting uses

The former government's response

On 12 March 2013, the former Labor Government released a draft legislation package in response to the Final Report. Amongst the former Government's core proposals included:

- the introduction of a public interest test in respect of nationally significant media mergers and acquisitions;
- the appointment of a "Public Interest Media Advocate" with powers to approve mergers and acquisitions in the industry and declare independent news media self-regulation bodies;
- a permanent reduction in television broadcasting licence fees by 50 percent (conditional on the broadcast of an additional 1,460 hours of Australian content by 2015);
- referral to a joint parliamentary committee of proposals to remove the current 75 percent reach rule; and
- permanent allocation of spectrum to community television.

The former Labor Government's reform proposals were introduced to the Parliament as a package of six bills on 14 March 2013. Of the six bills, two were successful and have since received assent. The other four bills were withdrawn by the former government and will not proceed any further. The two successful bills were:

- the Television Licence Fees Amendment Bill 2013, which provides for the 50% reduction in commercial television broadcasting licence fees; and
- the *Broadcasting Legislation Amendment (Convergence Review and Other Measures) Bill 2013*), which limits the number of commercial television broadcasting licences to three, ensuring that there will be no new fourth commercial station, and imposes an Australian content transmission quota on commercial television broadcasting licences.

The Classification Review 2012

On 1 March 2012, the ALRC delivered its report *Classification - Content Regulation and Convergent Media*. This report makes recommendations regarding the reform of content regulation in Australia designed to adapt the existing regulatory system to the massive growth being experienced in the availability of content delivered online.

The ALRC recommendations included:

- adjustment to the content classification scheme to make it platform independent;
- a narrowing of the range of content that requires classification;
- consistency of content regulation - the ALRC recommended that content be regulated in a consistent fashion, regardless of the delivery platform;
- new classifications authority - the ALRC recommended that feature films, TV programs and computer games should be classified by a new classifications authority that has statutory independence. As a result, film, television and games would be regulated under the same system;

- uniform national legislation - state-based regulatory regimes restricting access to media content should be brought under uniform national legislation; and
- the introduction of a procedure for recognising classifications made outside Australia.

New regulation for new services

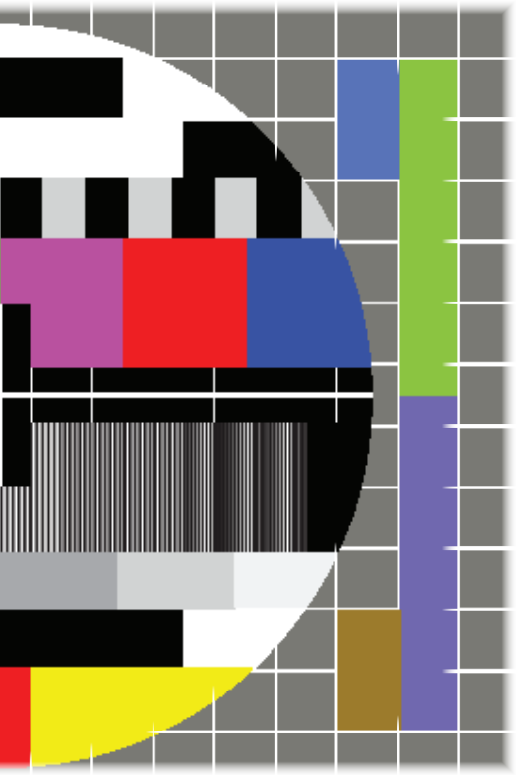
Rapid advancements in technology have also spurred an exponential increase in data transmission, both within domestic borders and internationally. An example of a new technology/application is VoIP. This has raised numerous difficult and challenging regulatory issues.

For example, Communications Alliance recently released guides for comment in relation to the quality of service parameters for VoIP services. The purpose of the guides is to assist industry in the provision, transmission, planning and testing of VoIP services. This also illustrates that VoIP services are gradually becoming mainstream.

Cybersecurity

The former Labor Government was concerned in maximising personal data security. In the 2007-08 federal budget, that government allocated approximately US$9 million over four years to implement a range of cybersecurity initiatives.[10]

Amongst the initiatives was the ISP voluntary code of practice (iCode). The iCode was developed by the Internet Industry Association (IIA) in conjunction with the former Labor government and is a voluntary code of practice intended to improve cybersecurity for consumers. It was implemented on 1 December 2010 and within its first 12 months, 34 ISPs (representing 90 percent of the domestic home Internet market) signed up to the iCode.[11]



During 2012, the iCode was reviewed by the DBCDE, which provided recommendations to the IIA. The IIA conducted its own review and, taking account of recommendations from the DBCDE, has released a revised version of the iCode for public comment. At the time of writing, the DBCDE is considering the submissions and a further improved version of the iCode is being prepared.

In July 2012, the Attorney-General's Department released a discussion paper titled "Equipping Australia against emerging threats and evolving threats." This discussion paper proposes a package of reforms to improve Australia's cybersecurity and to update Australia's telecommunications interception powers.

The discussion paper proposes "an industry-wide obligation on all telecommunication carriers and carriage service providers (C/CSPs) to protect their infrastructure that will support the confidentiality, integrity and availability of Australia's national telecommunications infrastructure".[12]

It also proposes:

- a requirement for C/CSPs to provide government, when requested, information to assist in the assessment of national security risks to telecommunication infrastructure; and
- a penalty regime to encourage compliance.[13]

In relation to interception powers, the discussion paper states that the current interception regime is outdated.[14]

The discussion paper also raises the possibility of extending the TIA to cover a broader range of telecommunication industry participants, including possibly social network providers and cloud computing providers.

Australian Cybersecurity Centre

On 23 January 2013, the (then) Prime Minister Julia Gillard launched *STRONG AND SECURE - A Strategy for Australia's National Security* (Report). The Report sets out the framework for Australia's national security efforts and notes that the Internet has increased the potency and impact of nonstate-based threats.

The Report announces the establishment of the Australian Cyber Security Centre (ACSC).[15] The ACSC will bring together a number of existing agencies and is expected to be fully operational by late 2013.[16] The ACSC will be responsible for identifying, detecting and responding to cybersecurity threats and working with industry and government to minimise these threats.

The Report also records as a *future direction* to "continue to develop law enforcement techniques and methods to address cyber facilitated crimes".[17]

Defence White Paper

Cybersecurity continues to be a significant issue as shown by the earlier *2013 Defence White Paper* (The White Paper). This paper recognises that cybersecurity remains a "serious and pressing national security challenge" in Australia, reinforcing the message of The 2009 Defence White Paper.[18] This threat is heightened by Australia's reliance on the Internet and Defence's increased dependence on "networked operations".[19]

Going forward

As a result, we expect cybersecurity to remain a continuing integral part of the new government's regulatory agenda for the industry. We also expect to see industry operators capitalising on cybersecurity issues. For example, in October 2012, Macquarie Telecom signed a head agreement with the Department of Agriculture, Fisheries and Forestry to provide a security framework for the government agency's Internet traffic. The deal is the "first major outsourcing contract to be awarded under a new government initiative to improve cyber security by reducing the number of gateways that federal agencies use to access the Internet".[20]

Rights holders

Copyright Issues - the iiNet litigation

Copyright owners also have an important voice in the regulatory debate. As data download rates continue to soar and rights owners take steps to prevent copyright infringement in an increasingly digital environment, the position of intermediaries such as ISPs receives greater scrutiny. An example of this was the 2012 iiNet litigation.

This litigation was brought by a group of movie studios against the Internet service provider iiNet. The studios had previously issued notices to iiNet advising it of alleged copyright infringements by its subscribers. The infringing acts were said to be the unlawful accessing of films by peer-to-peer file sharing software "BitTorrent."

These notices included details of the works said to be infringed, the date and time of infringements and the IP addresses of iiNet customers engaging in such conduct. iiNet was asked to warn the infringing subscribers and, if necessary, suspend or terminate their accounts.

iiNet did not comply. As a result, the studios commenced (through the Australian Federation Against Copyright Theft (AFACT) legal action alleging that iiNet had "authorised" the allegedly infringing activity by failing to restrain it, once it had become

Copyright Act s 101(1) Authorisation

- States that "... a copyright ... is infringed by a person who...without the licence of the owner of the copyright, does in Australia, or authorises the doing in Australia of, any act comprised in the copyright"
- This section makes it a breach of copyright for a person (such as an ISP) to "authorise" acts that infringe Australian copyright laws.
- The section also lists factors that a court must take into account to determine if an authorised infringement has occurred.

s 112E Facility Defence

- The "mere facilitation provision"
- This provides that a carrier or carriage service provider who provides facilities that facilitate the making of communication does not authorise any infringement of copyright in an audiovisual item merely because another person uses the facilities provided to infringe copyright.

Pt V Div 2AA Safe Harbours

- The "safe harbour provisions"
- These provisions limit the remedies available against carriage service providers (such as ISPs) who have been found to have authorised copyright infringement. They apply to carriage service providers who have adopted and reasonably implemented a policy that provides for termination of services to repeat infringers.

aware of its users' actions. The studios claimed that iiNet was therefore liable under the Copyright Act.

After a number of hearings in the lower courts, the High Court of Australia (HCA) found in favour of iiNet in April 2012. The HCA held that iiNet did not authorise the infringing behaviour because:

- iiNet did not have direct technical power or control over the BitTorrent system;
- iiNet's contractual power to suspend or disconnect infringing users was only an indirect power to prevent infringement, which was further diluted by the fact that no industry code existed that would require other ISPs to prevent customers who had their service terminated from entering new service contracts and infringing over those connections; and
- the infringement notices sent by the AFACT did not provide sufficient information or evidence to make it reasonable for iiNet to suspend or disconnect customers in order to prevent infringements.

Despite iiNet's victory in the HCA in 2012, whether service providers such as ISPs can be held liable for copyright infringement or authorising copyright infringement, where the infringement has been committed by one of its users, will depend upon the particular circumstances.

However, the door remains open for service providers to be held liable for authorising copyright infringement in other circumstances, and that liability will turn on the facts of each case. Moving forward, the key considerations in determining whether an intermediary, such as an ISP, has authorised copyright infringement are:

- the degree of the service provider's knowledge of the infringement;[21]
- the extent (if any) of the service provider's power to prevent the wrongdoing or its capacity to "exert control" over the situation; and
- whether the service provider took reasonable steps to prevent or avoid the infringing activity.

Content over cloud services - TV Now Litigation

Another important copyright development in 2012 was in relation to the (now discontinued) Optus "TV Now" service.

In July 2011, Optus launched its TV Now service that allowed subscribers to record and store free-to-air television programs on Optus' cloud storage platform, which subscribers could then stream back within 30 days to compatible devices. Subscribers could view recorded programs with a delay of at least two minutes from the actual free-to-air broadcast. The recordings were made at the instigation of each subscriber and with a unique copy being made for that subscriber.

In August 2011, Optus commenced legal proceedings seeking a declaration that the National Rugby League (NRL) and the Australian Football League (AFL) had made unjustified threats of copyright infringement against Optus. Telstra joined the proceedings and alleged, together with the NRL and the AFL, that Optus had infringed copyright in the NRL, and AFL matches broadcast on free-to-air television.

The key issues were:

- who made the recordings (Optus or the subscriber);
- whether Optus could take advantage of the time-shifting exemption under the Copyright Act.

The Federal Court of Australia (FCA) found at first instance that Optus' TV Now service did not breach the Copyright Act. This was because the court found that the subscriber was the maker of the copy of the free-to-air broadcasts as the subscriber "caused" the recording to be made by selecting the program and "pressing" the button. The FCA also found that the time-shifting exemption applied to those recordings.

Legal Corner

The time-shifting exemption under the Copyright Act.

Section 111 of the Copyright Act applies to both domestic and private use, and permits the recording of broadcasts for replay at a more convenient time.

The Full Federal Court of Australia (FFCA) overturned this decision on appeal. The FFCA took the view that either Optus alone or Optus and the subscriber, acting together, made the recordings and that the time-shifting exemption did not apply because Section 111 of the Copyright Act was not "intended to cover commercial copying on behalf of individuals".[22] Optus appealed the decision to the HCA and in September 2012, the HCA refused to grant Optus leave to appeal.

The TV Now litigation was the first time that an Australian court considered the scope of the time-shifting exception in the Copyright Act.

While the FFCA pointed out that the decision was fact-specific, the FFCA's decision signals that cloud computing service providers that store and transmit copyright material on behalf of subscribers may be held liable for copyright infringement. The litigation also highlights the difficulty faced by the current regulatory regime that is increasingly being challenged by rapid technological advancements.

The way forward for ISPs - Copyright

Partly in response to industry calls for reform as a result of these actions, in August 2012, the ALRC conducted an inquiry into copyright and the digital economy.

The purpose of the review was to determine if copyright laws should evolve to support the growth of the digital economy in Australia. An Issues Paper was then released, seeking comments on 55 questions covering a wide range of issues, some of which included the following.

- **Retransmission of free-to-air television**
  Currently, retransmission without the original broadcaster's permission does not infringe copyright in broadcasts, to ensure places without adequate free-to-air coverage can see these transmissions. The Issues Paper asks if this should be reformed.
- **Cloud computing and the Optus TV Now case**
  The Optus TV Now case highlighted the potential of cloud computing services to infringe copyright, or to enable their customers to infringe copyright. The Issues Paper questions the effect the Copyright Act has on these new services.
- **The legal status of user generated content**
  For example, a user might take a copyright work (such as a song) and add it to a home video, which is then shared online. Under the current regime, this is considered to constitute copyright infringement. The Issues Paper asks whether this should be amended.

The ALRC will release a Discussion Paper with proposals for reform once it has considered industry submissions on the Issues Paper, with a final report to be delivered by 30 November 2013.

Legal Corner

In light of the above litigation and uncertainty in the area of copyright infringement, we recommend that business implement appropriate user policies to prevent copyright infringement. In addition, ISPs should have in place appropriate systems and processes to ensure that they are not authorising copyright infringement. Guidance can be sought from the HCA's judgment in the iiNet litigation, which indicated that systems and processes should address the following key principles:

- The degree of the service provider's knowledge of the infringement
- The extent (if any) of the service provider's power to prevent the wrongdoing or its capacity to "exert control" over the situation
- Whether the service provider took reasonable steps to prevent or avoid the infringing activity

An infringement notice scheme for ISPs?

In November 2011, Communications Alliance in conjunction with five of Australia's largest ISPs put forward a copyright infringement scheme for all Australian ISPs to fight online content piracy (the CA Scheme).

The five ISPs involved were Telstra Bigpond, iiNet, Optus, iPrimus and Internode. AAPT, Ericsson Australia and the Internet Industry Association were also listed as contributors.

The key aspects of the proposed CA scheme were to:

- require ISPs to forward education and warning notices to customers allegedly engaged in content piracy, where evidence of infringement is provided by content owners. ISPs were not required to terminate customer connections or demand payment from alleged infringers under the proposed arrangement;
- give customers the right to appeal infringement notices; and
- provide that, after three warning notices, customers would have their details passed on to content owners by ISPs.

However, the CA Scheme has been criticised by some in the industry as being ineffective and was rejected by the AFACT.

Free Trade

The Trans-Pacific Partnership

Another important consideration in the regulatory debate is the effect such regulation has on free trade and commerce generally. In particular, the current push for increased regulation and oversight in the industry has resulted in protests from some quarters that this will impact on trade across national borders, particularly in relation to data flows. A good example is the proposed Trans-Pacific Partnership (TPP).

The TPP is a proposed international trade agreement currently being negotiated between a number of countries in the Asia Pacific region. The TPP is intended to be a regional framework for the expansion of free trade between member nations.

If Australia signs the TPP, then domestic data centre operators will be compelled to allow the free-flow of data across international borders. This will affect the proposed domestic data retention laws, which may become invalid as a restriction on trade under the TPP.

The proposed privacy law amendments and cybersecurity laws may also be at odds with the TPP because, whilst at the macro level there is a movement toward free and unrestricted data transfer. At the domestic level, the federal government is searching for means to control and regulate data flow. At the same time, copyright owners are concerned with preventing infringement of their rights, which includes regulating the operations of data centre operators.

Against all of these regulatory issues is the NBN. This enormous infrastructure project is discussed further in Chapter 3.

3

The National Broadband Network

Announced in April 2009, the NBN is the largest infrastructure project ever proposed in Australia.

Under the former Labor government's communications policy, NBN Co was established as a government-owned corporation to build and operate a fibre to the premises (FTTP) service to 93 percent of the Australian population, initially at speeds of up to 100 megabits per second. NBN Co proposed to offer the remaining 7 percent of the population access to fixed wireless and satellite services, with off-peak download speeds of up to 25 megabits per second.

Under this policy, the objective of NBN Co was to build and operate a wholesale-only, open-access network making available wholesale services to retail service providers (RSPs). NBN Co must not discriminate among access seekers, and must charge using uniform national wholesale pricing. This requires cross-subsidisation between the charges for access to different parts of the network.

Key trends and issues for 2013

Although construction of the NBN began on a small scale in 2010/2011, until relatively recently, the main focus of the project has been to establish an appropriate legislative and regulatory framework.

In September 2013, the Labor Federal government was replaced by a Coalition government. The government's NBN policy departed from Labor policy in certain key respects.

The new government's communications policy proposes a mixture of fibre to the node (FTTN) and FTTP technology, with a combination of satellite and fixed wireless networks to serve the most remote areas. The rollout will be primarily FTTN-based, (in about 71 percent of cases by 2019) but FTTP technology would be deployed (in about 22 percent of cases) in greenfield housing estates and in areas where existing copper needs to be replaced or is otherwise commercially unviable (for example, due to high maintenance costs). Areas where Telstra's HFC network exists would not be prioritised for NBN fibre rollout. The balance will be deployed using fixed wireless (4 percent of cases) and satellite (3 percent of cases).

It remains to be seen to extent to which this policy is implemented following the election. Under the current (Labor) model, the key remaining regulatory hurdle is the Special Access Undertaking (SAU), which NBN Co lodged with the ACCC in late 2012. On 4 April 2013, the ACCC released its draft decision, which rejected the SAU and proposed a number of amendments, including a long-term commitment from NBN Co not to raise prices above the consumer price index.

On 4 July 2013, the ACCC released its draft notice specifying variations to the SAU and calling for industry submissions. The period for submissions closed on 26 July 2013. After considering submissions on the draft notice, the ACCC will finalise its proposed variations to the SAU in a formal written notice to NBN Co. The ACCC has announced that it expects to issue NBN Co with the formal notice in early August 2013.[23]

To the extent the current government's policy is implemented, there will be important changes to the NBN regulatory package, including the SAU. It is likely that the SAU will need to be substantially delayed as a result of these changes. On the construction front, NBN Co released an updated three-year rollout plan in May 2013, which forecasts construction of the network to have begun for about 4.85 million homes by mid-2016. The previous update to the three-year plan, in March 2012, forecast construction to have commenced or be completed for 3.5 million premises by 30 June 2015.

On 4 July 2013, NBN Co issued a media release in which it announced that as at 30 June 2013, 207,500 premises had been passed by fibre optic cable in built-up areas, which is within its revised target range of 190,000 to 220,000.

The diagram on the next page shows a snapshot of the current and anticipated future progress of the NBN. If the new government implement its announced communications policy fully, it is likely the following forecasts will change substantially.

Looking ahead

The Commonwealth must retain ownership of NBN Co until the rollout is complete to ensure that the federal government's objectives for the NBN are met. However, the enabling legislation includes a divestment process by which NBN Co is sold from government ownership. By law, the sale of NBN Co can only occur once all of the following steps are satisfied:

Build finishes. The Communications Minister must declare that the NBN is built and fully operational.

Productivity Commission. The Productivity Commission must conduct an inquiry into regulatory, budgetary, consumer and competition matters relating to the NBN and report on its findings.

Parliamentary Joint Committee. A Parliamentary Joint Committee must consider the findings of that report.

Decision to sell. The Finance Minister must make a disallowable declaration that conditions are suitable to sell NBN Co.

Parliament. The Parliament must not disallow that declaration.

Nov 2010: The *Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Act 2010* (Cth) passes Federal Parliament. This law includes the framework for Telstra's voluntary structural separation

Apr 2009: The former Labor government incorporates NBN Co. NBN Co is a wholly-owned "government business enterprise" and is regulated by the CCA

June 2010: On the same date, NBN Co announces an agreement with SingTel Optus to progressively migrate Optus HFC subscribers to the NBN as it is rolled out. NBN Co agrees to make progressive payments to Optus as customers migrate

June 2010: NBN Co and Telstra announces that binding agreements have been entered into, subject to various conditions precedent, which have now been satisfied. As well as allowing the use of pits and ducts, the Telstra agreements require Telstra to progressively disconnect premises from Telstra's copper and HFC networks, except for certain pay-TV services over the HFC networks

June 2021 Forecast: NBN Co intends to complete the remaining Fibre Access Nodes (more than 400) by FY2021

June 2016 Forecast: NBN Co intends to have commenced or completed construction for approximately 4.85 million premises by mid-2016

June 2016 Forecast: In its corporate plan, NBN Co forecasts it will connect 1.13 million existing premises

June 2015 Forecast: NBN Co intends to launch two satellites in mid-2015

June 2015 Forecast: NBN Co intends to complete 121 POIs during FY2015, (including the completion of dark fibre transit network) and complete 650 Fibre Access Nodes

Sept 2013 Forecast: NBN Co intends to pass 341,000 homes by this date.

June 2013: NBN Co announces it has passed 207,500 premises, within the reduced forecast range of 190,000 to 220,000 premises

Apr 2013: The ACCC rejects NBN Co's revised SAU and proposes a number of amendments to the SAU in its draft decision. The ACCC proposes, amongst other things, that it has the ability to more frequently review usage charges on the NBN, together with powers to regulate the introduction and withdrawal of new products

Mar 2013: NBN Co reduces its roll-out predictions, attributing the reduction to slower than forecast progression on the construction work by contractors. NBN Co confirms that the 2021 completion date and overall cost of the NBN will remain unchanged

Dec 2012: The NBN is rolled out to approximately 52,014 premises. NBN Co announces in its corporate plan that it will commence or complete approximately 785,000 fibred premises by 31 December 2012, reaching 3.5 million premises by 30 June 2015

Nov 2012: NBN Co announces the final list of 121 Points of Interconnection (POIs)

Sept 2012: NBN Co lodges a revised SAU with the ACCC

Aug 2012: NBN Co reduces its roll-out predictons, attributing the reduction to its protracted negotiations with Telstra in respect of the fibre rollout utilising Telstra's infrastructure

July 2012: The ACCC publishes a final determination granting authorisation of the Optus HFC Agreement

Mar 2012: Telstra's Structural Separation Undertaking (SSU) and Migration Plan comes into force on the signing of the Telecommunications (Voluntary Undertakings-Exemptions) Declaration 2012 by the Minister

Dec 2011: NBN Co lodges its first Structural Access Undertaking (SAU) with the ACCC. The SAU covers the NBN Access Service (which covers services offered over the fibre, fixed wireless, and satellite networks). It sets out, for a 30-year term, the service description and certain proposed price and non-price terms and conditions of access

Oct 2011: NBN Co releases a 12-month rollout plan stating that construction work will commence in 28 locations covering 485,000 premises

Mar 2011: The *Telecommunications Legislation Amendment (National Broadband Network Measures Access Arrangements) Act 2011* (Cth) (Access Act) passes into law. The Access Act authorises the conduct of NBN corporations (which may otherwise be illegal) in relation to interconnection, bundling of services and cross-subsidisation

Mar 2011: The *National Broadband Network Companies Act 2011* (Cth) (NBN Companies Act) establishes the structure and function of NBN Co. NBN Co is (mostly) wholesale only and must supply services on a non-discriminatory basis. There are ownership limits to prevent vertical integration, its services are automatically captured by access regulation, and there is a process for its eventual sale, after construction is completed

The Project

Under the former government's plan, the NBN was planning to use FTTP for connectivity to 93 percent of Australian households. This requires fibre optic cable to be connected directly into homes, apartments, businesses and other premises, entirely replacing the traditional copper telecommunications network owned by Telstra.

Under the agreement struck between NBN Co and Telstra, most of the construction and deployment of the network was intended to utilise the Telstra ducts that are currently used to supply copper-based services to consumers and business, as well as pits, lead-in conduits (ownership of which transfers to NBN Co), exchange space and dark fibre. Other parts of the construction will require access to power poles to allow overhead construction.

Points of Interconnect

Although the NBN is referred to as a "national" network, in reality, while the labor model, it comprises a large number of smaller local networks (121), each with its own POI. Wholesale RSP customers of NBN Co can interconnect to these smaller networks at each POI.

NBN Co is not required to provide interconnection at a location that is not a listed POI, if the refusal is reasonably necessary to achieve uniform national pricing. The choice of such a large number of POIs will have a significant effect on the shaping of the NBN RSP market.

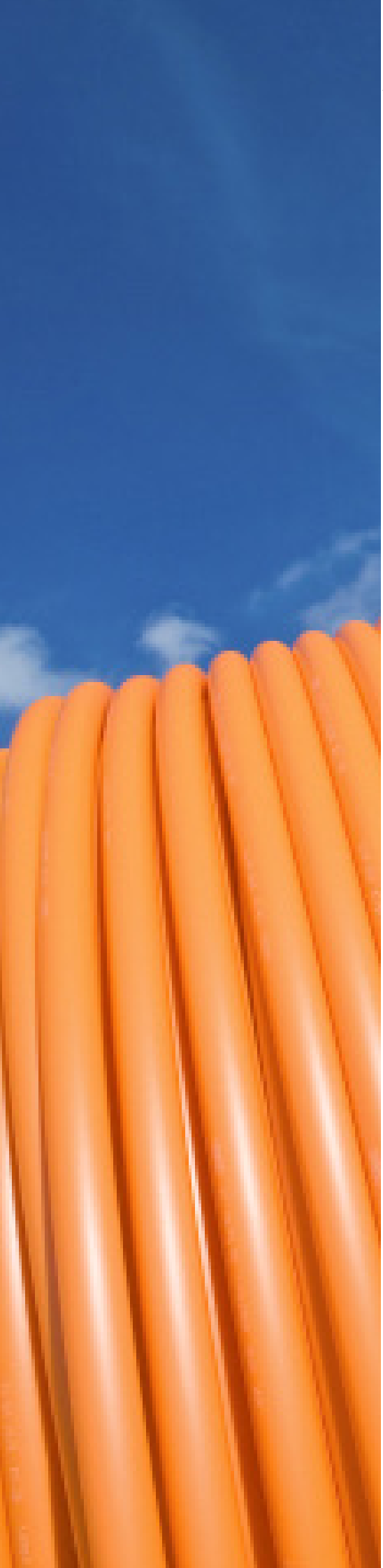
In particular, the large number of POIs means service providers must have access to a correspondingly large network of domestic transmission capacity to connect to all 121 locations. There are currently only a small number of operators with access to such a ubiquitous network.

Effect on business

As the NBN proceeds carriers' fixed line margins will change as they transition to an NBN environment. For example, Telstra's margins on fixed line products are likely to fall as a result of the transition to FTTP and will also be affected in a FTTN environment. Other carriers will be affected in proportion to the extent by which their network access costs change in the transition to the NBN.

The extent to which participants can obtain access to competitive backhaul services will be crucial. The small number of carriers with existing backhaul connections to these POIs will have a significant competitive advantage in the market place.

Service providers without access to competitive backhaul systems or the scale to fund the new billing and provisioning systems will need to gain access to NBN services through an "aggregation" model. This is where carriers who have this infrastructure will resell NBN-based services to smaller regional or niche service providers.



Regulatory overview

Despite limited construction activity, there has been a very large amount of commercial and regulatory activity to determine the environment in which the NBN will operate. This regulatory regime will now be revised and potentially amended following the change in government.

This current environment for NBN Co is very complex. Broadly, the legislation requires NBN Co to be "wholesale only", and to supply services to all access seekers on a non-discriminatory basis. It must also offer uniform national pricing. Because NBN Co's activities would otherwise breach antitrust laws, there is legislation authorising it to undertake activities (which would otherwise be illegal) in relation to interconnection, bundling of services and cross-subsidisation.

NBN Co's services are "declared" and the terms of access can either be determined by the ACCC (through an Access Determination) or agreed between NBN Co and the ACCC through a SAU. As discussed earlier in this Chapter, NBN Co submitted a SAU to the ACCC in 2012. The ACCC issued a draft decision in April 2013, which rejected the SAU and suggested various amendments. In June 2013, the ACCC released a draft variation notice for industry submissions and announced that, after considering submissions to the draft variation notice, it will issue a formal notice to NBN Co to vary the SAU in August 2013.

NBN Co must offer uniform national pricing across metro, rural and regional areas. This requires cross-subsidisation in pricing between the more populated (and profitable) areas and those with smaller population density.

The former Labor government directed the ACCC to regulate superfast networks built by non-NBN carriers that would otherwise compete with the NBN. Operators of these networks must provide a basic bit stream service to all access seekers and must operate their networks on a wholesale-only basis. The ACCC has decided that such networks must offer services at a price set by benchmarking against NBN Co's current prices. This results in a current price ceiling of A$27 per month for a 25/5 megabit per second service.

The ACCC recently released its annual industry report for 2011-2012.[24] In its report, the ACCC indicated that in the coming years, it will focus on ensuring that RSPs do not "engage in unfair market practices to obtain new customers who may be reconsidering their current plan in light of new products offered over the NBN",[25] for example, by attempting to lock in customers through bundled services.

This warning is in direct response to the current push by providers to increase market share in an already saturated market.[26] Refer to Chapter 4 for further discussion in respect of competition in the market.

It is likely that the incoming government will carefully scrutinise this framework and regulatory changes are likely to be proposed.

Contracts behind the NBN

Because the NBN is wholesale only, it supplies "declared" services to RSPs who on-sell to consumers. Most existing RSPs have now signed short-term contracts with NBN Co in relation to the supply of these services (currently on a small scale).

These contracts are based on the standard NBN Co terms. NBN Co must provide the ACCC with the details of access agreements that contain different terms from its published offers. The ACCC must maintain a register of the statements of differences on its website. Below is a summary of the complicated basis on which access seekers obtain services from NBN Co.

Inconsistencies between the documents described below are resolved in the order described in the . Ministerial pricing determinations prevail over inconsistent terms within SAU's binding rules of conduct and access determinations, but not over access agreements.

Looking Forward

To the extent this is maintained, the uniform NBN pricing will make it difficult for RSPs to compete solely on price. Existing and new players will seek to differentiate their products through brand and distribution strategies and also the introduction of new product sets. We expect to see an increase in emerging services such as VoIP, Internet television and mobile tethering. Participants will also seek to differentiate themselves through bundled offerings (giving mobile carriers a competitive advantage), as well as exclusive content and application offerings.

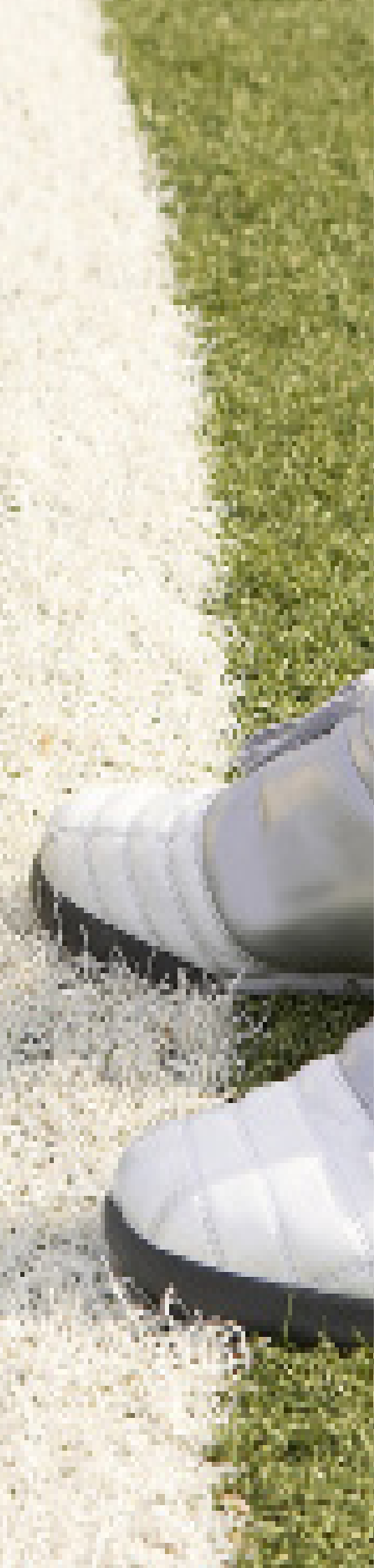
Document type	Explanation of document	Document status	
Access Agreements	Bilateral contracts between NBN Co and the RSPs	Short-term access agreements have been entered into with carriers	
Special Access Undertaking	This is lodged by NBN Co with the ACCC. Once a SAU is approved by the ACCC, NBN Co must supply relevant services under its terms	NBN Co lodged a revised SAU with the ACCC in September 2012. The ACCC issued a draft variation notice in July 2013. The ACCC intends to issue a formal notice to NBN Co to vary the SAU in August 2013	Ministerial Pricing Determination
NBN Co's specific Binding Rules of Conduct	These rules are made by the ACCC where there is an urgent need to do so. Once made, they are binding on NBN Co, and can specify the terms and conditions for compliance with the standard access obligations.	None have been published	
NBN Co's specific access determination	These determinations are made by the ACCC. Once made, they are binding on NBN Co and can specify the terms and conditions for compliance with standard access obligations.	No determinations have been made	
Standard Form of Access Agreement (SFAA)	A SFAA is made by NBN Co and published on its website. Typically, Access Agreements are based on an SFAA.	NBN Co has released the following SFAAs: ■ Wholesale Broadband Agreement in respect of the provision of services via fibre and fixed wireless ■ Satellite Wholesale Broadband Agreement in respect of the provision of services via NBN Co's interim satellite service ■ Testing Terms & Conditions in respect of testing of services prior to commercial launch ■ Satellite Testing Terms & Conditions in respect of testing of satellite services prior to commercial launch	

Competition

In addition to administering the NBN specific access regime, the ACCC has a significant and ongoing role in administering competition regulation in the communications sector more generally. We look at the state of competition in the communications market more generally in Chapter 4.

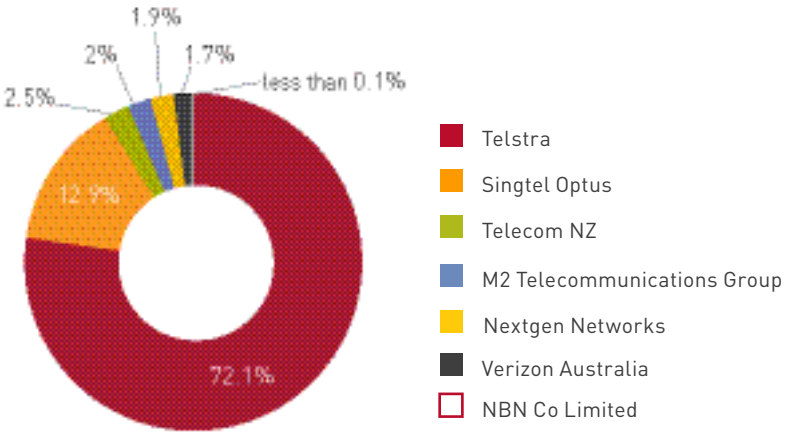
4

Competition

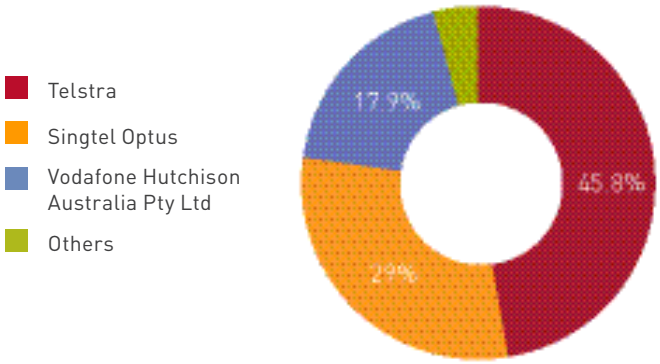


Overall, the communications market in Australia is dominated by a handful of big operators.

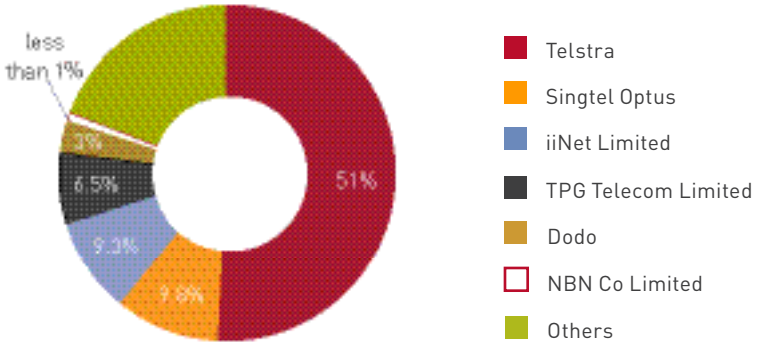
As at mid-2013, the top wired telecommunications network operators include the following[27]



The top wireless telecommunications operators are as follows[28]



The top internet service providers include the following[29]



The recent past has been characterised by intensifying price and service competition in the maturing mobile and fixed broadband markets, as service providers fight for market share. At the same time, the industry is experiencing some fundamental structural changes (refer to the discussion at Chapter 1).

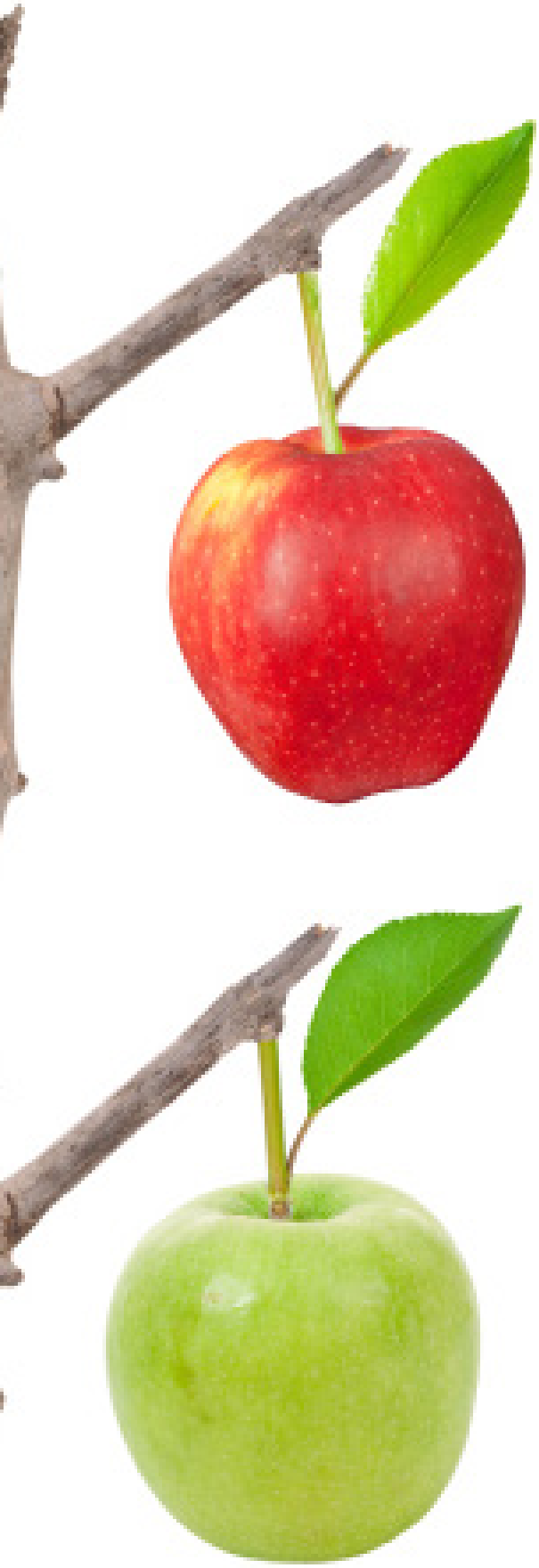
In particular, with the mobile market nearing saturation, revenue growth from mobile carriage services has begun to flatten out. As a result, service providers seek to differentiate their product sets through bundling and exclusive content offerings. At the same time, the number of fixed telephony services continues to gradually decline as consumers migrate to mobile services.

We expect the demand for mobile data services to continue to increase with increasing competition. We expect this to include significant growth in machine-to-machine mobile services and operations (for example, tracking applications).

For example, the ACCC recently released its annual industry report, which stated that prices paid by consumers for telecommunications services decreased by 2.2 percent in 2011-2012, with prices almost 20 percent lower than they were in 2006-2007.[30] In respect of voice services, the ACCC found that, for the first time, more calls were made from mobile phones than from fixed lines during this period.[31] In addition, the ACCC confirmed the downward trend of prices for mobile services.

Such fierce competition has, and will continue to, result in heavy marketing activity, which in turn will attract close scrutiny from the ACCC, the ACMA and other regulatory bodies. This is placing pressure on the traditionally "self-regulatory" model used in the industry to date.

For example, in its Telecommunications Competitive Safeguards for 2011-12 industry report, the ACCC indicated that it will be monitoring the effectiveness of recent compliance mechanisms in the revised Telecommunications Consumer Protections Code, discussed further below in this chapter.



Role of the ACCC

As discussed in Chapter 2, the ACCC actively monitors the effectiveness of competition in the communications market.

The ACCC administers a communications specific antitrust regime that allows it to intervene where it believes an industry participant is acting anticompetitively. The ACCC also has the power to set the terms of access to declared services through Access Determinations. Category A standard access obligations (SAOs) apply to service providers generally. Category B SAOs apply only to an NBN Corporation, and only at listed points of interconnection.

Access Disputes

Until relatively recently, access disputes were typically resolved by the ACCC through an arbitration process under the predecessor law to the CCA. This involved the ACCC arbitrating access disputes, which were usually between Telstra and other service providers. This process was criticised as being slow and cumbersome, with complaints that it encouraged delaying tactics and gaming of the system.

In response to criticisms of this adversarial model, provisions allowing the ACCC to arbitrate these disputes have now been repealed, except for access disputes currently being arbitrated. Instead, from January 2011, the negotiate/arbitrate model was abolished and the ACCC was given the power to set default and non-price terms in Access Determinations.

Access Determinations only apply where there is no commercial agreement between an access seeker and an access provider. The Access Determination creates a benchmark upon which access seekers can fall back on while still allowing parties to negotiate different terms of access.

The ACCC can make either interim or final Access Determinations for both NBN Co and non-NBN Corporations. The ACCC has not yet made an Access Determination in relation to NBN Co's services. However, if the terms of access between an access seeker and NBN Co are different to those in an Access Determination, then NBN Co will still be subject to the non-discrimination provisions.

Currently, ACCC Access Determinations are in place in respect of the following services:

- Fixed-line services
- Domestic transmission capacity
- Wholesale ADSL
- Local bitstream service
- Domestic mobile terminating access services

Fixed Line Services

On 11 July 2013, the ACCC announced the commencement of a "Fixed Services Review" and a separate inquiry into high volume, long distance backhaul services and pricing (the Domestic Transmission Capacity Service (DTCS)).

The "Fixed Services Review" encompasses two public inquiries. The first inquiry will be into whether to re-declare existing fixed-line services. The second inquiry will be to assist in making final access determinations for wholesale ADSL service and the existing fixed-line services, as follows:

- The unconditional local loop service
- The line-sharing service
- The public switched telephone network originating access
- The public switched telephone network terminating access
- The local carriage service
- The wholesale line rental service

In July 2013, the ACCC released a discussion paper on the fixed-line services declaration inquiry and has called for industry submissions to be provided by 23 August 2013.

Separately, the ACCC has also released a discussion paper on the DTCS declaration inquiry. This inquiry will determine whether DTCS should continue to be regulated, including analysis of individual routes and the impact of the NBN and industry submissions on this inquiry are due a week later, by 30 August 2013. If continuing regulation is determined, the ACCC intends to launch a separate inquiry in early 2014 into the applicable price and non-price terms and conditions that should apply.

The inquiry into final access determinations for existing fixed line and wholesale ADSL services comes ahead of any discussion paper.

Legal Corner

The ACCC undertakes economic regulation of the communications sector. Its roles are primarily set out in the *Competition and Consumer Act 2010* (Cth) (CCA) and also addressed in telecommunications-specific legislation.

ACCC declares wholesale ADSL

During the transition phase to the NBN, businesses will be focussed on obtaining and consolidating market share. This is discussed previously in Chapter 3.

However, as Telstra owns the only ubiquitous local access network in Australia, there were concerns that Telstra would exploit its market advantage by overcharging for wholesale ADSL services. Accordingly, in December 2011, the ACCC commenced an inquiry into whether to declare the wholesale ADSL service.

Following this enquiry, the ACCC declared this service on February 2012. As a result, service providers are able to grow their customer base in areas where it would otherwise be uneconomical to install their own DSLAMs.

The ACCC published a Final Access Determination (FAD) for the use of Telstra's copper network for wholesale ADSL services until 30 June 2014. The FAD's terms and conditions apply if there is no commercial agreement between an access seeker and Telstra.

ACCC declares superfast non-NBN networks

Effective in April 2012, the ACCC also declared the local bitstream access service.

The local bitstream access service specifically applies to non-NBN "superfast" telecommunications networks. Superfast carriage services are defined to have a download transmission rate of more than 25 megabits per second. This declaration is intended to cover the "last mile" of fibre to residences and small businesses on networks that are not owned by NBN Co and does not apply to mobile, wireless or satellite networks. It only applies to those networks built or upgraded after 1 January 2011.

Wholesale service providers must, upon request, supply the service to RSPs under the "standard access obligations" that are mentioned above. Unlike other declared telecommunications services, the local bitstream access service declaration does not expire, cannot be varied and cannot be revoked. However, it is likely this will be reviewed by the incoming Coalition government.

To the extent it remains in force, owners of such networks must offer a basic wholesale connectivity service (similar to the NBN service) on a non-discriminatory basis. The newly declared service is primarily expected to apply to a relatively small number of fibre networks, such as those in new housing developments.

This declaration effectively prevents carriers from "cherry-picking" the NBN, by building or upgrading local fibre networks in low-cost high density areas before the NBN can be built.

Domestic mobile terminating access services

In July 2013, the ACCC commenced an inquiry on the mobile terminating access service (MTAS), which is a wholesale service provided by mobile network operators to allow fixed line and other operators to terminate calls on their mobile networks. The MTAS declaration regulates the price the terminating network can charge the originating network. The ACCC sought views on whether the MTAS declaration needed to be renewed or amended in light of current market conditions. Unless renewed, the current MTAS declaration will expire on 30 June 2014. Submissions closed on 5 July 2013.

Telstra structural separation undertaking (SSU)

Notwithstanding many reforms, Telstra retains market dominance by virtue of its vertical integration.

> The former Labor government stated, "Partly because of this integration, it has been able to maintain a dominant position in virtually all aspects of the market, despite more than 10 years of open competition. It is the government's view that Telstra's high level of integration has hindered the development of effective competition in the sector." [32]

As a result, the Telstra SSU regime was introduced as part of the NBN Co package of reforms introduced in November 2010.

Under the framework, Telstra had the choice of electing to either submit a voluntary SSU or be subject to mandatory functional separation as well as other adverse outcomes. Telstra chose the SSU route.

In this case, structural separation involves the separation of Telstra's voice and broadband services from its copper and HFC networks to the NBN.

During the period of migration from Telstra copper to NBN services, Telstra has agreed to provide "equivalent outcomes" for its wholesale customers to those which are achievable by Telstra's retail businesses. The SSU also specifies measures that will enable the ACCC to monitor Telstra's compliance with its undertakings (including reporting requirements as expanded on below).

Telstra has also separately agreed to make access to its ducts and pipes available to NBN Co, and progressively decommission its copper network and HFC Networks. Telstra is currently required to complete its structural separation by 1 July 2018.

The ACCC approved Telstra's SSU and Migration Plan in February 2012, which then came into force in March 2012.

The ACCC is required to review and report annually on Telstra's compliance with its SSU and Migration Plan. The ACCC's first report for the period from 6 March 2012 to 30 June 2012 noted a number of breaches.[33]

The ACCC reported that most breaches concerned Telstra's obligations to safeguard confidential or commercially sensitive wholesale customer information provided to Telstra in its capacity as access provider of regulated services from disclosure to the Telstra businesses that compete against wholesale customers in retail markets.

Despite Telstra taking steps to ensure compliance since the breaches occurred, the ACCC is continuing its investigation into each of the breaches included in the report.

Facilities access code

Carriers must have access to telecommunications facilities in order to provide communications services.

The Facilities Access Code only applies between carriers and allows carriers to install equipment on or in facilities owned by other carriers.[34]

However, as part of the NBN Co regulatory reform package, the federal government has granted statutory access to carriers to fixed-line facilities installed in Australia after 27 September 2011. Access is given where the facility is owned or operated by non-carriers such as a developer, utility provider, council or private property owner. This applies to pits and ducts, as well as poles where the terrain makes it necessary to deploy lines above ground.

Access disputes are governed by the Telecommunications Act and the CCA. As with declared services, the regime was traditionally based on a negotiate-arbitrate model. However, under the new regime, parties are no longer obliged to enter into good faith negotiations for access before referring disputes to the ACCC. Instead, access to these fixed-line facilities is provided on terms that are commercially negotiated or, failing agreement, determined by an agreed arbitrator (with the ACCC being the default arbitrator).

In addition, the ACCC is empowered to make Access Determinations without any referral from the disputing parties (for example, the "local bitstream access service" later discussed in this Chapter).

Moreover, the current regulation includes specific rules which apply to Greenfields' real estate developments. These rules require developers to ensure that new developments are NBN-ready through the installation of underground ducting and other infrastructure.

Consumer protection

As discussed elsewhere, the current market is characterised by aggressive price competition.

In this environment there is, unsurprisingly, a significant amount of attention to consumer protection. The telecommunications industry is subject to the general laws and regulations that apply to all retail offerings. However, as a result of the unique nature of telecommunications, the industry also has a specific regime that supplements the general law (described further below).

An example of the specialised nature of issues that can arise in consumer protection for the telecommunications sector is the recent TPG litigation.[35] This was a case concerned with whether TPG's advertisements were misleading or deceptive under section 52 of the *Trade Practices Act 1974* (Cth) and subsequently section 18 of the Australian Consumer Law (ACL).[36]

The subject matter of the case was a series of advertisements in various media for TPG ADSL 2+. TPG advertised ADSL 2+ for A$29.99 per month. However, the small print stated that this price was only available when bundled with a home phone. The advertisements also did not include the set-up fee of A$129.95.

The Federal Court of Australia found that some of TPG's advertisements did not properly present the minimum charge associated with the plan. TPG was fined and ordered to issue corrective notices to each customer who adopted the internet service, corrections on its website and establish a compliance program with independent audits.

On appeal, the Full Court of the Federal Court of Australia held that TPG's disclosures on the bundling requirement and set-up charge were adequate and TPG's only breach was its initial television advertisement.[37] The Full Court held that a reasonable consumer would understand the practice of bundling and the set-up fees that would apply. The Full Court reduced TPG's initial fine from A$2 million to A$50,000 and ordered the ACCC to pay 75 percent of TPG's costs.

In January 2013, the ACCC filed an application for special leave to appeal, but this appeal has not been heard by the High Court. At the time of writing, the ACCC has been granted leave to appeal to the High Court.

The TPG litigation demonstrates that courts can sometimes have divergent views when determining if telecommunications service providers are misleading consumers.

Vodafone and iiNet have also come under recent scrutiny with respect to consumer protection issues. On 24 May 2013, the ACMA issued a formal warning to Vodafone for failing to comply with the provision of the TCP Code that requires a carriage service provider to prominently display the standard charges (two-minute phone call, cost of sending an SMS and the cost of using 1 MB of data). Vodafone published an advertisement in the Herald Sun on 18 April 2013 and allegedly failed to prominently display the standard charges.

The ACCC also recently issued an infringement notice to iiNet for A$102,000 for failing to prominently state the total minimum price payable for its Naked DSL Service. The infringement arose from an advertisement on the rear of a bus in February and March 2013, which displayed the monthly price of iiNet's Naked DSL Service of A$59.95. It also displayed the total minimum price of the service, but not, in the ACCC's view, in a sufficiently prominent way.

Some important regulatory developments

In 2012, some important regulatory developments in this space were as follows:

- The registration (in March 2012) of the updated Mobile Premium Services Code. This code regulates the advertising of mobile premium services, including advertising, provision of information to customers, supply of the service, complaint-handling procedures and unsubscribe and opt-out mechanisms.
- The registration (in September 2012) of the substantially revised Telecommunications Consumer Protections Code C628:2012 (TCP Code), which provides community safeguards in relation to sales, service and contracts, billing, credit and debt management, changing suppliers and complaint-handling. It also sets out a framework for annual submission of documents addressing code compliance and monitoring.
- The establishment of Communications Compliance to act as a monitoring body on TCP Code compliance. The first set of annual compliance documents were due to be submitted by service providers subject to the TCP Code to Communications Compliance in April 2013. The ACMA is also playing an active role in TCP Code compliance.

Where to from here

We believe the coming years will see continuing pressure on consumer regulation, particularly as industry compliance with the TCP Code is examined. In addition, roaming charges continue to be a source of consumer friction. The Telecommunications Industry Ombudsman's (TIO) December 2012 publication of *TIO Talks* reported that whilst the number of roaming complaints decreased by 70 percent, the value of disputed roaming charges remains high, averaging A$1.6 million per quarter.[38]

In addition, the December 2012 *TIO Talks* reported that mobile phone complaints (mostly in respect of coverage issues) increased by 4.2 percent in 2012 and comprised 57 percent of all complaints received by the TIO.[39] The TIO confirmed that its focus on customer service and complaints handling in 2012 will continue into 2013.[40]

In response to these issues, the ACMA has released for comment the (International Roaming) Industry Standard 2013 (ACMA Standard).[41] The ACMA Standard requires CSPs to provide certain information to consumers after an SMS-enabled device is activated overseas. The information, designed to reduce "bill shock", includes:

- a warning that the consumer is roaming;
- the cost of using the device in that country;
- information in respect of how the consumer can stop roaming (the CSP cannot charge the consumer more than A$1 to do so); and
- information in respect of how the consumer can find out more information about the roaming.

Where to from here?

Overall, it can be seen that the communications industry is complex, concentrated and highly regulated. In Chapter 5, we look at where the industry will go from here in the near to medium term.

Legal Corner

The communications industry primarily operates using a co-regulation model. The peak industry representative body is Communications Alliance, which (amongst other things) develops industry codes which are then presented to the ACMA for registration. Code compliance is voluntary but, upon registration, the ACMA can direct participants to comply with a code, upon which compliance becomes mandatory.

5

Business response to the data deluge

Over the last year, some key developments in the industry have included the following.

- Ongoing bundling and discounting of service offerings to encourage customer experience and retention (but, in some cases to the detriment of profit margins)
- Growth in data services which, in some cases, led to issues with copyright (for example, refer to Chapter 2 for a discussion of the iiNet and TV Now litigation)
- Considerable consolidation and merger activity in this industry, which are discussed further below
- Crossover to retail strategy, as carriers continue to streamline their distribution strategies and brand management

Looking ahead, the key trends for the near term arise in part from these shifts in the market, and in part from the market anticipating the rollout of the NBN. We describe these trends further below.

M&A activity to continue

We believe competition in the market will continue to intensify in the near term, as carriage service providers consolidate to gain market share and scale in an already saturated market and, in some cases, exit the market altogether. This is particularly so in the second tier market.

Whilst developing technologies and new revenue streams from data and content services will continue to grow, this growth will not compensate for the loss in revenue in the traditional services market. As a result, consolidation will be key to survival in this environment.

Therefore, we expect to see continued horizontal alliances between small to medium operators attempting to combine resources and infrastructure to maintain market share. We also expect to see big carriers swallow smaller operators and expand their markets through vertical integration (see below).

Whether such merger activity will lead to renewed growth in the industry will depend on how well industry players cooperate and consolidate. Continued consumer demand for data and instant connectivity, coupled with rapid technological developments, means consumers will be empowered to demand increased data at lower prices.

An example of this trend is the recent (28 June 2013) sale by Leighton Holdings of fibre-optic network NextGen, data centre designer-operator Metronode and cloud services provider Infoplex (Leighton Telecommunications Businesses) to Ontario Teachers' Pension Plan (OTPP). The transaction resulted in OTPP acquiring a 70 percent stake in the Leighton Telecommunications Businesses.

We expect to see continuing acquisitions and divestments in both the carrier infrastructure and customer base segments over the near to medium term.

The spectrum dilemma

Additionally, to meet the increasing demand for mobile data, carriers must either purchase additional spectrum or expand existing network infrastructure. Both options are potential drivers of M&A activity. Over the medium to long term, the ACMA expects that there be a significant shortfall in the spectrum available for communications purposes.

A recent example of "spectrum driven" M&A is the acquisition of Vividwireless Group Ltd (Vividwireless), an Australia-based wireless broadband and Internet services company, by Singtel Optus for A$230 million in 2012. The acquisition was a strategic move by Optus to acquire Vividwireless' radio frequency spectrum licence in the 2.3 GHz band, which would help in the build out of its super-fast 4G long-term evolution mobile services, in direct competition with its rivals, Telstra and VHA.

In April 2013 the ACMA auctioned off 15-year licences for spectrum in the 700 MHz (digital dividend) and the 2.5 GHz bands. The digital dividend is becoming available as Australia switches over from analogue to digital television services, which is currently underway and was originally due to be complete by December 2013. The 2.5GHz band is ideal spectrum for transmitting data and use with 4G technologies. This explains Optus' interest in Vividwireless' 2.3GHz spectrum as it possesses similar properties to 2.5GHz spectrum.

The ACMA offered spectrum in 5 MHz paired blocks as this is ideal for use by 4G devices. The combinatorial clock auction system was selected for the auction, following the model used previously in the UK, Ireland, Denmark, the Netherlands, Austria and Switzerland.

On 14 December 2012, the (former) Communications Minister issued directions to the ACMA to set a reserve price for 700 MHz spectrum at A$1.36 per MHz per person in the relevant geographic area. The reserve price for the 2.5GHz band was set at A$0.03 per MHz per person in the relevant geographic area. The reserve price for the 700 MHz spectrum was criticised by the industry as being too highly relative to international standards.[42] The auction results were announced by the ACMA on 7 May 2013. They are shown in the table below.

Bidder	Spectrum secured		Total price
	700 MHz band	2.5 GHz band	
Optus Mobile	2x10 MHz (20 MHz in total)	2x20 MHz (40 MHz in total)	$649,134,167
Telstra	2x20 MHz (40 MHz in total)	2x40 MHz (80 MHz in total)	$1,302,019,234
TPG Internet	Nil	2x10 MHz (20 MHz in total)	$13,500,000
Total spectrum sold	**2x30 MHz (60 MHz in total)**	**2x70 MHz (140 MHz in total)**	**$1,964,653,401**
Total spectrum unsold	**2x15 MHz (30 MHz in total)**	**Nil**	**N/A**

It is interesting that no carrier purchased the maximum amount of spectrum in the 700MHz range and there was 30 MHz left unsold. This has been largely attributed to the high reserve price.

Of the participating carriers, Telstra purchased the most spectrum that will assist it in maintaining its wide coverage.

The former Communications Minister Stephen Conroy has since released two draft Ministerial Directions in relation to the unsold 700MHz spectrum. The Australian Communications and Media Authority (Spectrum Allocation - Post-Auction Review) Direction No. 1 of 2013 directs the ACMA will to report to the Minister by 1 September 2014 on the appropriate procedures for the allocation of spectrum licences for unsold spectrum in the 700MHz band. The Radiocommunications - (Spectrum Access Charges - 700MHz Band) *Direction No. 1* requires that the access charge be no less than A$1.36/MHz/pop, which was the reserve price for the digital dividend spectrum auction.

Some carriers have also looked elsewhere to gain access to additional spectrum. For example, in May 2012, SingTel Optus and Vodafone Hutchison Australia announced proposals to expand existing mobile infrastructure and enter into site-sharing arrangements. The arrangement allows Vodafone to utilise Optus' network in selected regional areas, and may give Optus access to more sites around the country.

Over time, as demand for more spectrum to carry mobile data surpasses the amount of "new" spectrum available, carriers will need to find ways to better utilise existing spectrum whilst reducing the demand on spectrum assigned to mobile services. The Optus and Vodafone alliance is an example of alternative means to gain access to spectrum.

We also expect to see an increase in spectrum-sharing arrangements as advances in technology, including small cells (see discussion at Chapter 4), make it possible for mobile networks to use the same frequencies as other services. We also expect to see the continued growth of Wi-Fi, which shifts mobile users off the cellular network and onto Wi-Fi, thereby ceasing to use the carrier's spectrum.[43]

Vertical integration

In the current market, many operators still provide distinct services with independent revenue streams.

An obvious way to obtain a greater share of the revenue available in the market is to control an entire distribution chain. An example of an organisation in a related industry (IT) that has successfully achieved vertical integration is IBM, which develops its own infrastructure, computer platforms, operating systems and distribution chains.[44]

In the rapidly changing communications industry, we expect vertical integration to become an important strategy for participants. A recent example of vertical integration in the USA is Google's announcement of its proposal to build its own fibre network in the United States.

Business response to the NBN

The NBN will be a key catalyst for significant structural change in the industry. In addition, the industry is currently evolving in anticipation of the rollout. This will also continue to drive M&A activity.

However, business response to the NBN will vary under each of the following scenarios:

- The NBN is rolled out as planned by the former Labor government.
- As a result of the recent change of goverment, the NBN rollout is delayed or scaled back.

We discuss each scenario below.

The NBN is rolled out as planned

As discussed in Chapter 3, if the NBN is rolled out as planned, the major carriers will still retain a market advantage through their existing systems, distribution networks and brand. However, because the NBN is a structurally separate access network, it will allow in new entrants who are able to meet the costs of reaching scale.

In this environment, we expect business to concentrate on the following key issues:[45]

- Scale

  As access costs will be the same for all access seekers, the key to success will be attaining scale, as a way of overcoming the burden of large systems and infrastructure overheads associated with being an NBN RSP.

- Customer relationships
  Business will seek to differentiate themselves through marketing campaigns aimed at capturing customers.
- Convergence
  Business will continue to drive for technological change and provide bundled services to capture market share and differentiate themselves through their products.

Initially, we expect a proliferation of small entrants in the market whose business model will concentrate on reselling aggregated capacity that is acquired from larger carriers. However, as these small service providers gain scale, they will build their own fibre connections to key POIs in the NBN access network and will become carriers over time.

At the same time, carriers with mobile infrastructure will concentrate on driving revenue.

Smaller operators who are unable to align themselves with larger carriers to gain access to infrastructure and therefore are unable to achieve scale may eventually be squeezed out of the market.

Rollout is delayed or scaled back

However, following the recent election, it is likely that the NBN project will be paused or construction slowed down to allow the new government to assess the project and review the legislative framework including competition issues discussed in Chapter 4.

Prior to 2007, the Coalition's policy was to focus communications funding in underserved areas (that is, rural areas). As we mention in Chapter 3, the Coalition proposes to deploy FTTN technology in most areas, supplemented by FTTP technology in greenfield housing estates and in areas where existing copper needs to be replaced.

Under the former Labor government, the NBN rollout plan and business case assumed national rollout with cross-subsidisation of rural and metropolitan areas. However, if the Coalition intends to shift funding to underserved rural areas, then this will require significant amendments to the rollout plan and business case of the NBN and may mean consequential delays in rollout. In addition, the current agreement with Telstra will need to be significantly renegotiated to purchase the last mile of copper.

It is also clear the NBN project faces significant challenges in both deployment and rollout. This can be seen from recent media announcements of disagreements between NBN Co and its contractors and suppliers, including the recent failed negotiations between NBN Co and Ausgrid with respect to the leasing arrangements of Ausgrid's pole infrastructure.[46]

On 3 April 2013, Ausgrid issued a media release stating that the negotiations between itself and NBN Co for NBN Co to lease Ausgrid's pole infrastructure to assist the NBN rollout had failed and NBN Co had elected to use the powers granted to it under the Telecommunications Act to use the pole infrastructure.

Conclusions

The one certainty in the communications market is there will be ongoing change. Watching this change develop over the near to medium term will be a fascinating experience.

Annexure - Legislative framework

Relevant legislation/quasi-legislation governing telecommunications carriers and the ACMA includes:

- *Telecommunications Act 1997* (Cth);
- Telecommunications Code of Practice 1997;
- Telecommunications (Low-impact facilities) Determination 1997; and
- *Telecommunications (Consumer Protection and Service Standards) Act 1999.*

The central legislative enactment regulating the telecommunications industry is the *Telecommunications Act 1997* (Cth) (the Act). The main stated objective of the Act is to provide a regulatory framework which promotes:

- the long-term interests of end-users of carriage services or of services provided by means of carriage services; and
- the efficiency and international competitiveness of the Australian telecommunications industry.

The Act seeks to regulate the telecommunications sector by addressing the activities of two main entities: carriers and service providers.

Carriers

The primary focus of the Act is on carriers. A carrier must be a corporation, partnership or a public body. A carrier licence must be obtained by the owner of one or more network units used to supply a carriage service to the public, or by a carrier nominated by the owner and authorised by the ACMA to operate the network unit or units pursuant to a "nominated carrier declaration".

There is a distinction in Australian regulation between a telecommunications carrier or service provider, and a "broadcasting services" provider. The provision of commercial television/radio, subscription television, community broadcasting and data transmitter licenses are all regulated instead by the *Broadcasting Services Act 1992* (Cth).

There are about 200 active carrier licences in Australia. There is no licensing requirement for service providers, although their activities are regulated by legislation, including service provider rules.

Industry Codes

Representative bodies of the communications industry (principally the Communications Alliance) develop industry codes which are then presented to the ACMA for registration. Upon registration, the ACMA can direct participants to comply with a code, upon which compliance becomes mandatory.

When a code is being developed under this regime, the ACMA must consider whether certain conditions have been met before it can register the code. These conditions include:

- whether the relevant parties have been consulted (e.g. the ACCC, OAIC, other industry and consumer bodies, and the general public); and
- whether the code provides adequate community safeguards or, where the code does not deal with matters relevant to the community, adequately deals with the matters covered.

Once a code is registered by the ACMA, it becomes effective, and the ACMA can enforce compliance with the code.

TCP Code

The Telecommunications Consumer Protections (TCP) Code 2012 is an important industry code of conduct. It was developed by the CA and registered by the ACMA on 1 September 2012. It provides community safeguards in the areas of sales, service and contracts, billing, credit and debt management, changing suppliers, and complaint handling. It also sets out a framework of code compliance and monitoring. See Chapter 4.

Glossary

Term	Definition
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
ACMA Standard	Industry Standard 2013 as produced by ACMA
ADSL	Asymmetric digital subscriber line
AFACT	Australia Federation Against Copyright Theft
ALRC	Australian Law Reform Commission
Attorney-General's Department	Australian Government Attorney-General's Department
CA Scheme	Proposed copyright infringement scheme as developed by Communications Australia Ltd
CCA	Competition and Consumer Act 2010 (Cth)
CCC	Competitive Carriers' Coalition
Communications Alliance	Communications Alliance Ltd
Copyright Act	Copyright Act 1968 (Cth)
CSP	carriage service provider
DBCDE	Department of Broadband, Communications and the Digital Economy
DSL	digital subscriber line
DSLAM	digital subscriber line access multiplexer
FAN	fibre access node
FCA	Federal Court of Australia
FFCA	Full Court of the Federal Court of Australia
FTTN	fibre to the node
FTTP	fibre to the premises
GHz	gigahertz
HCA	High Court of Australia
HFC	hybrid fibre coaxial
iCode	ISP Voluntary Code of Practice
iiNet	iiNet Limited
Information Commissioner	Office of the Australian Information Commissioner
Internode	Internode Pty Ltd
IPO	initial public offering
ISP	Internet service provider
MHz	megahertz
NBN	National Broadband Network
NBN Co	NBN Co Limited
Optus	SingTel Optus and its Australian subsidiaries
POI	point of interconnection
Privacy Act	Privacy Act 1988 (Cth)
PSTN	public switched telephone network
RSP	retail service provider
SAU	special access undertaking

Term	Definition
SSU	structural separation undertaking
Telecommunications Act	Telecommunications Act 1997 (Cth)
Telstra	Telstra Corporation Limited
TCP Code	Telecommunications Consumer Protections Code C628:2012
The Minister	The Minister for Broadband, Communications and the Digital Economy
TIO	Telecommunications Industry Ombudsman
TPP	Trans-Pacific Partnership
Vividwireless	Vividwireless Group Ltd
Vodafone	Vodafone Hutchison Australia
VoIP	voice over Internet protocol

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