



Mark McFadden

Principal Consultant, InterConnect Communications

Summary

Mark McFadden is the Principal Consultant on Internet Infrastructure and Governance for InterConnect Communications. Previously he was a Consulting Resource Manager for Addressing, Naming and Protocol Issues at the Internet Assigned Numbers Authority. With more than 20 years of operational and policy experience with IP addressing, he has extensive experience in large-scale internetworking. Since 2012, Mark has been a member of the UK delegation to the ITU's Study Group on Security and has been the UK lead on Cloud Computing Security

He is an active contributor to work in the Internet Engineering Task Force (IETF) and ICANN, and he is involved in the development of global internet addressing standards and policies. He is also a regular contributor to the work of the Regional Internet Registries, including serving as the Chair of the Address Supporting Organisation. Prior to working for IANA, Mark was the Senior Strategist for IP Addressing and Naming at BT for four years. Mark also taught in the Computer Science program at the University of Wisconsin in Milwaukee.

Experience in Internet Infrastructure and Governance

- InterConnect was contracted by ICANN to assess the effectiveness of ICANN's Generic Names Supporting Organization (GNSO) Policy Development Process (PDP) and whether the current GNSO PDP process satisfies the needs of the multi-stakeholder model and Internet users. Mark led InterConnect's team which undertook a critical analysis of the GNSO PDP as defined and practiced, identifying the strengths and weaknesses and reported on the extent to which the GNSO PDP satisfies the mission of ICANN in developing sound policy in support of the public interest.
- Through 2012 / 13, Mark led InterConnect's team (including our core Naming and Addressing consultants and partners from University College London) in providing Evaluation Panel support to ICANN's new gTLD programme. InterConnect was contracted to provide three of the independent evaluation panels associated with the rollout of new gTLDs in the root zone of the Internet's public DNS. The independent evaluation panels help ICANN assess whether applicants for new gTLDs meet ICANN's minimum criteria.
- Mark led InterConnect's team preparing a report into Implications of Deployment of Carrier Grade Network Address Technology for Ofcom. Ofcom contracted InterConnect to undertake a research study to assist it to understand the implications of the deployment of CGN technology for policy issues that are likely to be impacted. Work was completed in July 2013.
- Mark led an InterConnect team undertaking a study on IPv6 Implementation for Ofcom. The objective of the IPv6 Deployment Study was to provide broad and independent review of IPv6 in the UK. The report identified trends in technology and government support of IPv4-to-IPv6 transition. It also examined, in depth, policy issues related to IPv6 transition and how governments have a role in the success of that transition. The work was successfully completed in June 2012 and InterConnect is currently assisting Ofcom in the preparation of the public report.
- Mark led an InterConnect team undertaking a study Implementation for Ofcom on DNSSEC. The study (completed in September 2011) provided independent technical and systems expertise and knowledge to support Ofcom/OTA in developing an analysis of DNSSEC in the context of the public Internet in the UK and included a survey and analysis of the current state of deployment of DNSSEC in the UK and a comparison of the current state of deployment in the UK with deployment in EU member states and G20 nations.
- Assisting in the administration of the IPv4 and IPv6 global addressing space,
- Managing the administration of the IANA Internet Protocol Parameter registries,
- Evaluation new Internet protocol standards and assessments of the implications of extensions to the DNS.
- Worked on the Internationalisation of the Domain Name space; transforming the DNS from English only name space to a truly international name space.
- Represented IANA at regional forums including Regional Internet Registries, ICANN, and other network operator forums.

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- Authored technical assessments of growth and capacity of the root zone of the DNS as well as implications of DNSSEC on Internet Service Providers.
 - Authored a Contingency Plan for the IANA that documented the procedures to be followed in the event of loss of critical infrastructure in the Internet.
 - Principal technical assessors for requests for port numbers, delegations into the .ARPA zone, and requests for changes to the Internet' protocol parameter registries.
 - Authored several RFC and Internet Drafts for Internet standards
 - BT's lead strategist for Internet Naming and Addressing issues including corporate-wide approaches to IPv4, IPv6 transition and DNS engineering, policy and architecture.
 - Accomplishments include providing a pan-BT view of IP addressing requirements and being lead coordinator of BT's architectural and engineering strategy for transition to IPv6.
 - Tasked with the responsibility for moving BT's IPv6 testbeds into production capabilities.
 - Responsible for strategic approaches for the DNS inside of BT including DNSsec, the engineering implications of new gTLDs and Internationalised Domain Names.
 - Instrumental in bringing IPv4 exhaustion and its risks to the attention of wholesale and retail providers of broadband services throughout the UK.
 - Principal liaison for BT with the five RIRs and IANA.
 - Remains one of the core sources for expertise in SIP and its related protocols for BT.
 - Responsible for acting as an advocate for BT in international standards bodies, regional internet registries, national country code registries national and regional governments, and industry consortia.
 - Working independently in global communications companies, helped build strategic Internet identifier solutions to engineering and policy problems.
 - Spent significant time on issues relating to telecommunications convergence, transition to IPv6 networks and policy issues relating to the Domain Name System.
 - Acted as an advocate for Internationalised Domain Names.
 - Represented large, global carriers and Internet providers in standards and operational fora.
 - Works actively in Internet standards bodies (e.g. the IETF), regional operations groups (e.g. NANOG, RIPE), and industry consortia (e.g. The US ENUM Forum, ETNO).
 - An active participant in Internet policy setting groups (e.g. ICANN, WSIS).
 - Assisted IANA with the evaluation of Internet protocol assignments, Internet Draft implications for protocol registries and strategic implications of IETF standards track documents on IANA workload and methodology.
 - In 2003, elected to the ASO Address Council and served as its chair for two years.
 - Been Secretariat of the ISPCP Constituency in the gNSO at ICANN since its inception.
 - Co-authored and chaired the ICANN Ad Hoc Committee on Internet Addressing.
 - Planned, developed and delivered core Internet related curriculum for more than 45 University courses over ten years.
 - Designed and taught new certification programs for students in the area of Internet security with a special emphasis on Intrusion Detection and Forensics.
 - Expanded program offerings to reflect swift changes in the marketplace and standards community.
 - Worked with a variety of vendors and IT professionals to carefully match academic offerings to real-world security, wireless and Internet applications.
 - Migrated course offerings from a traditional stand-up presentation style to online offerings in 2002.
 - Acted as principal investigator on grant reviews for Department of Commerce (NTIA) Technology Opportunity Grants for Internet and IT applications.
 - Helped to build a global Internet Service Provider trade association into an international force for public policy and standards efforts.
 - Implemented a communications strategy for outreach to global and regional telecommunications and Internet providers.
 - Designed, planned and implemented communications programs for changing public and technical policy related to the Internet.
 - Acted as the technical liaison for an Internet exchange point (PAIX), allowing Internet Service Providers to exchange traffic and routes in a cost-neutral setting.
 - Acted as a technical liaison for lobbying Congress during the enactment of the 1996 Telecommunications Act.
 - Represented the global ISP community in privacy and cybersecurity lobbying in Washington DC.
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	<ul style="list-style-type: none">• Designed, procured and implemented the first set of Internet services for State government in Wisconsin.• Established statewide policy for technology and public use of the Internet in Wisconsin state government.• Member of the Governor's Task Force on Technology and Information Brokering, 1994 – 1996. Employee of the Year, 1995.
Employment History	<ul style="list-style-type: none">• IANA Resource Specialist, 2009 – 2010• BT, Principal Strategist for Internet Naming and Addressing, 2004 – 2009• Internet policy advisors, llc, Chief Technology Officer and President, 1994 – 2006• University of Wisconsin at Milwaukee, Director, Internet, Internet Security and Wireless Certification Programs, 1995 – 2004• Commercial Internet eXchange (CIX), Chief Technology Officer and Communications Director 1994 – 2002• Department of Natural Resources Chief, Computer Science Section, 1978 – 1995
Qualifications	<ul style="list-style-type: none">• Mathematics and Philosophy (Philosophy Honors Program, 1981), University of Wisconsin, Madison