# The 'Convergence Phenomena' from a Regulator's Perspective

**Australian Communications and Media Authority Chairman, Chris Chapman, detailed his learnings and experiences from being at the coalface of regulatory convergence over the last five years, in a speech to CAMLA in Sydney on 30 May 2011.**

## Introduction

Let me immediately manage your expectations… I'm here to add some food for thought in what will be a very long conversation. So I'm not loaded up with answers, but do come with relatively strong experience with how 'convergence' is playing out at the coalface, and the implications thereof. There is no right time to pop one's head up above the parapet but the hard yards for the three team members of the Convergence Review are just about to start and my fundamental, overarching, thought-provoking, wide-eyed question to them (and I've already conveyed it to them personally) is: "Where the bloody hell do you draw the new boundaries?" So hopefully, by the end of my observations tonight, you too, like me, will now lie awake at night pondering on this question, along with the other three great imponderables of life:

- In electricity, does the electron simply nudge (or excite) his or her mate, or just pass straight through?
- If the universe is still expanding, then what's that piece of real estate just beyond where the universe's boundary is currently drawn?
- And will the Blues ever win another State of Origin series?!

Yes, I hear you say, get a life.

So tonight marks the official opening of the ACMA's contribution to the Convergence Review, with a fuller version of my remarks being posted on our website (acma.gov.au), along with the several humble offerings we're similarly releasing tonight… and all here at CAMLA.

I should add, in the interests of transparency, that my observations tonight are mine (and mine alone). Like so many aspects with which the ACMA deals, reasonable minds can well differ and the official ACMA view on the Convergence Review doesn't come before the Authority until 9 June (after which we will be at the disposal of the Review team for advices and soundings should they seek them).

The week before last when I sat down to try and capture the essence of what I wanted to convey tonight, synchronicity hit me fair in the face… it was there in my media clippings:

## Convergence is an everyday issue

There is not a day I don't see a new issue surfacing in the media-communications space and that day was no exception:

- Firstly, the Sony PlayStation network security breach. As reported, Sony's servers for online media and gaming were compromised by a major security breach. A hacker gained access to customer account information, which included personal information and, in some cases, credit card information. The personal information of over 77 million Sony network user accounts, including more than 1.5 million Australian accounts, was apparently exposed as a result of the security breach. Possible consequences of this

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include identity theft and fraud – and, as I further understood it, the risks to consumers were heightened by Sony's delay in their notification of the breach.

- Secondly, there was the Facebook 'brocial' network. The Sydney Morning Herald reported on this men's only Facebook group which circulates hundreds of photos of scantily clad women without their knowledge or consent. The images are gathered from the Facebook photo albums of the members' female friends and members also post the women's names and links to the group site, which allows other members to access the personal Facebook pages of any of the women featured on the site.

- Thirdly, a news item reported that the Queensland police 'arrested' Fairfax journalist Ben Grubb for questioning in relation to a Facebook 'break-in' incident. This concerned a story Grubb had written. The story was about witnessing a presentation by a security expert who had demonstrated how privacy-protected photos on Facebook can be accessed, using the photos of the wife of a rival security expert to illustrate! To quote police, they were 'acting on a complaint about an alleged hacking incident that saw private material being obtained unlawfully.'

And then today, a piece in The Australian by Chris Tryhorn about the reporting of the case of Manchester United footballer Ryan Giggs highlighting the different standards applied to old and new media. In the context of the UK controversy over celebrities using court orders to gag the press, Giggs' name circulated on Twitter. The footballer's lawyers tried to force the social networking site to reveal those naming him and, as was probably predictable, Twitter users went into overdrive. Broadcasters and newspapers immediately leapt at the chance to name Giggs and cast off the legal gag. I think Tryhorn put it very well in this morning's piece when he said:

"The internet and social media have revolutionised the flow of information, making it harder than ever to control stories. One solution would be for [the UK] parliament to debate the issue and come up with a comprehensive new privacy act, but it has shown little appetite for that so far. But in the age of the internet, enforcement of any privacy law is always going to be a problem and newspapers don't like to play second fiddle to the riotous blogosphere."[1]

Put simply, convergence is an everyday issue… and these four stories are but immediate illustrations of the indisputable fact that developments in communications technology are outpacing what was thought of as possible just five years ago, let alone what legislative frameworks considered would be required more than 10 years ago. Many of the controls on content and the provision of telecommunications services will need revision and adaptation for today's reality and for the emerging digital economy.

## Just to refresh you on the role and nature of the ACMA

The ACMA is the independent statutory authority tasked with ensuring most elements of Australia's media and communications legislation,[2] related regulations and numerous derived standards and codes of practice operate effectively and efficiently, and in the public interest.

The ACMA was created as a 'converged' regulator designed to bring together the threads of the evolving communications universe, specifically in the Australian context the convergence of the four 'worlds' of telecommunications, broadcasting, radiocommunications and the internet. It was formed on 1 July 2005 by a merger of the responsibilities of the Australian Broadcasting Authority and the Australian Communications Authority.

However, we do not always have an obligation or opportunity for intervention with regard to episodes such as those sketched above, although it might seem logical to us, and perhaps also to the average person in the street. Indeed, it is also not always clear what if anything we could or should do, or how we might go about doing it!

Consistent with our converged nature, the ACMA spans a diverse 'legacy' collection of legislated objectives. The agency has responsibilities under four core, principal acts — the Radiocommunications Act 1992, the Telecommunications Act 1997, the Telecommunications (Consumer Protection and Service Standards) Act 1999 and the Broadcasting Services Act 1992 (**BSA**). There are another 32 acts to which the agency responds in areas such as spam, the Do Not Call Register and interactive gambling. We also create and administer more than 523 legislative instruments including radiocommunications, spam and telecommunications regulations, and licence area plans for free-to-air broadcasters.

The ACMA has confronted a very challenging strategic environment since its inception. The ACMA was created squarely in the context of fundamental change and the pressures for change on the ACMA are constant and unremitting. The rate of change is unprecedented and it is well recognised that the organisation must be vigilant and not take any aspect of relevance for granted.

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1 http://www.theaustralian.com.au/business/media/soccer-stars-away-from-home-sex-life-sees-twitter-expose-uks-privacy-flaws/story-e6frg996-1226065216072

2 It should be noted that the carriage of key economic aspects (competition policy, pricing and access regimes) of telecommunications regulation is in the hands of the Australian Competition and Consumer Commission (**ACCC**) - which plays a complementary role to the ACMA with respect to these aspects of the media and communications space.

## Communications and media 'maturity' horizons - timelines and vectors

One useful way we have recently developed to conceptualise this landscape of change is this universe showing the 'maturation' of various vectors of change across a broad timeline.

This time line is divided across three horizons out to 2015, 2015 to 2025 and beyond 2025.

Please bear in mind that I see this as merely illustrative of the complexity and interconnectedness we face, not a definitive analysis and certainly not predictions – view it if you will as building a 'scenario' – and I will just quickly pick the eyes out of some of the detail.

### Devices

I start with devices not because they are most important, but because they are what seems to be generating the most 'buzz' at the moment with consumers – smart phones are the current rage and seem to have supplanted big screen TVs in the bragging rights stakes over the last year or so. Looking a little further out, perhaps we will see even more massive adoption of tablet style devices, widespread 3D TVs will move into lounge rooms, there will be truly flexible screens, widespread adoption of smart home technology and screen-less projection displays as used by Tom Cruise in the film 'Minority Report'.

I would make the point here that many of these things (and those that follow) are in the market, in trial or being prototyped today – so what I am talking about is the possible point at which they become a widely adopted, common place part of everyday life – a point which is clearly (to me anyway) a matter merely of conjecture rather than prediction.

### Content

People have traditionally provided their own 'content' in voice phone calls (and emails and SMS) and consumed content published for them on broadcast TV and radio. This tradition has blurred with the advent of social media publishing, while the world of available published content will eventually be massively multi-channelled (and I am not talking about Foxtel's 200 channels or Freeview's 15 channels). Perhaps we are indeed on the edge of an era of 'Global TV' (1000's of global channels)? Beyond that we peer out to a world where content is increasingly endowed with useful meta-data and evolves to become more 'intelligent' or at least self-descriptive.

### Network

Content seems to have been the initial steer given to the Convergence Review but, of course, from this audience's perspective, communications and media services sit in a wider context – as well as a device to be received on, they need to be carried by something – today and into the future that will be a network. We have seen an explosion in network forms, while they all increasingly use IP technology. These networks are too many to review – but the scale ranges from the global reach of social networks to the small scale of personal area networks (**PANs**) and Bluetooth. We are seeing the rollout of a national scale broadband network (**NBN**) and further out at the micro-level one can see the massive rise of machine to machine communications, perhaps culminating in the 'internet of things'. Importantly, we can also discern the likely rise of 'intelligence' at the network level with the notion of a semantic net, and the growth of truly smart infrastructure.

### Services

Of course the individual component parts (devices, content, and networks) mean nothing without the services (i.e. the way for consumers and citizens to get access to the content and communications they need – increasingly whatever, whenever, wherever and however they want). This is most dramatically illustrated in the rise of mobile communications, but the rise and rise of the internet cannot be ignored. Now we are watching the development of apps markets and video on demand (**VOD**) – we will expect to see IPTV as a mass-market offering (more on IPTV in a moment). Further out we see the migration of more mainstream 'services' such as health and education as the broadband-enabled digital economy really starts to take root.

### Consumer / citizen

I mentioned consumers and citizens as users of services – and issues they have are unfolding across the timelines as well. Currently we are conducting a public inquiry into the unacceptable complaints handling and customer service performance of Australian telecommunications (I expect to release our draft final 'Reconnecting the Customer' report[3] on Wednesday) - and there are a number of other contemporary issues such as local content, content classification, increasing concerns about privacy and data security. Looking further out we see the desire for digital media literacy and concerns about identity management becoming more pressing. We discern pressures arising from constant connection and a demand for instant responsiveness to service the logical conclusion to the 'whatever, whenever, wherever and however' paradigm. Perhaps there will be increased automation of people's profiles and preferences, culminating with the use of electronic agents to media to digital marketplace interactions?

### Regulation

And finally, because I am a regulator and the current topic is the inability of our old rules to deal with new media, I posit regulation as an important vector of change. We currently work in an environment of multiple acts and co-regulation (more of this shortly) and the ACMA is, as I have said, a converged regulator. We look forward to the legislative embrace of convergence in some fashion, but as I will suggest towards the end of my remarks, this is unlikely to be the end of things. We see emerging the necessity of adaptive regulation and the challenge of setting and meeting global standards, the alignment of media and communications specific rules with the needs of a fully digital economy, and the grapple with the emerging automated, semantic world of data intelligence. You will have perhaps noticed a common theme of intelligence and semantic connection to which I will also return.

### Introducing the idea of 'broken concepts' within media and communications legislation and regulation

As I have mapped above, changes in communications technology are out-pacing our notions of what we thought was possible just five years ago, let alone what guidelines or legislative frameworks conceived would be required back then.

Those four core acts are now decades old and, in some cases, are becoming increasingly difficult to apply in a converged communications and media environment. The age of these acts – and the legislative constructs therein – is perhaps most usefully illustrated by the observation that they were made before the internet was established in Australia.

I would not like this to be interpreted as a criticism of the legislature – it is in the very nature of convergence that it gets away from us and leads us to unexpected places sometimes in a veritable nanosecond.

However, due to the rapid change that has characterised the communications sector over the past two decades, those core acts have then been incrementally supplemented with amendments, new schedules and a range of purpose-specific acts (such as the Spam Act 2003 or the Interactive Gambling Act 2001). These subsequent acts have

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3 http://www.acma.gov.au/webwr/_assets/main/lib310013/reconnecting_the_customer-draft_public_inquiry_report.pdf

been made reactively (i.e. in response to developments in hardware, software and connectivity, changing social attitudes and behaviours, enhanced citizen expectations and/or globalised economic shifts).

In the majority of cases, this new legislation has been 'tacked on' to existing legislative constructs (i.e. those established in the core acts). For this reason, even legislation that has been adopted with full knowledge of converged communications structures is inevitably based, to some extent, on dated concepts set out in the core legislation.

As a result, in my view the Australian communications legislative landscape now resembles a patchwork quilt or the game, Uno Stacko. It is fragmented and characterised by legislative 'band-aid' solutions that lack an overarching strategy, narrative or coordinated approach to regulating communications and media in a digital economy. Regulatory pressure has bitten into core legislative concepts and definitions, creating these strained or 'broken concepts'. Ultimately, their 'elasticity' will expire at which time they will no longer function efficiently or effectively in a converged environment.

We at the ACMA have consistently documented and indicated our preparedness to grapple with the regulatory implications of convergence. 'Broken concepts' is a reasonably provocative phrase which we have used to highlight the notion that legacy legislation - the rules for the communications sector that used to work nicely 20 years ago don't entirely fit the circumstances we have to embrace now, let alone over the next 20 years.[4]

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So we indeed think that it is timely to review aspects of regulation across the legislation that the ACMA administers that are all under pressure. Consistent with our aim to be a thought-leader in the decision-making about what might replace the legacy, non-convergent legislative framework, we have worked very consciously (internally) over the last two or so years to envisage a sustainable regulatory framework and flexible approaches that can be responsive to change.

The ACMA maintains an active review program to effectively and efficiently manage our response to convergence impacts on regulatory and co-regulatory arrangements for communications and media services. In this program, my staff have examined the convergence status of 40 or so key concepts in Australian communications legislation, and found that many of these are broken or straining in relevance. I will go into a little detail below on some specific examples to highlight the depth of the issue.

For convenience, I will do so under the headings of the 'four worlds' that the ACMA regulates—telecommunications, broadcasting, radiocommunications, and the internet. Each of these 'worlds' had its genesis in a traditional, often physically defined analogue world, but they are all now trending towards that converging centre point. A common denominator across all of these is an evident need for much greater consistency in approach to definitions, concepts, regulatory policy, structures and approaches as well as compliance measures, available enforcement powers and actions.

To start with, the world of **telecommunications** has many concepts that are verging on their use-by-date. Just a few examples:

- The Universal Service Obligation (**USO**) is an obligation that is imposed on the Universal Service Provider (currently Telstra) and is funded through an industry levy imposed on carriers on the basis of eligible revenues. It seems doubtful that the policy objective of the USO (increased socioeconomic participation) can still be achieved by a voice-based telephone service (i.e.

e-inclusion is now paramount), since e-inclusion concepts do not align with such sector-specific governance (e.g. digital literacy requires whole-of-government approach). In addition, because, frankly, it transcends sectors, the NBN will challenge the concept of the USO as a market obligation, with implications for the industry funding model and tax regime.

- The Integrated Public Number Database (**IPND**) was premised on, and embodies, a database concept of particular number holdings but is less relevant as the proportion of non-geographic numbers (mobile and VoIP, as well as relaxations on the geographic nature of standard numbers) increases.

- The notion of a Public Mobile Telecommunications Service retains some currency for the moment since its definition is not tied to voice. However, it is tied to current mobile technologies and there are no guarantees that the key dependency on inter-cell handover will remain as mobile converges to use the IP standard.

For the world of **radiocommunications**, cognitive radio is an example of the kinds of fundamental developments driving the formation of many 'broken concepts'.

- The concept of interference deeply informs spectrum licence technical frameworks and apparatus licence RALIs. However, using this as our primary planning parameter is challenged because technology improvements have increased the ability of equipment to achieve acceptable quality of reception by increasing the tolerance to interference and by decreasing the level of interference caused. Cognitive radio automatically avoids damaging interference.

- Another point of challenge is in the realm of allocative efficiency where the impact of spectrum bands, specific to licence-type except in defined circumstances, can limit the ACMA's ability to achieve allocative efficiency. The problems here are legion: conversion between licence types is administratively difficult; the interference management framework could be improved by recognising receiver performance; it is difficult for the ACMA to shift between market-based and administrative allocation of licences, when, in many circumstances, market-based allocation can be considered more efficient; and there are barriers to the development of private band management.

In the somewhat more recent, but now very well established world of the **internet**:

- Interactive gambling services (which are right now so topical for a variety of reasons) are currently dealt with under the BSA. While it is possible for interactive gambling to be provided by digital television and its remote control, the more likely challenge is from internet gambling and gaming – which really stretches the use of broadcasting-based law.

- The concept of a content service provider, which is used to differentiate online and mobile content from broadcasting content, is under sustained pressure from convergence trends.

- So far as this internet domain is concerned it seems more and more technologies and services are evolving effectively 'off the regulatory grid': things like user-generated content and the social web, peer-to-peer networks and private networks. These are developing with virtually no point of contact with the legislative or regulatory structure; here, worse than broken, the current concepts are at risk of being irrelevant.

In the world of **broadcasting**, we find examples of strained concepts, such as:

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4 Chris Chapman first coined the term 'broken concepts' in a speech he gave to the Federal Court Judges Conference in January 2008 and gave wider exposure to the term with the release of his speech to the 14th European Conference of Postal and Telecommunications Administrations in Strasbourg, France, in April 2008, titled 'The flexibility benefits of Australia's co-regulatory approach'. Since then he has also made a number of similar observations publicly, for instance, in a speech at ACMA's RadComms2010 conference (Melbourne, 5 May 2010) and in the ACMA media release 'ACMA welcomes the convergence review', 3 March 2011.

- Degree of 'influence' is a central concept to the current regulation of media ownership and control with the policy aim to ensure a diversity of content and opinion. Broadcasting and newspaper operators are increasingly offering internet-based services to complement their other offerings. At the same time, internet services have facilitated the rise of many new influencers outside the traditional media organisations, although arguably none of these has achieved anywhere near the degree of influence of those traditional players. A key consideration will be whether the concept of influence is useful going forward, how it would be assessed in any event or is there some other divining proxy for influence?

- The preoccupation of notions such as licence area and media ownership and control with terrestrial broadcast, print and magazine media is under pressure from converged communications, particularly the internet and consequent easy access to international content, rather than local geographic models of service delivery.

- The idea of a broadcasting service and program is essentially an analogue concept from a time when a service was normally a single channel or stream of programs. The current framework is in the process of being modified to the needs of digital multi-channels. They rely on technical distinctions that have become outdated and are unlikely to achieve the original policy aims – all electronic communications (e.g. text, video, radio, images or voice) are now transmitted to some extent as data, which is resolved into their native form by the receiving device. However, different rules apply to traditionally broadcast content as distinct from content delivered over convergent devices.

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I would refer you back to a very willing discussion that took place at a Senate Estimates shortly after I started as Chair of the ACMA. Our current Minister was in opposition then, and he led a vigorous interrogation of my representatives at the Senate table over the definition of 'the internet' and how it might apply in the specific case (of Telstra providing what he characterized then as IPTV services to its BigPond customers of the V8 supercar races, the AFL video service and the Rugby World Cup). After a debate that covers some nine pages of Hansard transcript, the Senator posed his question as follows:

> "I am asking you to give it [the internet] a meaning and at this stage you are saying you do not have a settled view of the meaning of the word 'internet'. I am asking for a settled view. I do not think I am asking for anything outrageous. I think there is a whole industry out there that is going to hang on your definition of the word 'internet'."

He wasn't wrong!

In response to the question on notice, the ACMA noted that the internet as such could be characterized by a set of features rather than precisely defined, and continued:

> "The internet is dynamic and evolutionary. Over time, there have been changes to what have been its commonly accepted features and scope. This is expected to continue." [5]

So we were not wrong!

So tonight those are just tasters - I'll be saying more about these and the other 40-odd other 'broken concepts' over the coming weeks and months in the context of ACMA advice to the current Convergence Review.

Suffice it to say that as key regulatory elements are being conceptually stretched and pulled, and the pace of change is accelerating, the ACMA will be advocating for a sustainable regulatory framework and flexible approaches that are responsive to change. Within the ACMA we have been facing up to regulatory uncertainty in our day-to-day work, as we operate in an environment of permanent change. But far more importantly, it is now time for the entire media and communications regulatory regime to face up to the same challenges and we intend to use the experience and knowledge that the ACMA has accumulated from working at the coalface of convergence to assist the Convergence Review to plot their way forward.

*action to address the current issue of convergence in the context of IP networks will also need to acknowledge that for communications and media, change is ongoing, relentless and probably still accelerating.*

## The question has been posed – what is the 'problem' the Convergence Review needs to 'fix'?

It is clear to us that this collection of problematic 'broken concepts' confirms the strongest suspicion that something is wrong: that something needs fixing. However, as an old saying goes (which I love) "a series of anecdotes does not data make". Even though these 'stress points' we have identified are not just a set of unrelated issues and even if you fixed each individually, in the micro as it were, then you would not have addressed the fundamental problem anymore than if you simply extended the ACMA's powers to deal with the anecdotal problems I kicked off with (the Sony PlayStation network security breach, the Facebook 'brocial' network, the Facebook 'break-in' incident and the effective circumscribing of the law by Twitterers) – these are symptoms if you like, under which lies a deeper dynamic.

As I see it, there are actually three problems, which can be synthesised into an overarching meta-problem, which is what faces this Convergence Review:

- Digitalisation broke the nexus between the shape of content and the container which carried it – a voice call was no longer solely defined by being carried on a plain old Bakelite telephone network; a TV show by arriving via a transmission tower and TV receiver (the same for radio shows); music spread rapidly beyond the domains of the vinyl record, compact cassette and CD – it got 'shared' online; and the internet carried news much further and faster than a newspaper. This meant that regulation constructed on the premise that content could be controlled by how it is delivered has increasingly lost its force, both in logic and in practice. This problem began to be recognised as one of 'convergence' as far back as the end of the 1980s;[6] however, legislative response has been sporadic.

- Based on digital content and carriage, IP networks have come to play an ever more important role. This has meant content has become increasingly non-linear, interlinked and 'uncontained' while people increasingly expect to connect and communicate seamlessly – anywhere, anyhow, anytime. Entire new and massively successful network businesses emerged in the last

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5 Official Committee Hansard Senate Environment, Communications, Information Technology and The Arts Legislation Committee Estimates (Budget Estimates) Tuesday, 23 May 2006

6 Nicholas Negroponte was one of the first to recognize this development, and he may have been one of the first to use the term convergence to describe it. The Oxford English Dictionary has recorded the first use of convergence in this sense in 1978, while Stuart Brand reports that Negroponte used it in 1973 (Brand, 1988).

decade – Google and Facebook to name the most prominent. The idea of regulation in relation to the 'layers' (the so-called 'horizontal layers') has emerged as a useful tool to structure a way forward… and I'll come back to that.

- But here's a curve ball for you: the playing out of virtualization. Maybe even then it's not safe to go back into the water because, looking into the next decade and towards 2025 it seems plausible that we are moving towards a communications world of 'virtualisation', where network elements can and will be emulated in software, which will lead to an ever more intricate and subtle interconnection between networks, services and content as those very layers themselves become diffused as a consequence. So my initial provocation is this: even legislation and regulation possibly based on that radical horizontal (i.e. the layers) model, and not based on the vertical, is itself likely to be challenged in a future environment.

*Our Gov 2.0 strategy is all about taking this tag-line 'mantra' and making users part of our DNA. This is a deep exercise and goes well beyond having a Twitter feed and a Facebook page.*

Put succinctly, the overarching meta-problem (which for convenience we can perhaps continue to term 'convergence' since this is how the current Review is framed) is that the legislative challenge of digitalisation has not been adequately addressed legislatively, and has been compounded by (in fact, run over by) the emergence and dominance of IP networks. These two waves of change remain essentially unaddressed while a third wave of virtualization (or some other wave) quite possibly looms. Therefore, action to address the current issue of convergence in the context of IP networks will also need to acknowledge that for communications and media, change is ongoing, relentless and probably still accelerating.

## ACMA and convergence

As I said above, we (the ACMA) have been on this issue for several years. We recognised early that the ACMA must actively transform to meet these challenges internally in the way it conducts itself as an organisation, to create a robust organisation that can be constantly relevant to the needs of its stakeholders as these needs evolve in a changeable, perhaps turbulent, environment. We have worked on an internal transformation to shape and position the ACMA to remain relevant to the future challenges we face as an agency.

The ACMA response has been encapsulated in a clear, shared vision for the organisation. This vision is to remain constantly relevant and our strategic intent is to achieve this by delivering on our mandated outcomes, discharging our statutory obligations and by transforming ourselves into a resilient, e-facing, learning organisation, responsive to the numerous pressures for change that confront us. And we determined the ACMA strategic goal is: 'to make communications and media work (really work) in Australia's public interest'. So that is our constant touchstone. The ACMA has structured itself to reflect the converging nature of the communications environment with the aim of providing stakeholders with access to a more cohesive arrangement of responsibilities. Some of you will recall that we initially aligned operations to reflect: the regulatory 'inputs' to industry (including the allocation and planning of spectrum, numbering, licensing and technical standards) and the functional 'outputs' from industry (including compliance with codes and content standards, and consumer protection issues more broadly). This organisational form was strategically adjusted at the end of 2009, to bring additional focus to several key tasks that presently face the organisation (including the digital transition for TV and radio and various telecommunications aspects of

the NBN proposals), while maintaining the ACMA commitment to regulating converging industries in a converged way. While not fully appreciated at the time and not yet reaping the dividends, I think that it will eventually lend an appropriate new weighting to the role of the citizen as a key fulcrum to which discussion and reconsideration will revert and around which every problem and issue will need to reconcile. The driving force of the transformative process at the ACMA has been our single organising idea (**SOI**) converged through first principles thinking. In 'marketing' terms, the SOI relates to the ACMA brand but, critically, it is also about the whole strategy for the organisation. For me, it sets the behavioural cue for everybody in the organization and has done so since well before 2009 – it has been a catalyst for our internal thinking, planning and action, as much as for external organisational communication. We have adopted a logo and brand identity that captures the convergence of the 'four worlds' we regulate (broadcasting, telecommunications, radiocommunications and the internet) that I have previously mentioned.

As an extension of our brand development activity, we also developed a 'tag line' to convey the mission of the ACMA in action – for external purposes this being distilled as "communicating | facilitating | regulating", but reflecting the point above, also capable of being used with an internal, imperative, focus as "communicate | facilitate | regulate". Our Gov 2.0 strategy is all about taking this tag-line 'mantra' and making users part of our DNA. This is a deep exercise and goes well beyond having a Twitter feed and a Facebook page. To be effective as well as relevant, we have to be confident we understand where the public's 'interest' is on issues… and on this aspect we can, indeed we will have to, do much more and be much better at it. So, in a significant way, it will come from listening to them in the spaces where they want to converse.

The more I focus on the concepts under the umbrella of convergence, the more convinced I am of the need to traverse these questions in the widest context of the modern media and communications world. To do otherwise again risks being caught in the complexity of the old model, unable to unravel the interdependencies which are currently so intertwined as to make analysis, let alone change, very difficult. However, in establishing this context, the key question I started with tonight arises: "Where the bloody hell do you draw the new boundaries?" We think you start with what has always mattered and probably always will.

## Enduring concepts

I know the Convergence Review team have recently published a set of principles, but tonight I thought I'd go back to what we see as their antecedents, and identify a number of enduring concepts which we believe will remain important to the shape of the future media and communications environment and how we approach it in a legislative and regulatory sense:

- Access - to citizens and consumers of services and content and industry participants to the resources required to deliver communications and media (that work in Australia's national interest);
- Diversity – of content, sources of content and ownership of the platforms and channels over which content is provided;
- Cultural integrity – in defining acceptable communications and media in our society consistent with community attitudes and facilitating the production and consumption of culturally appropriate content;
- Quality – of services and information which is symmetrical to the demands of consumers;
- Competition – in the markets which provide choice to consumers;
- Efficiency – in the allocation of resources and the delivery of services over time;
- Innovation – in networks, services, applications and devices; and

- Confidence – in the system of markets and government interventions which deliver communications to society and in the ability of citizens to meaningfully engage and participate.

Reflecting on changing industry supply models and international regulatory practice has also been helpful to the ACMA in identifying emerging issues of concern to consumers and possible new regulatory models to deal with these issues arising from the use of digital and internet- based content services. This work includes research papers on international approaches to content regulation and emerging business models in the digital economy,[7] which I am releasing tonight in conjunction with this speech.[8]

## Designing future regulatory intervention

In my mind, a key question is: what is an enduring pivotal point for regulatory intervention?

I think the clue lies in the concept of 'influence'. The perception of media influence has been used by those who develop and legislate policy to manage and calibrate when and how we should intervene in media. The question is how we migrate that from the past and present application to the tumultuous media and communications world of the present and immediate future. Previously, influence was judged by the proxy of reach and audience. These are both challenged by fractured multi-channel media, global distribution and user generated content. What might be the future proxy for influence? Or do we need another concept altogether? I don't have the answer tonight!

As the media and communications regulator, our perspective is necessarily a practical and pragmatic one as we rethink how regulation might be designed to deliver on important outcomes, about the fundamental objectives of the legal and regulatory framework and how those enduring concepts can be ensured by being enshrined in the future.

One thing we (and the Convergence Review) can usefully do is engage with the well-understood parameters of good regulatory design for any intervention by government or a regulator. These suggest any future regulatory interventions should be consistent with regulatory best practice thinking. To inform our understanding on this, we've done research on international developments and looked at the experiences of other jurisdictions with converged media and communications legislation.

This suggests to us that regulatory design should be best practice based and proportionate – this entails availing of a set of regulatory responses which are symmetrical to the circumstances, rather than presuming self-regulation or co-regulation or direct regulation as a matter of course. This requires a nuanced regulatory toolkit, including a set of mid-tier powers. And we have documented these points in our public paper on optimal conditions for co- and self-regulation that I have already mentioned above.

I suspect regulatory design will need to be evolutionary for some time however – not a 'big bang' approach as I heard someone recently suggest. And that is because the reality is that there will be parallel approaches to regulation. In many areas, the traditional and the new will need to co-exist for some time, recognising that we have a community at different phases of their lifecycle and, perhaps, an increasingly fractionating community that values different forms of access, control and broad cultural values. However, while a one-size-fits-all solution may not be appropriate, as I will caution in my conclusion, it is my view we are also reaching the 'use-by-date' for incremental change – the interdependencies and complexities of our current arrangements will only accommodate so much more tinkering.

Regulation should be market-based and, to the extent possible, consistent with best practice in regulatory design, which requires an in-principle rationale for intervention, be it market failure, social policy good, safety or indeed curing other regulatory failure.

Regulation needs to be firm, clear and enforceable when matters are made subject to mandatory rules, but at the same time flexible and open to future developments so we are able to adaptively accommodate emerging issues and new concerns.

One key to a successful transition of legislation and regulation from the pre-convergence silos (embodied in the current suite of acts and instruments) is to move from the vertical frame of these silos to the horizontal framing offered by the layered network model of the internet. The key idea is that the network layers function to link the physical world of wires and electrons to carry the digital bits which compose the logical data of content and then make that content data available to applications used by actual people since it is native to the way in which networks are constructed and the internet works – but this notion has yet to find its way into the policy debate in a functional way, let alone into legislation.

> *Regulation should be market-based and, to the extent possible, consistent with best practice in regulatory design, which requires an in-principle rationale for intervention, be it market failure, social policy good, safety or indeed curing other regulatory failure.*

Most network models use a layered approach, some with fewer layers and with various names and functions for each layer. The traditional Open Systems Interconnection (**OSI**) model (which was defined back at the beginning of the '80s) has seven layers, possibly too many for our purposes. Perhaps a model of 2 or 3 layers would be a useful starting place:

- **Infrastructure**, being approximately OSI layers 1, 2, 3 (physical, data link, and network), concerned with access, connections and infrastructure.

- **Content**, concerned with content, generation, delivery and format - roughly equivalent to OSI layers 4, 5, 6 (transport, session, presentation).

- **Applications**, equating to the OSI layer 7 (application) with perhaps an additional layer '8' for the actual end user, concerned with the services and the viewer / consumer experience of content, applications and transactions.

A 'layered model' of regulation is, and will be, a very useful tool in thinking and planning how to address the convergent world of communications and media, and constructing and implementing such a model for the next decade or two would be an outstanding accomplishment – with my important earlier caveat that this is not necessarily an end-state. We have given some thought to what might come in the more distant future to replace 'layers' as a regulatory paradigm – after all like any model, 'layers' has its limitations, which over time may become apparent if and when it is sufficiently challenged by the environment. The lesson of the changes we have seen, continue to see, and are confident will be sustained, is that we live in a time of exponential change and such a challenge will

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7 ACMA occasional papers, 'International approaches to audiovisual content regulation - A comparative analysis of the regulatory frameworks', May 2011 and 'Emerging Business Models in the Digital Economy – The Mobile Applications Market', May 2011.

8 There are also two recent ACMA research papers relevant to these issues '"Citizens' and the ACMA - Exploring the concepts within Australian media and communications regulation' http://www.acma.gov.au/WEB/STANDARD/pc=PC_312186 and 'Optimal conditions for effective self and co-regulatory arrangements' http://www.acma.gov.au/WEB/STANDARD/pc=PC_312187.

indeed be forthcoming. Why would we think that any regulatory approach or model will prove immune and ultimately stable in such an environment?

Our current thinking is that the potential evolution of the semantic net provides a clue to conceiving of a world where, in an environment of seamless services and unified communications, intelligent content will be aware of, and able to externalise, its characteristics. In this scenario, it would be based on content meta-data evolved and agreed in the face of common global regulatory expectations and will operationally mesh with automated user profiles, perhaps reinforced with the operation of agent technology, to implement semantic content policies.

In such an environment perhaps the key role for a regulator will be to act as a network participant and influencer, a semantic regulator if you like. Working to ensure the integrity of the semantics of the net, not only with information but in terms of such things as reputation reporting and recommendations, so that such a complex, dynamic and automated market can and will optimally self-organise and working in terms of citizen and consumer empowerment and therefore in the public interest, would continue to remain our abiding concern. As I said, this is the stuff of future scenarios – as such, it is obviously uncertain and must be heavily caveated.

However, having said all that and as intellectually interesting as it may be, it would be a stretch too far for the Convergence Review to spend its necessarily limited resources and energies on an exhaustive exploration of such possible futures that are decades out. It has quite sufficient on its plate simply to navigate the transition of our current and immediate-future communications and media markets out of their legacy silos and current uncertain holding positions.

As mentioned, I feel the layers 'paradigm' will guide us well in that endeavour. However, I also consider that whatever wisdom the Review ultimately delivers will need to be tempered by an awareness that markets, technology and society will continue to evolve and that a graceful transition to whatever may come next (ie. it must be capable of providing a bridge) must be a key design parameter to this current work. I think recognition of the need to empower the regulator to be flexible and rapidly adaptive to changing industry circumstances will be a crucial part of the way forward.

Well that has been a lot to cover. So, in conclusion, let me leave you with the following thought to ponder. Some of you may be aware of the child's game, Uno Stacko. You start with a perfectly formed tower of interlocking plastic bricks. Players progressively remove a brick. At first it is easy and the tower remains sound. However, as the game progresses, the interdependencies of the remaining bricks become more and more apparent and, at each turn, choosing which brick to remove becomes progressively more difficult with the resulting structure becoming ever more fragile. Eventually a player (the loser) removes the brick that causes the tower to tumble.

I think this is a useful metaphor for where we are today - over the last fifty years a dense and interlocking weave of media and broadcasting legislation and regulation has been assembled, tied inextricably at critical points to the physical infrastructure that delivers content and services and linked in vital ways to underpinning concepts many of which are at least being stretched, and often broken, by the technological and social changes brought by the IP-fuelled convergence revolution of the internet. Change is difficult because of the inter-relationships and dependencies that exist, and incremental change often increases the fragility we confront. This observation can be made in every media and communications jurisdiction in the world.

So the dilemma now if we keep playing the Uno Stacko game: how many more bricks can we remove from the media-comms tower before it would collapse? I don't think anyone can know for sure but the one thing you can say is that it certainly isn't child's play.

I am not actually predicting calamity and the Minister's purposeful initiative in establishing the Review and the resulting dialogue should be recognised as the first serious move to risk mitigate away from calamity. That is because we need to think beyond incremental change (Uno Stacko), and change the game to one that builds again from first principles so that whatever does emerge in Australian media and communications can survive, be internationally competitive and indeed assist us to prosper in the digital economy of the future.

I hope that has opened some horizons.

Thank you.

***This is an abridged version of the speech delivered by Chris Chapman on 30 May 2011, an expanded version can be found at http://www.apo.org.au/research/'convergence-phenomena'-regulator's-perspective.***

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