Resume

Geoffrey Huston, B.Sc, M.Sc.

1. Personal and Contact Details:

[redacted]

2. Position

Chief Scientist
Asia Pacific Network Information Centre
http://www.apnic.net

3. Educational Qualifications:

Bachelor of Science, 1st Class Honours, Australian National University, [redacted]

Honours:	Computer Science
Majors:	Computer Science, Pure Maths
Prizes	Australian Computer Society prize for Computer Science
	ANU National Undergraduate Scholarship

Master of Science, Australian National University, 1983
Degree by Research.

4. Career Summary

I have been involved in information technology innovation and leadership since implementing Australia's first national Internet service network in the mid 1980s, and since that time I have worked extensively in the Internet sector's peak international bodies, as well as in areas of IP technology and standards.

In the mid-1980's I was tasked with the design and implementation of the Australian National University's fibre-optic data network, and, as the University Network Manager, I oversaw the implementation of a campus-wide fibre data network In 1989 I took up the position of Manager with the Australian Academic and Research Network. Internet. This network, AARNet, was the first Internet service network in Australia, and for the period from 1989 until 1995 was not only an effective academic and research sector service platform, but also assumed the role of backbone of the emerging public Internet utility. Within this role I oversaw all parts of the design, implementation and subsequent operation and further development of the network.

In 1995 I took up the role of network technical manager of Telstra Internet with the Australian telecommunications service provider, Telstra. In this role I lead the technical activity that progressed Telstra's core Internet through 3 successive generations of technologies, from digital circuits, through the use of SDH systems to IP over fibre systems. I took up the role of Chief Internet Scientist in Telstra in 2000, and provided deep subject-matter expertise into Telstra's processes regarding strategic directions of technology with respect to Internet-based services and service delivery platforms.

Since mid-2004 I have been working in a full-time research capacity with the Asia Pacific Network Information Centre, concentrating on aspects of inter-domain routing, the interaction of address distribution policies and routing outcomes and scaling of the inter-domain routing system.

I have also been closely involved with industry standards, and have participated in the Internet Engineering Task Force since 1989. I have served on the Internet Architecture Board of the IETF from 1999 until 2005, and I have chaired a number of Working Groups in this period. I have chaired the SHIM6 Working Group studying site multi-homing techniques for IPv6, and the SIDR Working Group studying adding routing security into the inter-domain routing framework. I was enrolled into the Internet Society's Internet Hall of Fame as part of their inaugural program in 2012.

I was accepted as a member of ICANN's Security and Stability Committee at the start of 2015, and in that committee I have worked on SSAC studies on IPv4 address exhaustion, IDNs and namespace collisions, as well as membership procedures.

My current areas of technical interest include inter-domain routing analysis, with particular attention to scalability, stability and dynamic properties of the inter-domain routing system, and in the stability and scalability of the Domain Name System and DNSSEC.

5. Career Positions

2004 – Present: APNIC

I am the Chief Scientist at the Asia Pacific Network Information Centre, the body responsible for IP address distribution in the Asia Pacific region. In this role I undertake analysis of address distribution policies and assess the efficacy of these policies in meeting the various objectives associated with the address distribution function. I have also undertaken studies relating to the use of addresses in the context of enhanced Internet security measures, studies of the potential of alternate distribution mechanisms and also broader investigations in the area of industry structure and social and public policy making. Most recently, I have been using a novel technique of using online advertising networks as a low cost high volume network measurement system, allowing a set of measurements that look at the Internet not from the inside out, but from the same posture as many clsients of the network: from the perspective of the end user.

I have contributed to the work of the OECD, and authored a paper on the economic and policy aspects of the transition to IPv6.

I have undertaken many presentations on technical topics to the IETF, to a large number of network operator groups, to the Internet Governance Forum meetings, and a large number of other technical fora.

1995 - 2004: Telstra

Network Technical Manager, (1995 – 1998)
Chief Internet Architect, (1998 - 2002)
Chief Internet Scientist (2002 – 2004)

Within this role I provided technical direction to Telstra's Internet services, and leadership to a team of engineers. My roles included a component of research, technology transfer and technology evaluation. I was responsible for the management the backbone Internet platform for the company, and managing the operation of an Internet retail platform. I designed and implemented a number of network management and accounting tools to support this platform, including a usage accounting system, a network utilization platform, a capacity planning tool, and a number of service management tools. I also designed the network's routing system, and provided solutions to Telstra to address both business objectives and regulatory inputs concerning retail, wholesale and interconnection agreements for Telstra's Internet products.

1989 - 1995: Australian Academic and Research Network

Network Technical Manager

Prior to July 1995 I was the Network Technical Manager of the Australian Academic and Research Network (AARNet), a position I held since the inception of AARNet in March 1989. In this period I was largely responsible for the construction of AARNet, and undertook the roles of strategic, financial and policy management of the network, as well as undertaking a wide range of operational management tasks.

During this period I undertook a positioning for AARNet which placed this network as a wholesale backbone IP service provider, allowing smaller ISPs to emerge without the requirement for extensive capital investment in international and domestic infrastructure.

6. Professional Positions

Treasurer, Board of the Public Interest Registry

I have served as a Board member of the Public Interest Registry, a subsidiary of the Internet Society. This body manages the ".org" top level domain name as a not-for-profit activity managed in the public interest. I held the office of Treasurer on this Board from 2003 until 2005.

Chair, Internet Engineering and Planning Group

I have served as chair since this body's inception in 1991 until 2006. This group meets three times a year immediately prior to IETF meetings to discuss topical Internet operational issues.

Executive Director and Member, Internet Architecture Board

I served as a member of the Internet Architecture Board (IAB) from March 1999 until March 2005. I was also the Executive Director of this body from 2001 until 2005. This extended period of involvement with the IETF at a leadership level has exposed me to the broad picture of technical activity as it relates to Internet technologies and service provider requirements.

Member of the Executive Council of the Asia Pacific Network Information Centre

I served on the Executive Council of APNIC from its inauguration in 1996 until 2004, serving at the chair of this body for the first two years.

Chairman, Board of Trustees, Internet Society

I served as an inaugural Trustee for the Internet Society from 1992 until 1995, and was elected to a second term of office in 1998 until 2001. I held the office of Secretary to the Board of Trustees from 1993 until 1999. I served a one year term as Chairman of the Board of Trustees of the Internet Society in 2000. During my period as chair I reorganized the structure of the Society's operations in order to improve accountabilities in each of the Society's activity domains. I also introduced a new funding model that doubled the Society's recurrent revenues in a single year.

7. Books and Papers

"Quality of Service", Paul Ferguson & Geoff Huston, John Wiley & Sons, March 1998. This book examines the state of tools to deliver QoS responses to network clients. The book is a technical overview, commenting on the state of development of QoS tools.

"ISP Survival Guide", Geoff Huston, John Wiley & Sons, December 1998. This book is a comprehensive guide to an Internet Service provider, examining the technical environment, the business and marketing environment and the strategic and policy environment in which an ISP operates.

"Internet Performance Survival Guide", Geoff Huston, John Wiley & Sons, December 1999. This book looks at Internet performance, examining the topics of Differentiated Services and MPLS and QoS, and also including a more detailed examination of the application of QoS tools within an ISP service environment.

I have also published a large number of refereed papers, and have undertaken keynote presentations, technical presentations, and tutorials at many venues. These are collected on my web site, http://www.potaroo.net. I am also a regular contributor to the Internet Protocol Journal, where I have authored a number of articles on a very wide range of (predominately technical) topics.