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'BORDERLESS MARKETS' KEY COMMUNICATIONS CHALLENGE

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I want to begin by taking a close look at the word 'convergence' and the conceptual models we use to understand our industry.

It seems to me that traditional ways of talking about industry convergence are not very helpful. The important new market reality is the breaking down of domestic market boundaries, and the emergence of regional and global markets.

This has far-reaching implications for existing industry structures and regulatory approaches.

These profound changes force us to reconsider a lot of our assumptions about both the industry and the job of regulating.

Australia and neighbouring countries in the Asia Pacific region all face the same challenges and share common concerns.

In fact, no country can act effectively any more in isolation.

We need to collaborate to shape the best communications environment for the future in the same way that our world has learnt that we need to collaborate to preserve our physical environment.

THE ANATOMY OF A WORD

'Convergence' is a curious word. Like 'culture', 'media' or 'standards' it is one of those words in danger of collapsing under the weight of meaning dumped on it. This signals that we are moving into complicated territory, rich in ambiguity.

The term convergence derives from science, where it has long been used to denote precise phenomena in physics, mathematics and biology. It is part of the natural lexicon of technocrats.

From the late 1950s the word began to be used by psychologists for a mode of thought, contrasted to *divergent* thinking, characterising the type of logical problem solving that requires working systematically towards the single correct solution.

Few would suggest that this style of convergent thinking is helpful in a public policy context, where there are few perfect or final solutions.

In borrowing the term convergence, industry has still been using it in the context of a scientific construct, albeit metaphorically, as a close analogue of the term's application in physics and biology.

For example, in electronics convergence represents the alignment of the three electron or optical beams for correct image registration in a colour television display. More suggestively, in *The Origin of Species*, Charles Darwin used convergence to describe the tendency in diverse or allied animals or plants to assume similar characteristics under like conditions of environment.

It is a small step to suggest a natural evolution of apparently different activity in telecommunications, broadcasting and computing as coming together in a common and integrated technology or applications platform, around which markets and institutions can be reorganised.

This simplifying construct gives us a way of imposing order and rationality on apparent confusion.

It is not coincidental that most presentations about technology and industry evolution use illustrations charting the merging of different technology streams in a new, integrated platform, variously labelled broadband ISDN, multi-media or personal communications services.

Convergence, therefore is a technical term now used as a metaphor in describing industry change. Metaphors mean different things to different people: this allusive, evasive quality is the whole point of metaphors.

We resort to metaphors when we perceive changes or developments that

continued on p.5

'BORDERLESS MARKETS' KEY COMMUNICATIONS CHALLENGE

continued from p.1

do not fit neatly within accepted conceptual models, or established regulatory frameworks.

It is instructive to look at the entry of the word convergence into our discourse about communications. We find two different streams of thinking.

The Japanese seem to be the first to make explicit use of the word convergence. In 1977, Koji Kobayashi of the NEC corporation presented a keynote speech at the Intelcom meeting in Atlanta, US. There he argued that communications and computing had been heading for a merger since the introduction of semi-conductor technology.

NEC adopted the slogan of convergence - *'C&C': Computing and Communications* - as its corporate mission statement.

This initial usage focussed wholly on the integration of technologies in the transformation of production processes on the supply side of business.

During the 1980s, the word convergence grew in popularity and usage and became enlarged to join telecommunications and broadcasting.

Again, the focus has been on the impact of developments like digitalisation and optic fibre transmission in transforming the production and delivery processes for both telecommunications and broadcasting.

These technology changes have offered new functionality, as well as different cost structures, both factors which change barriers to market entry and the scope for product substitution.

A second, French, school of thought about convergence is very different and doesn't really stress the term at all. The seminal work was the 1978 report by Nora and Minc, *L'Informatisation de la Societe*. The concern of this French school was about *Telematique* as a new social paradigm.

This approach does not attribute a deterministic power to technology as the central change agent, as in the Japanese model. Technology is simply the *technique* within a socio-economic framework. The focus has been on attempting to describe new markets based on the merging of personal and mass communications, and the transformation of existing media through both technological and social re-structuring.

In France, and later in Germany with the Berkom Project, there has been active collaboration between governments, telephone companies, the press and broadcasters to explore, shape and test new information environments.

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In Australia, a technocratic model of convergence has dominated debate. As in other Anglo-Saxon countries, this has coincided with a decade of national economic re-structuring, characterised by the application of convergent thinking to the problem-solving of micro-economic reform.

Hence, both industry analysts and economic managers have mutually reinforced the emphasis on the restructuring of production processes and the liberalisation of the supply-side of industry.

Around the world, regulators now borrow convergence as a term of despair, or as an alibi. Convergence becomes a code word for the fear that they have lost control and that the ground is shifting under their feet.

The fact of industry change cannot be denied. What is important is the diagnosis of change and the approach to solutions. In doing so we cannot ignore the established regulatory models we inherit and the whole legacy of law and precedent that will be different in every country. In Australia, communications has been tightly regulated, with rigid and stand-alone regimes for telecommunications and broadcasting.

The discourse about convergence, a discourse which is only beginning, is already creating in some quarters the expectation that all our problems will go away if we merge these discrete regulatory functions.

This ignores the question of what we are regulating and why.

The basic point is that neither the problem - the collapse of traditional industry and market boundaries - nor possible solutions have much to do with technology in itself.

Talk about technology convergence is a diversion.

The re-definition of the technology environment has happened, and has been taken as a given. the technology has become truly transparent to our inquiry.

> With digitalisation all of the media become translatable into each other - computer bits migrate merrily - and they escape from their traditional means of transmission. If that's not revolution enough, with digitalisation the content becomes totally plastic - any message, sound, or image may be edited from anything into anything else.

[Stuart Brand, *The Media Lab: Inventing the Future at MIT*, MIT 1988]

The debate is about changing business systems. It is about markets and the restructuring of the business chain in the distribution of information services to, and between, end-users.

What we see now is that the restructuring has grown in speed and size as companies form strategic alliances and partnerships across previous industry boundaries to develop new business opportunities in a convergent world.

In setting out what was literally a world strategy last month, Rupert Murdoch said:

> The traditional distinctions are break-

ing down. Five of the world's biggest industries - computing, communications, consumer electronics, publishing and entertainment - are converging into one large dynamic whole.

THE NEW MARKET REALITIES

Globalisation is the current buzz word of trade policy and market analysis, but not yet of regulators.

In traded goods, the market place has long been international and is now served by 'world factories'. The organisation of the market in motor vehicles is a good example. The 1980s saw the internationalisation of trade in services, most notably in the global intermeshing of financial markets. There is a growing international trade in telecommunications, information services and broadcasting.

The main players are now organising around regional or global markets, not country markets. Rupert Murdoch's News Limited provides the prototype firm of these new media markets. What is happening is that markets are now being redefined around customers, regardless of national geography.

Telecommunications companies and banks set out to serve transnational corporations world-wide. Broadcasters address distributed ethnic or special interest markets across country borders: we now talk about the 'Chinese language market' or regional news services. The BBC World Service or CNN, to take just two examples, become alternative cultural options for local viewers around the world.

Geography is ceasing to be important for two reasons. Firstly, telecommunications has changed delivery systems. Private satellite systems provide borderless distribution.

The most dramatic demonstration of the new broadcasting was the distribution of CNN's coverage of the Gulf War. What was, in this case, generally syndicated through local channels, is now commercialised in regional broadcasters like Star's Asiasat service.

Satellite footprints reach targeted audiences across country boundaries. On the ground, optic fibre and the work on interactive services is changing the relationship between program suppliers and viewers.

Subscription, interactive and 'video on demand' services are more in the mould of traditional point-to-point telecommunications services than the traditional point to multi-point distribution of 'free-to-air' broadcasting. Anonymous mass viewers become individual customers.

Secondly, programme production is being organised around audio-video 'world factories' that assemble program component material from multiple sources and package it for specific customer markets.

What are the implications for a small country like Australia? Obviously, local production and programme distribution now become part of a larger market game. What were once regarded as small, niche markets, for example, multicultural Australia's various ethnic groupings, now also become part of extended regional ethnic markets.

Co-productions become the norm, not the exception. Australia's Kerry Packer and Rupert Murdoch invest heavily in Asian markets. Australia's public broadcaster, the ABC, introduces regional television services.

Australia, like most countries in the region, is entering the era of borderless markets. This phenomenon of borderless markets is the real challenge for the communications industry and its regulators.

It is a challenge that Australia shares, in particular, with comparably sized countries throughout the Asia Pacific region. The central common concern that is emerging is the preservation and promotion of different cultural values and identity.

REGULATING THE NEW MEDIA MARKETS

Most communications regulators have not been well-equipped to deal with controlling business systems. This has traditionally been the task of generic regulation, whether company code legislation or trade practices law.

Here the focus is on rules governing supply-side behaviour, the conduct of firms in bringing goods or services to a market.

Industry specific regulation, as in communications, has tended to be concerned mostly with the regulation of demand-side, market situations. It is about setting rules for access to markets, or setting conditions on market participation. The intention is to determine or enforce particular market outcomes against specific national policy objectives.

These objectives might concern the quality of community life such as:

- the rights of access to services or Information;
- the objective of promoting a 'self-image' of the community;
- the reflection and representation of that identity in any medium;
- or be about the status of individual choices in the community interest, reflected in debates about privacy, the rights of free speech and censorship.

All of this involves regulation that removes degrees of freedom from the normal market domain.

The traditional means to effect these public interest objectives has been to set rules for participation for particular markets. In a world of increasing structural linkages across markets, it will become necessary to re-examine how restrictions are applied.

The generic problems with defining markets are well known to economists and trade practices lawyers.

In communications, we used to cheat by using technology descriptors to impose particular market forms on consumers, so that we had something pinned down to control. Hence the convoluted technical definitions that prefaced virtually all pieces of communications legislation.

Two factors have changed all this. First the increasing transparency of the technology that makes attempts to create technology boundaries almost impossible to conceive or enforce. Models of technology regulation are breaking down.

The second factor is the customer, and the increasing ability of users to subvert or to by-pass carefully constructed regulatory restrictions.

The simplest example is the use of satellite dishes in the Asia Pacific area to access the wide variety of unencrypted satellite broadcast and business services to by-pass national systems or restrictions on access.

Increasingly both markets and supplier's business systems are creating the 'borderless world', that is, borderless markets.

In addition, once technology bottlenecks disappear, so too does the concept of mass markets and the mass media. This is true whether we are talking about a 'standard' plain old telephone service or free-to-air mass broadcasting.

Customer segmentation and niche markets are now dictating service delivery options, not vice-versa. This trend is irreversible.

The conundrum for governments and their regulators is whether we persist in trying to prop up established regimes, or adopt a policy approach of recognising, accepting and even encouraging innovation in the national interest.

Given that traditional markets are turning themselves on their heads, how does the regulator adapt or even get ahead of the game?

The issue is the regulation of industry sectors, traditionally discrete, where the boundaries are collapsing. For the regulator, the only issues are:

- what are the available levers for control?; and
- what is the relevance or efficacy of these levers to affect any specific policy objectives?

The underlying public interest issues affecting communications are few. They involve:

- the efficient allocation of national resources (whether spectrum or investment);
- notions of social equity in access to communications services and the availability of diverse sources of information;
- concerns to preserve the 'self-identity' of sovereign communities, and those communities' values and aspirations (its 'culture');
- balancing the conflicts between notions of private freedom of information and public 'standards';
- the promotion of communications as an economic and social infrastructure.

None of these is a matter that is the exclusive preserve of communications.

Notions of social equity cut across all aspects of public polity, including education, health, personal security, and support programs for affirmative action and non-discrimination.

Private versus public information is a similarly pervasive issue.

Traditionally, telecommunications was defined as private information and broadcasting and the press was defined as public information. No such line can now be drawn following the introduction of interactive, that is transactional, information and entertainment services. Australian cultural identity encompasses heritage legislation, land rights, immigration policy as well as the arts and media.

Brian Johns, ABA Chairman

Increasingly, the public policy issues for regulators revolve around:

- the balance between generic, cross-sectoral, and industry-specific regulation (and the maintenance of consistency across whatever regulatory solutions);
- the balance between the extremes of self-regulation and mandatory controls;
- the differentiation between the roles of 'promotion' and industry development, arbitration, and of control.

The discrete functions of industry promotion, arbitration, and control are often confused and bundled up together within the functioning of regulatory agencies.

The specific, central challenges in broadcasting regulation today are:

- to find new vehicles for promoting and encouraging local programming material and for ensuring that no particular players or interests can dominate the markets in a way that prevents local viewers from accessing material that is culturally relevant and that reflects local interests and concerns.

The flipside is whether unregulated access to new media outlets will undermine local cultural values.

- ensuring continued widespread national coverage and accessibility of diverse information and entertainment services, so that 'access gaps' do not develop as more and more services rely on direct customer subscription.

These are challenges that Australia shares with most other countries in the Asia Pacific region. We have a common interest in collaborating to address these challenges that cut across national borders.

In summary, talk about industry convergence is really about the consequences of market changes that undermine the traditional models for regulation. In communications, we can no longer use technology to define or control markets.

Simply aggregating regulatory functions or agencies to capture escaping industry activity will not solve the greater problems of:

- revisiting the nexus between public policy objectives and regulatory levers;
- going back to distinguish and differentiate between the different roles of government in promoting, developing, and controlling industry activity.

Old solutions are under strain. It is

continued on p. 9

achieved through starting from a more general dynamic model that may produce a stronger result. A vector autoregressive model (VAR) would be able to specify the dynamics of the data and eliminating the need to make adjustments for autocorrelation which appeared to be a problem in many of the models used. Different VAR models could incorporate one of the income/economic activity variables and a dummy variable for colour television (this appears to have a significant impact).

Public Good

An earlier version of 'Broadcasters' Market Behaviour' was reviewed in *ABA Update* (No 9/July 1993). The public good aspect of broadcasting services is discussed - public goods are not traded in a market because effectively they are not scarce. Public goods consumption by one person does not reduce what can be consumed by another. Presence of this characteristic limits the efficient operation of markets and often underpins government involvement in the provision of goods and services.

'Provision of Broadcasting Services' discusses the extent of under supply of commercial radio services. Indicators include the value placed on broadcasting licences, anticipated demand for subscription services and the demand for community licences. Average service costs and revenue, derived from ABA figures, are also used as indicators of the extent to which additional services could be accommodated. It also concludes that there is likely to be excess demand for services from consumers.

Public broadcasters are also a means for providing a public good. The general objectives of the ABC and SBS are covered along with a discussion of their cost efficiency and performance as well as detailed information on their staffing and programming costs.

There is a brief description of community radio and the growth in the number of services in this sector.

Commercial Radio

The ownership structure of the industry is related to different measures of output and costs. The largest radio groups increased their potential audience and substantially increased their revenue share over the period although concentration did not appear to increase. Between 1986 and 1991 there was an observable split in the industry with larger media groups consolidating nearly 60 per cent of potential reach. A gradual decline in potential audience of media groups when ranked from largest to smallest reach had become more pronounced by 1991.

The report does not find strong evidence for economies of scale through networking. This is attributed to the cost of sustaining widely dispersed services. However, it suggests economies of scale may result from locating services in adjacent licence areas. Conclusive evidence on economies of scale may require a more detailed examination of network costs.

The examination of the financial performance of commercial radio makes use of averages to highlight the large differences in financial characteristics between categories of services.

The report notes that early in the 1980s, capital city FM services experienced concurrent growth in average revenue above that of capital city AM services. As capital city AM services converted to FM both these measures declined to near the level of average AM services.

Profit before interest and tax (PBIT) divided by total assets, is used as a measure of the profit rate which varied between 9 per cent and 2 per cent in 1991-92 for different capital city groups. However substantial intangible assets in the balance sheets of licensees poses a problem for the measurement of a profit rate. Radio licences are around fifty per cent of total assets and are revalued to reflect expected earnings from the service. They are therefore related to the current level of PBIT through a common relationship to cash flow (many licences are valued on discounted cash flow and PBIT would have a similar trend to cash flow). To this extent, changes in the level of PBIT will cause an adjustment in total assets. A fall in PBIT would therefore lead to a reduction in total assets, with the effect that the profit rate would not fall as much as if total assets were fixed at historical cost.

Alternative measures include a ratio of PBIT to revenue, or gross operating surplus to total product, though these also have limitations in how well they describe the rate of profit or rate of return.

As stated above, there are some welcome developments contained in this publication that point to a greater emphasis on the application of general theory to broadcasting economics and systematic testing of those applications using econometric techniques.

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BORDERLESS MARKETS (CTD)

continued from p. 7

important to recognise the negative consequences of industry change for the established regulatory order.

The way forward, however, is to go back to the constant, underlying concerns driving our regulatory intentions, and to look for new opportunities for promoting these public interests in the new, emerging communications environment.