# Emeritus Professor Reginald Paul (Reg) Coutts (1949–2021)

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[3]

☆ 75 [4]

**Abstract**

This obituary celebrates the many contributions of Emeritus Professor Reg Coutts (1949–2021) to telecommunications, to ICT innovation and to the Australian industry associations in which he had key leadership roles. The article quotes comments from many of Reg's co-workers at different stages of his multi-faceted career.

# Introduction

**Reg Coutts**

Reg Coutts, one of Australia's most distinguished telecommunications engineers, died on 29 August 2021 at St Andrew's Hospital in Adelaide, in the company of his wife Pam and daughter Louise. This article celebrates Reg's contributions to telecommunications and ICT innovation, and to the industry associations in which he had key leadership roles.

Born on 13 July 1949 in Woodville, S.A., Reg Coutts was the second son of Hubert and Gertrude May Coutts. As a boy he grew up in Findon, S.A., and attended St Michael's College, where he matriculated in 1967. While a child, he contracted polio, leading to a permanent withering of his right arm. Reg ensured throughout his life that this physical disability would never bar him from achieving anything he wanted to do.

From 1968 to 1972, Reg studied electrical engineering, computer science and applied mathematics at the University of Adelaide, graduating with a B.Sc. in 1971 and a B.Eng. (Honours) degree in electrical engineering in 1973.

With the assistance of a Commonwealth Postgraduate Award, he carried out research from 1973 to 1977 for a PhD degree in electrical engineering, awarded in 1978, on the topic of "Channel state feedback, for digital communications in a fading environment" (Coutts, 1976 [5]).

## Reg's Career at the PMG/Telecom Australia/Telstra

While a university student, Reg was supported by a PMG[6] Engineering Cadetship from 1971 to 1976. In 1976, he moved to Melbourne to join Telecom Australia's Research Laboratories (TRL). He was able to combine writing up his Ph.D. thesis there with carrying out research in TRL's Radio and Satellite Networks Division, studying the potential of new radio technologies for application in Telecom's national network.

Reg's career in telecommunications was very important to him, as it was to us, his numerous friends and colleagues across the industry and in academia.

I first met Reg when we both worked at TRL in Clayton, Victoria, in the late 1970s, at a time in which TRL's expertise had great influence within Telecom. While we worked in different areas of TRL and on different network technologies, we shared an active interest in our union (the Professional Officers Association) and in progressive politics. Besides which, Reg's gregariousness and outgoing nature meant that he created friendships easily across the Laboratories and beyond. Meanwhile, the effectiveness of his research work was such that he rose through several promotions to become Section Head of the Radio and Satellite Networks Division in 1985.

In 1989, he had an unexpected career change when he was recruited by Ian Campbell to join Telecom's Mobile Communications Services Division as National Manager, Strategy and Business Development. The immediate challenge was the imminent introduction of competition in mobile services, legislated for 1991. Reg's first job was to advise on which new digital radio technology Telecom, soon to become Telstra, should recommend to the regulator for implementation. The new job gave Reg scope to use his 'big picture' knowledge and skills. In 1992, the expected competition from Optus and Vodafone in mobile networks began.

Kevin Phillips, then head of Mobiles Engineering, has written:[ii] [7]

"I worked closely with Reg early on in mobiles and briefly more recently.

"There were a large number of operational issues which had to be addressed urgently. Reg's lateral thinking strategies and persuasive ways were very helpful in planning and implementing these changes and managing the relationship with the rest of Telstra.

"In mobile communications, new billing, marketing and customer service systems had to be defined, acquired and operated. Reg worked comfortably in strategy across all these domains.

"On the network side we had a head start but due to the ever-rising demand, continually underestimated, we struggled with capacity. I recall Reg's famous broom chart which spelt out the issue and helped in later years to get more realistic predictions and match resources for the business."

Simon Moorhead and Brian Louey-Gung worked for Reg during his time at Mobiles. Simon remembered Reg's extraordinary energy and enthusiasm, working long hours every week at the job. Brian attests to Reg's talents as a manager:[iii] [8]

"He threw highly complex tasks at me that I didn't realise that I was capable of completing, that forced me to network strongly both inside and outside Telstra in order to just understand the challenges, let alone successful[ly] complete them, and supported me throughout."

In parallel with his work on business strategy for Mobile, Reg continued his participation in the standards work of the Telecommunications Union's CCIR (International Consultative Committee on Radio), which he had begun while at TRL. His priority was on providing inputs to third generation cellular mobile network standards. The Working Group meetings were held in varied locations, such as Vancouver, Costa Rica, Japan and Washington, and Reg became a seasoned traveller.

## Professor Coutts

In 1993, Reg left Telstra to take up a newly created Chair in Telecommunications at the University of Adelaide, a position requiring a strong focus on commercialisation. His colleague, Professor Derek Abbott (2021 [9]), has written:

"He swiftly started up the Centre for Telecommunications Information Networking (CTIN). … The establishment of CTIN was a joint venture between Vodafone, the South Australian State Government and the University of Adelaide. … Reg's Centre typically bought in $1M in funds per annum, which for the time was significant funding into the University. Major clients included AAPT, Optus, and Vodafone.

The CTIN's funded studies included: high density wireless LAN (Wi-Fi) performance modelling analysis; 3G terrestrial links network planning; GPRS network signalling traffic modelling; TCP/IP performance measurement of the public Internet; and radio spectrum auction analysis and training.

"Reg's CTIN worked in Australia and internationally with individual start-ups, the major telecommunications companies, manufacturers, universities, and government (including a report for a working group for the Prime Minister's Science and Engineering Council). It was at the right place, at the right time, with the right multidisciplinary approach, as the telecommunications industry in Australia was deregulated" (Abbott, 2021 [9]).

Reg was also active in enabling the University of Adelaide's participation in the Smart Internet Cooperative Research Centre, a seven-year Commonwealth-funded CRC set up in 2001. This CRC linked eight universities across four states with several private sector organizations, notably Telstra, Motorola and Westpac.

Trevor Barr has written:[iv] [10]

"Reg's most valuable role, together with Pam, was advocacy for projects concerning how end users could benefit more as the Internet technology platform evolved. Reg called for research into the complexities of *who* has Internet access *on whose terms*, together with issues related to affordability, with a strong call for projects about neglected groups, especially the disabled.

"Reg thrived at the CRC dinners over a glass or two of red wine. I incurred his wrath on several occasions, and learnt the hard way to never criticise his beloved Adelaide Crows!"

In the 1990s and 2000s, Reg and Pam, a social science researcher, were regular contributors at the Network Insight Institute's multidisciplinary annual conferences in Sydney, delivering papers on their research. These were very stimulating conferences at which telecommunications engineers, economists, lawyers, media researchers, social scientists, marketers and user advocates got together to debate research findings and ideas on the future of Australian media and telecommunications. Reg flourished in that environment.

One of Reg's enduring interests over the past twenty years has been the replacement of the traditional Universal Service Obligation, which provides universal access to telephony services (only) across rural and regional Australia, by a more modern means of providing universal access to broadband Internet-based services. His ideas are developed in his 2015 paper 'Better Telecommunications Services for all Australians' (Coutts, 2015 [11]).[v] [12]

# Expert Consultant and Advisor

While at Adelaide, Reg set up his company Coutts Communications, to provide a vehicle for his private consulting work, particularly as an expert witness and technical advisor in court cases dealing with mobile telecommunications.

Here's Kevin Phillips again:[ii]

"In more recent times I had some connection with Reg in the field of law enforcement's use of network based mobile location. This had become a subject of strong personal interest to Reg, and he pursued it with his characteristic enthusiasm and scientific approach. He had doctoral students working on the subject and published papers in an attempt to wind back what he saw as over reliance, and some travesties of justice, based on the use of these techniques."

In 2004, Reg formally retired from the University of Adelaide, who bestowed upon him the title of Emeritus Professor. According to his colleagues, Reg cheerfully explained his new title as "It means you get to keep your desk and still work as a professor, but they don't pay you anymore". At Reg's funeral, Derek Abbott (2021 [9]) told us:

"Now, many retired Professors go into hiding and we never see them again. … Not Reg. … He religiously came into work, was active in the University community, and was a staunch drinking member of the University Staff Club.

"In these retirement years Reg kept himself busy and performed expert witness work for courts that needed an expert opinion on mobile phone records to decide whether a phone was near the scene of a crime or not. In as little as a week before Reg passed away, I remember him looking forward to a forthcoming case where he believed he would easily take down the case of the Prosecution" (Abbott, 2021 [9]).

In fact, after formally retiring from the University in 2004, Reg became busier than ever. In 2007, he was appointed to the Rudd Government's Panel of Experts to advise on bids from the industry on the best way to implement a national broadband network adequate to serve Australia in the future. Another distinguished member of that Panel, Emeritus Professor Rod Tucker, has written:[vi] [13]

"I worked closely with Reg on the NBN Panel of Experts and came to appreciate his wisdom on telecommunications matters. Interactions with Reg were always lively, and he kept all members of the committee on their toes with his questions, comments, and insights. It was a pleasure working with Reg."

In further recognition by government of his expertise, Reg was appointed as a part-time Member of ACMA (the Australian Communications and Media Authority) from October 2010 to May 2014.

# Leadership of the Telecommunications Society

Participation in the NBN Panel of Experts was far from the only major issue requiring Reg's attention in 2007. In the previous year, he had been elected as Chair of the Telecommunications Society of Australia (TSA), whose role in disseminating knowledge to the industry of new developments in telecommunications has a history going back to 1874.

In 2007, Reg had the challenge of keeping the TSA's activities alive and well in an era of shrinking membership and vanishing sponsorship revenues. As a radical solution, the TSA Board decided to transfer its functions and assets to the Australian Computer Society (ACS), after being assured it would be supported there. For six years, Reg and his colleagues were able to keep the activities and morale of the TSA alive, through the Computer Society's Telecommunications Committee, which Reg chaired. During those years the "TSA" remained as active as ever, producing regular issues of its online journal, the *Telecommunications Journal of Australia*, as well as holding lunchtime lectures in Melbourne, Sydney and Adelaide, and the annual Charles Todd Oration in Sydney.

However, in 2013, the new CEO of ACS announced he would ban the use of the Telecommunications Society's name, in his desire to use a single brand name, the Australian Computer Society. This threat to the prestige and importance of telecommunications was of course incendiary to our members. After a period of unproductive negotiations, Reg and the Telecommunications Committee decided to take the telecommunications group out of the ACS and recreate the TSA.

Thus was born the Telecommunications Association Inc. (TelSoc for short), and its new Journal, the *Australian Journal of Telecommunications and the Digital Economy*. Seven former TSA members acted as founding directors of TelSoc, and Reg was unanimously elected its founding Chairman in July 2013. He remained Chairman for seven years, stepping down last year to become Vice Chairman to assist his successor, Jim Holmes, and the new members of the Board.

In this way Reg and his colleagues ensured the continuation of the almost 150-year traditions of this very active society. The rescue of the Telecommunications Society is one of the many achievements of Reg's career, and it attests to the multi-faceted nature of his many contributions to Australian telecommunications.

In 2018, Reg was admitted by the Pearcey Foundation to its Hall of Fame for "distinguished lifetime achievement and contribution to the development and growth of the Australian Information and Communication Technology industry".

## Final Years

In his last two years, Reg was capable of further surprises. In the lead-up to the 2019 federal election, the seat of Mayo, held by the Centre Alliance (cross bench member) Rebekha Sharkey, was under threat from Georgina Downer, a conservative candidate from a Liberal Party dynasty. Reg's offer to stand as a candidate was gratefully accepted by the ALP, and Jim Holmes flew over to Adelaide to support Reg in his campaign. According to Jim, Pam was slightly worried her talented husband might just win, destroying any chance of a happy retirement together. Reg assured her that, realistically, he had no chance of winning the seat. Fortunately, from Pam's point of view, his prediction was accurate and, just as he intended, his flow of preferences helped ensure that the more progressive Ms Sharkey won the seat.

Reg's death from cancer in August, 2021 came as a shock to his many friends across the industry. However, to the end, he remained cheerful and upbeat. In tribute to his sunny character and sense of humour, the final video shown at his funeral was the Monty Python masterpiece, "Always look on the bright side of life".

Farewell, Reg – comrade, colleague and friend.

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i [18] The telecommunications functions of the Commonwealth of Australia's Postmaster General's Department (known as the PMG) were transferred to the newly created government-owned business enterprise Telecom Australia on 1 July 1975.

ii [19] Kevin Phillips. 'Articles on Reg', email to Tim Herring, 3 September 2021.

iii [20] Brian Louey-Gung. 'Reg Coutts', email to Peter Gerrand, 13 September 2021.

iv [21] Trevor Barr. 'Reg Coutts', email to Peter Gerrand, 8 September 2021.

v [22] The paper is also reprinted in this issue of the *Journal* (Moorhead, 2021 [23]).

vi [24] Rod Tucker. 'Reg Coutts', email to Peter Gerrand, 8 September 2021.

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