CONNECTING AFRICA: INTERNET AND THE ROLE OF THE MEDIA

BY KOOS BEKKER

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Koos obtained degrees in law and in literature at the University of Stellenbosch, and completed an LLB degree at the University of the Witwatersrand. In the 1980s he read for an MBA degree at Columbia University in New York, where he researched pay television. Immediately after graduation, Koos and a few young colleagues created M-Net, one of the first two pay television ventures anywhere outside the USA. Koos is a past winner of the South African chapter of the Ernst & Young World Entrepreneur Award. He also received the Protea Award of the South African Society of Marketers and the Sunday Times Lifetime Achievement Award. He sat on the Local Organising Committee for the 2010 Fifa Soccer World Cup and was awarded an honorary doctorate in commerce by the University of Stellenbosch.

INTRODUCTION

What do we actually mean by the term 'media'? The term should refer not only to the content that is communicated but also to the distribution technologies used to disseminate the content.

Distribution technologies currently include print, radio, television and the Internet. Importantly, when a new distribution technology comes onto the market it does not necessarily replace its predecessor – distribution technologies can, and do, exist side by side. New distribution technologies bring innovation, provide quicker ways of receiving and publishing content, and can disrupt the traditional way that business is done. The Internet is a good example of this. Ignore it at your peril.

Our business, Naspers, operates on the traditional technologies of print and satellite television, and on one new media distribution technology: the Internet. The Internet has revolutionised the way in which content or information is exchanged, and has forever changed the face of media. Any business built on a traditional media technology will have to embrace and adapt to the Internet – or die.

Countries also need to embrace new media such as the Internet, those that do will prosper whereas those that do not will fall behind. South Africa is falling behind its peers because the Internet has been welcomed in word only and not in deed. We have not sufficiently invested in broadband infrastructure, and even where this infrastructure exists the cost of access is too high. Secondly, we have a poor regulatory system and have not effectively managed the development of, and access to,

broadband Internet. As a country, we have to tackle these challenges if we are to take advantage of the potential this new medium offers.

Naspers recognised the need to adapt. It has long ceased to be a traditional 'media' company, and is likely in the next ten years to become an e-commerce company. However, the process of adaptation is painful and this pain is most starkly evident within the print media environment.

PRINT

The history of written communication can be traced back as far as 3100 BC to the Sumerian people who left the earliest evidence of a form of pictographic writing. The Egyptians improved on this form of writing and developed a full phonetic system of writing (known as hieroglyphics) shortly after 3000 BC. The first printed books date back to China in AD 868 but low rates of literacy and the high cost of paper meant that printing never developed into a mass medium in China.[1] It was only in 1440, when Johannes Gutenberg invented the mechanised printing press in Mainz, Germany, that books began to be printed for mass distribution. Gutenberg's innovation was to manufacture printing presses for anybody to buy and use.[2] He introduced a new technology. The printing press made a huge impact on society. For the first time, information could be spread quickly and accurately (for instance, printing allowed scientists working on the same problem to share their results accurately with other scientists) which contributed to the Enlightenment (or Age of Reason) in seventeenth-century Europe which radically altered how humans

[1] http://www.martinfrost.ws/htmlfiles/aug2008/massmedia.html
[2] http://www.ideafinder.com/history/inventions/printpress.htm;http://www.historyguide.org/intellect/press.html

perceived the universe. Speed and mass dissemination also made it hard for the church and state to control or censor what was being written.[3]

Print media continued to evolve and adapt, taking advantage of a number of nineteenth-century inventions such as steam power (which enabled mass production), the invention of the telegraph (which ensured that newspapers were supplied with news from all over the world) and the invention of photography and colour printing (which made the medium even more attractive to consumers).[4] Print became more than merely news – you could shop from the classifieds, share joys and tragedies in the birth and death announcements, or meet new people through the personals.

The success of the print media, in particular newspapers and magazines, was not only based on the circulation to millions of readers but was also due to advertising revenue. The first advertisements were for prayer books,[5] but the market grew rapidly to include consumer products and services. The print media market became a two-sided market, serving the reader and the advertiser. This two-sided market structure has been a feature of every mass media market since then.[6]

Radio, and later television, emerged as other forms of mass media. They were faster than newspapers at breaking news and took some advertising away from print, although they did not touch the revenue streams from classified advertising, so these media technologies were able to co-exist.

The Internet, however, is different. This new technology is undermining the advertising revenue on which print depends. As social media, mobile and multiscreen media enter the mainstream, allowing for reading and interacting with content, advertisers have shifted revenue spending to these digital technologies. This is fairly evident when one looks at recent figures for the share of advertising expenditure by medium in the United Kingdom, a country with high Internet and broadband penetration. Internet advertising now accounts for 36 per cent compared to newspapers at 19 per cent and magazines at 6 per cent.[7] The Internet has become more efficient at doing what was previously the domain of the print media and, as broadband penetration expands, print media will inevitably decline.

In the United States, print media has been declining since the beginning of the twenty-first century. The graph opposite is based upon the annual revenues of 2000 news organisations and shows clearly how dramatic that decline has been.[8]

3. http://www.flowofhistory.com/units/west/11/FC74
4. http://teacher.scholastic.com/scholasticnews/indepth/upfront/grolier/mass_media.htm; Saurin, S. 2012 'History and Future of Print Media and Its Impact on the Society' in Journal of Advances in Developmental Research. Vol 3, No. 1, June 2012 (www.journal-advances-developmental-research.com)
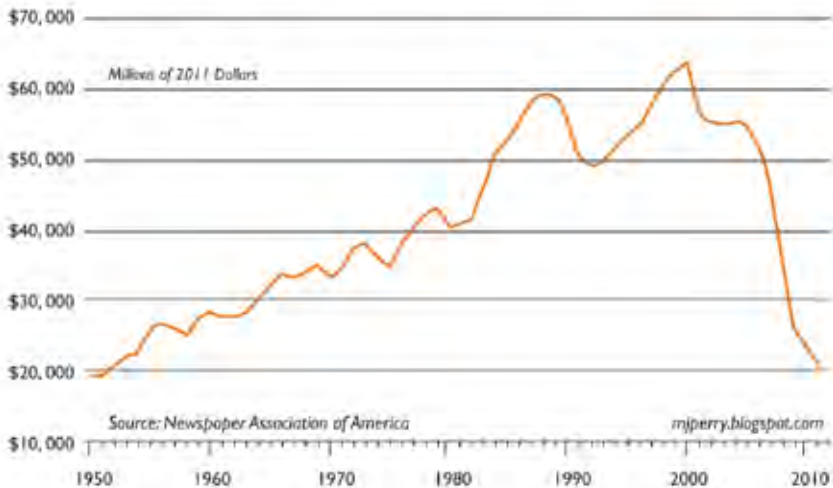5. http://mashable.com/2011/12/26/history-advertising/
6. http://hbr.org/2006/10/strategies-for-two-sided-markets/ar/1
7. Zenith Optimedia Forecasts, December 2012; This trend of advertising expenditure growth for the Internet is of concern for broadcasting as well. TV advertising stands at 27 per cent.
8. http://www.theverge.com/2012/3/20/2886806/the-decline-of-print-visualized-us-ad-sales

Print Newspaper Advertising Revenue Adjusted for Inflation, 1950 to 2011

Millions of 2011 Dollars

Source: Newspaper Association of America

mjperry.blogspot.com

Source: Perry, M. 2012. "Newspaper Ad Revenues fall to 60 YR. low in 2011" mjperry.blogspot.com [9]

Newspapers have initiated various strategies to halt the decline in circulation and advertising revenue, foremost among them the creation of a digital presence on the Internet. Digital content is either made available for free or 'paywalls' are created around premium content.

> A paywall is a system that prevents internet users from accessing certain web pages unless they have subscribed. Newspapers have been introducing paywalls on their websites to raise revenue which has been diminishing through declining print subscriptions and advertising revenue.

With some notable exceptions, paywalls have generally not been successful, as news can be sourced from other sites – for instance, digital-only newspapers such as the Huffington Post. Online newspapers that are free also tend to cannibalise their own print newspaper subscriptions and classified advertising. Moreover, revenues from digital advertising are not coming close to replacing the advertising revenues lost in the traditional print business. It is estimated that for every dollar gained in digital advertising, seven dollars are lost in print.[10]

The graph overleaf shows that in the US in 2012, print advertising revenue was less than half of what it was in 2006, and that these print losses far exceeded the gains made in online revenues.[11] The decline and economic recession has also led to a new trend in the US. Newspapers are closing print editions and going online. It was therefore not surprising to see Newsweek, founded in 1933, buckle under and announce that from the end of 2012, it would end its print edition and become a digital offering only.[12]
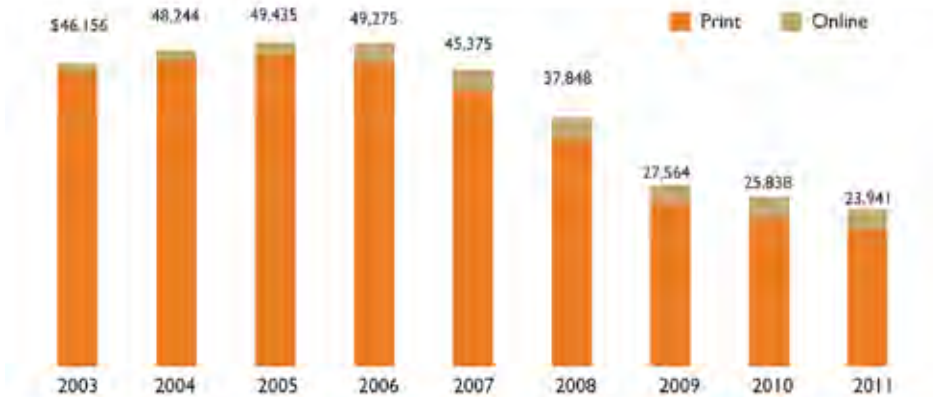
9. http://mjperry.blogspot.com/2012/02/newspaper-ad-revenues-fall-to-50-year.html
10. http://www.journalism.org/analysis_report/search_new_business_model
11. http://stateofthemedia.org/2012/newspapers-building-digital-revenues-proves-painfully-slow/newspapers-by-the-numbers/
12. http://mediadecoder.blogs.nytimes.com/2012/10/18/newsweek-will-cease-print-publication-at-end-of-year/

Print Advertising Revenue Falls, Online Grows
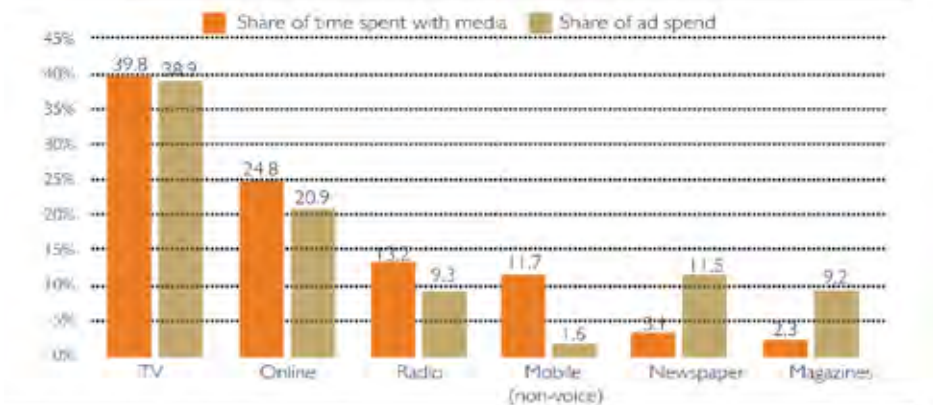
In Millions of Dollars

Source: Edmonds, R; Guskin, E; Rosenstiel, T and Mitchell, A. 2012. "Newspapers by the Numbers" in The State of the News Media 2013 Annual Report on American Journalism. http://stateofthemedia.org

This situation is predicted to worsen. Advertising revenue generally correlates with the amount of time and attention spent in producing any form of media. The graphic below illustrates that print media is still getting a disproportionate share of the pie:[14]

Things Could Get Worse for U.S. Print Media
Share of time spent with media per day vs. share of U.S. ad spending in 2012

Source: Richter, F. 2012. "Things could get worse for U.S. Print Media" http://www.statista.com[15]

13. http://stateofthemedia.org/2012/newspapers-building-digital-revenues-proves-painfully-slow/newspapers-by-the-numbers/
14. http://www.statista.com/topics/979/advertising-in-the-us/chart/682/share-of-the-media-time-vs-share-of-total-ad-spend/
15. http://www.statista.com/topics/979/advertising-in-the-us/chart/682/share-of-the-media-time-vs-share-of-total-ad-spend/
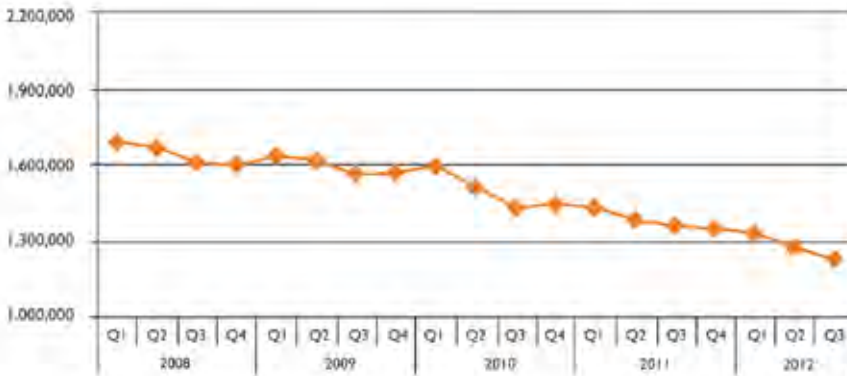
This trend away from print towards online media is not reserved for newspapers. For example, after 244 years the *Encyclopedia Britannica* is going out of print and will in future only be available online.[16] No doubt this decision was motivated in large part by the realities of competition from the Internet. Websites such as Wikipedia have none of the overheads, can be updated far more quickly, and have a much more user-friendly environment for access and searches.

Some print formats are also becoming obsolete. Before the Internet and smartphones, the Yellow Pages and White Pages were used to get a telephone number or find a plumber. Today, an Internet search does that for us, far more quickly and effectively. While these formats previously provided a useful service, it is no longer really necessary to produce them in print form.[17]

PRINT MEDIA TRENDS IN SOUTH AFRICA

Print media trends in first world economies are mirrored in South Africa a few years later. The graphs below illustrate the point:[18]

SA newspaper performance

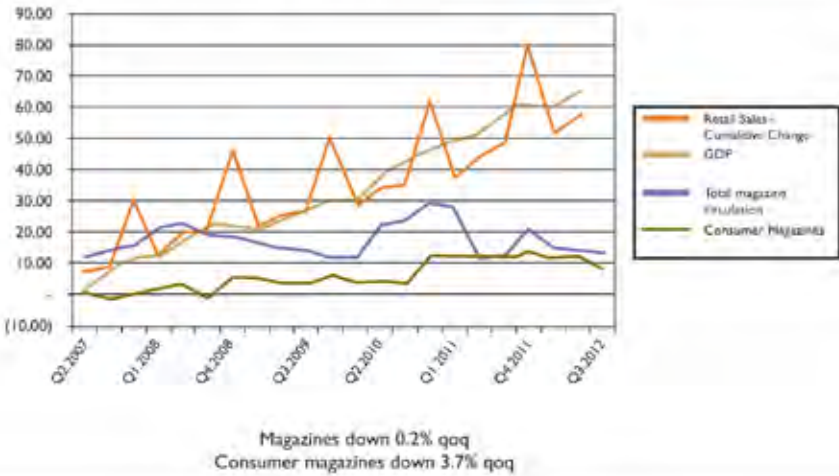Circulation has declined annually by 5.75% since 2008

16. http://mediadecoder.blogs.nytimes.com/2012/03/13/after-244-years-encyclopaedia-britannica-stops-the-presses/
17. http://communities-dominate.blogs.com/brands/2012/06/the-future-of-print-is-digital-but-no-i-dont-mean-ipads-or-smartphones-i-mean-traditional-printed-pa.html
18. http://www.abc.org.za/Notices.aspx/Details/26

SA magazines performance

Magazines down 0.2% qoq
Consumer magazines down 3.7% qoq

Source: Audit Bureau of Circulation of South Africa, Report 69.0, 3rd Quarter, 14 November 2012.[19]

South Africa has low broadband penetration. As a result, when it is compared to countries with high Internet and broadband penetration, there is not the same level of competition between print and digital alternatives. This will, however, change in the next five years as broadband, tablets and smartphones become more available to the population in general.[20] The steady erosion of advertising and circulation revenue will eventually result in a tipping point at which the print media[21] industry will have to re-scale into a niche form of media. Unlike electronic media, print media does not scale linearly[22] because of fixed high input costs for printing and distribution.

Print, in its current form, is not sustainable – and therein lies the pain. The print business has two forces working against it. One is cyclical: in a recession companies cut advertising before they cut any other cost, and newspapers deriving more than 50 per cent of their revenue from advertising are always going to be quite susceptible to the pace of the economy. In a boom, newspapers boom, but in a recession they suffer. The same is true for magazines.

The second force is the Internet. Many people over 40 prefer good old-fashioned paper. There is nothing as nice as sitting in London with a thick *Financial Times* on a Saturday morning, reading an article, ripping it out and writing a note to a colleague in the margins – but that's because most people over 40 grew up that way. Now, in cities like Hong Kong and New York, young people do not read newspapers. They get their news from twitter feeds; they read it on a blog; they read news sites; they read the *Huffington Post* – but they don't read newspapers. We have to adapt to this reality. In the future, media companies will need to ensure that newspapers remain at break-even point and do not make losses. This will

19. http://www.abc.org.za/Notices.aspx/Details/26
20. PricewaterhouseCoopers. September 2012. South African Entertainment and Media Outlook 2012-216. 3rd Annual edition. PwC: Johannesburg. p.160.
21. http://www.nytimes.com/2012/08/13/business/media/wondering-how-far-magazines-must-fall.html?_r=0
22. Print is an industrial operation and therefore the operational and capital costs do not scale in proportion to production.

require some painful cost-cutting. At the same time they need to grow their electronic services as fast as possible. The media industry is likely to become leaner, and to be based on a hybrid business model rather than one in which a product is printed and made available for sale at a newsstand or bookshop.

There is a great demand in the digital era for news and information. People or organisations that are trained to gather news and to distribute it in a variety of formats to different audiences over different distribution technologies will find a place in the new Internet world. Print media as we commonly understand it will no longer be defined by paper, but by the format and delivery of its content which for the most part will be electronic.

TRADITIONAL BROADCASTING

Radio, print and television have co-existed for years, the new distribution technology initially disrupting the other (does anyone remember the soapies on Springbok radio before the advent of TV?) and then both settling into some form of market accommodation with each playing to its own strengths. This was possible because each new technology was never a complete substitute for its predecessor. The Internet does not seem to be a team player, it is highly disruptive, not at all accommodating, and may in future be a substitute for all of these content distribution technologies.

While the pains felt by the print media industry have been stark and immediate, pay TV operators have done a better job of seeing the threat posed by the Internet. Print is being hit by a tsunami, but traditional broadcasters

are trying to ride the wave and have started a process of adaptation. The reason may be that TV has traditionally been (and was capable of being) a multi-technology product – available via satellite, cable or terrestrial.

TV has also continued to move onto new technologies such as fibre networks that use Internet Protocol ('Internet Protocol TV' refers to a closed, fixed geographically limited network) as they developed. However, this organic growth was almost always in respect of linear channel content with video-on-demand bringing up the rear.

> Linear channel content is when a viewer has to watch a programme at a particular time that it is offered and on the channel that it is offered. Video-on-demand is the opposite of this.

By comparison, Internet TV is mostly non-linear and very demand driven. For the first time, TV is faced with a new technology that threatens to disrupt its basic business model: offering bouquets of channels for a fee. This is happening at a time when certain TV technologies such as satellite are maturing. Traditional broadcasters will have to adapt to the changes and respond to the threats if they are to survive.

FACTORS AFFECTING THE TRANSITION TO THE INTERNET

There are several factors which will weigh in on whether traditional broadcasters will make the successful transition to what will inevitably become the dominant content technology. The four most critical – regulation, cost of distribution, devices and the way content

is consumed – are explored below, and the stark contrast between traditional broadcasting and the Internet are highlighted.

REGULATION

Since its inception, broadcasting has been heavily regulated. In order to launch a broadcasting service, you need to be licensed – a fairly lengthy process. Generally, a limited number of applicants are licensed and the licence is limited to a specific country. Once it is licensed, the content offered on the service is also regulated: what you can broadcast, what time of day you can broadcast, and how much advertising you can include, is specified. The licence also comes with expensive annual fees and compliance obligations.

The Internet stands in stark contrast to this lumbering traditional system. First, it is lightly regulated because it does not use frequency spectrum, you don't need a broadcasting licence and the service does not need to be geographically confined to a specific country. In the not too distant future, South Africans will be able to access services from operators across the globe. Competition to pay-TV from the Internet is coming thick and fast. There are some big hitters in this space – huge multinational companies such as Netflix, Amazon, Apple TV and Wal-Mart. Others, like Google, are adopting both linear and non-linear approaches with You Tube videos and Google Play movies. Television shows can be purchased by episode or by series. Some of these services play out on the PC/tablet, some on the TV screen, and others on specialised hybrid devices. There is

a choice of services available for the viewer and you can determine when you want them – there's no such thing as a watershed period.[23] These services are more agile, flexible and not restricted by the limitations of old style regulation.

The National Development Plan (NDP) makes an interesting point: as broadcast and other information communications technologies (ICTs) converge, setting quotas for local content on television and radio may promote local production, but this will also increase broadcasting costs – which will make it difficult for regulated broadcast services to compete against content providers on services such as the Internet.[24]

The same is true for other types of regulation imposed on traditional broadcasting, which will have to be minimal if it is to avoid becoming a barrier for traditional broadcasters competing with those offering TV content over the Internet. Regulation introduces costs, not just in terms of money, but also of time. Let's look at one small example: the authorisation of channels. For licensed broadcasting, every channel must be authorised before it can be broadcast, a process that can take months. On the Internet, a channel can be launched immediately. A content service on the Internet will therefore always get to market more quickly.

Regulators are often tempted to remedy this situation by trying to extend regulation to the Internet, but this is not the answer. The Internet is an open, global technology – you can't regulate the Internet in the traditional way unless you employ an army of regulators

23. In television, a watershed is the point in time after which programmes with adult content may be broadcast. It divides the day into the period in which family oriented programming suitable for children may be aired and where programming aimed at, or suitable for, a more adult audience is permitted (though not required). It may also mean the period of time during which programmes with adult content may be broadcast.
24. National Development Plan 2030, National Planning Committee in the Presidency. p 194.

and, even then, they will not be effective. The other alternative is to restrict access to the Internet, which is nonsensical. The solution is to decrease the regulation of traditional technologies and allow them to compete. Light touch regulation will foster innovation. The Internet thrived precisely because it was largely unregulated. We have ample examples of the effects of heavy, intrusive regulation in South Africa. For many years, Telkom was a statutory monopoly. At the time, the rationale was that it needed to be protected in order to roll out universal access. As we now know, this simply didn't work – high costs meant that access to fixed lines did not grow, but instead decreased rapidly. It was the mobile operators who drove real innovation by introducing services like pre-paid and, in this way, they achieved universal access without a regulatory obligation to do so.

THE COST OF DISTRIBUTION

The Internet is an inexpensive distribution technology that is open to all – big and small, producers and content originators. The cost of the distribution network contrasts sharply with that of satellite, which requires billions in investment capital to launch. The Internet has made it possible for almost anyone to make video content available online and almost anyone can create their own Internet radio station or podcast for a small investment and reach a global audience.

Internet sensations provide ample evidence of the global reach of the Internet. A Korean rapper called PSY released a music video 'Gangnam style' in July 2012 and by January 2013 the video had been viewed over 1.23 billion times on You Tube.[25] The Internet turned PSY into an international sensation, interviewed and courted by traditional media – TV could not even dream of reaching that many eyeballs. PSY came second in Google's top ten trending list for 2012 and has been nominated for the Time magazine's Man of the Year. Most people would have watched his video on smartphones. The Internet is a great technology on which to export local content and local products. There is no reason why South Africa can't have its own version of PSY. Local artists such as Die Antwoord have successfully used the Internet to build a global audience.[26]

INTRODUCING NEW DEVICES

The Internet drives intelligent devices, which is why that dumb television in your living room is fast becoming a computer. Can we even call it a TV when TV is simply one of the applications on the device? Connected TVs and Smart TVs are becoming the norm. They are connected to the Internet directly, or through your Wi-Fi in the home. My guess is that the dumb monitor we call a TV will cease to be manufactured in the next few years. Smart TVs come with added extras such as motion sensors and voice activation – yes, you can swipe your TV in the same way you change pages on a tablet (which looks more Wii than a TV). Because it's connected, content can be downloaded, shared or accessed using traditional and non-traditional modes of distribution.

25. http://www.770kob.com/abc_news/article/PSYGangnam_Style_Is_$8M_Blockbuster_Hit_on_YouTube/83956569658311E2B03FFEFDADE6840A/
26. http://www.timeslive.co.za/opinion/columnists/2012/06/26/die-antwoord-know-right-answers-for-success.

HOW CONTENT IS CONSUMED

Research shows that while scheduled broadcast TV is still dominant in households, on-demand viewing of content is increasing. In fact, what people are most prepared to pay for is on-demand TV and video content. At present, though, the biggest barriers to the consumption of on-demand content include not only the cost but also the difficulty experienced by viewers when trying to find the right content – and, finally, not being able to watch it on the main TV screen at home.

But consumer behaviour is shifting away from linear to on-demand viewing. Devices that allow consumers to take a 'shortcut' to more sophisticated behaviour without needing to learn technical skills are enabling this shift. This is an important point. The content has always been available on the Internet, but finding it required time and effort; in addition there was ongoing uncertainty over quality and legality. New Smart TVs and the application environment on entertainment devices such as tablets are making it easier to access on-demand content.[27] The chart below shows just how fast the take-up of connected TVs and other devices has grown.
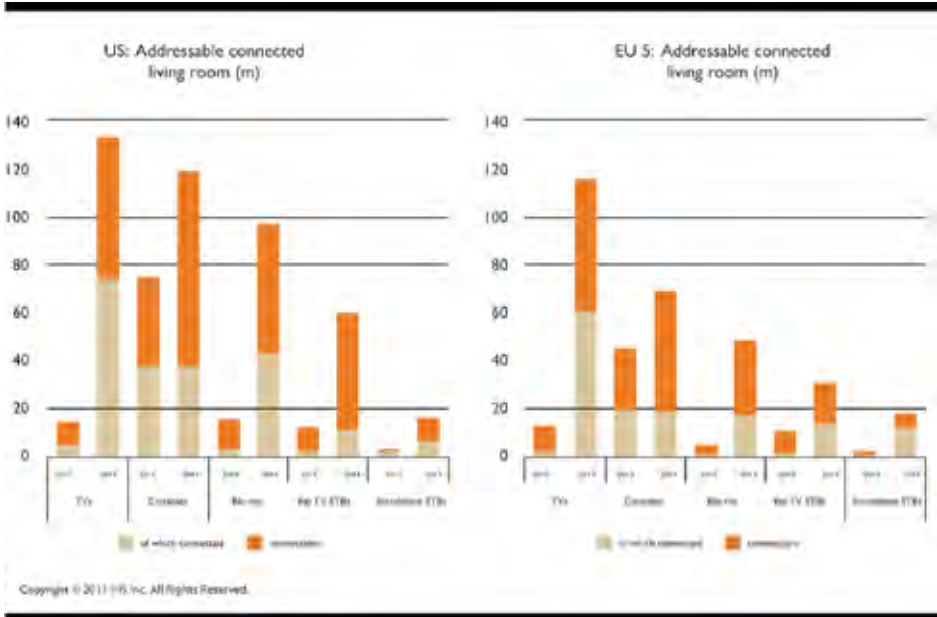
Source: Cryan, D. 2011. The changing landscape of online television. IHS presentation[28]

27. Ericsson Consumer Lab. August 2012. TV and Video – An analysis of evolving consumer habits. Sweden: Ericsson pp 4-6.
28. http://www.screendigest.com/presentations/2011_06_the_changing_landscape_of_online_television/view.html

Over-the-top television services (the term refers to on-demand services offered over the Internet) will increasingly compete with free-to-air and satellite for both TV advertising and subscriptions. When we look at the present rate of growth of these services, and the growth in broadband Internet penetration, it is evident that competition from these services is on our doorstep.

Netflix is a company that offers over-the-top television services, and has been quite aggressive in its home market, the US. The company bid against traditional TV broadcasters to stream Disney movies – and won. Netflix, together with the likes of Apple, Amazon (which bought Lovefilm in 2011) and Google (which has similar ambitions to Netflix) will compete against traditional TV broadcasters for content rights. The Netflix/Disney deal is a clear statement of intent. Content providers, like Disney, will welcome the deep pockets of these non-traditional broadcasters who can, and will, pay more.[29] Did we mention that the computer in the living room, the connected TV, is the perfect display for streamed content? It should therefore come as no surprise that traditional broadcasters are launching their own Netflix equivalents.

For traditional broadcasters the world has never been more dynamic – or more threatening. You have to be hyper-aware of how consumers use their devices in order to prepare for a world of multiscreen, connected networks. The TV is no longer a favoured device for content. It is easier to simply pull content from the Internet using your mobile phone, tablet, PC or games console.

Competition is no longer like for like (for example, one satellite player competing with another satellite player), but is instead from the new Internet services of e-commerce players: movie studios, sports rights owners, telecom operators and what used to be plain old-fashioned retailers. Traditional broadcasters have to learn to serve a new-look consumer with a variety of content options, distribution technologies and devices from which to choose. This new-look consumer is youthful and mostly accesses content via a mobile phone or tablet; is not loyal to channels but to individual programmes or series; and is not averse to illegally downloading content and sharing it with friends.

INTERNET

The Internet is a technology that allows networked computers to communicate across multiple, linked packet networks.[30] The Internet works because it is based on open standards that allow every network to connect to every other network, and it is this openness that enables people to develop and generate content, share information, sell products, and communicate, without needing permission from any regulatory authority. It has levelled the playing field and created the rich diversity we have today.[31] It is used daily around the world to access news, weather, radio stations, sport clips and video content as well as for chatting, messaging, social networking and e-mailing. It is a technology that allows each individual to interact with the world with almost no constraints.

29. http://www.studiobriefing.net/2012/12/netflix-in-300-million-deal-with-disney/
30. http://www.internetsociety.org/internet/what-internet/history-internet/brief-history-internet-related-networks
31. http://www.internetsociety.org/internet/how-it-works

The Internet continues to evolve. Cloud computing and cloud storage are changing the way people interact with the Internet. Applications now reside on the web and are accessed through the web browser, which means that applications for word processing, accounting, music downloads and so forth exist in the cloud and processing is done in the cloud. The same is true of storage. Rather than saving documents or content on multiple devices, it can be stored once in the cloud and accessed by any connected device.[32]

The speed of data transmission on the Internet will increase dramatically as high speed broadband networks are rolled out. In 2009, the average global data transmission speed was 1.7 megabits per second.[33] The current record for transmission speeds was set at Germany's Karlsruhe Institute of Technology where they successfully transmitted encoded data at a rate of 26 terabits per second on a single laser beam over a distance of 50 kilometres. It is the equivalent of the transmission of 700 DVDs worth of content in a mere second.[34] For media owners this is a frightening prospect. It is clear that, as time passes, the costs of producing ultra high speed broadband will decrease and the average consumer will be able to download a high definition video or stream it, in seconds without any lag. We are also seeing the continued evolution of technologies like Long Term Evolution (LTE), which can provide Internet access wirelessly at speeds that previously could only be achieved through fixed broadband. It is this development that is causing the proliferation of connected devices, in the household and for mobile use.

But why does any of this matter? It matters because it is changing the world we live in. News is tweeted before you hear it on the radio, see it on television or read it in the papers – and this news does not come with an editor. It also matters if a country wishes to be competitive and part of the global economy. The National Development Plan very clearly identifies information and communication technologies '… as a critical enabler of economic activity in an increasingly networked world' and notes that '… for this reason, a country that seeks to be globally competitive must have an effective ICT system, as this "infostructure" provides the backbone to a modern economy and its connections to the global economy.'[35]

SOUTH AFRICA

How does South Africa feature in this perfect storm of high-speed broadband access to the Internet, which is driving the economic competitiveness of nations? The depressing response is that we are rapidly falling behind, not only with regard to the rest of the world, but also in Africa. In 2000, South Africa was the Internet leader in Africa, but it has since been overtaken by Nigeria, Morocco and Kenya as shown in the two tables opposite.
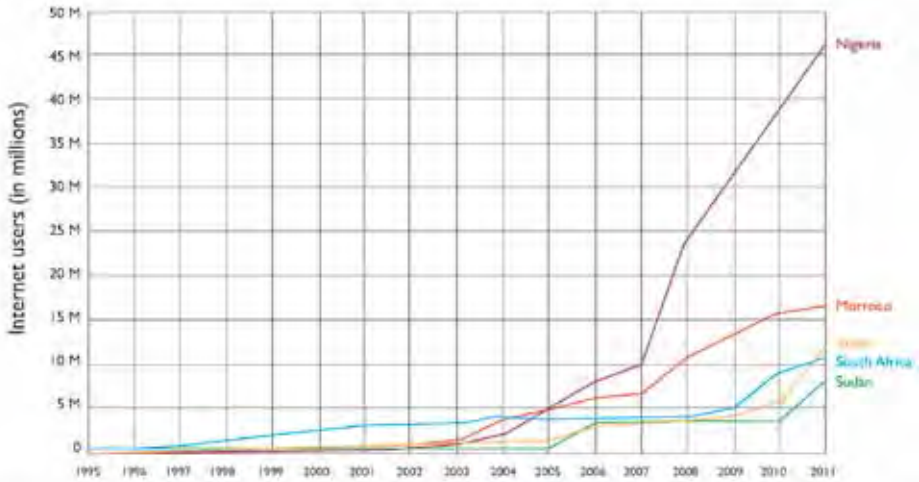
32. http://www.newmedia.org/articles/what-is-cloud-computing--.html
33. http://www.akamai.com/stateoftheinternet/
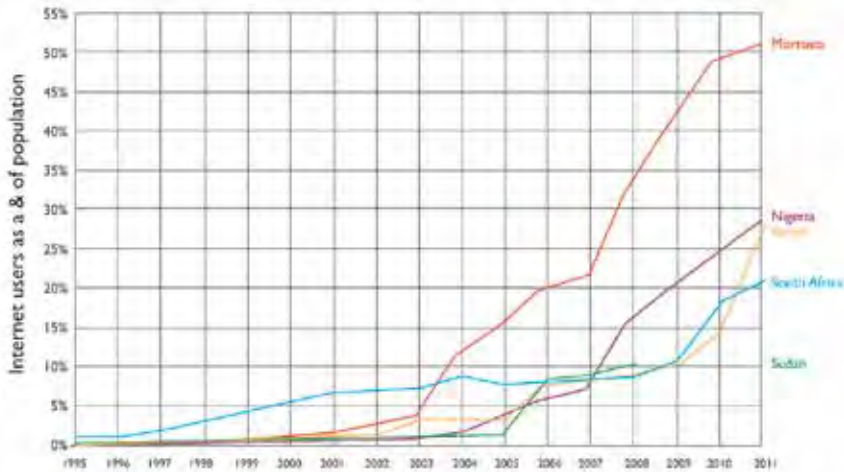34. http://www.gizmag.com/record-26-terabits-per-second-data-transmission/18702/
35. National Development Plan -2030, National Planning Committee in The Presidency. pp189-190

* Internet users are people with access to the worldwide network.

Source: MIH/World Bank November 2012[36]

* People with access to the internet per 100 inhabitants.

Source: MIH/World Bank November 2012[37]

36. Chart created by MIH November 2012 based on World Bank Indicators retrieved from Google Public Data Explorer (http://www.google.com/publicdata/directory?hl+en&dl=en)
37. Chart created by MIH November 2012 based on World Bank Indicators retrieved from Google Public Data Explorer (http://www.google.com/publicdata/directory?hl+en&dl=en)

This crisis is being taken seriously. We should applaud government for its frank assessment of what is wrong with broadband in this country and what needs to be done to fix it. The NDP comprehensively articulates the problems as including:

- Poor returns from the state's investment in Telkom;
- Little evidence of an effective strategy to ensure that connectivity in South Africa keeps up with its peers; and
- Policy constraints, weaknesses in institutional arrangements, conflicting policies, regulatory failure and limited competition.

The NDP proposes to address the concerns around South Africa's decline as an Internet leader in Africa in the short term (by 2015) by, inter alia:

- Changing the regulatory framework to ensure that Internet broadband capacity improves, prices fall significantly and access improves;
- Providing access to low-cost, high-speed international bandwidth with open access policies;
- Evaluating state-owned enterprise and municipal performance in ICT provision and deciding on the future role and configuration of the state's family of ICT enterprises (Broadband InfraCo, Sentech and Telkom); and
- Providing alternatives to infrastructure competition through structural separation of the national backbone from the services offered by Telkom to create a common carrier that offers open access to service competitors. Similarly, by encouraging or prescribing the sharing of expensive trenching infrastructure by creating common right of

way for competing operators to lay dedicated lines.[38]

The minister of communications has embarked on a full-scale policy review. We expect that the review will lay the foundation for these results.

There has also been much debate about whether government should nationalise Telkom. The NDP notes that Telkom still dominates the telecommunications backbone:

Their dominance has been ineffectively regulated, resulting in high input costs for business, which in turn resulted in an increase in costs of services and products. It has also inhibited the investment in growth areas in ICT … services. Telkom's monopoly has seen the deterioration in fixed line connections that will further undermine South Africa's future competitiveness unless it is addressed.[39]

The truth is that it doesn't really matter whether government or the private sector owns Telkom as long as you have the right people. What matters is which ministry takes responsibility as shareholder and which ministry takes responsibility for oversight of the regulator. The responsibilities should be split and not reside in a single ministry. The current lack of separation is responsible for the situation we find ourselves in (in general, the various ministers of communications have been conflicted and have erred on the side of protecting the commercial interests of Telkom at the expense of the sector and the economy as a whole). This separation can be implemented now. We do not have to wait for the results of a policy review.

38. National Development Plan 2030, National Planning Committee in the Presidency pp 194-195.
39. National Development Plan 2030, National Planning Committee in the Presidency p 190.

We should also be concerned about how the current situation affects the way South Africans use and interact with the Internet. The University of the Witwatersrand recently published a study on the South African Network Society, and the findings are fascinating. The study shows how the community of Internet users has changed over the past five years: most users are now black; almost half of them are women; four out of ten earn an income of below R1 500 per month; and two out of every ten users live below the poverty line.[40] According to the study 12.3 million adults in South Africa (aged 15 or older) now use the Internet – one in three. If this growth continues, then more than half the population will be online by 2014.[41] Those with access to the Internet go online more often and more people now use the Internet every day (22 per cent of all adults) than read a newspaper (17 per cent of all adults).

Those who connect to the Internet using mobile phones only are young, black and low-income earners who log on daily. Internet usage among this group is lower than among those who own computers, and they are less likely to make full use of the Internet to access information, educational materials or entertainment. Instead, their focus is on social networking sites such as Facebook. In contrast, those users who are connected at home or are accessing the Internet through cafes are more likely to use the net for research, shopping or banking.[42] It is this second, most connected group who make the greatest and widest-ranging use of Internet services. This group makes up only a small percentage of South Africa's Internet population, but they are the ones who currently benefit from the opportunities that the Internet is capable of providing.

The NDP also addresses the problem of the widening gap between those with mobile access only and the super-connected:

> International evidence suggests that a new ICT gap is opening up between those with access to high speed Internet and those who access Internet via mobile connections. While users cope with deteriorating fixed-line connections by switching to mobile networks in the short term, this may lock South Africans out of global networks in the longer term as applications in other countries are increasingly based on ultra-high-speed 'fibre to premises' networks.[43]

This is true for the international markets in which Naspers operates. Where countries have high speed fixed-line broadband access at affordable prices, consumers more readily engage in e-commerce. If consumers have to wait too long for an image to load and it pixelates, it is not a great experience. If that wait is also expensive, then consumers do not use the Internet to trade online. While mobile does work in some respects, it is not ideal for certain forms of e-commerce – mobile works well for social networking, but that is only a fraction of what is possible on fixed line Internet access. In many countries, the two technologies are symbiotic and consumers want both; the latter for mobility and the former for the richness of the experience and the speed of downloading.

The world is entering an era in which information is the driving force of human development and economic growth. In contrast, most African economies are limited by poor social and economic development. Without access to technology, the divide between Africa and the developed economies in the world is likely to grow.

40. The New Wave' report, written by Indra de Lanerolle, designed by Garage East © University of Witwatersrand http://www.networksociety.co.za. p 8-9.
41. 'The New Wave' report, written by Indra de Lanerolle, designed by Garage East © University of Witwatersrand http://www.networksociety.co.za. p 6.
42. The New Wave' report, written by Indra de Lanerolle, designed by Garage East © University of Witwatersrand http://www.networksociety.co.za.
43. National Development Plan -2030, National Planning Committee in the Presidency. pp 190-191.

Research results vary, but one study concluded that the contribution of broadband to GDP varies from between 0.25 to 1.38 per cent for every 10 per cent increase in broadband penetration.[44] Researchers have also studied the impact of innovation or network effects on employment. Broadband penetration generates a number of such effects ranging from new applications and services, such as e-commerce, online education and social networking to optimising business revenue growth. The influence of broadband on employment creation is also very beneficial, with growth varying from 0.2 per cent to 5.32 per cent for every 1 per cent increase in broadband penetration.[45] If South Africa is to reap the fruits of being a truly networked country that is globally competitive, it will need fast and affordable access to the Internet.

Naspers has learned a number of lessons as a 'media' company doing business on the Internet:

•   This new world is markedly different from that of print and television. New entrants must experiment and recognise that failure is part of experimentation.

•   The Internet may be an inexpensive distribution model, but monetising your offering and finding the business models best suited to this technology are much more difficult. The low cost of entry, however, makes experimentation easier and cheaper.

•   The low cost of entry also makes it easier for competitors to enter; it therefore does not take years for competition to arrive. There are no regulatory barriers in place, and a start-up does not need huge amounts of capital. This makes competition in the market very dynamic as new players enter the market more frequently and more quickly.

This is a very different world from that of our traditional business. Making the transition to this new world will be painful, but for Naspers there is no other option. In order to make the transition a reality in our own country we need fast and affordable access to the Internet by all South Africans, and a regulatory environment that supports it.

44. http://www.itu.int/net/itunews/issues/2011/05/14.aspx
45. http://www.itu.int/net/itunews/issues/2011/05/14.aspx