## Alastair Thomson Chief Information Officer National Heart, Lung, and Blood Institute National Institutes of Health, HHS

Originally from the South Island of New Zealand, Alastair received his BSc (Honours) in Psychology from the University of Otago in 1984 where he developed a computer system for temporospatial analysis of EEG data, followed by a Graduate Diploma in Computer Science in 1992 with a dissertation on the use of temporal neural networks for the composition of music.

His involvement in IT began with Television New Zealand where he developed computer systems for sports timing, video and audio editing, computer graphics and animation. After leaving TVNZ in 1990, he spent some time running his own computer animation business before joining the University of Otago as Director of the Computer Science Applied Research Center where he worked to commercialize the research discoveries of the Department of Computer Science including temporal databases, machine vision, 3D modeling and animation and artificial intelligence in diverse areas such as knitwear design, television production, automobile sales and marketing, and aluminum smelting.

In 1997 he the move to the United States to work with MCI Telecommunications where he architected systems for provisioning of local phone service before joining a small consulting firm - Blueprint Technologies - where he spent time guiding the construction and management of complex IT systems for insurance, finance, logistics, telecommunications, clinical research lab testing and several government agencies including the NIH.

As a consultant at the NIH he worked for several research Institutes and Centers and as an advisor to the Deputy Director Extramural Research, as an Enterprise Architect in the NIH Office of the CIO. In 2010 he was recruited to consult as an Enterprise Architect at the National Heart, Lung, and Blood Institute from where he entered Federal service as Chief of IT Security for NHLBI. Alastair was appointed Chief Information Officer in September 2013 and has since been engaged in major infrastructure improvement programs including deployment of a multi-petabyte high performance storage system to support research, pilots of cloud services for biomedical research that includes genomic analysis biophysics simulations using massively parallel virtual high performance computing clusters. On the more mundane but just as important administrative side he and his team are implementing several IT systems to support acquisitions, grants management, reporting and analytics and scientific portfolio analysis. Much of the focus of these systems is on reducing the administrative burden of the work of scientists and researchers as well as ensuring compliance of NHLBI systems with regulations relating to records management.