Stephen Wilson
digital identity profile

Stephen Wilson is a leading authority on digital identity, and one of the world's most original thinkers in the field.[1] For 29 years he has helped public and private organisations build effective identity frameworks, strategies and systems, advising on platforms, architecture, policy, privacy and governance. His technical specialisations include national scale identity infrastructure, verifiable credentials, PKI, blockchain technologies and biometrics. He has been personally responsible for many important innovations and policy reforms, including *Relationship Certificates* in the Australia federal government and attribute PKI-based verifiable credentials for the U.S. Department of Homeland Security (Lockstep is the only Australian company to win a competitive commercialisation grant in the DHS identity and privacy program). UK-based Innovate Identity named Stephen in the top 10 of *The Most Influential Thought Leaders in Digital Identity* 2016; One World Identity named him in the *Top 100 Influencers* three years running 2017-19. He has been retained as principal digital identity adviser by the national governments of Australia, Hong Kong, Indonesia, Kazakhstan, Macau, Malaysia, New Zealand and Singapore.

Selected digital identity engagements

- **Hushmesh (U.S.) 2022-now**: member of the strategic advisory board for this Series-A funded start-up, developing a radical new consumer-grade managed cryptography platform and automated information space
- **Australian Access Federation 2022**: commissioned to develop a landscape scan, situational analysis and strategic roadmap to guide the Trust & Identity strategy of this leading identity services business
- **ACCC 2021**: provided advice on national digital identity frameworks and international data protection trends as they apply to the future of the CDR
- **NSW *IDSupport* 2021**: provided the initial privacy impact assessment for this new consumer identity theft support service
- **American Assoc of Motor Vehicle Administrators AAMVA 2020-21**: Advisory Board member for this peak body's development of an ISO 18013 based *Digital Trust Service*
- **Trust Stamp (U.K.) 2020**: commissioned to write a whitepaper on the privacy properties of the company's proprietary tokenisation solution for biometric data
- **Australian Treasury 2019:** Independent review of the initial internal PIA for the Consumer Data Right (CDR) open banking / open data regime
- **NSW Digital Driver License 2018-19**: Independent review, risk assessment and ongoing advice on identity security for the DDL system and mobile app
- **IBM (U.S.) 2017-18**: strategic product adviser to the IBM Blockchain Identity team
- **Dept of Homeland Security (U.S.) 2016-19**: Contracted over three competitive stages to develop a novel verifiable credentials mobile wallet for First Responders
- **Australian Payments Network 2018**: Facilitator for the banking sector identity framework (*TrustID*) Working Group

[1] Tricia Wang, *People Centred Digital Future*, San Jose, 10 Dec 2018, https://tinyurl.com/pcdf-wang.

- **Evernym (U.S.) 2017-18**: subject matter expert on cryptographic key management in the DHS-funded project to develop the first Sovrin / Hyperledger Indy solution
- **Service Victoria 2017-18**: PIA on new citizen identity standards
- **Service NSW 2017**: PIA of the new *MyAccount* facility
- **FIDO Alliance (U.S.) 2017**: organised the first FIDO Alliance Asia Pac AU seminar
- **Australia Post 2017**: Privacy adviser for new Digital ID service
- **Digital Transformation Agency 2016**: privacy engineering advice and training for the Trusted Digital Identity Framework (TDIF)
- **Queralt (U.S.) 2016**: Acting Product Manager for this early-stage innovator, developing FIDO and Derived PIV (mobile ID) software
- **Biometrics Institute (U.K.) 2015-17**: Researched and developed a new privacy trust mark, and designed the pilot program
- **Aetna (U.S.) 2016**: Strategic privacy & trust roadmap for large scale rollout of multimodal biometrics to tens of millions of policy holders
- **Attorney Generals Department 2015-2016**: early stage PIAs of the new Face Verification Service (FVS) biometric pilots at Aus Federal Police and Immigration
- **Confyrm (U.S.) 2015-2016**: Privacy and Policy Officer for this real time identity fraud management company; road-tested the draft NIST Privacy Engineering tool
- **NSTIC National Strategy for Trusted Identities in Cyberspace 2012:** Led the preliminary privacy evaluation of the NSTIC program office platform.

Stephen's other identity clients and projects include the National Authentication Service for Health (NASH) business case, the South Australia Health PKI certificate policy and key signing ceremony, the smartcard strategy for the Australian banks' *Trust Centre*, the Australian National Smartcard Framework, fundamental reforms to Project Gatekeeper including Relationship Certificates, regional smartcard capability uplift for the World Bank, ASEAN harmonisation of e-signature rules, Medicare Australia product manager and Gatekeeper accreditation, the Identrus Starter Pack framework, the N.Z. Bankers Assoc PKI strategy, and the Australian Stock Exchange PKI.

Committees & Professional Associations

- Australian Institute of Company Directors (2024-now)
- Standards Australia Technical Committee IT-017 Identity Cards (2021-now)
- Identiverse Privacy & Ethics Track Chair (2016-now)
- Australian Information Security Association (honorary life member)
- International Association of Privacy Professionals (2012-now)

- Digital Identity Ministerial Advisory Council, New South Wales (2021-2023)
- World Health Organisation digital vaccination certificate Working Group (2021)
- National Blockchain Roadmap Cyber Security Working Group (2021)
- Mobile World Congress *GLOMO Awards* IDAM category judging panel (2016-17)
- Standards Australia Information Security Committee IT-12-4 (2004-17)
- Australian Government Gatekeeper PKI Policy Committee (2004-14)
- US National Strategy for Trusted Ids in Cyberspace Privacy Committee (2012-14)
- NATA IT Testing Accreditation Advisory Committee (2003-14)
- Australian Law Reform Commission Emerging Technology Committee (2007-8)
- OASIS PKI Adoption Technical Committee – Chair (2007-08)
- Asia PKI Forum – OASIS Liaison (2005-08)
- Smartcards & Information Security Australia (Co-chair) (2005-07)

- National Electronic Authentication Council (NEAC) (1998-2001)
- Federal Privacy Commissioner's PKI Reference Group (2001)
- Certification Forum of Australasia – Chair (1998-2001)
- American Bar Association Information Security Committee (1999-2002)
- APEC e-Authentication Task Group (1998-2001).

Selected Identity publications & presentations

- *Why Are There So Many Digital Identities?* M. Landrigan, S. Wilson and H. Fraser, Law, Technology and Humans, 2023
- Invited panellist, *Digital Identity - a global discourse,* Blockchain Governance Initiative Network BGIN Block #9, Sydney, Nov 20-12, 2023
- *Authentication for Everything: How to Make Good on the Promise of Digital Wallets*, FIDO Authenticate conference, Carlsbad California, Oct 19, 2023
- *Zero Identity*, Identiverse, Las Vegas, June 1, 2023
- *The History and Future of Digital Wallets*, Identiverse, Las Vegas, May 31, 2023
- *The future of data protection: infostructure to safeguard data value chains*, AISA Cybercon, Canberra, Mar 21, 2023
- *Leading at the Edge: FIDO and the Normalization of Cryptography,* FIDO Authenticate Conference, Seattle, October 2022
- *Optus breach: What next for digital credentials?* Innovation Australia, October 7, 2022
- *Digital Economy Infostructure*, Digital Trust New Zealand, Wellington, July 27, 2022,
- *The Market Failure of Digital Identity* Identiverse, Denver, June 23, 2022
- *Trust in the Post-Identity World,* Identiverse, Denver, June 22, 2022
- *Authentication APAC Trends and Insights* FIDO Authenticate APAC Virtual, Dec 9, 2021
- *The identity of things? We're gonna need a bigger idea!* FIDO Authenticate, Oct 20, 2021
- *A Goldilocks point for Digitised Vaccination Certificates* Turing Trustworthy Digital Identity Conference, Alan Turning Institute, Sep 13, 2021
- *Why Isn't Identity Easy?* Identiverse (virtual) June 2021
- *Reframing Digital Identity in the Era of Trust Data* GS1 Innovation Summit, Mar 30, 2021
- *Authenticate the World!* FIDO Authenticate (virtual) Nov 19, 2020
- *A digital "Yellow Card" using Community PKI*, IEEE International Symposium on Technology & Society, Nov 15, 2020
- *Securing Digital Credentials: Managing Privacy, Ownership and Trust*, Identity Week Asia, Singapore (webinar) Oct 14, 2020
- *Identity: It's the data stupid* Identiverse (virtual) July 23, 2020
- *What do you need to know? COVID-19 changes everything*, Festival of Identity Launch (webinar), May 4, 2020
- *ESSENTIALs Mid Term Early Stage Research Conference*, The Hague, Nov 14-15, 2019
- *How will digital identity benefit the economy?* Tech in Govt, Canberra, Aug 6, 2019
- *Regulation of the construction and use of digital identities,* UNSW The Allens Hub World Legal Summit, Sydney, Aug 1, 2019
- *Entrepreneurs, Data and Privacy: A Race to the Top*, Identiverse, Wash D.C. Jun 26, 2019
- *Making identity work in health,* Medical Software Industry Assoc, Sydney, June 13, 2019
- *Safeguarding data supply chains,* Safeguarding Australia, Canberra, May 9, 2019
- *Mobile Device Attributes Validation*, DHS Cyber Security Showcase Wash D.C., Mar 2019
- *Digital Identity* BankInter Future Trends Forum (Madrid, webinar), Feb 9, 2019
- *What identity is, and is not*, ScotChain18, Edinburgh, 2018
- *Is blockchain the solution?* ID2020 Summit, New York City, 2018

- *Mobile Device Attributes Validation*, International Identity Summit, Seattle, 2018
- *The FIDO Alliance: PKI as nature intended*, Digital ID Show, Canberra, 2018
- *Blockchain Identity Workshop*, Financial Services Council, Sydney, 2018
- *The Long Road to Identity on the Blockchain*, RSA Conference, 2018
- *A Holistic Assessment of Blockchains for Identity*, KNOW Identity, Wash DC, 2018
- *A Digital Identity Stack to Improve Privacy in the Internet of Things*, Wilson, Moustafa & Sitnikova, IEEE World Forum on IoT, Singapore, 2018
- *Do Blockchains have anything to offer Identity?* Internet Society, 2018
- *PKI Post Blockchain* Cloud Identity Summit, Chicago, June 20, 2017
- *FIDO and the broader identity* landscape FIDO Alliance Seminar, Sydney, 2017
- *How Healthy is Blockchain Technology?* HIMSS Asia Pac Conference, Singapore, 2017 (awarded Best Paper of the conference)
- *Biometric Standards, Large and Small* "Biometrics and Regulation" Tenth Workshop on the Social Implications of National Security (SINS17), Sydney, 2017
- *Blockchain Reality Check*, NIST Blockchain and Healthcare Workshop, Gaithersburg Maryland, 2016
- *There is no ID in blockchain*, Cloud Identity Summit, New Orleans, 2016
- *Forget about identity*, Cyber Identity Sandpit – Command, Control, and Interoperability Center for Advanced Data Analysis (CCICADA), Rutgers University, New Jersey 2015
- *Rationing Identity in the IoT*, Cloud Identity Summit, San Diego, June 10, 2015
- *Submission on Biometrics* Lockstep Consulting, to the UK Commons Select Committee - Science and Technology, September 2014
- *Fractional Identity: An alternative to NSTIC and Federated Identity Models* Re:ID, 2013
- *The Consumerization of Identity*, Constellation Research report, Oct 2013
- *Applying Information Privacy Norms to Re-Identification*, Harvard Law School, May 2013
- *Re-engineering Digital Identity* Cloud Identity Summit, Napa USA, 2013
- *Fractionating Identity: The ecology of Digital Identity* MIT Media Labs, 2013,
- *Legal Limits to Data Re-Identification* Science 8 Feb 2013: Vol. 339 no. 6120 pp. 647
- *Cyber law & e-authentication in Aust*, International Seminar on Cyber Law, Bali, Jan 2013
- *Calling for a Uniform Approach to Card Fraud Offline and On* Journal of Internet Banking and Commerce, Dec 2012, vol. 17, no. 3
- *Identity Evolves: Why Federated Identity is easier said than done*, AusCERT 2011, Gold Coast
- *Electronic Verification: new benchmark for customer identity*, Veda Advantage, 2011
- *Anonymity & Pseudonymity via smartcards and PKI*, eResearch Australasia, Sydney, 2009
- *An easily validated security model for e-voting based on anonymous public key certificates*, AusCERT2008 Security Conference Academic Stream, Gold Coast, 2008
- *Public Key Superstructure,* NIST IDtrust Workshop, Maryland USA, 2008
- *Smartcards as national infrastructure*, 5th Homeland Security Conference Canberra, 2006
- *Relationship Certificates* 5th International Asia PKI Symposium, Beijing, 2005
- *A novel application of PKI smartcards to anonymise Health Identifiers* AusCERT2005
- *Guidelines on how to determine Return on Investment in PKI* OASIS June 2005
- *Rethinking PKI – the electronic business card* SC Magazine, June 2003
- *A Critical Review of PKI* RSA Conference, San Jose, 2002
- *Demystifying international cross-recognition of PKI*, ISSE London, 2001
- *New models for the management of public key infrastructure and root certification authorities*. Proceedings of 7th IFIP Conference Info Security, Amsterdam 1999
- *Some limitations of web of trust models* Information Management & Computer Security, Vol. 7, No. 2, 1999.