Six emerging trends in media and communications
Occasional paper

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Introduction

The ACMA monitors industry and consumer data to identify changes in the media and communications environment and their impact on regulatory settings. Previous ACMA research, such as *Broken concepts*¹ and the *Emerging issues*² series of papers, has identified areas of regulatory strain resulting from changes in this environment. The ACMA’s 2014 data collection program highlighted six further trends that are of particular interest as they indicate challenges to the regulatory frameworks within which the ACMA works. These trends illustrate how developments in communications device technologies and over-the-top (OTT) services and content offer both:

- new opportunities for businesses and individuals as consumers and citizens
- potential challenges to confident and optimal use of these new services.

The evolving media and communications environment offers new ways to understand and achieve policy objectives, and may expose alternatives to ‘black-letter’ regulation.

However, changes in media and communications can also strain the effectiveness and efficiency of existing regulatory settings designed in an environment where content and communication services have been delivered by network owners over dedicated networks and devices. The selected trends highlight that consumers are increasingly using personalised access pathways to communications and content services that cut across different networks, devices and services. This paper looks at the implications of these six trends for existing regulatory settings.

Trends overview

A short overview of each of the six trends is provided below:

**Communications goes over-the-top (OTT)**

Trend data in this paper confirms that consumers are increasingly using OTT services. Globally, the volume of OTT mobile messages sent has overtaken SMS traffic, while the number of Australian home VoIP users has grown to nearly half the number of fixed-line phone services. Historically, telecommunications regulation has covered voice communications delivered over the copper network, but this now represents a declining set of communications services. These developments in OTT voice services suggest that it is timely to look again at how existing regulation might align with emerging OTT consumer behaviour. While incremental regulatory changes can often address individual problems, it also increases the risk of creating a fragmented rather than a coherent regulatory framework.

**Consumers build their own communications links**

Another feature of the expanding take-up of OTT services is consumers using the communications ‘building blocks’ at network, service and device levels to construct their own communication access pathways. Consumers can often choose a different option if one service is not working, effectively building additional redundancy and robustness through self-management of their communications network and service access. These decentralised modes of connection mean regulation may need to address public interest outcomes such as end-to-end connectivity and universal service in new ways.

For example, the traditional universal service obligation could be met by means other than a regulated service of last resort, in cases where the individual consumer has multiple pathways to achieve a network and service connection.

Wearable devices—personalised data arrives
There is a rapidly growing number of internet-accessible wearable devices that allow individuals to track their activities. Real-time continuous information on a range of personal indicators can offer numerous benefits, including improved health monitoring and increased productivity. Wearable devices may provide new avenues to deliver important consumer and market outcomes. For example, there is the potential for devices to automatically contact emergency services and instantaneously transmit detailed health and situational information. There is a concurrent growing interest in privacy and security management as increasing amounts of personal data are generated by these devices.

‘Flexible’ TV—online expands viewer options
Flexible TV refers to the expanding range of service options for viewers to access content from free-to-air television, subscription television, catch-up television or online video. While broad broadcast television viewing retains its hold on Australian audiences, OTT video content is now a commonly used complementary platform, with 50 per cent of online Australians having watched some form of internet television within a six-month period. This trend data further confirms the observations first contained in the ACMA’s 2010 Broken concepts paper—that the same content, delivered by the same content producer, is regulated differently depending on the distribution platform used. This inconsistency is expected to become even more pronounced as the availability and take-up of online video services increases in Australia.

Multi-screening is mainstream
The television screen remains key to the Australian household entertainment experience. Increasingly, viewers are using second (and even third) screens when they watch television. Two opposing effects are apparent from Australians changing screen behavior. For some audiences, there is a deeper connection with the television content; for other audiences, attention is split. The emergence of second-screen behaviour has potential implications for the regulatory concept of influence and for content-related industry obligations. For example, as second-screen content becomes mainstream, and audiences view it as a core part of their entertainment experience, they may transfer the expectations they have of broadcast television to the second screen. Conversely, the experience of second- and third-screen viewing may affect expectations about the content experience on the television screen. These developments were not envisaged within the current regulatory framework and there may be a variety of pressures to recognise changing and diverse community expectations of content protections within existing regulation.

TV is still the main news source, even as platforms shift
Broadcast television remains the main source of news, including for Australians accessing news online. Nonetheless, as part of the regulation of media diversity, citizens’ consumption of a more interactive and dispersed set of news sources is important to the way that regulators measure and assess the influence of news and the diversity of media voices. How the changing environment for the production, supply and consumption of news may be affecting media diversity is highly contestable. Nevertheless, the accurate measurement of online news, and content consumption more generally, is undergoing considerable innovation and is the subject of discussion between industry and regulators internationally.
Some observations on existing regulation

This paper primarily focuses on consumer behaviour data to identify trends in the media and communications environment. In turn, these trends may have some implications for changing industry structures and business models that also raise regulatory issues (although such structures and models are not the primary focus here). This paper provides some observations on the implications of these consumer and audience trends for existing regulation. However, it is not intended to be comprehensive.

By way of background, in the current communications and media environment, there are two broad service constructs in use. The first is service-specific networks and devices that have delivered voice, data and audiovisual communications and content. At their most straightforward, dedicated service networks connect end users to specific devices used to deliver different forms of communications and content (see Figure 1).

The second construct is internet protocol (IP) network architecture that underpins the provision of OTT services and content. IP network architecture can be understood in terms of defined network and service layers broadly comprising infrastructure, digital/IP transport, applications/services and content layers. While the network-layered architecture provides a useful conceptual model, in practice these layers are blurring through software-defined networks and infrastructure-like content and services. The increasingly virtualised nature of these layers means that there may not be a physical or, for regulatory purposes, a conceptual delineation that can be made between each layer. Infrastructure functions can be software-defined and the content layer can provide connections of services that are ‘infrastructure-like’.

This paper looks at Australians’ changing communications and content use across these two broad service constructs.

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3 There are other network models identifying different numbers of layers. For example, the OSI Reference Model defines seven network layers. See What is OSI Model and the Overall Explanation of ISO 7 Layers, 27 March 2013.

4 Refer to ACMA, Broken concepts, October 2013, pp. 1–4 for a more detailed discussion of this subject.
The ACMA has also drawn on its *Broken concepts* analysis of regulatory concepts to inform the following discussion about some of the regulatory implications arising from consumer and audience involvement in the changing communications and media environment. This earlier analysis offers a useful basis for assessing the utility of existing regulation in the context of communications and media developments; in particular, whether any of these developments contribute to:

1. A *misalignment* of policy and legislative constructs with market, behavioural and technological realities.
2. Gaps in the existing framework’s coverage of new forms of content and applications.
3. Misplaced emphasis in the legislative framework or underlying policy that skews the burden of regulatory activity and attention towards traditional media or communications activity.
4. *Blurring* of boundaries between historically distinct devices, services and industry sectors leading to inconsistent treatment of like content, devices or services.
5. *Mainstreaming* of innovations with associated changes in community expectations.
6. *Piecemeal* responses to new issues. Communications and media legislation has been incrementally amended and supplemented to address the rapid change occurring in the communications sector over the past two decades. The cumulative impact of these changes can reduce the overall coherence of the regulatory scheme.
7. *Institutional ambiguity* as a consequence of sectoral convergence such that several regulators—or no regulators—have a clear mandate to address pressing market or consumer concerns.

The relevance of identified trends in this paper is discussed in terms of these seven regulatory consequences. In many cases, trend data further confirms areas of regulatory pressure identified in the *Broken concepts* papers.
Each of these consequences is represented in at least one of the trends. In practice, each development has multiple consequences for existing regulatory settings. For example, while almost all the issues examined in this paper illustrate gaps where new activities are not recognised in existing regulatory concepts, simply filling those gaps would not necessarily be appropriate or efficient, or may not solve the specific regulatory problem posed. The complex and interconnected regulatory consequences suggest that often a multi-faceted approach is required that takes into account the changing environment and the changing balance of industry and consumer risks and harms.

**Purpose**

The ACMA has statutory obligations to report and advise the Minister for Communications, and to inform industry and the public about telecommunications, broadcasting and internet services.

The ACMA has developed a research program to provide an evidence-informed approach to meeting these obligations and its decision-making. Research informs the development of graduated regulatory response strategies, and reviews of regulation, including where there are opportunities to reduce direct regulation, adopt industry co- and self-regulatory solutions, or remove redundant regulation, consistent with a better-practice regulatory focus. There is a continued focus on measuring and assessing the benefits of regulation, and adapting regulatory and non-regulatory responses to address OTT and internet-based communications and content issues.

Each sector of media and communications is approaching its own tipping point, and each issue reflects a different balance of convergence pressures, prospects for red-tape reduction and opportunities for broader regulatory reform. Research helps in identifying the scope and case for change, and the design of effective regulatory and non-regulatory responses.

This program, researchacma, has five broad areas of interest:

> market developments
> media content and culture
> social and economic participation
> citizen and consumer safeguards
> regulatory best practice and development.

This occasional paper contributes to each theme of the researchacma program.
Communication goes OTT

Background
Consumers are increasingly using communications services delivered over the top (OTT) of the communications network. For example, OTT mobile messaging applications such as WhatsApp and KakaoTalk have global user bases of over 100 million each, while VoIP services are routinely offered as a fixed home phone alternative.5

Fixed-line network revenues decline
In the Australian context, OTT communication services are affecting traditional fixed-line voice revenue streams alongside fixed-mobile substitution trends. The decline in Australian wired telecommunications network revenue from $18.296 billion in 2008 to $12.045 billion in 2013 represents a 34 per cent reduction over this five-year period. In contrast, wireless telecommunications carriers' revenue increased from $15.967 billion to $20.014 billion over the same period.6

Figure 2 Declining wired telecommunications revenues in Australia

IBISWorld, Wired Telecommunications Network Operation in Australia, April 2014, p. 35.

This reduction in Australian wired telecommunications revenue reflects fixed-mobile substitution, as well as consumers moving to other means of communication, including VoIP, messaging applications and other services. For example, a variety of services enable users to avoid standard international voice call rates, such as prepaid SIM cards and Wi-Fi call applications. OTT VoIP and mobile messaging are two major examples of the move to OTT communications.

5 WhatsApp had 600 million users at August 2014. See Christian Bautista, 'WhatsApp now has 600 million active users, according to its founder', 26 August 2014. KakaoTalk reported that it had 140 million users in 2013. See Willis Wee, ‘KakaoTalk reveals it has 140 million users, made $203 million in revenue last year’, 19 April 2014.

6 IBISWorld, Wireless Telecommunications Carriers in Australia, February 2014, p. 32.
**VoIP subscribers increase**

One analyst firm forecasts that by 2018, 39 per cent of total consumer OTT VoIP minutes in Australia will comprise minutes substituted from Australian telecommunications operator minutes. Total Australian home VoIP users increased from 2.1 million in June 2009 to 4.6 million in June 2013, just under half of the number of fixed-line home phone services in Australia.

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**Figure 3 Take-up of VoIP by household consumers and fixed-line home phone services in Australia, 2009–13**


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**Mobile messaging overtakes SMS**

OTT mobile messaging has experienced strong growth in recent years. One analyst group found that, globally, OTT messages overtook the number of SMS in 2012. The monthly active users of WhatsApp grew from 400 million worldwide in December 2013 to 600 million in August 2014, illustrating the strong growth in OTT messaging services.

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7 Emeka Obiodu, Ovum, *Consumer OTT VoIP Forecast: 2013–18*, November 2013. Note: Ovum defines ‘consumer OTT VoIP’ as a call that originates from an OTT platform (either an application or computer-based software).

8 Informa, ‘*OTT messaging traffic will be twice volume of P2P SMS traffic this year*’, 30 April 2013.

9 Christian Bautista, ‘*WhatsApp now has 600 million active users, according to its founder*’, 26 August 2014.
Unlike carriage services, OTT messaging apps are not tied to a national location and are generally part of a global service. The major OTT messaging services include iMessage (Apple), Viber, Kakao Talk, WhatsApp, Facebook Messenger and Snapchat. None of these services is Australian-based or owned by an Australian telecommunications service provider.

Some observations on existing regulation

The move to OTT communications services represents a significant shift in consumer behaviour. The number of VoIP users is now nearly half the number of total fixed-line services in Australia and, on a global scale, OTT mobile messaging volumes have overtaken SMS. The number of Australian mobile phone users without a home fixed-line phone (3.68 million at June 2013\(^\text{10}\)) continues to grow and increasingly consumers are using alternative communications—including substitutes to voice telephony—as their main source of contact. This trend is eroding the utility of technology-specific safeguards, as noted in the ACMA’s earlier Broken concepts analysis.

In response to these developments in the market and changes in consumer use of services, new communications services are, where possible, being facilitated using existing regulatory mechanisms. One example is the 2011 variations to the Numbering Plan. Among other changes, this allowed VoIP providers to use geographic and location-independent communication services numbers for carriage services that are only capable of making outgoing calls.\(^{11}\) While specific changes can facilitate particular services and resolve individual problems, incremental changes risk creating fragmented, rather than coherent, regulatory schemes.

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\(^{10}\) ACMA, Communications report 2012–13, November 2013, p. 8.

\(^{11}\) The Telecommunications Numbering Plan Variation 2011 (No. 1) allowed VoIP providers to use geographic and location-independent communication services numbers for carriage services that are only capable of making outgoing calls. It also provided a framework for geographic numbers to be used for carriage services outside their normal area. Refer to the Explanatory Memorandum for more information.
Another consequence of these developments is that the historical focus of telecommunications regulation—voice services delivered over the copper network—now represents a declining set of communications services, resulting in gaps in regulatory coverage for OTT service users. For example, many underpinning telecommunications regulatory concepts such as the Standard Telephone Service (STS) do not readily incorporate alternative forms of communications, such as VoIP or messaging applications on social networking services. The *Telecommunications (Consumer Protection and Service Standards) Act 1999* defines the STS as a carriage service for the purpose of voice telephony that passes the connectivity test, and it is service- and technology-specific. The STS underpins a range of consumer safeguards, including the universal services regime and access to untimed local calls.

As consumers expand their communications service options, there is a risk of both misalignment between regulatory settings and market realities, and of misplaced regulatory emphasis on services that make up a declining percentage of total communications activity. These OTT developments suggest it is timely to look again at how existing communications protections might align with emerging OTT consumer behaviour. Possible regulatory responses to this environment include:

> reducing regulation or identifying alternative means of achieving policy objectives
> removing regulation that is no longer relevant or effective
> updating regulation to reflect environmental realities.

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Refer to ACMA, *Broken concepts*, October 2013, pp. 61–3 for more discussion of this subject.
Trend 2 Consumers build their own communications links

Background

Broad take-up of OTT services gives consumers access to a variety of functions using multiple combinations of networks, technologies, devices and services. While previously consumers may have had a home phone, a broadband connection via a digital subscriber line (DSL) connection and a mobile phone, they can now have several:

- network access options, such as fixed, mobile, Wi-Fi hotspots
- devices for communications, such as mobiles, tablets, laptops, wearable devices
- communication options, such as messaging apps, OTT VoIP, social networks such as Facebook.

Figure 5 Diverse communications options

Source: ACMA
Another feature of this expanding take-up of OTT services is that individuals are now able to use these network, service and device ‘building blocks’ to construct their own communications links. For example, a person may use a range of methods to contact a friend depending on location and other environmental context. At a cafe, he or she may access public Wi-Fi using their mobile device and use an OTT messaging app to send a message to a friend. At home, that same person may access their mobile network using a tablet to use a social networking application for the same purpose. Or they may use a fixed-line telephone.

Communications services themselves may detect the appropriate network based on the context of a situation. For example, Apple’s iMessage is a messenger service that will select how to send a message depending on the device used by the message recipient. The iMessage service automatically sends messages as an SMS to contacts with a non-Apple device, and sends the same message as an iMessage over the data network to contacts with an Apple device. Consequently, the same message sent at the same time to two contacts may be sent as both an SMS using the mobile network and an OTT message.

Figure 6 Consumers have the building blocks for communications

Source: ACMA
Each service, device or network access can have different:
> consumer expectations attached to them, depending on the context of their use
> relationships with the service provider
> expected length of use (one-off to long-term)
> regulatory treatment.

**Australians are using multiple devices**

Australians are using an increasing number of devices to communicate. A recent survey found that the number of respondents owning a tablet, laptop and smartphone had increased from 28 per cent in 2013 to 53 per cent in 2014.13

**Consumers use multiple communications services**

Individuals are also using a diverse set of communications services. More than 50 per cent of respondents to an ACMA survey used social networking, a fixed-home phone, texting, email and a mobile phone.

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**Figure 7 Communications services used in the last six months**

<table>
<thead>
<tr>
<th>Service</th>
<th>May-13</th>
<th>May-12</th>
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</thead>
<tbody>
<tr>
<td>Mobile phone calls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Texting from a mobile phone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed-line telephone at home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social networking (e.g. Facebook, blogging)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet telephony (e.g. VoIP, Skype)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instant messaging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public payphone</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Base:** People with a fixed-line telephone and/or a mobile telephone.

**Note:** Multiple responses allowed.

**Source:** ACMA-commissioned surveys, published in ACMA, Communications report 2012–13, p. 20.

In particular, the 18–24 age group is likely to use multiple communications services, with 63 per cent using six or more services.

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Consumers may also have different contractual and usage arrangements across these services. Not all of these networks will:

> be permanent or even long term
> provide any-to-any connectivity\(^\text{14}\)
> offer an adequate quality of service all of the time.

Alternative communications services are becoming increasingly important to consumers—nine per cent of respondents to an ACMA consumer survey cited social networks as their most used form of communication. Of the 18–24 age group, 26 per cent cited social networks as their most used form of communication in the last six months, making it the second most-used form of communication for this age group after texting.\(^\text{15}\) Social networks typically:

> restrict connections to other members of the service
> do not guarantee quality-of-service standards
> are not necessarily used long term, particularly when new services are constantly appearing. Recent examples include Vine (video-sharing site launched in 2013), Kik (messaging app launched in 2010), Pheed (launched in 2012) and the creation of a separate Facebook Messenger app in 2014.\(^\text{16}\)

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\(^{14}\) By any-to-any connectivity, this paper means that the service allow users to connect to other users of the service regardless of the network they are using. For example, users of some messaging apps can only send communications to members of the same messaging service.

\(^{15}\) ACMA-commissioned research, May 2013.

\(^{16}\) Facebook Messenger was previously only available through the Facebook app.
Some observations on existing regulation

A positive consequence of the range of communications services now in use is that a consumer may have multiple pathways to establish a network connection to a service or device. The ready availability of an alternative connection offers additional robustness and redundancy. If one service is not working, a consumer may be able to choose a different connection option. For example, if the mobile network is temporarily unavailable, a consumer may be able to use their fixed broadband connection to make an OTT VoIP call.

Concepts such as a service provider of last resort underpin the traditional regulatory obligations of telecommunications universal service. For example, the universal service obligation requires the universal service provider to make a standard telephone service and/or payphone reasonably accessible to all Australians. This obligation is designed to achieve the social and economic good of all Australians being able to connect to each other and to emergency services, public services and general information services. There is potential in this emerging OTT service environment—where alternative network and service pathways can be established by an individual consumer—for this obligation to be achieved in ways other than a regulated service.

Much of the telecommunications regulation that the ACMA administers, including industry codes such as the Telecommunications Consumer Protections (TCP) Code, provides protections for consumers who have a contractual relationship with a carriage service provider. Since these regulatory processes and structures were put in place, consumer communications behaviour has evolved to incorporate a more sophisticated web of communications links comprising a range of networks, devices and services.

New communications services are appearing constantly, allowing consumers to choose (sometimes temporarily) new ways to contact others. This structure of communications—often transitory, of variable quality and restricted in its base of users—may well challenge the relevance, efficiency and effectiveness of established communications regulation built on regulatory concepts like carriage service provider and standard telephone service.

This environment of innovation can also have implications for industry certainty and consumer confidence. Some communications services offer a range of functions, including financial purchases, which can blur the boundaries between financial and telecommunication services, and bring telecommunications services used for financial transactions into the ambit of financial regulation. Such a shift would raise questions for consumers about what safeguards to expect and where to go for regulatory assistance. Similarly, it might have an impact on industry certainty about applicable regulatory settings.
Wearable devices—personalised data arrives

Background

Wearable devices are monitoring or communications technologies that can be worn on the body; for example, in clothing or accessories. Currently available types of wearable devices include:

- **Smart watches**—these devices transmit information to and from the smartphone to the smart watch on the user’s wrist. Capabilities include texting, biometric functions and location-based services.
- **Health and fitness devices**—these can include health scanners and fitness monitors. Capabilities can include sleep- and movement-tracking.
- **Google Glass**—users wear glasses that are able to perform a variety of functions including navigation, music, communications, movement-tracking, and information and search services.

Cisco forecasts that wearable devices will increase from 22 million globally in 2013 to 177 million in 2018.

The increasing market for wearable devices is reflected in Google’s recent release of Android Wear, a mobile operating system designed specifically for wearable devices. Apple has announced the availability of its Apple Watch from early 2015. A US-based study found that there had been considerable growth in wearable device purchases in the last six months—60 per cent of respondents had purchased a wearable device in the last six months, compared to 11 per cent within the last 12 to 18 months.

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The forecast number of wearable devices is expected to remain small compared to the number of personal or handheld mobile devices in 2018, although 177 million still represents strong growth in wearable devices and substantial global use. The forecasts include Australian adopters (see Table 1).

Table 1 Mobile and wearable devices

<table>
<thead>
<tr>
<th>Device</th>
<th>2013</th>
<th>2018</th>
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<tbody>
<tr>
<td>Mobile devices (Personal/hand-held)</td>
<td>7 billion (6.7 billion)</td>
<td>10.2 billion (8.2 billion)</td>
</tr>
<tr>
<td>Wearable</td>
<td>22 million</td>
<td>177 million</td>
</tr>
</tbody>
</table>


Wearable devices offer individual and economy-wide benefits

Wearable devices collect a broad range of observed data, including biometric, location and communications information. Data such as physical activity is collected by wearable devices on an ongoing, continuous basis. Some wearable devices may also be able to collect particularly sensitive information, such as health data. For example, one wearable device tracks ECG, heart rate, heart rate variability and other biometric indicators.20 The emergence of wearable devices and their ability to produce, collate, analyse and distribute information in real time will likely further encourage growth in data-driven business models.

Availability and collection of such data can have both individual and economy-wide benefits. Individuals may benefit from the collection of information, real-time access to their own health and fitness information, potential health prevention benefits, tailored advertisements and product offerings, and the receipt of personalised services at a manageable cost. Individuals are choosing to wear wearable devices that monitor health and fitness indicators, such as sleep and active minutes tracker, with the expectation of positive effects on health and wellbeing. There is also the opportunity for increased business productivity; for example, through real-time access to information and improved customer service.21

Wearable devices can also be one way to contact, or be found by, emergency services. The FiLIP wearable smart locator designed for children can make and receive calls to parents and provides the child’s location. There is also an emergency button that begins ambient recording and connects the child to emergency services.

One consequence of the growth in wearable devices is the increase in the amount and value of data exchanged via device use. Individuals are already volunteering personal information through blogs, interactive sites, social networking services, applications and other online activities.22

Increases in the take-up of wearable devices suggests that the amount and sensitivity of data available online will expand significantly, given the diverse range of personal information such devices can collect on a constant basis. One analyst firm has forecast the amount of available data to be growing at around 45 per cent year-on-year, with available data reaching around seven zettabytes by the end of 2015. This equates to more than 1,000 gigabytes of data for each person on earth.23

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20 Best Fitness Tracker Reviews website.
Some observations on existing regulation

The collection of real-time data by wearable technologies presents a range of opportunities for telecommunications regulation to be more efficient and effective—such as the capability to collate and synthesise real-time contextual information that could be applied to critical services.

One example is the potential for the use of wearable devices to contact emergency services.24 The Department of Communications, in its discussion paper *Review of the National Triple Zero (000) Operator* (July 2014), is already anticipating the potential for automatic devices to be used in contacting emergency services.25 The paper notes the advantages for automatic contact when the user is incapacitated, and the potential ability to send stored medical information and data on the emergency incident. But it also notes the potential of an increased rate of non-genuine contact with the emergency call service and that a two-way conversation may not be possible. Existing regulation for emergency services is structured to support voice calls. But harnessing the potential wider set of information collected via wearable devices to support emergency service contact would require a more detailed consideration about how such devices and real-time information could be integrated into existing emergency service arrangements.

While there are many potential benefits and applications from the real-time information collected via wearable devices, there are also some barriers to wider adoption. ACMA research has found that many consumers want better information about the collection and use of their personal data to allow them to manage privacy issues in this environment.26

Protecting the personal information of consumers becomes more complex in an environment of multiple avenues to display, communicate and record personal data. For example, developments in data-driven marketing can mean that an individual’s online presence is the target of commercial messages rather than the traditional methods of telephone or email contact. In the Australian regulatory context, this poses challenges for the ongoing effectiveness of measures to reduce nuisance communications, based on the concept of ‘unsolicited commercial electronic messages’ as set out in the *Spam Act 2003*.27

Around the world, responses are being developed to manage and mitigate risks. The European Union introduced a Privacy and Data Protection Impact Assessment (PIA) Framework for Radiofrequency Identification (RFID) Applications. RFID applications are similar to wearable devices as they can automatically collect personal data for a variety of purposes including assets-tracking and automatic payments. Information stored on the tag may include identification, location and product information. The PIA Framework provides a methodology to assess and mitigate privacy risks associated with RFID tags and is the result of an agreement between industry, standards bodies, consumer organisations, trade unions and civil society groups to respect the EU Commission recommendation to set out principles for privacy and data protection in the use of RFID tags.28 The definition of personal information for the purposes of the

24 The ACMA regulates and monitors the provision of emergency call services and is interested in innovations that may affect these services.
26 ACMA, *Privacy and personal data—Emerging issues in media and communications, Occasional paper 4*, June 2013, p. 27.
27 For further discussion of this issue, see the case study on unsolicited commercial electronic messages in ACMA, *Broken concepts*, June 2013, pp. 84–5.
RFID PIA framework is restricted to a few types of data used for a set type of purpose. Sensitive data includes health, genetic and biometric information, and information on children.

In the United States, information and education are the preferred strategies for data risk management. The US Federal Trade Commission’s report on data brokers, Data Brokers—A Call for Transparency and Accountability, recommended that consumers are given more information on what data is collected on them and are able to access the information data brokers hold on them.  

29 FTC, Data Brokers—A Call for Transparency and Accountability, May 2014, p. 49.
‘Flexible’ TV—online expands viewer options

Background
Flexible TV refers to the variety of service options for viewers to access content including from:
- free-to-air television
- subscription television
- catch-up television
- online video.

Broadcast television remains an important part of Australians’ entertainment habits. Recent ACMA research found that 97 per cent of respondents had watched free-to-air (FTA) or subscription television in a typical week. Time spent watching television has declined only slightly over the past decade, with total television viewing time reducing from 190 minutes per day in 2001 to 172 minutes per day in 2013. At the same time, Australians are using a growing number of viewing entertainment platforms in addition to traditional television viewing.

Figure 10 TV watching habits in Australia, 2001–13

Source: OzTAM 2001–13. 2008–13 data includes free-to-air multichannels. 2010–13 is consolidated (includes time-shifted viewing; live-only viewing was measured prior to 2010). Annual averages are for five metro cities, 6 am–midnight, Sunday–Saturday.

Time spent viewing data is averaged across all television households.

30 ACMA, Community research informing the Contemporary community safeguards inquiry—qualitative and quantitative findings, March 2014, p. 10.
Online content is mainstream

Online video content has expanded available entertainment options beyond scheduled broadcast television. Consumers are building their own content delivery paths at a device, network and service level. For example, an individual may view an ABC television program through a scheduled television broadcast, the ABC television catch-up website or a different online content delivery service via computer, tablet or phone.

Figure 11 Consumers view content in a range of ways

Source: ACMA

Fifty per cent of online Australians\(^{31}\) watched some form of internet TV within a six-month period, including:

- professionally produced content (such as broadcasters’ catch-up TV websites)
- pirated content
- videos streamed from sites like YouTube.

The use of internet TV is particularly prevalent among young people. In 2013, online Australians aged between 16 and 24 spent more time watching internet TV than broadcast television at the scheduled program time\(^{32}\), representing a generational shift in the delivery and consumption of content. ACMA research has found that 78 per cent of people aged 14–15 and 80 per cent of people aged 16–17 used the internet to search for or watch videos, movies and television.\(^{33}\)

\(^{31}\) ACMA research found that 91 per cent of Australians had accessed the internet in the six months to May 2013.

\(^{32}\) The Nielsen Company

\(^{33}\) ACMA, *Like, post, share—young Australians’ experience of social media*, 2013, p. 28.
Gaining access to films, packaged seasons of television series and other similar content via online rather than physical means is increasingly common. One survey found that 26 per cent of Australians surveyed stated they will most likely watch films and packaged television content via online digital sources in the next 12 months. An additional 32 per cent stated they would use a mix of physical and digital sources to gain access to films and packaged television content.34

In Australia, on-demand or catch-up TV services of the broadcast networks, such as ABC’s iView, is the most popular way in which Australians access professionally produced online content. A May 2013 ACMA survey found that of the 7.86 million Australians aged 18 years and over that had accessed professionally produced online video content services, 6.69 million (85 per cent) accessed a catch-up television service. This compared to 1.94 million (25 per cent) who accessed a video-on-demand service and 1.38 million (18 per cent) who accessed a commercial online television service.35

The increasing number of online video services available in Australia may further increase online content consumption. Recent developments include:

- Stan—announced by StreamCo (co-owned by Fairfax Media and Nine Entertainment) in November 2014. The service will be ready for trial shortly.36
- Foxtel’s Presto online movie service—launched March 2014
- Netflix—in talks about an Australian launch of its service, reported to be in 2015.37

**Hbb TV introduced in Australia**

The Hbb TV standard represents another step in the evolution of online television delivery and a further blurring of distinctions between broadcast and internet television content. Like IPTV, internet video and broadcaster catch-up sites, this standard enables consumers to view broadband-delivered content via their television sets.

Freeview Plus, using the Hbb TV standard, is a service launched jointly by Australian FTA channels in September 2014 that may encourage further take-up of online delivery of television.38 Take-up will be limited by the number of Hbb TV-ready devices available and sold in Australia. The Freeview Plus service allows users to view catch-up and live television through the same screen. Consumers can already view catch-up television via their internet-ready television sets, but this service will further blur the distinction between internet and broadcast network-delivered content, as both are available via the same electronic program guide (EPG).39 Other than for live-to-air or near-live content, the viewer is expected to see little difference between old content broadcast in the previous seven days and delivered over the internet, and live content. Foxtel offers a similar service, where internet-connected Foxtel iQ boxes allow customers to view content screened in the past seven days via their internet connection.

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35 ACMA, *Communications report 2012–13*, p. 11.
36 Stan website
37 Josh Taylor, ‘Netflix Australia will not be the Netflix you are looking for’, *ZDNet*, 30 June 2014.
Video is an increasing proportion of network traffic

Turning to other markets, OTT content consumption is driving other changes in market structure and demand for communications infrastructure to support peak viewing. Internet traffic forecasts reflect the view that the internet is both a content distribution and consumption platform. While there are differences in forecast traffic estimates, embedded video streaming in applications and services is expected to drive global fixed and mobile broadband traffic in the future. Cisco estimates are outlined in Table 2.\(^{41}\)

<table>
<thead>
<tr>
<th>Network type</th>
<th>Percentage of network traffic that is video</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
</tr>
<tr>
<td>Mobile</td>
<td>53</td>
</tr>
</tbody>
</table>


Consumer take-up of OTT television services is further advanced in markets outside Australia. One survey found that 47 per cent of US households subscribe to one or more of the OTT TV services Netflix, Hulu Plus or Amazon Prime.\(^ {42}\) Netflix offers streaming television and film content online in the US, as well as other countries in North and South America, the Caribbean and Europe. In the US, Netflix accounts for some 34 per cent of US fixed access downstream traffic during peak period traffic.\(^ {43}\)

Some observations on existing regulation

While broadcast television remains the primary audiovisual content source for Australians\(^ {44}\), OTT delivery of content has a wide mainstream user base. One aspect of this trend is increased video traffic on fixed and wireless broadband networks. The forecast increase in mobile video traffic may place additional pressure on spectrum availability in the future. As reflected in the Five-year spectrum outlook 2014–18, ensuring appropriate spectrum arrangements are in place for mobile broadband services is an ACMA priority.\(^ {45}\)

Monitoring the delivery and consumption of audiovisual entertainment allows an assessment of how these developments affect the ongoing efficiency and effectiveness of broadcast regulation, as outlined in the Broadcasting Services Act 1992 (BSA).

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\(^{41}\) Multiple analysts provide forecasts. Cisco forecasts are used here as they are regarded as an industry standard and cited by government agencies, international bodies such as the ITU and infrastructure vendors.

\(^{42}\) Leichtman Research Group cited in Janko Roettgers, ‘Close to half of all U.S. households subscribe to Netflix, Amazon Prime or Hulu Plus’, GiagaOM, 6 June 2014.

\(^{43}\) Sandvine, Global Internet Phenomena Report 1H 2014.

\(^{44}\) ACMA research found that 97 per cent of respondents had watched FTA or subscription television in a typical week. See ACMA, Community research informing the Contemporary community safeguards inquiry—qualitative and quantitative findings, March 2014, p. 10.

\(^{45}\) ACMA, Five-year spectrum outlook 2014–18, September 2014.
Much online audiovisual content is provided by broadcasters in the form of catch-up television, which has been designed to fit within the broadcast television regulatory envelope. For example, the Nine Network has stated that the same standards are applied to news content broadcast through the television channel and displayed on the ninemsn website.\textsuperscript{46} ACMA consumer research found that viewers consistently distinguish between user-generated and professionally produced content on the internet. Participants expected professionally produced content to broadly reflect community standards whatever the delivery channel.\textsuperscript{47}

The trend data for content delivery and consumption further confirms the observation first outlined in the ACMA’s 2010 \textit{Broken concepts} paper that the same content, delivered by the same entity, is often regulated differently depending on whether the content is viewed via a broadband connection or broadcast spectrum. The BSA applies different levels of regulation according to whether the content is delivered by a broadcasting service, a datacasting service or an internet content service.

Differences in regulation between these three delivery mechanisms include:

> **Advertising.** There is no restriction on the placement of advertising in broadband content. There are restrictions for advertising in Children’s and Preschool programs broadcast under the BSA. There are other advertising restrictions, including time limits, covered by relevant broadcasting codes of practice.

> **Treatment of complaints.** Citizens can refer complaints to the ACMA about broadcast content if they are not satisfied by the response from the broadcaster. Different complaint processes govern content delivered over the internet. For example, citizens contact the ACMA in the first instance if they wish to make a complaint about prohibited online content.\textsuperscript{48}

> **Content regulation.** Broadcast content is regulated in a variety of ways, including classification and captioning, that do not apply to broadband-delivered content.

The relationship between regulatory treatment and delivery platform has challenged the application of content regulation over the last decade or more. The differing treatment of content dependent on delivery mechanism is likely to become even more pronounced as the amount of television-like online content distributed by non-broadcasters increases in Australia.

In the US, the wide availability and take-up of online video services, such as Amazon and Netflix, has made the different treatment of content depending on its mode of delivery a pressing regulatory issue. The Federal Communications Commission (FCC) chair has recently asked the FCC to include linear online video providers within the definition of ‘multichannel video programming distributor’ (MVPD), which is currently limited to cable, satellite and IPTV video providers. This expansion of MVPD means that linear online video providers will have:

> the same ability to negotiate to carry broadcast television stations as cable, satellite and IPTV providers

> the same access to programming owned by cable operators as satellite and IPTV providers.\textsuperscript{49}


\textsuperscript{47} ACMA, \textit{Digital Australians—expectations about media content in a converging media environment}, October 2011, p. 52.

\textsuperscript{48} Online content is deemed to be prohibited if its classification category is RC, X18+, or a category 1 or 2 restricted publication. Other classification categories, or if material is not classified, may result in an assessment of ‘potential prohibited’. See the ACMA website for more information.

\textsuperscript{49} Tom Wheeler, FCC Chairman, ‘\textit{Tech Transitions, Video and the Future},’ 28 October 2014.
There is a further dimension to this debate occurring in the US, where the wide take-up of streaming video services has also sparked increased media attention on the issue of net neutrality—the principle that all internet traffic is to be treated equally. In May 2014, the FCC issued a Notice of Proposed Rulemaking recommending that ISPs be prohibited from blocking legal content, but that charges to guarantee faster access, or ‘paid prioritisation,’ would be allowed. US President Barack Obama explicitly voiced his support of net neutrality in November 2014, calling for the FCC to reclassify wired and wireless consumer broadband services as a ‘telecommunications service’ under Title II of the Telecommunications Act.\(^50\) This would allow the FCC to disallow paid prioritisation on consumer broadband networks. The FCC Chairman has stated that it is still exploring possible options.\(^51\)

\(^{50}\) Colin Mann, ‘Obama reiterates opposition to paid prioritisation,’ Advanced-television.com, 10 November 2014.

\(^{51}\) FCC Chairman Tom Wheeler’s Statement on President Barack Obama’s Statement Regarding Open Internet, FCC website, 20 November 2014.
Multi-screening is mainstream

Background
Television—and the television screen—is key to the household entertainment experience, but there are now a variety of video-capable devices and content services that enable Australians to view multiple screens at the same time.

The second screen catches on
Many Australians are watching television with one eye on their phone or computer. In 2013, 74 per cent of online Australians regularly watched television and used the internet at the same time, an increase of 25 percentage points since 2009. The incidence of second-screening for those aged 25–34 was 89 per cent in 2013.

Figure 12 Online Australians watching TV and using the internet simultaneously

![Graph showing the percentage of online Australians watching TV and using the internet simultaneously from 2009 to 2013.](Source: Nielsen, Australian Connected Consumers, 2014.)

Triple-screening, where the viewer watches television and uses both the internet and a mobile device, has also emerged as a significant trend—26 per cent of online Australians have triple-screened.52

Content available over range of devices
The same content can be viewed via a range of devices, including mobile phones, laptops, tablets and televisions.

52 Nielsen, Australian Connected Consumers, 2014, p. 128.
Table 3 Viewing content by device—preferred device when viewing different types of content

<table>
<thead>
<tr>
<th></th>
<th>Mobile phone</th>
<th>Tablet</th>
<th>Computer</th>
<th>Television</th>
</tr>
</thead>
<tbody>
<tr>
<td>User-generated content</td>
<td>41%</td>
<td>17%</td>
<td>71%</td>
<td>10%</td>
</tr>
<tr>
<td>Video clips</td>
<td>23%</td>
<td>11%</td>
<td>53%</td>
<td>24%</td>
</tr>
<tr>
<td>TV shows/full-length movies</td>
<td>5%</td>
<td>4%</td>
<td>29%</td>
<td>71%</td>
</tr>
</tbody>
</table>


While the television screen remains the primary preferred viewing device for long-form television shows and films (as shown in Table 3), other devices are also being used at different times. Nielsen has recently announced a partnership with Facebook designed to track what content viewers are watching on devices other than the television.⁵³

**Enhanced services are also available**

Individuals are also able to view multiple screens on their television screens. Internet-enabled television allows the delivery of enhanced services through the television screen, which may include interactive and product-purchasing capabilities. Some ‘smart TVs’ have the ability to provide online and television content at the same time through a split screen.

**Changing engagement with content**

The second (online) screen can be used to discuss or comment on the broadcast content or to engage with content unrelated to the television program. Second (and third) screening means that the audience:

- May not be paying as much attention to the television screen. An individual may be reading articles or social networking posts that are unrelated to the television content. For example, someone may be watching a television evening news program while catching up on Facebook.
- May be engaging more deeply with the broadcast content. While watching the television program, an individual may also be commenting on it, through applications or services such as Twitter. One Australian survey found that 21 per cent of second-screening activity related to the television program being watched.⁵⁴ Australian examples include Q&A, in which viewers’ tweets are displayed on the bottom of the screen while the program is broadcast⁵⁵, and The Voice, in which viewers can vote to ‘save’ participants.⁵⁶ Viewers may engage online with the television program through unrelated services and applications, such as Twitter, or interact within a program ecosystem that provides space and opportunity for audiences to connect with each other and the program. An example of the latter is Channel Seven’s Fango service, which allows viewers to discuss selected Channel Seven television programs, vote in real time on polls trivia and other issues, and win prizes.⁵⁷

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⁵⁵ Q&A’s moderated twitter feed, ABC, 2014.
⁵⁶ The Voice Australia: How it works, news.com.au, 16 April 2012.
⁵⁷ Fango, Yahoo!7 website.
One example of audiences using online tools to engage with televisual content is the first presidential campaign debate between Barack Obama and Mitt Romney in 2012, which generated over 10 million tweets by the time the debate had finished.\(^58\) Pew research found that, in general, the audience used social media to interact with the televised debate. For example, fact-checking the debate was the second most popular reason to engage with social media (Table 4).

<table>
<thead>
<tr>
<th>Stated reason</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor broadcast media responses and reactions</td>
<td>46</td>
</tr>
<tr>
<td>Fact-check</td>
<td>41</td>
</tr>
<tr>
<td>Follow the reaction of political reporters</td>
<td>39</td>
</tr>
<tr>
<td>Monitor social media</td>
<td>32</td>
</tr>
</tbody>
</table>


### Additional complementary content

The second screen can also display additional content that can become an integral part of the viewing experience. An early example of this trend is the Network Ten television series *Secrets and Lies*, which explicitly encouraged its audience to interact on the second screen through the ‘Focus Room’ that allowed viewers to discuss the show and a social TV application that gave viewers additional clues while the program was broadcasting. Additional *Secrets and Lies* content was created for Zeebox (a social TV application that has now been relaunched as Beamly), Twitter, Facebook, the Channel Ten website, mobile app Tenplay and YouTube.\(^59\)

### Understanding audience attention in this environment is complicated

The increased interactive capabilities of internet TV, through split-screen and interactive services as a television program is viewed, and the multiple devices (and consequently environments) in which content can be viewed, is also complicating understanding of the audience’s attention and involvement.

Understanding the attention paid to, and influence of, the first screen in this environment is consequently a more complicated proposition. The media sector is exploring alternative measurements to complement ratings data. For example, Nielsen Twitter weekly top 10 identifies the most popular television shows by audience number and then provides the following additional information:

- number of tweets related to a television episode
- number of unique Twitter accounts that have sent at least one tweet related to the television episode
- number of times such a tweet was seen
- total number of Twitter accounts that are accruing at least one of the tweets about that television episode.

As yet, there is no agreed standard method globally to measure audience attention in this environment.

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Some observations on existing regulation

Multi-screening raises two issues relevant to regulatory settings:

> whether users are paying as much attention to the first screen
> whether the community has the same attitudes to content shown on second screens, which informs discussion of community safeguards.

Whether the audience is paying the same level of attention

Broadcasting regulation bases much of its regulatory treatment of media platforms on the perceived influence of different broadcasting services, such as radio and television. The concept of influence has flow-on effects to the regulation of broadcast licensing, standards, diversity, and internet and datacasting services.\(^6^0\)

The multi-screen environment did not exist when broadcasting regulation was framed in the early 1990s. Audiences’ split attention may have some impact on the broadcasting media’s ability to influence, and this is the subject of ongoing debate internationally. For example, if audiences are routinely checking social network updates while watching television news on the first screen, the content of that program may be less influential. It is equally possible that online interaction with programs such as the ABC’s Q&A allows multiple points of views to be explored by the audience, making the content of Q&A itself less influential.

Conversely, the number of online conversations about program content (to continue this example) may extend its audience and influence. At present, there is no consensus globally about the best tools or metrics to measure media influence. Consequently, there is no clear answer to questions about the effect of multi-screening on the influence of particular content.

Consumer attitudes when using second-screen content

If audiences are interacting with content and other services on the second screen through properties owned by the content producers, this offers:

> a more interactive experience for the audience
> a potentially more engaged audience for the content producer and advertisers
> additional avenues to build audience loyalty.

When the second screen is used to create additional content as part of the television program viewing experience—as with Secrets and Lies—the boundaries between a television program and the supporting online content is blurred. In the future, both the content producer and audience may increasingly consider the content produced and delivered online for the second screen to be an integral part of the television program. The potential merging of broadcast television programs and supporting online content challenges the continuing appropriateness of the regulatory definition of a ‘television program’.

As second-screen content becomes mainstream and audiences see it as an essential part of the television viewing experience, viewers may transfer the expectations they have of broadcast television to the second, or even third, screen. One example could be the provision of captioning for the deaf and hearing-impaired. Broadcasters are required to comply with rules and standards for captioning of television programs. Secondary content supplied via broadband as complementary second-screen material is not subject to the same requirements.

\(^6^0\) The concept of influence is discussed further in Chapter 6.
Conversely, the experience of second- and third-screen viewing may also affect expectations about the content experience on the primary television screen. For example, expectations about audience loyalty and interactivity may transfer from the second screen to primary-screen environment. There may be a variety of pressures to recognise these changing viewing experiences and diverse community expectations of content within the existing regulatory framework.
TV is still the main news source, even as platforms shift

Background
New developments in media, encouraged by the ubiquitous deployment of IP networks, have altered news media supply chains and content consumption behaviours. While print newspaper circulations are declining globally, individuals are increasingly consuming online news, opinion and current affairs in a variety of forms. Nonetheless, broadcast television remains the main source of news, including for Australians accessing news online.

Print newspaper circulation decline
The decline in print newspaper revenues and circulation, both in Australia and internationally, is well documented. Combined Monday to Saturday Australian national newspaper sales declined 8.3 per cent between 2012 and 2013. Monday to Sunday metropolitan titles declined 11.5 per cent over the same period.61 Total newspaper revenues in Australia declined 18 per cent between 2009 and 2013.

Figure 13 Newspaper revenues in Australia, 2009–13


Smaller decline in overall television news audiences
The consolidated audiences of FTA television evening news programs in Australia shows an overall decline of 10 per cent between 2009 and 2013, albeit with some growth in audiences in 2012 and 2013.

Recent ACMA research into regional local news broadcasts echoes this finding. While average audiences for different news services fluctuated from year to year at individual sub-market levels, there was an overall declining trend in audiences for early evening news broadcasts on the main FTA television channels across the combined 19 regional sub-markets between 2003 and 2013.62

TV still the main source of news
Television remains the most cited platform for sources of news, despite the overall decline in audience levels. 2014 ACMA research found that 92 per cent of FTA or subscription television viewers watched a news or current affairs programs on television63, while earlier ACMA research found that television was the respondents’ main source of news.64 This is confirmed by 2013 Nielsen research, which found that more online Australians (36 per cent) cited television as their main source of news than any other source.

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63 ACMA, Community research informing the Contemporary community safeguards inquiry—qualitative and quantitative findings, March 2014, p. 12.
64 ACMA, Digital Australians—expectations about media content in a converging media environment, October 2011, p. 39.
Websites are the second-most cited main source of news.\textsuperscript{65} There is a wide range of news websites, but traditional broadcasting platforms and print newspapers comprised all of the top 10 most-visited news sources online in September 2014, demonstrating the blurring boundaries between content distribution networks for news content.

### Table 5 Australians audiences for online news sites, September 2014

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Unique audience ('000)</th>
<th>Online version of offline media</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>smh.com.au</td>
<td>3,607</td>
<td>Print newspaper</td>
</tr>
<tr>
<td>2</td>
<td>news.com.au</td>
<td>3,569</td>
<td>Print newspapers</td>
</tr>
<tr>
<td>3</td>
<td>ninemsn news websites</td>
<td>3,129</td>
<td>TV</td>
</tr>
<tr>
<td>4</td>
<td>ABC News websites</td>
<td>2,518</td>
<td>TV</td>
</tr>
<tr>
<td>5</td>
<td>Daily Mail Australia</td>
<td>2,508</td>
<td>Print newspaper (UK)</td>
</tr>
<tr>
<td>6</td>
<td>The Age</td>
<td>2,082</td>
<td>Print newspaper</td>
</tr>
<tr>
<td>7</td>
<td>The Guardian</td>
<td>1,934</td>
<td>Print newspaper (UK)</td>
</tr>
<tr>
<td>8</td>
<td>Yahoo7 news websites</td>
<td>1,911</td>
<td>TV</td>
</tr>
<tr>
<td>9</td>
<td>Herald Sun</td>
<td>1,713</td>
<td>Print newspaper</td>
</tr>
<tr>
<td>10</td>
<td>BBC</td>
<td>1,492</td>
<td>TV and radio (UK)</td>
</tr>
</tbody>
</table>

*Source: The Nielsen Company.*

\textsuperscript{65} Nielsen refers to these websites as online ‘owned’ media, defining them as all websites excluding social platforms.
Some observations on existing regulation

Encouraging diversity in the control of the more influential broadcasting services is an object of regulation. The BSA seeks to ensure media diversity in the more influential services—commercial broadcast television, commercial broadcast radio and print newspapers. To date, diversity of media voices on these platforms has also been promoted and managed by placing limits on the control of licensed commercial broadcasting services that service specific geographic markets, as well as companies that publish newspapers associated with those markets. The BSA regulates ownership and control through multiple mechanisms, including the Statutory Control Rules and the Media Diversity Scheme, which the ACMA administers. Monitoring the consumption of news media across all delivery channels is essential to understanding media diversity in a multi-platform environment.

The concept of influence is also integral to the regulation of broadcast media in Australia, reflecting a view that traditional media is able to influence audience attention to particular issues. The capacity of media to influence is based on its framing (setting the context in which an issue is analysed by an audience) and agenda-setting capacity, where the promotion and placing of news content affects the audience’s interpretation of an issue’s importance. Section 4 of the BSA states that different levels of regulatory control will be applied across broadcasting and internet services according to the degree of influence they possess in shaping community views in Australia. This is based on the idea that the media services that exercise the greatest level of influence on the community, in terms of public opinion and cultural identity, should be regulated at a higher level than other, less influential, services.

The emergence of online news offers consumers a wider pool of news sources, and marks a material change in the environment in which news media is regulated. Citizens now have multiple avenues of access to news sources, albeit many of them from traditional offline sources such as newspapers, TV and radio. This environment offers both opportunities and risks to the state of media diversity. The multiple online news sources available to complement print newspapers and broadcast networks could be seen as encouraging diversity. But there is also the risk that these online news services offer diversity only superficially, as consumers continue to use a select set of traditional news providers, even when consuming news online.

The way in which the changing environment for the production, supply and consumption of news is affecting media diversity is highly contestable. The online platform provides alternative spaces for citizens to produce, share and critique news sources. This platform also facilitates collective citizen action in a way that could transform existing power dynamics. This is supported by research that indicates a reduction in traditional media’s agenda-setting influence, and that independent
political bloggers can command an audience that rivals that of traditional media.\textsuperscript{71} Traditional media’s influence is also seen to be affected by citizens’ use of independent media to evaluate and critique mainstream media.\textsuperscript{72} Other research states that the perception of a reduction in traditional media influence is overstated, given that the most popular news sites online are provided by traditional media.\textsuperscript{73} In this context, the online platform is more an amplifier for traditional media news content than a home for independent voices.

While online channels for news expand, citizens are consistently using traditional news sources on the online platform and television remains the main source of news for online Australians. Nonetheless, citizens are consuming a more interactive and dispersed set of news sources across a wide variety of service, platforms and devices. It is important to monitor these developments in news delivery and audience consumption to ensure that existing regulatory structures and processes put in place to encourage and monitor media diversity do not result in ineffective or inefficient regulation with a misplaced emphasis on one segment of a rapidly evolving market. Part of this task may be to identify the most accurate way to measure consumer consumption of news online. The accurate measurement of online news and content consumption, more generally, is undergoing considerable innovation and is the subject of discussion between industry and regulators internationally.


