ONLINE VIDEO IN AUSTRALIA
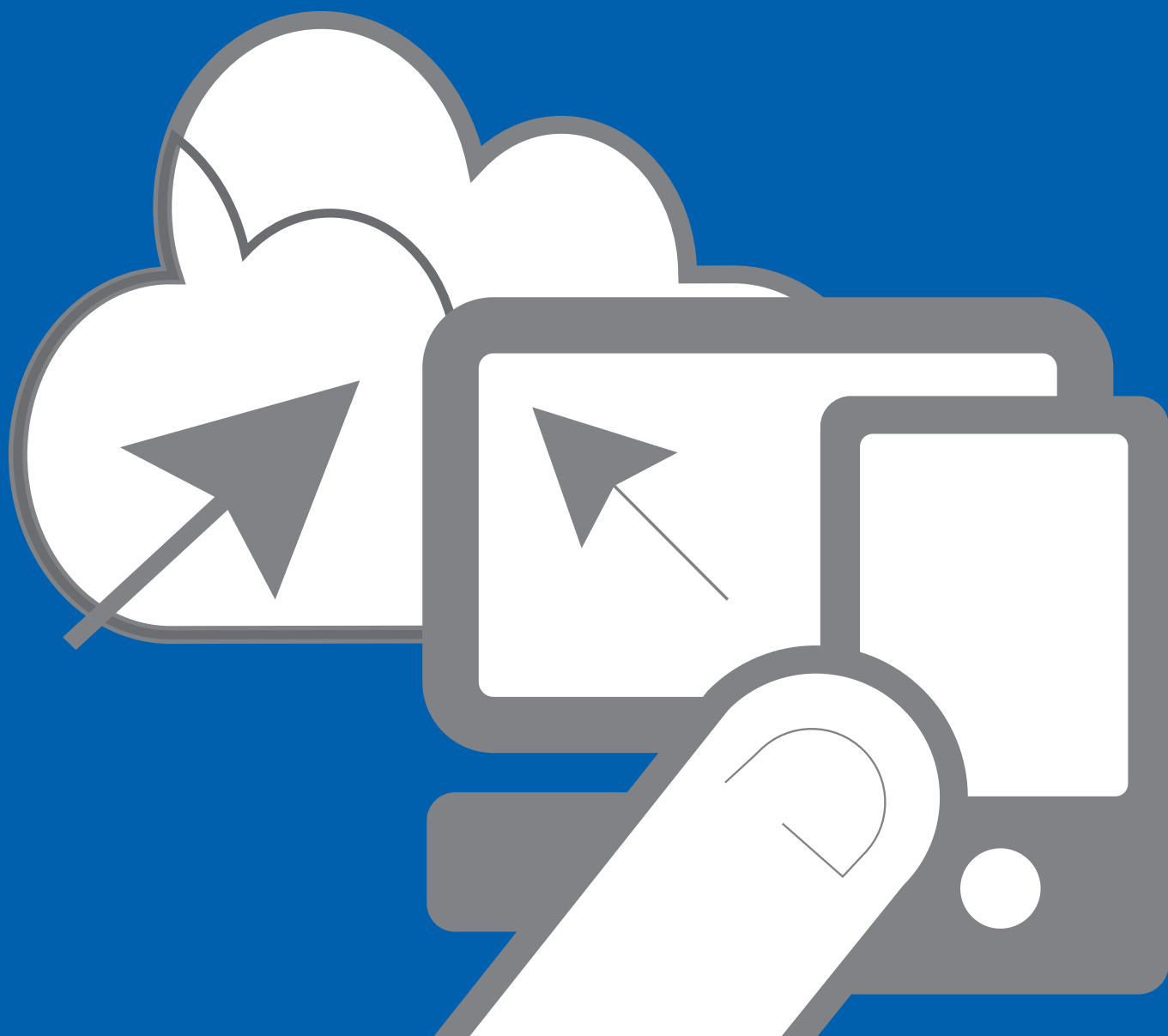
exploring audiovisual fiction sites

Spreading
Fictions DISTRIBUTING STORIES
IN THE ONLINE AGE

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Credits

Acknowledgements

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Executive summary

Audiences

Online video has grown rapidly in recent years …

One in five Australians (14 years and over) reported viewing online video via a PC 'in the last four weeks' in 2010, nearly double the figure in 2008, according to Roy Morgan.

Other researchers estimate much higher proportions but of different groups.

Nielsen found 60 per cent of Australian internet users (16 years and over) consumed video content online in the year 2010, up from 41 per cent in 2009.

ComScore reported 81 per cent of the Australian internet population (15 years and over) viewed video online in July 2010.

The World Internet Project found 42 per cent of Australian internet users (18 years and over) downloaded or watched movies, TV shows or video clips at least monthly in 2009, up from 25 per cent in 2007.

… especially among the young …

People aged 18–29 years accounted for 21 per cent of the Australian population in 2010 but 38 per cent of the audience for online video, according to Roy Morgan. Around two in five in this age group reported viewing online video 'in the last four weeks' in 2010, almost double the participation rate of all Australians.

… but still occupies less of the whole population's time than older media

Across the whole population, Australians have been adding new screen activities to old ones. While online video, social media and console and online games have grown, cinema and especially television have endured.

Online video occupies a smaller share of the time spent with media than older forms. Australians (14 years and over) spent nearly 21 hours a week watching television in 2010 according to Roy Morgan, but just over 13 hours using the internet for all purposes including online video.

The World Internet Project found in 2011 that Australian internet users (18 years and over) were spending more time on the internet (22.8 hours a week) than watching television (14 hours a week); non-internet users were spending 22.7 hours a week watching television, 2 hours more than Roy Morgan estimated for Australians (14 years and over) the year before.

In the six years to 2010, according to Roy Morgan, the average time Australians (14 years and over) spent with television fell by around 1.4 hours a week; the time they spent on the internet grew by nearly 6 hours a week.

Australians are not big online video users by international comparison

International comparisons show online video is growing everywhere but Australians are not particularly heavy users. Nielsen's Index of online and mobile video usage found Australia was in the bottom third of 55 countries tracked in March 2010.

Short clips dominate online video viewing overseas

Nearly three-quarters of videos viewed, according to a Yahoo! survey of 4,100 US online video viewers – but viewing of long-form content like movies and full-length TV programs has grown, from 16 per cent of content viewed in 2009 to 26 per cent in 2011.

Australians post as well as watch

'Sharing photographs or videos' was the second most popular reason Australian social media users (14 years and over) used social networking sites, according to the 2011 Sensis Social Networking survey. The World Internet Project found 17 per cent of Australian internet users (18 years and over) posting videos online in the year 2011, more than triple the proportion in 2007.

Online video is an incredibly diverse sector …

Australians get audiovisual stories online in many ways and from many places. Different types of online video service based in Australia and overseas use different delivery systems and retail business models to deliver many kinds of content.

… and measuring it is complex and constantly evolving

Measuring use of these services requires different tools that are not easy to reconcile and are being constantly developed by research companies. This makes analysis of the online video sector, at this stage of its evolution, more complex than other distribution sectors like cinema, television and DVD, where there is more consensus about what and how to measure, and what the metrics mean.

Where do Australians get their audiovisual stories online?

This project concentrates on websites. Our primary measurement tool was Nielsen NetView. NetView provides data on the frequency and duration of access to particular URLs. The Interactive Advertising Bureau of Australia [IAB] appointed the Nielsen Company as the sole and exclusive preferred supplier of online audience measurement services in Australia in May 2011. In October 2011, Nielsen began releasing data using a new hybrid methodology, known as Nielsen Online Ratings; see page 62 for more information.

We also received some data about traffic to the ABC's websites and catch-up TV service collected by WebTrends, some data and analysis on the

frequency and duration of access to particular URLs from Experian Hitwise, and gathered information from secondary sources about other places where Australians go for audiovisual stories.

Even Nielsen NetView's consistent metrics do not provide a perfect tool for analysing behaviour across different URLs where online video activity occurs, because the nature of that activity varies so widely. For example, on catch-up TV and video sharing sites, users find and stream videos; visitors to iTunes and P2P BitTorrent sites search for and download videos to watch at another time; visitors to most video search sites generally leave the site to stream the videos they find from other sites.

Some sites offering video attract a lot of users seeking other content like music (eg. iTunes) and software (P2P BitTorrent sites).

Further, identical or similar content is available from many sites, such as a recently broadcast TV drama, simultaneously available from a TV broadcaster's network and catch-up sites, iTunes, YouTube and P2P BitTorrent sites. The relative popularity of these different sites makes it much harder to compare the performance of individual titles than it was when the only forms of distribution were free-to-air and subscription TV and DVD.

Methodology

This project identified 25 sites for detailed analysis. Initially, we used a three-month sample of Australian unique audience estimates from Nielsen NetView over the period January to March 2011.

In the top 500 domains ranked by Australian unique audience, 94 sites 'offering video content for download, streaming or physical purchase directly on the home page' were identified by visiting and checking for the prominence of video. Significantly, Facebook was not among them, because, although reported by Nielsen as 'overtaking YouTube' in 2010 as the main video sharing site, video is not presented or aggregated on the home page. The 94 sites were allocated to categories developed by the research team: newspapers and online magazines; broadcaster; video sharing; games; cinema and video; P2P BitTorrent sites; and pornography.

We then selected 25 sites for more detailed analysis. These should not be seen as the only sites of interest to the project. Many others could have been productively analysed as well. We excluded games and pornography sites, then chose at least one site from the other five categories. Wherever possible we selected domains, sub-domains or page-level URLs most closely related to video activity, although NetView sample sizes were insufficient for reliable projection of audience size for a small number of these URLs in at least some months [see page 29].

Three main measures were used to analyse the selected 25 sites (see also definitions in the 'Analysis' section, page 33):
- the size of the 'unique Australian audience' visiting each site each month;
- the total amount of time ('total minutes') spent on each site by these visitors; and
- the average time spent on the site per visitor .

This data was obtained for the months June 2010 – June 2011. Demographic data was also supplied for the month of June 2011.

Results

Of the 25 selected sites, **YouTube** had by far the most unique visitors. Over the 12 months to June 2011, it attracted a average monthly audience 3.9 times larger than the second-most-visited site, **iTunes**, and 6 times larger than the third, the Seven Network's TV site **au.tv.yahoo.com**.

Australians also spent more time in total using YouTube than any of the other selected sites: 20 times more than the next most visited site, iTunes. Visitors to YouTube averaged around 50 minutes per person per month throughout the period (51.5 minutes in June 2011) – far more than the visitors to any other selected site.

P2P BitTorrent sites had more visitors than broadcaster sites. Between June 2010 and June 2011, the most popular P2P BitTorrent site, The Pirate Bay was visited by twice as many people as the most popular commercial television catch-up sites, Plus7, and FIXPlay [renamed 'ninemsn Video' December 2011].

Visits to the three selected P2P BitTorrent sites also accounted for more time in total than the three commercial TV catch-up sites combined. Users spent five times as long visiting The Pirate Bay as the most popular catch-up site, Plus7 between June 2010 and June 2011, for example.

Measured by time spent per visitor, the next most-used sites after YouTube were: the **Neighbours website** (25.4 minutes per person in June 2011, and an average of 8.6 minutes person throughout the period); **Disney** (24.3 minutes; 38.4 minutes); isohunt (18.3 minutes;16.3 minutes) and Quickflix (16.0 minutes; 17.7 minutes).

According to WebTrends data provided by the ABC, visitors to **iView** spent an average of just under 90 minutes per user per month on the site. This was a much higher figure than NetView's: the ABC and Nielsen advise that time spent viewing video on iView was not captured by NetView because iView is a standalone rather than embedded Flash player.

Hitwise data on the total number of visits for the 16 sites it could analyse showed fairly steady growth over the period from November 2010 to October 2011 and the dominance of video sharing sites, primarily YouTube. It also showed visits to these 16 sites more than doubled as a proportion of visits to all sites ('market share') between October 2008 and October 2011.

Demographic profiles

Demographic data was obtained for the unique audiences visiting the selected sites in June 2011. Particular programs can significantly affect month-to-month demographic profiles.

The ABC, SBS and Foxtel Download sites attracted more male than female visitors, especially Foxtel. The commercial TV broadcaster and Neighbours program sites attracted more female than male visitors, especially the Ten main channel site and Neighbours.

iTunes attracted similar proportions of male and female visitors but older men spent more time on the site than younger people.

Video sharing sites attracted more male than female visitors, though YouTube less so than Vimeo, DailyMotion and Metacafe. Most age/gender groups spent an average of at least 20 minutes using YouTube over the month. The most intensive visitors were men 35–49 (56.4 minutes per person) and women 35–49 (54.0 minutes). In comparison, young male YouTube users were relatively light users: 2.9 minutes per person for men 18–24 and 7.0 minutes for men 25–34.

Use of all of the listed P2P BitTorrent sites skewed towards men: 68 per cent for The Pirate Bay, 66 per cent for isoHunt and 57 per cent for EZTV.

Analytical considerations

Some caution must be expressed about interpreting this analysis of unique Australian audience, total minutes and time per person spent on sites for the selected 25 sites.

In particular:

Coverage of online video activities: In the terms adopted by the Australian Communications and Media Authority (ACMA), the analysis covers 'internet video' but not closed access, managed, IP multicast 'IPTV' services, like those offered by Fetch TV, Telstra via its T-Box and Sony via its Bravia connected TVs. It also does not separately identify use of 'internet video' within sites like Facebook or on mobile devices.

Measurement of online video activities: NetView includes in its 'time spent on a URL' only time spent where a URL is 'in focus' – is visible or is in the foreground – on a user's desktop. If multiple tabs are open in a browser, only the tab that is in focus is credited. If there is no new URL request for 30 minutes, the user's time spent on the URL is treated as having ended after one minute. This may be significant for measuring online viewing of long-form video content. Further, NetView did not capture 'time spent' viewing videos on sites where videos were viewed through standalone, rather than embedded players (mostly Flash). The sites affected were ABC iView and SBS Player.

Change: even where consistent metrics are used to measure the same URLs over time, the content and activities available from sites and their technical organisation are constantly modified. For example, during the course of this project, BigPond Movies exited the DVD rental business; Quickflix introduced online delivery; and an organisation not included among the selected 25 sites, the BBC, launched a subscription video-on-demand service in Australia and other countries based on its domestic TV catch-up service, iPlayer.

Context: Although different methodologies prevent direct comparisons, the substantial amounts of time spent on particular online video sites by those who visit them should not obscure the continuing heavy consumption of video by other means, especially television.

How do Australians pay for online audiovisual stories?

Several features of the 25 selected sites were analysed to explore the question of how audiovisual stories online are being paid for: the type of content offered by each site; the delivery technology; whether or not advertising is carried; the transaction model between the service provider and online users; and the owner and its primary business.

A wide range of different types and combinations of types of content were offered, mostly via streaming.

The overwhelming majority, 20 of the 25 selected sites, offer content without direct charge to consumers. These 'free' services are funded in one or more of the following three ways:

- advertising;
- public funding (the two selected ABC sites and the SBS site); and
- cross-subsidy by revenue earned from other activities.

The transaction arrangements between service providers and online users do not fully explain the business models for the selected 25 sites because most are controlled by entities with other interests. For these sites, the services offered, the forms of interaction with consumers and the transaction models need to be understood as part of wider business strategies.

Of the selected sites:

- Eight are controlled by six different Australian-based broadcasters. Two of these, Seven and Nine, operate their online presence in partnership with US-based companies, Yahoo! and Microsoft.
- Eleven are controlled by other kinds of media and communications enterprises:
    - two international production and distribution companies, FremantleMedia (the Neighbours program site) and Disney;
    - Australian and New Zealand-based newspaper company Fairfax Media (SMH TV);
    - online retail company Amazon (IMDb);
    - two telecommunications companies, Australia's Telstra (BigPond Movies) and France Telecom-Orange (Daily Motion);
    - computer and consumer electronics company Apple, now one of the world's largest companies by market capitalisation (iTunes);
    - search and advertising company Google (YouTube and Google Video);
    - software maker Microsoft (Bing Video and a stake in ninemsn);
    - US internet business InterActivCorp (Vimeo).
- Six 'independents': the Australian-based online DVD renter Quickflix; the video sharing and search sites MetaCafe and Blinkx; and the three P2P BitTorrent sites.

Can Australians find Australian audiovisual stories online?

The top-grossing 100 Australian feature films of all time at the Australian box office and 30 top-rating Australian TV drama titles broadcast between 2004 and 2010 were checked across five online sites during one week of August 2011.

This analysis found online DVD renter **Quickflix** offered more of the Australian feature films and TV dramas than the free sites (The Pirate Bay, YouTube) and many more than the paid sites (iTunes, BigPond Movies).

About the project

'Spreading Fictions: Distributing Stories in the Online Age' is an Australian Research Council Linkage project supported by the Australian Broadcasting Corporation (ABC) and Screen Australia.

The central research question is: 'How do Australians get their audiovisual stories and how might they get them in the future?' Responding to the increased emphasis on audiences and distribution in government policy about audiovisual media, the goal is to quantify the changing ways Australians are watching and engaging with audiovisual stories across the cinema, free-to-air and subscription television, consumer/DVD, online and mobile sectors.

The focus on narrative fiction content reflects the high priority given by successive governments in Australia and overseas to policies encouraging the making, promotion, screening and discussion of local audiovisual works, especially feature films, adult and children's TV dramas and documentaries. These policies are based on the high cost of these formats relative to the revenue-earning capacity of national markets. Challenges to these underlying economics are coming from at least three related directions: technology, audience behaviour and business models.

Running from 2010 to 2013, the project will produce a series of publications analysing audiovisual distribution in Australia.

This report describes and analyses some key elements of the online sector. Future reports will describe other sectors and analyse distinctive features of the emerging distribution landscape.

Jock Given
February 2012

Audiences

Using media

In recent years, Australians added new screen activities to old ones (Screen Australia 2011b).

The use of social media, online video and, to a lesser extent, console and online games grew, but television and cinema endured.

Participation in 'screen' activities

Different measures are used to assess regular participation in different media activities.

Roy Morgan publishes data that counts TV viewers if they have watched it 'in the last week'; for cinema, social media, online and mobile video, the measure is participation 'in the last four weeks'; for DVD/video, it is 'rented or bought in the last three months'; for console and online games, it is a person who has 'ever played a game console'.

Using these definitions, watching free-to-air TV attracts the highest level of regular participation. During 2010, 94 per cent of Australians (14 years and over) watched free-to-air TV 'in the last week', little changed since 2005. More than half purchased or rented a DVD 'in the last three months', but this has dropped 5 per cent since 2005. The proportion of people who have ever played a console game increased from 26 per cent in 2005 to 30 per cent in 2010, and cinema attendance 'in the last four weeks' increased slightly from 27 per cent to 29 per cent. Subscription TV fell slightly from 21 per cent (2008) to 19 per cent (2010) (Screen Australia 2011b).

Newer screen activities have grown strongly. Online video viewing 'in the last four weeks' via a PC grew from 11 per cent in 2008 to 20 per cent in 2010; social media via PC grew from 14 per cent to 29 per cent over the same period. Social media and online video via mobile 'in the last four weeks' each exceeded 1 per cent for the first time in 2010.

The time period can have a big effect on the assessment of participation. For example, the participation rate for cinema rises to 69 per cent if the measure is 'in the last year' (Screen Australia 2011c).

Participation rates also vary widely across age groups. Free-to-air TV participation is lowest among18–29-year-olds (90 per cent) but this group had the highest rates of participation in DVD/Blu-ray video (64 per cent), social media activities (50 per cent via computer and 16 per cent via mobile) and online video (37 per cent via computer and 5 per cent via mobile).

This group accounted for 21 per cent of the Australian population in 2010, but significantly higher proportions of the total audience for online video (38 per cent), console gaming via computer (34 per cent), and DVD/Blu-ray video (25 per cent) (Screen Australia 2011b).

Participation rates for screen media, 2006–2010
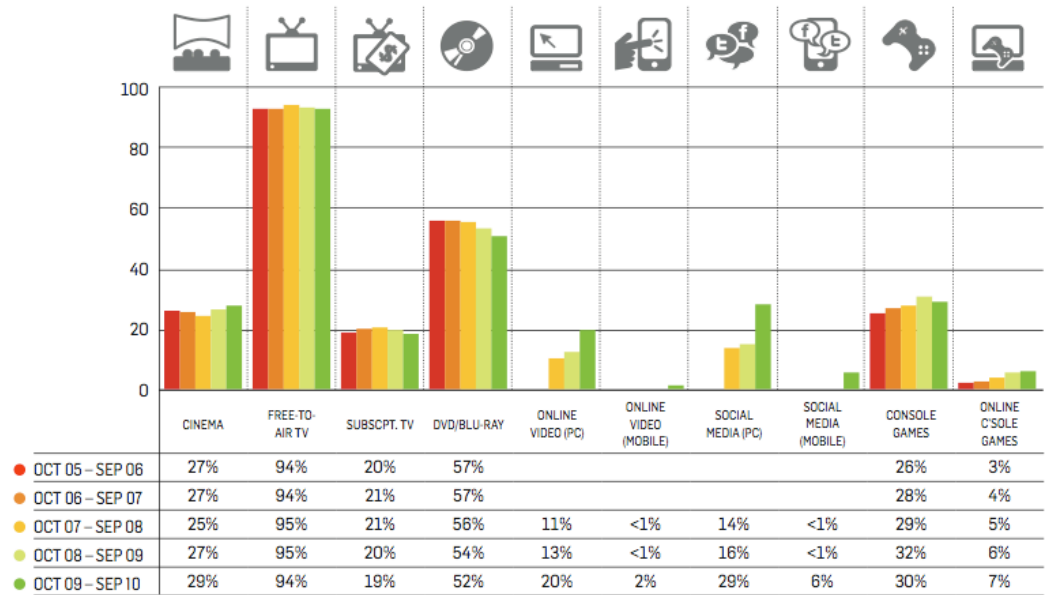
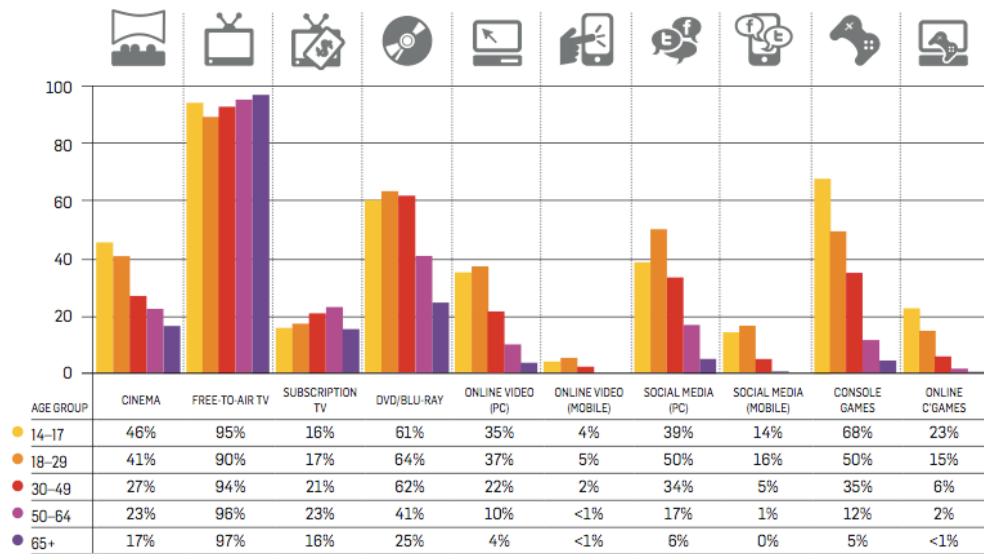|	CINEMA	FREE-TO-AIR TV	SUBSCPT. TV	DVD/BLU-RAY	ONLINE VIDEO (PC)	ONLINE VIDEO (MOBILE)	SOCIAL MEDIA (PC)	SOCIAL MEDIA (MOBILE)	CONSOLE GAMES	ONLINE C'SOLE GAMES
● OCT 05 – SEP 06	27%	94%	20%	57%					26%	3%
● OCT 06 – SEP 07	27%	94%	21%	57%					28%	4%
● OCT 07 – SEP 08	25%	95%	21%	56%	11%	<1%	14%	<1%	29%	5%
● OCT 08 – SEP 09	27%	95%	20%	54%	13%	<1%	16%	<1%	32%	6%
● OCT 09 – SEP 10	29%	94%	19%	52%	20%	2%	29%	6%	30%	7%

Source   Screen Australia analysis of Roy Morgan Single Source, in Screen Australia (2011b)

Participation rates by age group, 2010

AGE GROUP	CINEMA	FREE-TO-AIR TV	SUBSCRIPTION TV	DVD/BLU-RAY	ONLINE VIDEO (PC)	ONLINE VIDEO (MOBILE)	SOCIAL MEDIA (PC)	SOCIAL MEDIA (MOBILE)	CONSOLE GAMES	ONLINE C'GAMES
● 14–17	46%	95%	16%	61%	35%	4%	39%	14%	68%	23%
● 18–29	41%	90%	17%	64%	37%	5%	50%	16%	50%	15%
● 30–49	27%	94%	21%	62%	22%	2%	34%	5%	35%	6%
● 50–64	23%	96%	23%	41%	10%	<1%	17%	1%	12%	2%
● 65+	17%	97%	16%	25%	4%	<1%	6%	0%	5%	<1%

Source   Screen Australia analysis of Roy Morgan Single Source, in Screen Australia (2011b)

Time spent

Australians (14 years and over) spent an average of nearly 52 hours each week with media in 2010. Over the previous five years, this figure grew steadily, but its composition changed significantly. (Roy Morgan 2010, 2011).

Time spent on the internet grew from around 7 hours to 13 hours a week, while the time spent on radio, television and print media all fell.

Television, however, remained the dominant media activity in 2010 occupying around 21 hours of the average person's week. This was considerably more than the internet's 13 hours.

Also, because Roy Morgan's Single Source survey categorises media by the type of medium used to access the content, time spent on activities like catch-up TV, listening to radio online and reading news on newspapers' websites is most likely reported by users within the internet category.

Time spent with media in Australia (hours per week) 2004–2010

Media	2004	2005	2006	2007	2008	2009	2010	Change 2004–2010
TV	22.2	21.9	21.9	21.8	21.5	21.2	20.9	-1.4
Radio	16.2	15.5	14.9	14.7	14.2	13.3	13.4	-2.8
Newspaper	3.5	3.5	3.4	3.4	3.3	3.1	3.1	-0.5
Magazines	1.9	1.9	1.9	1.8	1.7	1.7	1.5	-0.4
Internet home, work, school or elsewhere	7.1	7.6	8.6	9.5	10.7	12.0	13.0	+6.0
Total hours spent with media per week	50.9	50.4	50.8	51.3	51.5	51.2	51.8	+0.9

Source   Roy Morgan (2011).

Notes   People aged 14 years and over.
Hours in table are in decimal form: 21.15 hours equals 21 hours 9 minutes.
Based on average hours per whole week usually spent viewing TV, listening to radio, reading newspapers or magazines, using the internet.

The official television measurement agency in Australia, OzTAM, found a slightly higher figure than Roy Morgan for time spent watching television in 2010 by Australians (all ages): an average 22 hours 10 minutes a week.[1]

Non-internet users (18 years and over) consume much more TV, radio and newspapers than internet users, according to the World Internet Project.

Time spent with media in Australia (hours per week), internet users vs non-users

Survey period Scope	Roy Morgan 2010 (12 months) People aged 14+	World Internet Project June 2011 People aged 18+	
	Internet users and non-users	Internet users	Non-Internet users
Average hours/week spent with:"			
TV	20.9	14.0	22.8
Radio	13.4	12.6	19.0
Newspaper	3.1	2.9	5.0
Magazines	1.5	na	n.a.
Internet home, work, school or elsewhere	13.0	22.8	0.0
Total	51.8	52.3	46.8

Source   Roy Morgan (2011); ARC CCi (2011)

Notes   Hours in decimal form. Totals not strictly comparable because World Internet Project does not include magazines.

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1 Compiled by Screen Australia from OzTAM data, 5 City Metro, ATV, 2am-2am, Total TV, Survey 1-10 2010 (Weeks 7-48). Based on a daily calculation and multiplied by 7 to derive weekly figure.

Using the internet

According to Roy Morgan, nearly 15.1 million (83 per cent) Australians 14 years and over 'used the internet (from any location)' in December 2010, up 6 per cent on the 14.2 million (80 per cent) in December 2009 (ACMA 2011: 3).[2]

The number of internet users differs from the number of internet subscribers. At December 2011, there were nearly 11.6 million active internet subscribers in Australia using fixed and mobile wireless (dongle, datacard, USB mode) services, according to the Australia Bureau of Statistics. There were also 11 million internet subscribers using mobile phone handsets a 62 per cent increase on the 6.8 million subscribers recorded at June 2010 (Australian Bureau of Statistics 2011: 3).

ACMA explains a subscriber differs from a user or person/business as one user may have multiple accounts with a single ISP, or accounts with more than one ISP. Conversely, there are single ISP subscriber accounts that provide internet access for multiple persons/organisations (e.g. universities) (ACMA 2011: 41).

Entertainment and amusement is the fifth most popular reason for using the internet via computer, after research and information, communication activities (email, internet telephony), banking and finance activities, and general activities (browsing/surfing). It is the equal second-most-popular reason for undertaking online activities via mobile phone handset) after communication activities (email, internet telephony) (ACMA 2011: 7).

Using the internet to watch video

Online viewing of all types of video – advertisements, user generated content, authorised and unauthorised streaming and downloading of commercial films and programs – is increasing for all Australians according to a range of surveys and measures.

- 20 per cent of **Australians** (14 years and over) viewed online video (in the last four weeks) in 2010, almost double the 11 per cent in 2008 (Roy Morgan data in Screen Australia [Screen Australia 2011b]).
- 42 per cent of **Australian internet users** (18 years and over) downloaded or watched movies, TV shows, video clips monthly or more often in 2009 up from 25 per cent in 2007 according to World Internet Project data (Ewing & Thomas 2010).
- 60 per cent of **Australian internet users** (16 years and over) consumed video content online in 2010 up from 41 per cent in 2009 (Nielsen 2011a).[3]

The heaviest online video users were males aged between 18 and 49 years, living in cities according to Roy Morgan data.

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[2] comScore reported 13.4 million Australian unique Internet visitors 15 years and over 'accessed the Internet from Home or Work in December 2010'. comScore, 2011, *State of the Internet –Australia.*

[3] comScore reported 81 per cent of the Australian internet population viewed video online during July 2010. comScore 2010, 4 Out of 5 Internet Users in Australia Viewed Online Video in July, http://www.comscore.com/Press_Events/Press_Releases/2010/9/4_Out_of_5_Internet_Users_in_Australia_Viewed_Online_Video_in_July [Accessed 22 August 2011].

Australian internet users report spending 21.7 hours per week online in 2010, including a range of online video viewing activities: official on-demand and catch-up services (4.2 hours), IPTV (2.7 hours), watching TV shows or movies from 'unofficial' sources (5.5 hours); and across a range of devices including video by mobile (1.5 hours a week) (Nielsen 2011a).

Many media users 'multi-task'. According to Nielsen, simultaneous consumption of the internet and TV, for example, increased 11 percentage points, from 49 per cent of internet users in 2009 to 60 per cent in 2010 (Nielsen 2011a).

Online video use, 2007–2010

		Roy Morgan		Nielsen		World Internet Project	
Scope		Total population aged 14+		Internet users aged 16+		Internet users aged 18+	
Survey period		12 months		December		September	
Activity		Streamed or downloaded video		Consumed video online		Downloaded or watched movies, TV shows, video clips etc	
		2008	2010	2009	2010	2007	2009
% participation				-			
Weekly		-	-	-	27%	19%	30%
Monthly	via PC	11%	20%	-	43%	25%	42%
	via mobile	<1%	2%	-	-	-	-
12 months		-	-	41%	60%	-	-

Source   Roy Morgan (2011); Nielsen (2011a); ARC CCi (2011)
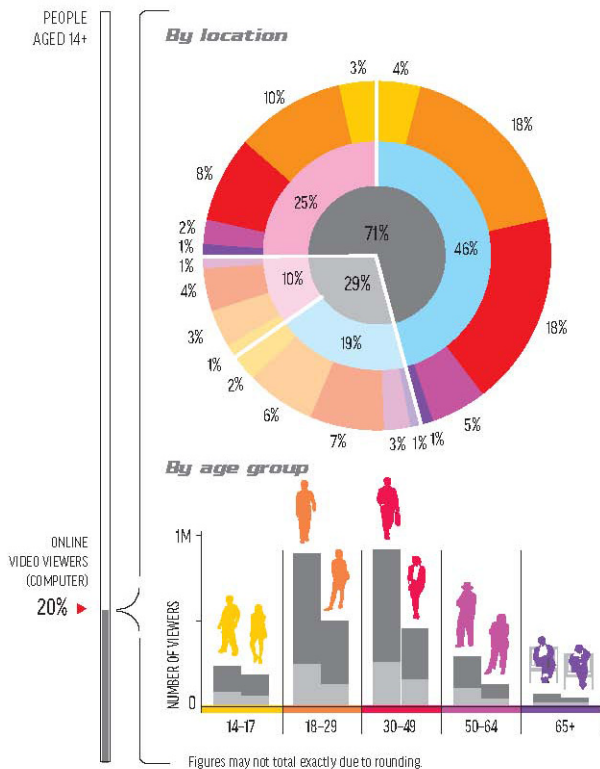
Online video users: **Mobile video users:**
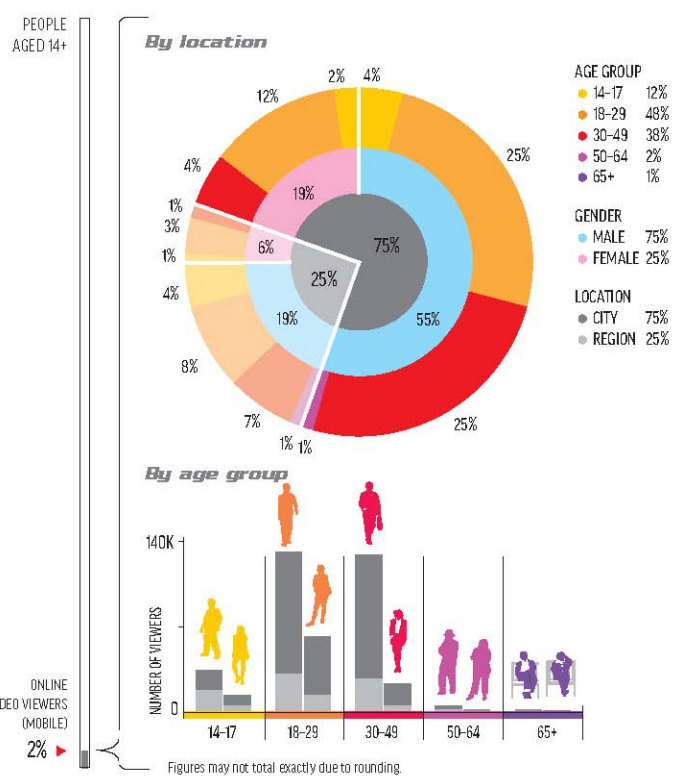
Source   Screen Australia analysis of Roy Morgan Single Source, October 2009 to September 2010, in Screen Australia (2011a).

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Online video viewing activities, Australian internet users, 16 years and over, average weekly hours, 2010[4]

Online video activities	Average hours per week
IPTV	2.7
Official TV (on-demand or catch-up TV services)	4.2
TV shows or movies streamed or downloaded from the internet from unofficial sources	5.5
Video by mobile	1.5

Source   Nielsen (2011a)

Note   Base: Online Australians 16+ who consume the above media in an average week (n=5,886).

While downloading music or audio/video podcasts remained the most popular form of online digital content activity among Australians aged 14 years and over in December 2010, according to ACMA analysis of Roy Morgan data, streaming video clips or TV programs grew by 125 per cent over the same period a year earlier (ACMA 2011: 39).

Select digital content activities undertaken online during December 2009 and December 2010
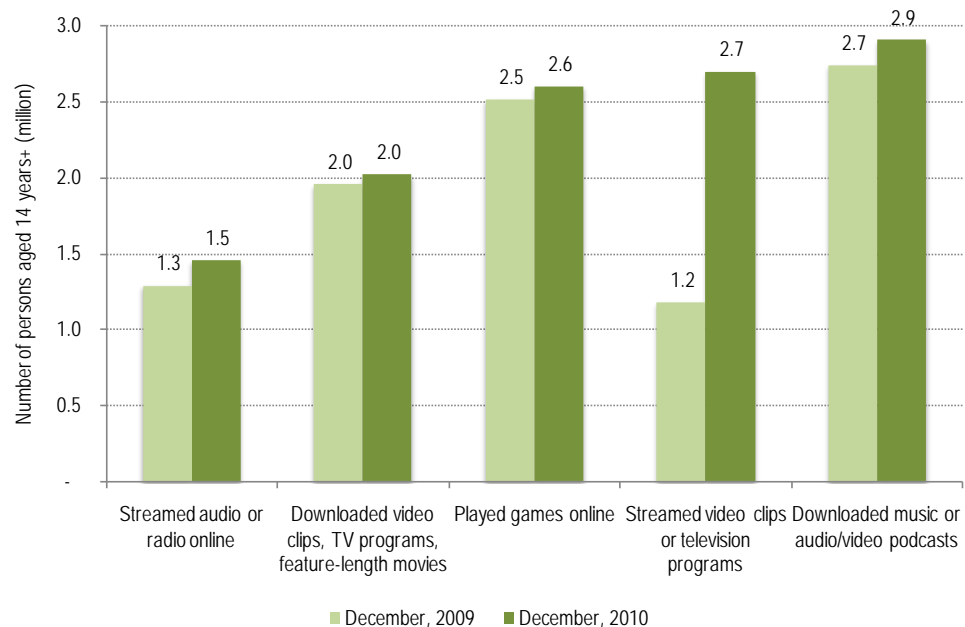
Source   Roy Morgan Single Source in ACMA (2011).

Australia's online video use compared with other countries'

Nielsen's Index of online and mobile video usage (indexed to all respondents globally) in March 2010 found Australia was in the bottom third of 55 countries tracked (Nielsen 2010).

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[4] comScore reported the average viewer watched more than 7 hours of video in July 2010 (Australian Internet users 15 years and over). Source: comScore 2010, 4 Out of 5 Internet Users in Australia Viewed Online Video in July Available: http://www.comscore.com/Press_Events/Press_Releases/2010/9/4_Out_of_5_Internet_Users_in_Australia_Viewed_Online_Video_in_July [Accessed 22 August 2011].

Online video: Index of usage by market, March 2010

Market	Index	Market	Index	Market	Index
China	126	Venezuela	111	New Zealand	90
Indonesia	126	South Korea	110	US	90
Philippines	124	Ukraine	110	South Africa	90
India	121	Thailand	109	Australia	86
Mexico	121	Croatia	107	Estonia	84
Columbia	117	Taiwan	107	Hungary	83
Malaysia	116	Italy	106	Czech Republic	81
Pakistan	116	Singapore	106	Norway	79
Egypt	114	Poland	103	UK	76
Vietnam	114	Portugal	101	Turkey	67
Argentina	113	Lithuania	97	Sweden	66
Saudi Arabia	113	Latvia	96	Austria	56
UAE	111	Canada	93	Switzerland	53
Brazil	111	Finland	93	Netherlands	53
Chile	111	Spain	91	Germany	50
Hong Kong	111	Israel	91	Belgium	47
Romania	111	Greece	90	France	46
Russia	111	Ireland	90	Japan	46
				Denmark	30

Source   Nielsen (2010)

Note   n=27,665 online consumers ages 15+ Indexed to all respondents, globally.
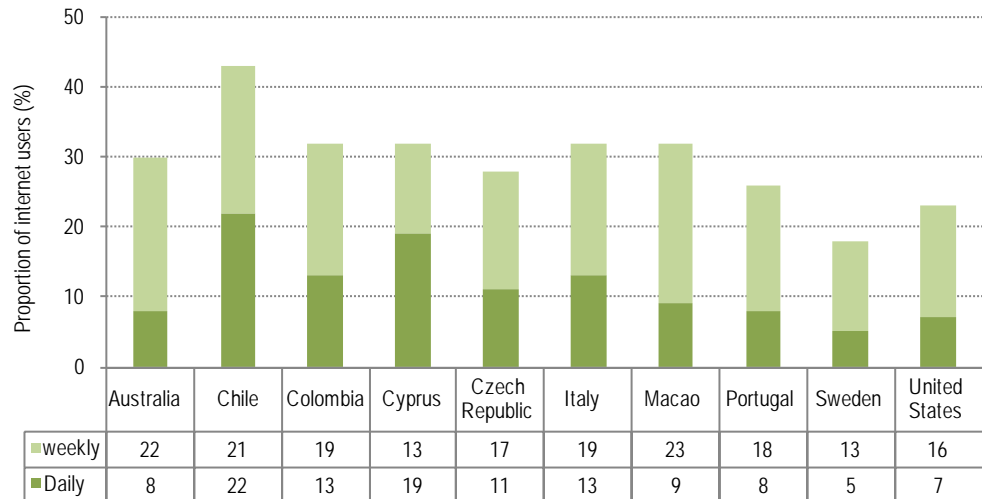
Mobile video: Index of usage by market, March 2010

Market	Index	Market	Index	Market	Index
Philippines	182	Hong Kong	91	Sweden	45
Indonesia	173	Japan	82	Ireland	45
China	173	South Korea	82	Estonia	45
India	164	South Africa	82	Croatia	45
Singapore	155	Lithuania	82	Austria	45
Egypt	155	Taiwan	73	Switzerland	36
Brazil	155	Latvia	73	Portugal	36
UAE	145	Israel	73	Netherlands	36
Vietnam	136	France	73	Finland	36
Thailand	136	Turkey	64	Czech Republic	36
Saudi Arabia	136	Romania	64	Australia	36
Pakistan	136	Italy	64	Spain	27
Venezuela	118	Chile	64	Norway	27
Mexico	118	US	55	New Zealand	27
Ukraine	109	Poland	55	Denmark	27
Malaysia	100	Greece	55	Canada	27
Columbia	100	Argentina	55	Hungary	18
Russia	91	UK	45	Belgium	18
				Germany	9

Source   Nielsen (2010)

Note   n=27,665 online consumers ages 15+ Indexed to all respondents, globally.

In its 2009 comparison of online video viewing across nine countries, the World Internet Project placed Australia around mid-level overall for downloading and watching video content, although it had a relatively low proportion of users doing so daily (Ewing & Thomas 2010).

Downloading or watching movies, TV shows or video clips daily and weekly, selected countries, proportion of internet users, 2009

	Australia	Chile	Colombia	Cyprus	Czech Republic	Italy	Macao	Portugal	Sweden	United States
■weekly	22	21	19	13	17	19	23	18	13	16
■Daily	8	22	13	19	11	13	9	8	5	7

Source   ARC CCi (2010).

Ericsson's annual *TV & Video Consumer Trend Report 2011* reported that in Germany, Spain, Sweden, Taiwan, US and UK, the proportion of people consuming broadcast TV and DVDs dropped from 2010 to 2011, while for streaming on-demand TV and movies and downloading content the proportions all rose (Ericsson ConsumerLab 2011).[5]

Consumer usage of TV/Video, more than once a week (proportion of respondents), selected countries, 2010–2011.

	2010	2011
Scheduled broadcast TV	88	84
Short video clips, e.g. YouTube	44	47
Recorded broadcast TV	50	45
Streamed on-demand TV shows	30	33
DVD/Blu-ray	30	29
Downloaded content	26	29
Streamed on-demand movies	23	25
Pay-per-view	12	12

Source   Ericsson ConsumerLab (2011)

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[5] 22 qualitative and 13,000 quantitative interviews were conducted representing almost 400 million consumers. This quantitative approach was complemented by 22 in-depth, in-home interviews with families in three countries: Germany, Sweden and the US.

Using the internet to watch fiction video

There is little published research that specifically assesses the consumption of **narrative fiction** video, such as movies, TV drama, short films and user generated content, especially by Australian internet users.

The research that is available suggests the most popular online video genres are short in length, but consumption of longer formats like movies and TV dramas is growing.

A 2009 survey of Australian YouTube users found they mainly watched short-length program formats on YouTube (Chuck 2009). Conducted on behalf of YouTube's owner, Google, by Research International, the survey interviewed 3,000 males and females nationwide aged 14 years and over who had visited the YouTube website in the past three months.

Genres regularly watched by Australian YouTube users, 2009
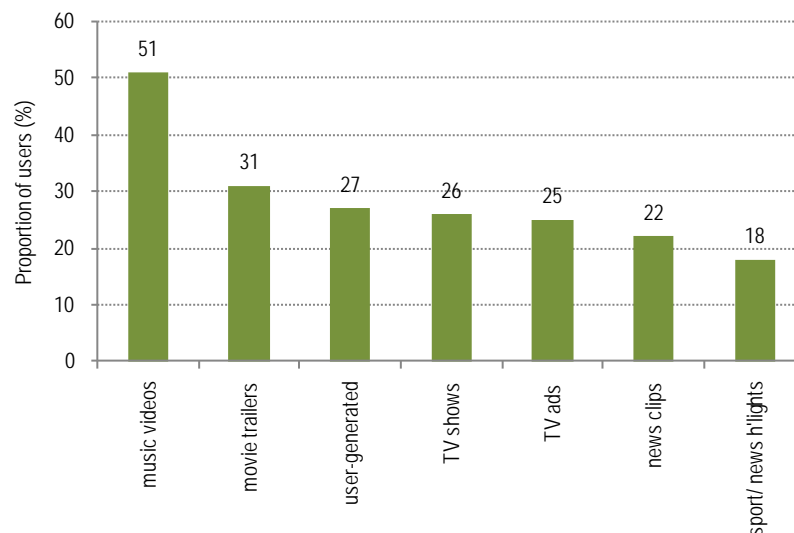
Source   Research International for YouTube, in Chuck (2009)

A 2007 survey of videos in YouTube's 'most popular' categories found that in the Most Viewed and to a lesser extent the Most Favourited categories, traditional media content dominated.

This included news highlights, celebrity interviews, talk show appearances and reality TV, then sketch comedy, soap operas, live sport, music (especially Top 40 music videos) and advertisements.

In the Most Discussed and Most Responded categories, user generated content dominated, including conversational 'vlogs', live music, music/sport/slice-of-life, information, and some scripted material[6] (Burgess & Green 2009: 45).

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[6] The survey was conducted by sampling the Top 60 in each category each day for six days across two weeks in each of three months in the second half of 2007. This produced a total sample of 4,320 videos, 1,080 in each of the four categories.

Proportion of videos per Youtube popularity categories by source
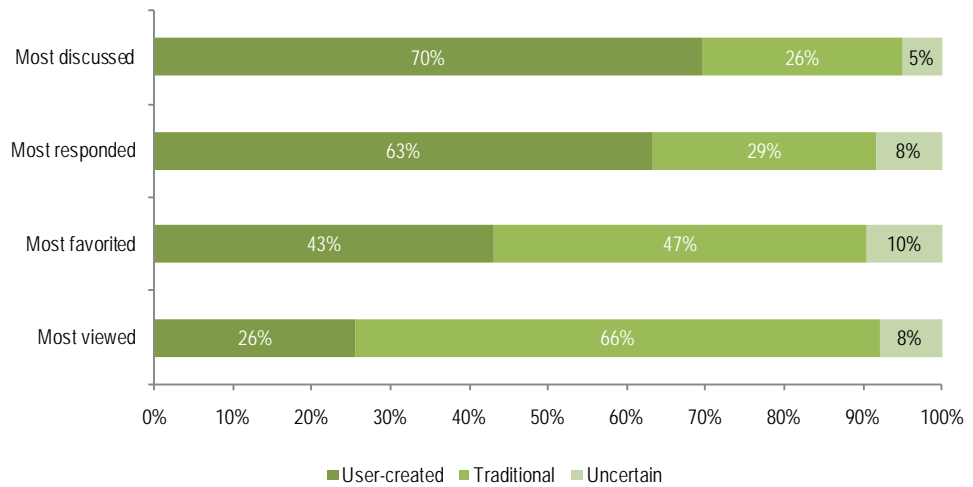
Source   Burgess and Green (2009: 45)

In June 2011, 40 per cent of 18–30 year old Australian mobile internet users, watched videos, according to an online survey of 1,004 mobile internet users. The most popular forms for mobile viewing in this age group were short-length films, including music videos (viewed by 53 per cent of respondents), humour/comedy (51 per cent), amateur clips (35 per cent) and news (20 per cent). Only 14 per cent of this group used their mobile to view full-length TV and 6 per cent to view feature-length movies; 2 per cent watched movie trailers (Goggin & Crawford 2011).

Video watched on mobiles, Australian mobile internet users, aged 18 to 30, 2011
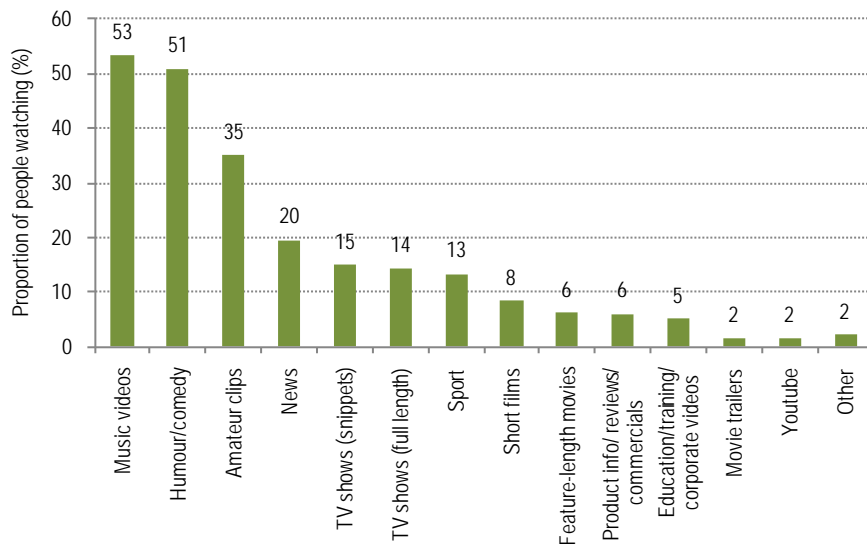
Source   Goggin & Crawford (2011)

Survey question: What are the three most common types of video you watch on your mobile?

Peer-to-peer sources of fiction

According to Nielsen, Australian online users averaged 5.5 hours a week watching TV shows or movies downloaded from the internet from 'unofficial sources' in 2010 and 4.2 hours a week watching 'official TV' from catch-up or on-demand services (Nielsen 2011a).

Users source copyrighted content from sources such as P2P; video sharing sites where whole movies and especially TV shows can be posted in 10 to 15 minutes instalments; or virtual private networks that enable geo-blocking to be bypassed.

Recent large-scale studies of peer-to-peer file-sharing agree the vast majority of music and video content transferred using BitTorrent is copyrighted and shared illegitimately (Envisional 2011: 4; Mateus & Peha 2011: 18).

Video (movies: 39.2 per cent, TV shows/seasons: 17.2 per cent) is the most 'supplied' type of content in BitTorrent, making up over 50 per cent of BitTorrents available for download (Mateus & Peha 2011: 15).

Users concentrate on the most popular titles: 117 movies accounted for half of all movie transfers using BitTorrent from August 2010 and February 2011 (Mateus & Peha 2011: 26).
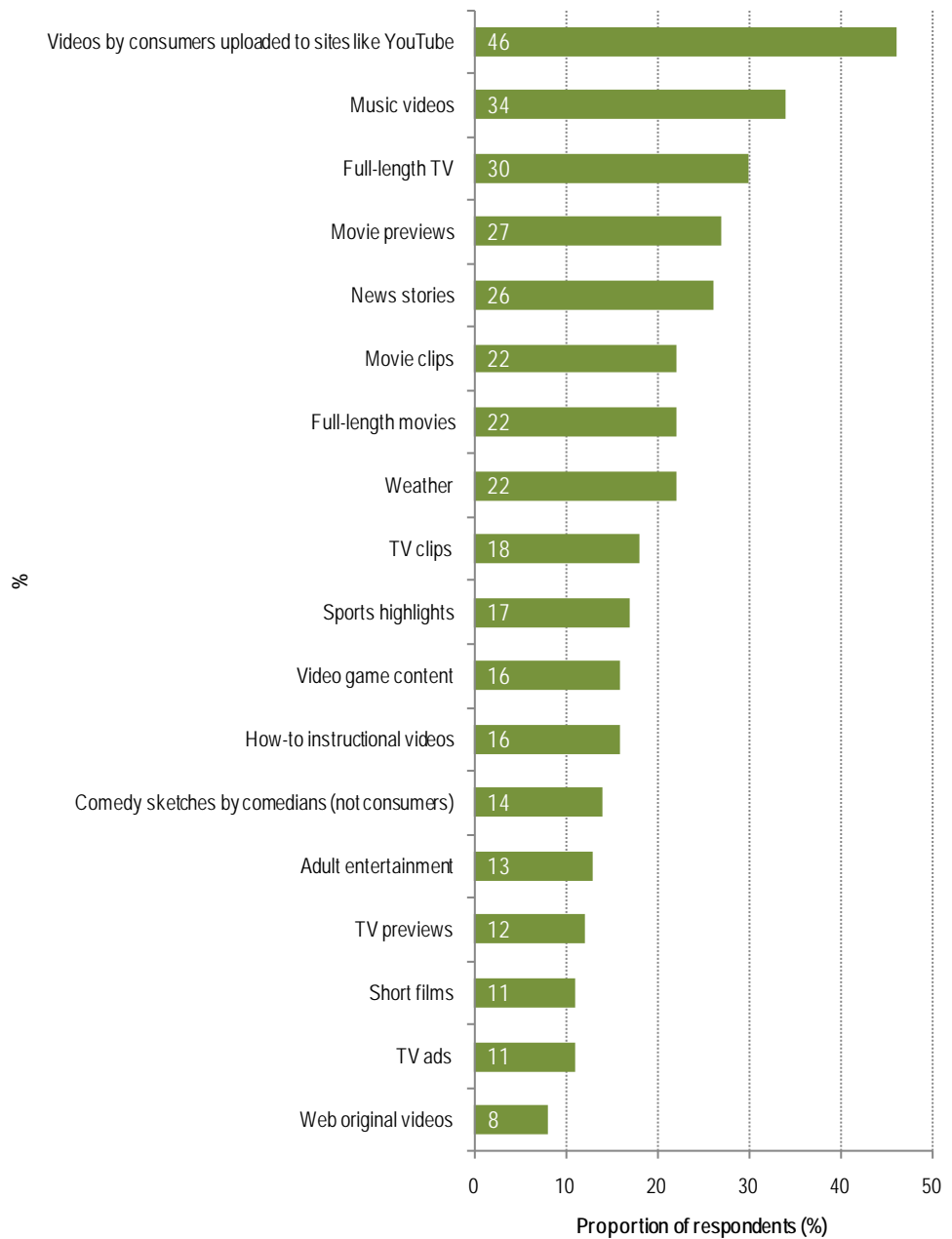
Overseas studies

Viewing of movies and TV programs in the US is increasing due to greater availability of long-form content, the popularity of sites such as Hulu and other broadcast TV sites, technology developments and internet users' growing comfort with online video, according to eMarketer (Verna 2010).

In the US, research by Frank A. Magid and Associates found short-form content continues to dominate online video, but full-length movies and TV grew in 2011 over previous years[7] (Frank N. Magid Associates 2011).

- 5.6 hrs a week was spent watching online video among viewers watching at least weekly, up from 4.6 hours in 2010.

- 88 per cent of online video consumers watch short, professional clips regularly (eg music video, movie/TV previews/trailers/clips, video game content, web original videos).

- 30 per cent of online video consumers watch full-length TV regularly, up from 25 per cent in 2009.

- 22 per cent of online video consumers watch full-length movies regularly, up from 10 per cent in 2009.

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[7] Base: Total respondents, 8-64. N=2482. Question: About how often would you say you watch any type of video content online on a computer?

**Types of online video content regularly viewed, proportions of respondents, 2011**

Type	%
Videos by consumers uploaded to sites like YouTube	46
Music videos	34
Full-length TV	30
Movie previews	27
News stories	26
Movie clips	22
Full-length movies	22
Weather	22
TV clips	18
Sports highlights	17
Video game content	16
How-to instructional videos	16
Comedy sketches by comedians (not consumers)	14
Adult entertainment	13
TV previews	12
Short films	11
TV ads	11
Web original videos	8

Proportion of respondents (%)

Source   Frank N. Magid Associates (2011)

US research company Accustream notes video aggregation sites and services are increasingly important drivers of growth in online video viewing in 2010 (AOL, MSN, Yahoo, VideoDetective, Blinkx, Comcast and others) (Accustream Research 2010).

Yahoo research reports online viewing of full-length movies and TV grew from 16 per cent of content viewed in 2009 to 26 per cent of content viewed in 2011. However, short clips still represent nearly three-quarters of videos viewed (Yahoo! Interpret 2011).

**Proportion of content type watched in the last 24 hours, 2009 and 2011**
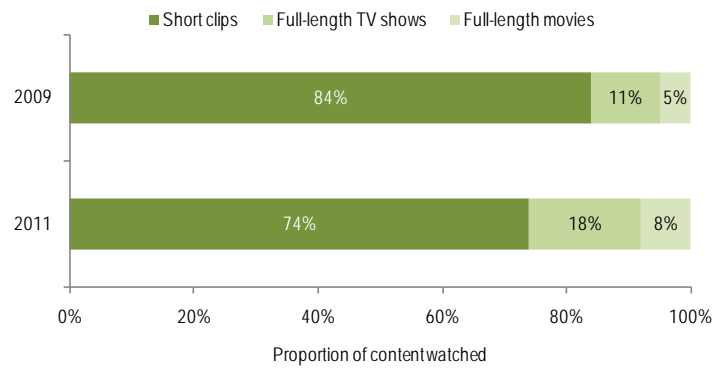
Source   Yahoo! Interpret (2011)

Global Web Index surveyed the genre/ topic of online video consumption by 1,000 internet users aged 16–64 years in the US in January 2009.

Music video (21 per cent) was the only genre to score over 9 per cent of videos viewed online in the previous week. Drama made up only 4 per cent of videos viewed; film trailers 6 per cent (Global Web Index 2009).

Breakdown by genre/topic of video programs viewed online in the previous week in the US, January 2009
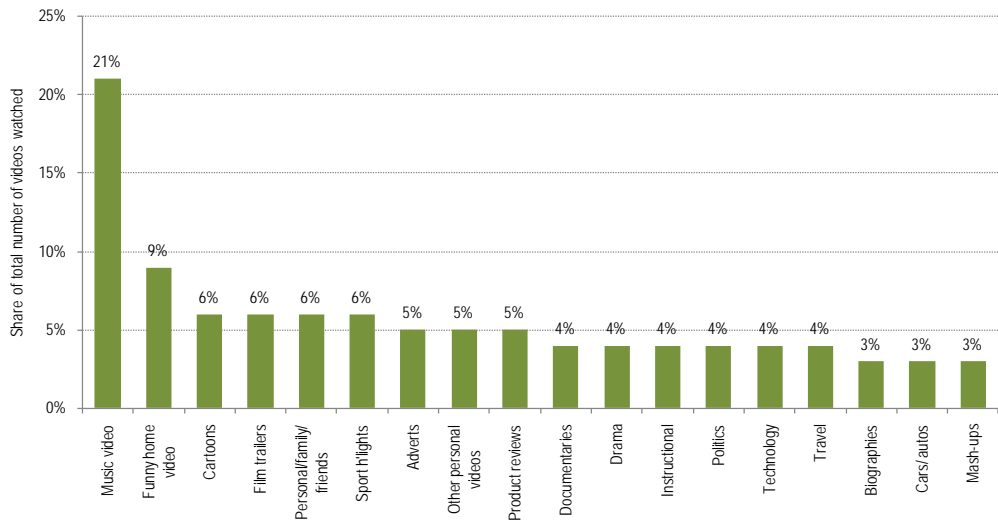

Source   Global Web Index (2009)

Using the internet to create/distribute video

The World Internet Project reports the proportion of Australian internet users 18 years and over posting videos online during the year grew from 4.8 per cent in 2007 to 17 per cent in 2011 (Ewing & Thomas 2010).

Frequency of Australian internet users 18 years and over posting videos online, 2007 and 2011
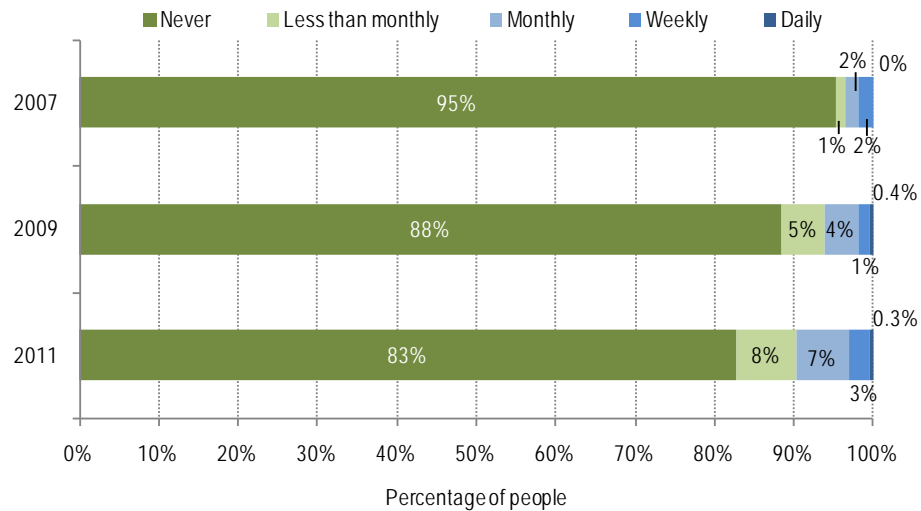
Source   ARC CCi (2011)

Research International's 2009 study for Google found 20 per cent of Australian YouTube users uploaded their own video (Chuck 2009).

ACMA reported 4 per cent of girls and 6 per cent of boys aged 8 to 17 years posted their own video online in 2007. This was only a small subset of those who had created some form of online content: 47 per cent of girls and 38 per cent of boys (ACMA 2008: 19).

Video sharing is popular on social networking sites: the 2011 Sensis Social Networking survey found 'sharing photographs or videos' was the second most popular reason social media users 14 years and over used social networking sites, at 56 per cent. The most common reason nominated for using social networking sites was 'catching up with friends or family' at 93 per cent (Sensis 2011: 18).

In 2010, more Australians who uploaded video did so on Facebook than YouTube according to the Nielsen 2011 Online Consumer report (Sinclair 2011).

US research

Pew Internet reported one in seven adult internet users in the US (14 per cent) uploaded a video to the internet so others could watch it or download it in 2009. That was almost double the 8 per cent of adult internet users who uploaded video in 2007.

One in five adults who watched video online (21 per cent) also posted video online.

Video uploading was more common among internet users under age 50 than it was among older internet users. Roughly one in five internet users aged 18–49 years (18 per cent) had uploaded a video online, but just 10 per cent of internet users aged 50 and older.

Pew, however, found some significant changes in the types of people uploading video from 2007 to 2009. Young internet users were most likely to upload video in 2007, and the activity was concentrated among 18–29 year-olds. In 2009, 30–49 year-olds were just as likely as the youngest adults to upload video.

The 2007 study also found men were twice as likely as women to post video online. By 2009 that disparity had gone; male and female internet users were equally likely to upload video.

Pew asked uploaders if they posted video to any of six different types of sites. Among the choices presented, by far the most popular were social networking sites like Myspace or Facebook (52 per cent of uploaders posted video on these sites in 2009) and video sharing sites like YouTube or Google Video (49 per cent of uploaders post on this kind of site).

The most popular content to post online was home video (uploaded by 62 per cent of video uploaders), travel videos (24 per cent) and television/movie clips (24 per cent) (Purcell 2010).

Where do Australians get their audiovisual stories online?

Methodology

Australians get audiovisual stories online in many ways and from many places. Measuring these different activities requires different tools.

The need to use different data sources highlights the complexity of online video at this stage by comparison with other distribution sectors. For cinema, the number of admissions provides a good measure of how many people view a particular title from start to finish. For television, sophisticated and costly measurement schemes run by third party research companies provide an accepted means for assessing how much time audiences spend watching particular programs, even though there are many acknowledged uncertainties, for example, about the scale of out-of-home viewing. For DVD, data about the volume of sales and rentals is captured by retailers, but it is much harder to translate this into information about the number of viewings of particular titles (Screen Australia 2011b). For online video, the complexities are even greater than the acknowledged uncertainties of methodologies for measuring longer-established media.

This project concentrates on websites. Our primary measurement tool was Nielsen NetView. NetView provided data on the frequency and duration of access to particular URLs. We also received some data about access to the ABC's websites and catch-up TV service collected by WebTrends, some data and analysis on the frequency and duration of access to particular URLs and search activity from Experian Hitwise, and gathered information from secondary sources about other places where Australians go for audiovisual stories.

Nielsen NetView was selected as our primary source because:

- it provides detailed site metrics including unique audience, time spent and demographic breakdowns, although it does not separately identify video activity;
- it is used by Spreading Fictions partner the ABC and the majority of the major online publishers in Australia;
- it is accredited by the Interactive Advertising Bureau of Australia (IAB) and has been appointed the sole and exclusive preferred supplier for the provision of online audience measurement services in Australia; and
- it enables comparison to other countries with NetView such as the US, Brazil, the UK, France, Germany, Italy, Spain and Switzerland, although cross-country analysis was not undertaken for this project.

In October 2011, Nielsen began releasing data using a new hybrid methodology, known as Nielsen Online Ratings (IAB Australia & Nielsen 2011). See page 62 for more information.

To better understand the websites where Australians go for audiovisual stories, we examined a three-month sample of Australian unique visitor numbers from Nielsen NetView covering approximately 1,300 domains and 1,300 sub-domains over the period January to March 2011.

First, sites 'offering video content for download, streaming or physical purchase directly on the home page' were identified by visiting and checking for the prominence of audiovisual content offerings in the top 500 domains ranked by Australian unique visitors in the three month sample period.

This identified 94 video sites in the top 500 domains. These were allocated to categories developed by the research team. These are not official categories or rankings generated by Nielsen.[8] The categories are described in more detail in the next section.

- 20 newspaper sites and 12 online 'magazine-style' sites
- 16 broadcast sites
- 13 video sharing sites
- 10 games sites
- 9 cinema and video sites
- 8 peer-to-peer BitTorrent sites
- 6 pornography sites.

Significantly, Facebook was not among them, because, although reported by Nielsen as 'overtaking YouTube' in 2010 as the main video sharing site (Sinclair 2011) video is not presented or aggregated on the home page. Rather it is shared within members' social networks or via public Facebook pages.

Second, we selected 25 sites for more detailed analysis. We excluded games and pornography sites, then chose at least one site from the other five categories. Games and pornography sites were excluded because the overall project is concentrating on narrative fiction.[9] This reflects the high priority given by successive governments in Australia and overseas to policies encouraging the making, promotion, screening and discussion of local feature films, adult and children's TV dramas and documentaries.[10]

Wherever possible we selected domains, sub-domains or page-level URLs most closely related to video activity, although NetView sample sizes were insufficient for reliable projection of audience size for a small number of these URLs in at least some months, particularly:

> foxtel.com.au/download
> imdb.com/features/video
> player.sbs.com.au
> smh.com.au/tv

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8 The boundaries between these categories are not clear-cut and other categories could be used. For example, a 'music' category could be employed, encompassing sites like Vimeo and Myspace, which we have allocated to Video Sharing, and iTunes, which we have allocated to Cinema and Video.

9 Fictional film or narrative film is film that tells a fictional story or narrative. Bordwell, D & Thompson, K 1997, Film Art: An Introduction 5th edn, The McGraw-Hill Companies cited in 'Fictional Film' Wikipedia http://en.wikipedia.org/wiki/Fictional_film. Accessed 22 August 2011.

10 Between 1994/95 and 2007/08, 72 per cent of federal and state screen agencies' production funding was allocated to feature film and TV drama production. Screen Australia 2010, Film agency funding survey 1994/95 to 2007/08. Accessed 13 September 2010.

The 25 selected sites should not be seen as the only ones of interest to the project. Many other sites could have been productively analysed as well.

Video sites in Top 500 Domains

Category	No. of video sites in Top 500	No. of video sites selected for sample
Newspaper and magazine	20+12	1
Broadcaster	16	9
Video sharing	13	4
Games	10	-
Cinema and video	9	5
Peer to peer – BitTorrent	8	3
Pornography	6	-
Video search	-	3
Total	94	25

25 selected video sites

Site name	Site type	Nielsen site hierarchy	Unique audience, Nielsen NetView March 2011 ('000s)
au.tv.yahoo.com	Broadcaster	Sub-domain	1,155
abc.net.au/tv	Broadcaster	Page level	599
au.tv.yahoo.com/plus7	Broadcaster	Page level	381
fixplay.ninemsn.com.au	Broadcaster	Sub-domain	377
abc.net.au/iview	Broadcaster	Page level	357
ten.com.au/watch-tv-episodes-online	Broadcaster	Page level	218
neighbours.com.au	Broadcaster	Domain	109
player.sbs.com.au	Broadcaster	Sub-domain	95
foxtel.com.au/download	Broadcaster	Page level	42
itunes.apple.com	Cinema and video	Sub-domain	2,102
quickflix.com.au	Cinema and video	Domain	324
bigpondmovies.com	Cinema and video	Domain	186
disney.com.au	Cinema and video	Domain	146
imdb.com/features/video	Cinema and video	Page level	18
smh.com.au/tv	Newspaper	Page level	123
thepiratebay.org	P2P BitTorrent	Domain	736
isohunt.com	P2P BitTorrent	Domain	527
eztv.it	P2P BitTorrent	Domain	344
video.google.com.au	Video search	Sub-domain	230
bing.com/videos	Video search	Page level	178
blinkx.com	Video search	Domain	80
youtube.com	Video sharing	Domain	7,663
vimeo.com	Video sharing	Domain	711
dailymotion.com	Video sharing	Domain	498
metacafe.com	Video sharing	Domain	354

Source   Analysis of Nielsen NetView data

Nielsen delivered two NetView datasets for each of these sites:

- unique audience (or visitors), total minutes and total page views per month for the 13 months from June 2010 to June 2011 inclusive. Home and work internet users, excluding apps.
- unique audience, total minutes and total page views for June 2011 by demographic group (by gender and by age group). Home and work internet users, excluding apps.

Categories of site

Broadcaster sites

Network sites were well represented in the top 500 domains, including Australia's five free-to-air networks, Foxtel and overseas broadcasters, the BBC and CNN.

We selected only two of these network sites, one of the top-ranking commercial sites, Yahoo7, and the higher ranking of the two public broadcaster sites, ABC TV. We anticipated that a lot of use of the Broadcast sites would be for purposes other than watching video (e.g. checking schedules), and we wanted to focus mainly on the relatively new catch-up sites.

Catch-up TV services, offered by all free-to-air and subscription broadcasters via their websites, provide access to recently screened programs for a limited period of time. Foxtel and Austar on demand are available to subscribers only.

We selected the five free-to-air catch-up sites plus the Foxtel on demand site.

Catch-up TV was first launched in Australia by Network Ten in 2007 with the first season of *Supernatural*. This was followed by more comprehensive services from the ABC in July 2008, SBS during 2008/09, Foxtel in October 2009 and the Seven and Nine in early 2010.Ten revamped its service October 2010 (ABC 2008; Cameron 2010a, b, c; Pendlebury 2009; SBS 2009). Not all programming is offered on catch-up services; for example movies are rarely available on free-to-air catch-up services.

Individual program websites aim to engage viewers before, during and after programs are broadcast through a range of activities that varies widely for different genres. Some offer catch-up episodes.

We selected Fremantle Media's *Neighbours* website, the highest-ranking drama website January–March 2011. Other high-ranking program websites included Nine's *Top Gear*, which offers clips, car sales, reviews, and games; Ten's *The Biggest Loser*, which offers full episodes, Club and lifestyle advice; and Seven's *Today Tonight*, which offers the show's segments for streaming.

Cinema and video sites

Several different kinds of sites are included in this category.

Independent movie information sites: IMDb is the top-ranking cinema/video site. It offers an extensive database of titles, cast and crew

credits, reviews and previews. We selected for analysis the more specific url imdb.com/features/video/ which has streamed full-length titles since September 2008 and now offers 8,000 titles. Another popular site not included for further analysis is Rotten Tomatoes. It offers movie previews, reviews and news.

Cinema exhibitor sites: These offer session times, information about currently screening and upcoming movies, ticket sales and trailers. Four of the nine cinema/video sites in the top 500 were in this sub-category: the Great Union/Birch Carroll and Coyle site eventcinemas.com.au, hoyts.com.au, yourmovies.com.au, villagecinemas.com.au.

Although we were interested in what may be an important trend towards sampling movies, either as a prelude to seeing the whole film or as an experience in its own right, we had higher-priority sites in this category.

Video sale/rental sites: We selected the three top-ranking sites in this sub-category for further analysis: iTunes, Quickflix and BigPond Movies. Each is structured differently.

The iTunes Australian music store was launched October 2005. Television programs were first added in June 2008, including US programs and the programs of three local networks Seven, Nine and the ABC. The film catalogue was launched in August 2008 (Apple 2008a, b).

Quickflix launched in 2003 as an online DVD rental service, and began a streaming service late in 2011.

BigPond Movies was launched as an online DVD rental service in February 2006. This business was sold to Quickflix in July 2011. Only online delivery has been offered through BigPond Movies since October 2011.

Studio/distributor sites: All the major studios have sites offering a range of features. Although not in the top 500 sites in January to March 2011, the Disney site was selected for further analysis to gain insight into young audiences.

Individual movie websites: Created by distributors or production companies, these offer features including behind the scenes, games, blogs, character guides, merchandise and trailers.

Video sharing sites

A video sharing service allows individuals to upload video clips to an internet website and to specify levels of access by others.

We selected four of the top-ranking video sharing sites for our 25, including Metacafe launched in July 2002, vimeo (November 2004), YouTube (2005, with a localised Australian site launched in October 2007) and Daily Motion (March 2005).[11] Myspace, although also a top-ranking video sharing site, was not selected because its main focus is now music video.

As explained above, Facebook did not satisfy the definition of a website prominently offering video from its homepage, although it ranked second in the Top 500 domains with 9.5 million unique visitors in March 2011, behind Google with 12.2 million.

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[11] Launch dates sourced from Wikipedia pages for each site.

Despite the importance of Facebook as a distribution point for video (probably including fiction video), we decided not to use Nielsen NetView to further analyse it, because the site is not structured with sub-domains or pages where video use is focused.

This sub-category also includes web hosting services. No sites in this sub-category were selected for further analysis because they were not directly relevant to the primary focus on narrative fiction.

Newspaper sites

In the top 500 domains, we identified 20 newspaper sites and 12 online 'magazine-style' sites, all offering video. Of the top 25 sites offering video, eight were newspaper sites. This may have been influenced by several significant news events in January–March 2011: the Queensland floods and earthquakes in New Zealand and Japan.

Even without this spike, news sites are popular online destinations and they have been making more use of video for several years. During December 2010, 6.2 million Australian internet users accessed online news sites from home (ACMA 2011: 38). D S Simon found 85 per cent of US online media websites (TV, radio, newspaper, magazines, web media) and 78 per cent of newspaper sites used online video content in 2011, up from 64 per cent in 2010 (D S Simon Productions 2011).

Newspapers overtook broadcasters for the total number of video minutes streamed in the third quarter of 2010 in the US according to video hosting platform Brightcove. Analytics provider TubeMogul reported the number of video titles uploaded by newspapers in the same quarter was more than double the number uploaded a year earlier (Ingram 2010).

Because this project is focused on narrative fiction, much of the video content on these news sites was not of direct interest. We selected the Fairfax site SMH TV, launched October 2010 (Mitchell 2010) for further analysis, because it is one of the family of Fairfax TV sites that host some narrative fiction.

Peer-to-peer (P2P) BitTorrent sites

BitTorrent is a protocol for sharing files over a distributed network without a large impact on a single server or point of contact. Files are downloaded from other peers on the network, hence the term peer-to-peer (P2P) (Layton & Watters 2010: 1).

Eight of the Top 500 domains were P2P BitTorrent sites. We selected the top three for further analysis: The Pirate Bay, isoHunt, EZTV.

BitTorrent is the most used file-sharing protocol worldwide with over 8 million simultaneous users and 100 million regular users of the software worldwide in January 2011 according to Envisional (2011).

Movies have the highest 'supply' in BitTorrent (39 per cent of swarms[12]), followed by music albums (17 per cent), TV shows (17 per cent) and software (7 per cent). However, software is the most 'transferred' media, accounting

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[12] All peers (including seeders) sharing a torrent are called a swarm
http://en.wikipedia.org/wiki/Glossary_of_BitTorrent_terms#Swarm. Accessed 14 February 2011.

for close to 38 per cent of all transferred copies, followed by individual songs (19 per cent), movies (16.4 per cent) and TV shows (5.6 per cent) (Mateus & Peha 2011: 15, 17).

For Australian internet users (18 years and over) in 2011, the World Internet Project found:

- 23 per cent used file-sharing (from several times a day to less than monthly);
- 19 per cent reported the ability to download movies for free on the internet means they spend a lot less on movies;
- 15 per cent reported the ability to download television for free on the internet means they watch less TV (ARC CCi 2011).

TorrentFreak reports that:

> While millions of people still use BitTorrent every day to download videos, increasingly streaming sites have become more dominant for online entertainment. Nearly every video file available via BitTorrent can also be streamed online somewhere, for a payment or totally free.

> During recent years many BitTorrent clients [a computer program that manages downloads and uploads using the BitTorrent protocol] have introduced streaming functionality (Ernesto 2011).

Video search sites

Video search engines and online video directories allow video and digital film material on the internet to be indexed, catalogued and searched (Good 2007).

Although not in the Top 500 domains January–March 2011, we concluded video search engines were likely to become increasingly important ways for users to find video online. We selected the top three for further analysis: Google Video (launched 2005), Bing Video (officially released on 2007 as Live Search Video, and rebranded as Bing Videos (2009) and Blinkx (2004).[13]

Analysis

Time series charts were compiled using the unique audience and time spent data supplied by Nielsen for each month from June 2010 to June 2011. For the demographic data supplied by Nielsen, stacked bar charts were compiled showing the unique audience from each demographic group for each website in June 2011.

A selection of these charts is presented and analysed below.

Where comparisons are made between different sites and types of sites, it is important to keep in mind the different types of activity occurring on different sites. For example, on network TV sites, visitors may be checking schedules as well as watching video; on catch-up sites, they are more likely to be watching video. On YouTube they are watching video; on Quickflix during the period for which NetView data was supplied, they were searching for and ordering DVD titles because online delivery had not commenced. On iTunes,

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[13] Launch dates sourced from Wikipedia pages for each site.

they may be downloading software, searching for audio or video, or listening to samples. On P2P BitTorrent sites, they are searching for titles, but the transfer of files or parts of files among peers is not captured as time spent on the P2P site itself. On some video search sites, users are only searching; on Bing Video, which hosts videos, they may be watching as well.

Unique audience

Nielsen defines unique audience as: 'the total number of unique persons that have visited a website or used an application at least once in the specified reporting period. Persons visiting the same website or using the same application more than one time in the reporting period are only counted once' (Nielsen 2006). The data is drawn from a panel of Australians.

Of the selected 25 sites, YouTube had by far the most visitors by this metric. Over the 12 months to June 2011, it attracted a unique audience 3.9 times larger than the second-most-visited site, iTunes, and six times larger than the third, the Seven Network's TV site au.tv.yahoo.com.

P2P BitTorrent sites had more visitors than broadcaster sites. Between June 2010 and June 2011, the most popular P2P BitTorrent site was visited by twice as many people as the most popular commercial television catch-up sites, Plus7, and FIXPlay (renamed 'ninemsn Video' December 2011).

Broadcaster sites

Commercial television catch-up sites: The unique audience for all commercial television catch-up grew over the period, though not steadily. The unique audience for the most popular of these sites, Plus7, grew by 45 per cent over the 12 months to June 2011, to 527,000 users. Nine's FIXPlay more than doubled its monthly users to 328,000 in June 2011 and Ten's catch-up site grew 77 per cent to 285,000 (the Ten catch-up site is for the main channel only and does not include the separate catch-up sites for One and Eleven).

Public broadcaster catch-up sites: The unique audience for ABC iView grew 58 per cent over the 12 months to 482,000 in June 2011, averaging 423,000 per month.

WebTrends data provided by the ABC recorded 'unique browsers' to iView growing at a similar rate over the period, 65 per cent, from 581,000 in June 2010 to 960,000 in June 2011,averaging 728,000 per month.[14]

The SBS Player site had a unique audience of 75,000 in June 2011. On 1 September 2011, SBS launched a new video catch-up service, SBS On Demand. The new player provides access to more than 90 per cent of all SBS prime-time TV content and a back-catalogue of more than 20,000 items (Diaz 2011).

Network sites, which give access to much more than video, had more unique visitors than catch-up sites. For example, the most popular broadcaster site

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[14] Nielsen is recommending the retirement of the monthly unique browser (UB) figure because Australians' use of multiple devices, browsers and the rates of generation of cookies, mean it is no longer representative of the online audience. For example, in June 2011, Nielsen's Marketing Intelligence showed almost 120 million UBs a month originating in Australia, whilst each month there are only about 15 million Australians online. Nielsen's retirement of the monthly UB figure will only occur with industry consultation and agreement.

Source: IAB Australia & Nielsen (2011), Frequently asked questions, Nielsen and IAB Australia, 22 September; Nielsen (2011), Nielsen Online Ratings FAQ, [Sydney]: Nielsen, 23 September, au.nielsen.com/site/documents/NielsenOnlineRatingsFAQFINAL.pdf. Accessed 10 February 2012.

in June 2011, au.tv.yahoo.au, attracted a unique audience of 1.4 million, which was 2.7 times larger than the associated Plus7 catch-up site. The network sites were also visited by more people than the Neighbours program site and SMH TV site (SMH TV is only one of several Fairfax TV sites).

Audiences for catch-up and network sites all declined sharply over summer, similar to free-to-air television audiences. Foxtel On Demand did not show the same pattern, although some caution should be used here as the proportion of the NetView panel using Foxtel Download is small.

Unique audience (millions), June 2010 to June 2011
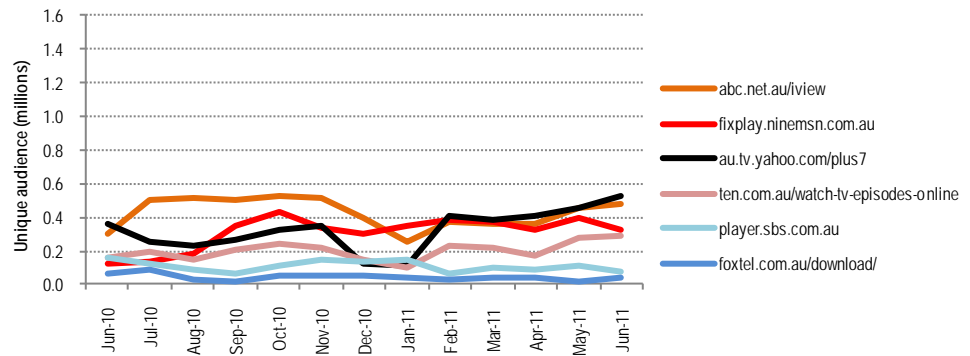
Selected broadcaster catch-up sites

Other broadcaster sites
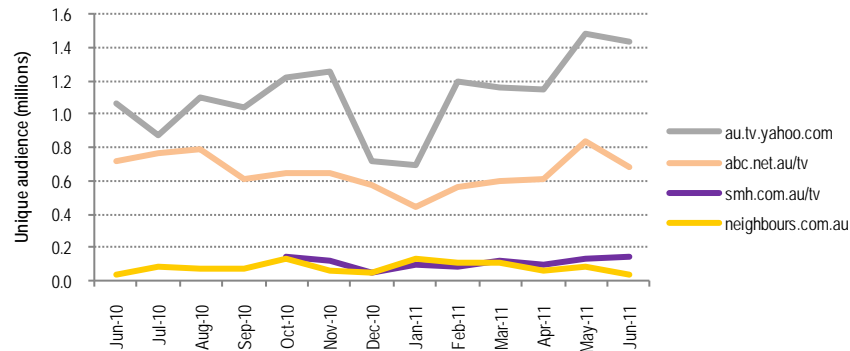
Broadcaster network and catch-up sites
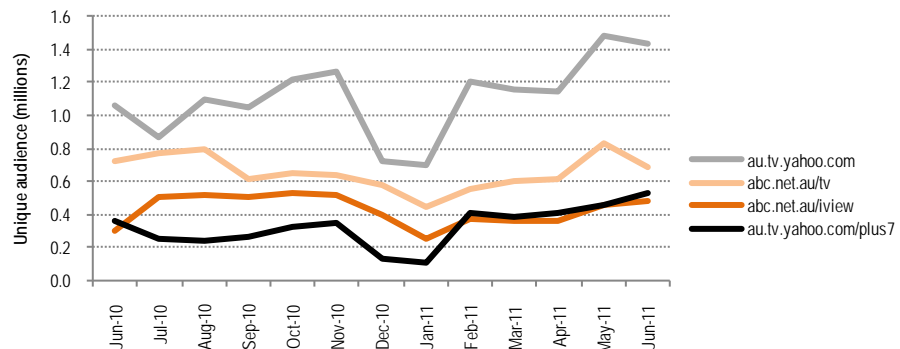
Source   Analysis of Nielsen NetView data

Newspaper sites

Fairfax launched its video site during the study period, on 1 October 2010. The unique audience for SMH TV in its launch month was 147,000. This fell

to a low of 49,000 in December, increasing again from March 2011, and reaching 144,000 in June.

Cinema and video sites

Unique visitors to the iTunes website grew by more than 150 per cent to 2.8 million in June 2011. Much of this traffic is likely to be driven by demand for content other than video.

Unique visitors to BigPond Movies halved between June 2010 and June 2011. Quickflix (395,000) had around twice BigPond Movies' number of unique visitors in June 2011 (187,000).

Unique visitors to IMDb video grew sharply but from a low base, to 35,000.

Cinema and video sites, unique audience (millions), June 2010 to June 2011
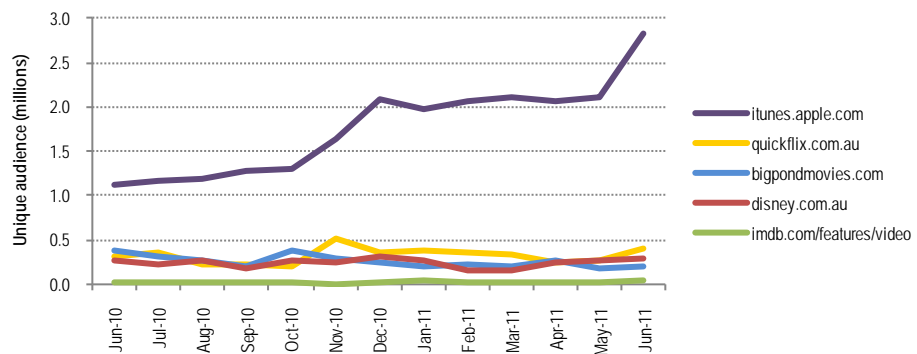
Source   Analysis of Nielsen NetView data

Video sharing sites

YouTube was by far the most popular site selected in this category and among all 25 sites. Its unique Australian audience grew 20 per cent from 6.4 million in June 2010 to 7.7 million in June 2011. Vimeo doubled its unique visitors over the 12 months to 843,000 in June 2011.

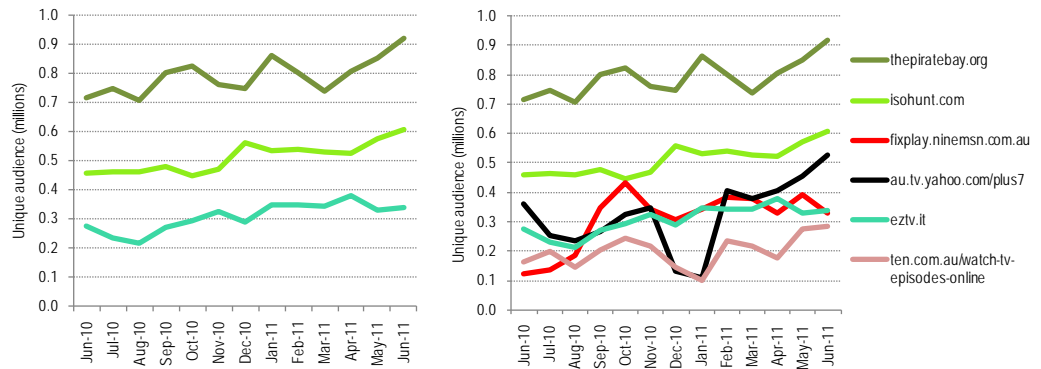**Video sharing sites, unique audience (millions), June 2010 to June 2011**
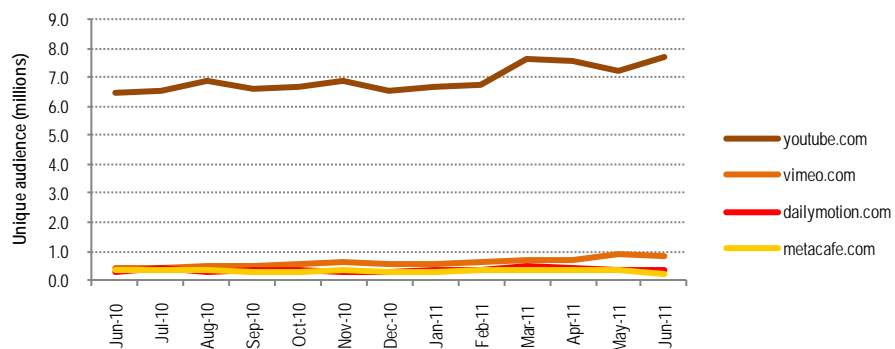
Source   Analysis of Nielsen NetView data

P2P BitTorrent sites

The most popular P2P BitTorrent site among Australian internet users was The Pirate Bay. Unique visitors to all three selected P2P BitTorrent sites grew from around 1.1 million in June 2010 to 1.3 million a year later.

P2P BitTorrent sites, and P2P BitTorrent sites compared to selected broadcast catch-up sites, unique audience (millions), June 2010 to June 2011
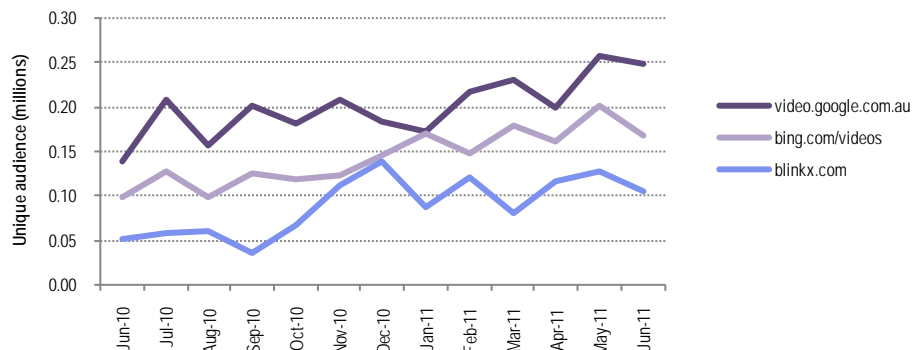

Source Analysis of Nielsen NetView data

Video search sites

Video search sites were not as popular as the P2P BitTorrent sites, but their audience grew strongly. The unique audience for Google Video grew by just over 80 per cent between June 2010 and June 2011, from 138,000 to 249,000. Bing Video grew by 68 per cent from 99,000 to 167,000 and Blinkx doubled to 104,000.

Video search sites, unique audience (millions), June 2010 to June 2011

Source   Analysis of Nielsen NetView data

Total minutes spent on sites

In Nielsen NetView, 'total minutes' is an estimate of time spent on a URL by Australians using a computer to access the internet. Time is recorded only where a URL is 'in focus' – is visible or is in the foreground – on a user's desktop. If multiple tabs are open in a browser, only the tab that is in focus is credited. If another application/program is in use, none of the URLs open in browser tabs is credited for time. A session is defined as: 'a continuous series of URL requests with a user present, with no more than a 30 minutes gap between two URL requests'. A session ends when the user changes or there is no new URL request for 30 minutes, in which case the last URL in

focus is credited one extra minute after the last recorded user activity (Nielsen Online 2006, 2007).

NetView did not capture 'time spent' viewing videos on sites where videos were viewed through standalone, rather than embedded players (mostly Flash). The sites affected were ABC iView and SBS Player.

Between June 2010 and June 2011, Australians spent more time using YouTube than any of the other selected sites: 19.7 times more than the next most visited site, iTunes. Australians also spent more time in total using the three selected P2P BitTorrent sites than most other sites. They spent more time on these sites, for example, than on the three commercial TV catch-up sites combined. Users spent 5 times as long visiting The Pirate Bay as the most popular catch-up site, Plus7, for example.

Broadcaster sites

Commercial television catch-up sites: Total time spent each month on the selected commercial television catch-up sites grew over the period, from around 5 million minutes in June 2010 to around 6 million in June 2011, though the growth was not steady. Total time spent on the most popular of these sites, Plus7, fell from 4.1 million minutes in June 2010 to 3.2 million minutes in June 2011. Nine's FIXPlay almost tripled from 0.6 to 1.6 million minutes, peaking at 2 million minutes in October 2010, and Ten's main channel catch-up site almost quadrupled from 0.4 million minutes to 1.1 million minutes. Plus7 averaged 2.6 million minutes over the 12 months; Nine's FIXPlay 1.3 million minutes and Ten's main channel catch-up site 0.5 million minutes.

Public broadcaster catch-up sites: ABC iView was the most popular catch-up site in the second half of 2010 (in terms of total time spent), attracting 6 million minutes in July 2010 and an average of 4.8 million minutes per month between June and December 2010. Total monthly minutes fell to an average 1.0 million minutes between January and June 2011. Time spent using the SBS Player averaged 0.9 million minutes per month, peaking in November 2010 at 1.6 million minutes.

WebTrends data provided by the ABC shows a very different picture. According to WebTrends, visitors spent a total of around 86 million minutes on the iView site in June 2011 and an average of 65 million minutes each month from June 2010 to June 2011:

ABC iView, June 2010 to June 2011

	June 2010	June 2011	Average June 10 to June 11
Visitors	581,198	960,344	727,640
Visits	2,235,476	3,109,357	2,374,496
Average visit length [1]		27.55	27.48
Total minutes		85,662,785	65,259,065
Minutes per visitor per month		89.2	89.7

Source: WebTrends, provided by ABC

Notes   [1] fractions of minutes in decimal form, not seconds

Network sites: Australians spent more time in total on Seven's network site au.tv.yahoo.com than any of the other selected broadcast sites. Over the 12

months to June 2011, total time spent on the Yahoo!7 site increased 11 per cent, from 10.1 million minutes in June 2010 to 11.2 million minutes. Total time spent on the ABC TV site fell by 20 per cent, from 3.2 million minutes in June 2010 to 2.6 million minutes in June 2011.

Total minutes (millions) spent on sites each month by Australians, June 2010 to June 2011
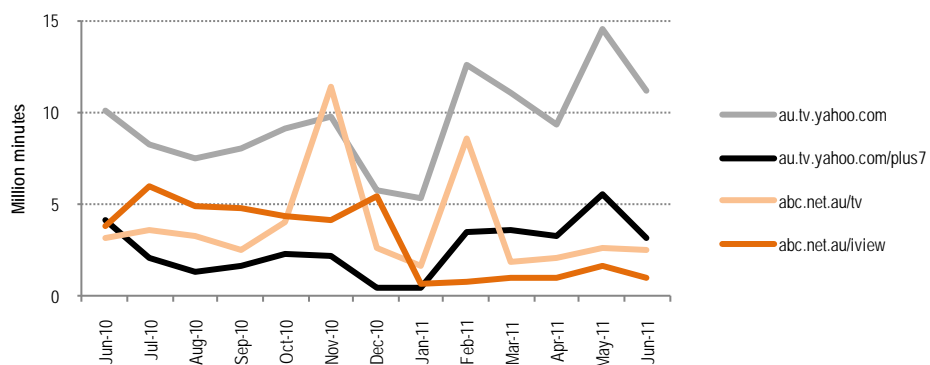
Selected broadcaster catch-up sites
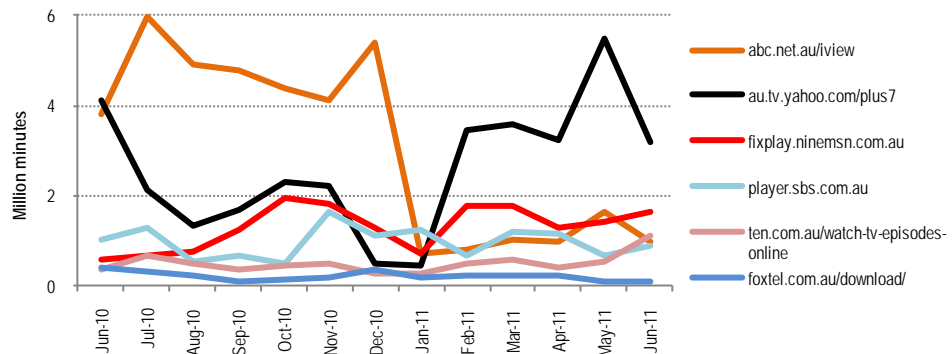
Other broadcaster sites
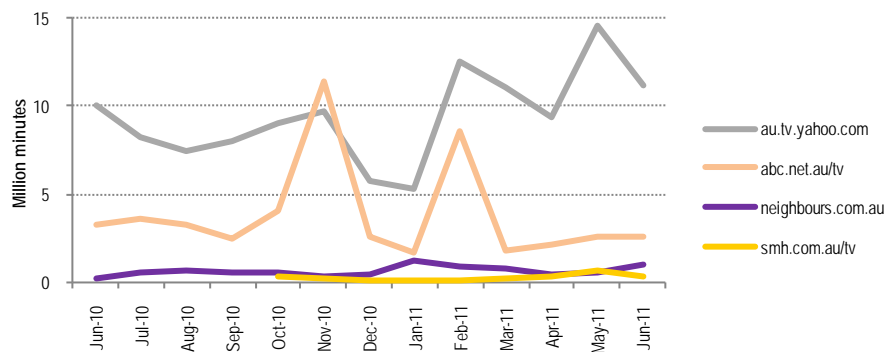
Broadcaster network and catch-up sites

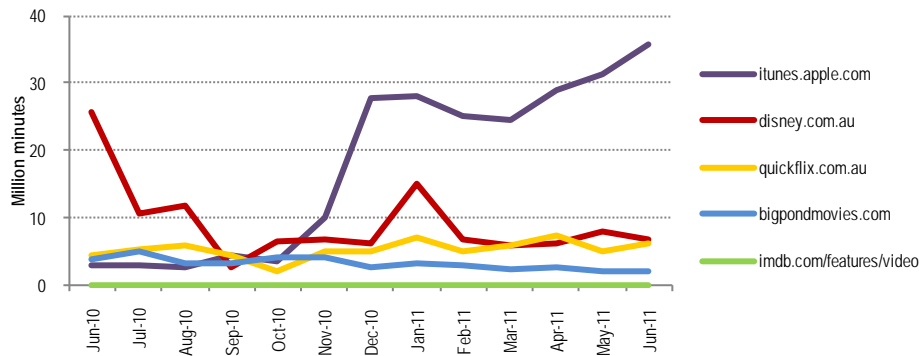Source   Analysis of Nielsen NetView data

Newspaper sites

Launched in October 2010, total time spent on SMH TV more than doubled from January 2011 to June 2011 (from a total 136,000 minutes to 339,000 minutes).

Cinema and video sites

Over the 12 months, time spent on the iTunes website increased more than ten-fold to 35.8 million minutes in June 2011.

Australians spent more time on the Disney and Quickflix sites than on most of the selected broadcaster catch-up and network sites.

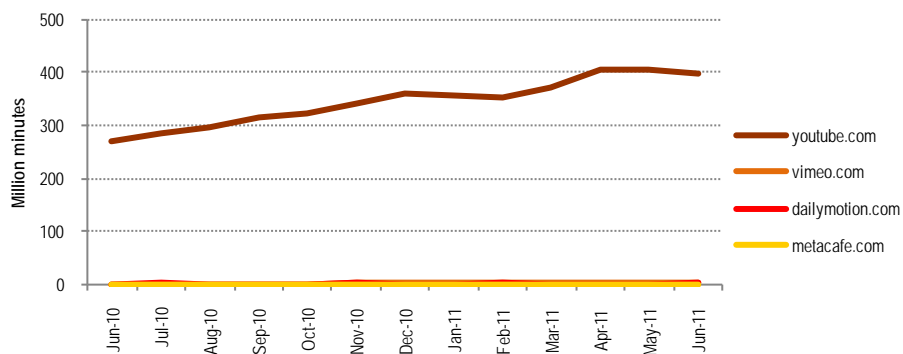**Total minutes spent on cinema or video sites, each month by Australians, June 2010 to June 2011**

Source   Analysis of Nielsen NetView data

Video sharing sites

As noted earlier, Australians spent more time using YouTube than any other of the selected sites. Over the 12 months, time spent on YouTube increased by 46 per cent to 398 million minutes in June 2011.

The other selected video sharing sites averaged between 1 million and 2.4 million minutes per month between June 2010 and June 2011.

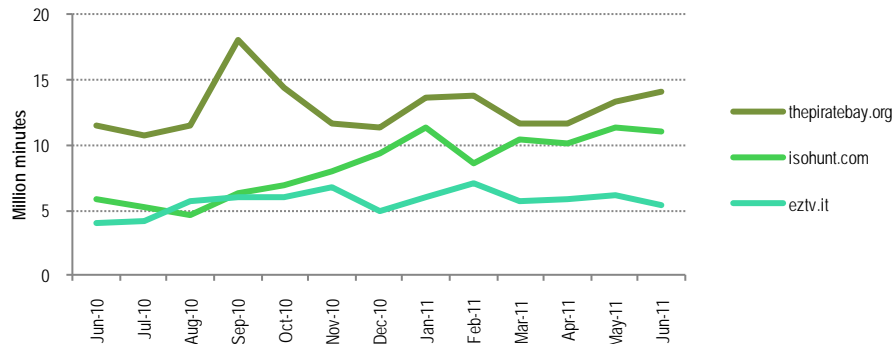**Total minutes spent on video sharing sites each month by Australians, June 2010 to June 2011**

Source   Analysis of Nielsen NetView data

P2P BitTorrent sites

Total time on the three selected P2P BitTorrent sites increased over 43 per cent from 21.4 million minutes in June 2010 to 30.6 million minutes in June 2011. Time on isoHunt increased by over 88 per cent, The Pirate Bay by 23 per cent, and EZTV by 35 per cent.

In June 2011, Australians spent a total of 14.2 million minutes using The Pirate Bay – third behind YouTube and iTunes on this metric.

**Total minutes spent on P2P BitTorrent sites each month by Australians, June 2010 to June 2011**

Source   Analysis of Nielsen NetView data

Video search sites

Compared with the P2P BitTorrent sites, Australians did not spend a lot of time on general video search sites although use of video search sites appears to have increased. Total time spent on the three selected sites grew by 22 per cent from June 2010 to 2.1 million minutes in June 2011.

The most popular of the video search sites based on this metric, Bing Video, attracted a total of 1.5 million minutes in June 2011, up 14 per cent from June 2010.

Total minutes spent on video search sites each month by Australians, June 2010 to June 2011
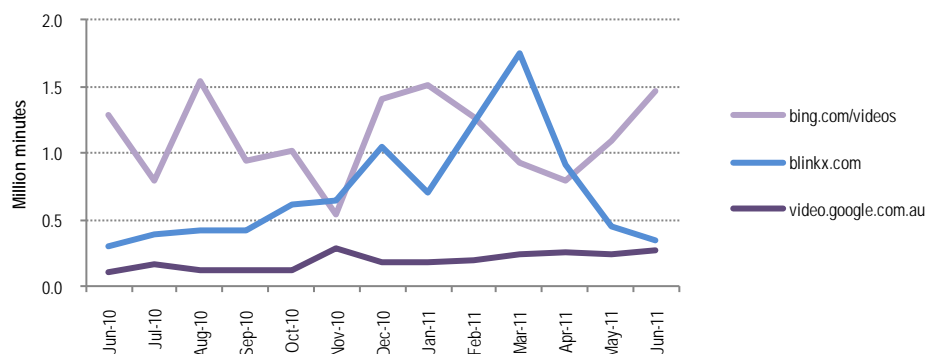
Source   Analysis of Nielsen NetView data

Time per person spent on sites

Time per person is: 'time spent during computer sessions per person for the specified reporting period'. Time per person spent on a site is calculated by dividing total minutes by the unique audience. This reveals the average time each unique visitor spent using the URL that month. It is a simple average that does not reveal, for example, the balance and intensity of heavy and light use.

YouTube visitors spent far more time per person using that site than the visitors to any other selected site. They spent 51.5 minutes per person in June 2011 and averaged around 50 minutes per month throughout the period.

The next most-used sites in June 2011 after YouTube were: the Neighbours website (25.4 minutes per person, and an average of 8.6 minutes person throughout the period), Disney (24.3 minutes; 38.4 minutes), isohunt (18.3 minutes;16.3 minutes) and Quickflix (16.0 minutes; 17.7 minutes).

Broadcaster sites

Time per person across the selected broadcast sites fell by 22 per cent from June 2010 to June 2011, although NetView data does not capture time spent on ABC iView and SBS standalone players.

Visitors spent an average 9 minutes per person visiting the broadcast sites each month. Time spent on some sites ranged widely from month-to-month.

Commercial television catch-up sites: Time per person increased for Ten's main channel catch-up site (up 82 per cent to 4 minutes) and Nine's FIXPlay (up 7 per cent to 5 minutes) from June 2010 to June 2011, but dropped for Plus7 (down 46 per cent to 6 minutes).

However when averaged over the 13 months, time per person on Plus 7 was well above the average for this group. Users averaged 7.5 minutes on Plus 7, followed by Nine's FIXPlay at 4.2 and Ten's main channel catch-up site at 2.5 minutes per person per month.

Public broadcaster catch-up sites: From June 2010 to June 2011, average minutes per person per month on ABC iView dropped over 80 per cent from 12.5 to 2 minutes. Visitors spent an average 6.9 minutes per person per month on ABC iView, peaking in December 2010 at 13.7 minutes. As noted above, however, WebTrends data supplied by the ABC recorded a much higher time spent on the site. Average visit lengths ranged between about 26 and 29 minutes throughout the year, giving a much higher average time spent on the site per user of just under 90 minutes per month.

Use of the SBS Player almost doubled over the period, from an average 6.2 minutes per person per month in June 2010 to 12.1 minutes in June 2011.

Network sites: Visitors to the au.tv.yahoo.com network site spent 7.8 minutes per person and visitors to the Plus7 catch-up site spent an average of 6.1 minutes.
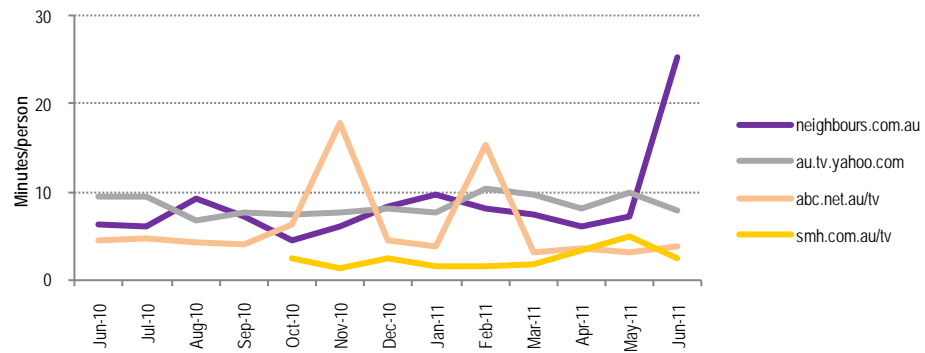
Individual program websites: Time per person spent on the *Neighbours* website averaged around 7 minutes per month from June 2010 to May 2011, but rose sharply to 25.4 minutes in June 2011.

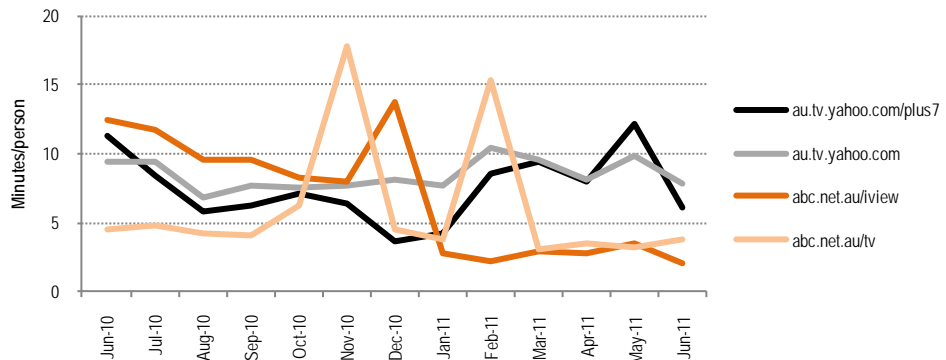**Average time spent per person each month, June 2010 to June 2011**

Broadcaster catch-up sites
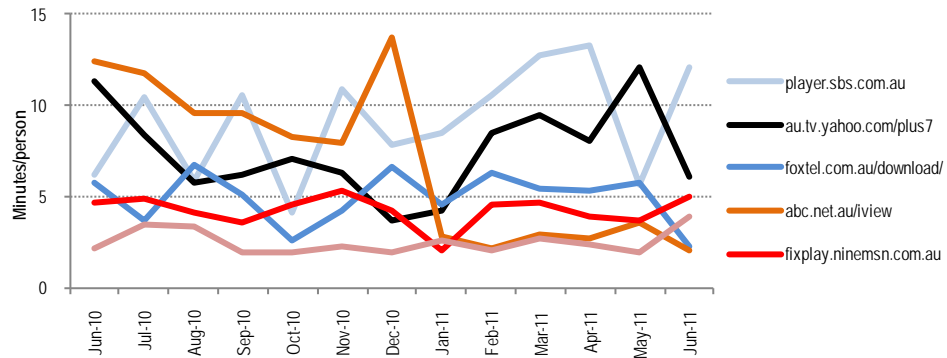
Other broadcaster sites

Broadcaster network and catch-up sites

Source   Analysis of Nielsen NetView data

Newspaper sites

SMH TV site users spent an average 2.4 minutes per user per month between October 2010 and June 2011.

Cinema and video sites

Disney's site users spent more time on the site in June 2011 than any of the selected sites except YouTube and Neighbours, 24.3 minutes per person. Throughout the period from 2010 to 2011, the monthly figure ranged widely,

from over 90 minutes (the highest of any site) to under 15 minutes, and averaged 38.4 minutes.

Despite providing access to full-length video, Australian internet users only visited the IMDb Video site for very short periods, averaging less than 2 minutes per month.

Average time spent per person on cinema or video sites, each month, June 2010 to June 2011
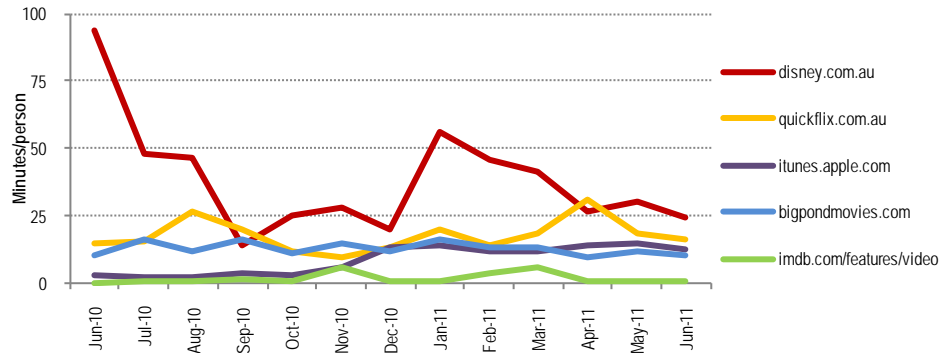
Source   Analysis of Nielsen NetView data

Video sharing sites

Australian YouTube users spent much more time visiting that site (around 50 minutes per person per month on average between June 2010 and June 2011) than the users of other selected video sharing sites (averaging between 3 and 5 minutes per person per month).

Average time spent per person on video sharing sites, each month, June 2010 to June 2011
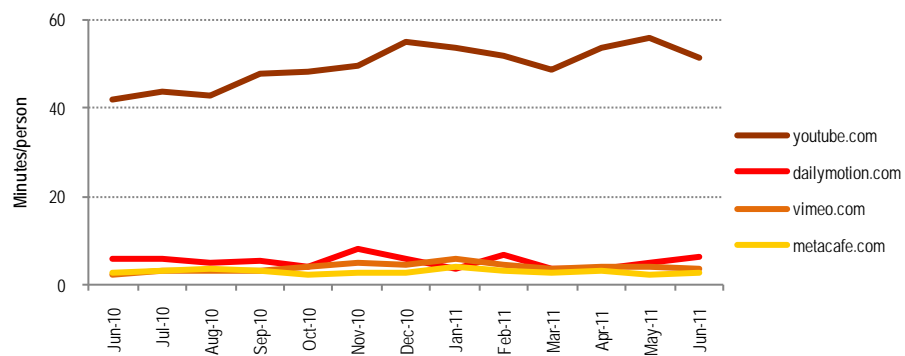
Source   Analysis of Nielsen NetView data

P2P BitTorrent sites

P2P BitTorrent site users spent more time visiting those sites than most other selected types. For most of the period, users of the three sites spent an average of 16–20 minutes visiting them each month.

Average time spent per person on P2P BitTorrent sites, each month, June 2010 to June 2011

Source Analysis of Nielsen NetView data
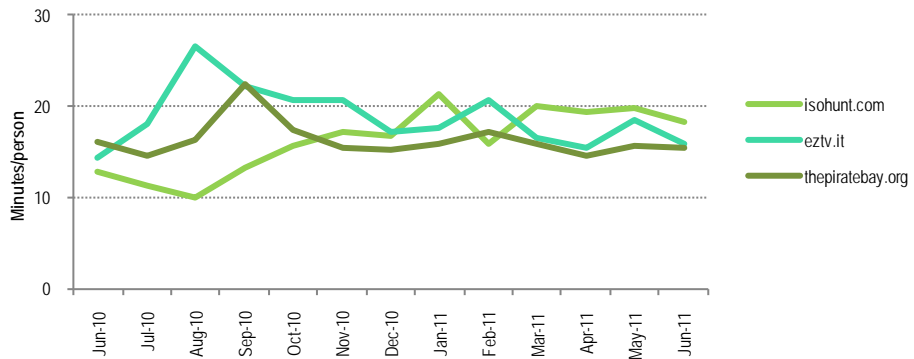
Video search sites

Despite growth in unique visitors and total time spent, time spent per person per month on Bing Video and Blinkx fell, by 32 per cent to 8.8 minutes per person in June 2011 for Bing, and by 44 per cent to 3.4 minutes per person for Blinkx. Time per person spent on Google Video, however, increased by 27 per cent to 1.1 minutes per person.

Average time spent per person on video search sites, each month, June 2010 to June 2011
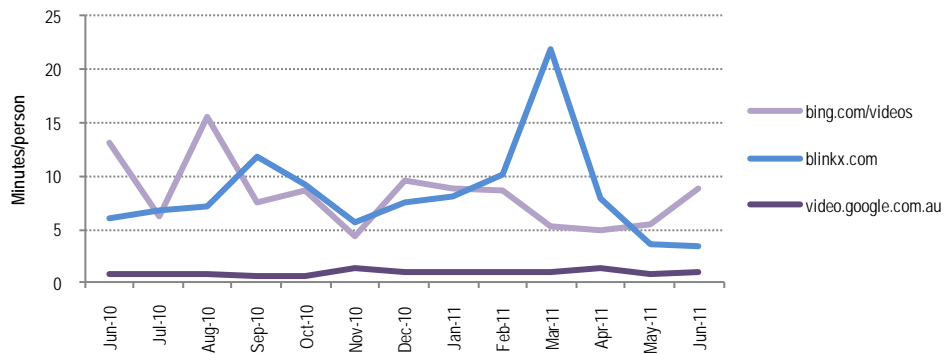
Source Analysis of Nielsen NetView data

Experian Hitwise analysis

Experian Hitwise supplied data from its panel of 3 million Australian internet users on visits to 16 of the selected websites and the average length of visits. Websites for which Hitwise was unable to supply data are in italics:

Broadcaster sites	Video search sites
au.tv.yahoo.com	video.google.com.au
abc.net.au/tv	bing.com/videos
fixplay.ninemsn.com.au	blinkx.com
abc.net.au/iview	
neighbours.com.au	**Video sharing sites**
player.sbs.com.au	youtube.com
Not included:	vimeo.com
au.tv.yahoo.com/plus7;	dailymotion.com
ten.com.au/watch-tv-episodes-online;	metacafe.com
foxtel.com.au/download	
Cinema and video sites	*Not included:*
quickflix.com.au	*Newspaper:*
bigpondmovies.com	*smh.com.au/tv*
disney.com.au	*P2P BitTorrent:*
Not included:	*thepiratebay.org*
itunes.apple.com; imdb.com/features/video	*isohunt.com; eztv.it*

Hitwise provided the total number of visits from November 2010 to October 2011 for the 16 sites it could analyse. This data shows fairly steady growth over the period and the dominance of video sharing sites, primarily YouTube.

**Total visits by category: for all 16 available sites**
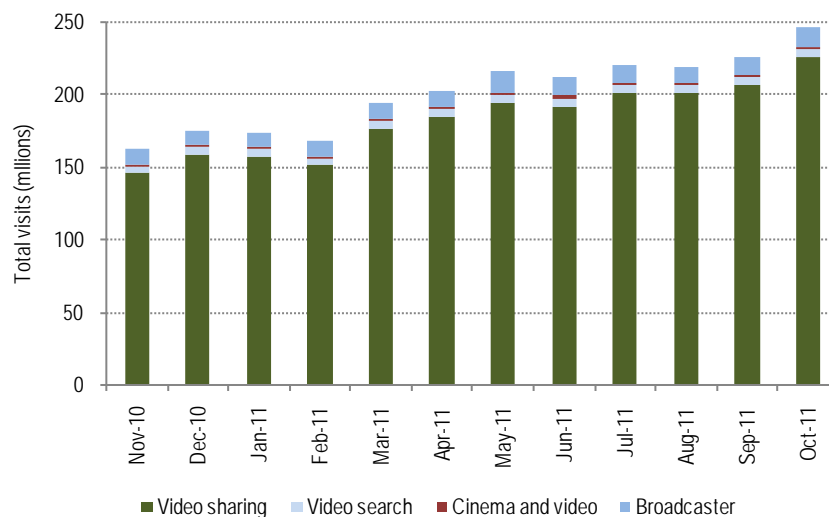
Source: Experian Hitwise

Hitwise also calculated the number of visits to the 16 sites it could analyse as a proportion of total visits to all sites, a measure it calls 'market share'. This shows visits to the set of 16 sites more than doubled as a proportion of visits to all sites between October 2008 and October 2011.

Video sharing sites more than doubled their share from 1.3 per cent in October 2008 to 3.5 per cent in October 2011. Over 96 per cent of the visits to the video sharing sites in October 2011 were to YouTube. The six broadcast sites also nearly doubled their market share, but only from 0.1 per cent of all visits to 0.19 per cent.

Market share by category: all 16 available sites
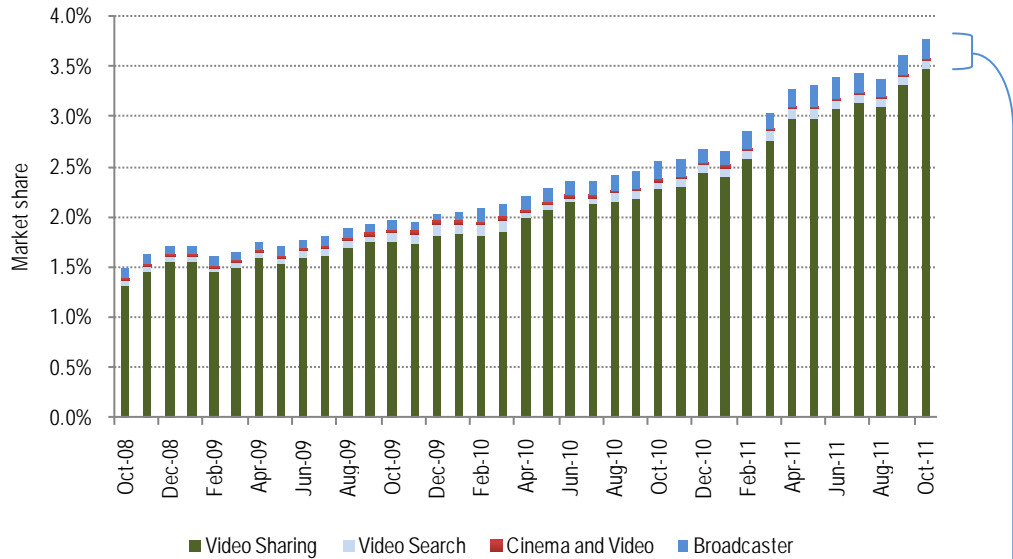
Source: Experian Hitwise

BREAKOUT:
Market share by category: video search, broadcaster, cinema and video categories (12 sites)
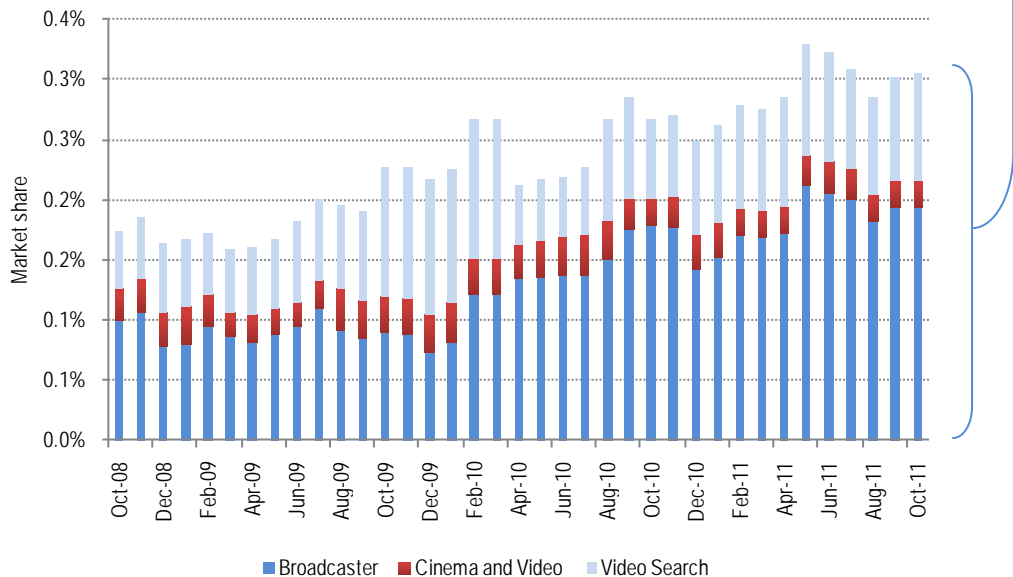
Source   Experian Hitwise

Hitwise provided data on the average length of visits to each of the 16 sites in each month from October 2008 to October 2011. This is not the total time users spend on each site each month because an individual user might make multiple visits. The length of visit is calculated as the average across all visits to a site over the period. Some are shorter and some are much longer.

Most of the individual sites did not show a lot of change in average visit length over the period. YouTube, which had the longest average visit length, was steady at around 19–21 minutes. ABC iView rose from around 2.5 to around 11 minutes and the Seven network site rose from around 5 to around 8.5 minutes. BigPond Movies fell from nearly 8 to under 5 minutes.

Average length of visit: selected sites
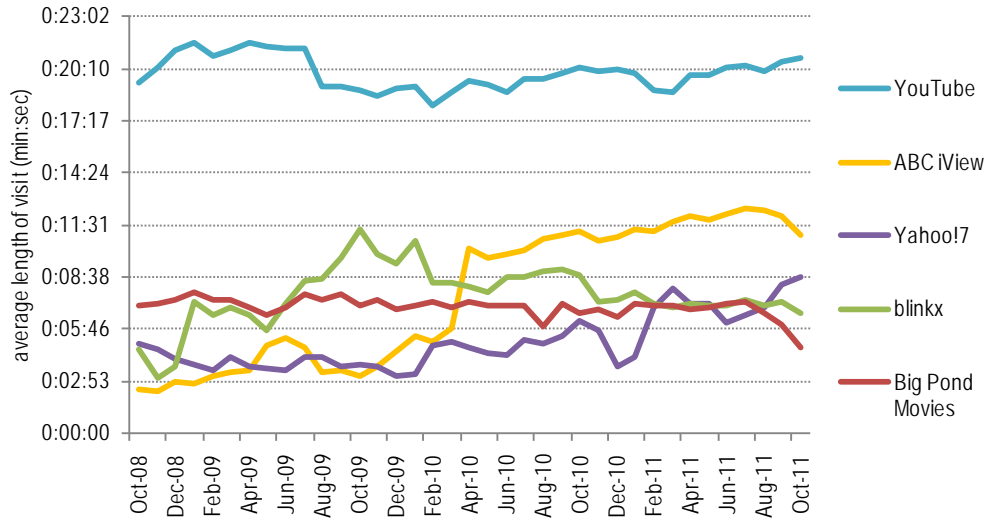
Source   Experian Hitwise

Because of the different methodologies, it is not possible to make direct comparisons between the Hitwise and Nielsen data.

Selected demographic data, June 2011

Particular programs can significantly affect month-to-month demographic profiles.

The ABC iView, the SBS Player and Foxtel Download sites all skewed male in June 2011. Of ABC iView's unique audience of 482,000 in June 2011, 57 per cent were male. Males comprised 63 per cent of the SBS Player's unique audience, and 86 per cent of Foxtel Download's. Like iView, the ABC TV site skewed male – 55 per cent of unique users in June 2011.

Unique audience ('000s) June 2011

ABC iView
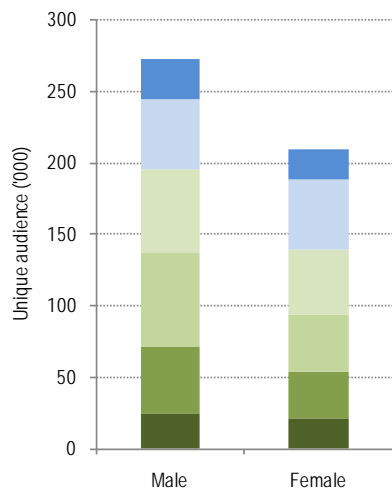
abc.net.au/tv
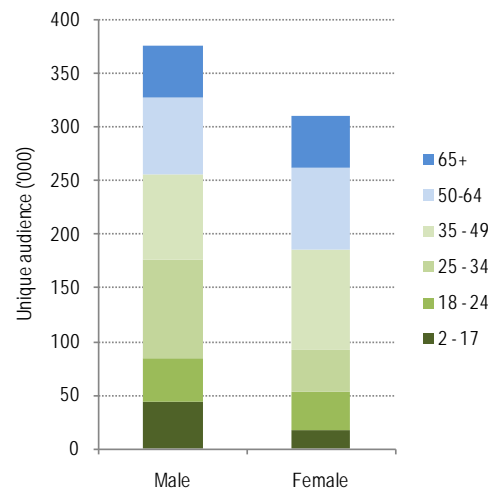
Source   Analysis of Nielsen NetView data

Commercial broadcaster catch-up sites skewed female – 66 per cent of Plus7's 527,000 unique users, 54 per cent of FIXPlay users and 78 per cent of Ten's main channel catch-up site users were female. Seven's network site, au.tv.yahoo.com, also skewed female.

Unique audience ('000s) June 2011

au.tv.yahoo.com/plus7
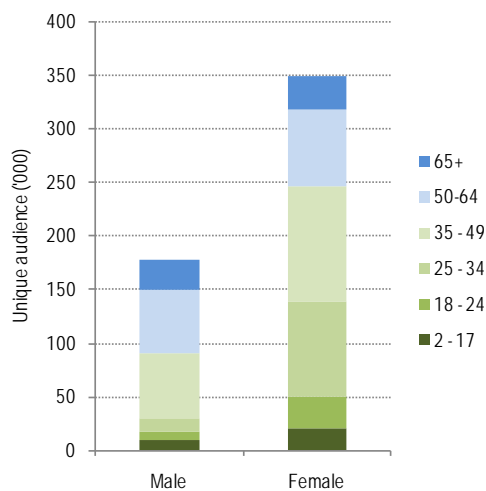
au.tv.yahoo.com
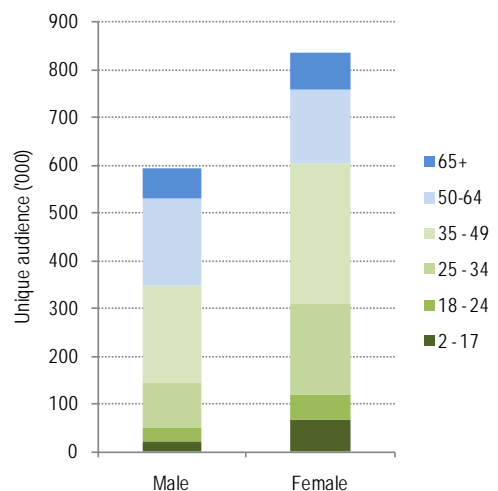
Source   Analysis of Nielsen NetView data

The gender balance of people using the iTunes website in June 2011 was virtually even – 51 per cent men and 49 per cent women.

Users of the most popular of the 25 selected sites, YouTube, skewed slightly towards men: 54 per cent were men, 46 per cent were women. The other video sharing sites included in the list skewed more strongly towards men: 74 per cent for Metacafe and 59 per cent for Vimeo.

Unique audience ('000s) June 2011
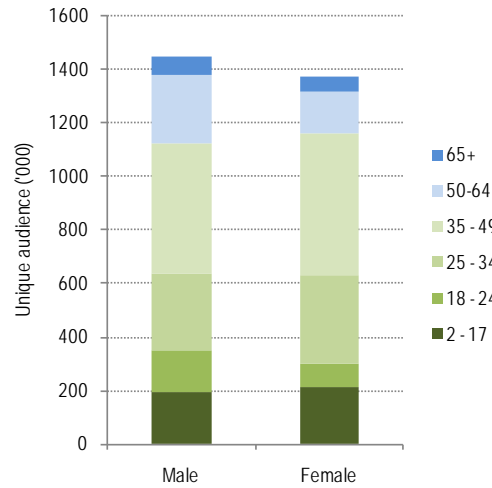
itunes.apple.com   **youtube.com**
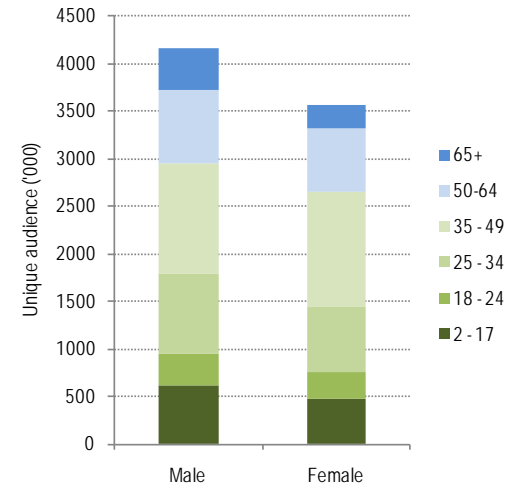
Source   Analysis of Nielsen NetView data

Use of all of the selected P2P BitTorrent sites skewed towards men: 68 per cent for The Pirate Bay, 66 per cent for isoHunt and 57 per cent for EZTV.

Thepiratebay.org, unique audience ('000s) June 2011
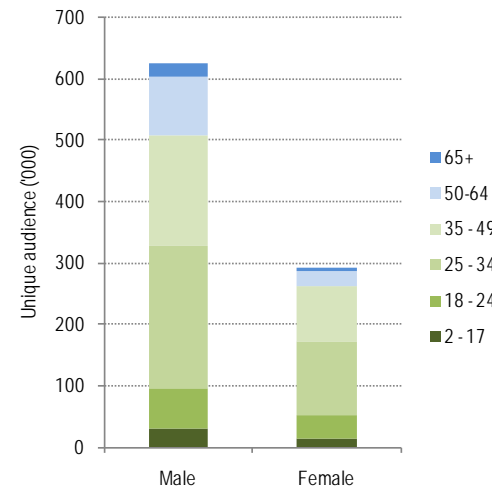
Source   Analysis of Nielsen NetView data

How do Australians pay for online audiovisual stories?

Various features of the 25 selected sites were summarised to explore the question of how audiovisual stories online are being paid for:

- the type of content offered by each site;
- the delivery technology; whether or not advertising is carried;
- the transaction model between the service provider and online users; and
- the owner and its primary business.

Content

The 25 selected video sites offer several types of content. These include:

- full-length content – full-length movies and television programs;
- clips – short-form content, including home video, excerpts from television programs, promotional video;
- TV channels – linear programming, similar to a television channel, or a retransmission of a broadcast service;
- catalogue listings – listings of videos available for DVD rental or VOD purchase or rent;
- content listings/search results – lists of video found using video search engines.

Sites may offer more than one of these types of content.

Delivery

Most of the 25 selected sites offer content streamed, rather than for download. One, Quickflix, supplies physical DVDs by mail. BigPond Movies also offered mail order DVDs by subscription at the time the list was compiled although it has since sold its DVD business to Quickflix.

In June 2010, Cisco predicted video streaming and downloads would grow from 40 per cent of all consumer internet traffic at the end of 2010 to nearly 60 per cent in 2014. In January 2011, Envisional estimated that in the US video streaming alone made up between 27 and 30 per cent of all US internet traffic (Cisco 2010; Envisional 2011).

Advertising

Of the 25 selected sites, 16 carry advertising. The types of ads on the sites listed here include most of the types defined by the Internet Advertising Bureau (IAB Australia 2011c).

25 selected video sites

Site name	Content	Delivery	Advertising	Transaction model	Owner and primary business
Broadcaster sites					
abc.net.au/iview	Full-length content	Stream	-	Free	ABC – broadcasting
abc.net.au/tv	Full-length content	Download & stream	-	Free	ABC – broadcasting
au.tv.yahoo.com/plus7	Full-length content	Stream	Yes	Free	Seven Network – b'casting; Yahoo! – internet
au.tv.yahoo.com	Clips & full-length content	Stream	Yes	Free	Seven Network – b'casting; Yahoo! – internet
fixplay.ninemsn.com.au	Full-length content	Stream	Yes	Free	Nine Network - broadcasting; Microsoft – software
ten.com.au/watch-tv-episodes-online	Clips & full-length content	Stream	Yes	Free	Network Ten – broadcasting
player.sbs.com.au	Clips & full-length content	Stream	Yes	Free	SBS – broadcasting
foxtel.com.au/download	PPV and pay TV channels	Download & stream	Yes	Subscription	Foxtel – pay TV
neighbours.com.au	Clips & full-length content	Stream	Yes	Free	FremantleMedia – production & distribution
Newspaper site					
smh.com.au/tv	Clips & full-length content	Stream	Yes	Free	Fairfax Media – newspapers
Cinema and video sites					
imdb.com/features/video	Clips & full-length content	Stream	-	Freemium	Amazon – online retail
bigpondmovies.com	Full-length content	Download	-	Rental & subscription	Telstra – telecoms
disney.com.au	Clips	Stream	Yes	Free	Disney – production & distribution
quickflix.com.au	Catalogue listings	DVD by mail	-	Subscription	Independent
itunes.apple.com	Full-length content	Download	-	Purchase, rental	Apple – computers & consumer electronics
Video sharing sites					
dailymotion.com	Clips & full-length content	Stream	Yes	Free	France Telecom-Orange – telecoms
metacafe.com	Clips & full-length content	Stream	Yes	Free	Independent
vimeo.com	Clips & full-length content	Stream	-	Freemium	InterActivCorp – internet
youtube.com	Clips & full-length content	Stream	Yes	Free	Google – search & advertising
P2P BitTorrent sites					
eztv.it	Search results	Link to torrent files	Yes	Free	Independent
isohunt.com	Search results	Link to torrent files	-	Free	Independent
thepiratebay.org	Search results	Link to torrent files	Yes	Free	Independent
Video search sites					
bing.com/videos	Search results & content	Stream	Yes	Free	Microsoft – software
blinkx.com	Search results	Link to other sites	Yes	Free	Independent
video.google.com.au	Search results	Link to other sites	Yes	Free	Google – search & advertising

Transaction model

Approaches to charging consumers for online video include:

- **Free**. The overwhelming majority, 20 of the 25 selected sites, offer content without direct charge to consumers. These 'free' services are funded in one or more of the following three ways:
    - advertising
    - public funding: three of the 25 selected sites receive public funding (the two ABC sites and the SBS site)
    - cross-subsidy by revenue earned from other activities: this is discussed in more detail below under 'owner and primary business'.
- **Rental**. A consumer makes a one-off payment in return for the right to view content over a period of time, usually a few days. The content might be a single video such as a movie or TV program, a group of programs such as a whole TV series or a curated group of separate titles, such as an online film festival. The list includes two sites offering online rentals, iTunes and BigPond Movies.
- **Purchase**. A consumer makes a one-off payment in return for receiving something, such as the digital files acquired via iTunes or the right to watch a one-off live event. Micropayments may also be made to access incremental content.
- **Subscription**. A consumer makes a regular payment, generally monthly, to secure ongoing access to particular content for streaming, download or physical delivery. The three subscription services on the list are Foxtel Download, BigPond Movies' DVD rental service and Quickflix.
- **Freemium**. A consumer receives something of value without direct charge, but is then invited to upgrade it for a fee. The list includes two examples of freemium payment models, IMDb and Vimeo.

A comparison of the prices of a small sample of videos available for purchase and rent by Australians in September 2011 was compiled. Titles were chosen to be easily comparable across retailers and over time.

The table shows fairly consistent pricing of online rentals of similar titles by competing service providers, but significant differences between DVD and online purchase prices for different titles. Sometimes the physical item is more expensive than the online version; sometimes it is cheaper. The table also shows significant differences between iTunes' Australian and US prices at the exchange rate prevailing at the time, and between DVD prices quoted by Amazon in the US and JB HiFi in Australia.

Film and video prices for selected titles, 13-25 September 2011 (A$)[a]

Title	Classic movie *The Pink Panther*	New release *Harry Potter and the Deathly Hallows, part 1*	Children's movie *Tangled*	TV show *Mad Men, season 4*	Australian TV show *Angry Boys*
Cinema: Greater Union Miranda	28.00[b]	17.50[c]	12.00[c,d]	-	-
DVD purchase: JB Hi-Fi	14.99	15.98	38.99	29.98	38.99
iTunes purchase: Australian store	12.99	24.99	24.99	35.99	32.99 2.99 per ep.
iTunes rental: Australian store	3.99	5.99	5.99	-	-
BigPond Movies rental	3.99	5.99	5.99	-	1.99 per ep.
Sony Video Unlimited: rental	3.99[e]	6.99	5.99	-	-
DVD purchase: Amazon US[f]	11.61	9.99	13.80	28.55	-
iTunes purchase: US store[f]	9.51	14.28	14.28	21.90	-
iTunes rental: US store[f]	-	3.80	-	-	-

Sources Apple (2011), Amazon (2011), Bigpond Movies (2011), Event Cinemas (2011), JB Hi-Fi (2011), Sony Australia (2011)

Notes a. All prices are for SD titles. In Australia, iTunes Store delivers HD titles only to iPad and Apple TV and BigPond Movies to LG and Samsung connected TVs. HD titles are available on Sony Video for an extra $1 per rental.
b. Pre-sales of a special classic movie viewing
c. Harry Potter and the Deathly Hallows, Part 2
d. Children's ticket price
e. Price for an alternative 'classic' movie, *Alien*
f. US prices converted using exchange rate of AUD 1 = USD 1.05

Owner and primary business

The transaction models do not fully explain the business models for the selected 25 sites because most are controlled by entities with other interests. For these sites, the services offered, the forms of interaction with consumers and the transaction models need to be understood as part of wider business strategies.

Of the selected sites, eight are controlled by six different Australian-based **broadcasters**. Two of these, Seven and Nine, operate their online presence in partnership with US-based companies, Yahoo! and Microsoft.

A further 11 are controlled by different kinds of **media and communications enterprises**:

- two international production and distribution companies, FremantleMedia and Disney;
- an Australian and New Zealand-based newspaper company, Fairfax Media;
- the online retail company, Amazon;
- two telecommunications companies, Australia's Telstra and France Telecom-Orange;

- the computer and consumer electronics company, Apple, now one of the world's largest companies by market capitalisation;
- the search and advertising company, Google;
- software maker, Microsoft; and a US internet business InterActivCorp.

The remaining six might be called '**independents**': the Australian-based Quickflix; the video sharing and search sites MetaCafe and Blinkx; and the three P2P BitTorrent sites.

Broadcaster sites

All Australian free-to-air broadcasters offer catch-up services. Their licence agreements with content rights holders are increasingly likely to allow broadcasters to make programs available on these catch-up sites for a limited period after broadcast. ABC's iView makes programs available for 14 days. On Nine's FIXPlay, the period varies according to agreements with program suppliers. Catch-up services also offer limited access to broadcasters' back-catalogues, including full episodes of some recently broadcast series, and complete series of older programs.

Foxtel Download gives Foxtel subscribers access to some programs for catch-up viewing online as part of their TV subscription. It also allows them to download pay-per-view movies for the same extra fee they pay to watch them on television.

These services allow broadcasters to make their programs available on PCs, laptops and mobile devices as well as on TV sets and to free their viewers from the constraints of the broadcast schedule. For commercial broadcasters and the SBS, who can insert advertisements in the streamed programs, and Foxtel, which can sell more pay-per-view experiences, they also provide ways of earning revenue. For the ABC, running a free catch-up service without advertising is a pure cost that must be justified solely by its capacity to expand audiences and improve viewing experiences.

The different financial implications of catch-up services for different broadcasters may affect their strategies for other forms of online delivery. For example, a broadcaster's position on the length of the catch-up window might be influenced by the shares of revenue expected to accrue from rental or purchase of content through iTunes, or from authorised release on YouTube under a YouTube revenue-sharing partnership, or from sales to subscription IPTV services.

Australian broadcasters have all chosen to build and run their own catch-up sites, unlike the US, where Hulu is a joint venture of Disney, NBC Universal and News Corporation, and the UK, where the BBC's iPlayer now links to other UK-broadcasters' catch-up sites as well, and a joint connected TV platform, YouView, will be launched in 2012 by the four terrestrial broadcasters (BBC, ITV, Channels 4 and 5), and three other companies, BT, Talk Talk and transmission provider Arqiva.

Other media and communications enterprises

All the other media and communications enterprises that established or acquired one or more of the selected 25 sites did so to expand, strengthen or defend their primary businesses. Notably, Google acquired YouTube and

Amazon acquired IMDb. The standout start-up success is Apple's iTunes, which Apple has turned into a profitable standalone enterprise, generating total net sales of US$4.1 billion in 2010, including audio, video and apps (Apple 2010: 34). For most sites, disaggregated data showing the commercial performance of the websites alone is not available.

Of the international production and distribution companies, FremantleMedia's Neighbours site generates revenue through display advertising and ads embedded in the full-length episodes of *Neighbours* offered for streaming. Disney offers episodes of some TV programs for viewing but the site is not currently the company's primary vehicle for online delivery. It offers full-length titles for sale and rental via other sites, including iTunes and BigPond Movies. It is one of the joint owners of the online streaming service, Hulu and has been supplying Disney and Pixar titles to Netflix, but announced September 2011 this arrangement would end February 2012 (Garrahan 2011b). Disney's own website primarily promotes its movies, music, stage shows, television channels and theme parks, although it does offer the capacity to buy tickets to stage shows. It displays advertisements on its website.

Fairfax's move into online video follows the long cross-media history of a company whose roots lie in newspapers. It controlled television and radio stations until the 1980s, then re-acquired radio stations in 2007. Already offering a lot of video news clips on its newspaper websites, Fairfax started hosting more TV-like content in October 2010 with the launch of SMH TV, earning revenue from embedded and display advertising. In its 2010 annual report, Fairfax stated that it would continue to invest in short-form video (Fairfax Media 2011).

Online retail pioneer Amazon bought IMDb in 1998 from its British developers to drive traffic to its sites and encourage the online purchasing of physical copies of movies. The site offers databases of films and industry contacts and also free content, including mainstream, independent and classic films. In February 2011 Amazon introduced free streaming of 5,000 movies and TV shows to consumers using its premium shipping service Amazon Prime at a cost of $US79 a year. (Garrahan 2011a). Amazon acquired Lovefilm, the UK online DVD subscription service in January 2011. In February 2012 it launched ABC TV [US] on Demand in the UK, and signed non-exclusive licensing arrangements with BBC Worldwide and ITV (Bradshaw & Birchall 2011; Indvik 2012).

Australian telco Telstra has had a significant stake in the video business since joining News Corp to form Foxtel 1994. Now Australia's largest pay TV company, with 1.58 million subscribers at 30 June 2011 (Foxtel 2011), Foxtel is owned by Telstra (50 per cent), News Corp (25 per cent) and Consolidated Media Holdings (25 per cent). Telstra has the largest share of the internet access and mobile markets but is rarely perceived as a leader in price or customer service. The range and quality of the online and mobile video content it is able to offer its subscribers via BigPond Movies and TV may, however, provide a competitive edge and the company has the resources to invest heavily in it. Retaining and attracting internet access subscribers to migrate from its own networks to the public National Broadband Network is an important goal.

Telstra BigPond only offers video for rental. It does not offer purchases, like iTunes. Online rentals are growing more strongly in Australia than purchases. Screen Digest estimates digital rental transactions increased three-fold in

2010. Continued growth was forecast in 2011. Screen Digest credits much of the growth to Telstra's T-Box, an IPTV and high-definition digital terrestrial set-top box launched in June 2010. The online rental market grew overall but iTunes' share of transactions fell from 85.5 per cent in 2009 to 52.9 per cent in 2010 (Cryan & Loeffler 2011).

Bing Video is Microsoft's version of Google Video, a video search engine within the software company's search engine, Bing. It returns video search results from around the internet including Google's YouTube, but video from partners including Fox and Hulu is displayed within the Bing Video viewer. In Australia, Microsoft is also in partnership with the Nine Network on the NineMSN website and with Foxtel, delivering Foxtel subscription TV channels to Xbox 360 gaming devices.

Google started Google Video as a video sharing site in 2005. After acquiring YouTube the following year, it transformed Google Video into a search index. First, Google Video started searching beyond its own hosted content; then video uploads were discontinued altogether. It is now contains millions of videos indexed and available for viewing (Google 2011). The site carries Google advertising, similar to the main Google search site.

YouTube earns revenues by selling ads on its homepage and search results pages, and by placing advertisements within the videos themselves. Advertisers may also run contests and sponsor events such as live concerts and holiday promotions. This revenue is shared with content partners (YouTube 2011). Google does not break out revenue across its products, so it is not currently clear whether YouTube is profitable in its own right.

Two of the other video sharing sites included on the list are owned by other communications companies. The French site DailyMotion is part-owned by France Telecom-Orange, which bought a 50 per cent stake early in 2011. Daily Motion carries advertising, and offers paid video hosting services to businesses (DailyMotion 2011). Vimeo is wholly owned by US internet company InterActiveCorp, which also owns sites including ask.com and thedailybeast.com. Vimeo carries advertising under a freemium model – users can upgrade to a Plus account for US$60 per month, which includes increased storage space, no advertising, unlimited uploads and greater editing control; or a PRO account for business and commercial use (Vimeo 2011).

Apple's iTunes dominates online digital content sales, internationally and in Australia. The service was initially developed to deliver music content to Apple's portable music player, the iPod, but has expanded to include video, apps and ebooks delivered to many different devices produced by Apple and other manufacturers. The Australian Home Entertainment Distributors Association estimates digital purchases of film and TV shows were in the order of $35 million in 2010, more than double the $16.8 million estimated in 2009 (AHEDA 2011). iTunes has led this segment in Australia since it first offered video in Australia in August 2008. Screen Digest estimates iTunes' Australian video sales grew six-fold in 2009, more than doubled cent in 2010 and would grow 44 per cent in 2011 (Cryan & Loeffler 2011).

iTunes does not dominate online rentals as it does online sales. It has much more competition for online rentals and from powerful companies with other sources of revenue, like Telstra and BigPond, Microsoft and Xbox and Sony and PlayStation (Cryan & Loeffler 2011). In August 2011, Apple announced it

had removed the option to rent television shows from iTunes, as part of a campaign to encourage customers to take up 'iTunes in the Cloud' via iOS devices (Apple spokesperson Tom Neumayr in Kafka 2011).

In the US, a recent PriceWaterhouseCoopers survey of 200 consumers found renting to be the most popular means of viewing video and movie content, primarily because consumers see it as better value. In the second half of 2010, 42.6 per cent of US consumers rented DVDs and 31.7 per cent rented video content via an online subscription service such as Netflix; 19.8 per cent purchased a physical copy, 9.4 per cent paid a fee to stream from a website and 6.9 per cent purchased a download from a website (PriceWaterhouseCoopers 2011).

Independents

Quickflix is a standalone business, like Netflix in the US. A DVD subscription rental service since launching in 2003, Quickflix started streaming through Sony's range of connected BRAVIA TVs, Blu-ray players and home theatre systems from 28 October 2011; through PC or Mac from 10 November and on Playstation 3 from December 2011 (Quickflix 2011b,c). There were just over 300 titles – 10 Australian – available to stream in February 2012. The same month, HBO, the US premium television company owned by Time Warner, announced it would acquire nearly 16 per cent of Quickflix (Battersby, 2012).

Compared with other countries, take up of online DVD subscription rental services in Australia is low. At the end of 2010, only 1.1 per cent of DVD households subscribed to online rental services, compared with 5.4 per cent in the UK and over 20 per cent in the US (Scott & Jayalath 2011). PriceWaterhouseCoopers estimates use of these services in the US during the same period was much higher, with 43 per cent of consumers renting a physical copy of a movie via a mail subscription service once a month or more (PriceWaterhouseCoopers 2011). The online DVD rental market in Australia consolidated in July 2011, when Quickflix acquired BigPond Movies' DVD rental business (Quickflix 2011a). At the time of the deal, Quickflix's had 70,000 subscribers (Boreham 2011).

One of the four video sharing sites in the selected 25 sites, Metacafe, is not controlled by other media and communications enterprises. It carries display ads alongside its embedded video player and embeds ads before videos start playing (Metacafe 2011).

Of the P2P BitTorrent sites, the Pirate Bay and isoHunt include display advertisements in the borders of their web pages. They also raise funds by selling branded products like T-shirts and key rings. The Pirate Bay was founded by a Swedish anti-copyright group in 2003, and is currently registered as a non-profit organisation in the Seychelles (The Pirate Bay 2011). It describes itself as an 'open tracker, where anyone can download torrent files' free of charge. isoHunt was founded in Canada, also in 2003. It is currently fighting lawsuits against the Motion Picture Association of America and against Music Canada. isoHunt actively seeks advertisers, claiming a 'very high conversion rate and visitor loyalty' (isoHunt 2011).

Blinkx is the only independently owned video search site on the list. The Blinkx website claims it pioneered video search on the internet and that it uses a unique combination of identification technologies, delivering more content from a broader range of sources than other search engines (blinkx 2011).

Can Australians find Australian audiovisual stories online?

A selection of websites was analysed to determine the number of Australian titles available online. Because of inconsistent tagging, searches using 'Australia' are unreliable, so a sample of the most popular titles was used to assess availability.

The top-grossing 100 Australian feature films of all time at the Australian box office and 30 top-rating Australian TV drama titles broadcast between 2004 and 2010 were checked across five websites 13–17 August 2011.

In summary:

- Only a small proportion of Australian movies and TV dramas are available online for rent or purchase.
- Online DVD rental offers a much higher proportion of the top Australian movies and TV dramas.
- TV catch-up sites offer from one to three Australian TV dramas each, depending on the networks' current shows.

Top-grossing Australian movies and top-rating Australian TV drama available on five sites, 13–17 August 2011

	iTunes		BigPond movies	Quickflix	YouTube		The Pirate Bay
Type of service	Online video downloads		Online video downloads	Online DVD	Video sharing		P2P BitTorrent
Transaction model	Sale/rental		Rental	Rental	Free/ad-supported		Free/ad-supported
Titles available to…	buy	rent	rent	rent	stream directly from YouTube	access via links to other sites	download
Top-grossing Australian **movies** available (n=100)	29	22	26	95	20	40	84
Top rating Australian **TV dramas** available (n=30)	11	0	0	28	22	na	16

Notes   Compiled August 2011.

Feature films: Top 100 Australian feature films at the Australian box office as at March 2011, based on gross box office in current dollars (not adjusted for inflation).

TV dramas: Top 30 TV drama titles overall screened on Australian television 2004 to 2010. OzTAM, All people, five-city metro average, program average. Each title is included once. Where a title screened more than once during the period, the screening with the highest audience is used.

Online DVD renter Quickflix offered many more of the Australian feature films (95/100) and TV dramas (28/30) than the other sites.

It was closely followed by P2P BitTorrent site The Pirate Bay, where 84/100 top-grossing Australian movies and 16/30 TV dramas were available. [These

titles were not tested for download and so may be false or fake links.] Another indication of availability on P2P sites is the number of 'seeders' or 'seeds'. These are people (IP addresses) who have completed their download but keep the file available. For many Australian films and TV programs the number of seeders was very low.

Full versions of 20 of the top 100 grossing Australian movies and episodes from 22 of the top 30 Australian TV dramas were available on YouTube in the survey period. A further 40 movies had been removed by YouTube due to copyright breaches, but the pages continued to offer links to other sites where the full movie is offered for 'free'. [These titles were not tested for download and so may be false or fake links.]

Full episodes of Australian drama and comedy episodes are available via the ABC channels on Youtube including *East of Everything*, *The Librarians, MDA, Mother and Son* and *We Can Be Heroes.*

BigPond Movies offered 26 of the top-grossing Australian movies for rent and a further 43 Australian features outside the top 100; iTunes offered 22 of the top-grossing Australian movies for rent and sale and a further five titles for sale only.

iTunes offered 11 of the 30 top rating TV dramas for sale only (six were screened on ABC TV); while none were available from BigPond Movies. Only two Australian TV drama titles were located on BigPond Movies: *Angry Boys* and *Wilfred.*

TV content from all countries, not just Australia, was low on BigPond Movies. Only 50 to 60 TV drama titles were on offer during the survey period in August 2011.

Australian drama programs on TV catch-up sites vary depending on the networks' current shows or where rights allow productions to be offered for longer periods. For example, on 17 August 2011, the following titles were available:

- FIXPlay [9]: *McLeod's Daughters*, *Rescue*, *Sea Patrol*
- ABC iView: *Rake*, *Crownies*, *The Tunnel* (movie)
- Ten: *Hawke*, *Neighbours*, *Offspring*
- Plus 7: *Home and Away*, *Packed to the Rafters*
- SBS: *Swift and Shift*
- Fairfax site SMH TV offered three back catalogue Australian TV dramas originally screened on the ABC: *Summer Heights High* (2007), *The Librarians* (2007+), *We Can Be Heroes* (2005).

Measurement

*The notion that the internet is the most measurable medium […] is confounding in that the internet also provides the most measures to deal with, understand, and translate into useful metrics because it turns out that not everything measureable is what is seems. (*Pellegrini 2009)

Internet measurement is complex and evolving. The project considered a range of sources of data about Australians' access to online audiovisual content via websites. Each source offers different attributes and uses different methodologies.

Website traffic

Website traffic is measured using:

- **on-site analytics** – where there is direct access to the website – data can be collected through:
    - web server log files (examples: Webalizer or AWStats)
    - javascript hooks into the web pages, also called page tagging (examples: Google Analytics, Omniture SiteCatalyst, Yahoo IndexTools)
- **off-site analytics** – usually used for internet marketing research - methods include:
    - user-centric analytics: groups of people (panels) are established to function as a representative sample of all web user. They share their activities log with the research company. An example is the toolbar that collects web traffic by Amazon's Alexa service, or the home and work panels used by Nielsen for its NetView service.
    - network-centric analytics: Internet Service Providers provide network logs on web activities that pass through their sites. For example, Hitwise (Pfeiffer 2008).

User surveys

User surveys are undertaken by phone or online, possibly using self-completion diaries. A variety of companies conduct them to gain insight into user behaviour not available via website tracking such as viewing of online video or internet access through games consoles, or to explore user motivations and future behaviour.

Organisations conducting regular user surveys include Nielsen, Roy Morgan, Sensis and Swinburne University's Faculty of Life & Social Sciences CATI Centre, for the Australian node of the World Internet Project.

According to Sequent Partners, research asking people how they consume media isn't nearly as accurate as research that actually observes how they

use it. In 2009, Sequent (in collaboration with Ball State University's Center for Media Design on behalf of the Nielsen-funded Council for Research Excellence), directly observed how people spent their day using media, and found that while growing rapidly, online video and mobile video still account for a small fraction of the amount of time Americans spend watching all forms of video content, including live TV programming, time-shifted television, DVDs, video games, etc (Mandese 2009).

Hybrid approaches

Methodologies which combine data from a representative panel of internet users with site-centric data have been developed to provide a more complete picture of internet use.

ComScore's Unified Digital Measurement methodology combines person level measurement via a panel with audited site-centric census of usage across different locations and devices (Cheng 2011).

Nielsen's Online Ratings, launched in Australia in October 2011, combines Netview's panel of online Australians with data compiled from a tracking tag publishers place on web pages across their sites/network.

According to Nielsen a tagging based approach is effective because it collects all activity on a website (i.e. all locations) and allows website activity for any site tagged, including the long tail, to be tracked (IAB Australia & Nielsen 2011; Nielsen 2011b).

Measuring online video use

The commercial importance of online video has made more accurate measurement of it a high priority for distributors, content owners and research companies.

Methodologies include:

- content owners tag videos which are tracked
    - by a research company: eg Nielsen's VideoCensus; comScore's Video Metrix.
    - by a website: eg Youtube's Content ID.
- sites are crawled to identify videos published and viewed: eg Vquence.

Nielsen's VideoCensus, available in the US and the UK, can report on viewing of cached content, peer-to-peer programs and digital rights-managed (DRM) video streams. Online video publishers, technology providers and networks attach a simple piece of code to their video delivery platforms which is analysed by the Nielsen desktop meter, deployed to panelist PCs. The data can report down to the level of a specific video, including program type and name (Nielsen 2009).

Nielsen Australia plans to launch VideoCensus in Australia, noting its introduction will be subject to approval from the IAB and requires publishers to tag all video. (Nielsen 2011b)

comScore's Video Metrix was launched in Australia in April 2010, as well as China, Hong Kong, Japan, Malaysia and Singapore, adding to the five

markets where the service was already available (US, Canada, UK, France and Germany) (comScore 2010).

Video Metrix combines comScore's 2 million person global panel (including 20,000 in Australia at January 2011 which provides people-level data – with census-side stream measurement in order to account for 100 percent of a Website's audience. Participating companies place tags on their content and ads, and these calls are recorded by comScore servers every time content is accessed (comScore 2009, 2011a, b).

Youtube's Content Identification tool is used by US network broadcasters, movie studios, and record companies. It identifies content, attributes ownership including shared ownership (eg. separate ownership for audio and video), and reports how much of a video is viewed (YouTube 2009). The content owner can choose to block access or share in the ad revenue generated by views of particular items, regardless of who uploaded them (Milano 2011).

Australian company **Vquence**, which specialises in the consumption of socially published video online, 'crawls' many of the key social video sites on the web and tracks what videos are being published as well as their daily usage (Vquence 2011).

TV measurement companies are working to monitor online viewing. In 2012, the UK's BARB (Broadcasters' Audience Research Board) will expand its current test to install software meters in 1,100 homes (an estimated 2,500 people). The meters will enable web-TV viewing on PCs, laptops and tablet devices to be examined alongside television set viewing, from a single source (BARB 2011).

US TV audience measurement firm Rentrak reports viewing figures for video-on-demand content viewed through the internet and mobile devices, as well as television (Verrinder 2011).

In Australia, TV ratings company OzTAM is investigating the potential of measuring online viewing of broadcast video content across a range of devices (OzTAM 2011).

Video tracking issues

Particular complexities in measuring online video use include the consumer devices captured, the range of content that is or can be identified, the amount of a video that needs to be viewed to count as a 'view' and the impact of specific actions by the user.

Consumer devices: New devices generally require new code to be written into measurement applications. Without it, new forms of consumer behaviour are not tracked or are tracked in confusing ways. This has been particularly important as smart-phones, tablet devices and internet-connected TVs and games consoles have proliferated.

Range of content identified: Some content producers may be better able to tag content than others, or particular measurement systems may only track the content produced by participating entities.

What counts as a 'view': TubeMogul investigated the actions which trigger a 'view' on eight video sharing websites, finding most of the following counted as a view (TubeMogul 2011).

1. Full View – watching a video from start to finish.

2. Half View – watching a video more than half way (but not to completion).

3. Refresh – refreshing the browser after video begins playing [not all sites counted this].

4. Embedded – watching a video through a player embedded on another site.

5. Embedded Autoplay – watching a video set to start automatically when the page loads through a player embedded on another site.

Working with online video platform Brightcove, Tubemogul discovered full-length episodes have higher completion rates than clips (TubeMogul 2011).

Impact of specific actions by the user: This is particularly important for measuring advertising videos. The IAB Australia issues guidelines for online measurement of ad impressions advising for example, on approaches to counting auto-play and auto-refresh. The guidelines require segregated disclosure of auto-refresh counts if they are material to total impressions by the campaign. Auto-plays can be counted where the viewer has been made aware video will be auto served (IAB Australia 2011a; Interactive Advertising Bureau 2009).

Major sources cited

Experian Hitwise

Panel size: 25 million people worldwide, including 3 million in Australia

Domains tracked (as used by Australians): 1 million+ (at September 2011).

Experian Hitwise is a multinational firm that measures online traffic. Founded in Australia in 1998, Hitwise operates in the US, Canada, Brazil, the UK, Australia, New Zealand, Hong Kong, and Singapore.

The company has developed software used by Internet Service Providers (ISPs) to collate activity website logs created on their networks. This anonymous data is aggregated and provided to Hitwise, where it is analysed to provide a range of industry standard metrics relating to the viewing and use of websites. These include page requests, visits, average visit length, search terms and pre and post site usage. All types of Internet usage, including home, work, educational and public access are represented (Experian Hitwise 2011).

Internet use is matched with lifestyle profiles. Each household is assigned a lifestyle grouping on the basis of characteristics of adjacent households from a range of sources including ABS census data, Australian Taxation Office data, and marketing surveys. This grouping is attached to the web activity data originating from a household that provides data to Hitwise via their ISP. Known as Mosaic, this service is licenced from Pacific Micromarketing (Waller 2008).

Nielsen NetView

Nielsen NetView – operating in Australia since 1999 – is an online internet panel generated through random digital dial (RDD) and online panel recruitment. It reports Australians aged 2 years and over capturing actual usage at home and at work.

Sample/Panel size: 7,000 (at September 2011) (Nielsen 2011b)

Usage is metered by a piece of software installed on panelists' computers to measure all web properties a person visits, which is then projected to create the data within NetView. The meter identifies the person using the computer to collect demographic information when they log in.

In any given month more than 100,000 websites visited by panelists at home and work locations are tracked, with around 3,000 websites reported, due to minimum sample size requirements. (Nielsen 2011b)

In May 2011, the Interactive Advertising Bureau of Australia [IAB] appointed the Nielsen Company as the sole and exclusive preferred supplier of online audience measurement services in Australia. Nielsen's Online Ratings hybrid measurement methodology, launched October 2011, combines data from a representative panel of internet users with site-centric data collected from tags placed on publishers' websites (Nielsen 2011b; Sinclair 2010).

IAB's aim is for online to be measured comparably with other media in addition to providing online reach and frequency analyses comparable with traditional media schedules; and to set a platform for true cross-media measurement with other channels and devices, including mobile devices (IAB Australia 2011b).

Nielsen Online Consumer Report

Nielsen's Australian Online Consumer Report 2010 surveyed 5,886 online Australians from 13–20 December 2010, analysing demographic, behavioural and ownership segments.

Data was collected via an online survey administered among a sample of internet users aged 16 years and above, sourced from Nielsen's YourVoice access panel, randomly stratified by age, gender and location (Nielsen 2011c).

Nielsen Online Consumer Survey Data quoted in this profile was obtained from secondary sources.

Roy Morgan Single Source

Roy Morgan Single Source is an Australia-wide survey covering both internet and non-internet users.

The survey includes: 50,000 face-to-face interviews conducted nationally with people aged 14 years and over; approximately 20,000 product self-completion diaries; and approximately 20,000 media self-completion diaries, used to record detailed media consumption, including such things as internet activities and website visitation across 48 weeks of the year.

Data obtained by Screen Australia covered the period October 2005 to September 2010 (Screen Australia 2011b).

Sensis Social Media Report

The Sensis Social Media Report reports results of research conducted by Sweeney Research. Research for the 2011 report was conducted between January and March 2011.

The Consumer Survey was a telephone survey of 803 randomly selected respondents 14 years and over across Australia.

The Business Survey interviewed 1,800 small and medium enterprise (SME) proprietors from across Australia and 151 marketing decision-makers in large businesses (Sensis 2011).

World Internet Project: ARC Centre of Excellence for Creative Industries and Innovation (CCi) survey

A random sample of 1,000 Australians was interviewed by Swinburne University's Faculty of Life & Social Sciences CATI Centre for the Australian node of the World Internet Project. Interviews were conducted 12 June–4 July 2007; 8 September–12 October 2009; 8 June–6 July 2011 (ARC CCi 2011; Ewing, Thomas & Schiessl 2008).

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