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Interesting issues for an industry at a time of record growth

[Peter Gerrand](#) ^[1]

Life Member, TelSoc.

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Abstract

This editorial notes several key indicators of record growth in Australian telecommunications, as the backdrop to the second issue of this multidisciplinary policy Journal. The growth in social connectivity and 'big data', together with the rapid evolution of new infrastructure technologies, all pose interesting challenges for good policy making – and for keeping up with new developments. The satisfying backdrop of high growth in the telecommunications industry provides a canvas on which to introduce the other thirteen articles which make up this edition (V2 N1) of the Australian Journal of Telecommunications and the Digital Economy.

Introduction

Our industry is in a state of solid – and in some areas, spectacular – growth. The OECD has reported that in June 2013, Australia topped their league tables for mobile broadband, with a penetration rate of 114%^[i] ^[5]. However the ACMA notes that whereas the penetration of mobiles increased by 3% in the 2013 financial year, the major growth area lies in downloaded data, which increased by 59% (to 677 petabytes) – 93% of this by fixed-line access^[ii] ^[6] (which rather justifies the need for the NBN, given we only had 25.6% penetration of fixed-line broadband access at the end of that year^[iii] ^[7].)

Our mobile phone networks now cover 99% of the Australian population *where we live*, a very creditable statistic, although only 25% of the landmass^[iv] ^[8]. And the coverage by the much faster 4G mobile networks is increasing: market leader Telstra reported in December 2013^[v] ^[9] that it had switched on its 3,500th base station, and Vodafone and Optus are clearly in a race to match its coverage. The national communications satellites provide 100% coverage in principle, but the demand has been such that their current capacity is effectively exhausted^[vi] ^[10]. (NBN Co's two new Ka-band satellites will commence operation in 2015, providing 12 Mbps download speeds to 3% of the population living in remote locations.) As an additional encouraging sign from the demand side, the Telecommunications Industry Ombudsman reported in October^[vii] ^[11] that the number of consumer complaints in the 2013 financial year represented a five-year low; and reported again in March that complaints received in the October-December quarter were the lowest in six years (although they still arrive at about 360 a day)^[viii] ^[12].

It is clearly the growth in use of tablets and smart phones that is accelerating the take-up of broadband data, whether downloaded directly from cellular radio networks or (more commonly) via WiFi from fixed accesses to our homes, offices, hotels and cafes. By December 2013, 53% of Australian children between 6 and 13 years owned or used a tablet computer, according to a Roy Morgan survey^[ix] ^[13]. And Telsyte reports^[x] ^[14] that the sales of tablets doubled in 2013 to reach an impressive 4.8 million units.

The next 'big things'

On the supply side, the next big development is 5G, the new mobile technology intended to support the 'Internet of Things'. We have commissioned Stuart Corner to write an overview article for this issue on what 5G means, and how its capabilities are likely to differ from those of the current 4G, 3G and earlier generations of mobile technologies. In our June issue, we plan to publish articles on the new mobile infrastructure technologies that will support 5G. In the meantime, as the adequacy of mobile coverage remains a contentious issue in some areas, we publish a paper by Shara Evans on lessons to be learned from US techniques in monitoring the coverage of current 3G and 4G networks.

Of course we are still waiting for the full realisation of 2009's 'next big thing', our National Broadband Network. Given that much of the NBN's business plan is still under review, we publish two policy articles aimed at encouraging positive outcomes for the new NBN. The first, by this author, points out the implications of leaving uncorrected a fundamental error in the new Australian Government's deregulatory policy for NBN Co, which could be financially disastrous. The second, by Craig Watkins (from Informative Technology Innovations) and Kelvin Lillingstone-Hall (CEO, OAK Telecom), argues that providing Fibre to the Distribution Point is a more cost-effective technology solution for the NBN than Fibre to the Node, and provides a much cheaper transition to the ultimate broadband solution of Fibre to the Premises.

In our June issue we hope to provide expert critiques of the NBN reviews commissioned by the Minister of Communications.

Issues around 'big data'

Since Edward Snowden's revelations on the exhaustive extent of digital surveillance on our activities by national security agencies, issues of data security and privacy in using the Internet 'Cloud' remain legally contentious and uncertain. We continue the theme of Cloud data security, commenced in our November 2013 issue, with a structured, comprehensive review by David Vaile, head of the Cyberlaw Centre at the University of NSW, of the research literature and legislation bearing on this topic. In particular his team addresses practical questions such as 'How can Cloud services be used safely, and when can they be dangerous?' and – more ominously – 'In a court case, could you prove and exercise your (the owner's) rights to control, access or delete data held in the Cloud?'.

A topical issue in Internet governance

New issues in Internet governance have recently arisen in the treatment of geographical names in the domain name system (DNS). Who has ultimate rights to domain names such as .berlin, sydney.com or melbourne.com.au? Heather Forrest from the Law School of the Australian Catholic University provides a report on the current treatment of geographic names by ICANN, on the one hand, and WIPO's Universal Domain Name Resolution Process (UDRP) on the other. Chris Chaplow, the founder of the andalucia.com tourism website, writes a memoir on the first application of the UDRP to a disputed geographic name (his own!); and David Lindsay from Monash University, himself the author of a authoritative textbook on Internet Domain Name Law, provides a book review of Dr Forrest's new book on the protection of geographical names in international law and in ICANN's DNS policy.

Policy research to serve the digitally enabled society

But all this new infrastructure, whether in the DNS or in broadband networks, has presumably a broader purpose: to serve the digital economy and, more fundamentally, the digitally enabled society. The essay by Professor Catherine Middleton of Ryerson University on 'Building a digital society: questions for communications researchers' outlines three areas in which media and communications researchers can offer insights into the ongoing development of a digital society: infrastructure development, the role of mobile connectivity, and the need for better data through which to understand engagement in the digital society. Man Chui Jung (from the South Korean Foundation of Agriculture, Technology, Commercialization and Transfer) and co-authors Sora Park and Jee Young Lee from the University of Canberra describe the results of their study of South Korea's Information Network Village project, an investment in human capital that demonstrated how the 'digital divide' can be reduced in rural Korea. And RMIT University research economist Professor Jason Potts writes on the economic arguments for investing in free public WiFi – very topical given the initiatives being taken by several cities around the world to provide free WiFi in order encourage inward tourism.

Memoirs by telecommunications activists

To celebrate major initiatives within Australian telecommunications, this Journal has initiated what we hope will be a regular History section, in which we encourage the publication of memoirs by those who took a key role in creating those initiatives. We inaugurate this series with a memoir by Robin Eckermann on the creation of TransACT, Australia's first VDSL broadband carrier, for which he was the founding Chief Architect.

An interview with our Chief Scientist

Lastly, we are pleased to publish an interview by free lance journalist Beverley Head with Professor Ian Chubb AO, Australia's Chief Scientist, which draws out his career trajectory and provides him with an additional forum in which to present his views on the policies needed to provide Australia with greater capacity for innovation in the post-mining boom era.

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- [i] ^[15] See <http://www.oecd.org/sti/broadband/communications-outlook.htm> ^[16]
- [ii] ^[17] See <http://www.acma.gov.au/theACMA/Library/Corporate-library/Corporate-publications/communications-report-fast-facts> ^[18]
- [iii] ^[19] See <http://www.oecd.org/sti/broadband/communications-outlook.htm> ^[16]
- [iv] ^[20] See http://www.communications.gov.au/mobile_services/mobile_phones ^[21]
- [v] ^[22] See: http://www.computerworld.com.au/article/433391/updated_4g_australia_state_nation/ ^[23]
- [vi] ^[24] See <http://www.smh.com.au/it-pro/government-it/nbn-satellites-near-full-capacity-20131115-hv2m5.html> ^[25]
- [vii] ^[26] See http://www.arnnet.com.au/article/529665/telco_complaints_drop_five-year_low/ ^[27]
- [viii] ^[28] See <http://news.theage.com.au/breaking-news-national/telco-complaints-hit-sixyear-low-20140320-3542v.html> ^[29]
- [ix] ^[30] See <http://www.roymorgan.com/findings/5486-tablet-computer-use-now-mainstream-among-young-australians-december-2013-201403132227> ^[31]
- [x] ^[32] See https://www.telsyte.com.au/?page_id=691 ^[33]

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